CITY OF CLARKSTON
where possibilities grow

3921 CHURCH STREET ♦ CLARKSTON, GEORGIA 30021
(404) 296-6489 ♦WWW.CLARKSTONGA.GOV

Mayor Beverly H. Burks
Councilmembers:
Jamie Carroll *Laura Hopkins*
Awet Eyasu *Yterenickia Bell*
Debra Johnson *Susan Hood*
Shawanna Qawiy, City Manager

CITY COUNCIL MEETING AGENDA

Tuesday, December 6, 2022 - 7:00PM
ZOOM

1. **CALL TO ORDER**

2. **ROLL CALL**

3. **ADMINISTRATIVE BUSINESS/ PRESENTATION**
   Approval of the 11/01/2022 City Council Meeting Minutes and 11/29/2022 Special Called Meeting and City Council Work Session Minutes.

4. **REPORTS**
   - **A.** Planning/Economic and Development Report
   - **B.** City Manager's Report
   - **C.** City Attorney's Report
   - **D.** Council Remarks
   - **E.** Mayor's Report

5. **PUBLIC COMMENTS**
   Any member of the public may address the Council during the time allotted for public comment. Each attendee will be allowed 3 minutes for comments at the discretion of the Presiding Officer. The public comment period will be limited to 40 minutes, and it is not a time for dialogue. If your public comment contains a series of questions, please submit those to the City Clerk in writing. This will facilitate follow-up by the council or staff. The City Council desires to allow an opportunity for public comment; however, the business of the city must proceed in an orderly, timely manner.

6. **OLD BUSINESS**
   - **A.** To approve an ordinance amending Article V Multifamily Rental Dwellings, Section 11-97. Fee and certificate required (c) to include increasing the annual inspection reports from 20% to 50% annually.

7. **CONSENT AGENDA**
   - **A.** To approve a resolution to adopt Dekalb County's 2023 Hazardous Mitigation Plan.
   - **B.** To approve the proposed City Council Regular and Work Session Meeting dates and City Holiday Calendar.
   - **C.** To approve the reappointments of Herbert Clark and Charles McFarland to the Planning and Zoning Board.

8. **NEW BUSINESS**
   - **A.** To present the Proposed FY 2023 Operating & Enterprise Fund Budget.

B. Public Hearing – Public Comments on the Proposed FY 2023 Operating & Enterprise Fund Budget.

C. To adopt an ordinance of the FY 2023 Operating & Enterprise Fund Budget.

D. To approve the 2023 LMIG Proposed Projects.

9. ADJOURNMENT

PUBLIC PARTICIPATION BY VIDEO CONFERENCE

The City of Clarkston, Georgia will conduct the City Council Meeting at 7:00 p.m. on Tuesday, December 6, 2022. The public may participate in the meeting by using the following information below:

https://us02web.zoom.us/j/83206710379?pwd=RnFIUFBxOVB6MVRIM0ZsTUxON3VpZz09

Dial by your location
+1 646 931 3860 US
+1 301 715 8592 US (Washington DC)
+1 305 224 1968 US
+1 309 205 3325 US
+1 312 626 6799 US (Chicago)
+1 646 558 8656 US (New York)
+1 719 359 4580 US
+1 253 205 0468 US
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
+1 360 209 5623 US
+1 386 347 5053 US
+1 507 473 4847 US
+1 564 217 2000 US
+1 669 444 9171 US
+1 669 900 9128 US (San Jose)
+1 689 278 1000 US
Meeting ID: 832 0671 0379
Passcode: 019604
Find your local number: https://us02web.zoom.us/u/kfEGKsZoK

MINUTES OF A REGULAR MEETING

OF THE CITY COUNCIL OF CLARKSTON, GEORGIA HELD

BY TELECONFERENCE, ZOOM AUDIO/VIDEO

IN SAID CITY ON TUESDAY, NOVEMBER 1, 2022

On the 1st day of November 2022, at 7:00 p.m., the City Council of Clarkston, Georgia met in regular session by teleconference, Zoom Audio/Video in said City. Mayor Beverly Burks called the meeting to order. The following members of the Council Members were present: Vice Mayor Awet Eyasu; Councilmembers Jamie Carroll; Debra Johnson; Yterenickia Bell, and Susan Hood. Absent: Laura Hopkins. The following City staff were present: Shawanna Qawiy (City Manager); Dan Defnall (Finance Director); Tomika R. Mitchell (City Clerk); and Stephen Quinn (City Attorney).

NOTE: Items appearing in these minutes are in the order they were discussed, not necessarily in the order they appeared on the agenda.

1. CALL TO ORDER
   The meeting was called to order at 7:00 p.m.

2. ROLL CALL
   All members of Council were present.

3. ADMINISTRATIVE BUSINESS/ PRESENTATION
   Approved the 10/04/2022 City Council Meeting minutes and 10/25/2022 City Council Work Session minutes.

   Councilmember Hood made a motion to approve the 10/04/2022 City Council Meeting Minutes and 10/25/2022 City Council Work Session Minutes. Councilmember Johnson duly seconded the motion. Mayor Burks called for the vote and declared the motion approved (5-0). Councilmember Hopkins was absent.

4. REPORTS
   A. Planning/Economic and Development Report and the City Manager's Report
      - Upcoming Planning & Zoning Board Meeting will be held on December 20, 2022
      - Upcoming Safe Sidewalk Audit on November 7, 2022
      - Project conversations are commencing
      - FY 2023 budget season is approaching
      - The Pocket Park needs a name
      - Zoning Rewrite meeting will be held on November 20, 2022

   B. City Manager's Report
      - This report was given during the Planning/Economic and Development Report.

   C. City Attorney's Report

- Stephen Quinn presented a brief report on the case vs. the City of Tucker appealing the dismissal of a lawsuit.

D. Council Remarks
- The Council members briefly gave an overview of meetings and events they attended, and projects they are currently working on.

E. Mayor's Report
- Mayor Burks gave a brief overview of meetings and events she attended and other news of the City.

5. PUBLIC COMMENTS

There were no public comments.

6. OLD BUSINESS

There was no old business.

7. CONSENT AGENDA

A. Approval of allocating $30,000 ARPA funds to the Clarkston Community Center proposal request for (the) Expansion of Adult & Senior Services; ESL & Civics, Digital Literacy program.

Vice Mayor Eyasu made a motion to approve the Consent Agenda. Councilmember Bell duly seconded the motion. Mayor Burks called for the vote and declared the motion approved (5-0). Councilmember Hopkins was absent.

8. NEW BUSINESS

There was no new business.

9. ADJOURNMENT

Vice Mayor Eyasu made a motion to adjourn. Councilmember Johnson duly seconded the motion. Mayor Burks called for the vote and declared the meeting adjourned (5-0). Councilmember Hopkins was absent.

The meeting adjourned at 7:20 p.m.

ATTEST:

Tomika R. Mitchell	Beverly H. Burks
City Clerk	Mayor

MINUTES OF A SPECIAL CALLED CITY COUNCIL MEETING/ WORK SESSION
OF THE CITY COUNCIL OF CLARKSTON, GEORGIA
HELD BY TELECONFERENCE, ZOOM AUDIO/VIDEO
IN SAID CITY ON TUESDAY, NOVEMBER 29, 2022

On the 29th day of November 2022, at 7:00 p.m., the City Council of Clarkston, Georgia met in a Special Called City Council Meeting/ Work Session by teleconference, Zoom Audio/Video in said City. Mayor Beverly Burks called the meeting to order. The following members of the City Council were present: Vice Mayor Awet Eyasu; Councilmembers Jamie Carroll; Laura Hopkins; Debra Johnson; Yterenickia Bell, and Susan Hood. Absent: None. The following City staff were present: Shawanna Qawiy (City Manager); Dan Defnall (Finance Director); Tomika R. Mitchell (City Clerk); and Stephen Quinn (City Attorney).

NOTE: Items appearing in these minutes are in the order they were discussed, not necessarily in the order they appeared on the agenda.

1. CALL TO ORDER – SPECIAL CALLED MEETING

2. ROLL CALL
   All members of the City Council were present.

3. OLD BUSINESS
   There was no Old Business.

4. NEW BUSINESS
   A. To present the Proposed FY 2023 Operating & Enterprise Fund Budget Presentation.

      City Manager, Shawanna Qawiy presented the Proposed FY 2023 Operating & Enterprise Fund Budget.

      The Council presented comments. Vice Mayor Eyasu stated he would like the amount for Community Action for the Early Learning Task Force to be increased to $10,000 for FY 2023. Councilmember Hood inquired about funding Clarkston 101.

   B. Public Hearing- Public Comment on the Proposed FY 2023 Operating & Enterprise Fund Budget.

   The Public Hearing opened at 6:54 p.m.

      Brian Medford presented comments about the Sears Pool contract. Eyelachew Desta presented comments about the Early Learning Task Force. Roberta Malavenda presented comments about the Early Learning Task Force. Cynthia Dorsey Edwards presented comments about the Early Learning Task Force.

   The Public Hearing closed at 6:57 p.m.

Ms. Qawiy recommended the Council send her and the Finance Director all changes they would like to make to the budget by this Friday.

5. ADJOURNMENT OF SPECIAL CALLED MEETING

Vice Mayor Eyasu made a motion to adjourn the meeting. Councilmember Johnson duly seconded the motion. Mayor Burks called for the vote and declared the meeting adjourned (6-0). The meeting was adjourned at 7:00 p.m.

WORK SESSION AGENDA – 7:00 p.m.

1. WORK SESSION- RESIDENT COMMENT POLICY
   Mayor Burks read the Resident Comment Policy.

2. PRESENTATION/ ADMINISTRATIVE BUSINESS

   A. To discuss the resolution to adopt the 2022 Dekalb County Hazard Mitigation Plan.

   City Manager, Shawanna Qawiy stated the 2022 Countywide Hazard Mitigation Plan Update aims to produce the following strategic outcomes by reducing loss of life and decrease property losses due to the occurrence of natural disasters within the planning area; and providing the framework and coordination to encourage government, and both public and private sector organizations at all levels, to undertake mitigation to minimize potential disasters and to employ mitigation strategies in the recovery following disasters.

   The Council briefly discussed this item.

   This item will be placed on Consent Agenda on the next City Council meeting agenda.

   B. To discuss the proposed City Council Regular and Work Session Meeting dates and City Holiday Calendar.

   The City Council reviewed and discussed the holiday calendar with no changes. The Council also discussed the City Council Work Session and Regular meeting dates, changing the Tuesday, November 7th City Council Meeting date to Thursday, November 9th due to the Election Date of November 7th.

   This item will be placed on the Consent Agenda on the next City Council meeting agenda.

3. OLD BUSINESS

   A. To discuss amending Article V Multifamily Rental Dwellings Section11-97. Fee and certificate required paragraph (c) to include increasing the annual inspection reports from 20% to 50% annually.

City Manager, Shawanna Qawiy presented a brief update on the communication with the owners of the apartments stating most of the apartments are in compliance and were able to discuss educational needs of inspections with the owners.

Councilmember Hood also mentioned having a registered list of inspectors to make sure there is effectiveness with inspections.

The Housing and Infrastructure Committee previously met to discuss this item and recommended Clarkston to require 50% of the apartments be inspected each year, and that Clarkston create a list of approved inspectors that apartments can use for the inspections. There would be a 2-year exemption for brand new apartments where they could inspect just 20% per year. This change would start in 2023.

The Council briefly discussed this item.

Attorney Quinn will provide an ordinance with revisions.

Brian Medford presented comments pertaining to this item.

Roberta Malavenda presented comments pertaining to this item.

This item will be placed on the next City Council meeting agenda.

4. NEW BUSINESS

A. To discuss the 2023 LMIG Proposed Projects.

City Manager, Shawanna Qawiy stated the FY 2023 LMIG award letter contains information on how to apply for the LMIG funds, and the total award amount.

To complete the application process, the staff is providing the proposed list of projects for consideration under this fiscal year of funding. The formula amount for the Fiscal Year 2023 program is $93,532.50 with a local match of $28,059.75 (30%). The total project budget will be $ 121,592.25.

With an approved listed of projects the mayor will sign a cover letter with a notarized LMIG application. The entire LMIG package will be submitted on-line before the application deadline of February 2023.

The Council briefly discussed this item and inquired about the selection process of the LMIG Projects. The Council recommended additional time to discuss the proposed projects.

The Council recommended placing this item on the January 3, 2023 City Council Work Session agenda for further discussion of the proposed projects.

B. To discuss the reappointments of Herbert Clark and Charles McFarland to the Planning and Zoning
Board.

Mayor Burks gave a brief overview of this item stating these two individual's terms have expired and they would like to be reappointed. City Manager, Shawanna Qawiy stated their terms will expire on December 31, 2022.

The Council briefly discussed this item.

This item will be placed on the Consent Agenda on the next City Council meeting agenda.

Vice Mayor Eyasu made a motion to enter Executive Session. Councilmember Johnson duly seconded the motion. Mayor Burks called for the vote and declared the motion approved (6-0).

5. EXECUTIVE SESSION

The Council discussed legal matters in Executive Session.

6. ADJOURNMENT

Councilmember Bell made a motion to adjourn the meeting. Councilmember Johnson duly seconded the motion. Mayor Burks called for the vote and declared the meeting adjourned (6-0).

The meeting adjourned at 9:09 p.m.

ATTEST:

_____ _____

Tomika R. Mitchell
City Clerk

Beverly H. Burks
Mayor

CITY OF CLARKSTON

ITEM NO: 6A

CLARKSTON CITY COUNCIL MEETING

HEARING TYPE: City Council

BUSINESS AGENDA / MINUTES

ACTION TYPE: Vote

MEETING DATE: December 6, 2022

SUBJECT: To approve an ordinance amending the multifamily rental dwelling Section 11-97 (c) of the Clarkston Code of Ordinances to increase the annual multifamily inspections from 20% to 50% annually.

DEPARTMENT: CITY ADMINISTRATION

PUBLIC HEARING: ☐YES ☒ NO

ATTACHMENT: ☐YES ☐NO
Pages:

INFORMATION CONTACT: Susan Hood, City Council
PHONE NUMBER: 404-296-6489

PURPOSE: To approve an ordinance amending the text in Article V Multifamily Rental Dwelling Section11- 97. Fee and certificate required (c) to increase the required annual multifamily inspections from 20% to 50% annually.

NEED/ IMPACT:
Currently all owners of multifamily rental dwellings or multifamily rental (units) within the city that make available for lease or receive income for use of four (4) or more such dwellings or units must obtain a business license. According to **Section 11-97 Fee and certificate required. (c) Each owner of a multi-family rental dwelling shall submit a code compliance certificate annually with their business license renewal. Such annual code compliance certificate shall cover at least twenty (20) percent of the units within each dwelling, provided all units shall be inspected, at a minimum, every five (5) years**.

The city is proposing to amend the text in Section 11-97 Fee and certificate required (c) to read; **Each** owner of a multi-family rental dwelling shall submit a code compliance certificate annually with their business license renewal. Such annual code compliance certificate shall cover at least **fifty (50)** percent of the units within each dwelling, provided all units shall be inspected, at a minimum, ***annually.***

Staff shall create a list of approved inspectors that apartments can use for the inspections. There would be a 2-year exemption for brand new apartments where they could inspect just 20% per year. This change would start in 2023.

RECOMMENDATION:
The recommendation is to require that 50% of the apartments be inspected each year.

ORDINANCE NO. 22-_____

AN ORDINANCE TO AMEND CHAPTER 11, ARTICLE V OF THE CITY OF CLARKSTON'S CODE OF ORDINANCES TO MODIFY THE REQUIREMENTS FOR LICENSING AND INSPECTIONS OF MULTI-FAMILY RENTAL HOUSING DEVELOPMENTS.

WHEREAS, a number of multi-family residential developments offer dwelling units for rent within the City; and

WHEREAS, the City determined in 2012 that some multi-family residential rental developments were not in compliance with applicable life safety codes and posed a threat to the health and welfare of their occupants as well as the City at large; and

WHEREAS, in 2012 the City enacted a program to protect the health and welfare of its residents by imposing certain regulations and inspection requirements on multi-family rental dwellings; and

WHEREAS, the initial round of inspections was effective at bringing units up to code, but the City Council has now determined that more frequent inspections are necessary to protect life-safety at multi-family rental dwellings by ensuring that these units remain in compliance with applicable codes; and

WHEREAS, the City Council desires to further specify the individuals authorized to make such inspections.

NOW THEREFORE, BE IT ORDAINED BY the City of Clarkston, Georgia that Chapter 11, Article V of the City's Code of Ordinances be amended as follows:

Section 1.

The definition of "certified building inspector" in Code Section 11-94 is hereby amended to read as follows:

"Certified building inspector. A person who is a licensed design professional (architect or engineer) or holds one (1) of the following certifications from SBCCI (ICC): Property maintenance and housing inspector, housing rehabilitation inspector, building inspector, building plan examiner or commercial combination inspector and is listed on a list of authorized certified building inspectors maintained and published by the city manager."

Section 2.

Section 11-97 of the City Code is hereby repealed in its entirety and the following text adopted in its place:

"**Sec. 11-97. Code Compliance Certificate Required.**

1. Each owner shall submit a code compliance certificate annually with their business license renewal. Such certificate shall cover at least fifty percent (50%) of the units at the development. Every unit shall be inspected, at a minimum, every twenty-four (24) months and shall appear on a code compliance certificate at least every other year. All units inspected shall be listed individually on the code compliance certificate submitted to the city by the certified building inspector.

2. Newly constructed units shall be exempt from the code compliance certificate requirement of subsection (1) for twenty-four (24) months from the date that such units receive a new construction certificate of occupancy from the city. Instead, separately from any certificate that may be required under subsection (1), the owner of newly constructed units (as defined in this subsection) shall submit a code compliance certificate annually for twenty percent (20%) of all newly constructed units. No newly constructed unit shall appear on a code compliance certificate required by this section in consecutive years. Upon the date that is twenty-four (24) months after an initial certificate of occupancy is issues, a unit shall be deemed to no longer be "newly constructed" and shall be subject to subsection (1) from that date forward.

3. Each owner and certified building inspector shall keep a written record of all inspections for each unit including the date of the inspection, items inspected and all violations, if any, observed. Such records shall be available to the city upon request. Such records shall be presented to the city within ten (10) business days after such request is made in writing to the inspector. Failure to provide such records shall nullify the code compliance certificate for those units.

4. This Article is not intended to impair the right of the city, through its appropriate officials, to inspect any unit when probable cause exists to suggest that such unit is not in compliance with applicable codes."

Section 3.

The sections, paragraphs, sentences, clauses or phrases of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared illegal by the valid judgment or decree of any court of competent jurisdiction, such illegality shall not affect any of the remaining phrases, clauses, sentences, paragraphs and sections of this Ordinance.

Section 4.

Any City ordinances or portions of ordinances in conflict with this ordinance are hereby repealed.

Section 5.

This ordinance shall become effective _____.

SO ORDAINED this _____ day of December, 2022.

ATTEST:

CITY COUNCIL OF
CITY OF CLARKSTON, GEORGIA

_____
Tomika Mitchell, City Clerk
(SEAL)

_____
Mayor Beverly H. Burks

Approved as to form:

_____
Stephen G. Quinn, City Attorney

ARTICLE V. MULTI-FAMILY RENTAL DWELLINGS

Sec. 11-96. Definitions.

The following terms shall have the meaning respectively ascribed to them as follows:

Certified building inspector. A person inspecting for compliance with the various adopted codes who is a licensed design professional (architect or engineer) or holds one (1) of the following certifications from SBCCI (ICC): Property maintenance and housing inspector, housing rehabilitation inspector, building inspector, building plan examiner or commercial combination inspector.

Code compliance certificate. A certificate, substantially similar to Exhibit "A" attached hereto and incorporated herein, executed by a certified building inspector and stating compliance with those minimum standards described in the inspection report attached thereto.

Inspection report. The report attached to the code compliance certificate describing minimum requirements for inspection of each unit.

Lease. Any written or oral agreement which sets forth any and all conditions concerning the use and occupancy of multi-family rental dwellings or multi-family rental units.

Multi-family rental dwelling. Any multi-family structure, multi-family building, or other facility promised and/or leased to a residential tenant or tenants for use as a home, residence, or sleeping unit. This definition includes, but is not limited to multiple family dwellings, multiple family apartment units, boarding houses, rooming houses, group homes, and flats.

Multi-family rental unit. Any one area, room, structure, flat, apartment, or facility of a multi-family rental dwelling that is being leased or rented to only one tenant, group of tenants, or family under one lease, or under terms of joint and severable liability.

Occupancy. Includes all tenants, lessees and persons residing within a multi-family rental dwelling or multi-family rental unit.

Owner. Any person, agent, firm, or corporation having a legal or equitable interest in a premises.

Owner-occupied. Any part of a structure used as living quarters by the owner of said structure where other parts of the structure are used as multi-family rental units. Example: two-family dwelling, owner occupies one (1) flat; rooming house, owner occupies one (1) unit.

Premises. Any lot or piece of land inclusive of the multi-family rental dwelling or multi-family rental unit.

(Ord. No. 12-369, § 1(Attach.), 9-4-12)

Sec. 11-97. Fee and certificate required.

(a) All owners of multi-family rental dwellings or multi-family rental unit(s) within the city that make available for lease or receive income for use of four (4) or more such dwellings or units must obtain a business license from the city pursuant to this article. If the multi-family rental dwelling meets the requirements of O.C.G.A. § 48-13-5 by having an onsite/offsite rental or management office location, then the owner shall be subject to an occupation tax as provided in this article.

(b) All owners of multi-family rental dwellings or multi-family rental unit(s) within the city that make available for lease or receive income for use of four (4) or more such dwellings or units shall register such dwellings/units with the city and pay a regulatory fee of one hundred dollars ($100.00) on an annual basis, whether or not the multi-family rental dwelling is subject to occupation tax.

(c) Each owner of a multi-family rental dwelling shall submit a code compliance certificate annually with their business license renewal. Such annual code compliance certificate shall cover at least twenty (20) percent of the units within each dwelling, provided all units shall be inspected, at a minimum, every five (5) years. All units inspected shall be listed individually on the code compliance certificate submitted to the city by the certified building inspector. When a newly constructed or remodeled multi-family rental dwelling receives a certificate of occupancy, additional inspections pursuant to this section are not required for one (1) year. After one (1) year has elapsed, regular annual inspection of twenty (20) percent of units shall commence and continue as required by this section.

(d) Furthermore, each owner and certified building inspector shall keep a written record of all inspections for each unit including the date of the inspection, items inspected and all violations, if any, observed. Such records shall be available to the city upon request. Such records shall be presented to the city within ten (10) business days after such request is made in writing to the inspector. Failure to provide such records shall nullify the code compliance certificate for those units.

(e) If inspection of such dwellings or units by a certified building inspector results in a determination that further work is necessary to comply with all applicable building and life safety codes and the minimum standards set forth herein, an acceptable plan shall be submitted to the chief building official outlining the time and scope of work necessary to bring the units into compliance. If such plan is accepted by the chief building official as reasonable and justified, an extension may be granted for up to one (1) year for completion of repairs and compliance with this ordinance. No extension shall be granted if life safety issues are involved and any such units shall not be leased until brought into compliance.

(Ord. No. 12-369, § 1(Attach.), 9-4-12; Ord. No. 416 , § 1, 10-3-17)

Sec. 11-98. Failure to provide code compliance certificate.

(a) Failure to provide the code compliance certificate as provided herein shall be a violation of this article and is subject to those penalties contained herein Clarkston's Code of Ordinances. Further, said failure, upon a judicial determination, shall be a condition constituting probable cause, and may subject said multi-family rental dwelling or multi-family rental unit(s) to inspection by the city building official and fines imposed by the municipal court, not less than two hundred dollars ($200.00) and no more than one thousand dollars ($1,000.00).

(b) Said inspection by the city, if required, shall be at the sole cost of the owner and failure to pay said cost shall result in a lien being placed on the premises as provided for collection of taxes. Failure to pay the occupational tax as provided herein shall be a violation of this ordinance and is subject to those penalties set forth in this article. Nothing contained in this section shall prevent the city from enforcement of the state minimum standard codes as provided in section 5-l of this Code of Ordinances of the City of Clarkston, Georgia.

(Ord. No. 12-369, § 1(Attach.), 9-4-12)

Exhibit "A"
CODE COMPLIANCE CERTIFICATE

Building Department

City of Clarkston City Hall

3921 Church Street Clarkston, Georgia 30021

Re: [Name and address of Apartment Community]

Date: _____ Total Number of Units: _____

_____/_____/_____ Units Inspected (Listed individually)

The undersigned is a Certified Building Inspector pursuant to City of Clarkston Ordinance section 11-96 and provides this certification pursuant to such Ordinance.

Those apartment units listed on the inspection reports attached hereto have been inspected and found to be in compliance with applicable building codes of the City of Clarkston currently in effect.

For purposes of this certification, compliance with applicable building codes shall be deemed to mean that those units inspected meet those certain minimum standards for basic equipment and facilities for dwellings as set forth on the inspection reports attached hereto.

In the event that the undersigned is an employee of the owner or property manager of the community, the undersigned is acting only in such capacity and shall incur no personal liability in connection with such inspections.

Nothing herein imposes any liability on the City of Clarkston or prevents the City of Clarkston from enforcing Georgia Minimum Standard Codes as provided by Georgia law and the Clarkston Code of Ordinances.

Certified and sworn this _____day of_____,200__

[Signature of Inspector]

Name:

Registration Number:

Certification Held:

INSPECTION REPORT

Name of Community:

Apartment No.:_____ Date of Inspection:_____

	Minimum Standards for Basic Equipment & Facilities for Dwellings	PASS	FAIL	Action Required for Compliance
1.	Flooring is impervious in kitchen and bath areas			
2.	Privacy for bathrooms			
3.	Hot and cold water supply			
4.	Heating facilities in good working order, no unvented heating appliances in sleeping rooms			
5.	Garbage disposal facilities (trash cans or sink grinder for food stuff disposal)			
6.	Smoke detector devices as required by law			

7.	Windows, 8% glazing of floor space for light and ventilation, 45% shall be operable with screens if no air conditioning. Windows shall be in good repair and rodent proof, no open cracks or holes			
8.	Plumbing facilities including kitchen sink, lavatory, tub or shower, and water closet, are clean and sanitary and are in good working order			
9.	Electrical in good working order with proper covers, no exposed wiring, existing light fixtures in good working order			
10.	Both interior and exterior doors, jams and hardware in good working order			
11	Stairs in good working order with protective railings (interior and exterior)			
12.	Interior floors, walls and ceiling kept in good repair			
13.	Proper number of residents per bedroom as required by law			
14.	Extermination as needed			
15.	Exit requirements, unobstructed means of egress leading to safe and open space			
16.	Care of premises requires property to be generally maintained with no excessive trash, rubbish or similar items			
17.	Address numbers posted and in plain view			

(Ord. No. 12-369, § 1(Attach.), 9-4-12)

Secs. 11-99—11-100. Reserved.

CITY OF CLARKSTON

ITEM NO: 7A

CLARKSTON CITY COUNCIL MEETING

BUSINESS AGENDA / MINUTES

HEARING TYPE: City Council

ACTION TYPE: Vote

MEETING DATE: December 6, 2022

SUBJECT: To approve the 2022 Dekalb County Hazard Mitigation Plan Update.

DEPARTMENT: CITY ADMINISTRATION

PUBLIC HEARING: ☐YES ☒ NO

ATTACHMENT: ☒ YES ☐NO
Pages:

INFORMATION CONTACT: Shawanna Qawiy, City Manager
PHONE NUMBER: 404-296-6489

PURPOSE: To approve the 2022 Dekalb County Hazard Mitigation Plan Update.

NEED/ IMPACT:
The 2022 Countywide Hazard Mitigation Plan Update aims to produce the following strategic outcomes:

• Reduce loss of life and decrease property losses due to the occurrence of natural disasters within the planning area; and

• Provide the framework and coordination to encourage government, and both public and private sector organizations at all levels, to undertake mitigation to minimize potential disasters and to employ mitigation strategies in the recovery following disasters.

RECOMMENDATION: N/A.

RESOLUTION NO. _____

A RESOLUTION BY THE CITY OF CLARKSTON ADOPTING THE 2022 DEKALB COUNTY HAZARD MITIGATION PLAN UPDATE.

WHEREAS, DeKalb County and its municipal governments are required to complete a Pre-Distaster Hazard Mitigation Plan by the Disaster Mitigation Act of 2000; and

WHEREAS, under the provisions of the Disaster Mitigation Act of 2000, local governments that complete Pre-Disaster Hazard Mitigation Plans will remain eligible for Federal mitigation funding; and

WHEREAS, DeKalb County and its municipal governments have completed a Pre-Disaster Hazard Mitigation Plan that fulfil ls the Federal requirements of the Disaster Mitigation Act of 2000.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Clarkston, Georgia that the City of Clarkston hereby adopts this Pre-Disaster Hazard Mitigation Plan.

SO RESOLVED, this 6th day of December 2022.

CITY COUNCIL
CITY OF CLARKSTON, GEORGIA

_____
Beverly H. Burks, Mayor

ATTEST:

_____
Tomika R. Mitchell, City Clerk

DeKalb County
GEORGIA

2022 Countywide Hazard Mitigation Plan Update

(Insert Month) (2022)

Encompassing Unincorporated DeKalb County, Georgia, and the Municipalities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain, Stonecrest and Tucker.

BOLD planning

Prepared and submitted by:

BOLDplanning Inc.
A division of Agility Recovery Solutions
480 Duke Drive, Suite 130
Franklin, TN 37067
615.469.5558 / Kiana.Freeman@agilityrecovery.com

DeKalb Emergency Management Agency
Yolanda A. Harkley
1950 W Exchange Pl
Tucker, GA 30084
770.724.7810 / YAHarkley@dekalbcountyga.gov

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Executive Summary

The 2022 Countywide Hazard Mitigation Update was developed to 1) revise the previous hazard mitigation activities of Unincorporated DeKalb County, Georgia, and the municipalities of Avondale Estates (City), Brookhaven (City), Chamblee (City), Clarkston (City), Decatur (City), Doraville (City), Dunwoody (City), Lithonia (City), Pine Lake (City), and Stone Mountain (City), and 2) identify the hazard mitigation activities of new plan participants, Stonecrest (City) and Tucker (City), which together form the 'planning area.'

The plan update was prepared in partnership with the DeKalb County Emergency Management Agency, the DeKalb County Mitigation Planning Committee, and Tennessee-based BOLDplanning Inc., a division of Agility (https://www.agilityrecovery.com). It supersedes DeKalb's 2016 Countywide Hazard Mitigation Plan Update and outlines a mitigation strategy for five (5) years following plan approval and adoption by all plan participants.

Formal adoption and implementation of a federally approved hazard mitigation plan (HMP) presents many benefits to DeKalb County and the participating jurisdictions. Most notably, by identifying problems and possible solutions in advance of natural disasters, the planning area will be in a better position to obtain hazard mitigation funding from the Federal Emergency Management Agency (FEMA). This may include both pre- and post-disaster financial assistance.

The 2022 Countywide Hazard Mitigation Plan Update aims to produce the following strategic outcomes:

- Reduce loss of life and decrease property losses due to the occurrence of natural disasters within the planning area; and
- Provide the framework and coordination to encourage government, and both public and private sector organizations at all levels, to undertake mitigation to minimize potential disasters and to employ mitigation strategies in the recovery following disasters.

Specifically, these strategic outcomes will be brought about through the following planning process:

1) Identify, describe, and characterize the hazards to which the planning area is susceptible; and
2) Assess the risk of each hazard, including probability, frequency, exposure, and vulnerability; and
3) Examine feasible mitigation opportunities appropriate for the identified hazards, and prioritize those opportunities; and
4) Implement mitigation actions to reduce loss of life and damage to property; and
5) Identify mitigation opportunities for long-term planning consideration.

Glossary

ACS – American Community Survey
ASCE – American Society of Civil Engineers
BFE – Base Flood Elevation
CDC – Centers for Disease Control and Prevention
CRS – Community Rating System
CUSEC – Central U.S. Earthquake Consortium
CWPP – Community Wildfire Protection Plan
DEMA – DeKalb County Emergency Management Agency
DHS – Department of Homeland Security
DMA 2000 – Disaster Mitigation Act of 2000
EAP – Emergency Action Plan
EOC – Emergency Operations Center
EOP – Emergency Operations Plan
FEMA – Federal Emergency Management Agency
FIRM/DFIRM – Flood Insurance Rate Map/Digital Flood Insurance Rate Map
FMA – Flood Mitigation Assistance (Grant Program)
GEMA - Georgia Emergency Management and Homeland Security Agency
GIS – Geographic Information System
HAZUS – GIS System (FEMA)
HMGP – Hazard Mitigation Grant Program
HMP – Hazard Mitigation Plan
HMPC – Hazard Mitigation Planning Committee
ICS – Incident Command System
LEPC – Local Emergency Planning Committee
LEOP – Local Emergency Operations Plan
MJHMP – Multijurisdictional Hazard Mitigation Plan
NCEI – National Centers for Environmental Information
NEIC –National Earthquake Information Center
NFHL – National Flood Hazard Layer
NFIP – National Flood Insurance Program
NFPA – National Fire Protection Association
NOAA – National Oceanic and Atmospheric Administration
NRCS – National Resources Conservation Service
NWS – National Weather Service
OES – Office of Emergency Services
PDM – Pre-Disaster Mitigation (Grant Program)
PDSI – Palmer Drought Severity Index
POC – Point of Contact
RL – Repetitive Loss
SFHA – Special Flood Hazard Area
SRL – Severe Repetitive Loss
SSURGO – Soil Survey Geographic Database
UAISI – Urban Area Security Initiative
UDC – Unified Development Code
USACE – U.S. Army Corps of Engineers
USDA – U.S. Department of Agriculture
USGS – U.S. Geological Survey
WID – Watershed Improvement District
WUI – Wildland Urban Interface

Introduction to Mitigation

The Emergency Management Cycle & Mitigation

Understanding the emergency management cycle is the first step in effectively planning and operating in relation to all disaster-related activities. The emergency management cycle is an open-ended and ongoing process. The four phases in the process are mitigation, preparedness, response, and recovery. Each phase of the cycle can last for years, months, or only moments in duration, while different paths can exist simultaneously.



Mitigation planning is the process of determining how to reduce or eliminate loss of life and damage to property resulting from natural disasters. It is carried out as any sustained action to reduce or eliminate long-term risk to life and property from a hazard event. Mitigation encourages long-term reduction of hazard vulnerability. As is the goal of emergency management, so is the goal of mitigation to save lives and reduce property damage.

The Disaster Mitigation Act of 2000 (DMA 2000)

In the past, federal legislation has provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) became law on October 30, 2000, amending the Robert T. Stafford Disaster Relief and Emergency Assistance Act (the "Stafford Act") (Public Law 93-288, as amended). Regulations for this activity can be found in Title 44 of the Code of Federal Regulations Part 206, Subpart M.

This legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. This act establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP).

Section 322 of the act specifically addresses mitigation planning at the state, local, and tribal levels. It identifies new requirements that allow HMGP funds to be used for mitigation planning activities and increases the amount of HMGP funds available to states that have developed a comprehensive, enhanced mitigation plan prior to a disaster. States and communities must have an approved mitigation plan in place prior to receiving post-disaster HMGP funds. Local and tribal mitigation plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities and identifiable gaps.

DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. It encourages and rewards local and state pre-disaster planning and promotes sustainability as a strategy for disaster resistance. This enhanced planning network will better enable local and state governments to articulate accurate needs for mitigation, resulting in faster allocation of funding and more effective risk reduction projects. To implement the new DMA 2000 requirements, the Federal Emergency Management Agency (FEMA) prepared an interim final rule, published in the Federal Register on February 26, 2002, at 44 CFR Parts 201 and 206, which establishes planning and funding criteria for states and local communities.

On October 31, 2007, FEMA subsequently published an Interim Rule in the Federal Register, which ensures the Flood Mitigation Assistance (FMA) program planning requirements are consistent with the mitigation planning regulations as cited in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201 (44CFR Part 201).

This interim rule established that local communities must comply with mitigation planning requirements to be eligible to apply for FEMA mitigation project grant funding, including FMA and FEMA's Severe Repetitive Loss (SRL) Program. Meeting the requirements of the regulations cited above ensures participating jurisdictions within the planning area will be eligible to receive disaster assistance, including hazard mitigation grants

available through the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended.

DeKalb County has the responsibility to coordinate activities relating to hazard evaluation and mitigation, and to prepare and submit to FEMA a local hazard mitigation plan, following the criteria established in 44 CFR 201.6 and Section 322 of the DMA 2000 (Public Law 106- 390).

Section 1: Planning Process

Planning Process
- Plan Introduction
- Plan Development
- Stakeholder Participation
- Community Involvement

Local Procedures & Resources

Planning Area

Hazard Risk Assessment

Mitigation Strategy

1.1 – Plan Introduction

The DeKalb County, Georgia (GA) – 2022 Countywide Hazard Mitigation Update involves 13 participants, 11 of which were included in the previous plan (2016) and two (2) of which are new. These consist of DeKalb County, i.e., unincorporated DeKalb County, and the municipalities of Avondale Estates (City), Brookhaven (City), Chamblee (City), Clarkston (City), Decatur (City), Doraville (City), Dunwoody (City), Lithonia (City), Pine Lake (City), and Stone Mountain (City), as well as Stonecrest (City) and Tucker (City), respectively. The cities of Stonecrest and Tucker were incorporated in 2016.

As mentioned in the Executive Summary, this plan update was prepared in partnership with the DeKalb County Emergency Management Agency (DEMA), the DeKalb County Mitigation Planning Committee (MPC), and Tennessee-based BOLDplanning Inc., a division of Agility (https://www.agilityrecovery.com). It supersedes the DeKalb County, GA – 2016 Countywide Hazard Mitigation Update and outlines a mitigation strategy for five (5) years following plan adoption.

1.2 – Plan Development

1.2.1 – Plan Revision Process

On September 25, 2021, the DeKalb County Emergency Management Agency (DEMA) applied for a Hazard Mitigation Grant Program (HMGP) grant under FEMA Project HMGP-DR 4400-18, Hurricane Michael. Once awarded, the county hired Tennessee-based BOLDplanning Inc. (BOLDplanning) to facilitate the plan update's development.

The plan revision process was initiated shortly thereafter, with an initial mitigation planning team established. Members were asked to seek out other interested parties for the formation of the DeKalb County Mitigation Planning Committee, or MPC. The MPC provided proper jurisdictional representation and actively participated in all aspects of the plan update's development. Details are provided in Section 1.2.3 – Participating Jurisdictions, MPC Contributions by Planning Phase.

A variety of planning events and activities, including meetings and conference calls, took place throughout the plan revision process. Most were conducted virtually via Zoom® due to the ongoing COVID-19 pandemic. If a committee member could not attend a meeting, they were contacted by phone, provided the specifics of the meeting, and asked to offer comments or suggestions. A summary of the major planning events and activities can be found in Section 1.3.3.

The public, as required by FEMA and the Sunshine Laws, was given multiple opportunities to ask questions, voice concerns, review plan drafts, and provide input toward the plan update's development. The public was also invited to provide feedback on hazard identification, hazard ranking, and mitigation project prioritization. These outreach efforts were accomplished through BOLDplanning's launching of two online surveys.

The first survey, the Dekalb County, GA Hazard Mitigation Plan Survey (https://publicinput.com/S4057), allowed for MPC members, plan stakeholders, and the public to provide input to hazards and potential hazard mitigation projects that are ongoing for the county. The second survey, the Dekalb County, GA Hazard Mitigation Plan – Open Comment Survey (https://publicinput.com/I2514) allowed all MPC members, plan stakeholders, and the public to provide feedback and input on the mitigation update prior to its submission to GEMA/HS and FEMA. Information specific to these efforts can be found Section 1.3 as well as Appendix C – Public Participation.

In preparation for plan drafting, BOLDplanning reviewed DeKalb County's previous mitigation update (2016) and performed a gap analysis of policies, procedures, resources, etc. Additionally, the company reviewed the Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan (Effective March 18, 2019 – March 17, 2024) and other state and local documents in relationship to mitigation planning. BOLDplanning also consulted with GEMA/HS staff (as needed) throughout the plan revision process.

All plan drafts were reviewed by the MPC and other plan stakeholders, including the public, and modifications were made as deemed necessary. The DeKalb County, GA – 2022 Countywide Hazard Mitigation Update was submitted to GEMA/HS and FEMA for review on Date and the final, approved plan was adopted by all participating jurisdictions with the signing of plan adoption resolution letters.

The MPC will monitor the mitigation update's progress over the course of the next five years and make modifications if deemed necessary. Additionally, DeKalb County will begin the process of preparing its next mitigation update (2027) in 2025.

Plan Revision Process Summary

- DEMA engaged BOLDplanning to provide staff support in facilitating the plan revision process and preparing the 2022 Countywide Hazard Mitigation Update.
- All jurisdictions participating in the plan update's development appointed a representative to service on the mitigation planning committee (MPC), along with DEMA, other stakeholders and BOLDplanning.
- Various planning events and activities ensured the MPC's understanding and agreement of the planning process, including organizing resources, assessing hazards, developing the plan update, implementing the plan update, and monitoring its progress over the next five (5) years.
- The public was given the opportunity to participate in the mitigation plan's development as required by FEMA and the Sunshine Laws.

1.2.2 – What's New in this Mitigation Update?

While certain elements of DeKalb County's previous mitigation plan (2016) have been retained, outdated information has been either revised or removed from the 2022 update. Particular emphasis was given to revising the list of critical facilities, updating the hazard risk assessment, determining the status of prior mitigation projects (2016), and identifying new mitigation projects, as explained below.

What's New? Section 3 – Planning Area (Critical Facilities Summary)

The DeKalb County MPC evaluated the list of critical facilities uploaded to the Georgia Mitigation Information System and used in the previous plan (2016). For mitigation planning purposes, this list is the basis for vulnerability assessments and loss estimates. DEMA staff updated the critical facilities list to produce the maps appearing in the 2022 mitigation update. The complete list can be found in Appendix C - Critical Facilities & Infrastructure.

What's New? Section 4 – Hazard Risk Assessment

The Dekalb County MPC evaluated the hazards identified in the previous mitigation update (2016) as well those included in the State of Georgia 2019 Hazard Mitigation Strategy, Standard and Enhanced Plan to properly determine which hazards to include/exclude in the 2022 Countywide Hazard Mitigation Update. A comparison of these plans, along with the MPC's final decisions, are provided in the table below.

Table 1: Summary of Hazards, 2022 Countywide Hazard Mitigation

Summary of Hazards, 2022 Countywide Hazard Mitigation Update			
Hazard	**DeKalb County 2016 Countywide Hazard Mitigation Update**	**2019 Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan**	**Final Decision to Include/Exclude in 2022 DeKalb County 2022 Hazard Mitigation Update**
Coastal Hazards	Excluded	Included	Exclude – Not Applicable to Planning Area
Dam Failure	Included as Flood (Dam Breach)	Included	Include in Flooding – Reasonable Risk
Drought	Included	Included	Include – Disaster History
Earthquake	Included	Included	Include – Reasonable Risk
Extreme Heat	Included	Included	Include – Disaster History
Geologic Hazards	Excluded	Included	Exclude – No Reasonable Risk
Hurricane Wind	Included as Wind Hazards	Included	Include in Wind Hazards – Disaster History
Inland Flooding	Included as Flood	Included	Include in Flooding – Disaster History
Severe Weather	Included as Wind Hazards	Included	Include in Wind Hazards – Disaster History
Severe Winter Weather	Included as Winter Storm	Included	Include – Disaster History
Tornado	Included as Wind Hazards	Included	Include in Wind Hazards – Disaster History
Wildfire	Included	Included	Include
Wind	Included as Wind Hazards	Included	Include as Wind Hazards – Disaster History

What's New? Section 5 – Mitigation Strategy

DeKalb County's 2016 Countywide Hazard Mitigation Update contained a risk assessment of identified hazards for the planning area along with a mitigation strategy to address the identified hazards' risk and vulnerability. Fittingly, many open discussions took place with the MPC and other plan stakeholders to update these sections of the plan for 2022. From these discussions came the identification of mitigation projects and goals for plan inclusion, which typical focus on strengthening critical facilities and infrastructure.

A Mitigation Strategy Update Meeting, facilitated by DEMA and BOLDplanning, provided the participating jurisdictions with information on how to offer additional insight related to the identified hazards, and subsequently the mitigation projects and goals. The Dekalb County mitigation planning points of contact (POCs) learned how BOLDplanning would assist them in providing input to update the mitigation projects from 2016 as well as how and when to offer any new/proposed projects to include in the 2022 update.

Following this meeting, representatives from BOLDplanning worked with DeKalb County and the participating jurisdictions to provide updates relevant to previous mitigation projects (2016), including their current status (completed, deferred, or carryover). The DeKalb County MPC was tasked with identifying any new mitigation projects for the 2022 update and entering them into the BOLDplanning.com platform, dubbed DeKalbReady.com.

All mitigation projects selected for the 2022 Countywide Hazard Mitigation Update, whether carried over or new, are based upon the potential to reduce risk to life and property with an emphasis on new and existing infrastructure, ease of implementation, community and agency support, consistency with local/jurisdictional plans and capabilities, available funding, vulnerability, and total risk.

The 2022 mitigation update includes 29 carryover projects from the 2016 plan as they are still relevant, in progress or ongoing. The 2022 mitigation update also includes 23 new projects. All were assessed using STAPLEE or a similar methodology to ensure the projects reflect current mitigation priorities. Details specific to these projects can be found in Section 5 - Mitigation Strategy.

NOTE: As with previous mitigation updates (2011 and 2016), DeKalb County will continue to take a multijurisdictional approach to planning; thus, ensuring the mitigation goals and objectives of the county and the participating jurisdictions remain consistent.

What's New? Section 5.5 – Planning Integration

Mitigation does not end at plan approval. Plan approval is only the beginning. The successful implementation of any number of mitigation projects requires the coordination and collaboration of different local agencies, departments, and organizations. All have varying decision-making processes and authorities governing their actions. This mitigation update, once approved, must be integrated into their decision-making processes as a tool for improving their respective resiliencies.

DeKalb County's 2022 Countywide Hazard Mitigation Update is not only useful for implementing mitigation projects but also critical to development plans and capital improvement projects. The plan's risk assessment is of particular value as it can help prevent unmanaged and dangerous development in identified hazard areas such as floodplains.

Accordingly, Dekalb County intends to incorporate elements of the 2022 Countywide Hazard Mitigation Update into other planning documents. These may include the DeKalb County Emergency Operations Plan (EOP) and the DeKalb County Comprehensive Plan, among others. Likewise, the participating jurisdictions will integrate parts of the 2022 mitigation update into similar local plans.

1.3 – Stakeholder Participation

The Dekalb County MPC is made up of stakeholders working together for the development and ongoing maintenance of this plan update. The participants are grouped into actively participating representatives from the participating jurisdictions within Dekalb County.

- **Mitigation Planning Committee (MPC)** – This group consists of the jurisdictional representatives from the planning area, the Georgia Emergency Management Agency and Homeland Security (GEMA/HS), supporting state and federal agencies, and BOLDplanning.
- **Other Stakeholders** – This group consists of interested parties from the local community and a state university. This plan was developed with the support and input from various commercial interests.
- **Members from the General Public** – FEMA requires this planning effort to be open to constant input from interested citizens in compliance with the Sunshine Laws. In Georgia, public meetings must comply with the State's Open Meetings Act, unless established by statutory exemption. Therefore, any individual citizen who wishes to be involved in this effort to mitigate future disasters is encouraged to attend the MPC meetings and to solicit relevant comments to be included in the draft sections of the written plan.

1.3.1 - Participating Jurisdictions, MPC Contributions by Planning Phase

The following table provides information specific to the jurisdictions participating in the 2022 Countywide Hazard Mitigation Update, along with their MPC contributions by planning phase.

Table 2: Participating Jurisdictions, MPC Contributions by Planning Phase

Participating Jurisdictions, MPC Contributions by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
DeKalb County Representative, Title (requested)	• Led the Mitigation Planning Committee (MPC) • Provided information on hazards, critical facilities, Points of Contact (POCs), etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will lead in the MPC as prescribed in Section 2 – Plan Maintenance
DeKalb County (Unincorporated) Representative, Title (requested)	• Provided administrative support for the MPC • Provided information on hazards, critical facilities, POCs, etc.	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Avondale Estates (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Participating Jurisdictions, MPC Contributions by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
Brookhaven (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Chamblee (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Clarkston (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Participating Jurisdictions, MPC Contributions by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
Decatur (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Doraville (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Dunwoody (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Participating Jurisdictions, MPC Contributions by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
Lithonia (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Pine Lake (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Stonecrest (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

Participating Jurisdictions, MPC Contributions by Planning Phase				
Jurisdiction and Representative	**Planning Process**	**Risk Assessment**	**Mitigation Strategy**	**Plan Maintenance**
Stone Mountain (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance
Tucker (City) Representative, Title (requested)	• Participated in MPC • Provided information on hazards, critical facilities, POCs, etc. • Served as primary POC for the jurisdiction	• Completed hazard history documentation • Completed risk assessment questionnaire • Reviewed risk assessment	• Provided mitigation project updates and actions history • Proposed mitigation projects • Prioritized mitigation projects using STAPLEE (or similar) methodology	• Will participate in the MPC as prescribed in Section 2 – Plan Maintenance

1.3.2 – Other Plan Stakeholders

The following table details plan stakeholders outside the DeKalb County MPC. Among them are relevant government agencies (local, state, and federal) with the authority to regulate development, as well as any/all regional organizations. Also represented, if applicable, are the public, neighboring communities, academia, and private organizations.

Table 3: Other Plan Stakeholders, Involvement

Other Plan Stakeholders, Involvement			
Name	**Organization**	**Position**	**Involvement**
Principal Plan Developers			
Brittney Bond	BOLDplanning	Mitigation Planner	Organized planning schedule, meetings, and plan development process; plan writer and editor

Other Plan Stakeholders, Involvement			
Name	**Organization**	**Position**	**Involvement**
Michael Amberson	BOLDplanning	Mitigation Planner	Researched and developed plan content
Karla O'Grady	BOLDplanning	Project Support	Provided additional support and input; coordinated kick-off meeting
Will Minkoff	BOLDplanning	Project Support, Plan Reviewer	Provided additional support and input; coordinated kick-off meeting; reviewed plan drafts
Kiana Freeman	BOLDplanning	Mitigation Planner	Final plan review and editing
Local Governments			
LaThaydra Sands	City of Lithonia	City Administrator	MPC Chair; represented jurisdiction, and provided additional support and input
Donovan Cushnie	DeKalb County Government, Department of Planning and Sustainability	Floodplain Coordinator	MPC Co-Chair; represented jurisdiction, and provided additional support and input
Courtney Frisch	City of Chamblee	Assistant Director of Public Works	MPC Administrative Support; represented jurisdiction, and provided additional support and input
Patrick Bailey	DeKalb County Medical Examiner	Director-Medical Examiner	Represented jurisdiction, and provided additional support and input
DC Ward	DeKalb Emergency Management	Deputy Director	Represented jurisdiction
Joseph Whelchel	DeKalb County Police Department (DKPD)	Police Officer	Represented jurisdiction, and provided additional support and input
Paul Hanebuth	City of Avondale Estates - Avondale	Asst. City Manager	Represented jurisdiction
Philemon Harrington	DeKalb County Police Department (DKPD)	Detective	Represented jurisdiction, and provided additional support and input
ChaQuias Miller-Thornton	City of Stone Mountain	City Manager	Represented jurisdiction

Other Plan Stakeholders, Involvement			
Name	**Organization**	**Position**	**Involvement**
Yolanda Harkley	DeKalb County Emergency Management (DEMA)	Emergency Manager	Represented jurisdiction, and provided additional support and input
Kristopher Matson	Children's Healthcare of Atlanta	Emergency Manager	Represented jurisdiction, and provided additional support and input
Jim Tavenner	City of Stone Mountain Public Works Department	Director	Represented jurisdiction, and provided additional support and input
J Walker	DeKalb County Police Department (DKPD)	Sergeant	Provided additional support and input
Carl Thomas	City of Dunwoody	Stormwater Utility Manager	Represented jurisdiction
Chief J.K. Cox	DeKalb County Emergency Management Agency (DEMA)	Director	Provided additional support and input
William Voorhies	DeKalb County Fire Rescue	Deputy Chief of Planning and Risk Reduction	Represented jurisdiction
Matthew Murrary	Brookhaven Police Department	EMA Team Lead	Represented jurisdiction, and provided additional support and input
Gerald Selby	Community Member	Community	Represented jurisdiction, and provided additional support and input
Toni Washington	City of Decatur	Fire Chief/Emergency Manager	Represented jurisdiction
Adam Wade	DeKalb County Police Department (DKPD)	Detective	Represented jurisdiction, and provided additional support and input
Robin Pitts	Citizen	Mother	Represented jurisdiction
Akin Akinsola	DeKalb Roads and Drainage	Floodplain Management Supervisor	Represented jurisdiction
Alesia Guest	DeKalb County E-911 Communications Center	E-911 Deputy Director	Represented jurisdiction
Regional Organizations			

Other Plan Stakeholders, Involvement			
Name	**Organization**	**Position**	**Involvement**
State Agencies			
Lucy Herring	Georgia Emergency Management and Homeland Security (GEMA/HS)	Hazard Mitigation Planning Specialist	Represented agency, and provided additional support and input
Federal Agencies			
Plan Reviewer(s)	Federal Emergency Management Agency (FEMA)	Designated Plan Reviewers, FEMA Region 4	Reviewed and approved plan
Academia & Private Organizations			

1.3.3 – Planning Meetings and Activities

As expected, much time and effort went into the development of the DeKalb County, GA - 2022 Countywide Hazard Mitigation Update. Following is a synopsis of the major, public, and private, mitigation planning meetings and other plan-related activities that took place throughout the plan development process. Proof of the meetings, sign-in sheets, public notification documentation, etc. can be found in Appendix C – Public Participation.

Hazard Mitigation Plan Update Kick-Off and Public Information Meeting, October 7, 2021 – Hosted by BOLDplanning and conducted remotely using Zoom® web conferencing due to ongoing COVID-19 concerns, this meeting was open to DEMA, the MPC, and the public. Prior to the meeting, a public announcement ran for two weeks on DEMA's Next Door social media page and DeKalb County's Facebook page. During the meeting, everyone was encouraged to ask questions, voice concerns, and provide input to the mitigation plan update. Of the 48 people in attendance, one (1) was from the public. BOLDplanning worked with the MPC to collect contact information, hazard history, facility information, and other pertinent jurisdictional information. Documentation pertaining to this meeting is in Appendix C – Public Participation.

Image 1: Screenshot, Kick-off and Public Information Meeting, October 7, 2021



Image Source: BOLDplanning

Hazard Mitigation Plan, Mitigation Strategy Update Meeting, October 6, 2021 – DEMA hosted a mitigation strategy update meeting for the MPC and plan stakeholders to gain additional insight into the county's hazards and determine how best to represent the jurisdictions during the plan update's development. Participants learned about the BOLDplanning process for updating previously identified mitigation projects (2016) and were encouraged to ask questions and express any/all concerns. The meeting took place virtually through Zoom® web conferencing due to ongoing COVID-19 concerns. It was attended by 27 stakeholders; the public was not invited given the topic(s) of discussion. Documentation pertaining to this meeting is in Appendix C – Public Participation.

Hazard Mitigation Plan Update, Public Review Period, TBD – Prior to the Public Review Period, a public announcement ran for x weeks in XXX and for x weeks in the XXX. DeKalb County also utilized social media by posting the public announcement on the county's Facebook page for x days. Additionally, DEMA publicized the Public Review Period on their website for the duration of the period (14 days). Due to the COVID-19 pandemic and DeKalb County government reopening with operations modified for COVID-19 Safe Practices, MPC members and the public were asked to review a draft copy of the updated plan online (available on DEMA's website) before asking questions or expressing concerns. The MPC, plan stakeholders, and the public

provided feedback for the plan draft using an online survey tool, i.e., Public Input. Documentation pertaining to the Public Review Period is in Appendix C – Public Participation.

Hazard Mitigation Plan Update, Final Review Meeting, Date TBD – The updated DeKalb County mitigation plan was reviewed by the MPC and other stakeholders, as requested, prior to its submission to the Georgia Emergency Management Agency (GEMA). However, due to the ongoing COVID-19 pandemic, the Final Review Meeting was not conducted in person. Rather, DEMA emailed the MPC and plan stakeholders, requesting final plan review and final comments via email reply.

Hazard Mitigation Plan Update, Plan Adoption Signing, Date TBD – Upon plan approval, adoption letters pertaining to the 2022 Countywide Hazard Mitigation Update were disseminated and signed by the 13 plan participants: Unincorporated DeKalb County, Georgia, and the municipalities of Avondale Estates (City), Brookhaven (City), Chamblee (City), Clarkston (City), Decatur (City), Doraville (City), Dunwoody (City), Lithonia (City), Pine Lake (City), Stonecrest (City), Stone Mountain (City), and Tucker (City). The signing of these resolution letters codifies the plan update's adoption.

Additional planning efforts included meetings with representation from other jurisdictions and the public at large. Planning events also included conference calls

1.4 – Community Involvement

The Dekalb County MPC provided the opportunity for neighboring communities, agencies, businesses, academia, non-profits, and other interested parties to be involved in the mitigation planning process. The public was notified of open meetings via Dekalb County's website, and local newspapers. BOLDplanning and DEMA invited all non-covered jurisdictions, including school districts and others with expiring mitigation plans, to participate in the plan update. Any jurisdiction or school district not covered in the 2022 Countywide Hazard Mitigation Update is either covered under another plan or declined to participate.

Local and regional agencies and the representatives of participating jurisdictions, including mayors, public officials, police/fire/EMS, GIS, planning, building, and zoning, and others, were notified of MPC meetings via email and phone. Emergency managers from neighboring Georgia counties, Gwinnett, Rockdale, Henry, Clayton, and Fulton, were personally invited to attend the kick-off and public draft review meeting.

For two weeks prior to each public meeting, an announcement appeared on DEMA's website (https://www.dekalbcountyga.gov/). For documentation, see Appendix C – Public Participation.

At the first public planning (virtual) meeting, attendees ranked and identified hazards, aided in the creation of a community profile, prioritized mitigation projects, and completed a risk assessment questionnaire. During this meeting, and the latter public review meeting, citizens and other parties were invited to review the most current draft, provide any input of feedback, and ask any relevant questions of the Dekalb County MPC and BOLDplanning.

Due to the COVID-19 pandemic and government reopening/COVID-19 Safe Practices for Dekalb County and the participating jurisdictions, the Public Review Period of the plan draft, as previously stated, was held virtually. MPC members and the public were invited to review a draft copy of the Dekalb County HMP (update) posted to DEMA's website (https://www.dekalbcountyga.gov/dema/dekalb-emergency-management-agency) before asking questions or voicing concerns. The MPC, stakeholders, and the public provided feedback and input on the plan draft by completing a feedback questionnaire (https://publicinput.com/I2514).

Relevant federal, regional, state, and local governments as well as any private and non-profit organizations were invited to provide input and technical expertise. The entities, who volunteered, either in person or by providing hazard data, are listed in the following table.

Table 4: Partner Involvement by Entity

Partner Involvement by Entity		
Entity Classification	**Entity**	**Entity Input**
Federal Agencies	Environmental Protection Agency (EPA), National Parks, National Oceanic and Atmospheric Administration/ National Centers for Environmental Information (NOAA/NCEI), American Society of Civil Engineers (ASCE), Army Corp of Engineers, United States Department of Agriculture (USDA), FEMA, Natural Resources Conservation Service (NRCS), National Inventory of Dams, United States Geological Survey (USGS), National Weather Service (NWS), U.S. Census Bureau	Provided census data, weather data, dam data, land use data, and geological data
State Agencies	GEMA, Georgia Bureau of Investigation (GBI), Georgia Department of Transportation (GDOT), Georgia Environmental Protection Division, Georgia Forestry Commission, State Courts	Provided oversight and technical assistance; provided hazard records; provided hazard data
Local Governments	DeKalb County Emergency Management Agency (DEMA); Dekalb County Planning and Zoning Division, Participating Municipalities (Cities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stonecrest, Stone Mountain, and Tucker), Dekalb County School District, Dekalb County Water System	Provided input as MPC members / principal subjects; Provided input – GIS (maps); Provided input – public school map; provided input from various interests
Private Organizations	BOLDplanning, Dekalb County-Marietta Water Authority; Metropolitan North Georgia Water Planning District; Central United States Earthquake Consortium	Directed planning effort as principal planners; provided input from various interests; provided hazard data
Academia	University of Georgia Information Technology Outreach Services (ITOS)	Provided input – Hazus report

Section 2: Local Procedures & Resources

Planning Process
Local Procedures & Resources
• Available Resources
• Continued Public Involvement
• Plan Maintenance Process
Planning Area
Hazard Risk Assessment
Mitigation Strategy

2.1 – Available Resources

2.1.1 – Documentation Resources

The DeKalb County MPC conducted a comprehensive review of DeKalb County and the cities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stonecrest, Stone Mountain, and Tucker, to determine the availability of existing emergency management and preparedness information for mitigation planning purposes. Following is a synopsis of their findings.

DeKalb County, GA – 2016 Countywide Hazard Mitigation Update
DeKalb County and the cities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, and Stone Mountain, are currently covered by this plan. The cities of Stonecrest and Tucker were not incorporated until 2016 and thus, considered part of unincorporated DeKalb at the time of the plan's development and adoption.

Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan, March 18, 2019 - March 17, 2024
The Georgia Hazard Mitigation Strategy (GHMS) is a result of the state's continued efforts to reduce its exposure to losses from natural hazards, and to maintain eligibility for the full range of disaster assistance available under the Robert T. Stafford Disaster Relief and Emergency Assistance Act as amended by the Disaster Mitigation Act of 2000 (DMA 2000). The Enhanced Plan documents the state's commitment to the objectives of hazard mitigation. This designation recognizes Georgia as a proactive leader in implementing a comprehensive statewide program. The 'enhanced' status acknowledges the extra effort the state has made to reduce losses, protect resources, and create safer communities.

DeKalb County Critical Facilities List
The DeKalb County MPC assessed the list of critical facilities uploaded to the Georgia Mitigation Information System. The list was used throughout the development of the 2022 mitigation update and is the basis for the vulnerability assessments and loss estimates. The complete list is available in Appendix C – Critical Facilities & Infrastructure.

DeKalb County Continuity of Operations (COOP) Plan
Developed by DEMA using the BOLDplanning.com platform and a 'best practices' methodology, this 'living document' helps ensure the agency can continue to perform mission-essential functions during a wide range of emergencies.

DeKalb County Local Emergency Operations Plan (LEOP)
Developed by DEMA using the BOLDplanning.com platform and a 'best practices' methodology, this 'living document' describes the management and coordination of resources and personnel during periods of major emergency.

DeKalb County Comprehensive Plan, DeKalb County 2050 Unified Plan
The DeKalb County 2050 Unified Plan combines two of the county's long-range plans into one: a Comprehensive Transportation Plan that identifies priority transportation projects and policy recommendations, and a Comprehensive Land Use Plan that establishes the framework for future growth and development. Transportation and land use investments have a direct impact on one another, so the combined plan creates a more consistent and unified strategy. The combined plan addresses housing, health and wellness, public safety, arts and culture, sustainability, retail, and annexation.

City of Avondale Estates Comprehensive Plan Update (2021)
This plan presents a vision for progress and provide a framework for the execution of that vision. It is aimed at guiding the city on investment planning and organization to promote quality of life for citizens by provision of adequate infrastructure and amenities.

City of Brookhaven Comprehensive Plan Update (2019)
This plan (update) affirms the city's 'big picture' vision, defines goals, and lays out a task list for city leaders, staff, and citizens to address issues as well as position the city to be a leader within the Metro-Atlanta area. It includes updated policies, data, and a new work program.

City of Chamblee Comprehensive Plan 2034
Adopted in 2016, this plan is a 20-year policy guide that assesses current conditions, projects future trends, develops strategies and goals, and creates a work program to achieve these goals. The plan, as required by the Georgia Planning Act, includes the following elements: Community Goals, Needs and Opportunities, Community Work Program, Land Use, Housing, and Transportation.

City of Clarkston Comprehensive Plan 2040
This plan updates the previous plan (2006) while building off the momentum of recent development.

City of Decatur Comprehensive Plan
This plan serves as a guide for making rezoning and capital investment decisions by city officials and staff. It also provides the Decatur community a snapshot of where it is today and wants to be tomorrow (through the year 2040).

City of Dunwoody Comprehensive Plan
This plan assists decision-making and administrative actions in an effort to guide the City of Dunwoody toward the community's preferred future. Subsequent to the original Comprehensive Plan's adoption, the city has also adopted the Comprehensive Transportation Plan, Parks and Recreation Master Plan, Dunwoody Village Master Plan, and Georgetown/North Shallowford Mast Plan as addenda, demonstrating the city's continued commitment and efforts to establish an encompassing guiding policy document.

City of Lithonia 2020 Comprehensive Plan Update
Lithonia is one of DeKalb County's smallest cities, both in population and geography. Citizens appreciate the quality of life offered in the community, while simultaneously advocating for increased opportunities for economic and community development. Creating new opportunities while preserving the existing quality of life will achieve the balance the community is looking for in attaining the vision set out in this Comprehensive Plan.

City of Pine Lake Comprehensive Plan
Pine Lake is DeKalb County's smallest city, both in population and geography. Thus, it is a strongly connected community where individuals are valued. It elevates the arts, the environment, and civic participation. To sustain these values, Pine Lake will plan growth and maintain the environment, while improving services, city finances, and the quality of life for residents. Adopted October 12, 2021, this plan demonstrates the city's resiliency for over 75 years and supports its vision for the future.

City of Stonecrest Comprehensive Plan
The City of Stonecrest is one of DeKalb County's newest cities; it was incorporated in 2016. The city's Comprehensive Plan sets the vision, mission, policies, and goals. It is the guide that current and future administrations will use for future development and growth.

City of Stone Mountain Comprehensive Plan 2021
As an update to the City of Stone Mountain's previous Comprehensive Plan (2016), this plan builds upon well-established vision, goals, and policies. It incorporates recent planning efforts from the last five years, current trends and data, and new community input, and includes a new work program to define the city's path for the future.

City of Tucker Comprehensive Plan
Tucker is one of DeKalb County's two newest cities; it was incorporated in 2016. The city's Comprehensive Plan expresses the community's aspirations and goals for the future, while articulating a corresponding set of policies and recommendations to guide future decisions regarding land use, development, and capital improvements.

Other Planning Documents

Dekalb County, Georgia Flood Insurance Study
The Dekalb County Flood Insurance Study (FIS) revises and updates information on the existence and severity of flood hazards in this specific geographic area. This FIS aids in the administration of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973. This study has developed flood-risk data for various areas of the community that will be used to establish actuarial flood insurance rates and to assist the community in its efforts to promote sound floodplain management. Minimum floodplain management requirements for participation in the National Flood Insurance Program (NFIP) are set forth in the Code of Federal Regulations (CFR) at 44 CFR, 60.3.

Hazard Risk Analyses Supplement to the Dekalb County Joint Hazard Mitigation Plan
In 2020, the Georgia Department of Emergency Management partnered with the Carl Vinson Institute of Government at the University of Georgia to develop a detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in Dekalb County. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets.

Georgia Safe Dams Programs
Pursuant to the Georgia Safe Dams Act, O.C.G.A. Secs. 12-5-370 et seq., the Safe Dams Program (https://epd.georgia.gov/watershed-protection-branch/safe-dams-program), is responsible for developing and maintaining an inventory of dams, classifying dams, and ensuring compliance of all regulated dams. The Dam Diagram and Inventory of Dams information is included in the Dam Failure hazard identified within this HMP update.

Dekalb County Planning Documents
Dekalb County's participating jurisdictions provided a host of planning, zoning, and development-related documents. These documents were reviewed, assessed, and cataloged to compile Section 5.1 – Mitigation Capabilities as well as Section 5.5 - Planning Integration of this HMP update.

2.1.2 – Fiscal Resources

The DeKalb County MPC assessed all available funding options for hazard mitigation planning purposes. Following is a list of federal, state, and local funding sources that are either available or relevant to the 2022 Countywide Hazard Mitigation Update.

Flood Mitigation Assistance Program (FMA)
The FMA program is designed to aid in the buyout of repetitive loss (RL) and severe repetitive loss (SRL) properties as well as assist in the funding of flood mitigation projects and activities.

Fire Prevention & Safety Grants (FP&S)
These grants are administered by FEMA to enhance safety of the public and firefighters from fire and fire-related hazards. The primary goal is to target high-risk populations and reduce injury. Fire departments, local governments, and recognized community organizations are eligible to receive this funding.

Hazard Mitigation Grant Program (HMGP)
The Hazard Mitigation Grant Program (HMGP) is managed by FEMA and administered GEMA. DeKalb County does not have any HMGP funds available for mitigation planning.

Local Revenues & Budgets
Recognizing the importance of hazard mitigation planning, DeKalb County and the participating jurisdictions have self-funded the 25% match required by FEMA's PDM grant.

Pre-Disaster Mitigation Grant Program (PDM)

PDM, which is managed by FEMA, is a nationally competitive grant program. The development of this mitigation update was funded by a PDM grant at a 75% match.

2.1.3 – Technical Resources

The DeKalb County MPC employed a variety of technical resources in this plan's development. These technical resources were instrumental in completing an accurate vulnerability and risk assessment.

BOLDplanning (now a division of Agility, https://www.agilityrecovery.com)

Over 17 years in business, and as the principal plan writer, BOLDplanning has helped state and local agencies across the country create more than 10,000 Hazard Mitigation Plans (HMPs), Continuity of Operations Plans (COOPs), Emergency Operations Plans (EOPs), and Local Emergency Operations Plans (LEOPs). The company offers clients a unique combination of expert consulting and a world-class online software solution, the BOLDplanning.com platform, that together make the planning process easier, more efficient, and more effective.

Company capabilities also include project management, stakeholder engagement, GIS (mapping), and Homeland Security Exercise and Evaluation (HSEEP)-based exercises.

Throughout the course of developing the DeKalb County, GA - 2022 Countywide Hazard Mitigation Update, the BOLDplanning.com platform (shown below) was used to capture key data and keep the project on schedule. The platform, dubbed DeKalbReady.com, will remain available for plan maintenance and project tracking, as well as integrating additional plans, including DeKalb County's Continuity of Operations (COOP) Plan and Emergency Operations Plan (EOP), if desired.

Image 2: Screenshot, DeKalb Ready.com

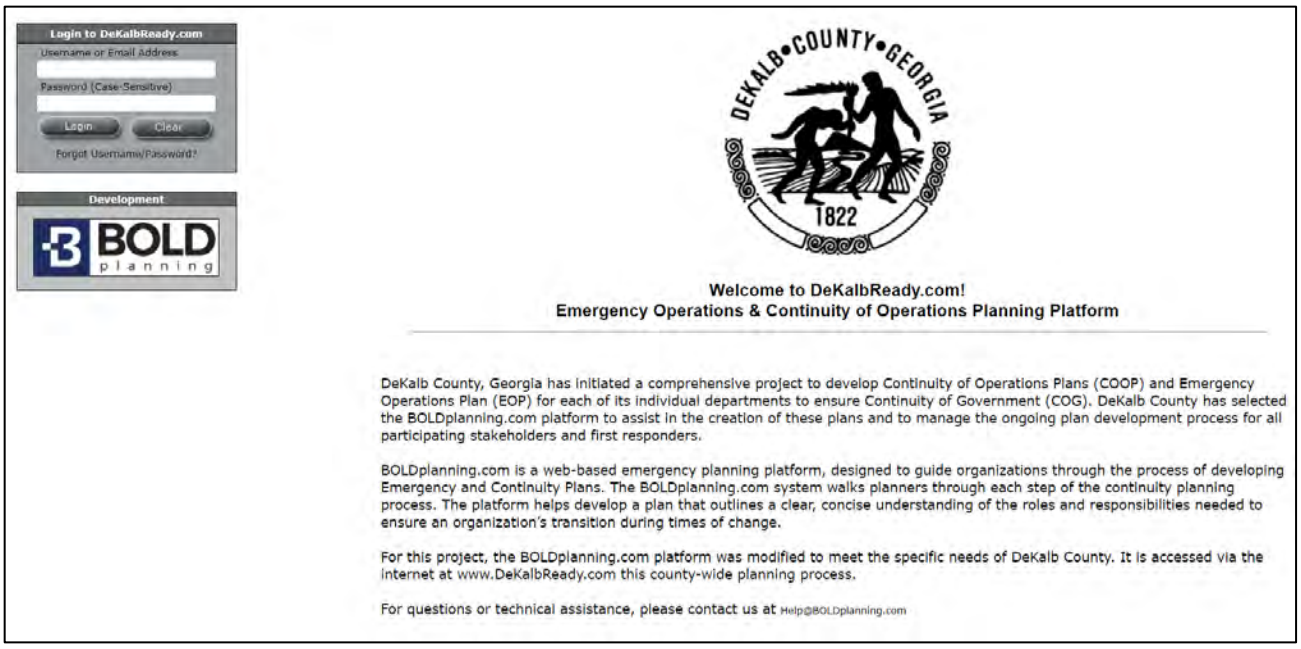


Image Source: BOLDplanning

NOTE: BOLDplanning has a 100% FEMA approval rate for well over 50 state, local and tribal mitigation plans since 2004, including numerous first-submission approvals.

ESRI ArcGIS v10
Most, if not all, of the maps within this plan (including the Hazus models), were developed using ESRI's ArcGIS v10.

FEMA Digital Flood Insurance Rate Map (DFIRM), National Flood Hazard Layer (NFHL)
FEMA's NFHL data was instrumental in mapping floodplain locations and estimating potential flood impacts and loss estimates for this mitigation update.

National Oceanic and Atmospheric Administration, National Centers for Environmental Information (NOAA/NCEI)
NOAA/NCEI's Storm Events Database was the primary source of weather-related historical data for this mitigation update.

U.S. Army Corps of Engineers (USACE)
Data from USACE's National Inventory of Dams was instrumental in determining the location of high-hazard dams in the planning area and assessing the hazard level.

2.2 – Continued Public Involvement

DeKalb County is dedicated to involving the public in the continual shaping of its mitigation plan and the development of its mitigation projects and activities.

The DeKalb County MPC will continue to keep the public informed about its hazard mitigation projects and activities through DEMA's website. Additionally, it will provide a "comments/suggestions" option for the public to submit input through the website.

The public will also be invited to participate in annual MPC meetings to review and discuss the mitigation-related events of the past year.

DeKalb County used a public input website to collect data from local plan stakeholders during the hazard mitigation planning process. All collected data was used to create a local hazard profile and provide insight on

the public's concerns. A public input site will continue be used as needed to track the status of previous hazard mitigation actions and elicit feedback for future hazard mitigation actions.

Copies of the 2022 Countywide Hazard Mitigation Update will be available online through DEMA's website and the participating jurisdictions.

2.3 – Plan Maintenance Process



The DeKalb County MPC has developed a method to ensure monitoring, evaluation, and updating of its 2022 Countywide Mitigation Update. Upon adoption of the plan, DEMA will utilize the MPC to provide plan updates, revisions, and data collection for future mitigation planning purposes. The MPC Chair will form a subcommittee comprised of the DEMA director and jurisdictional representatives from the MPC, to analyze the proposed mitigation projects. The Chair of the subcommittee will be determined by a vote in the subcommittee. Additional subcommittee members may be added based on necessity. The subcommittee will submit a quarterly report to the MPC, which in turn, will submit an annual report to DEMA.

DEMA may request a non-scheduled report on the monitoring, evaluation, or updating of any portion of this plan due to irregular progress on mitigation actions and or projects, in the aftermath of a hazard event, or for any reason deemed appropriate.

NOTE: Hazard mitigation plans are required to be updated every five (5) years per FEMA. DeKalb County will meet this requirement by starting the planning process three (3) years after this plan is formally adopted.

2.3.1 – Plan Monitoring & Situational Change

Regularly report on the progress of mitigation actions and projects from start to finish



Plan monitoring can be defined as the ongoing process by which stakeholders obtain regular feedback on the progress being made towards achieving their goals and objectives. In the more limited approach, monitoring may focus on tracking projects and the use of the agency's resources. In the broader approach, monitoring also involves tracking strategies and actions being taken by partners and non-partners, and figuring out what new strategies and actions need to be taken to ensure progress towards the most important results.

A monitoring report will be written and submitted for review to the MPC and after the annual MPC meeting, or when triggered by situational change. The monitoring report answers the questions on the following page.

- ✓ *Is the mitigation project under, over, or on budget?*
- ✓ *Is the mitigation project behind, ahead of, or on schedule?*
- ✓ *Are there any changes in DeKalb County's capabilities which impact the hazard mitigation plan?*
- ✓ *Are there any changes in DeKalb County's hazard risk?*
- ✓ *Has the mitigation action been initiated, or its initiation planned?*
- ✓ *If applicable, has participation in a mitigation action's collaboration been regular?*
- ✓ *If any, what plan updates occurred, why did they occur, and what is their impact?*



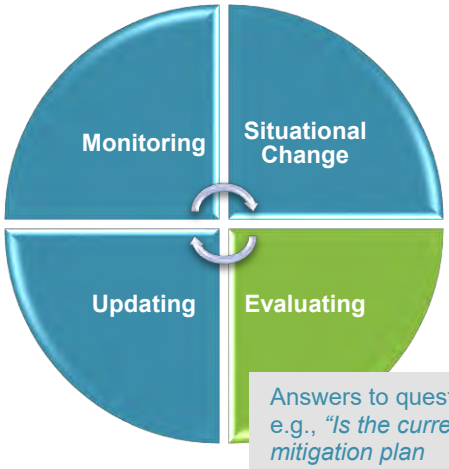
Plan change(s) due to training, drills, exercises, project completions, hazard events, etc.

The plan maintenance process is cyclical and maintenance items can operate simultaneously within the process.

2.3.2 – Plan Evaluating

A plan evaluation is a rigorous and independent assessment of either completed or ongoing activities to determine the extent to which they are achieving stated objectives and contributing to decision making.

An evaluation report will be written and submitted to DeKalb County's MPC when the situation dictates. The following situations are typical examples of when an evaluation will be necessary.



Answers to questions e.g., *"Is the current mitigation plan sufficient, helpful, and relevant?"* are imperative during an evaluation

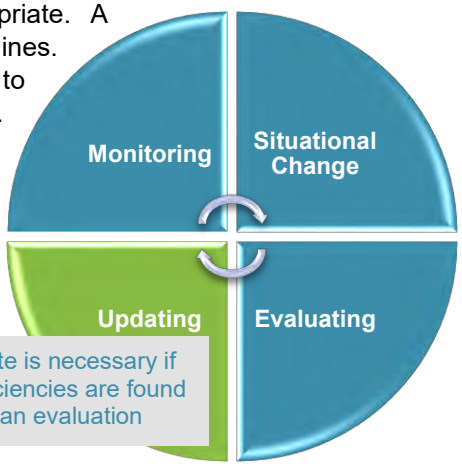
- Post hazard event
- Post training exercise
- Post tabletop or drill exercise
- Significant change or completion of a mitigation project
- Significant change or completion of a mitigation action

An evaluation report will ask the following questions in response to the previously listed events.

- ✓ *Do the mitigation objectives and goals continue to address the current hazards?*
- ✓ *Are there new or previously unforeseen hazards?*
- ✓ *Are current resources appropriate for implementing a mitigation project?*
- ✓ *Was the outcome of a mitigation action/project expected?*
- ✓ *Are there implementation problems?*
- ✓ *Are there coordination problems?*

2.3.3 – Plan Updating

Typically, the updating of a hazard mitigation plan is initiated upon the completion of a plan evaluation and even then, only when the evaluation determines an update is appropriate. A plan update also occurs every five (5) years per FEMA guidelines. Additionally, when new hazard data becomes available, it will be added to the plan. New data will be confirmed or denied at future MPC meetings.



For whatever reason, a plan update can be written anytime it is deemed necessary by the DEMA.

To ease this process, DeKalb County will continue to use the online platform, DeKalbReady.com. The website, as previously mentioned, serves as a repository for information specific to hazard mitigation and increases collaboration between plan stakeholders. Users can track the plan's progress in real time and document their concerns.

According to FEMA/DMA 2000 guidelines for mitigation planning, Dekalb County will begin the process of updating its plan three (3) years from its formal adoption. It will do so under the direction of the county's EMA Director. DEMA will coordinate and facilitate a bi-annual meeting within the five-year cycle with stakeholders from the participating jurisdictions to gather relevant information needed for the next plan update. These meetings will ensure that status is known for the projects and goals identified in the mitigation strategy are up to date (as required by FEMA), in the next, five-year plan update (2027).

2.3.4 – Evaluation Report

DeKalb County Mitigation Planning Committee
DeKalb County Hazard Mitigation Plan
Evaluation Report

Hazard Mitigation Plan Sub-Committee Chair: _____
Meeting Date: _____
Plan Approval Date: _____
Plan Expiration Date: _____
Have there been any disasters or training event since the last report? If so, list them below:

Disaster Number/ Training Event	Hazard Type(s)	Was the hazard expected or unforeseen?	Is a plan update required?
Example: DR-1000	*Tornado*	*Unforeseen*	*Yes*
Example: Annual Training	*Flash Flooding*	*Expected*	*No*

Mitigation Projects:

Mitigation Project	Participating Jurisdiction(s)	Proposed/Scheduled/In Progress/Completed	Behind/Ahead/On-Schedule	Estimated Completion Date
Example: Tornado Safe Room	*Anytown*	*In Progress*	*On-Schedule*	*1/1/2022*

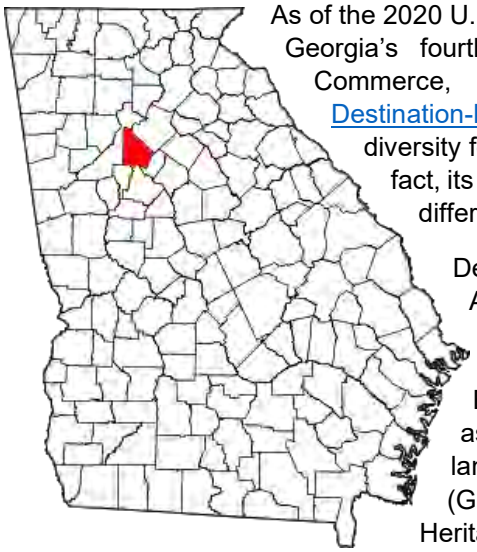
Public Engagement and Outreach Notes:

Miscellaneous Notes:

Section 3: Planning Area

DeKalb County, one of 159 counties in the State of Georgia, was created in 1822 from Henry, Gwinnett, and Fayette Counties. It is located in the north central portion of the state and situated on a natural ridge that runs between Atlanta and Athens, aka the Continental Divide. The county encompasses 267.7 square miles of land area, making it the 113th largest county in Georgia by total area.

Today, DeKalb County is included in the Atlanta-Sandy Springs-Roswell, Georgia Metropolitan Statistical Area, aka Metro Atlanta area. It contains roughly 10% of the City of Atlanta, of which the other 90% lies within nearby Fulton County. Adjacent to DeKalb County are Gwinnett County (north), Rockdale County (east), Henry County (south), Clayton County (southwest), and Fulton County (west).



As of the 2020 U.S. Census, DeKalb County had a population of 764,382, making it Georgia's fourth-most populous county. The DeKalb County Chamber of Commerce, https://www.dekalbchamber.org/wp-content/uploads/2019/09/Destination-DeKalb-County-GA-2018-6-26-18.pdf), credits the county's diversity for its continued growth and international appeal over the years. In fact, its numerous businesses and residences presently represent over 30 different countries and speak at least 200 languages.

DeKalb County is located only minutes from the Hartsfield-Jackson Atlanta International Airport (the second busiest airport in the world) and is the site of the former Naval Air Station Atlanta. It is home to nine colleges and other postsecondary institutions, including Emory University, Georgia State University, and Mercer University, as well as the Centers for Disease Control (CDC). Notable landmarks of DeKalb County include Stone Mountain Park (Georgia's most-visited attraction) and the Arabia Mountain National Heritage Area.

For mitigation planning purposes, the planning area for this HMP update includes unincorporated DeKalb County, and the cities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur (the county seat), Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain, Stonecrest, and Tucker.

NOTE: The cities of Stonecrest and Tucker did not participate in the previous plan update as they were incorporated after its adoption in 2016.

Employment & Economy

U.S. Census data (2019) indicates the presence of 17,293 employer establishments in DeKalb County. The county's diverse industry base includes manufacturing, retail, construction, trade, finance, engineering, healthcare, and management. Large employers include AT&T Mobility and Emory Healthcare (Atlanta Regional Commission, https://atlantaregional.org/atlanta-region/county-profiles/dekalb-county/).

DeKalb County's unemployment rate, 4.8% (December 2021) is generally less than the national average, 6.0% (December 2021) and future job growth, i.e., over the next ten years, is predicted to be 44.7%, which is higher than the U.S. average of 33.5% (https://www.bestplaces.net/economy/county/georgia/dekalb). The county has seen the job market increase by 2.9% over the last year (2020-2021) alone.

The median household income is $62,399 (2019 dollars), which is above the State of Georgia's average of $61,980 (U.S. Census 2020).

Housing

According to the U.S. Census (2020), there are 289,829 households in DeKalb County. A household includes all the people who occupy a housing unit as their usual residence. There are also 326,101 housing units in the county. A housing unit is a house, apartment, mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters (or if vacant, intended for occupancy as separate living quarters).

Table 5: Population Summary, DeKalb County

Population Summary, DeKalb County			
Jurisdiction	**Population**	**Households**	**Housing Units**
DeKalb (County)	764,382	289,829	326,101
Avondale Estates (City)	3,567	1,422	1,726
Brookhaven (City)	55,161	22,549	25,945
Chamblee (City)	30,164	11,526	13,198
Clarkston (City)	14,756	3,727	5,398
Decatur (City)	24,928	8,841	11,205
Doraville (City)	10,623	3,231	3,751
Dunwoody (City)	51,683	20,482	22,514
Lithonia (City)	2,662	938	1,100
Pine Lake (City)	752	386	400
Stone Mountain (City)	6,703	2,351	2,777
Stonecrest (City)	59,194	20,325	24,452
Tucker (City)	37,005	14,479	16,255

Data Source: U.S. Census Bureau (2020 Decennial Census), https://data.census.gov/cedsci/profile?g=0500000US13089
NOTE: The population of DeKalb County includes 390,344 who live inside the Atlanta-DeKalb County Census Division (CCD). The City of Atlanta participates in the Fulton County Multi-Jurisdictional Hazard Mitigation Plan.

The U.S. Census Bureau (v2019) reported the median value of owner-occupied housing units in DeKalb County to be $215,600. However, BestPlaces, https://www.bestplaces.net/housing/county/georgia/dekalb, shows the current median home cost in DeKalb County to be $275,300. BestPlaces also indicates home appreciation is up 16.5% in 2021.

Regarding new housing stock, the U.S. Census Bureau indicates the issuance of 2,225 building permits in DeKalb County for 2020. However, since not all permits become actual housing starts, and starts lag the permit stage of construction, this number does not represent total new construction, but should provide a general indicator on construction activity and the local real estate market.

The following table provides a structural summary, by sector, for DeKalb County, as identified by FEMA's geographic information system-based natural hazard analysis tool, Hazus.

Table 6: General Building Stock (GBS) Exposure Updates by Occupancy Class, DeKalb County

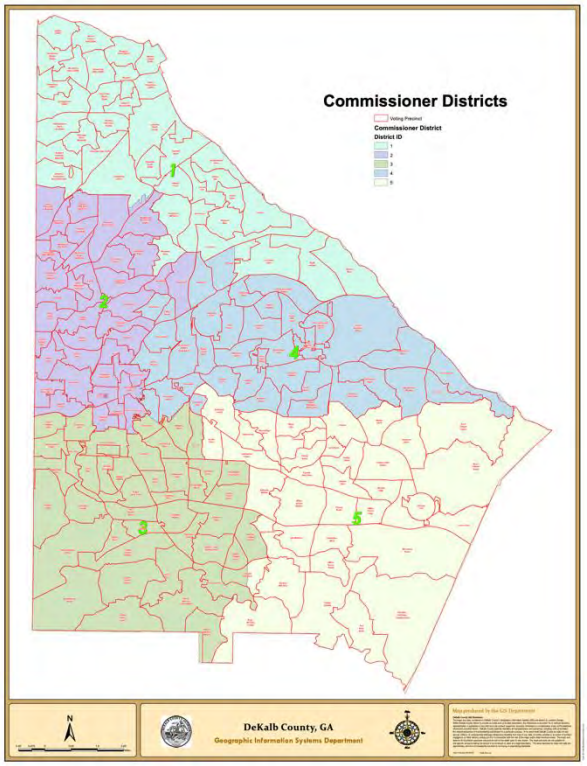
General Building Stock (GBS) Exposure Updates by Occupancy Class, DeKalb County				
General Occupancy	**Default Hazus-MH Count**	**Updated Count**	**Default Hazus-MH Exposure**	**Updated Exposure**
Commercial	13,947	6,670	$13,046,956,000	$12,186,755,000

General Building Stock (GBS) Exposure Updates by Occupancy Class, DeKalb County				
General Occupancy	**Default Hazus-MH Count**	**Updated Count**	**Default Hazus-MH Exposure**	**Updated Exposure**
Industrial	3,328	951	$2,315,533,000	$1,871,459,000
Residential	206,947	213,813	$65,913,862,000	$124,235,839,000
Agricultural	525	0	$196,471,000	0
Religious	1,583	230	$1,526,135,000	$250,159,000
Government	491	0	$547,765,000	0
Education	639	89	$1,513,469,000	$323,004,000
TOTAL	**227,460**	**221,753**	**$85,060,191,000**	**$138,867,216,000**

Data Source: DeKalb County EMA

NOTE: Per the Hazus report, the GBS records for DeKalb County were replaced with data derived from parcel and property assessment data obtained from DeKalb County. The county provided-property assessment data was current as of July 2022. The exposure values represent the total number and replacement costs for DeKalb County buildings.

Based upon the numbers indicated above, DeKalb County has a total of $138,867,216,000 billion in structural (building value) exposure.



Government

The Board of Commissioners serves as the legislative branch of the DeKalb County government. The Board is comprised of seven part-time commissioners, all elected to a four-year term. DeKalb County is divided into five districts with one commissioner serving each district. There are also two "super districts," one on the east end of the county and the other on the west end, each making up about half of the county population. Each super district is served by one commissioner. Therefore, every citizen of DeKalb County is served by two commissioners, one with the district and one with the super district.

Each of the cities within DeKalb County have their own local governing bodies in place. These consist of an elected mayor and city council, and an appointed city manager who oversees the day-to-day operations of their respective city's functions, i.e., zoning, code enforcement, building permits, site inspections, business licenses, public safety, etc.

Emergency Services

The DeKalb County E-911 Center serves as the planning area's primary Public Safety Answering Point (PSAP). Its staff handles more than one million calls each year, over 800,000 of which are 9-1-1 calls, providing full dispatch services to all of unincorporated DeKalb County and to the cities of Avondale Estates, Clarkston, Lithonia, Pine Lake, Stone Mountain, Stonecrest, and Tucker. The center also provides fire-rescue dispatch services to the cities of Brookhaven, Chamblee, Decatur (rescue only), Doraville, and Dunwoody. Additionally, the center provides rescue dispatch services to that portion of Atlanta which lies in DeKalb.

The cities of Chamblee, Decatur, and Doraville operate their own PSAPs. The cities of Brookhaven and Dunwoody utilize the services of the Chattahoochee River 911 Authority (ChatComm) as their public safety answering point.

DeKalb County residents are served and protected by the DeKalb County Police Department, the DeKalb County Sheriff's Office, and Georgia State Patrol. The Uniform Division of the DeKalb County Police Department consists of four precincts and the Tactical Response Team (TRT). The DeKalb County Sheriff's Office is one of only 41 sheriff's offices nationwide (3,083) to hold the distinctive "Triple Crown" accreditation status by the National Sheriff's Association.

Fire services are provided by the DeKalb County Fire Rescue Department and others within their jurisdictional borders. The Department operates 26 strategically located to provide coverage throughout the planning area. The stations are staffed by 600 well-trained men and women and handle nearly 90,000 calls for service annually.

Mutual aid agreements are in place to support large-scale, multi-department emergency response. Collectively, there are 26 fire facilities, ten (10) police facilities, and one (1) Emergency Operations Center (EOC) located in DeKalb County and participating jurisdictions.

The DeKalb Emergency Management Agency (DEMA) is the lead organization responsible for providing management and coordination of mitigation, preparedness, response, and recovery activities within the county.

Hospitals & Medical Facilities

DeKalb County has multiple hospitals and health care facilities that range in size and primary function, including emergency/trauma care, primary care, long-term care, and walk-in care. Among them are Emory University Hospital, Emory DeKalb Medical, and the Atlanta VA Medical Center.

Senior Care & Living Facilities

DeKalb County has an extensive system of programs and services for its senior (65+) population. This includes seven (7) nursing homes, senior centers, and senior housing facilities, all of which are considered vulnerable to the impacts from disasters.

NOTE: FEMA/DMA 2000 requires that hazard mitigation plans consider socially vulnerable populations. These populations can be more susceptible to hazard events, based on several factors, including their physical and financial ability to react or respond during a hazard, and the location and construction quality of their housing. Accordingly, the elderly (65+ population) as well as those living in low-income households are considered vulnerable populations within this update to this plan update.

Schools

As for public education, the planning area is served by the DeKalb County School District (DCSD), https://www.dekalbschoolsga.org. DCSD is Georgia's third-largest school system. The district serves nearly 102,000 students, 137 schools & centers, and 15,500 employees.

Transportation

Highways – Five (5) major road arteries, i.e., interstates, traverse DeKalb County: Interstates 20, 85, and 285. I-20 runs east to west, while I-85 runs northeast to southwest. I-285, aka "the Perimeter," is a beltway that encircles most of Atlanta. It has come to mark the boundary between the interior of the region and its surrounding suburbs. Numerous, heavily traveled state routes are also present within DeKalb County.

Airports – DeKalb County is located within minutes of the Hartsfield-Jackson Atlanta International Airport (ATL), which is presently the world's second busiest airport (only behind Guangzhou Baiyun International Airport in China). The county itself is home to the DeKalb-Peachtree Airport (PDK), the second busiest airport in the State of Georgia. As such, PDK has averaged about 228,000 operations (take-offs and landings) per year over the past 30 years.

Rail Systems – DeKalb began as a railroad town and it still serves as a major rail junction, with several freight lines belonging to Norfolk Southern and CSX intersecting below street level in downtown.

Public Transportation – The Metropolitan Atlanta Rapid Transit Authority, or MARTA, is the principal rapid-transit system in the Metro Atlanta area, and is the eighth largest in the U.S. Though originally formed in 1971 as strictly a bus system, MARTA today also consists of 48 miles of rail track and 38 train stations. It also maintains a single rail station at Hartsfield-Jackson Atlanta International Airport (ATL). Presently, MARTA serves nearly 400,000 passengers a day, including residents of DeKalb County.

High-Hazard Dams

After considerable study and evaluation by several sources, it has been determined that Georgia has nearly 31 Class II Dams and 16 Class I Dams located in DeKalb County.

Evacuation Measures

Depending on a hazard's severity and impact, certain locations within DeKalb County may need to be evacuated. In these instances, the county assists with the coordination and communication of evacuation routing as necessitated by the execution of local municipal Emergency Operations Plans (EOPs).

Specific evacuation plans are identified in Atlanta's Regional Coordination Evacuation Plan and DeKalb County's emergency plans; most of the plans' content is not shared with the public until warranted.

DeKalb County and all participating jurisdictions have identified mitigation actions to protect critical facilities and critical infrastructure, including facilities available to support sheltering and transportation routes that facilitate evacuation and the movement of emergency vehicles.

Shelters

With the support and cooperation of the American Red Cross (ARC) and local jurisdictions, DeKalb County assists with the coordination and communication of shelter availability as necessitated by the execution of local municipal EOPs.

Climate & Physical Environment

DeKalb County is categorized as having a humid, subtropical climate, influenced by the Appalachian Mountains to the north, the Gulf of Mexico to the south, and the Atlantic Ocean to the southeast. The summer (July) high is around 89 degrees, and the winter (January) low is around 32 degrees. The county receives 52.3 inches of rain and 1.4 inches of snow, on average, each year, which is below the U.S. average of 38 and 28 inches respectively.

According to the National Weather Service, https://www.weather.gov/ffc/2019AnnualClimateSummary, 2019 ended up being warmer and drier across north and central Georgia. Average temperatures were at least two degrees above normal. Ranked by average temperatures, Atlanta (66.1 degrees) recorded its warmest year on record. Climate change is generally considered to be the root cause for the increase.

The annual BestPlaces Comfort Index for DeKalb County is 7.6 (10=best), which means it is one of the most pleasant places in Georgia.

As for the physical environment of the planning area, DeKalb County is largely built out and suburban in nature. Most of the county is in the Winder Slope District of Georgia's Piedmont Province. The Winder Slope District is characterized by gently to strong sloping hillsides bisected by headwaters of major streams flowing to the Atlantic Ocean. The soils of DeKalb County fall into 12 U.S. Natural Resource Conservation (NRCS) categories, ranging from poorly drained or nearly level ground to well-drained soils on steep slopes.

There are three major drainage basins: the Chattahoochee River Basin, South River Basin, and the Yellow River Basin. Most of the land in the Chattahoochee River Basin drains westward to the Chattahoochee River via Nancy Creek, Peachtree Creek, and several smaller tributaries. The South River tributaries, Pole Bridge, Snapfinger, Shoal, and Entrenchment Creeks, drain the southern part of DeKalb County. The southeastern portion of DeKalb is drained by the Yellow River, which flows through the extreme easter part

of the County and flows toward the south. The Yellow River Basin includes Stone Mountain, Swift, and Crooked Creeks.

Soils along the South River, Yellow River, Peachtree Creek, Nancy Creek, and their tributaries are nearly level. The floodplains are typically narrow and frequently flood during the spring and winter months. (For additional information, see Section 4.4 – Flood.)

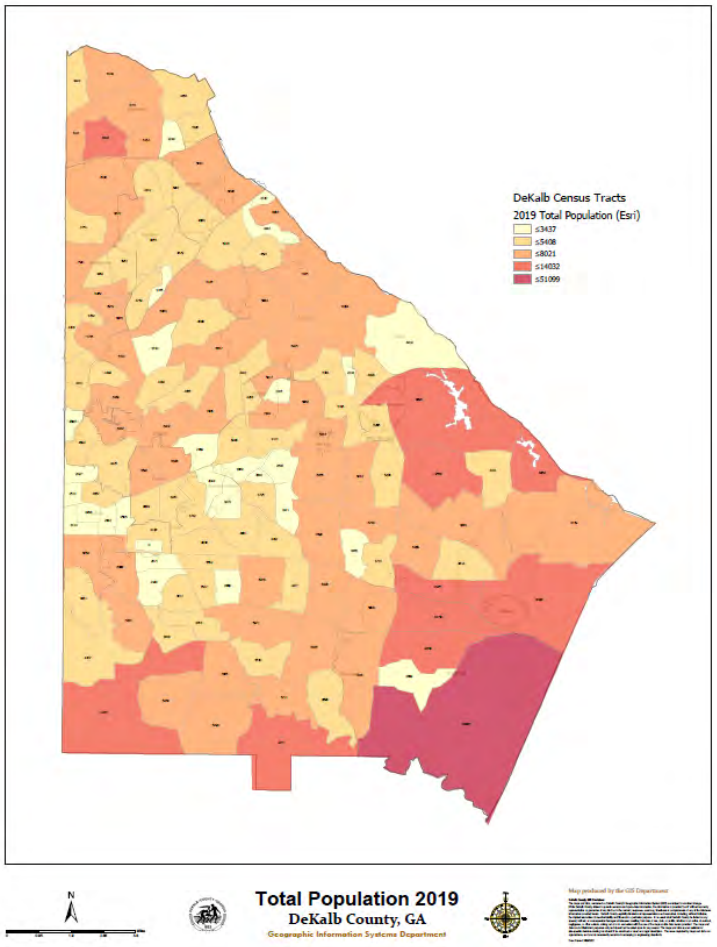
Tree species commonly found in the DeKalb County include Loblolly Pine, Northern Red Oak, White Oak, Short Leaf Pine, White Ash, and Winged Elm.

Given its many attributes, including location (proximity to Atlanta), continued financial and economic vitality, cultural diversity, rich history, and natural beauty, DeKalb County remains attractive to new residents, businesses, and visitors alike. As evidence, the Atlanta Regional Council (ARC) predicts that the county's population will grow to just over one million in 2050.

3.1 – Demographics

Of the 159 counties in the State of Georgia, Dekalb County is ranked as 112th in land area (267.58 square miles) and fourth in population size (707,185). According to the U.S. Census Bureau, the population of Dekalb County increased from 691,893 in 2010 to 764,382 in 2020. This represents an increase of 72,489 people, or a 10.48% increase over a ten-year period.

MAP: 1 *JURISDICTIONAL MAP*



Source: *Geographic Information Systems Department*

The following table details the population demographics specific to DeKalb County and its participating jurisdictions.

Table 7: Community Demographics, DeKalb County

Community Demographics, DeKalb County							
Jurisdiction	Size (Sq. Mi.)	Population			% Population Change		
		2000	2010	2020	2000 – 2010	2010 – 2020	2000 – 2020
DeKalb County	267.7	665,865	691,893	764,382	+3.91%	+10.48%	+14.8%
Avondale Estates (City)	1.23	2,609	2,960	3,567	+13.45%	+20.5%	+36.7%
Brookhaven (City)	12	38,579	40,456	55,161	+4.87%	+36.35%	+43%
Chamblee (City)	7.7	9,552	9,892	30,164	+3.56%	+205%	+216%
Clarkston (City)	2.1	7,231	7,554	14,756	+4.47%	+95.3%	+104%
Decatur (City)	4.4	18,147	19,335	24,928	+6.55%	+28.9%	+37.4%
Doraville (City)	4.9	9,862	8,330	10,623	-15.53%	+27.5%	+7.72%
Dunwoody (City)	13.2	-	46,267	51,688	-	+11.7%	-
Lithonia (City)	0.9	2,187	1,924	2,662	-12.03%	+38.36%	+21.7%
Pine Lake (City)	0.2	621	730	752	+17.55%	+3.014%	+21.1%
Stone Mountain (City)	1.6	-	5,802	6,703	-	+15.53%	-
Stonecrest (City)	37.4	-	-	59,194	-	-	-
Tucker (City)	20.25	-	-	37,005	-	-	-

Data Source: U.S. Census Bureau (2020 Decennial Census)
**Percent of Population Change Calculation: https://www.omnicalculator.com/math/percentage-change#how-to-calculate-the-percent-change*
NOTE: No population data exists for the DeKalb County cities of Stonecrest and Tucker as they were only incorporated since 2017 and 2016 respectively.

The Atlanta Regional Commission (ARC), as previously stated, projects that DeKalb County's population will grow to just over one million in 2050.

The U.S. 2020 Decennial Census, in combination with the 2019 American Community Survey, also included the following demographic values specific to DeKalb County:

- Of the total population (764,382), 388,963 are categorized as Black or African American; 225,752 are categorized as White; 81,471 are categorized as Hispanic or Latino; 50,834 are categorized as Asian. The balance of the population is comprised of Other/Combined races.
- Of the total population, 7.1% of people are under the age of five; 76.7% are age 18 and over; and 12.9% are over the age of 65.
- Of the total population, 9.8% of people have a health-related disability.
- Of the total population, 62.9% are enrolled in school (K-12), compared to the State of Georgia at 67.5%.
- The employment rate within DeKalb County is 65.4% versus the State of Georgia at 59.6%.
- Of the total population, 12.4% of people live below the poverty level, which is lower than the State of Georgia at 13.3%.

It is important to note that population trends can be used as a basis for estimating future changes within the planning area. Population trends can provide a basis for making decisions on the type of mitigation approaches to consider and the locations in which these approaches should be applied. This information can also be used to support planning decisions regarding future development in vulnerable locations, e.g., nursing homes or low-income households.

Map 2: DeKalb County, Community Profile

*Has been requested

Map Source: Insert

3.2 – Land Use & Development Trends



Photo Source: Unknown

As previously mentioned, DeKalb County was originally carved from the Georgia counties of Henry, Gwinnett, and Fayette, and formally established in 1822. Today, it is part of the thriving Metro Atlanta area, and encompasses 267.7 square miles of land area. Its population, as of the 2020 U.S. Decennial Census, is 764,832, which is up from 691,893, or 10.48%, from 2010.

Like other locations in and around the Metro Atlanta area, DeKalb County has experienced considerable change within jurisdictional boundaries over the last few decades. Most recently, two new municipalities were carved from unincorporated areas within the County. These are The City of Tucker, established 2016, to the northeast and the City of Stonecrest, established 2017, to the southeast. According to public record, it appears more change may be on the way as many are hoping to incorporate a new city, the City of DeKalb, in the not-so-distant future.

The largest land use in DeKalb County is Medium Density Residential, followed by Forested/Undeveloped, Commercial, and High Density Residential. This reflects the county's development pattern, which is predominately single-family residential with commercial and multi-family uses along major roadway corridors and intersections. Most of the DeKalb County follows an automobile-oriented decentralized suburban development pattern. This pattern, which is very common within the Metro Atlanta region, has high building and land use separation resulting in low pedestrian orientation and accessibility.

The current pace of residential development is expected to greatly reduce the amount of Forest/Undeveloped land as the county approaches build out. Most of the county's remaining large tracts of undeveloped land are found in the far southern and eastern portions of DeKalb, while many smaller tracts still exist within developed areas.

With the U.S. Census Bureau reporting the issuance 10,074 building permits issued for 2020, 11,405 issued for 2021 and 3,279 issued so far for 2022, it is evident that new construction and structural improvements continue at a steady pace in DeKalb County. It presently follows the Updated Georgia State Minimum Standard Codes, which went into effect on January 1, 2020.

To meet the current and future demands of an increasing population, DeKalb County and its participating jurisdictions must continue to implement proactive measures pertaining to land use and development. It is there that housing, transportation, education, historic preservation, and the environment, among other things, are of greatest concern.

Accordingly, and as required by state statute, OCGA 50-8-7.1 et seq., every local government in Georgia is required to have a Comprehensive Plan to guide public policy. The 2014 update to the Minimum Standards and Procedures for Local Comprehensive Planning further requires that each government update its comprehensive plan at least once every five years.

Three elements are required for every community's Comprehensive Plan: Community Goals, Needs and Opportunities, and the Community Work Program. Additional elements may also be required based upon local conditions within the specific community. Examples of optional elements include Infrastructure and Community Facilities, Natural Resources, Community Sustainability, Disaster Resilience, Education, Greenspace, Historic and Cultural Resources, Human Services, Intergovernmental Coordination, Public Safety, Recreation, and Solid Waste Management.

The Comprehensive Plans of DeKalb County, and the cities of Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stonecrest, Stone Mountain, and Tucker are available online through the Georgia Department of Community Affairs website, https://www.dca.gov.

Following are the links to all participating jurisdictions' comprehensive plans:

DeKalb/Unincorporated DeKalb (County),
https://www.dca.ga.gov/sites/default/files/2021.09.16.dekalbco.compplanupdate_adopted.pdf

Avondale Estates (City), https://www.avondaleestates.org/DocumentCenter/View/1468/2016-Comprehensive-Plan-Update---Adopted-?bidId=

Brookhaven (City),
https://www.dca.ga.gov/sites/default/files/2019.09.30.brookhavencompplanupdate_adopted.pdf

Chamblee (City),
https://www.dca.ga.gov/sites/default/files/2019.12.20.chambleecomprehensiveplan_adopted.pdf

Clarkston (City), https://www.dca.ga.gov/sites/default/files/2016.10.06.clarkstoncompplanadopted.pdf

Decatur (City), https://www.dca.ga.gov/sites/default/files/2021.10.29.cityofdecatur.compplan_adopted.pdf

Doraville (City),
https://www.dca.ga.gov/sites/default/files/doravillecompplanupdate20211020_adopted.pdf

Dunwoody (City),
https://www.dca.ga.gov/sites/default/files/2021.01.20.cityofdunwoody.compplanupdate_adopted.pdf

Lithonia (City),
https://www.dca.ga.gov/sites/default/files/2021.03.16.cityoflithonia.2020compplanupdate_adopted_reduced.pdf

Pine Lake (City), https://www.dca.ga.gov/sites/default/files/pinelakecompplan2021014_adopted.pdf

Stone Mountain (City),
https://www.dca.ga.gov/sites/default/files/2021stonemountaincompplan20211102_adopted.pdf

Stonecrest (City),
https://www.dca.ga.gov/sites/default/files/2019.07.12.stonecrestcicompplan_adopted.pdf

Tucker (City), https://www.dca.ga.gov/sites/default/files/2018.07.20.tuckercompplanadopteddca.pdf

In addition to local comprehensive plans, the State of Georgia, which is divided into 12 planning regions, requires Regional Plans to aid with future land use and development. Regional Plans, as described the Georgia Department of Community Affairs, are a guide for future decision-making that address critical regional issues and opportunities and provide a framework for advancing the state's planning goals. Regional Plans are also wider in scope than local plans, and deal with broader issues that involve a variety of entities, including state and federal agencies, local governments, and private organizations. Each of Georgia's twelve Regional Commissions develops a regionally specific plan, which must be approved by DCA and adopted by its Regional Council. (Georgia Department of Community Affairs, https://www.dca.ga.gov/local-government-assistance/planning/regional-planning/regional-comprehensive-planning.)

DeKalb County lies within the Atlanta Planning region, which also includes Cherokee, Clayton, Cobb, Fulton, Douglas, Fayette, Forsyth, Gwinnett, Henry, and Rockdale counties, and the City of Atlanta. Information pertaining to the Atlanta Planning region's Comprehensive Plan is available online at: https://www.dca.ga.gov/node/2767. (Note: The 2016 plan is currently in the process of being updated.)

With the Atlanta Regional Commission, https://www.atlantaregional.org, predicting DeKalb County's population to grow to one million in 2050, the information within the aforementioned plans is essential to making meaningful, long-term decisions pertaining to community development. This includes mitigating the hazards that pose risk to all and/or portions of the planning area. A hazard-specific analysis, as it relates to land use and development trends within DeKalb County, is included within each identified hazard in Section

4 – Hazard Risk Assessment.

As explained by the Georgia Municipal Association, https://www.gacities.com/Resources/GMA-Handbooks-Publications/Handbook-for-Georgia-Mayors-and-Councilmembers/Part-Three-MANAGEMENT-of-MUNICIPAL-GOVERNMENT/Planning-and-Land-Use.aspx, the placement of certain infrastructure, i.e., roads and bridges, water/sewer/stormwater facilities, schools and libraries, police/fire/EMS facilities, and parks and recreation facilities, determine in large part where future development will go as well. Land adjacent to public investment is more easily developed and is more likely to be converted from agriculture, conservation, or another "green" use to a more intensive use when public facilities become available. For this reason, city leaders should be careful to avoid environmentally sensitive areas when choosing the location of common infrastructure.

Unfortunately, several major environmental problems associated with rapid land development persist within the planning area. Among them are the loss of trees and other vegetation, loss of wildlife habitat, poor air quality, and the creation of severe micro-climates, e.g., urban heat islands. Of equal concern is reduced water quality since the Chattahoochee River is the source of drinking water for most of DeKalb County. Additionally, the conversion of undeveloped land to impervious surfaces has significantly increased storm water runoff, which directly impacts the quality and flow of DeKalb County's streams. (See Section 5 for a complete list of mitigation projects addressing these and other issues within the planning area).

All participating jurisdictions within DeKalb County, including Decatur, the county seat, participate in the National Flood Insurance Program (NFIP) and the Community Rating System (CRS). There are presently 186 properties identified as Repetitive Loss (RL) or Severe Repetitive Loss (SRL). See Table 37 for a complete list of Repetitive Loss (RL) or Severe Repetitive Loss (SRL).

3.3 – Critical Facilities

Certain facilities have a net positive value on the community, i.e., they contribute to the public good by facilitating the basic functions of society. These facilities maintain order, public health, and education, and help the economy function. Additionally, there are infrastructure and facilities integral to disaster response and recovery operations. Conversely, some facilities and infrastructure are of extreme importance due to the negative externalities created when they are impacted by a disaster. What fits this definition will vary slightly from community to community, but the definition remains as a guideline for identifying critical facilities and infrastructure. For DeKalb County and its participating jurisdictions, the table below lists the **353** identified critical facilities and infrastructure by category. A complete list, including the locations (by jurisdiction) of these 353 identified critical facilities and infrastructure, can be found in Appendix C – Critical Facilities & Infrastructure.

Table 8: Critical Facilities by Category, DeKalb County

Critical Facilities by Category, DeKalb County	
Category	**Number of Facilities**
Communications	19
Courts/Courthouse(s)	5
Fire	27

Government Office(s)	66
Hospital	5
K-12	163
Library	18
Medical Office(s) & Clinic(s)	3
Police	13
Private	10
Sheriff's Office/Jail	1
Transportation	1
University	5
Water Treatment/Wastewater Facility	17
Total	**353**

Data Source: DEMA

Section 4 – Risk Assessment

Planning Process
Local Procedures & Resources
Planning Area
Risk Assessment
- Identifying Hazards
- Profiling Hazards
- Identifying Community Assets
- Risk Analysis
- Hazard Risk Summary
- Excluded Hazards

Mitigation Strategy

The goal of hazard mitigation is to reduce the future impacts of hazards, including property damage, disruption to local and regional economies, and the amount of public and private funds spent to assist recovery. To be done correctly, mitigation decision-making should be based on risk assessment. A risk assessment provides the foundation for the rest of the mitigation planning process, which is focused on identifying and prioritizing actions to reduce risk to hazards. The risk assessment can also be used to establish emergency preparedness and response priorities, for land use and comprehensive planning, and for decision making by elected officials, city and county departments, businesses, and organizations in the community.

Risk is the potential for damage, loss, or other impacts created by the interaction of natural hazards with community assets. Hazards are natural processes, such as tornadoes and earthquakes. The exposure of people, property, and other community assets to natural hazards can result in disasters depending on the impacts. Impacts are the consequences or effects of the hazard on the community and its assets. The type and severity of impacts are based on the extent of the hazard and the vulnerability of the asset, as well as the community's capabilities to mitigate, prepared for, respond to, and recover from events.

A review of recently declared disasters, from 2016 to the present, provides an overview of the hazards facing DeKalb County and its participating jurisdictions. This timeframe is referenced because DeKalb County has a FEMA-approved HMP that will expire on December 12, 2021. Since 2016, DeKalb County and its participating jurisdictions have experienced two presidentially declared disasters. These disaster declarations were due to a hurricane and epidemic/pandemic. A list of the declared disasters occurring in DeKalb County and its participating jurisdictions since 2016 is presented in the following table. Smaller events are more frequent and are not reflected in the table.

***Note**: Human-caused hazards such as Epidemic/Pandemic were not identified in the 2019 Georgia Hazard Mitigation Strategy Standard and Enhanced Plan (March 18, 2019 – March 17, 2024) and Statewide Hazard Assessment, or the 2016 DeKalb County Hazard Mitigation Plan. This disaster declaration was included in the table below due to the COVID-19 pandemic affecting DeKalb County and its participating jurisdictions during the drafting of this plan update.*

Table 9: Presidential Disaster Declarations, DeKalb County

Presidential Disaster Declarations, DeKalb County		
Designation	**Incident Period**	**Incident Type**
DR - 4338	09/7/2017 – 09/20/2017	Hurricane Irma
DR - 4501	01/20/20 – Continuing	COVID-19 Pandemic

Data Source: FEMA

4.1 – Identifying Hazards

The first step in developing a hazard assessment is to identify the hazards that have a reasonable risk of occurring in DeKalb County and its participating jurisdictions. Proper identification allows for appropriate

and well-planned action to mitigate the extent and impact of a hazard event. It also helps facilitate emergency response and recovery operations. Further, while not all disaster contingencies can be planned for, applying an all-hazards approach to the mitigation process does yield greater awareness and better preparedness for unforeseen hazard events overall.

The following table lists the 13 hazards identified in the Georgia Hazard Mitigation Strategy, as well as the justification for their inclusion/exclusion within this DeKalb County HMP update. Research indicates two of the 13 hazards (coastal hazards and geological hazards) pose no reasonable risk to the planning area. As such, they are excluded from this plan update. Justification for their exclusion can be found in Section 4.3 – Excluded Hazards.

Of the 13 state-identified hazards, 11 pose a risk to DeKalb County and/or at least one of its participating jurisdictions. These are hurricane wind, wind, severe weather, tornadoes, inland flooding, severe winter weather, drought, wildfire, earthquake, dam failures, and extreme heat. This plan integrates dam failure and inland flooding into the flooding hazard section, and hurricane winds, severe weather, and tornadoes into the wind hazard section. Details for each of these hazards and their potential impact on DeKalb County and its participating jurisdictions are in Section 4.3 – Hazard Risk Summary.

Table 10: State of Georgia Identified Hazards

State of Georgia Identified Hazards			
Hazards in State / Previous County HMP	**Previous Inclusions**	**Included/Excluded**	**Justification**
Hurricane Wind	State Plan, Prior Plan	Included in Wind Hazard Section	Disaster History
Coastal Hazards	State Plan	Not Included	No Reasonable Risk
Wind	State Plan, Prior Plan	Included	Disaster History
Severe Weather	State Plan, Prior Plan	Included in Wind Hazard Section	Disaster History
Tornado	State Plan, Prior Plan	Included in Wind Hazard Section	Disaster History
Inland Flooding	State Plan, Prior Plan	Included in Flood Hazard Section	Disaster History
Severe Winter Weather	State Plan, Prior Plan	Included	Disaster History
Drought	State Plan, Prior Plan	Included	Disaster History
Wildfire	State Plan, Prior Plan	Included	Disaster History
Earthquake	State Plan, Prior Plan	Included	Reasonable Risk
Geological Hazards	State Plan	Excluded	No Reasonable Risk
Dam Failure	State Plan, Prior Plan	Included in Flood Hazard Section	Reasonable Risk
Extreme Heat	State Plan, Prior Plan	Included	Disaster History

4.2 – Profiling Hazards

4.2.1 – Hazard Description

This section describes the general characteristics of the specified hazard.

4.2.2 – Location & Extent

Location. This section contains information about the geographic areas within the planning area that are affected by the hazard.

Extent. This section describes the strength or magnitude of the hazard.

4.2.3 – Previous Occurrences

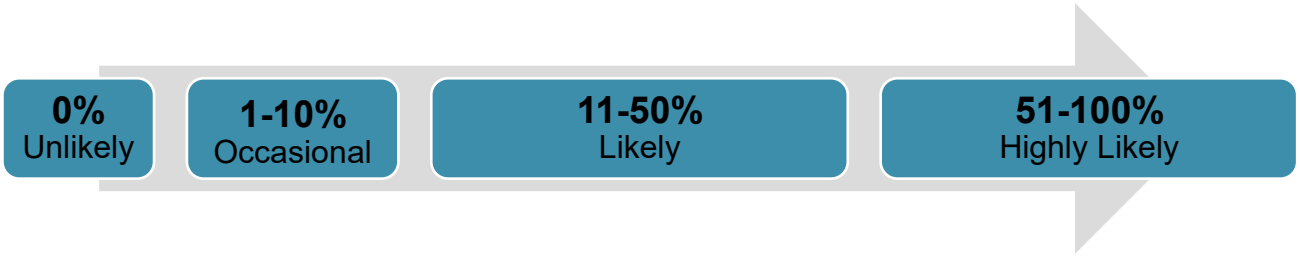
This section contains a history of previous hazard events for the profiled hazard.

***Methodology**: Most of the historical data used in the risk assessment originates from the National Oceanic and Atmospheric Administration/National Centers for Environmental Information (NOAA/NCEI). In most instances, the hazard affects a large geographic area, and thus, the hazard data is reported at a county level. This is the best available data for these hazards. The calculations for Previous Occurrences and the Probability of Future Events are based on county-level data as well.*

4.2.3A – Probability of Future Events

This section of the plan describes the likelihood, or probability, of the identified hazard occurring within the planning area. If discrete quantitative data is available, a finite probability will be listed. See the table below for additional information related to the probability of future events.

Illustration 1: Probability Categories/Range per Year



4.2.4 – Vulnerability of Community Assets

This section identifies assets at risk to hazards. The assets include people, economy, built environment, and natural environment.

4.2.5 – Risk Analysis

This section evaluates the vulnerability of community assets, describes potential impacts, and estimates loses for each hazard. Methods for analyzing risk include exposure analysis, historical analysis, and scenario analysis. These methods can be expressed qualitatively or quantitatively. Qualitative evaluations describe the types of impacts that might occur during a hazard event. Quantitative evaluations assign values and measure the potential losses to the assets at risk.

Exposure Analysis. Identifies the existing and future assets located in the identified hazard areas. It may also consider the magnitude of the hazard. Exposure analysis may quantify the number, type, and value of structures, critical facilities, and infrastructure located in identified hazard areas.

Historical Analysis. Uses information on impacts and losses from previous hazard events to predict potential impacts and losses during a similar future event. Historical analysis is used to address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged.

Scenario Analysis. Predicts the impacts of a particular event. Scenario analysis may be used to predict potential impacts and loses in terms of monetary costs, casualties, infrastructure downtime, and other risk elements.

In 2022, the Georgia Department of Emergency Management partnered with the Carl Vinson Institute of Government at the University of Georgia to develop a detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in DeKalb County, Georgia. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets.

Hazus-MH Version 2.2 SP1 was used to perform the analyses for DeKalb County. The Hazus-MH application includes default data for every county in the US. This Hazus-MH data was derived from a variety of national sources and in some cases the data are also several years old. Whenever possible, using local provided data is preferred. DeKalb County provided building inventory information from the county's property tax assessment system. This section describes the changes made to the default Hazus-MH inventory and the modeling parameters used for each scenario.

The default Hazus-MH site-specific point inventory was updated using data compiled from the Georgia Emergency Management Agency (GEMA). The default Hazus-MH aggregate inventory (General Building Stock) was also updated prior to running the scenarios. Reported losses reflect the updated data sets.

The GBS records for DeKalb County were replaced with data derived from parcel and property assessment data obtained from DeKalb County. The county provided property assessment data was current as of November 2021 and the parcel data current as of November 2021. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary; then, each parcel point was linked to an assessor record based upon matching parcel numbers. The parcel assessor match-rate for DeKalb County is 100%. The generated building inventory represents the approximate locations (within a parcel) of structures. The building inventory was aggregated by census block. Both the tract and block tables were updated. Table 11 shows the results of the changes to the GBS tables by occupancy class.

*Table 11: GBS Building Exposure Updates by Occupancy Class**

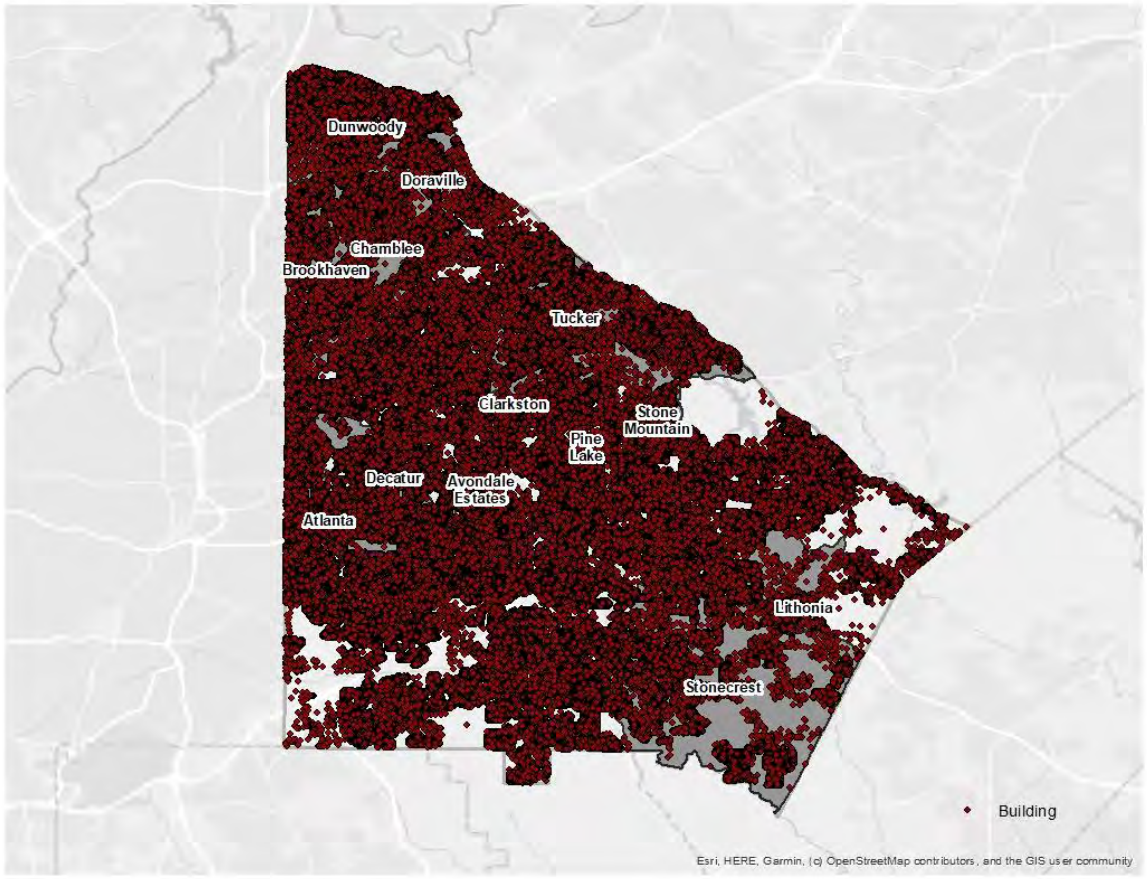
GBS Building Exposure Updates by Occupancy Class				
General Occupancy	**Default Hazus-MH County**	**Updated Count**	**Default Hazus-MH Exposure**	**Updated Exposure**
Agricultural	525	0	$196,471,000	$0
Commercial	13,947	6,670	$13,046,956,000	$12,186,755,000
Education	639	89	$1,513,469,000	$323,004,000
Industrial	3,328	951	$2,315,533,000	$1,871,459,000
Government	491	0	$547,765,000	$0
Religious	1,583	230	$1,526,135,000	$250,159,000
Residential	206,947	213,813	$65,913,862,000	$124,235,839,000
Total	**227,460**	**221,753**	**$85,060,191,000**	**$138,867,216,000**

*The exposure values represent the total number and replacement cost for all DeKalb County Buildings

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

For DeKalb County, the updated GBS was used to calculate hurricane wind losses. The flood losses and tornado losses were calculated from building inventory modeled in Hazus-MH as User-Defined Facility (UDF), or site-specific points. The following map shows the distribution of buildings as points based on the county provided data.

Map 3: DeKalb County Overview



Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

4.2.6 – Problem Statements

Problem statements combine potential consequences and impacts of the identified hazard with other community characteristics to express vulnerability.



4.3 (W) – Wind

4.3.1 – Hazard Description

Several different events can generate wind hazards. The National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI) Database divides wind events into several types, including High Wind, Hurricane (Typhoon), Marine High Wind, Marine Strong Wind, Marine Thunderstorm Wind, Strong Wind, Thunderstorm Wind, Tornado, Tropical Depression, and Tropical Storm. Marine High Wind, Marine Strong Wind, and Marine Thunderstorm Wind present no reasonable risk for DeKalb County. This plan will profile Straight-Line Winds (High Wind, Strong Wind, and Thunderstorm Wind), Tropical Systems (Hurricane, Tropical Storm, and Tropical Depression), and Tornadoes. Other hazards associated with thunderstorms, such as lightning and hail, will be included in profile for Straight-Line Winds.

Straight-Line Winds*:* Naturally occurring, wind is simply moving air that is caused by differences in air pressure within the Earth's atmosphere. Air under high pressure moves toward areas of low pressure. The greater the difference in pressure, the faster the air flows. The definitions of the three wind types addressed in this section come from the NOAA/NCEI Storm Data Preparation document:

- High Wind*:* Sustained, non-convective winds of 40 mph or greater lasting for one hour or longer, or winds (sustained or gusts) of 58 mph for any duration on a widespread or localized basis.
- Strong Wind*:* Non-convective winds gusting less than 58 mph, or sustained winds less than 40 mph, resulting in a fatality, injury, or damage.

- Thunderstorm Wind*:* Winds, arising from convection (occurring within 30 minutes of lightning being observed or detected), with speeds of at least 58 mph, or winds of any speed (non-severe thunderstorm winds below 58 mph) producing a fatality, injury, or damage.

Downbursts, including dry or wet microbursts or macrobursts, are classified as Thunderstorm Wind events. In some cases, the downburst may travel several miles from the parent thunderstorm, or the parent thunderstorm may have dissipated. A gustnado is a small and usually weak whirlwind that forms as an eddy in thunderstorm outflows. It does not connect with any cloud-base rotation and is not a tornado. Since their origin is associated with cumuliform clouds, gustnadoes are classified as Thunderstorm Wind events.

Thunderstorms form when warm, moist air near the Earth's surface is forced upward through some catalyst (convection or frontal weather system). As the air rises, it cools, condenses, and forms cumulonimbus clouds that can reach up to 40,000 feet in altitude. When the rising air reaches its dew point, water droplets (rain) and ice (hail) form and begin falling the long distance through the clouds towards the ground. As the droplets fall, they collide with other droplets and become larger. The falling droplets create a downdraft of air that spreads out at the Earth's surface, resulting in strong, oftentimes damaging winds. The collision of the water and ice particles in the cloud(s) form a large electrical field, discharging as dangerous cloud-to-ground or ground-to-cloud lightning.

There are four ways in which thunderstorms can organize: single cell, multi-cell cluster, multi-cell lines (squall lines), and supercells. The average single-cell thunderstorm develops rapidly, is approximately 15 miles in diameter, and lasts less than 30 minutes at a single location. Multi-cell clusters and multi-cell lines, which can also form relatively quickly, can travel for distances exceeding 600 miles. Supercells are usually associated with severe weather phenomena. Regardless of the type of thunderstorm, warm, humid conditions are most favorable for their development.

A thunderstorm is classified as "severe" by NWS when it contains one or more of the following: hail one inch or greater, winds gusting more than 50 knots (57.5 mph), and/or a tornado. In these instances, Severe Thunderstorm Watches or Severe Thunderstorm Warnings will be issued by the national/local weather authorities.

A Severe Thunderstorm Watch is issued by NOAA's Storm Prediction Center when conditions are favorable for severe thunderstorms. A watch can cover parts of a state or several states. A Severe Thunderstorm Warning, on the other hand, is issued by local NOAA NWS Forecast office meteorologists and is specific to a designated area. Warnings, which can cover parts of counties or even several counties, mean severe weather has been reported by spotters or indicated by radar and that there is a serious threat to life and property.

According to NOAA, many hazardous weather events are associated with thunderstorms. Under the right conditions, rainfall from thunderstorms causes flash flooding, which kills more people each year than hurricanes, tornadoes, or lightning. Lightning is responsible for many fires around the world each year and causes fatalities. Hail up to the size of softballs damages cars and windows, and kills livestock caught out in the open. Strong (up to more than 120 mph) straight-line winds associated with thunderstorms knock down trees, power lines and mobile homes.

Lightning is one of the more dangerous weather hazards in the United States. The NWS describes lightning as a giant spark of electricity in the atmosphere or between the atmosphere and the ground. As the rapid discharge between positive and negative regions of a thunderstorm, lightning flashes are composed of a series of strokes (with an average of about four). The length and duration of each lightning strike vary, but typically average around 30 microseconds. People and objects can be directly struck by lightning, or damage can occur indirectly when the current (up to 100 million volts of electrical potential) passes through or near them.

Per the NWS, lightning strikes the U.S. about 25 million times a year, killing an average of 51 people and accounting for hundreds of injuries including serious burns. Interestingly, lightning is hotter than the surface of the sun and can reach temperatures around 50,000° Fahrenheit. Lightning is also responsible for millions

of dollars of property damage annually, including damage to buildings, communications systems, powerlines, and electrical systems. Moreover, lightning causes forest and brush fires, as well as deaths and injuries to livestock and other animals.

According to the National Lightning Safety Institute (NLSI), lightning triggers more than 26,000 fires in the U.S. each year. The Institute estimates property damage, increased operating costs, production delays, and lost revenue from lightning and secondary effects to be $6-7 billion dollars/year.

Hail, which is associated with thunderstorms, forms when updrafts carry raindrops into extremely cold areas of the atmosphere and form ice. The frozen precipitation falls to the ground when it becomes heavy enough to overcome the strength of the updraft. Hailstones can range from the size of a pea to the size of a grapefruit, and they can span a variety of shapes, though most are spherical. They are usually less than two inches in diameter and can fall at speeds of 120 mph.

The largest recorded hailstone in the U.S. was nearly as big as a volleyball and fell on July 23, 2010, in Vivian, South Dakota. It was eight inches in diameter and weighed almost two pounds.

On average, hail causes nearly $1 billion in damage in the U.S. each year to crops and property including automobiles, aircraft, and structures. According to the NOAA's Severe Storms database, there were 6,045 major hailstorms in 2017 resulting in $1.8 billion in property and crop damage. Hail also poses a safety threat to both humans and animals. In fact, NOAA estimates that 24 people in the U.S. are injured each year with some injuries significant enough to send them to the hospital.

Tropical Systems: A tropical weather system, as described by the National Weather Service (NWS), is one with organized convection (generally 100-300 miles in diameter) originating in the tropics or subtropics, having a non-frontal migratory character, and maintaining its identity for 24 hours or longer. It may or may not be associated with a detectable perturbation of the wind field.

Tropical systems include several types of tropical cyclones (the generic term for a non-frontal synoptic scale low-pressure systems over tropical or sub-tropical waters with organized convection, i.e., thunderstorm activity, and definite cyclonic surface wind circulation (Holland 1993). For the purpose of this HMP update, tropical systems include tropical depressions, tropical storms, and hurricanes as defined below:

- Tropical Depression: An organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph (33 knots) or less.
- Tropical Storm: An organized system of strong thunderstorms with a defined circulation and maximum sustained winds of 39 mph to 73 mph (34–63 knots).
- Hurricane: An intense tropical weather system with a well-defined circulation, producing maximum sustained winds of 74 mph (64 knots) or greater. Hurricane intensity is classified into five categories using the Saffir-Simpson Hurricane Scale (see Illustration 2). Winds in a hurricane range from 74 to 95 mph for a Category 1 hurricane to greater than 156 mph for a Category 5 hurricane. Hurricanes reaching Category 3 are considered major hurricanes because of their potential for significant loss of life and property damage. Category 1 and 2 storms are still dangerous and require preventative measures.

It is important to note that while hurricanes pose the greatest threat to life and property, tropical storms and depressions can also be devastating. Floods from heavy rains can cause widespread damage and loss of life, as can hurricane-spawned tornadoes. Both are common occurrences of tropical systems, particularly those that develop in the Atlantic Ocean.

Tornadoes*:* A tornado is a violent, dangerous, rotating column of air that is in contact with both the surface of the earth and a cumulonimbus cloud or, in rare cases, the base of a cumulus cloud. Often referred to as a twister or a cyclone, they can strike anywhere and with little warning. Tornadoes come in many shapes and sizes but are typically in the form of a visible condensation funnel, whose narrow end touches the earth

and is often encircled by a cloud of debris and dust. Tornadoes are usually born in "supercell" thunderstorms and present certain physical signs that include a dark, greenish sky, large hail, and a powerful train-like roar.

Tornadoes have the potential to produce winds in excess of 200 mph and can be very expansive –some in the Great Plains have exceeded two miles in width. According to the NWS, the widest tornado ever recorded in the U.S. was 2.6 miles wide, and it occurred on May 31, 2013, in El Reno, Oklahoma. Sadly, it claimed the lives of eight people, all of whom were in vehicles, and left a path of destruction ($40-$50 million in damage). The costliest tornado on record hit Joplin, Missouri, on May 22, 2011, resulting in $2.8 billion in damage. It killed 158 people and injured more than a thousand others.

As evidenced by past events, tornadoes can cause all kinds of damage to buildings, infrastructure, and property. Tornadoes have been known to lift and move objects weighing more than three tons, toss homes more than 300 feet from their foundations, and siphon millions of tons of water. However, less spectacular damage is much more common.

Tornadoes can also generate a tremendous amount of flying debris. If wind speeds are high enough, airborne debris can be hurled at buildings with enough force to penetrate windows, roofs, and walls. Most tornado-related injuries or deaths are caused by flying debris.

Violent tornadoes comprise only about two percent of all tornadoes, but they cause 70 percent of all tornado deaths and may last an hour or more. While tornado forecasters cannot provide the same kind of warning that hurricane watchers can, they can do enough to help save lives. Today the average warning time for a tornado alert is 13 minutes.

Until 2007 the Fujita Tornado Scale ranked the severity of tornadoes. The Fujita scale assigned a numerical F value, F0 through F5, based on the wind speeds and estimated damage. Since 2007 the U.S. switched over to the Enhanced Fujita Scale. The altered scale adjusted the wind speed values per F level and introduced a rubric for estimating damage. An EF0 tornado could lightly damage structures to the extent they would become unsafe to use until repaired. An EF1 or larger tornado could destroy the entire neighborhood, town, or city or damage any number of structures to the point where they would be unusable for at least a year.

4.3.2 – Location & Extent

All areas of DeKalb County are susceptible to wind hazards. Strong winds can form in association with thunderstorms, or in areas of high pressure. DeKalb County's proximity to the Gulf of Mexico creates the ideal conditions for thunderstorm and tornado development. Georgia borders the Atlantic Ocean and Gulf of Mexico, both of which provide an environment favorable for tropical systems. While DeKalb County is several hundred miles inland, it is still susceptible to the tropical system hazards.

According to NOAA, there are three basic ingredients needed for thunderstorm development: moisture, an unstable atmosphere, and some way to start the atmosphere moving (https://www.weather.gov/safety/lightning-thunderstorm-development). The National Weather Service in Peachtree City notes that all thunderstorms have the potential to produce tornadoes, but the type of storm that is most commonly tornadic is the supercell. This very severe, long-lived thunderstorm contains circulation aloft (mesocyclone) that grows upward through the storm and downward toward the ground. When conditions are favorable, tornadoes will be produced. Supercells have the potential to produce all magnitude of tornadoes The key atmospheric ingredients that lead to tornado potential are instability - warm moist air near the ground, with cooler dry air aloft and wind shear - a change in wind speed and/or direction with height. An unstable airmass promotes the development of strong updrafts, while wind shear will further increase the strength of the updraft and promotes the rotation from which tornadoes are produced (https://www.weather.gov/ffc/torntext).

Thunderstorms are a common occurrence across the U.S., including the State of Georgia. According to SHELDUS™/NCEI data referenced in the Georgia Hazard Mitigation Strategy, an average of 331 severe weather events occurred across the State between 1952 and 2017. These events in total caused 990

injuries, 168 fatalities, and more than $1.2 billion in damages. Over the period from 1997 to 2017, the historic occurrence jumped to 499 severe weather events per year, which equates to a significant chance of a severe weather occurrence in any given year.

Wind observations or measurements are required for determining the probability of wind damage and the estimation of wind energy. To help with the planning, design, and construction of buildings for residential and commercial purposes, as well as mitigation efforts, the American Society of Civil Engineers (ASCE) calculates Average Hazard Wind Scores. The wind speeds correspond with the assigned hazard score with values ranging from one to five, as shown in the following table.

Table 11: American Society of Civil Engineers (ASCE) Average Hazard Wind Score(s)

ASCE Average Hazard Wind Scores	
Wind Score(s)	**Wind Speeds (mph)**
1	<90
2	91-100
3	101-110
4	111-120
5	>120

Data Source: ASCE

As documented in the Georgia Hazard Mitigation Strategy Standard and Enhanced Plan (March 18, 2019 – March 17, 2024), DeKalb County has an average ASCE wind score of 1 with wind speeds < 90 MPH. Winds associated with strong to severe thunderstorms contribute significantly to the rating. Potential impacts from localized wind events include, but are certainly not limited to, the following:

- Significant debris generation
- Residential and commercial property loss
- Economic impact from business interruption or loss of tourism
- Agricultural loss
- Displaced residents requiring temporary shelter
- Loss of critical infrastructure function, including roads blocked by debris, downed powerlines, and interruption of communication services

Wind speed is the determining factor in the Saffir-Simpson Hurricane Scale. The following describes the characteristics of each category storm using the Saffir-Simpson Scale's Extended Scale:

Illustration 2: Saffir-Simpson Hurricane Scale

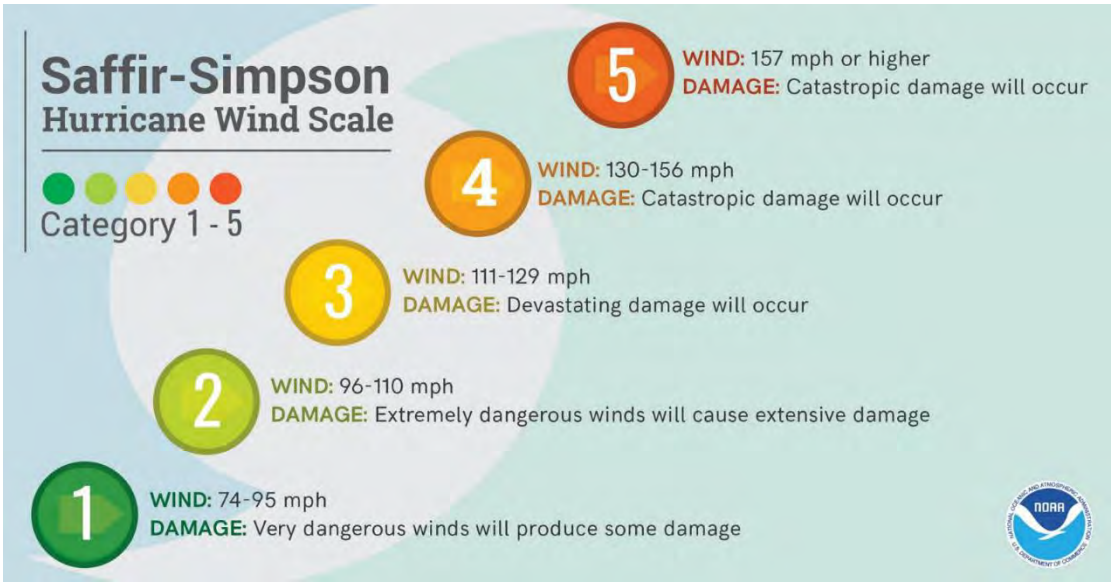


Illustration Source: NOAA

- **Category 1 Hurricane**: Winds 74 –95 mph. Very dangerous winds will produce damage. People, livestock, and pets struck by flying or falling debris could be injured or killed. Older (mainly pre-1994 construction) mobile homes could be destroyed, especially if they are not anchored properly as they tend to shift or roll off their foundations. Newer mobile homes that are anchored properly can sustain damage involving the removal of shingle or metal roof coverings, and loss of vinyl siding, as well as damage to carports, sunrooms, or lanais. Some poorly constructed frame homes can experience major damage, involving loss of the roof covering and damage to gable ends as well as the removal of porch coverings and awnings. Unprotected windows may break if struck by flying debris. Masonry chimneys can be toppled. Well-constructed frame homes could have damage to roof shingles, vinyl siding, soffit panels, and gutters. Failure of aluminum, screened-in, swimming pool enclosures can occur. Some apartment building and shopping center roof coverings could be partially removed. Industrial buildings can lose roofing and siding especially from windward corners, rakes, and eaves. Failures to overhead doors and unprotected windows will be common. Windows in high-rise buildings can be broken by flying debris. Falling and broken glass will pose a significant danger even after the storm. There will be occasional damage to commercial signage, fences, and canopies. Large branches of trees will snap, and shallow rooted trees can be toppled. Extensive damage to power lines and poles will likely result in power outages that could last a few to several days.
- **Category 2 Hurricane:** Winds 96-110 mph. Extremely dangerous winds will cause extensive damage. There is a substantial risk of injury or death to people, livestock, and pets due to flying and falling debris. Older (mainly pre-1994 construction) mobile homes have a very high chance of being destroyed and the flying debris generated can shred nearby mobile homes. Newer mobile homes can also be destroyed. Poorly constructed frame homes have a high chance of having their roof structures removed especially if they are not anchored properly. Unprotected windows will have a high probability of being broken by flying debris. Well-constructed frame homes could sustain major roof and siding damage. Failure of aluminum, screened-in, swimming pool enclosures will be common. There will be a substantial percentage of roof and siding damage to apartment buildings and industrial buildings. Unreinforced masonry walls can collapse. Windows

in high-rise buildings can be broken by flying debris. Falling and broken glass will pose a significant danger even after the storm. Commercial signage, fences, and canopies will be damaged and often destroyed. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks. Potable water could become scarce as filtration systems begin to fail.

- **Category 3 Hurricane:** Winds 111-129 mph. Devastating damage will occur. There is a high risk of injury or death to people, livestock, and pets due to flying and falling debris. Nearly all older (pre-1994) mobile homes will be destroyed. Most post-1994 mobile homes will sustain severe damage with potential for complete roof failure and wall collapse. Poorly constructed frame homes can be destroyed by the removal of the roof and exterior walls. Unprotected windows will be broken by flying debris. Well-built frame homes can experience major damage involving the removal of roof decking and gable ends. There will be a high percentage of roof covering and siding damage to apartment buildings and industrial buildings. Isolated structural damage to wood or steel framing can occur. Complete failure of older metal buildings is possible, and older unreinforced masonry buildings can collapse. Numerous windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Most commercial signage, fences, and canopies will be destroyed. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to a few weeks after the storm passes.

- **Category 4 Hurricane:** Winds 130 to 156 mph. Catastrophic damage will occur. There is a very high risk of injury or death to people, livestock, and pets due to flying and falling debris. Nearly all older (pre-1994) mobile homes will be destroyed. A high percentage of newer mobile homes also will be destroyed. Poorly constructed homes can sustain complete collapse of all walls as well as the loss of the roof structure. Well-built homes also can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Extensive damage to roof coverings, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will break most unprotected windows and penetrate some protected windows. There will be a high percentage of structural damage to the top floors of apartment buildings. Steel frames in older industrial buildings can collapse. There will be a high percentage of collapse to older unreinforced masonry buildings. Most windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Most trees will be snapped or uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months.

- **Category 5 Hurricane:** Winds 157 mph or higher. Catastrophic damage will occur. People, livestock, and pets are at very high risk of injury or death from flying or falling debris, even if indoors in mobile homes or framed homes. Almost complete destruction of all mobile homes will occur, regardless of age or construction. A high percentage of frame homes will be destroyed, with total roof failure and wall collapse. Extensive damage to roof covers, windows, and doors will occur. Large amounts of windborne debris will be lofted into the air. Windborne debris damage will occur to nearly all unprotected windows and many protected windows. Significant damage to wood roof commercial buildings will occur due to loss of roof sheathing. Complete collapse of many older metal buildings can occur. Most unreinforced masonry walls will fail which can lead to the collapse of the buildings. A high percentage of industrial buildings and low-rise apartment buildings will be destroyed. Nearly all windows will be blown out of high-rise buildings resulting in falling glass, which will pose a threat for days to weeks after the storm. Nearly all commercial signage, fences, and canopies will be destroyed. Nearly all trees will be snapped or uprooted,

and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Long-term water shortages will increase human suffering. Most of the area will be uninhabitable for weeks or months.

Tornadoes are rated on the Enhanced Fujita Scale. Destruction, ranging from minor to catastrophic, is dependent upon the intensity, size, and duration of the tornado. Structures made of light materials such as mobile homes are most susceptible to damage. The following table shows the level of loss/damage associated with each tornado category of the EF scale.

Table 12: Fujita-Enhanced Fujita Scale Comparison

Fujita-Enhanced Fujita Scale Comparison			
Fujita (F) Scale		**Enhanced Fujita (EF) Scale**	
Fujita Scale	**3-Second Gust Speed (MPH)**	**Enhanced Fujita Scale**	**3-Second Gust Speed (MPH)**
F0	45-78	EF0	65-85
F1	79-117	EF1	86-109
F2	118-161	EF2	110-137
F3	162-209	EF3	138-167
F4	210-261	EF4	168-199
F5	262-317	EF5	200-234

Table Source: NOAA

Illustration 3: Enhanced Fujita Scale, Damage

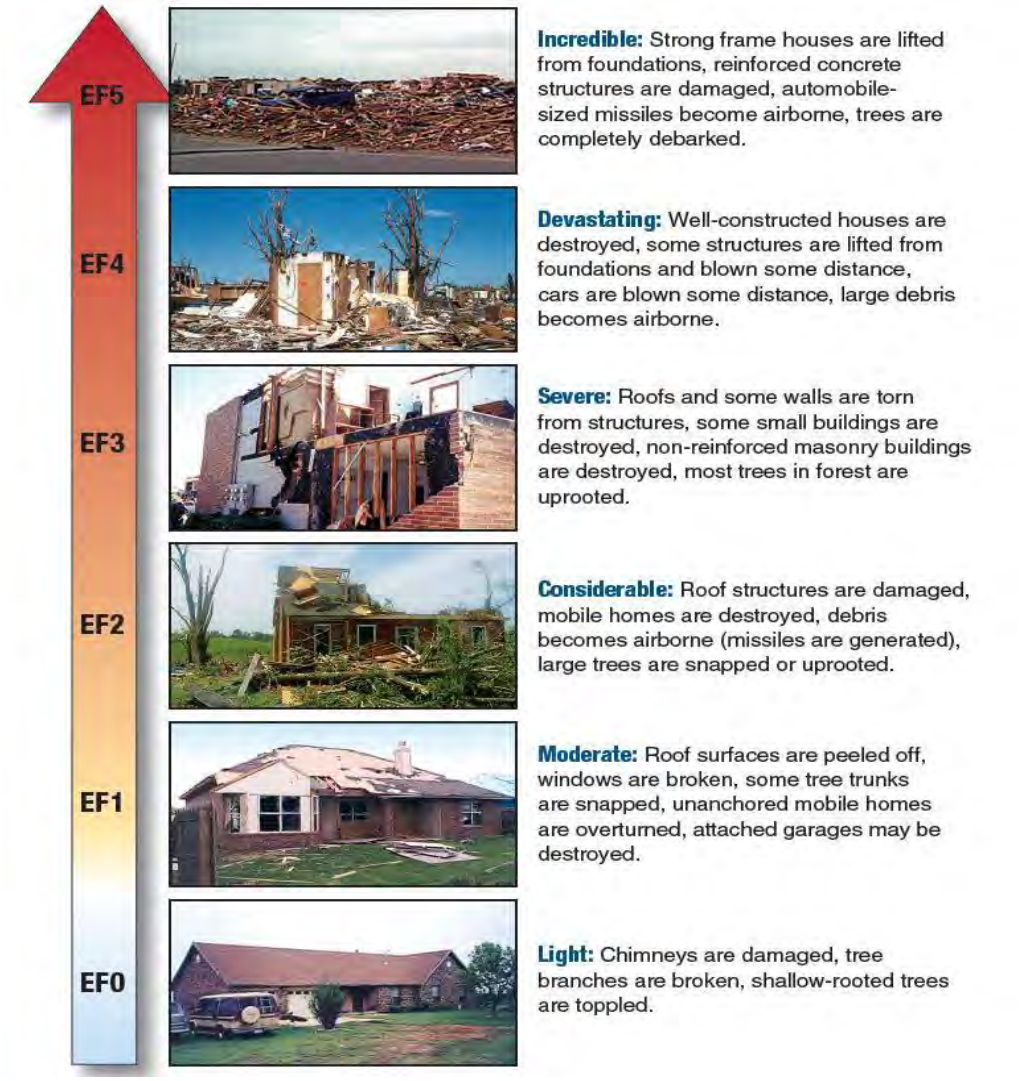


Illustration Source: FEMA

It is important to note how climate change affects the intensity and frequency of wind events (and their potential impacts). It is uncertain and is being studied intensively. For Georgia, until the impacts are better understood, the anticipated intensity and frequency of wind events will likely remain close to historical averages. However, damage to life and property will likely increase due to population and financial growth across the state, including DeKalb County.

4.3.3 – Previous Occurrences

Straight-Line Wind Events (Strong Winds, High Winds, Thunderstorms)

For this plan, hail and lightning damage will be included in this section. Between 1950 and 2019, significant straight-line wind events have impacted DeKalb County and the incorporated communities within its boundaries 261 times. These events caused four deaths, 12 injuries, and approximately $18.628 million in property damage. Between January 1, 2016, and December 31, 2020, significant straight-line wind events have impacted DeKalb County and the incorporated communities within its boundaries 50 times. These events caused one death, two injuries, and approximately $572,000 in damage.

Table 13: Straight-Line Wind Events (1950-2020)

Straight-Line Wind Events (1950-2020)					
Decade	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
1950s	0	0	0	$0	$0
1960s	4	0	0	$0	$0
1970s	10	0	0	$0	$0
1980s	43	0	1	$0	$0
1990s	91	0	1	$448K	$0
2000s	108	3	6	$16.873M	$0
2010s	81	1	3	$1.188M	$0
2020	15	0	1	$117K	$0
Total	**352**	**4**	**12**	**$18.628M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Table 14: Straight-Line Wind Events (2016-2020)

Straight-Line Wind Events (2016-2020)					
Year	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
2016	11	1	0	$130K	$0
2017	9	0	0	$187K	$0
2018	10	0	1	$55K	$0
2019	5	0	0	$83K	$0
2020	15	0	1	$117K	$0
Total	**50**	**1**	**2**	**$572K**	**$0**
Average	**10**	**0.2**	**0.4**	**$114.4K**	**$0**

Data Source: NOAA/NCEI Storm Events Database

May 17, 2004, Dunwoody Lightning Event: The Atlanta-Journal/Constitution reported that a 34-year-old man of Douglasville, who was installing a pool at a private residence, was struck, and killed by lightning while leaning against a truck outside at the site. The bolt of lightning struck the ground about 30 feet from where the individual was located at the time. Another individual with the same construction crew had his back singed during the time of this same lightning strike.

June 27, 2004, Decatur Lightning Event: The Atlanta Journal-Constitution reported that lightning struck and knocked over a large tree onto the Emory Wood Nursing Center on Oxford Road near Emory University. Four residents were trapped in the structure as a result and required hospitalization following the incident. One of the residents was wedged between a back wall and the tree where it had fallen on the nursing home.

Later in the evening, all 38 residents of the home were evacuated. Lightning also struck several power lines and transformers in the area leaving several people without power during the evening.

February 21, 2005, Druid Hills Hail Event: An employee of the DeKalb County Water Department reported that hail ranging in size from pennies to greater than golf ball, on the order of 2.0 inches in diameter fell.

July 10-11, 2005, DeKalb County Strong Wind Event: Strong winds, associated with the remnants of Hurricane Dennis, affected much of west Georgia from the late evening hours on the 10th through the early morning hours of the 11th. Sustained winds during this period were mostly 15 to 25 mph, but some gusts to near 40 mph were reported. The strong winds combined with heavy rain and saturated ground resulted in many downed trees and power lines across west Georgia, mainly west of a line from Americus to Atlanta, to Chatsworth. Many power outages were reported overnight and into the early morning hours. A large, 40-inch diameter poplar tree was blown down onto a home, killing a man sleeping in his bed. Several trees and power lines were blown down throughout the county during the night. Estimated Damage: $50,000

January 23, 2016, DeKalb County Strong Wind Event: At approximately 12:30 PM EST northwest winds of 20 to 25 MPH with gusts 30 to 40 MPH caused a tree to fall at the Mystery Valley Golf Club in Lithonia. The tree struck a United States Postal Service vehicle driven by a 36-year-old male postal worker. The vehicle left the roadway and travelled down a hill before striking another tree. DeKalb County Fire Department officials believe the impact from the falling tree, which did not appear to be in good health, likely caused the postal worker's death.

March 21, 2017, Druid Hills Thunderstorm Wind Event: The DeKalb County Emergency Manager reported several trees blown down from North Druid Hills to Clarkston. Trees were blown down on cars and houses on Verona Drive and Tanner Drive and a large tree fell on a home on Coralwood Drive. No injuries were reported.

August 9, 2017, DeKalb County Strong Wind Event: Strong winds associated with a large area of persistent showers produced isolated reports of damage in DeKalb County, including a large tree that fell on an apartment building and a car on Northeast Expressway and another tree blown down across the intersection of LaVista Road and North Druid Hills Road blocking traffic in all directions. No injuries were reported.

June 11, 2018, Oak Grove Thunderstorm Wind Event: The DeKalb County Emergency Manager reported trees blown down from around the intersection of Sycamore Street and East Ponce De Leon Avenue to Sams Street and Shadowmoor Drive at South Columbia Drive. One tree fell onto a house at the Sycamore Street location with one person injured. No information was available concerning the extent of their injuries.

August 1, 2019, Pittsburg Thunderstorm Wind Event: The DeKalb County Emergency Manager and the local broadcast media reported dozens of trees and a few power lines blown down in the Embry Hills area along Embry Hills Drive. A wind gust of 57 mph was measured by Georgia DOT equipment in this area as well. Some trees fell onto homes and automobiles.

Tropical System Events

The information used to develop the tropical system events section is taken directly from the NOAA/NCEI database because it provides the most complete repository for natural hazards in the United States. The method for which NOAA/NCEI reports tropical system impacts varies. Inland tropical system impacts can cause flooding, wind damage, and tornadoes. Events associated with these impacts are sometimes categorized as flood, wind damage, or tornadoes and not with the associated tropical system. So, while the number below reflects NOAA/NCEI data, the tropical system events for DeKalb County are higher.

Between 1950 and 2019, tornado events have impacted DeKalb County and the incorporated communities within its boundaries 16 times. These events caused no deaths, no injuries, and approximately $12 million in property damage. Between January 1, 2016, and December 31, 2020, tropical events have impacted

DeKalb County and the incorporated communities within its boundaries two times. These events caused no deaths, no injuries, and approximately $12 million in damage.

Table 15: Tropical System Events (1950-2020)

Tropical System Events (1950-2020)					
Decade	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
1950s	0	0	0	$0	$0
1960s	0	0	0	$0	$0
1970s	0	0	0	$0	$0
1980s	0	0	0	$0	$0
1990s	0	0	0	$0	$0
2000s	13	0	0	$0	$0
2010s	2	0	0	$12M	$0
2020	1	0	0	$0	$0
Total	**16**	**0**	**0**	**$12M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Table 16: Tropical System Events (2016-2020)

Tropical System Events (2016-2020)					
Year	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
2016	0	0	0	$0	$0
2017	1	0	0	$12M	$0
2018	0	0	0	$0	$0
2019	0	0	0	$0	$0
2020	1	0	0	$0	$0
Total	**2**	**0**	**0**	**$12M**	**$0**
Average	**0.4**	**0**	**0**	**$2.4M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

September 11, 2017, Hurricane Irma: On the morning of August 30th Tropical Storm Irma developed rapidly over the eastern Atlantic Ocean, just west of the Cape Verde Islands. Tropical Irma quickly strengthened as it moved west, reaching hurricane strength by the morning of August 31st. Hurricane Irma continued to move steadily westward across the Atlantic Ocean, intensifying to category 4 storm on the Saffir-Simpson scale as it approached the northern Leeward Islands of the Lesser Antilles on September 4th. By the morning of the September 5th Hurricane Irma had reached category 5 and remained so into the morning of September 8th as it moved through the northern Antilles and approached the Bahamas. Irma

continued moving west northwest as a category 4 storm before turning north over the Florida Straits and crossing the Florida Keys on the 9th and 10th. Hurricane Irma made landfall over southwest Florida as a category 4 storm during the evening of the 10th and travelled north northwest through western Florida before weakening to a category 1 hurricane as it crossed into southwest Georgia the afternoon of September 11th. Tropical Storm Irma crossed southwest Georgia through the day of the 11th before weakening to a tropical depression over north Alabama early on the morning of the 12th. Tropical storm strength winds produced widespread damage across central and north Georgia through the day of September 11th and into the early morning hours of the 12th. Isolated flash flooding associated with Tropical Storm Irma was reported as well.

The DeKalb County Emergency Manager reported hundreds of trees and many power lines blown down across the county. 267 homes and businesses were damaged, mainly by falling trees and large limbs, with 65 of them reported destroyed or sustaining major damage. Over 200 roads were blocked by downed trees, power lines and other debris with over 106 tons of debris cleared. Estimates are that over half of all customers lost electricity in the county for varying periods of time. A wind gust of 47 mph was measured at DeKalb-Peachtree Airport and a gust of 72 mph was measured on top of Stone Mountain, around 800 feet above the surrounding terrain. Radar estimated between 3 and 6.5 inches of rain fell across the county with 6.32 inches measured in Decatur. One firefighter received minor injuries while clearing debris. Around $11 million in insured losses were reported.

October 28-29, 2020, Tropical Storm Zeta: During the late evening of October 28th through the morning of October 29th, Tropical Storm Zeta swept rapidly across north Georgia producing widespread wind damage and isolated flooding across north and portions of central Georgia. Around 1.5 million customers lost electricity for some period, some for several days.

Winds gusted between 35 and 55 mph for several hours. A gust to 47 mph was recorded at DeKalb-Peachtree Airport (KPDK) at 3:54 AM EST and a gust of 54 mph was recorded near Emory University. Numerous trees and power lines were blown down across the county.

Tornado Events

Between 1950 and 2019, tornado events have impacted DeKalb County and the incorporated communities within its boundaries 13 times. These events caused one death, two injuries, and approximately $28.950 million in property damage. Between January 1, 2016, and December 31, 2020, tornado events have impacted DeKalb County and the incorporated communities within its boundaries two times. These events caused no deaths, no injuries, and approximately $265,000 in damage.

Table 17: Tornado Events (1950-2020)

Tornado Events (1950-2020)					
Decade	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
1950s	1	0	1	$25K	$0
1960s	2	0	1	$500K	$0
1970s	4	0	1	$3.025M	$0
1980s	1	0	0	$25K	$0
1990s	1	1	0	$25M	$0
2000s	1	0	0	$50K	$0
2010s	3	0	0	$325K	$0

2020	0	0	0	$0	$0
Total	**13**	**1**	**3**	**$28.950M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Table 18: Tornado Events (2016-2020)

Tornado Events (2016-2020)					
Year	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
2016	0	0	0	$0	$0
2017	1	0	0	$15K	$0
2018	0	0	0	$0	$0
2019	0	0	0	$0	$0
2020	1	0	0	$250K	$0
Total	**1**	**0**	**0**	**$265K**	**$0**
Average	**0.4**	**0**	**0**	**$53K**	**$0**

Data Source: NOAA/NCEI Storm Events Database

June 5, 1950, Tornado: An F1 tornado touched down in eastern DeKalb County. The tornado caused one injury and approximately $25,000 in property damage.

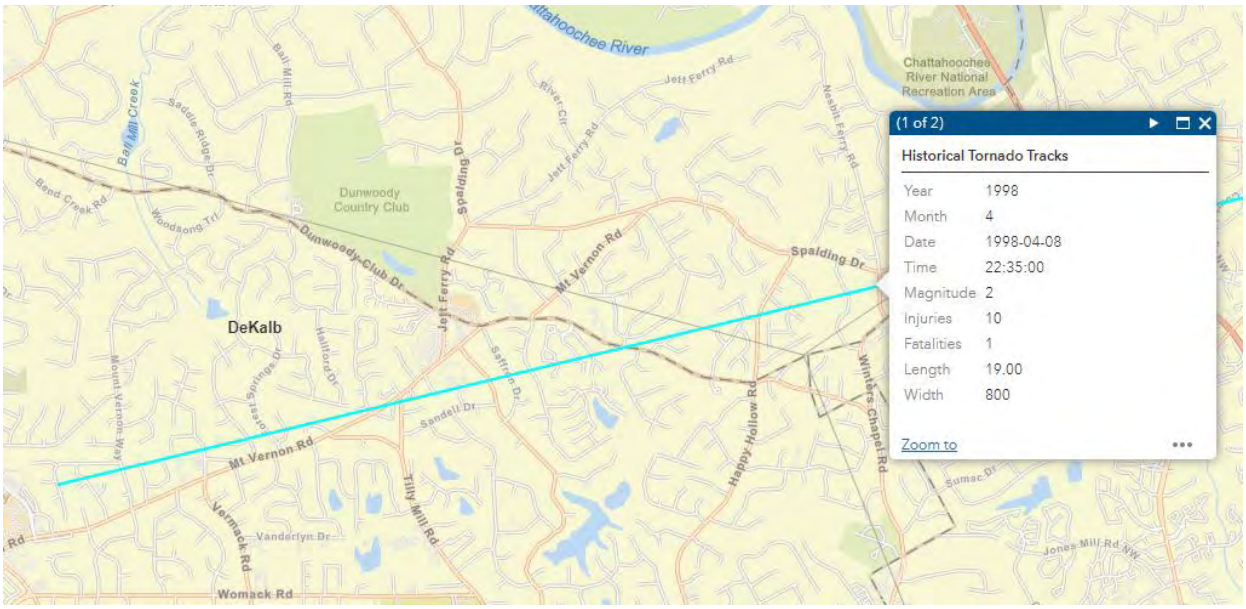
June 30, 1966, Tornado: An F1 tornado moved through DeKalb County causing one injury and approximately $250,000 in property damage.

May 14, 1976, Tornado: An F1 tornado touched down briefly in DeKalb County at 7:00 p.m. The tornado damaged a self-service gas station, injuring one person. At Interstate 285 and Flat Shoals Road, the tornado flipped a tractor-trailer.

May 8, 1978, Tornado: At 5:20 p.m., an F2 tornado moved northeast from Forest Park in Clayton County to southern DeKalb County. Many homes had roof damage, and two apartment complexes and a shopping center were severely damaged. The tornado caused approximately $2.5 million in property damage.

April 8, 1998, Dunwoody Tornado: An F2 tornado touched down in Dunwoody11:35 p.m. The damage path began just northeast of Perimeter Mall in Dunwoody and extended well into Gwinnett County. There was significant widespread damage to trees and homes. One person was killed when a tree fell on his home. DeKalb College's north campus was closed after several buildings sustained major damage. The tornado, which is the most costly and deadly in DeKalb County in the past 70 years, caused approximately $25 million in damage.

Map 4: April 8, 1998, Dunwoody Tornado



Data Source: FEMA National Integration Center Header Resilience Analysis and Planning Tool (RAPT)

May 4, 2017, Tornado: A National Weather Service survey team found that an EF0 tornado with maximum wind speeds of 70 MPH and a maximum path width of 80 yards touched down near Forest Glen Circle in central DeKalb County where it broke several large branches and uprooted a few trees. The tornado moved northeast crossing I-285, North Decatur Road, Dial Road and Greenridge Circle snapping or uprooting a few more trees before ending just past Greenridge Circle. The tornado caused approximately $15,000 in property damage.

October 10, 2020, Tornado: During the afternoon and evening of October 10th, as the remnants of Hurricane Delta passed northwest of Georgia, moisture from the Gulf of Mexico spread across the area. Several weak tornadoes occurred in north and central Georgia in addition to pockets of heavy rainfall and flooding across the Atlanta metropolitan area and portions of northeast Georgia.

A National Weather Service survey team found that an EF0 tornado with maximum wind speeds of 80 mph and a maximum path width of 250 yards travelled 1.7 miles across a portion of south-central DeKalb County. The tornado touched down just north of I-20 near Wesley Chapel Road and Cross Lane, snapping several small trees, and pulling a few shingles off of roofs. The tornado moved north northwest causing more extensive damage between Lindsey Drive and Oak Valley Road. In this residential area, including Sherwood Avenue and Hanes Drive, multiple large trees were snapped or uprooted with several falling on homes and taking down utility/power lines. The tornado weakened as it continued north northwest with several additional small trees snapped along its path over Belvedere Square and just across Covington Highway along South Indian Creek Drive. No injuries were reported. The tornado caused approximately $250,000 in property damage.

4.3.3A – Probability of Future Events, Wind

Table 19: Probability of Future Events, Wind

Probability of Future Events, Wind			
Decade	**Event**		
	Straight-Line Wind	**Tropical System**	**Tornado**
1950s	0	0	1
1960s	4	0	2
1970s	10	0	4
1980s	43	0	1
1990s	91	0	1
2000s	108	13	1
2010s	81	2	3
2020	15	1	0
Categorical Totals	352	16	13
Categorical Years	70	70	70
Categorical Averages	**502% Highly Likely**	**23% Likely**	**19% Likely**
Total Events = 381		**Total Years = 210**	
Likelihood of a Wind Event Each Year = 181%			

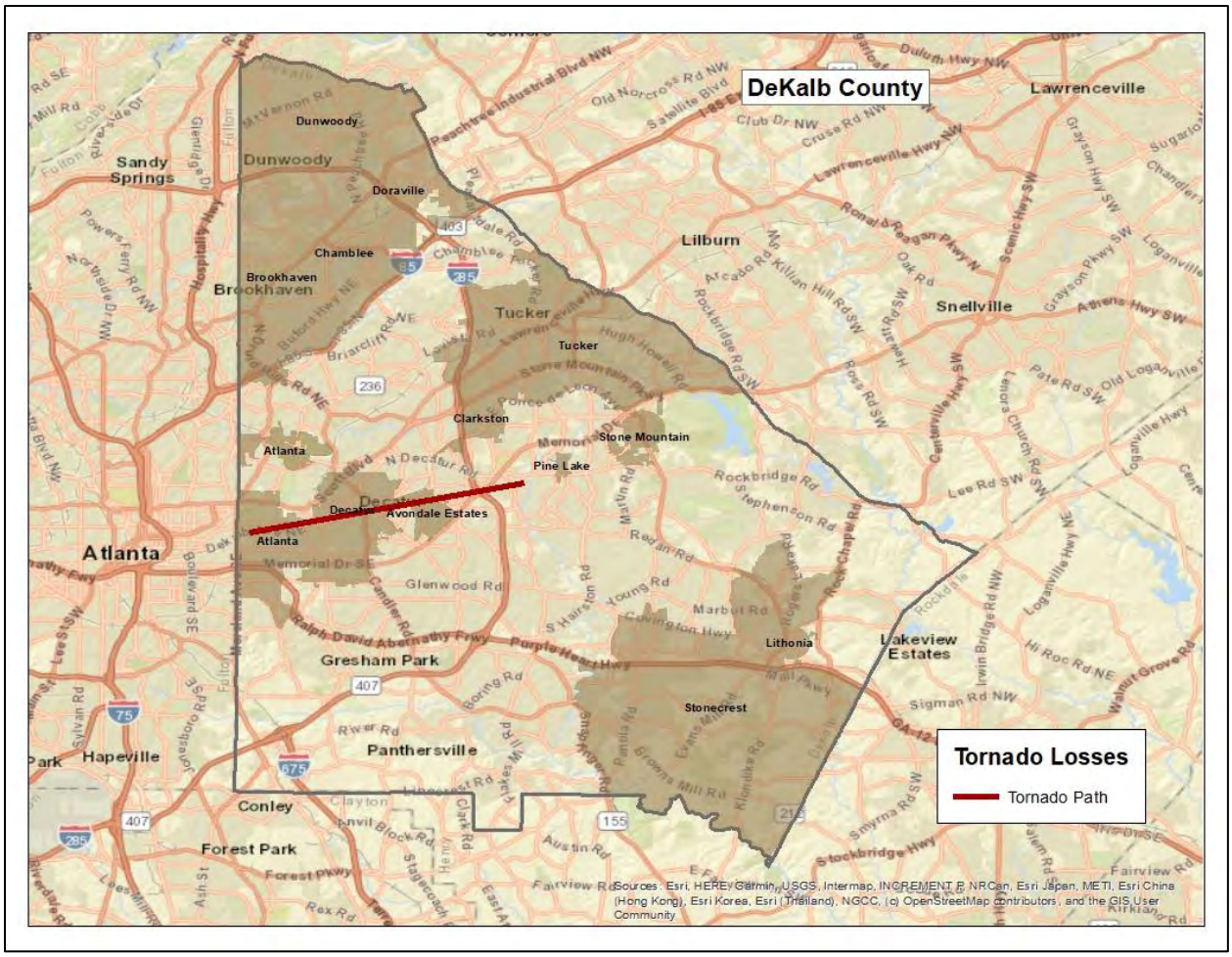
Data Source: NOAA/NCEI Storm Events Database

Based on this data, it is **HIGHLY LIKELY** a wind event will occur every year in DeKalb County and the incorporated jurisdictions within its boundaries.

4.3.4 – Vulnerability of Community Assets

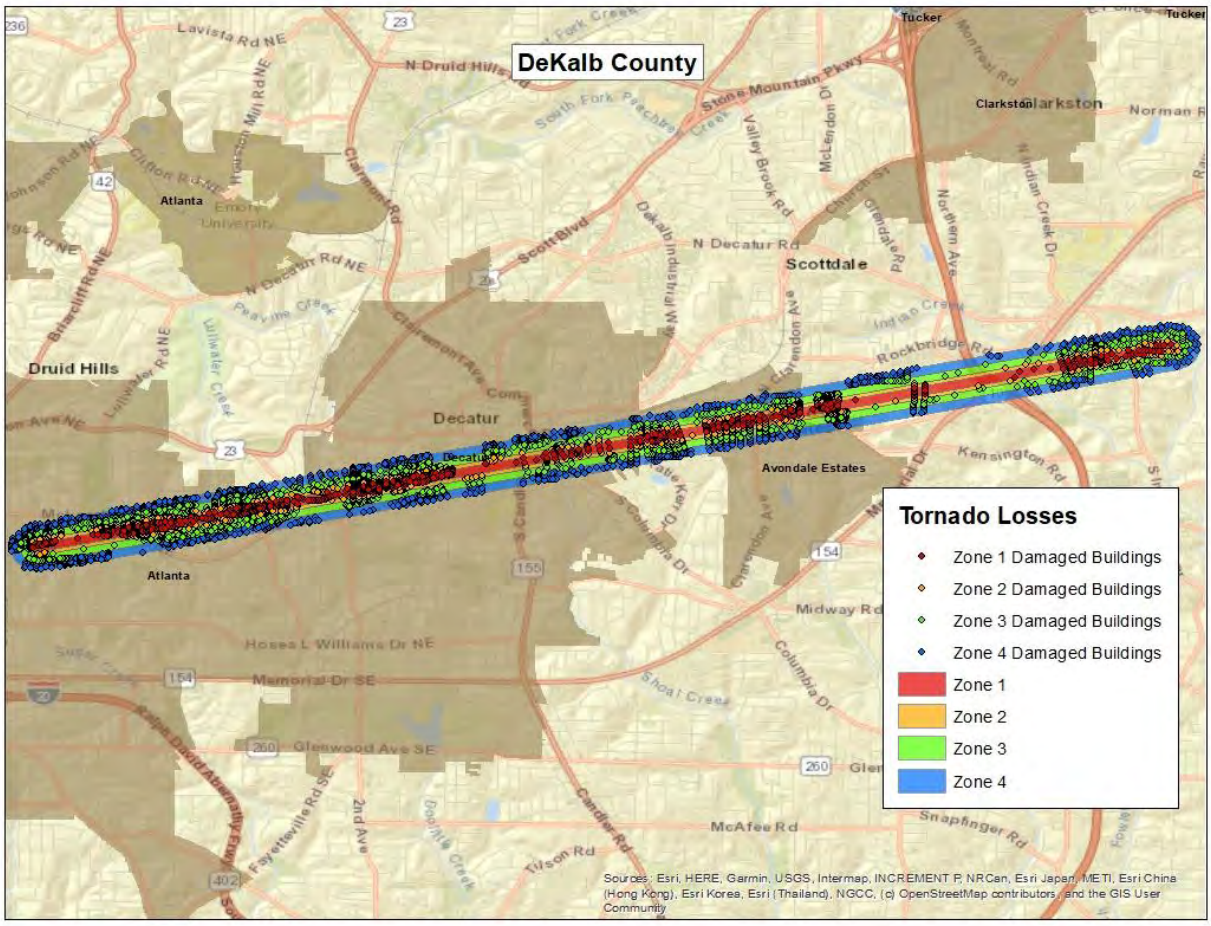
***Note**: As part of the hazard analysis conducted by the University of Georgia's Carl Vinson Institute of Government, separate hypothetical scenarios involving a tornado and a tropical storm impacting DeKalb County were run using Hazus-MH. The hypothetical tropical storm scenario involved maximum winds of 67 miles per hour. For the hypothetical tornado scenario, an EF-3 tornado was modeled to illustrate potential impacts to DeKalb County.*

Map 5: Hypothetical EF3 Tornado Path in DeKalb County



Map Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Map 6: Modeled EF3 Tornado Damage Buffers in DeKalb County



Map Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

People

All of DeKalb County's population are susceptible to wind hazards. Low-income individuals are more vulnerable to wind hazards. In its reported titled, "A Disaster in the Making, Addressing the Vulnerability of Low-Income Communities to Extreme Weather," the Center for American Progress argues that low-income people are disproportionately affected by extreme weather due to shoddy housing construction and the age of affordable housing (https://www.americanprogress.org/wp-content/uploads/2013/08/LowIncomeResilience-2.pdf). Low-income individuals also experience greater difficulties in recovering from wind hazard impacts. According to U.S. Census Bureau data, 15.1% of DeKalb County's population live in poverty. This represents 113,148 people. The cities of Lithonia (38.9%), Clarkston (30.9%), and Doraville (22.8%) have the highest levels of poverty in DeKalb County. The DeKalb County 2021 Comprehensive Plan 5-Year Update notes that poverty rates have increased in certain sections of central and south DeKalb County(https://www.dekalbcountyga.gov/planning-and-sustainability/2021-comprehensive-plan-5-year-update).

Individuals with access and functional needs are more vulnerable to wind hazard impacts. This may include children, the elderly, they physically or mentally disabled, non-English speakers, the medically or chemically dependent, and the transportation disadvantaged (https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-planning-handbook_03-2013.pdf). In DeKalb County, this includes the following:

- Individuals with a disability: 10.2% (75,923 people)

- Persons 65 years and over: 11.9% (89,507 people)
- Persons under 9 years: 13.5% (101,416 people)
- Speak English less than "very well" (age 5 years+): 8.7% (60,536 people)
- Households with no vehicles available: 8.6% (24,418 households)

The City of Stonecrest (11.4%) has the highest percentage of individuals with a disability. The City of Avondale Estates (23.4%) has the highest ratio of population aged 65 years or older. The City of Lithonia (22.3%), City of Clarkston (18.3%), and City of Decatur (18.2%) have the greatest percentage of people under 9 years. The City of Doraville (42.4%), City of Clarkston (40.9%), and City of Chamblee (28.7%) have the highest percentage of people who speak English less than “very well.” The City of Lithonia (14.7%) and City of Clarkston (14.3%) have the highest ratio of households with no vehicle available.

Housing is also an important factor in determining the vulnerability of people to wind hazard impacts. There are indicators of increased vulnerability of some people in DeKalb County to wind hazard impacts due to housing characteristics. Many older multi-family developments are suffering from physical deterioration and are often concentrated in areas with higher poverty rates. There are 1522 people who reside in mobile homes, vans, boats, or recreational vehicles in DeKalb County. Of this number, Brookhaven (98), Chamblee (84), and Dunwoody (60) have the highest number of residents residing in these structures. This is important to note because these structures are much more vulnerable to tornadoes than site-built homes. Mobile homes and vehicles are not safe in any magnitude of tornado.

This data, retrieved from the American Community Survey and the DeKalb County 2021 Comprehensive Plan 5-Year Update, provides insight into certain characteristics of DeKalb County that are likely indicators of vulnerability. Based on this data, the greatest population vulnerabilities to wind hazards in DeKalb County are in the City of Clarkston, the City of Lithonia, and unincorporated areas of the county.

As part of the hypothetical tropical storm scenario, Hazus-MH estimates the number of households evacuated from buildings with severe damage from high velocity winds as well as the number of people who will require short-term sheltering. Since the 1% chance storm event for DeKalb County is a tropical storm, the resulting damage is not enough to displace households or require temporary shelters

Vulnerability of the Economy

The leading industries in DeKalb County are Healthcare and Social Services (14.9% jobs), Retail Trade (10.9% of jobs), Accommodations and Food Services (7.2% of jobs), and Administrative and Support and Waste Management and Remediation Services (7.2% of jobs). Educational Services is another important industry in DeKalb County as it provides the fifth largest percentage of jobs (6.6%) and the highest average weekly wages of all industries ($2105). The private sector provides 85.6% of employment, while the Federal, State, and local governments provide 14.4% of DeKalb County employment (https://explorer.gdol.ga.gov/vosnet/mis/Profiles/Counties/DeKalb.pdf). The largest employers in DeKalb County are, (1) Centers for Disease Control and Prevention (CDC); (2) Veterans Affairs Medical Center Atlanta; (3) Emory University Hospital; (4) Emory DeKalb Medical; (5) Children’s Healthcare of Atlanta; (6) AT&T Mobility LLC; (7) State Farm Insurance Company/Atlanta Perimeter; (8) InterContinental Hotels Group Inc; (9) AirWatch LLC; and (10) Georgia Regional Hospital Atlanta (https://www.dekalbchamber.org/why-dekalb/).

All sectors of DeKalb County’s economy are susceptible to the impacts of wind hazards. The loss of any of DeKalb County’s leading industries could severely disrupt the community and its ability to recover from a disaster. Given the significance of the Healthcare industry in DeKalb County, a wind-related disaster impacting one of the community’s hospitals would severely stress the capabilities of the community to respond to the medical needs of the community. The CDC, located in DeKalb County, is a Federal agency under the United States Department of Health and Human Services which works to protect America from health, safety and security threats, both foreign and in the United States

(https://www.cdc.gov/about/organization/mission.htm). Its loss would not only affect DeKalb County's economy but would affect the entire nation.

Vulnerability of the Built Environment

The build environment includes infrastructure systems, critical facilities, and cultural resources. DeKalb County and each of its participating jurisdictions have developed a list of infrastructure and critical facilities which are vital to the community. The National Park Service's National Register of Historic Places is the official list of the Nation's historic places worthy of preservation.

Infrastructure systems are critical for life safety and economic viability and include transportation, power, communication, and water and wastewater systems. Critical facilities are structures and institutions which are necessary for the community's response to and recovery from emergencies. These critical facilities must continue to operate during and following disasters to reduce the severity of impacts and accelerate recovery. Appendix C of this plan lists the community's infrastructure and critical facilities. Appendix C of this plan lists the places in DeKalb County which are part of the National Register of Historic Places and are considered important cultural resources.

Considering the entire planning area is susceptible to wind hazard impacts, increased development and population growth can reasonably translate to exposure. The DeKalb County 2021 Comprehensive Plan 5-Year Update visualizes the development of three types of Activity Centers: Neighborhood Centers, Town Centers, and Regional Centers. There are 46 Activity Centers countywide. In addition, the plan includes residential designations: Rural, Suburban, and Traditional. DeKalb County's Future Land Use Map can be accessed via https://dekalbgis.maps.arcgis.com/apps/webappviewer/index.html?id=f241af753f414cdfa31c1fdef0924584.

The hypothetical tropical storm scenario was used to analyze impacts to the built environment in DeKalb County. Buildings in DeKalb County are vulnerable to storm events, and the cost to rebuild may have significant consequences to the community. The following table shows a summary of the results of wind-related building damage in DeKalb County for the tropical storm. The loss ratio expresses building losses as a percentage of total building replacement cost in the county.

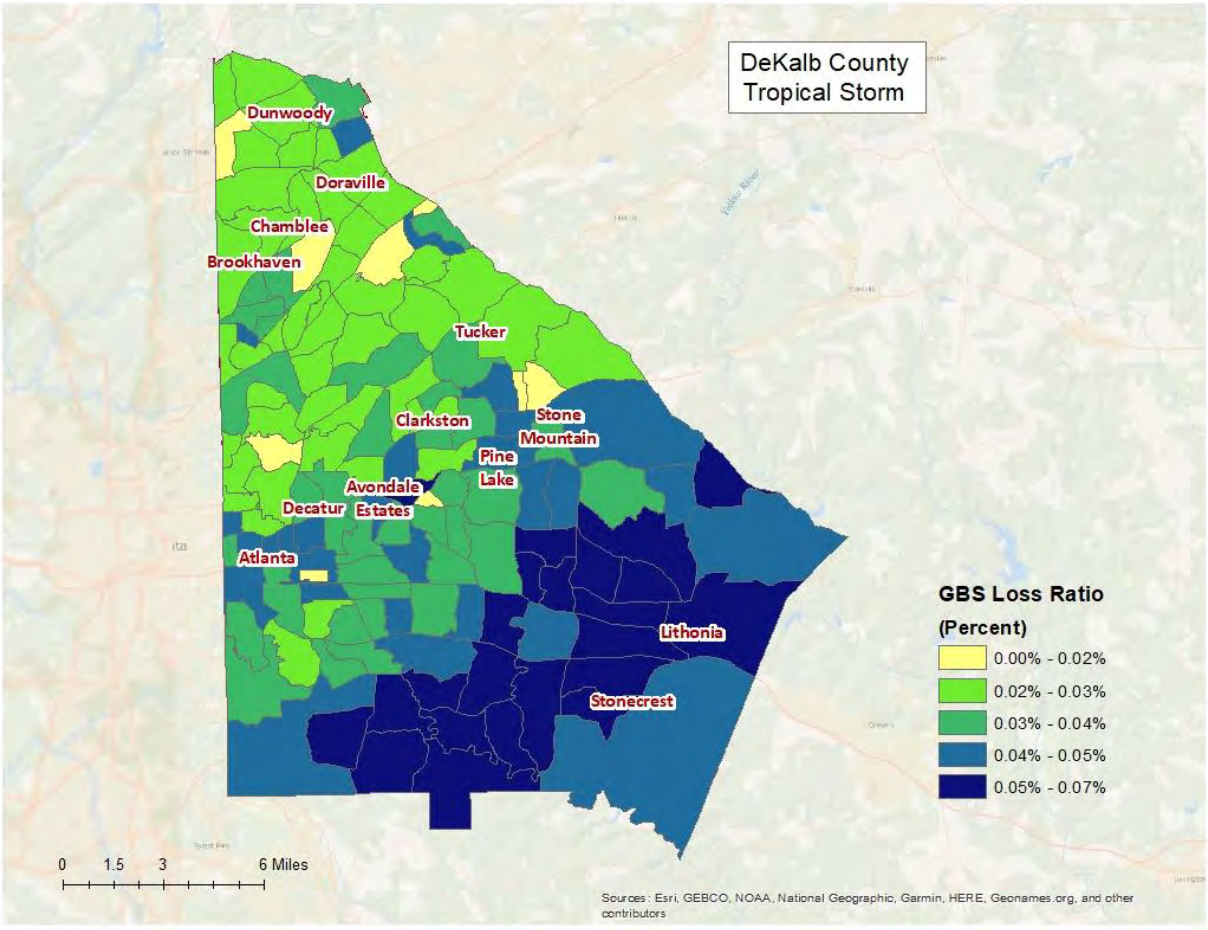
Table 20: Tropical Storm-Damaged Essential Facility Losses

Classification	Number of Buildings Damaged	Total Building Damage	Total Economic Loss[1]	Loss Ratio
Tropical Storm	232	$53,991,190	$69,558,650	0.04%

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Note that wind damaged buildings are not reported by jurisdiction. This is because census tract boundaries – upon which hurricane building losses are based – do not closely coincide with jurisdiction boundaries.

Map 7: Tropical Storm Wind Building Loss Ratios



Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

For the hypothetical tornado scenario, the analysis estimated that approximately 3708 buildings could be damaged, with estimated building losses of $745 million. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The overlay was performed against parcels provided by DeKalb County that were joined with Assessor records showing estimated property replacement costs. The Assessor records often do not distinguish parcels by occupancy class if the parcels are not taxable and thus the number of buildings and replacement costs may be underestimated. The results of the analysis are depicted in the table below.

Table 21: Estimated Tornado Building Losses by Occupancy Type

Occupancy	Buildings Damaged	Building Losses
Commercial	184	$29,799,298
Education	6	$4,490,370
Industrial	23	$2,407,978
Religious	2	$44,173
Residential	3,493	$707,780,592
Total	**3,708**	**$744,522,411**

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Essential facilities are also vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by a tropical storm or tornado. The results are compiled in the tables below.

Table 22: Tropical Storm-Damaged Essential Facility Losses

Classification	Facilities At Least Moderately Damaged > 50%	Facilities Completely Damaged > 50%	Facilities with Expected Loss of Use (< 1 day)
Tropical Storm	1	0	203

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Table 23: Estimated Tornado Essential Facilities Damaged

Facility	Amount of Damage
Agnes Scott College	Major Damage
Decatur High School	Minor Damage
Dunaire Elementary School (PK-5)	Minor Damage
Renfroe Middle School	Minor Damage
Talley Street Upper Elementary School	Minor Damage
Fire Station 3	Minor Damage

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

According to the Georgia Department of Education, Decatur High School's enrollment was approximately 1,732 students, Dunaire Elementary (PK-5) School's enrollment was approximately 409 students, Renfroe Middle School's enrollment was approximately 1,339 students, and Talley Street Upper Elementary School's enrollment was approximately 697 students as of October 2021. Agnes Scott College's enrollment was approximately 1,014 students as of Fall Semester 2020. Depending on the time of day, a tornado strike as depicted in this scenario could result in significant injury and loss of life. In addition, arrangements would have to be made for the continued education of the students in another location.

Hazus-MH estimates the amount of debris that will be generated by tropical storm force-winds and quantifies it into three broad categories to determine the material handling equipment needed:

- Reinforced Concrete and Steel Debris
- Brick and Wood and Other Building Debris
- Tree Debris

Different material handling equipment is required for each category of debris. The estimates of debris for this scenario are listed in the following table. The amount of tropical storm wind related tree debris that is estimated to require pick up at the public's expense is listed in the eligible tree debris column.

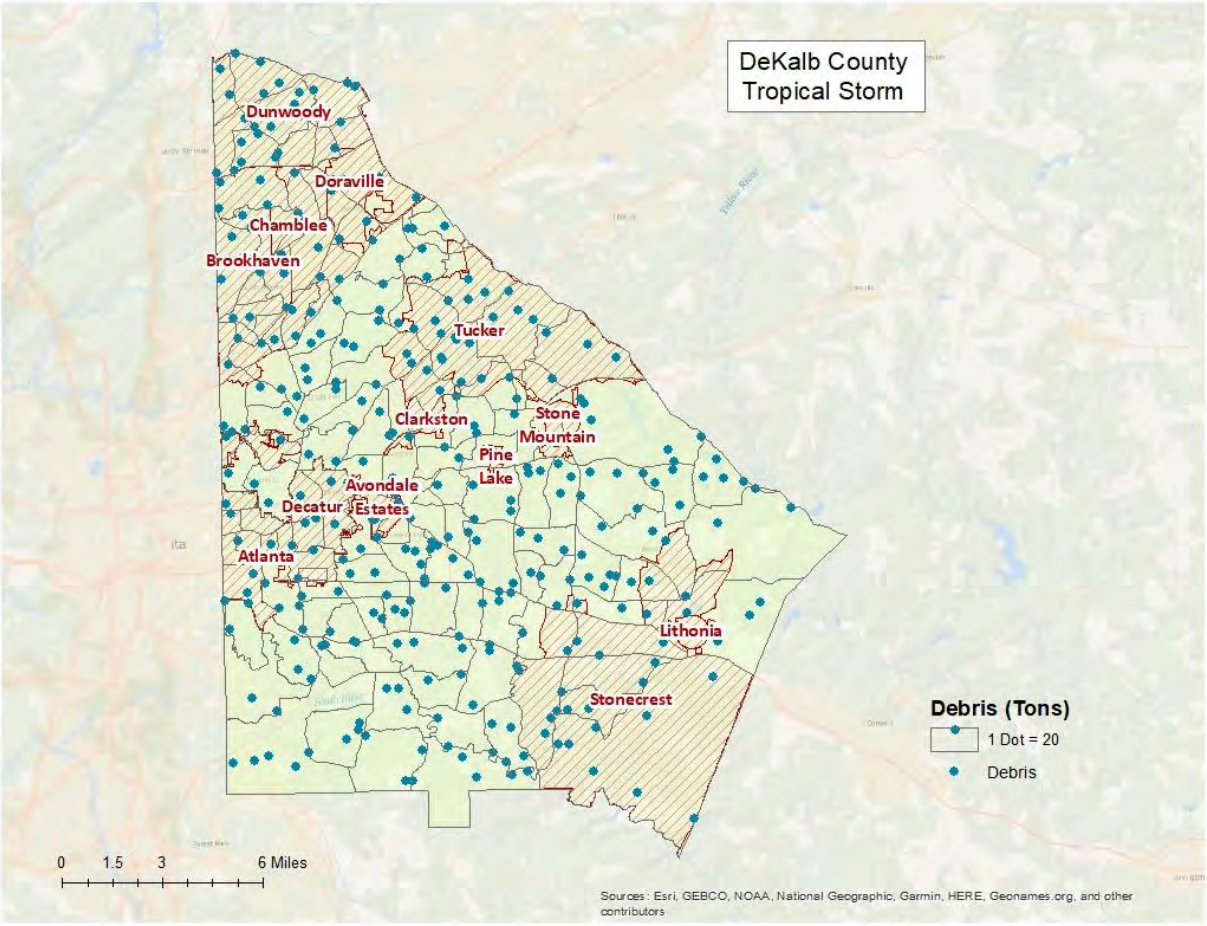
Table 24: Estimated Tornado Essential Facilities Damaged

Classification	Brick, Wood, and Other	Reinforced Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Tropical Storm	757	0	5,922	3,259	9,938

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

The following figure shows the distribution of all wind related debris resulting from a Tropical Storm. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.

Map 8: Tropical Storm Wind-Related Debris Weight (Tons)



Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Vulnerability of Natural Environment

The 2021 DeKalb County Comprehensive Plan – 5 Year Update lists two significant and unique geological features. Soapstone Ridge, located in the southwestern portion of the county, contains aboriginal steatite quarries which are of archeological and historic significance. Stone Mountain, located in the eastern area of the county, is the largest exposed granite outcropping in the world. The 2021 DeKalb County Comprehensive Plan – 5 Year Update also notes there are various Federally protected wetlands in the area, mostly in the flood prone areas of perennial creeks. These natural environmental resources are minimally vulnerable to wind hazard impacts.

4.3.5 – Risk Analysis

All community assets in DeKalb County and the jurisdictions within its boundaries are equally exposed to wind hazard impacts. FEMA's National Risk Index (NRI) estimates that DeKalb County and the jurisdictions within its boundaries have $85,060,191,000 worth of structures exposed to wind hazards each year. The NRI projects annual losses of 0.76 lives and $9,813,922 work of structures to wind hazard impacts each year. This includes impacts associated with strong winds, tornadoes, and thunderstorms. According to the NRI, the most significant projected losses to population and structures are from tornadoes (0.52 deaths and

$7,476,579). In fact, the NRI projects tornadoes to be costliest hazard in terms of structure loss and the second costliest hazard in terms of lives lost.

DeKalb County's most costly wind event in the past 70 years was the April 8, 1998, Dunwoody Tornado. The F2 tornado killed one person and caused approximately $25 million in damage. A similar event now would cost $39,690,817. A violent tornado (EF4+) would likely cause more deaths, injuries, and damage. An analog for a worst-case scenario is the May 23, 2013, Moore, Oklahoma Tornado. In 2013, Moore, Oklahoma had a population of just over 55,000. That is a about 6,000 more than Dunwoody. On May 23, 2013, an EF5 tornado struck Moore, Oklahoma. The tornado killed 24 people, injured 387 people, destroyed an estimated 1,150 homes, and created an estimated $2 billion in damage.

Table 25: Risk Analysis of Community Lifeline Systems to Wind, DeKalb County

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Search and Rescue	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Government Services	**High Risk.** Impacts may: • damage critical facilities and historical sites

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• disrupt power and communications to emergency operations centers • disrupt essential government functions • cause short-term or long-term school cancellations.
	Community Safety	**Moderate Risk.** Impacts may: • damage flood control systems • create secondary hazards
Food, Water, Shelter	Food	**Moderate Risk.** Impacts may: • disrupt commercial food distribution and supply chains • affect commercial and home perishable food supplies
	Water	**Moderate Risk.** Impacts may: • generate secondary hazards which can contaminate drinking water systems • damage wastewater systems
	Shelter	**High Risk.** Impacts may: • damage homes • damage shelters • damage lodging facilities
	Agriculture	**High Risk.** Impacts may: • injure livestock • damage crops • damage farm structures and equipment
Health and Medical	Medical Care	**High Risk.** Impacts may: • damage hospitals, pharmacies, long-term care facilities, and veterinary clinics • disrupt power and communications

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• contaminate water supply, affecting the provision of care • expend resources
	Patient Movement	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Public Health	**Moderate Risk.** Impacts may: • damage facilities • disrupt power and communications • expend resources
	Fatality Management	**Moderate Risk.** Impacts may: • expend resources • damage facilities and equipment • disrupt power and communications
	Medical Supply Chain	**Moderate Risk.** Impacts may: • expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials) • damage or block transportation routes
Energy	Power (Grid)	**High Risk.** Impacts may: • damage generation systems • damage transmission systems • damage distribution systems

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
	Fuel	**Moderate Risk.** Impacts may: • damage fuel storage resources • damage pipelines • damage fuel distribution locations
Communications	Infrastructure	**High Risk.** Impacts may: • damage or cause wireless systems to become overburdened • damage cable and wireline systems • damage or disrupt broadcast and satellite systems • damage or cause internet systems to become overburdened
	Alerts, Warnings, and Messages	**Moderate Risk.** Impacts may: • damage physical warning systems • disrupt the delivery of emergency alerts and warnings
	911 and Dispatch	**High Risk.** Impacts may: • damage public safety answering points or dispatch centers • damage communication systems • overburden communication systems
	Responder Communications	**High Risk.** Impacts may: • damage communication systems • overburden communication systems
	Finance	**Moderate Risk.** Impacts may: • damage banking facilities and equipment • disrupt communications
Transportation	Highway/Roadway	**High Risk.** Impacts may: • damage or block roads and bridges
	Mass Transit	**Moderate Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• damage buses or trains • damage or block transportation routes • delay routes
	Railway	**Low Risk.** Impacts may: • damage freight or passenger trains • damage or block transportation routes • delay routes
	Aviation	**Moderate Risk.** Impacts may: • damage airports • damage aircraft • delay routes
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**Moderate Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from fixed facilities • damage facilities • disrupt power supply to facilities
	Hazmat, Pollutants, Contaminants	**Moderate Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from non-fixed facilities, rail, and roadways

4.3.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W1	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, over a quarter of DeKalb County residents either live below the poverty line and/or have access and functional needs.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 25% of residents in DeKalb County have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance recovering from the event.
W2	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 23.4% of Avondale Estates residents are aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a quarter of the City of Avondale's residents are at a greater risk for injury due to a high wind event and may require greater assistance recovery from the event.
W3	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 22.4% of Brookhaven residents are children, of which 20% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters The City of Brookhaven has a large population of children, of which about 20% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.
W4	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 28.7% of Chamblee residents speak English less than "very well".	Individuals who don't speak English well are more vulnerable to disasters. The City of Chamblee has a large population of residents that do not speak English well and are therefore at a greater risk of injury due to a high wind event.
W5	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Clarkston, 30.9% of residents live below the poverty line, 32.4% are children, 40.9% do not speak English "very well", and 14.3% of households have no vehicle available.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Clarkston have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W6	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 32.2% of Decatur residents are children, of which 9.1% of live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Decatur has a large population of children, of which 9.1% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.
W7	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Doraville, 22.8% of residents live below the poverty line, and 42.4% speak English less than “very well”.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Doraville have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W8	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 21.9% of Dunwoody residents are children, of which 10.8% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Dunwoody has a large population of children, of which about 11% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.
W9	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Lithonia, 38.9% of residents live below the poverty line, 42.3% are children, and 14.7% have no access to a vehicle.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 38% of residents in the City of Lithonia have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W10	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 16.8% of Pine Lake’s population is aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a 17% of the City of Pine Lake’s residents are at a greater risk for injury due to a high wind event and may require greater assistance recovery from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W11	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 10.9% of Stone Mountain's population have a physical or mental disability. 10.3% have no vehicle available, and 21.8% are children.	Individuals with functional and access needs are more vulnerable to disasters. Over 20% of residents in the City of Stone Mountain have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W12	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Stonecrest, 11.4% of the population have a disability. Also, 26.7% of the population are children, of which 20.3% live in poverty.	Individuals with functional and access needs are more vulnerable to disasters. Over a quarter of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W13	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Tucker, 9.5% of residents have a disability. Also, 21.8% of the population are children.	Individuals with functional and access needs are more vulnerable to disasters Over a 20% of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W14	**Wind and built environment** High wind events are highly likely to occur in DeKalb County each year.	Infrastructure systems and critical facilities are important for life safety, economic viability, disaster response operations, and disaster recovery operations.	Infrastructure systems and critical facilities are vulnerable to wind hazard impacts. A major wind-related disaster in DeKalb County could damage or destroy key lifeline systems, hinder response operations, and prolong recovery operations.



Photo Source: istockphoto.com

4.4(FL) – Flood

4.4.1 – Hazard Description

Inland Flooding

Flooding, as defined by the National Weather Service (NWS), is the rising and overflowing of a body of water onto normally dry land. It can result from any overflow of inland or tidal waters, or an unusual accumulation or runoff of surface waters from any source.

Inland flooding, also known as “urban flooding” or “flash flooding,” can be caused by intense, short-term rain or by moderate rainfall over several days, which can overwhelm existing drainage infrastructure. Other factors that affect the dynamics of this type of flood include slope, width, and vegetation in place along the watercourse banks. The slope that flash floods traverse has a definite relationship to the overall speed in which the water will travel. The incline on which the water moves affects the width of the flooding area. Generally, the faster the water moves, the narrower that channel will be created, since the water digs the channel deeper as it flows. When water flows over shallower slope, it tends to spread out more, decreasing its potential to cause mass damage but still considered dangerous. Finally, the type of vegetation located along the flood’s path can prevent further erosion of the channel banks. A structure that lies along a flood channel with no surrounding vegetation is at risk of having its foundation undercut, which can cause structural damage, or in some cases, a building’s complete collapse. Riverine flooding occurs when excessive rainfall over an extended period causes a river to exceed its capacity. Typical causes of flooding, both inland and riverine, include tropical cyclonic systems, frontal systems, and isolated thunderstorms combined with other environmental variables such as changes to the physical environment, topography, ground saturation, soil types, basin size, drainage patterns, and vegetative cover. The rate of onset and duration of flooding events depends on the type of flooding (typical flood or flash flood). The spatial extent

of a flooding event depends on the amount of water overflow but can usually be mapped because of existing floodplains.

As depicted in the following illustration, a floodplain is a flat or nearly flat land adjacent to a river or stream that experiences occasional or periodic flooding environment, topography, ground saturation, soil types, Floodplains, or Special Flood Hazard Areas (SFHAs), are made when floodwaters exceed the capacity of the main channel or escape the channel by eroding its banks. The sediments (rock and debris) that build up over time from the floodplain's floor. Floodplains also include a floodway, which consists of the water channel and adjacent areas that carry flood flows and the flood fringe, which are areas covered by the flood but do not experience a strong current.

Illustration 4: Characteristics of a Floodplain

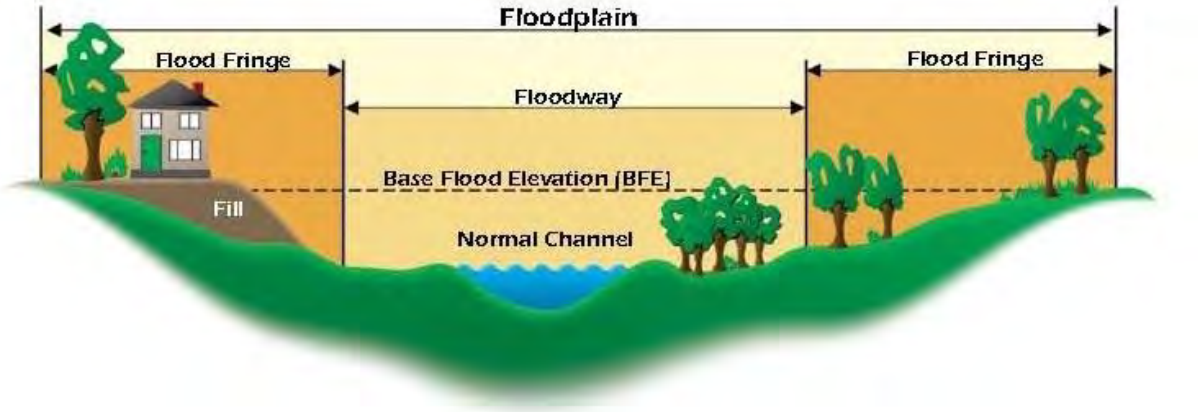


Illustration Source: www.co.mille-lacs.mn.u

All communities live with some risk of flooding. FEMA's community flood map program describes the flood risk for a particular area. The flood zones are used to determine insurance requirements and costs.

Moderate- to low- risk flood areas are designated with the letters B, C, and X on FEMA flood maps. In these areas, the risk of being flooded is reduced, but not completely removed. One-in-three insurance claims come from moderate- to low- risk flood areas.

High-risk flood areas begin with the letters A or V on FEMA flood maps. These areas face the highest risk of flooding. Property owners with a federally backed mortgage in these areas are required to purchase flood insurance as a condition of the loan. (https://www.floodsmart.gov/all-about-flood-maps)

The NFIP aims to reduce the impact of flooding on private and public structures. It does so by providing affordable insurance to property owners, renters, and businesses and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of general risk insurance and flood insurance.

The adverse impacts of flooding can include structural damage; agricultural crop loss; the death of livestock; loss of access to critical facilities due to roads being washed out or overtopped; unsanitary conditions resulting from materials such as dirt, oil, solvents, and chemicals being deposited during the recession; infestations of disease-carrying mosquitoes; mold and mildew, which pose a severe health risk to small children and the elderly; and temporary backwater effects in sewers and drainage systems. Raw sewage is a breeding ground for bacteria, such as E. coli and other disease-causing agents. A boil order may need to be issued to protect people and animals from contaminated water.

Of equal concern is the long-term psychological effect that flooding has on the people impacted by it. They must contend with the loss of life, property, livelihood, etc., as they cope with the aftermath. The clean-up can take months. The cost to restore a home may be too much, especially for the unprepared or uninsured.

Plus, there is the looming fear that it may flood again. The resulting stress on floodplain residents takes its toll in the form of aggravated physical and mental health problems.

Unfortunately, the risks from future floods are significant, given expanded development in coastal areas and floodplains, unabated urbanization, land-use changes, and climate change. Because of this, flooding may intensify in many regions across the country, even in areas where total precipitation is projected to decline. According to FEMA, water, and flooding account for about 40% of the Presidentially Declared Disasters in the United States.

Dam Failure

One of the potential causes of flooding is dam failure. A dam is a barrier across flowing water that obstructs, directs, or slows down the flow, often creating a reservoir, lake, or impoundment. Most dams have a section called a spillway or weir, over or through, which water flows, either intermittently or continuously. Dams commonly come in two types, embankment (the most common) and concrete (gravity, buttress, and arch), as well as sizes. They also serve several purposes and provide essential benefits, including drinking water, irrigation, hydropower, flood control, and recreation.

Large or small, dams have a powerful presence that is frequently overlooked until a failure occurs. Dams fail in two ways: 1) a controlled spillway release done to prevent full failure, or 2) the partial or complete collapse of the dam itself. In each instance, an overwhelming amount of water, and potentially debris, is released. Dam failures are rare, but when they do occur, they can cause loss of life and immense damage to property, critical infrastructure, and the environment.

Possible reasons for dam failure include but are not limited to:

- Sub-standard construction materials/techniques
- Spillway design error
- Geological instability caused by changes to water levels during filling or poor surveying
- Sliding of a mountain into the reservoir
- Poor maintenance, especially of outlet pipes
- Human, computer, or design error
- Internal erosion, especially in earthen dams
- Earthquakes
- Terrorism

There are three classifications of dam failure: 1) hydraulic, 2) seepage, and 3) structural. Following is an explanation of each these failure classifications:

1. Hydraulic: This failure is a result of an uncontrolled flow of water over and around the dam structure as well as the erosive action on the dam and its foundation. The uncontrolled flow causing the failure is often classified as wave action, toe erosion, or gullying. Earthen dams are particularly
susceptible to hydraulic failure because earthen materials erode more quickly than other materials, such as concrete and steel. This type of failure constitutes approximately 40% of all dam failures.

2. Seepage: Seepage is the velocity of an amount of water controlled to prevent failure. This occurs when the seepage occurs through the structure to its foundation, where it begins to erode within. This type of failure accounts for approximately 4% of all dam failures.

3. Structural: A failure that involves the rupture of the dam or the foundation by water movement, earthquake, or sabotage. When weak materials construct dams (large, earthen dams) are the primary cause of this failure. Structural failure occurs with approximately 30% of dam failures.

There are now approximately 90,000 dams nationwide with an average age of 56 years. A high number of these dams have received less than favorable Dam Safety Action Classification (DSAC) ratings from the U.S. Army Corps of Engineers (USACE). In fact, as of 2016, the federal government said there were approximately 15,000 U.S. dams classified as having high-hazard potential (HHP), meaning that their failure could result in loss of life. The worst dam failure in the United States occurred in 1889 in Johnstown, Pennsylvania, when over 2,200 people died, with many more were left homeless.

According to USACE, dams are unique components of the U.S. infrastructure in that most dams are privately owned. Dam owners are solely responsible for keeping their dams safe and financing maintenance, repairs, and upgrades. Most dams are regulated for safety by state and federal governments, much the same way as are bridges, food, drugs, factories, etc. States regulate most dams in the U.S. (about 80%). The federal government regulates the remaining number.

4.4.2 – Location & Extent

Flooding

Flash flooding is unpredictable and, therefore, can occur anywhere inside the planning area. A flash flood is an extremely dynamic event in which a high volume of water moves through an area at high velocity during a short period of time. This type of flooding can be challenging to predict and occur with little or no warning. In many cases, a flash flood can move through an area a mile from where rain has occurred, thereby increasing people's damage within the flood's path.

Flash floods occur when rainwater runs into small channels where it begins to collect. As these channels merge, the amount of water increases and picks up speed and force. This collection of water becomes a wall of water that can wash vegetation, structures, and debris. The debris then increases the amount of force available and increases the flood's destructive power.

In Georgia, flooding is greatly dependent upon precipitation amounts and is highly variable across the state. Georgia's climate is primarily affected by latitude, proximity to the Atlantic Ocean and the Gulf of Mexico, and topography. Certain seasons are more prone to present flooding based on the likelihood of excessive precipitation. Typically, the wet seasons are winter, early spring, and midsummer, and the drier seasons are fall and late spring. However, this varies across the state, with the northern portion receiving maximum precipitation amounts during the winter because of frontal systems. In contrast, central and coastal Georgia receive maximums in the mid-to-late summer because of tropical cyclones and convective thunderstorm activity.

The Flood Insurance Study of DeKalb County, GA, and incorporated areas indicates that the county lies within the Southern Piedmont major land resource area. The soils on uplands are mainly well drained and have a loamy surface layer and clayey subsoil. The landscape is made up of gently sloping soils on ridge tops with sloping to steep, well-drained loamy type soil. Although the county is planned mainly for urban use, some excellent farmland exists. Most of the county that has not been developed is in woodland or pastureland. The streams have a steep hydraulic gradient in their headwater reaches, but transition to a moderate gradient as they continue into the major channels.

The history of flooding in DeKalb County indicates that flooding may occur during any season of the year, but floods are most likely to occur in winter and spring when runoff conditions are most favorable. Major flood producing storms in these seasons are usually of the frontal type, which last from two to four days

and often cover large areas. Summer storms are usually more intense, but they are typically of shorter duration and limited extent.

The Metropolitan North Georgia Water Planning District, which serves DeKalb County and its participating jurisdiction, is located on the eastern subcontinental divide. The planning district comprises three distinct river systems (Apalachicola, Chattahoochee, and Flint ACF; Alabama, Coosa, Tallapoosa ACT; and Altamaha River), six river basins, and nine separate 8- digit Hydrologic Unit Code (HUC-8) Basins. Those major river systems are the Chattahoochee, Coosa, Flint, Ocmulgee, Oconee, and Tallapoosa River Basins. Those river systems create the following river basin watershed within the County: Upper Chattahoochee (Cities of Avondale Estates, Brookhaven, Decatur, Doraville, and Dunwoody; and the Upper Ocmulgee (DeKalb County and the Cities of Clarkston, Lithonia, Pine Lake and Stone Mountain).

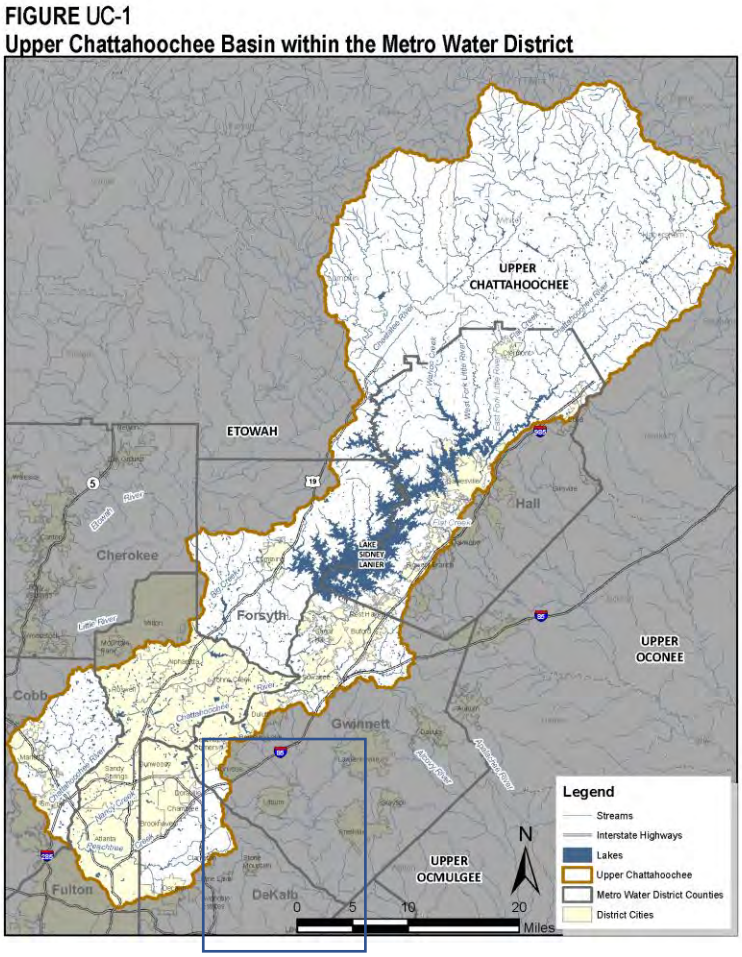
The overview and topography of each Watershed that flows in or near DeKalb County and its participating jurisdictions is as follows:

Upper Chattahoochee River Basin – The Upper Chattahoochee River Basin includes portions of the Gainesville Ridge, Central Highlands, and the Winder Slope physiographic districts. The Upper Chattahoochee River Basin covers twenty-nine (29) cities, including Cities of Avondale Estates, Brookhaven, Decatur, Doraville, and Dunwoody and seven counties, including DeKalb County. The river basin has its headwaters in the Blue Ridge Mountains northeast of the Metro Water District, flowing southwest to the confluence of the Chattahoochee River with Peachtree Creek. Approximately 43 percent, or 680 square miles, of this HUC-8 Basin is located upstream of the Metro Water District before it occupies a relatively narrow corridor through the center of the Metro Water District, averaging about 40 miles wide, starting in the northeast corner and extending to the southwest corner.

The Chattahoochee River (which includes the Upper Chattahoochee River Basin) joins the Flint River in southern Georgia to form the Apalachicola River, which flows to the Gulf of Mexico. The main tributaries feeding the Upper Chattahoochee River Basin through the Metro Water District include the Chestatee River, Wahoo Creek, Suwanee Creek, Big Creek, Sope Creek, Rottenwood Creek and Peachtree Creek. In contrast to the mainstem Chattahoochee River, all of the natural tributaries remain free-flowing within this basin. Groundwater availability is limited due to geologic conditions, which restrict the potential yield for water supply. More information about the Upper Chattahoochee River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_1_UpperChatt_RBP.pdf.

***Note**: The previous HMP (2016) and DeKalb County Flood Insurance Study (updated August 15, 2020) mentions there have been numerous flood events in DeKalb County. Significant flood-related damage has been experienced along North Fork Peachtree Creek, South Fork Peachtree Creek, Nancy Creek, their tributaries, and other streams. Past floods have caused damage because of development in the floodplains of the impacted streams. As growth in the county continues, the demand for building sites to accommodate residential and industrial development may force the county to consider sites previously considered unacceptable. Such sites could be vulnerable to serious flooding if proper precautions are not implemented.*

Map 9: Upper Chattahoochee River Basin Map (2017)



Map Source: Metropolitan North Georgia Water Planning District, Upper Chattahoochee River Basin Profile, http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_1_UpperChatt_RBP.pdf

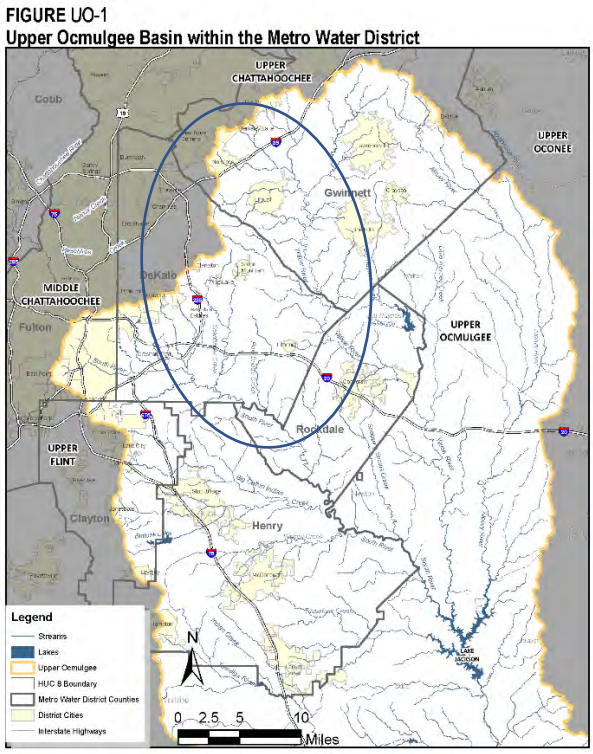
Upper Ocumlgee River Basin – The Upper Ocmulgee River Basin encompasses 982 square miles and includes portions of thirty (30) cities including the Clarkston, Lithonia, Pine Lake and Stone Mountain, and six (6) counties that include DeKalb County. Approximately 100 miles of Interstate 85, Interstate 75, Interstate 285 and Interstate 20 traverse the basin. The Ocmulgee streams and tributaries are classified as drinking or fishing, with the majority designated for fishing. The Upper Ocmulgee River Basin is entirely within the Piedmont province, which consists of a series of rolling hills and occasional isolated mountains. The Upper Ocmulgee River Basin includes portions of the Gainesville Ridge, Washington Slope and Winder Slope physiographic districts.

The headwaters of the Upper Ocmulgee River Basin originate in Clayton, DeKalb, Fulton and Gwinnett Counties and drain to the southeast through portions of Henry and Rockdale Counties. The Alcovy River, South River, Towaliga River and Yellow River are the main tributaries draining to this portion of the Metro Water District. This river basin includes one 8-digit HUC, ten 10-digit HUCs and forty 12-digit HUCs. While there are multiple smaller reservoirs, such as Big Haynes Creek, Blalock Lake, Lake Jodeco and Stone Mountain Lake in this basin, there are no major impoundments; however, Lake Jackson, a 4,570-acre

Georgia Power-managed Project, is located just outside of and downstream of the Metro Water District. As such, it is influenced by the land cover and watershed conditions found within the Upper Ocmulgee River Basin. Jackson Lake is not supporting its designated use of recreation due to fish consumption guidelines for legacy polychlorinated biphenyl (PCB) contamination, which is attributed to urban runoff and nonpoint source pollution. More information about the Upper Ocmulgee River Basin can be found online at http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_2_MiddleChat_RBP.pdf

Note: The previous HMP (2016) mentions that in the Unincorporated portion of the County, most significant flood related damages have been experienced along North Fork Peachtree Creek, South Fork Peachtree Creek, Nancy Creek, their tributaries, and other streams.

Map 10: Upper Ocmulgee River Basin Map (2017)



Map Source: Metropolitan North Georgia Water Planning District, Upper Ocmulgee River Basin Profile http://northgeorgiawater.org/wp-content/uploads/2017/05/Attachment_3_Ocmulgee_RBP.pdf

In terms of the extent, or range of magnitude, floods can vary greatly in the planning area from localized drainage to dangerous flash floods with significant depths and high velocities. According to the 2019 DeKalb County Flood Insurance Study, updated August 15, 2019, "New hydrologic and hydraulic analyses were prepared for Camp Creek, Camp Creek Tributary A, Crooked Creek Tributary to Stone Mountain Creek, Crooked Creek Tributary A, Crooked Creek Tributary A-1, Pine Mountain Creek, Johnson Creek, Little Stone Mountain Creek, Stone Mountain Creek, Stone Mountain Creek Tributary A, Swift Creek, Swift Creek Tributary A, Swift Creek Unnamed Tributary 3, Tom George Creek and Yellow River. The detail hydrology and hydraulics were performed for 20-, 10-, 4-, 2-, 1-, 0.2-percent-annual-chance flood events. The hydrology and hydraulics parameters were based on DeKalb County's 2-foot interval topography map, or the 2010 Light Detection and Ranging (LiDAR) Terrain data. The Hydrologic Engineering Center (HEC) computer software HEC-HMS (version 3.5) was used to model rainfall-runoff for the new detailed study watersheds except Yellow River, which was based on gage analysis." The 2019 DeKalb County Flood Insurance Study can be obtained by contacting the County Floodplain Coordinator.

The National Flood Insurance Program (NFIP) provides insurance to help reduce the socio-economic impact of floods. The NFIP status of community in the declared counties is published in the NFIP Community Status Book. The NFIP status has implications for disaster assistance to the community and its citizens. NFIP status means a community either:

- Participates in the NIFP
- Does not participate in the NFIP
- Is suspended or sanctioned

The Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management practices that exceed the minimum requirements of the NFIP. In CRS communities, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community's efforts that address the three goals of the program:

1. Reduce and avoid flood damage to insurable property.
2. Strengthen and support the insurance aspects of the NFIP.
3. Foster comprehensive floodplain management.

Table 26: FEMA Community Status Book Report, DeKalb County

FEMA Community Status Book Report, DeKalb County									
CID	**Community Name**	**Init FHBM Identified**	**Init FIRM Identified**	**Curr Eff Map Date**	**Reg-Emer Date**	**CRS Date**	**Curr Eff Date**	**% Disc SFHA**	**% Disc Non SFHA**
130528C	City of Avondale Estates		5/7/01	8/15/19	1/21/10				
135175F	City of Brookhaven*	6/2/70	5/15/80	8/15/19	10/18/13				
130066C	City of Chamblee	6/7/74	9/15/77	8/15/19	9/15/77				
130067C	City of Clarkston	2/21/75	6/15/81	8/15/19	6/15/81				
135159C	City of Decatur	6/16/70	6/16/70	8/15/19	6/11/71	10/1/93	5/1/15	15%	5%
130065C	DeKalb County	6/2/70	5/15/80	8/15/19	5/15/80	10/1/92	10/1/08	15%	5%
130069C	City of Doraville	6/7/74	9/1/77	8/15/19	9/1/77				
130679C	City of Dunwoody**	6/2/70	5/15/80	8/15/19	10/14/09				
130472C	City of Lithonia		5/7/01	12/8/16	1/3/08				
130070#	City of Pine Lake	4/12/74	6/15/81	5/16/13	6/15/81				
130260C	City of Stone Mountain	4/12/74	8/1/86	12/8/16	8/1/86				
130268C	City of Stonecrest	6/2/70	5/15/80	12/8/16	12/5/19				
130681C	City of Tucker	6/2/70	5/15/80	8/15/19	9/16/19				

Source: FEMA (https://www.fema.gov/cis/GA.pdf)

*Brookhaven is located on DeKalb County FIRM Panels: 0011J, 0012J, 0013J, 0014J, and 0016J dated 5/16/13. The initial FIRM date for Brookhaven is 5/15/80.

**Dunwoody has adopted the DeKalb County FIRM panels 13089C005H, 0010H, 0012H, 0016H, and 0017H dated 5/7/01.

The following information provides flooding sources, the most current Special Flood Hazard Areas (SFHAs), and flood insurance rate zones developed by FEMA for DeKalb County. SFHAs represent the areas subject to inundation by a 100-year flood event. Structures located within the SFHA have a 26 percent chance of flooding during the life of a standard 30-year mortgage. The following tables provide a summary of increases, decreases, and net charges of SFHA's for the County, Avondale Estates, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain, and DeKalb County Unincorporated Areas.

***Note**: At the time of this plan update, The DeKalb County Risk Report (May 2013) is an indeterminate period with no record of an updated version. The Cities of Brookhaven, Stonecrest, and Tucker were not included in The DeKalb County Risk Report (May 2013), as they both did not incorporate in time to be included. They are counted in the DeKalb County Unincorporated Areas.*

A. DeKalb County – SFHA Summary

SFHA Summary, DeKalb County				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	276.56	4.76	2.64	2.12
Within Floodway	22.09	3.86	1.01	2.85

Source: DeKalb County Flood Risk Report (May 2013) – Georgia Department of Natural Resources, Environmental Protection Division
Note: Although the Flood Risk Database may contain Changes since the last FIRM information outside DeKalb County, the figures in this table only represent information within the DeKalb County.

B. City of Avondale Estates – SFHA Summary

SFHA Summary, City of Avondale Estates				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	1.17	0.03	0	0.03
Within Floodway	0.32	0.02	0	0.02

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Avondale Estates, the figures in this table only represent information within the City of Avondale Estates.

C. City of Chamblee – SFHA Summary

SFHA Summary, City of Chamblee				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	4.88	0.03	0.6	-0.03
Within Floodway	.27	0	0	0

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division
Note: Although the Flood Risk Database may contain Changes since the last FIRM information outside the City of Chamblee, the figures in this table only represent information within the City of Chamblee

D. City of Clarkston – SFHA Summary

SFHA Summary, City of Clarkston				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	1.07	0.03	0.0	0.03
Within Floodway	0.12	0.01	0.0	0.01

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Clarkston, the figures in this table only represent information within the City of Clarkston.

E. City of Decatur – SFHA Summary

SFHA Summary, City of Decatur				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	0.20	0.04	0.08	-0.04
Within Floodway	0.09	0.02	0.03	-0.01

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Decatur, the figures in this table only represent information within the City of Decatur.

F. City of Doraville – SFHA Summary

SFHA Summary, City of Doraville				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	3.61	0.03	0.05	-0.02
Within Floodway	0.14	0.0	0.0	0.0

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Doraville, the figures in this table only represent information within the City of Doraville.

G. City of Dunwoody – SFHA Summary

SFHA Summary, City of Dunwoody				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	13.44	0.02	0.13	-0.11
Within Floodway	0.26	0.0	0.02	-0.02

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Dunwoody, the figures in this table only represent information within the City of Dunwoody.

H. City of Lithonia – SFHA Summary

SFHA Summary, City of Lithonia				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	0.94	0.0	0.0	0.0
Within Floodway	0.0	0.0	0.0	0.0

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division

Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Lithonia, the figures in this table only represent information within the City of Lithonia.

I. City of Pine Lake – SFHA Summary

SFHA Summary, City of Pine Lake				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	0.25	0.0	0.0	0.0
Within Floodway	0.04	0.0	0.01	-0.01

Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division
Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Pine Lake, the figures in this table only represent information within the City of Pine Lake.

J. City of Stone Mountain – SFHA Summary

SFHA Summary, City of Stone Mountain				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	1.66	0.02	0.0	0.02
Within Floodway	0.03	0.02	0.0	0.02

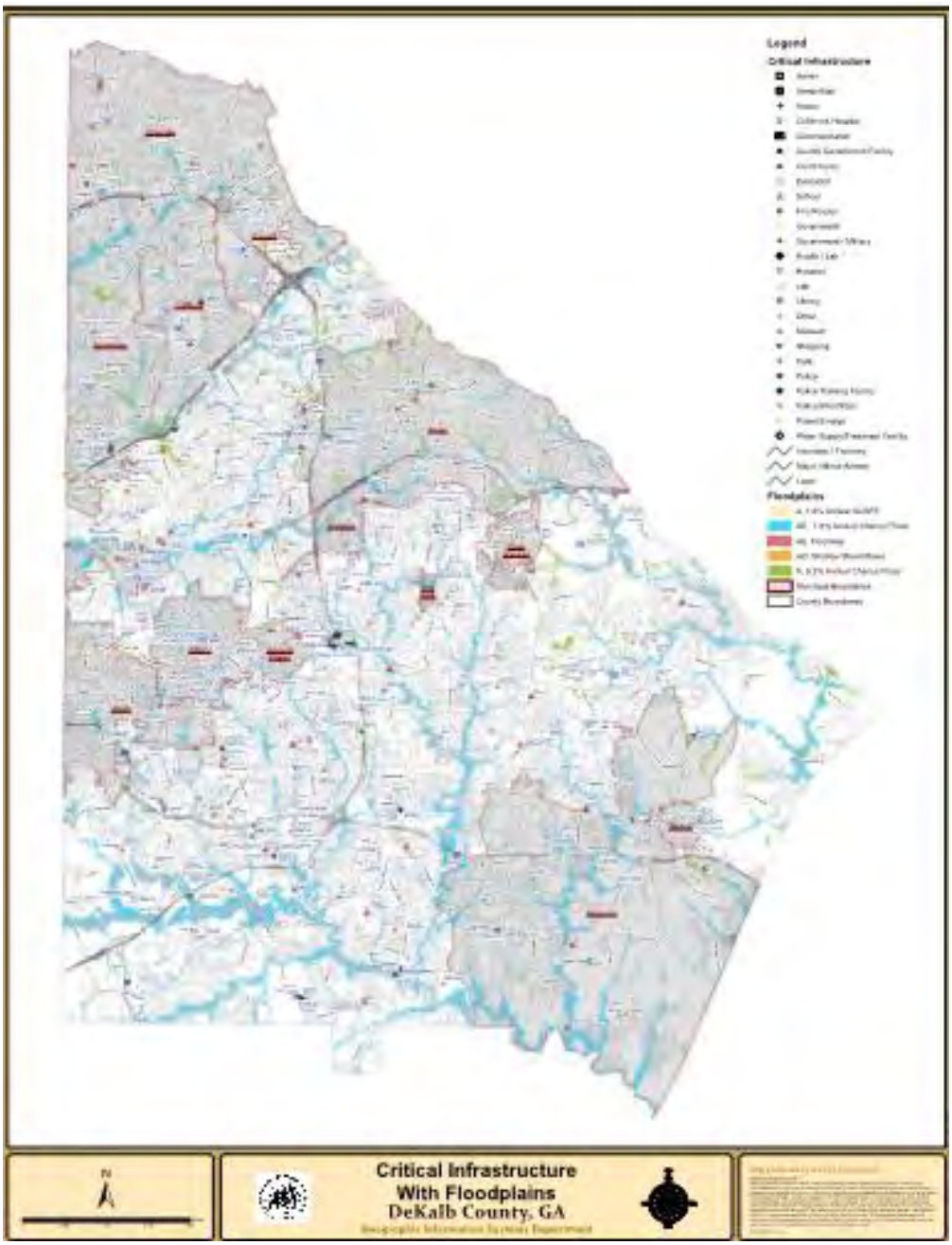
Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division
Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of City of Stone Mountain, the figures in this table only represent information within the City of Stone Mountain.

K. DeKalb County Unincorporated Areas Summary – SFHA Summary

SFHA Summary, DeKalb County Unincorporated Areas Summary				
Area of Study	**Total Area (mi²)**	**Increase (mi²)**	**Decrease (mi²)**	**Net Change (mi²)**
Within SFHA	238.06	4.44	2.26	2.18
Within Floodway	20.69	3.69	0.94	2.75

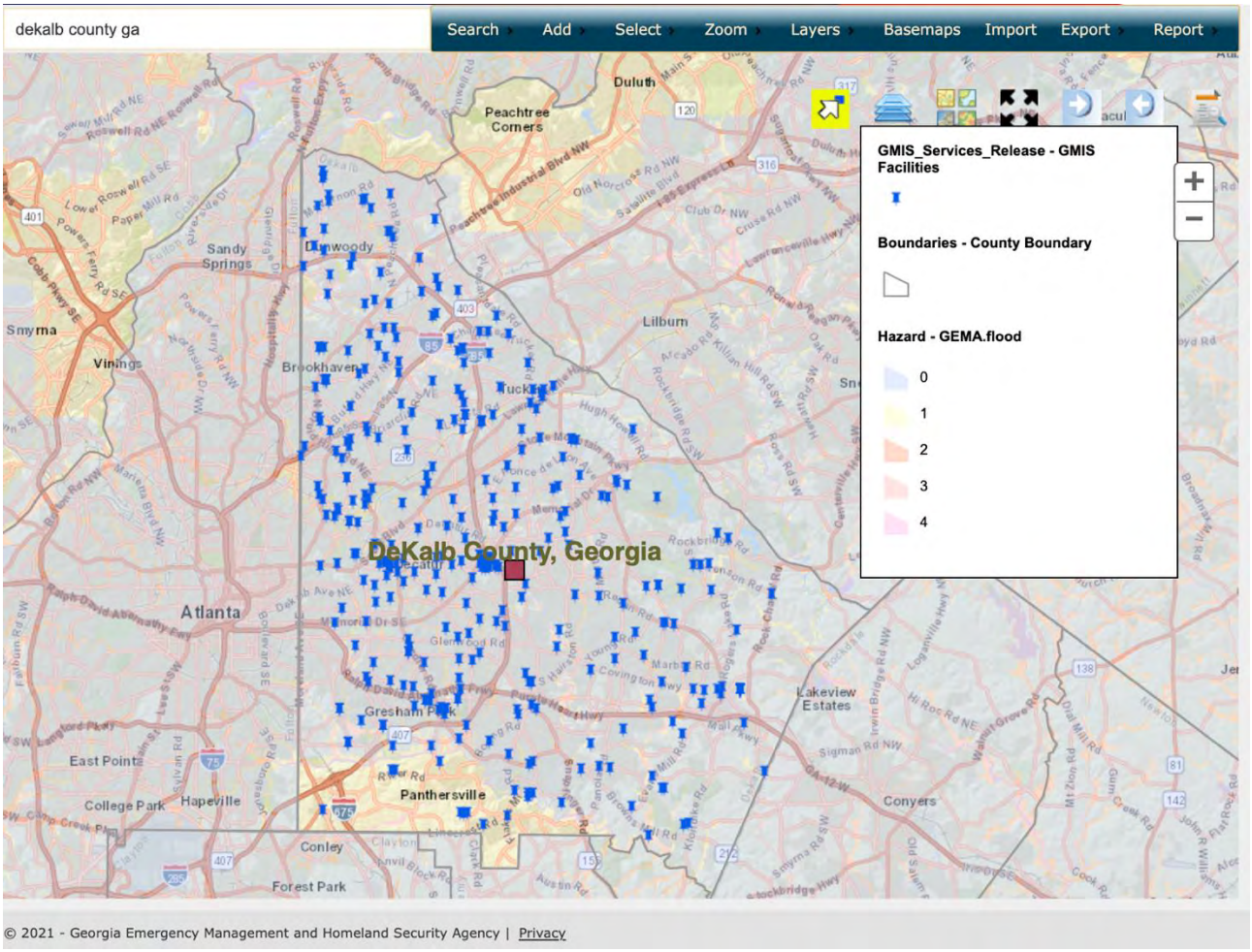
Source: DeKalb County PMR Flood Risk Report – Georgia Department of Natural Resources, Environmental Protection Division
Note: Although the Flood Risk Database may contain changes since the last FIRM information outside of DeKalb County Unincorporated Areas, the figures in this table only represent information within the DeKalb County Unincorporated Areas.

Map 11: DeKalb County, GA – Critical Facilities and Floodplain Map



Map Source: DeKalb County GIS Department

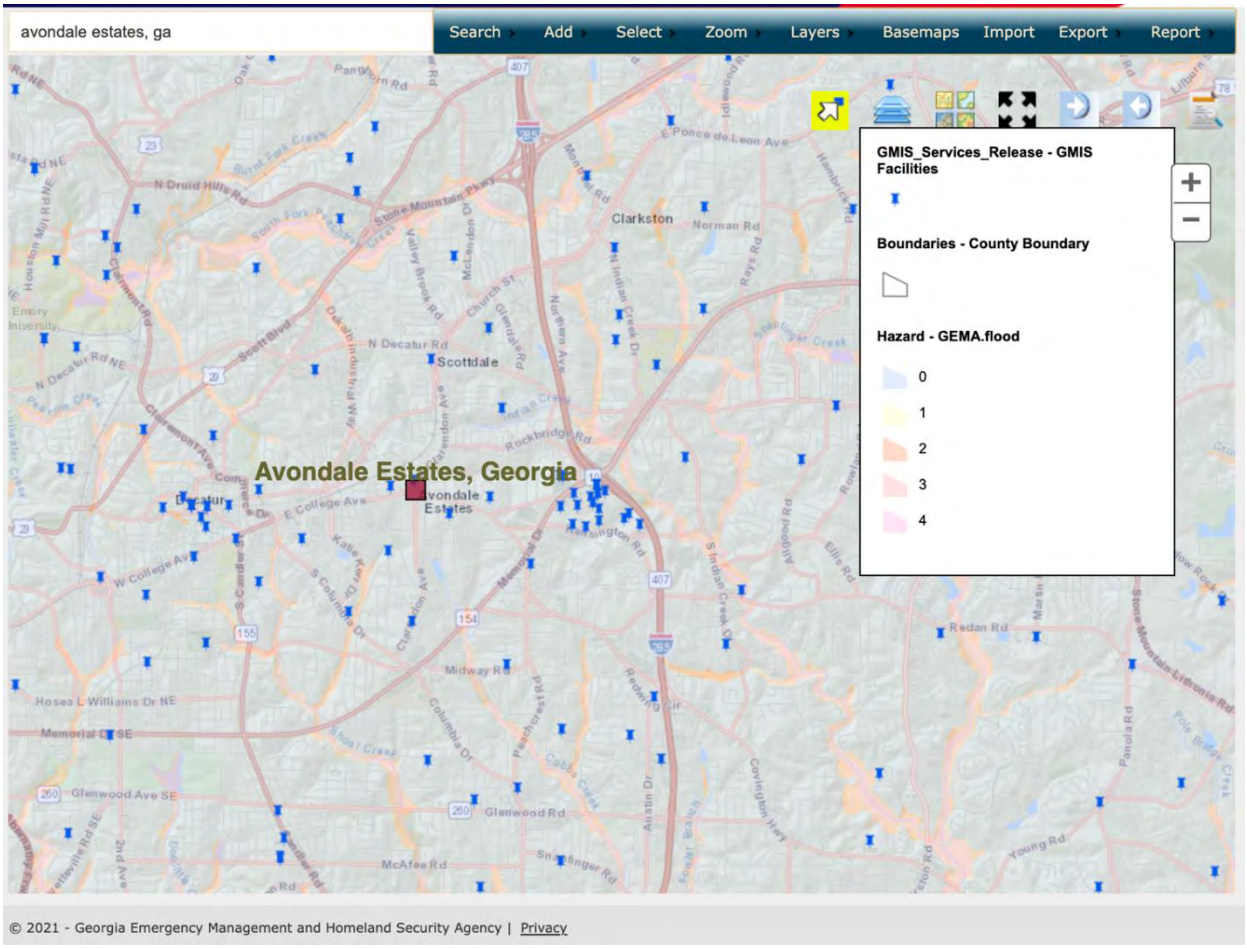
Map 12: DeKalb County, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

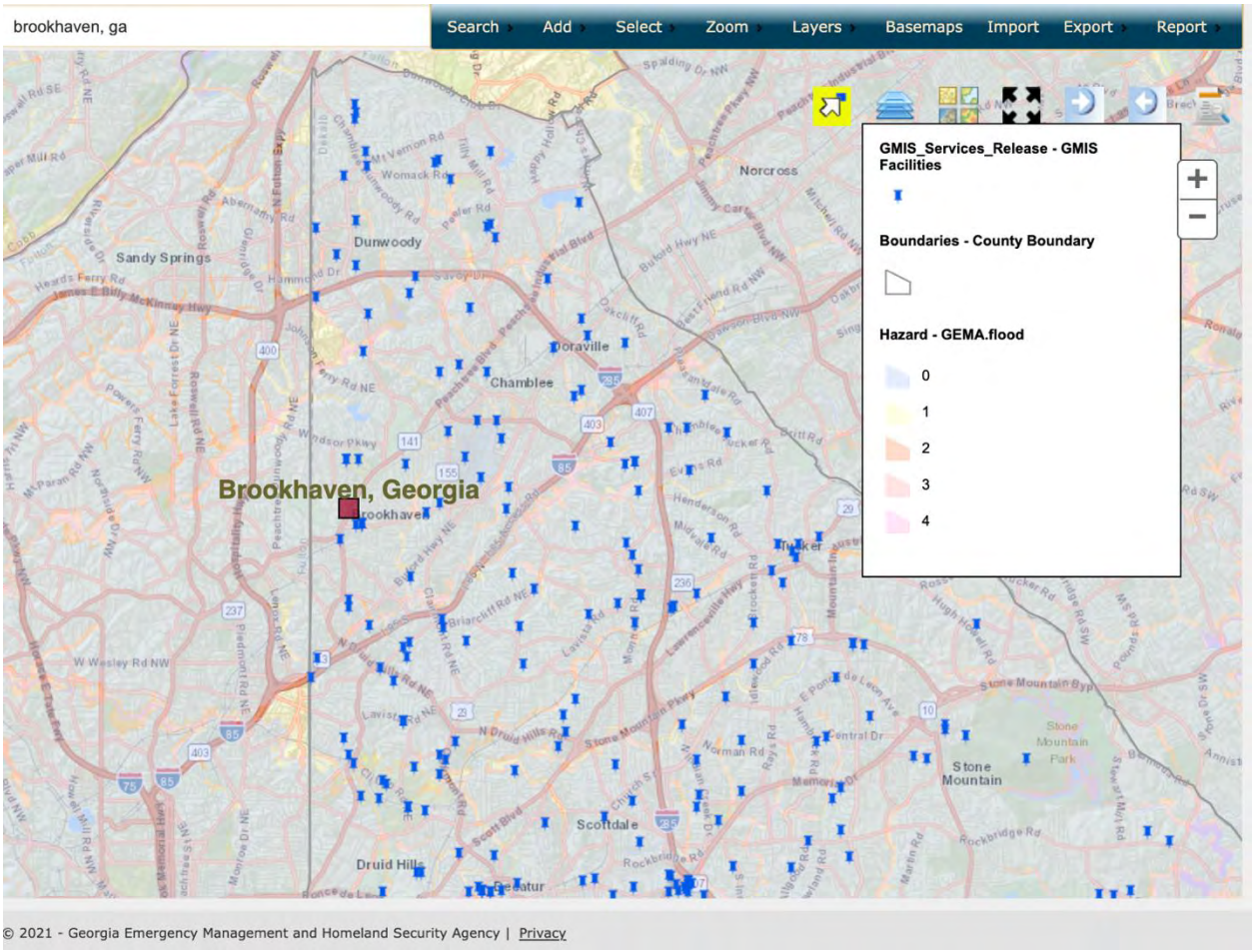
Map 13: City of Avondale Estates, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex

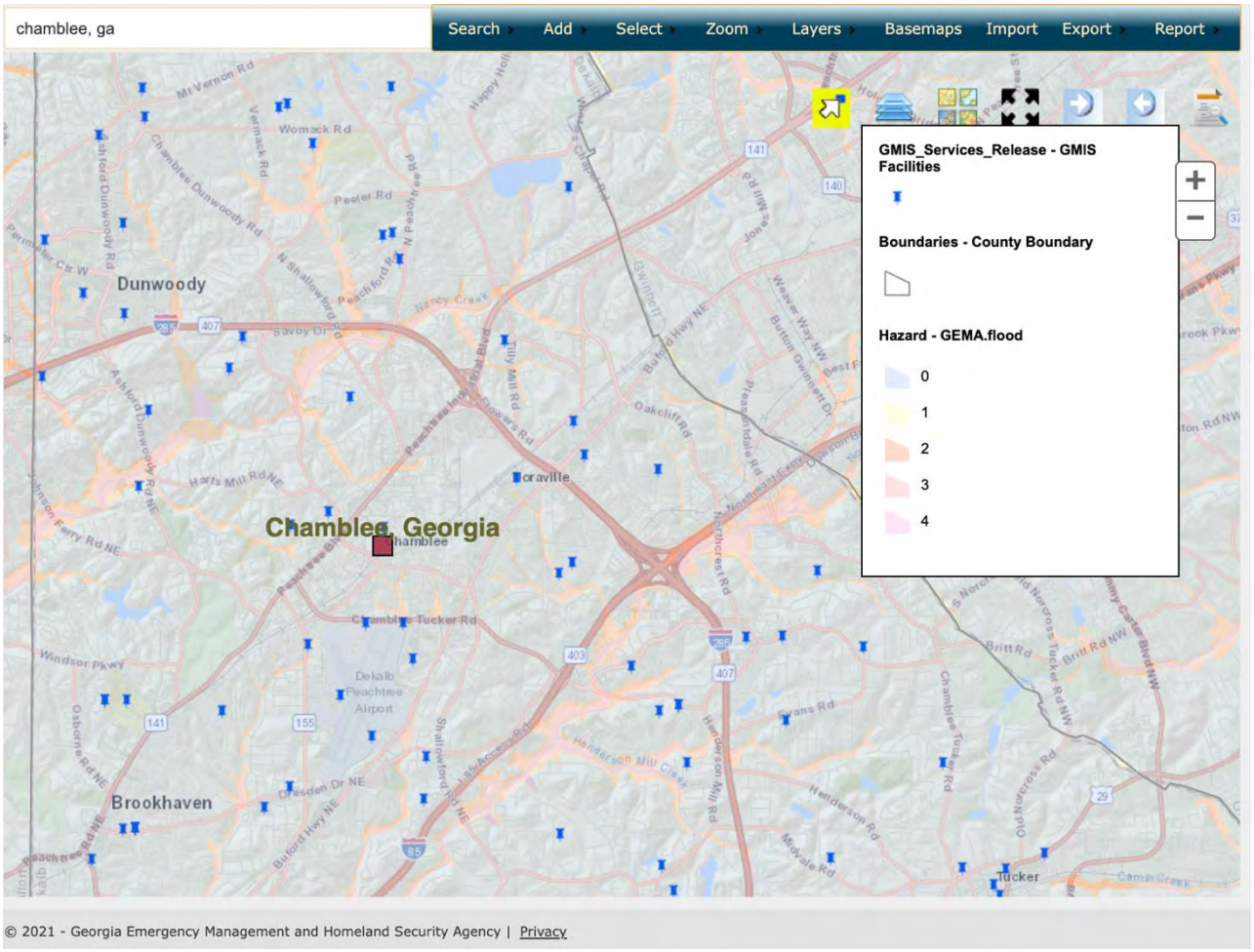
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 14: City of Brookhaven, GA GMIS Map with Flood Layer



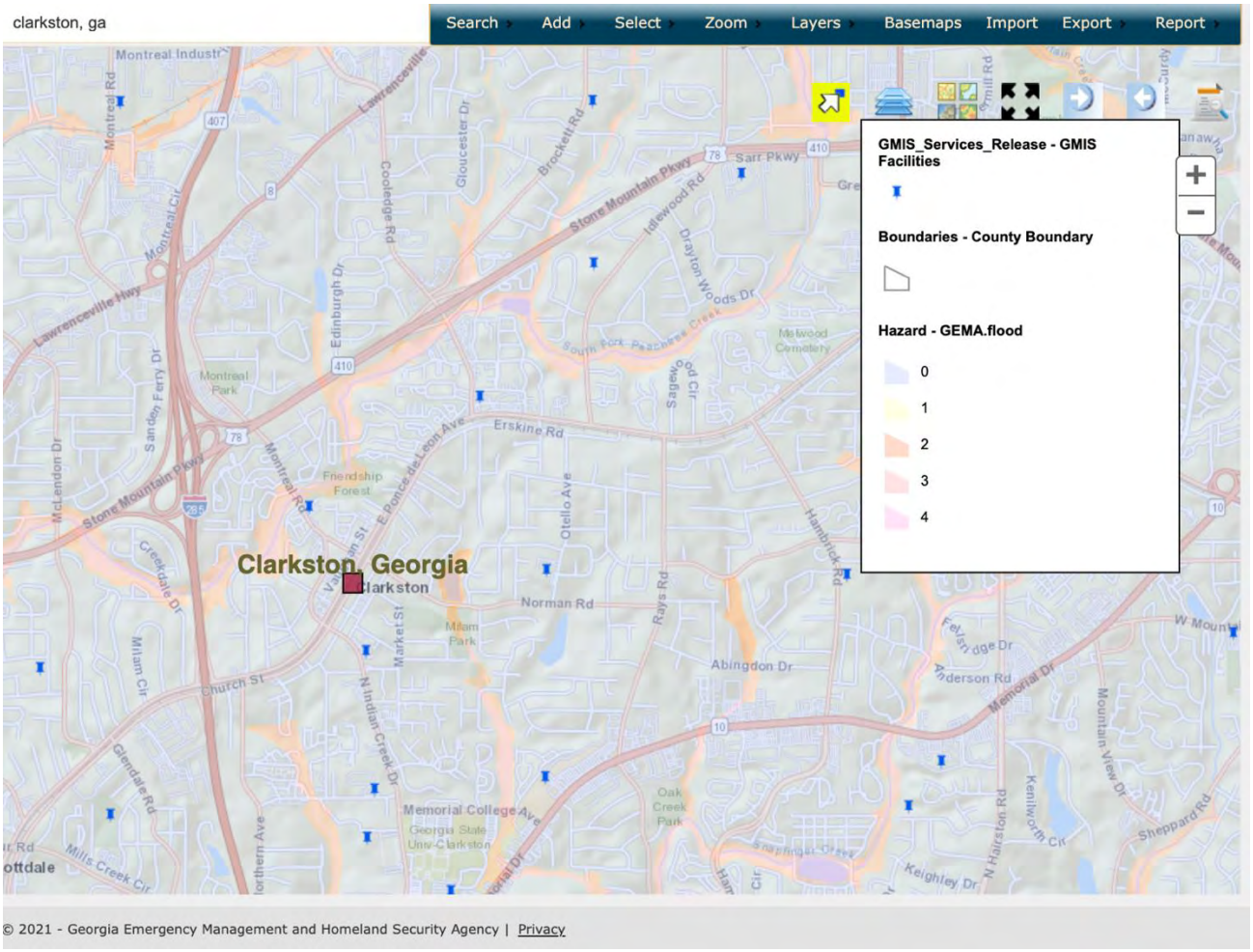
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 15: City of Chamblee, GA GMIS Map with Flood Layer



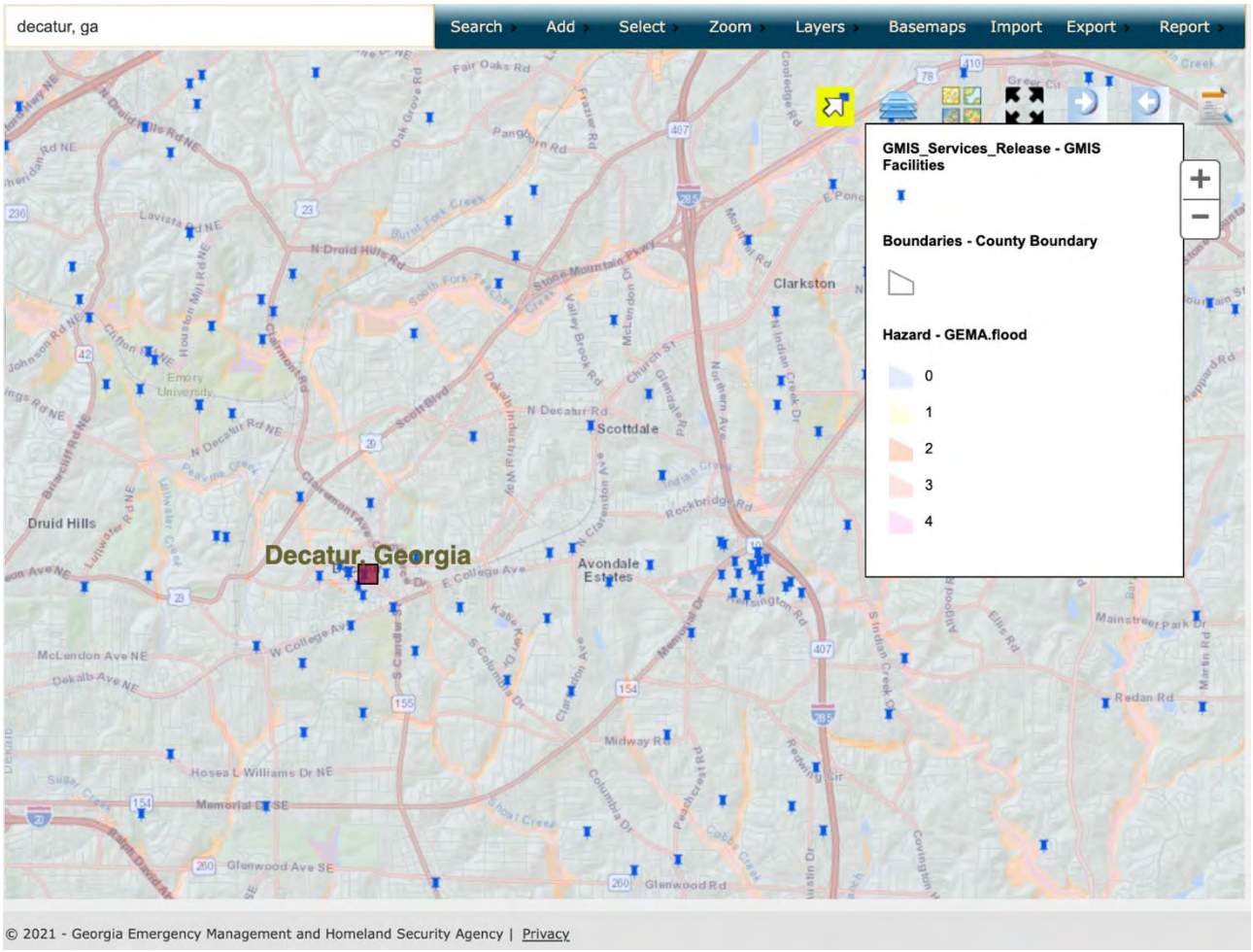
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 16: City of Clarkston, GA GMIS Map with Flood Layer



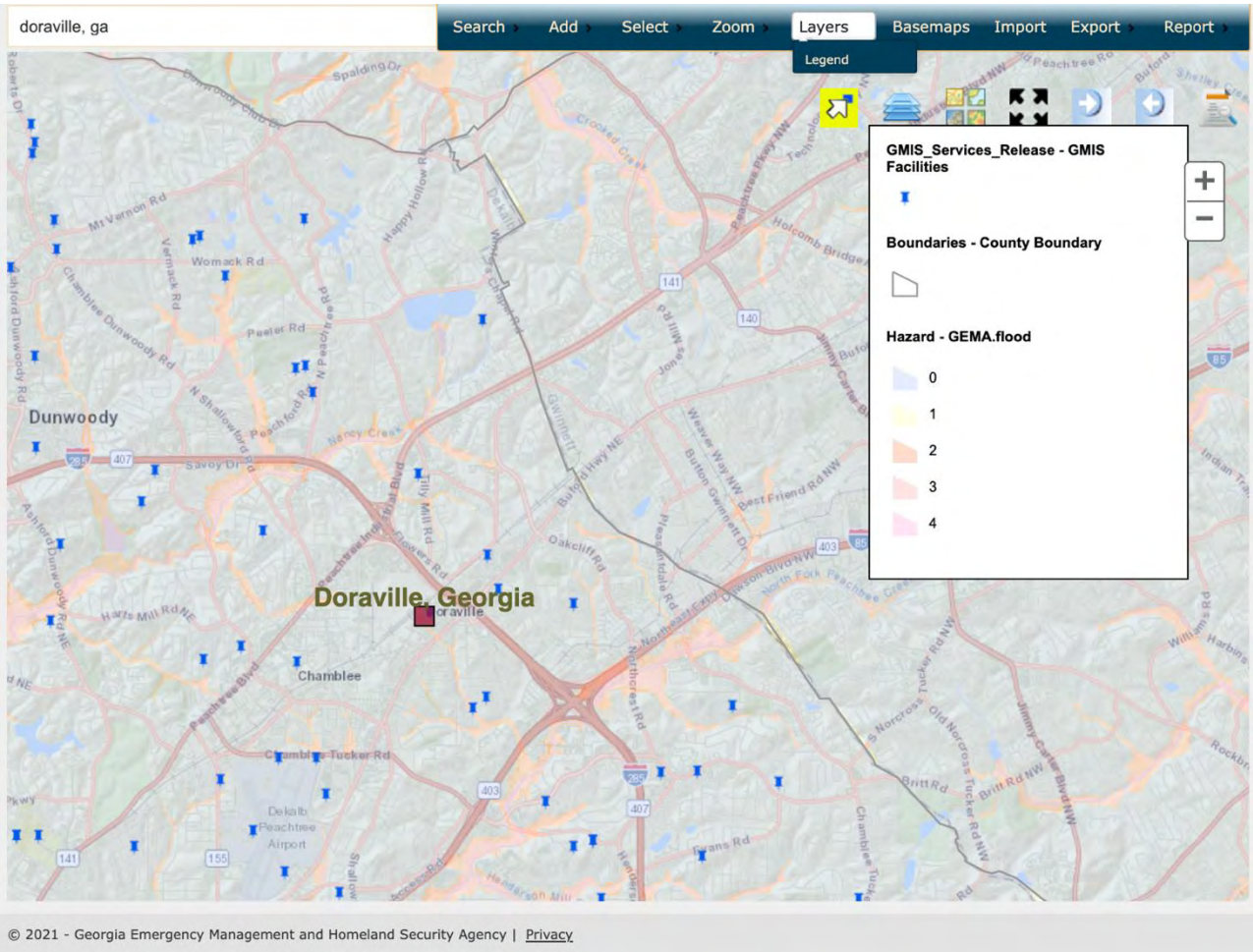
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 17: City of Decatur, GA GMIS Map with Flood Layer



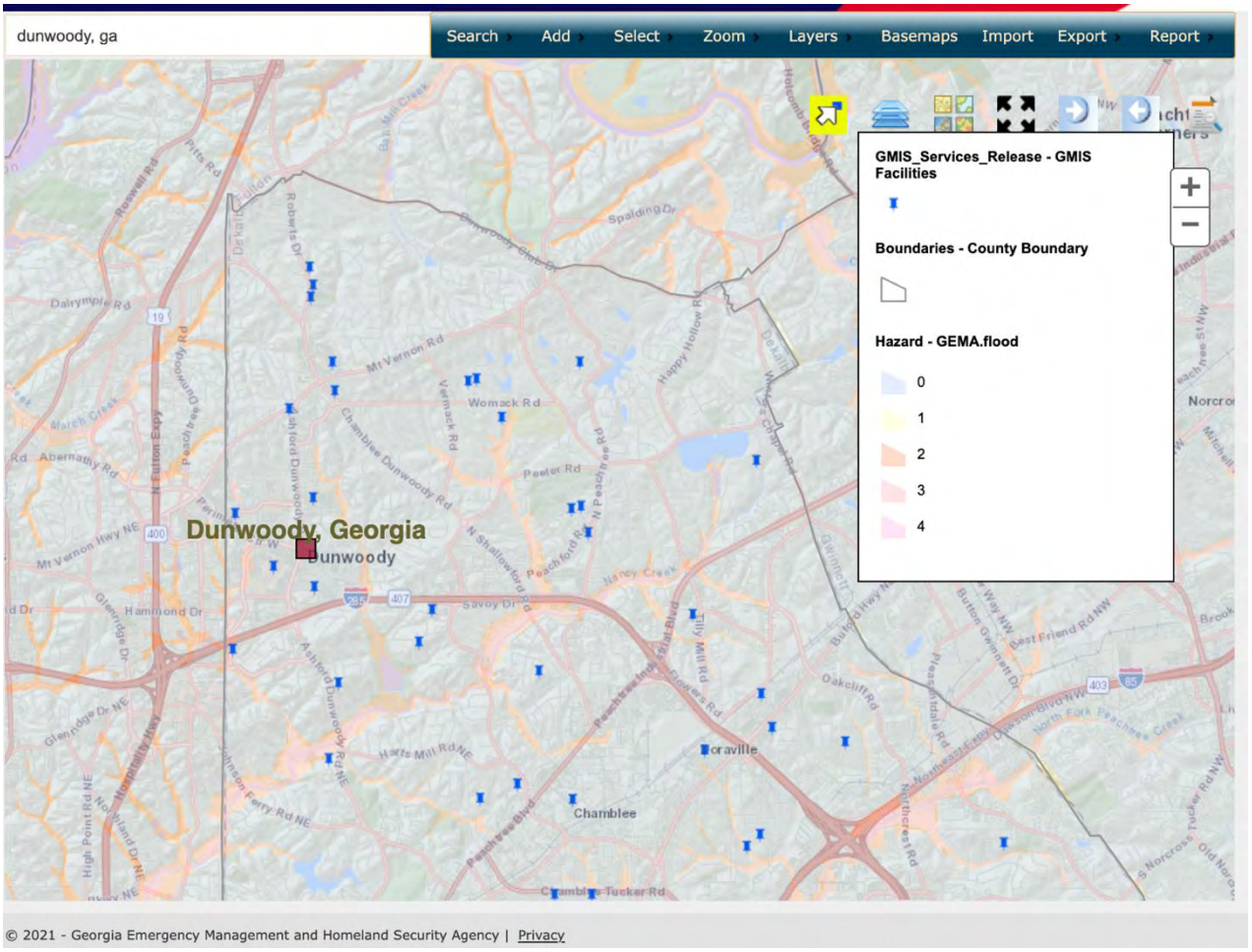
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 18: City of Doraville, GA GMIS Map with Flood Layer



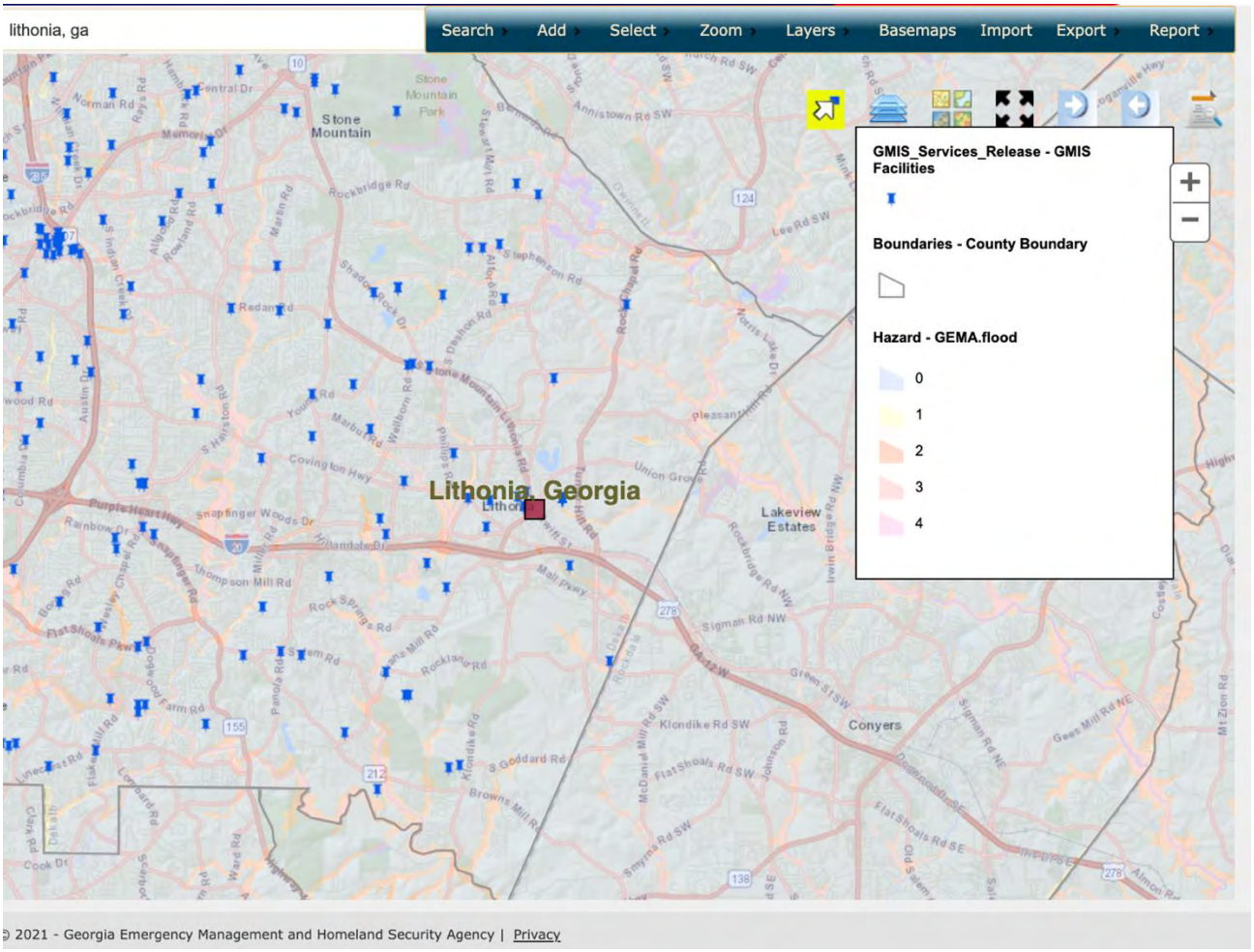
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 19: City of Dunwoody, GA GMIS Map with Flood Layer



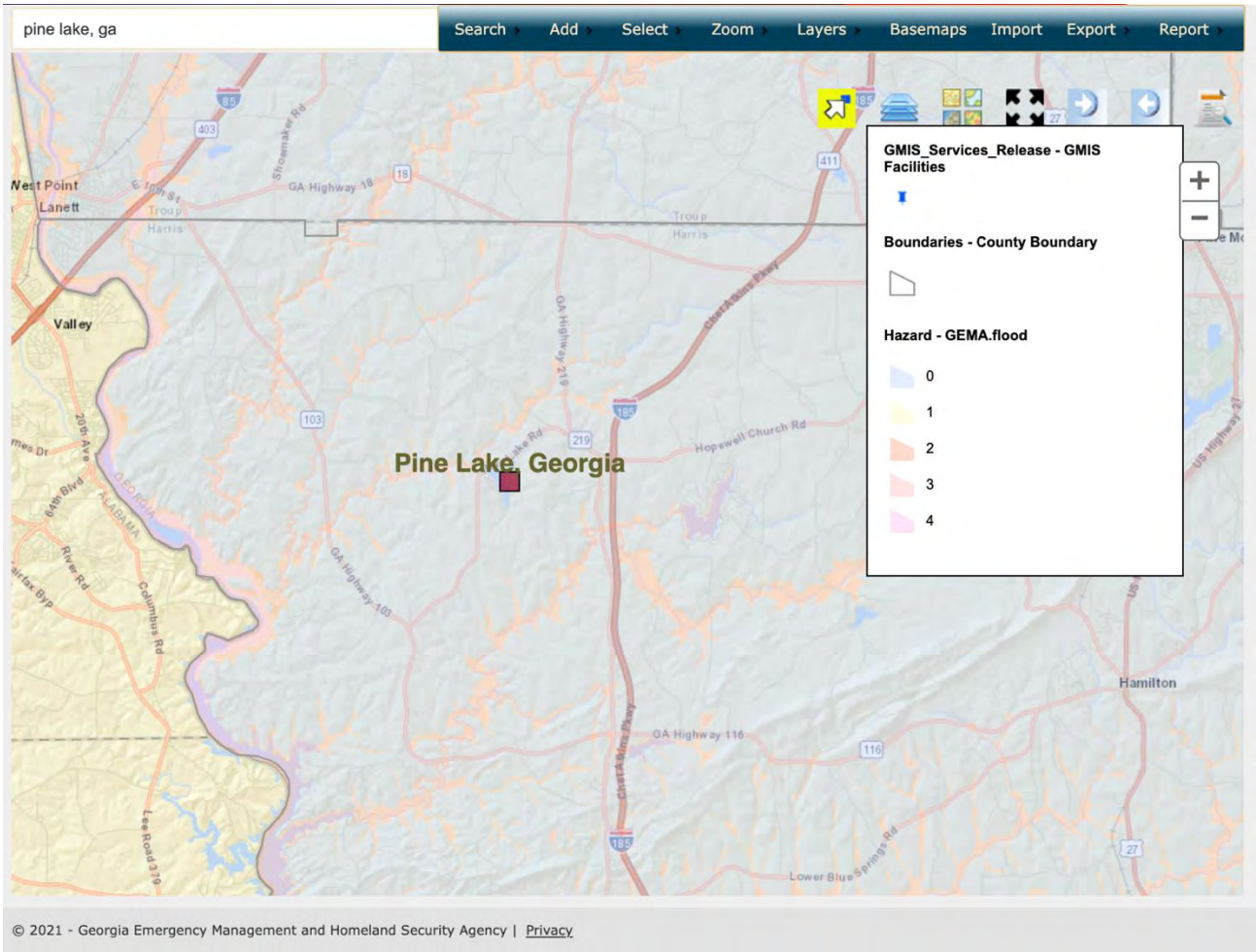
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 20: City Lithonia, GA GMIS Map with Flood Layer



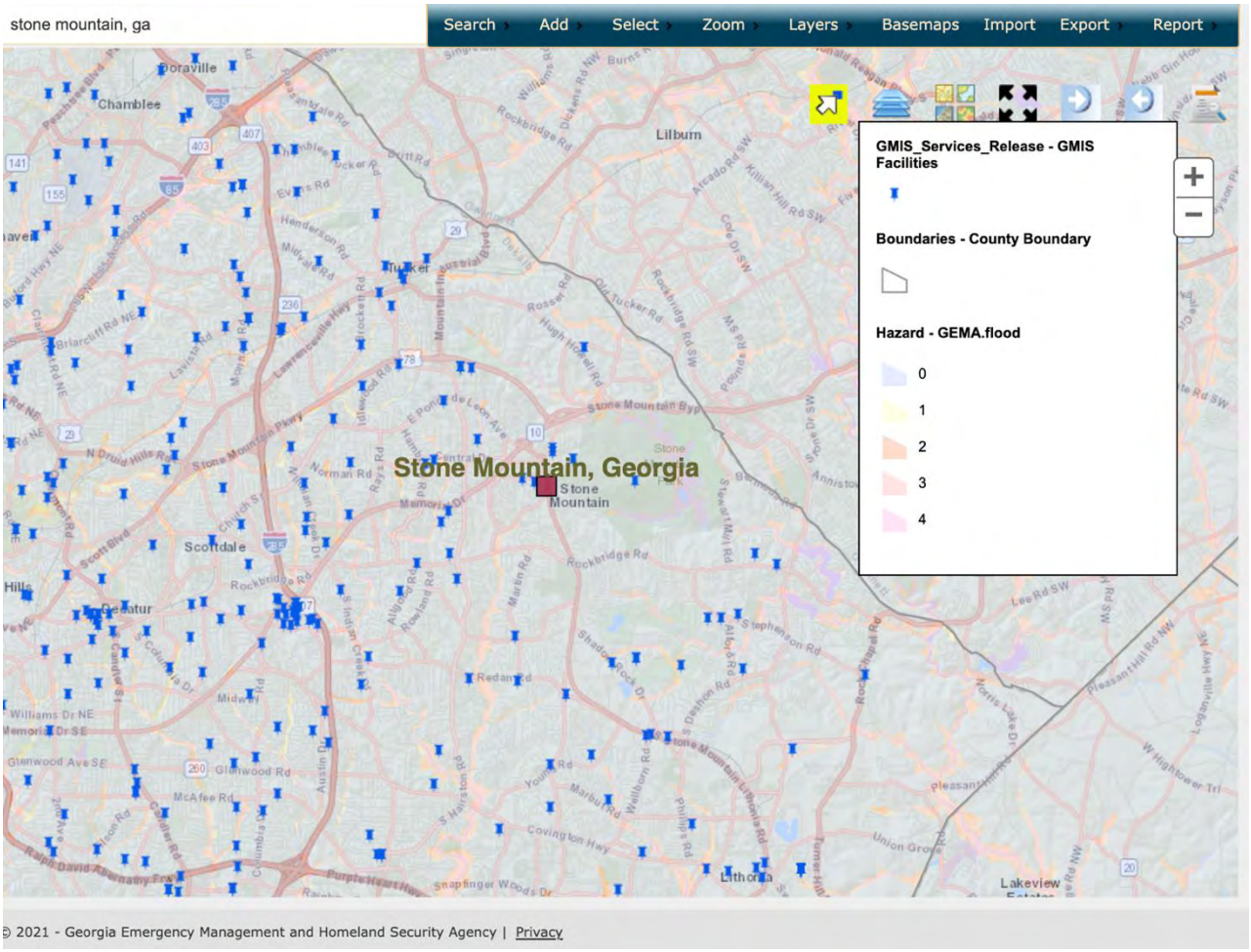
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 21: City of Pine Lake, GA GMIS Map with Flood Layer



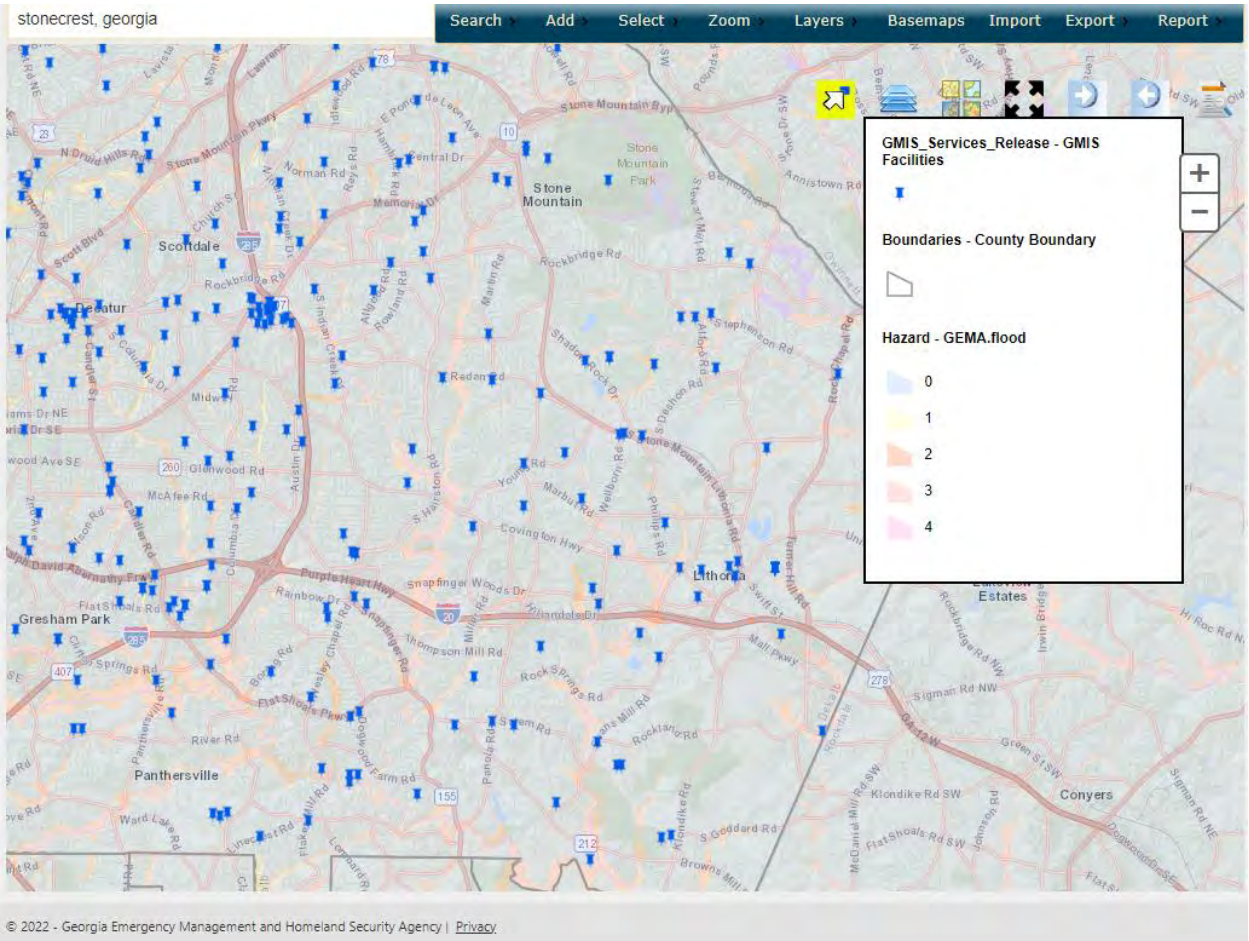
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 22: City of Stone Mountain, GA GMIS Map with Flood Layer



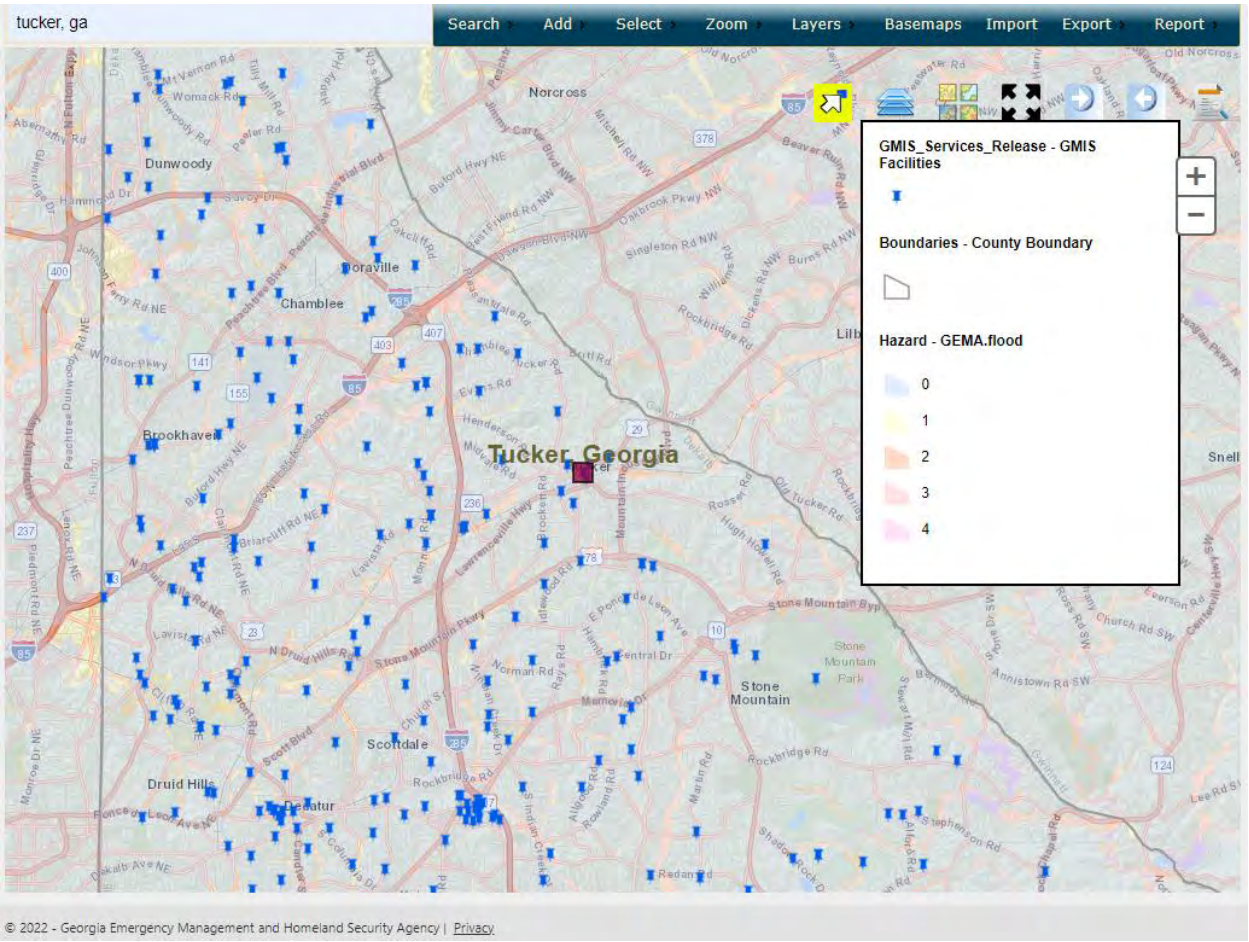
Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 23: City of Stonecrest, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

Map 24: City of Tucker, GA GMIS Map with Flood Layer



Map Source: Georgia Mitigation Information System (GMIS), https://apps.itos.uga.edu/GEMA.GMIS/Account/Login?ReturnUrl=%2fGEMA.GMIS%2fHome%2fIndex
***Note**: The GMIS Flood Layer in the following map comes from hazard scores within the GMIS system. The flood hazard scores are derived from the FEMA "Q3" Zone values. The Q3 Layer is derived from the FEMA paper flood insurance rate maps. Although the resolution is 1:24,000, which has an allowable error of 40 feet, FEMA recommends using 250 feet as the potential error. This layer cannot be used for a legal flood determination. For information on designations described visit https://gema.georgia.gov/.*

The following table explains the Floodplain Insurance Rate Map (FIRM) flood zone classifications associated with Maps on the proceeding pages. All DeKalb County FEMA DFIRM maps can be found in Appendix E.

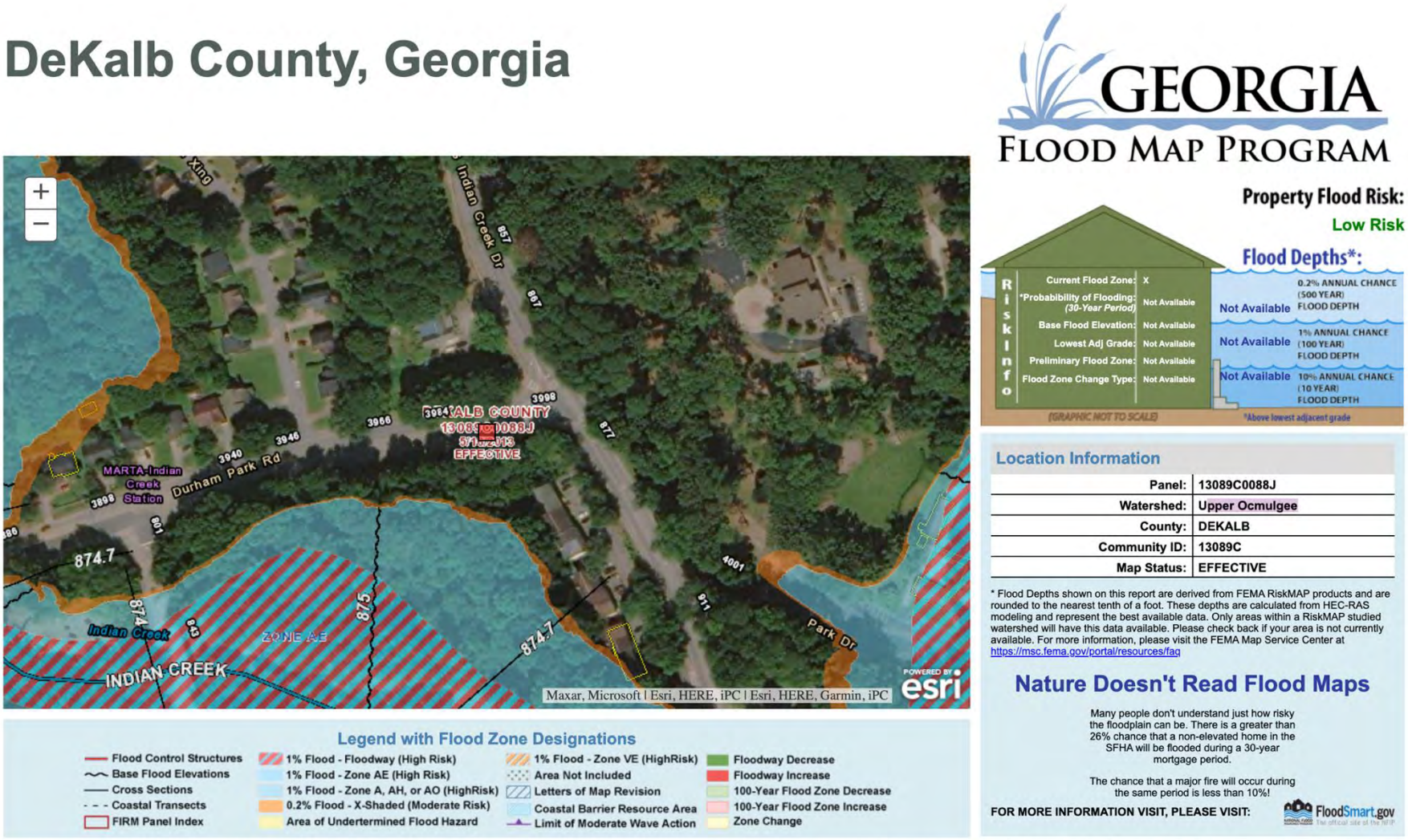
Table 27: Flood Zone Classifications

Flood Zone Classifications	
Zone	**Description**
A	An area inundated by 1% annual chance flooding, for which no BFEs have been determined. (100-Year Floodplain)
AE	An area inundated by 1% annual chance flooding, for which BFEs have been determined. (100-Year Floodplain)
Shaded X	Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. An area inundated by 0.2% annual chance flooding.
Unshaded X	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100- year flood.

Note: For the following FEMA National Flood Hazard Layer (NFHL) maps, the A and AE zones have been combined as they are both considered 100-year floodplain.

Source: FEMA Flood Zone Designations: https://snmapmod.snco.us/fmm/document/fema-flood-zone-definitions.pdf

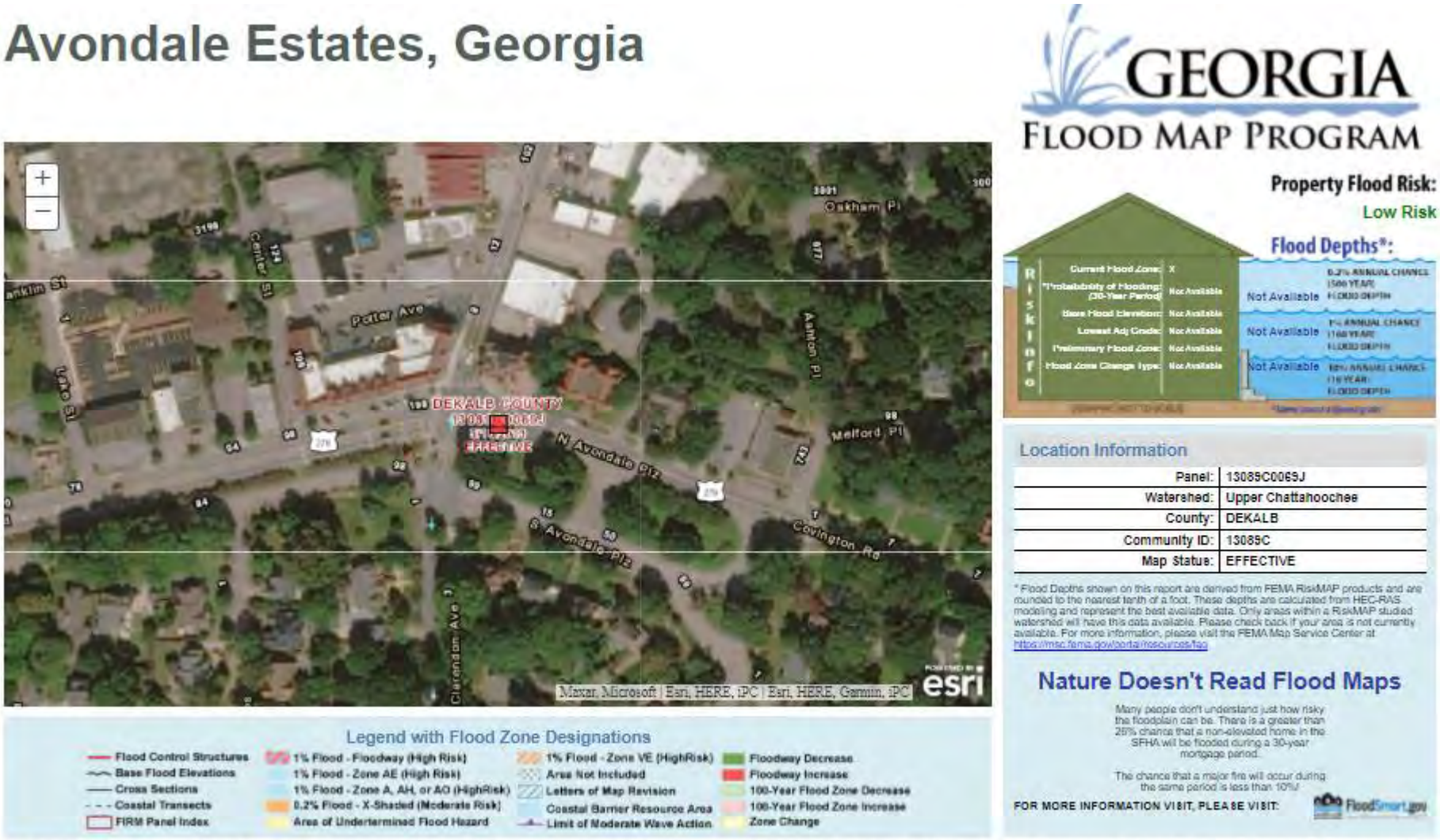
Map 25: Georgia DFIRM Map – DeKalb County GA



Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 26: Georgia DFIRM Map – Avondale Estates, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 27: Georgia DFIRM Map –Brookhaven, GA



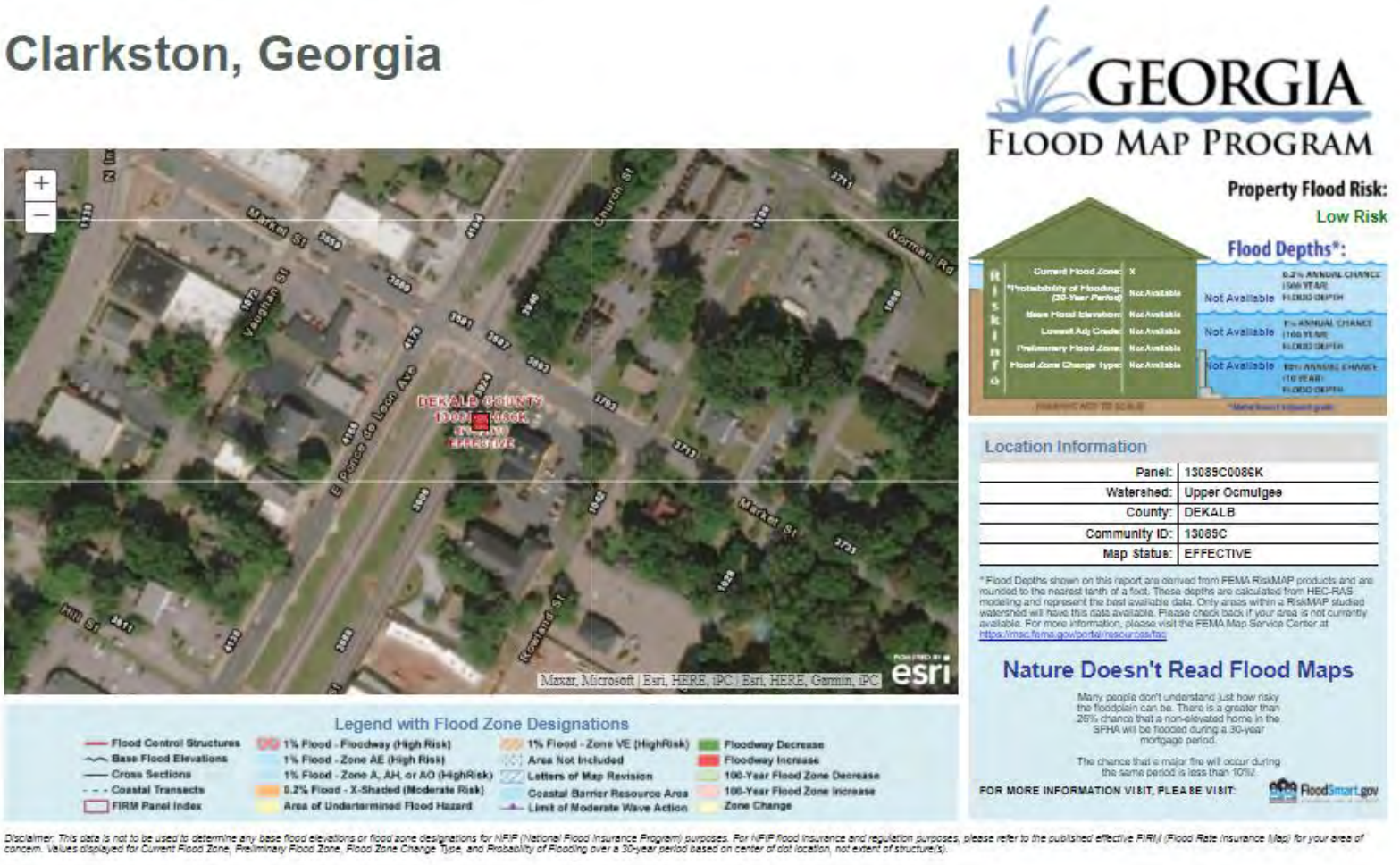
Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 28: Georgia DFIRM Map – Chamblee GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 29: Georgia DFIRM Map – Clarkston GA



Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

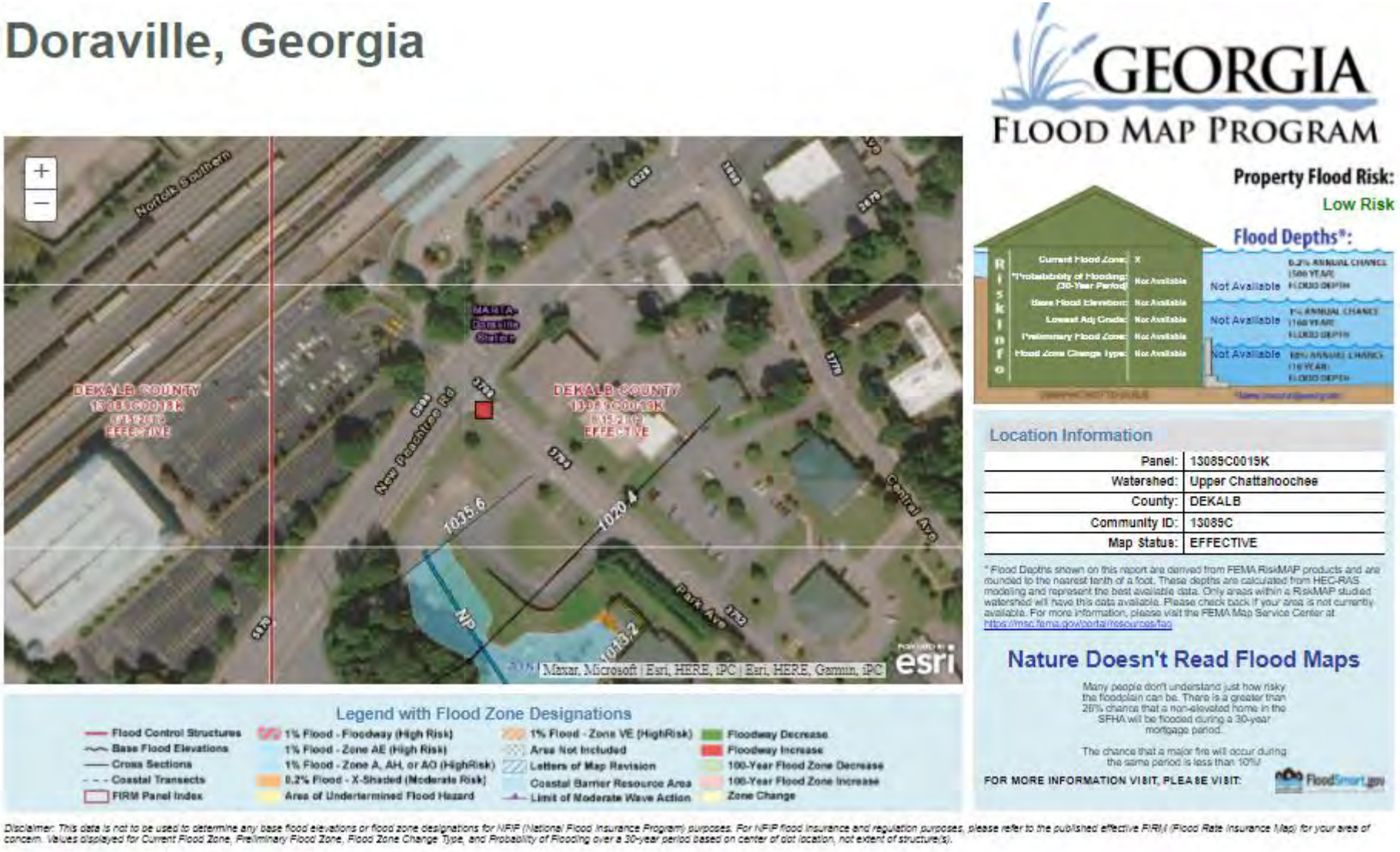
Map 30: Georgia DFIRM Map – Decatur, GA



Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

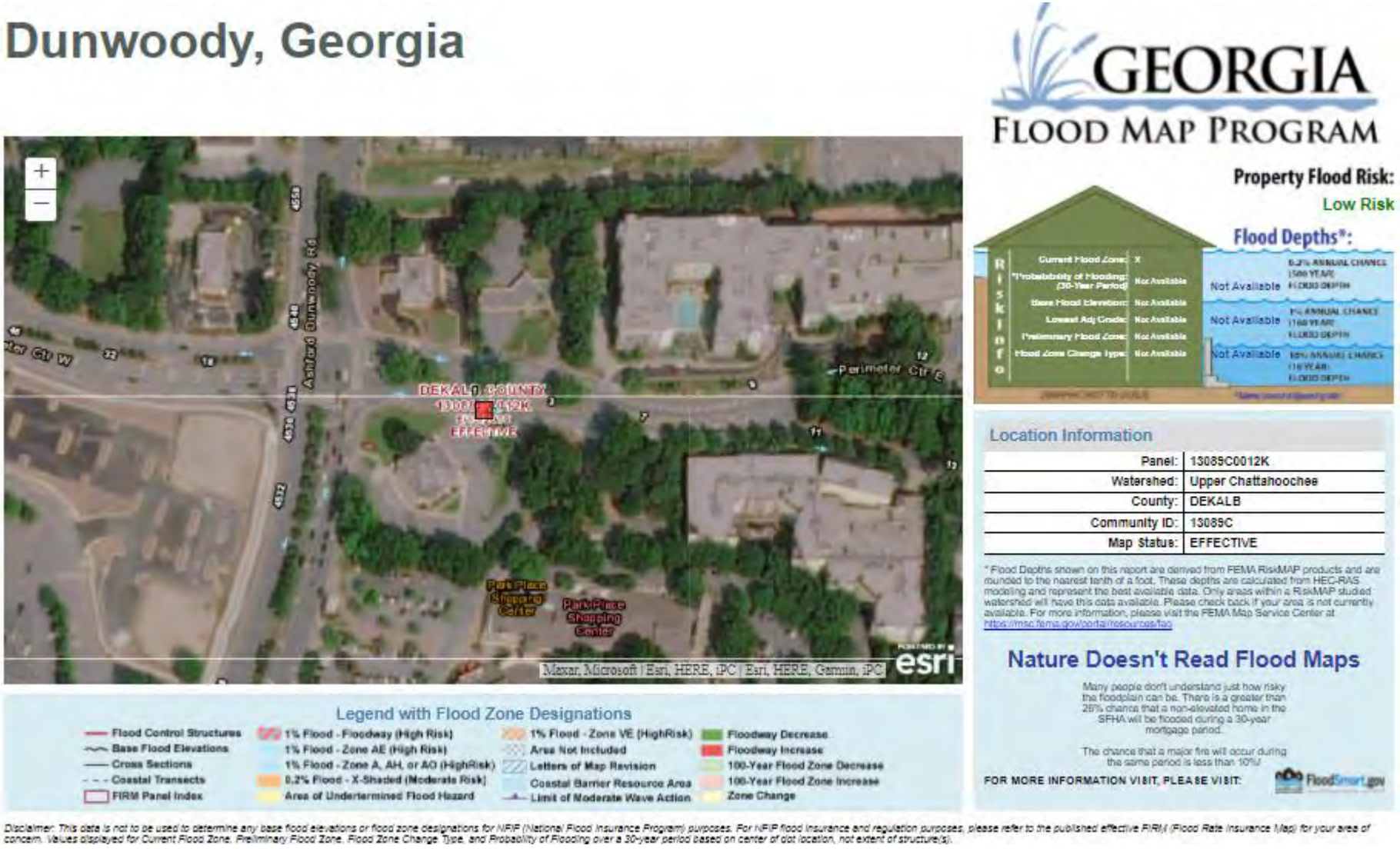
Map 31: Georgia DFIRM Map – Doraville, GA



Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 32: Georgia DFIRM Map – Dunwoody GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 33: Georgia DFIRM Map – Lithonia, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 34: Georgia DFIRM Map – Pine Lake, GA



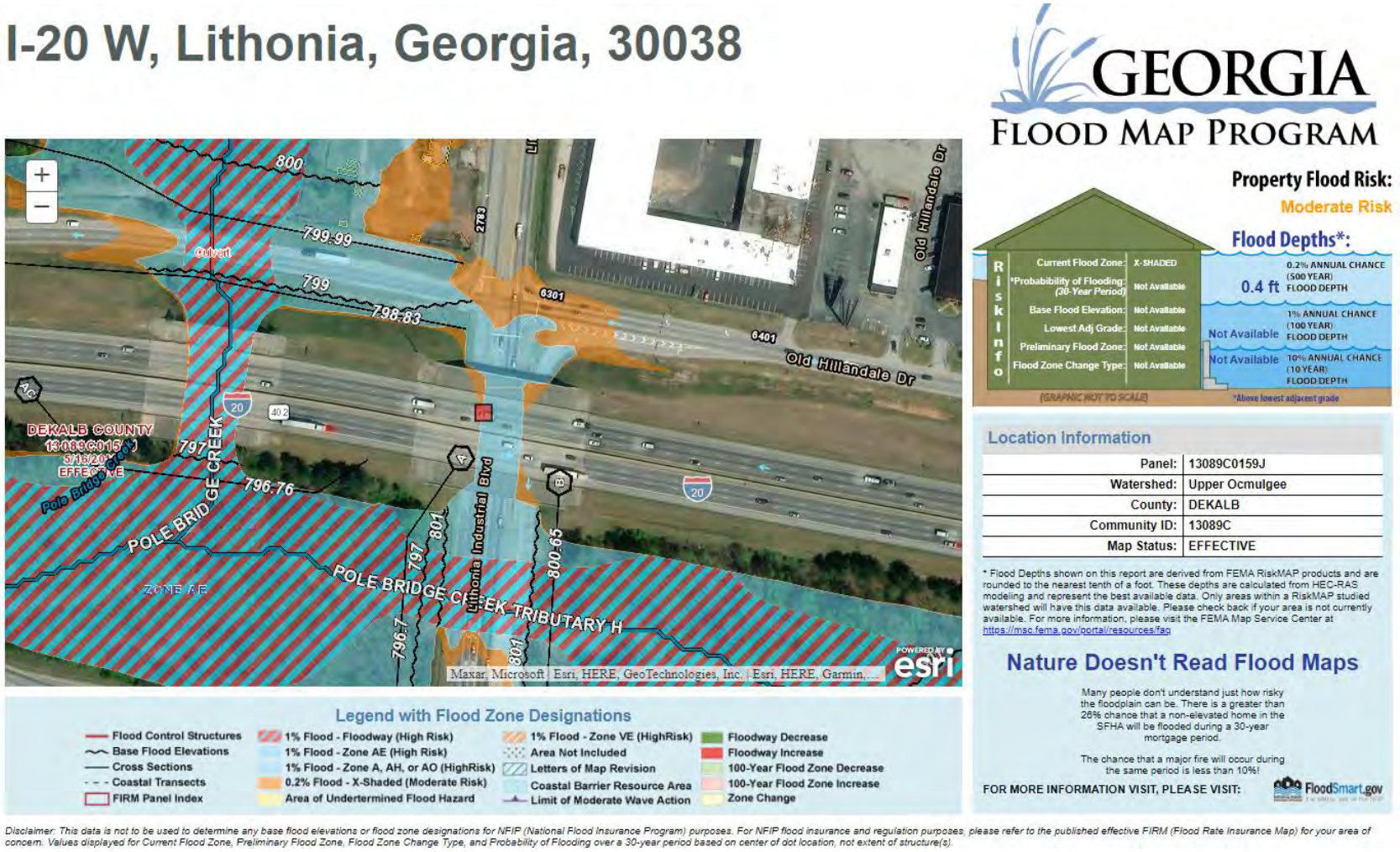
Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 35: Georgia DFIRM Map – Stone Mountain, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 36: Georgia DFIRM Map – Stonecrest, GA



Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Map 37: Georgia DFIRM Map – Tucker, GA

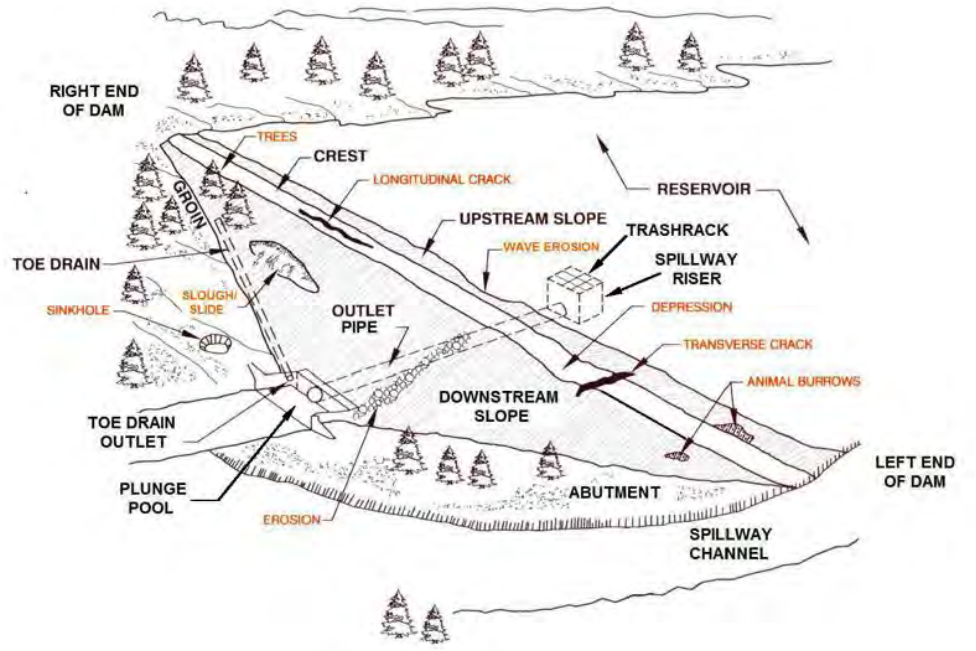


Disclaimer: This data is not to be used to determine any base flood elevations or flood zone designations for NFIP (National Flood Insurance Program) purposes. For NFIP flood insurance and regulation purposes, please refer to the published effective FIRM (Flood Rate Insurance Map) for your area of concern. Values displayed for Current Flood Zone, Preliminary Flood Zone, Flood Zone Change Type, and Probability of Flooding over a 30-year period based on center of dot location, not extent of structure(s).

Map Source: Georgia Flood Map Program: https://map.georgiadfirm.com/

Dam Failure

Across the State of Georgia, there are roughly 5,000 dams holding back natural and manmade bodies of water, including lakes, rivers, ponds, etc. The following drawing, obtained from the Georgia Safe Dams Program, shows the characteristics of a typical embankment dam. Common deficiencies are presented in orange.



The National Inventory of Dams (NID) indicates that there are 59 dams in DeKalb County. According to the Massachusetts Institute of Technology, the average lifespan of a dam is 50 years. At least 63% of dams in DeKalb County are over 50 years old. NID classifies 31% of the dams in DeKalb County to have a high-hazard potential. Dams assigned the high hazard potential classification are those where failure or mis-operation will probably cause loss of human life. (https://nid.usace.army.mil/).

Given these numbers, the possibility of dam failure, and subsequently high-velocity flooding, clearly exists within the planning area. A dam failure within DeKalb County and its participating jurisdictions could result in significant loss of life and damage to structures, roads, utilities, crops, and livestock. Economic losses could also result from a lowered tax base, lack of utility profits, disruption of commerce and governmental services, and extraordinary public expenditures for food relief and protection. The potential severity of a dam failure depends on the following factors:

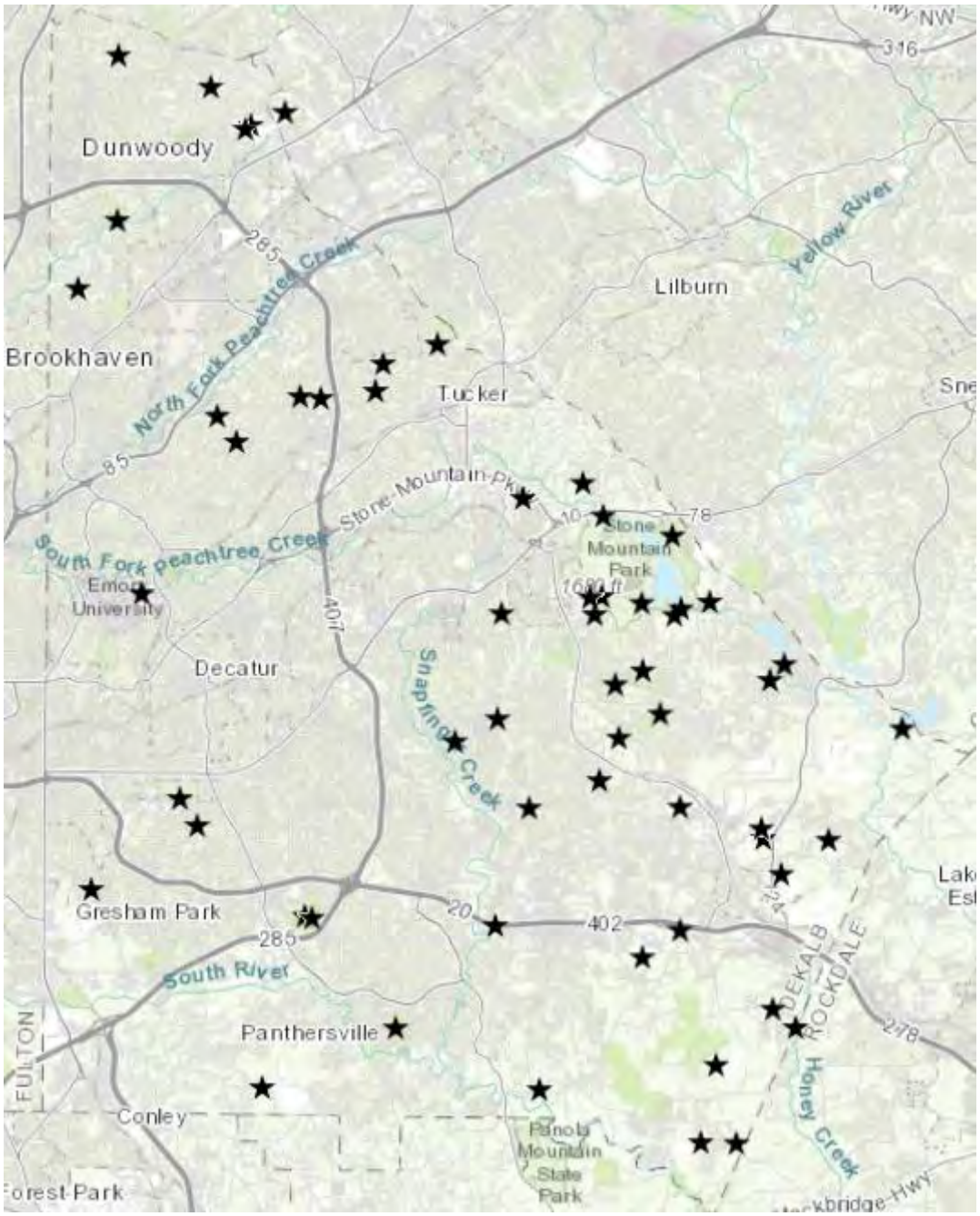
- the size of the dam
- the nature of the failure
- the velocity of the floodwater released,
- the density of the built environment and populations downstream
- the volume of water impounded by the dam

As dams continue to age, there is an increased potential of failure due to undesirable woody vegetation on the embankment, deteriorating concrete, and other structural factors that can cause issues over time. A

failure could lead to widespread flooding, putting the entire planning area at risk, particularly those living near a dam.

Currently, there is still not a standard scale to describe the extent of a dam failure based on the geographic location of the dam and the severity of a failure.

Map 38: DeKalb County Dams



Map Source: National Inventory of Dams

Map 39: DeKalb County High Hazard Dams



Map Source: National Inventory of Dams

Georgia's Safe Dam Program, which is regulated by the Georgia Environmental Protection Division, is a part of the Georgia Safe Dams Act, O.C.G.A. Secs. 12-5-370 et seq (https://epd.georgia.gov/watershed-protection-branch/safe-dams-program). This program is responsible for developing and maintaining an inventory of dams, classifying dams, and ensuring the compliance of all regulated dams. A dam considered under this Act is a structure that must either be at least 25 feet tall (vertical height) or store at least 100 acre-feet (volume) at maximum storage.

Table 28: Inventory of DeKalb County, GA Dams

Dam Name	Dam Hazard Classification	State ID
Browns Mill Lake Dam	II	044-055-00794
Buena Vista Lake Dam	I	044-023-00538
Chapel Hill Park Lake Dam	II	044-047-00865
Crooked Creek Lake Dam	I	044-100-04375
Davidson Mineral Properties	II	044-042-00706
Dunwoody Club Crossing Lake Dam	II	044-104-04510
East Lake Country Club Dam	I	044-006-00069
Echo Lake Dam	I	044-007-00172
Erin Lake Dam	I	044-004-00033
Exchange Park Lake Dam (Upper)	II	044-053-00792
Forest Lake Dam	II	044-040-01043
Glen Emerald Lake Dam	I	044-048-00865
Houseworth Lake Dam	II	044-110-04963
Howell Lake Dam	II	044-081-01106
Joels Lake Dam	II	044-031-00471
Kenilworth Lake Dam	I	044-005-00053
Key Lake Dam	II	044-060-00799
Kings Cliff Lake Dam	I	044-089-02710
Kingsley Lake Dam	II	044-018-00365
Kristina Lake Dam	II	044-091-00240
Mathis Lake Dam (Lower)	II	044-058-00797
Mcdaniel Lake Dam	II	044-084-01110
Murphey Candler Lake Dam	I	044-002-00005
Mystery Valley Lake Dam	I	044-038-00703
Norris Lake Shores Dam	II	044-022-00660
North Lake Dam	I	044-012-00171
O'neal Lake Dam	II	044-021-00360
Robert Nash Lake Dam	II	044-076-00899
Rockbridge Lake Dam	II	044-008-00065
Sandy Lake Dam	II	044-010-00143
Scott Candler Reservoir #2	I	044-108-05350
Scott Candler Reservoir Dam #1	I	044-024-00377
Silver Lake Dam	I	044-001-00004
Silver Ridge Lake Dam	II	044-097-04206
Simpson Lake Dam	II	044-056-00795
Southland Lake Dam	I	044-046-00782
Stn Mtn Pk Golf Course Lake Dam	II	044-083-01108
Stone Mountain Park Dam-North	II	044-080-01105

Dam Name	Dam Hazard Classification	State ID
Stone Mountain Park Dam-South	II	044-082-01107
Stone Mountain Park Lake Dam	I	044-003-00037
Stoneleigh Lake Dam	II	044-050-01657
Timber Trace Lake Dam	II	044-103-04480
Turner Hill Lake Dam	I	044-107-04563
Walden Lake Dam	II	044-043-00707
Ward Lake Dam	II	044-041-00705
Water's Edge Lake Dam	I	044-101-04422
Browns Mill Lake Dam	II	044-055-00794
Buena Vista Lake Dam	I	044-023-00538
Chapel Hill Park Lake Dam	II	044-047-00865
Crooked Creek Lake Dam	I	044-100-04375
Davidson Mineral Properties	II	044-042-00706
Dunwoody Club Crossing Lake Dam	II	044-104-04510
East Lake Country Club Dam	I	044-006-00069
Echo Lake Dam	I	044-007-00172
Erin Lake Dam	I	044-004-00033
Exchange Park Lake Dam (Upper)	II	044-053-00792
Forest Lake Dam	II	044-040-01043
Glen Emerald Lake Dam	I	044-048-00865
Houseworth Lake Dam	II	044-110-04963
Howell Lake Dam	II	044-081-01106
Joels Lake Dam	II	044-031-00471
Kenilworth Lake Dam	I	044-005-00053
Key Lake Dam	II	044-060-00799
Kings Cliff Lake Dam	I	044-089-02710
Kingsley Lake Dam	II	044-018-00365
Kristina Lake Dam	II	044-091-00240
Mathis Lake Dam (Lower)	II	044-058-00797
Mcdaniel Lake Dam	II	044-084-01110
Murphey Candler Lake Dam	I	044-002-00005
Mystery Valley Lake Dam	I	044-038-00703
Norris Lake Shores Dam	II	044-022-00660
North Lake Dam	I	044-012-00171
O'neal Lake Dam	II	044-021-00360
Robert Nash Lake Dam	II	044-076-00899
Rockbridge Lake Dam	II	044-008-00065
Sandy Lake Dam	II	044-010-00143
Scott Candler Reservoir #2	I	044-108-05350

Dam Name	Dam Hazard Classification	State ID
Scott Candler Reservoir Dam #1	I	044-024-00377
Silver Lake Dam	I	044-001-00004
Silver Ridge Lake Dam	II	044-097-04206
Simpson Lake Dam	II	044-056-00795
Southland Lake Dam	I	044-046-00782
Stn Mtn Pk Golf Course Lake Dam	II	044-083-01108
Stone Mountain Park Dam-North	II	044-080-01105
Stone Mountain Park Dam-South	II	044-082-01107
Stone Mountain Park Lake Dam	I	044-003-00037
Stoneleigh Lake Dam	II	044-050-01657
Timber Trace Lake Dam	II	044-103-04480
Turner Hill Lake Dam	I	044-107-04563
Walden Lake Dam	II	044-043-00707
Ward Lake Dam	II	044-041-00705
Water's Edge Lake Dam	I	044-101-04422

Data Source: Georgia Safe Dams Program

4.4.3 – Previous Occurrences

Flood Events

The NOAA NCEI Storm Events Database provides reliable information on flood events in DeKalb County beginning in 1997. Between 1997 and 2019, flood events have impacted DeKalb County and the incorporated communities within its boundaries 47 times. These events caused no deaths, no injuries, and approximately $17.135 million in property damage. Between January 1, 2016, and December 31, 2020, flood events have impacted DeKalb County and the incorporated communities within its boundaries 3 times. These events caused 0 death, 0 injuries, and approximately $25,000 in damage.

Table 29: Flood Events (1997-2020)

Flood Events (1997-2020)					
Decade	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
1990s	4	0	0	$19K	$0
2000s	24	0	0	$16.826M	$0
2010s	17	0	0	$470K	$0
2020	2	0	0	$0	$0
Total	**47**	**0**	**0**	**$17.135M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Table 30: Flood Events (2016-2020)

Flood Events (2016-2020)					
Year	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
2016	0	0	0	$0	$0
2017	1	0	0	$25K	$0
2018	0	0	0	$0	$0
2019	0	0	0	$0	$0
2020	2	0	0	$0	$0
Total	**3**	**0**	**0**	**$25K**	**$0**
Average	**0.6**	**0**	**0**	**$5K**	**$0**

Data Source: NOAA/NCEI Storm Events Database

March 8, 1998, Flash Flood Event: After over an inch-and-a-half of rain the preceding two days, showers and thunderstorms dumped another 2 or more inches in a six-hour period over the Atlanta metro area. Peachtree Creek as well as Nancy and Sope Creeks rose rapidly and came out of their banks. A foot of water was over some roads and basements of homes near the creeks were flooded. The event caused approximately $10,000 in property damage.

September 9, 2000, Flash Flood Event: The Atlanta Journal and Constitution reported that 3 to 4 inches of rain in a 2-to-3-hour period resulted in significant flooding. Forty-eight families had to be evacuated from an apartment complex on Memorial Drive in Decatur when water from Sugar Creek spilled over its banks and into the apartments. Flash flooding was also reported in Decatur. Road closures were required on Commerce Drive at Clairmont Road and College Avenue at Candler Road. On Electric Avenue, an unoccupied car was found with flood waters clear up to the roof. At Agnes Scott College in Decatur, East College Avenue was flooded as well. The event caused approximately $15,000 in property damage.

May 6, 2003, Flash Flood Event: Very heavy rain forced Peachtree Creek in North Atlanta to rise quickly to flood stage. The creek crested at 18.5 feet around 4 am EDT, 1.5 feet above the flood stage of 17.0 feet. Flooding of nearby roads, including Hanover West Drive, resulted. The lower levels of several apartments nearby were flooded as well as yards of homes near the creek. Nancy Creek, which flows into Peachtree Creek, was also in flood because of the heavy rain. The event cause approximately $250,000 damage.

June 16-17, 2003, Flash Flood Event: Fox 5 News of Atlanta reported that extensive flooding was occurring in the Brookhaven area. Several hundred people in Brookhaven had to be rescued from their apartments. This flooding was attributed to the rapid rise of Peachtree Creek. In some places the water was 10 feet deep. Several other roads across the northern portion of the county were also flooded, including Clairmont Road and Buford Highway. One resident on Drew Valley Road in Decatur reported that her neighbor's play set washed into her yard over an 8-foot fence. The event caused $500,000 in property damage.

September 16-17, 2004, Flash Flood Event: Numerous reports were received from the DeKalb County Emergency Manager, the media, and the public of extensive flooding across much of the Atlanta metropolitan area, especially the northern parts of the county. Widespread flooding of roads, streets, and

highways was reported throughout the county, several of which had to be closed. Many homes, businesses, property, and vehicles across the county were flooded during this event. Major flooding was reported in many areas of the central and northern parts of the county, specifically between Interstates 20 and 285. Some of these areas experienced catastrophic and historical flooding, with some of the worst flooding observed in nearly 100 years. National Weather Service river gages showed that Peachtree Creek and Nancy Creek quickly rose to record flood levels during the late evening hours. Peachtree Creek rose above its flood stage of 17 feet at 545 pm EDT, then went into record flood stage at 845 pm EDT, then fell below flood stage between 5 and 6 am EDT September 17th. The river crested at 22.7 feet, which is 5.7 feet above flood stage and 1.5 feet above the record flood stage of 21.1 feet, previously reached in 1990. The river gage on Peachtree Creek was washed away during this event. Hundreds of residents along and near Peachtree Creek had to be evacuated, some by boat. Twenty-five to 50 homes and several apartment complexes, including the Peachtree Apartments, were impacted by the flood waters, many sustaining significant and extensive damage. Record flooding was also observed on Nancy Creek, which reached its 11-foot flood stage at 600 pm EDT, reached a record flood stage of 15 feet at 1130 pm EDT, then fell below flood stage around 4 am EDT September 17th. The impact in this area was like that near Peachtree Creek, with dozens of homes flooded and many residents having to be evacuated. In Decatur, one home was devastated when the waters of Peavine Creek rose over two feet in the basement of one home. Several sinkholes were left in the county after the flooding receded, the largest being a 65 by 25-foot sinkhole on Durret Way in Dunwoody. The event caused approximately $5 million in property damage.

September 27-28, 2004, Flash Flood Event: The DeKalb County Emergency Management Director reported major flooding was once again observed along Peachtree and Nancy Creeks across the northern portion of Atlanta. This information was confirmed by National Weather Service river gages on these creeks. The creek was within two feet of the record stage reached just 10 days earlier during the remnants of Hurricane Ivan. Major flooding affected many roads and homes, many of which were the same ones affected just 10 days prior. The Peachtree Apartments were flooded. Several evacuations and rescues were required. All flooding was the result of heavy rain which persisted on the northwest side of the remnants of Hurricane Jeanne as it moved through East Central Georgia. This event caused $1 million in property damage.

September 16-21, 2009, Flood/Flash Flood Event: A historical, record, and catastrophic flood event unfolded during this period, mostly in the west central Georgia area, including the western and northwestern suburbs of Atlanta. Major flooding was noted in many other areas of north and central Georgia, including the eastern suburbs of Atlanta, northwest Georgia, and parts of central Georgia. The culprit was a very stagnant upper atmospheric pattern featuring a weak upper low that developed in early September across south Texas and slowly migrated east-northeast through September 22nd, until a more significant upper trough dropping south into the southern plains finally moved the pesky upper low northeast of Georgia. In addition, an unusually deep tropical flow was noted throughout this period. Precipitable water values exceeded 2.0 inches across the area during much of this period, resulting in extremely efficient rain producing cells. Persistent heavy rain showers and thunderstorms began to plague the area on the 16th and persisted daily through the 21st across parts of north and central Georgia.

However, the catastrophic flooding unfolded when a sea breeze moving northwest merged with existing outflow boundaries and higher terrain across the western suburbs of Atlanta to result in persistent heavy thunderstorms for a period of at least 12 hours that trained across the same counties west of Atlanta, generally affecting Carroll, Douglas, Paulding, and Cobb counties. As the activity progressed across the state, significant flooding unfolded further east, including Fulton County, and the city of Atlanta, DeKalb, and Gwinnett counties. Incredible rainfall amounts of 15 to over 20 inches, were observed from northeast Carroll, through much of Douglas, into eastern Paulding and southern Cobb counties. Rainfall amounts of 10 to 15 inches were noted across parts of Fulton, Dekalb, and Gwinnett. Rainfall amounts of 8 to 12 inches were noted in other spottier areas of northwest, north central, and central Georgia during this period.

The excessive rainfall on top of saturated ground resulted in some of the worst flooding ever reported in the Atlanta and north Georgia area. Eleven deaths were recorded during the event, mostly vehicle related deaths at night from washed out bridges and roads because of swollen creeks. Property damages are estimated to be at least $0.5 Billion, with hundreds of homes and businesses destroyed by flood waters. Bridges on several state and local highways were washed out and some will take months to even a year to replace. Eighteen counties (Bartow, Carroll, Chattooga, Cherokee, Cobb, Coweta, DeKalb, Douglas, Fulton, Gwinnett, Heard, Newton, Paulding, Rockdale, Stephens, and Walker) received a presidential disaster declaration because of the historic floods. Twenty-one counties were declared eligible for public assistance, including several central Georgia counties that were affected by flash flooding earlier in the period.

Some of the worst flooding was observed along Sweetwater Creek near the Cobb, Fulton, Douglas County line. Hundreds of homes were flooded and destroyed as the waters of Sweetwater Creek rose more than 20 feet above flood level.

Many main stem and secondary creeks, streams, and rivers across north and central Georgia, particularly in northwest and west central Georgia, reached record flood levels. Many of these same creeks, streams, and rivers remained in flood for several days. In some cases, record flood levels were recorded. The following is a list of new record flood levels set on several creeks, streams, and rivers in north and west Georgia. Noonday Creek near Woodstock rose to 19.6 feet on the 21st at 530 pm EDT. The previous record was 16.30 feet set on July 11, 2005. Nickajack Creek at Mableton reached 19.30 feet on the 22nd at 215 am EDT. The previous record was 16.60 feet set on July 11, 2005. The North Fork of Peachtree Creek at Atlanta rose to 18.07 feet on the 21st at 715 pm EDT. The previous record was 17.70 feet set on September 16, 2004. Utoy Creek near Atlanta rose to 27.04 feet on the 22nd at 1000 am EDT. The previous record was 16.86 feet set on May 6, 2003. The Chattahoochee River at Whitesburg rose to 29.61 feet on the 21st at 745 pm EDT. The previous record was 29.11 feet on December 11, 1919. Suwanee Creek at Suwanee rose to 14.30 feet on the 21st at 645 pm EDT. The previous record was 12.04 feet set on October 5, 1996. The Yellow River at Lithonia rose to 25.50 feet on the 22nd at 515 am EDT. The previous record was 17.53 feet set on May 7, 2003. The Yellow River near Conyers below Milstead rose to 22.54 feet on the 22nd at 500 pm EDT. The previous record was 16.36 feet set on July 8, 2005. The Chattahoochee River at Franklin rose to 29.98 feet on the 22nd at 500 pm EDT. The previous record was 28.40 feet set on December 15, 1919. The Sweetwater Creek at Austell rose to 30.17 feet on the 22nd at 1000 pm EDT. The previous record was 21.81 feet on July 12, 2005.

The following rivers reached flood levels that were within the top five all time levels at these locations. Peachtree Creek in Atlanta rose to 23.89 feet on the 21st at 915 pm EDT. The record is 25.80 feet recorded on December 20th, 1919. Nancy Creek in Atlanta reached 14.69 feet on the 21st at 930 pm EDT. The record is 15.50 feet on December 1, 1973. The Chattahoochee River at Vinings reached 28.10 feet on the 22nd at 1200 am EDT. The record is 29.0 feet set on December 10, 1919. The South Fork of the Peachtree Creek reached 15.21 feet on the 22nd at 1200 am EDT. The record is 29.0 feet set on December 10, 1976. The Chattahoochee River at Campbellton reached 30.55 feet on the 22nd at 300 pm EDT. The record is 31.60 feet set on December 10, 1919.

Several USGS stream gages showed significant flooding commencing during this time frame across DeKalb County as thunderstorms with heavy rain, which had been west of the area most of the night, began to edge east-northeast and develop across Fulton, DeKalb, and Gwinnett counties. The South Fork of Peachtree Creek at Johnson Road reached its flood stage of 12.0 feet at 128 am EDT. The North Fork of Peachtree Creek at Buford Highway reached its flood stage of 12.0 feet at 201 am EDT. Many homes, apartments, and businesses began to experience significant flooding during this time frame, especially in the vicinity of the flooded creeks. Several roads also became flooded, impassable, and were closed.

Record, and in some cases catastrophic, flooding continued to expand across the northern and western portions of the Atlanta metropolitan area as renewed rounds of showers and thunderstorms with very heavy rain tracked repeatedly over the same areas throughout the day. Portions of hundreds of roads in the county were closed from flooding and washed-out bridges and/or culverts. Hundreds of homes, apartments, and businesses sustained significant flood damage. Record flooding was occurring on Peachtree Creek, the North Fork of Peachtree Creek, and Nancy Creek in northeast Atlanta. The interchange of Interstate-285 and Interstate-85 in northeast DeKalb County, known as Spaghetti Junction was completely shut down for nearly an hour early on the 21st because of flooding. Major traffic backups occurred as a result. A mud slide blocked two westbound lanes of U.S. Highway 78 at Hugh Howell Road. Other mud slides were reported within the county. These are just some of the more significant examples of flood damage in the county.

DeKalb County Emergency Management personnel and USGS stream gages confirmed that major to record flooding continued to expand into all parts of the county. Hundreds of homes, apartments, businesses, and roads sustained damages from flooding. Several culverts and/or bridges were washed out and several roads were closed. Flood waters began to recede after 830 am EDT on the 22nd, however, many areas remained in major to record flood through 715 am EDT on the 23rd. This event was one of the most significant flooding events in DeKalb County history. It caused approximately $10 million in property damage. Disaster Declaration DR-1858-GA was declared for this event.

May 3, 2010, Flash Flood Event: A deep upper-level trough was shifting slowly east from the central U.S. into the eastern U.S. A leading cold front was located from New York to Alabama. A summerlike subtropical ridge across the southeast U.S. was slowly shifting off the southeast U.S. coast. The highly meridional flow had allowed an unusually deep tropical air mass to spread far northward across the eastern half of the U.S. This weather system had been responsible for widespread catastrophic flooding in western and middle Tennessee during the previous three days. As the system moved toward Georgia, it began to weaken considerably, and the main dynamics lifted northeast more toward the mid-Atlantic. Nonetheless, the slow movement of the system brought several rounds of showers and thunderstorms to the area with two-day rainfall of 3-4 inches. Flash flooding was observed in several counties on the northwest and west side of Atlanta, some of the same counties that experienced catastrophic flooding during late September 2009. Flash flooding during this event was far less significant. Severe weather was isolated and confined to east central Georgia toward the end of the event on the 3rd.

Several creeks across DeKalb County reached and exceeded flood stage during this period. This was verified by USGS stream gages. On the South Fork of the Peachtree Creek at Johnson Road, the flood stage of 12.0 feet was reached at 640 am EDT. The creek continued to rise and crested at 14.1 feet at 815 am EDT. The North Fork of Peachtree Creek at Buford Highway reached its flood stage of 12.0 feet at 710 am EDT, then crested at 15.1 feet at 130 pm EDT. On Snapfinger Creek in the southern part of the county, the flood stage of 12.0 feet was reached at 740 am EDT. The creek continued to rise to 12.7 feet at 915 pm EDT. The DeKalb County Emergency Management Director reported that flood waters from the upper South Fork of Peachtree Creek flooded the crawl spaces of several apartments on Lansbury Village Drive. Forty-five people had to be evacuated until the buildings were inspected and cleared of structural problems related to the flood waters. The event caused approximately $50,000 in property damage.

July 17, 2013, Flash Flood Event: An upper ridge remained over the Ohio Valley and Great Lakes area, with easterly flow dominating across the Southeast. An upper disturbance moving across in the easterly flow combined with the continued moist and unstable airmass allowed numerous showers and thunderstorms to develop during the afternoon and evening hours. Many of these became severe with damaging winds and even some reports of large hail. Isolated flash flooding was reported as well.

DeKalb County Emergency Management reported an apartment off Lansbury Village Drive was flooded with several inches of water by Peachtree Branch overflowing its banks. Also, the upper end of the North

Fork Peachtree Creek in the Doraville area experienced minor flooding. The event cause approximately $10,000 in property damage.

August 21, 2013, Flash Flood Event: A weak frontal boundary remained stalled over central Georgia on the 21st. A warm and moist airmass remained in place, and once again several showers and thunderstorms developed. A couple of these produced isolated flash flooding in north Georgia, and one briefly became severe with damaging winds.

DeKalb County Emergency Management reported the South Fork Peachtree Creek came out of its banks and caused minor flooding near Orion Drive and Lawrenceville Highway. The same creek also flooded portions of Medlock Park and athletic fields with up to 3 feet of water. Three homes on Scott Circle near the creek had flood waters enter their crawl spaces. A portion of Snapfinger Creek came out of its banks and flooded a home on Rowland Road with around one inch of water. The stage height at a USGS stream gage on Stone Mountain Creek at Silver Hill Road reached flood stage of 9 feet. The creek crest at 9.1 feet. Minor flooding occurred in the woodlands and residential yards along the creek. The event caused approximately $15,000 in property damage.

August 9-10, 2014, Flash Flood Event: Slow moving thunderstorms with heavy rain of 3 to 4 inches in less than 3 hours produced isolated flash flooding in an eastern portion of the Atlanta metro area. The public reported minor flooding of residential yards along portions of Snapfinger, Cobb, Shoal, Intrenchment and Stone Mountain Creeks in portions of central and south DeKalb County. The overflow of water from Snapfinger Creek flooded several cars in the Redan Village Apartments complex off of Redan Road. The event caused approximately $30,000 in property damage.

December 24, 2015, Flash Flood Event: Persistent, deep, and strong southwesterly upper-level flow across the eastern U.S. resulted in an extremely moist and moderately unstable atmosphere over North and Central Georgia. A stalled frontal boundary and a series of short waves in the southwesterly upper flow resulted in multiple rounds of heavy rain, and strong to severe thunderstorms, with widespread flash flooding, damaging thunderstorms winds, hail and an isolated tornado.

A USGS stream gauge on North Fork Peachtree Creek at Buford Highway or Georgia Highway 13 near Atlanta reached flood stage of 13 feet. The creek crest at 14.8 feet. Significant flooding occurred upstream and downstream from the gauge. Large portions of the backyards of residential homes on Victory Drive...Dunwoody Place and Converse Drive flooded with around two feet of water. A portion of the Sun Tan Center parking lot near the gauge flooded. A few roads and culverts in the area were damaged or washed out.

A USGS stream gauge on the South Fork Peachtree Creek at Johnson Road near Atlanta reached flood stage of 13 feet. The creek crest at 13.9 feet. Minor flooding occurred upstream and downstream from the gauge Portions of backyards of residential homes on Noble Drive...Helen Drive and Kay Lane were flooded with around one foot of water. A few roads and culverts were damaged or washed out in the area. The event caused approximately $300,000 in property damage.

June 20, 2017, Flash Flood Event: A stalled frontal boundary and anomalously moist air mass produced high rainfall amounts for several days, beginning June 19th. Multiple waves of precipitation including many training storms dropped high rainfall amounts over the metro Atlanta area and along the I-20 corridor. Rainfall amounts were generally 4-6 inches, with isolated amounts approaching 8 inches. Flash flooding resulted, especially within the Nancy Creek, North Fork Peachtree Creek and Yellow River basins.

Heavy rainfall resulted in flash flooding across northern DeKalb County, especially in areas along Nancy and Peachtree Creeks. Emergency Management reported residential water rescues occurred at locations on Warrenhall Lane along Nancy Creek. Flood waters also covered Bamby Lane along North Fork

Peachtree Creek, and Cove Circle and Burch Circle in the Drew Valley Neighborhood. A smaller creek flowed out of its banks and inundated Dresden Road. A person was rescued near the intersection of Oakcliff Road and Pleasantdale Road after their vehicle stalled in approximately two feet of water. Portions of South Fork Peachtree Creek flooded, eroding the area around Plantation Park Apartments, resulting in a partial collapse of the foundation. No injuries were reported. Rainfall estimates indicate that widespread 3 to 6 inches of rain occurred over northern DeKalb County. The event caused approximately $25,000 in property damage.

April 13, 2020, Flood Event: A powerful Spring storm system resulted in a Severe Weather / Tornado outbreak across much of the Southeast region, including north and central Georgia, beginning on Easter Sunday (April 12th) and lingering into the morning hours of April 13th. From the Storm Prediction Center (Day 1) convective outlook, just about the entire area was under an Enhanced Risk for severe weather with a Moderate Risk extending into western Georgia. In addition, enhanced rainfall occurred over far north Georgia and in portions of central Georgia, with rainfall amounts ranging from 3 to 8 inches through the event. Significant flooding was in portions of the area with numerous reports of washouts and several reports of rescues. DeKalb County Emergency Management reported flooding on the 600 block of Rockborough Drive. Rainfall amounts of 1 to 2 inches occurred in the area, causing the flooding. The event caused no property damage.

August 3, 2020, Flash Flood Event: Widespread thunderstorms along and ahead of a stationary front across north and central Georgia resulted in scattered severe thunderstorms with numerous reports of damaging thunderstorm winds and several reports of large hail. Localized flash flooding occurred in Fulton and DeKalb counties following a quick 3 to 5 inches of rain. The broadcast media reported flooding of both lanes of Peachtree Boulevard, near the intersection with Broad Street. The water reached halfway up the tires of cars driving by. Radar estimates indicate that 3 to 4 inches of rain occurred in the area. The event caused no property damage.

Table 31: Repetitive Loss Properties, DeKalb County and All Participating Jurisdictions

Repetitive Loss Properties, DeKalb County												
Community Name	**Community Number**	**Occupancy 1**	**Mitigate**	**Cumulative Building Payment**	**Cumulative Contents Payment**	**Total Losses**	**Total Paid**	**Is NFIP Repetitive Loss Flag**	**Is NFIP Severe Repetitive Loss Flag**	**Is FMA Repetitive Loss Flag**	**Is FMA Severe Repetitive Loss Flag**	**Not Repetitive Loss Flag**
DEKALB COUNTY *	130065	SINGLE FMLY	NO	105333.56	29799.59	6	135133.15	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	17830.72	765	3	18595.72	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	56897.91	31565.12	5	88463.03	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	66479.81	27645.65	6	94125.46	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	196822.84	78978.37	9	275801.21	Y	Y	N	Y	N
DECATUR, CITY OF	135159	SINGLE FMLY	NO	72644.01	11673.09	5	84317.1	Y	Y	N	Y	N
CHAMBLEE, CITY OF	130066	SINGLE FMLY	YES	18012.92	0	5	18012.92	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	65298.67	1276.64	3	66575.31	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
CHAMBLEE, CITY OF	130066	SINGLE FMLY	NO	13040.69	5500	3	18540.69	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	31601.81	11323.06	3	42924.87	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	YES	4172.16	1136.8	2	5308.96	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	80180.33	10891.28	10	91071.61	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	6317.29	3365.2	2	9682.49	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	43215.4	30889.65	7	74105.05	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	10013.14	14488.8	4	24501.94	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	YES	7647.15	3206.37	2	10853.52	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5931.27	0	2	5931.27	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	65739.7	0	5	65739.7	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	378690.93	39034.29	7	417725.22	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	57060.36	20362.26	7	77422.62	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	4130.4	2281.1	3	6411.5	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	12172.14	5059	2	17231.14	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	21892.11	15924.2	5	37816.31	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	29222.3	7650	2	36872.3	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	105405.68	20499.05	4	125904.73	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	9074.37	2000	2	11074.37	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	YES	149796.03	44581.1	5	194377.13	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	11264.62	2243.73	5	13508.35	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	4421.29	0	2	4421.29	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	9414.92	3170.79	3	12585.71	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	115072.5	0	3	115072.5	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	22969.31	5617.07	2	28586.38	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	53588.1	26661.65	5	80249.75	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	14060.05	0	3	14060.05	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	12034.82	0	5	12034.82	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	4900.79	0	2	4900.79	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	12098.78	1681.85	2	13780.63	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	21327.59	334.8	5	21662.39	Y	N	N	N	N
DECATUR, CITY OF	135159	2-4 FAMILY	NO	40192.29	3608.52	3	43800.81	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	128772.39	5884.76	6	134657.15	Y	Y	N	Y	N
TUCKER, CITY OF	130681	SINGLE FMLY	NO	111919.99	30771.81	5	142691.8	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	7694.86	0	2	7694.86	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	51877.5	25860.65	3	77738.15	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	47731.58	7706.32	4	55437.9	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
PINE LAKE, CITY OF	130070	SINGLE FMLY	NO	100218.51	0	3	100218.51	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	34925.99	1400	5	36325.99	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	13007.11	0	2	13007.11	Y	N	N	N	N
DEKALB COUNTY *	130065	2-4 FAMILY	YES	66089.85	0	2	66089.85	Y	N	Y	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	29634.6	5300	3	34934.6	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	7619.77	0	2	7619.77	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	YES	32353.23	5000	4	37353.23	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	78083.14	25147.3	3	103230.44	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	53049.85	14814.02	2	67863.87	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	YES	21720.92	13390.63	2	35111.55	Y	N	N	N	N
TUCKER, CITY OF	130681	SINGLE FMLY	NO	46173.34	1849.54	3	48022.88	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	47743.6	0	5	47743.6	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	YES	42630.76	2062.05	5	44692.81	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5380.94	0	2	5380.94	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	227644.85	99595.08	3	327239.93	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	79342.36	6928.99	4	86271.35	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	18832.94	0	3	18832.94	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	YES	105227.57	23194.62	3	128422.19	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	OTHER RESID	YES	460410.61	27328.65	2	487739.26	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	8031.6	585.34	2	8616.94	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	103742.84	16367.13	3	120109.97	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	143319.18	0	3	143319.18	Y	N	Y	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	218563.25	52798.84	4	271362.09	Y	Y	Y	Y	N
DECATUR, CITY OF	135159	SINGLE FMLY	NO	50179.42	17372.82	3	67552.24	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	173833.71	73831.85	5	247665.56	Y	N	N	N	N
DECATUR, CITY OF	135159	ASSMD CONDO	NO	62933.71	0	4	62933.71	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	102439.64	33844.24	3	136283.88	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	YES	49026.17	10180.71	2	59206.88	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	YES	211171.13	0	2	211171.13	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	YES	392381.56	0	2	392381.56	Y	N	N	N	N
DEKALB COUNTY *	130065	ASSMD CONDO	YES	427631.99	32632.76	2	460264.75	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	9989.52	0	2	9989.52	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	NO	156550.98	14184.85	5	170735.83	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	80404.92	4032.8	3	84437.72	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	25149.12	0	2	25149.12	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	33251.61	1938.88	2	35190.49	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	YES	41388.61	1926.01	3	43314.62	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	13453.87	0	2	13453.87	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	NO	21090.58	0	3	21090.58	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	27218.11	6284.25	3	33502.36	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5608.35	0	2	5608.35	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5891.3	0	2	5891.3	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	19931.81	0	2	19931.81	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	21025.82	0	2	21025.82	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	69478.04	2512.39	6	71990.43	Y	Y	N	Y	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	26120.32	259.09	2	26379.41	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	93981.74	27632.95	2	121614.69	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	30799.17	0	2	30799.17	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	32235.56	0	2	32235.56	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	48449.02	0	3	48449.02	Y	N	N	N	N
STONE MOUNTAIN, CITY OF	130260	SINGLE FMLY	NO	162368.86	21160.2	3	183529.06	Y	N	N	N	N
STONE MOUNTAIN, CITY OF	130260	SINGLE FMLY	NO	10961.68	0	2	10961.68	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	75545.6	0	2	75545.6	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	54910.05	9491.4	3	64401.45	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	29339.54	163.51	3	29503.05	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	15305.31	0	2	15305.31	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	15402.4	0	2	15402.4	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	145366.03	17473.65	5	162839.68	Y	N	Y	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	72622.96	0	4	72622.96	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	0	3849.13	2	3849.13	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	12392.86	0	3	12392.86	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	13981.76	0	2	13981.76	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	26342.38	2523.68	3	28866.06	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	YES	20221.41	0	2	20221.41	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5022.01	14666.2	3	19688.21	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	25469.14	1476	3	26945.14	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	16952.14	1055	4	18007.14	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	9614.44	0	2	9614.44	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	40685.23	0	3	40685.23	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	16490.95	0	2	16490.95	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	2411.89	20000	2	22411.89	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	45337.68	19470.45	2	64808.13	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	28328.98	2530.75	2	30859.73	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	98796.1	35312.62	3	134108.72	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	47474.26	12120.78	2	59595.04	Y	N	N	N	N
DECATUR, CITY OF	135159	SINGLE FMLY	NO	8172.37	411.28	2	8583.65	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	126629.14	21800	3	148429.14	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	122931.85	0	3	122931.85	Y	N	N	N	N
DECATUR, CITY OF	135159	2-4 FAMILY	NO	6932.51	0	2	6932.51	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	20279.37	1770.04	2	22049.41	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	ASSMD CONDO	NO	274728.14	27168.63	2	301896.77	Y	N	N	N	N
STONE MOUNTAIN, CITY OF	130260	SINGLE FMLY	NO	71781.79	39616.36	2	111398.15	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	NO	61656.96	0	2	61656.96	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	45208.4	0	2	45208.4	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	26960.14	8132.11	2	35092.25	Y	N	N	N	N
DEKALB COUNTY *	130065	2-4 FAMILY	NO	37822.39	12900	2	50722.39	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	297724.87	75999.68	6	373724.55	Y	N	Y	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	106391.24	13881.17	3	120272.41	Y	N	N	N	N
CHAMBLEE, CITY OF	130066	SINGLE FMLY	NO	67432.25	20047.44	2	87479.69	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	OTHR-NONRES	NO	126522.6	100000	2	226522.6	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	25385.25	0	2	25385.25	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	20339.97	483.46	2	20823.43	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	190607.25	36954.43	2	227561.68	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	8016.28	0	2	8016.28	Y	N	N	N	N
CHAMBLEE, CITY OF	130066	SINGLE FMLY	NO	83754.43	12470.56	6	96224.99	Y	Y	N	Y	N
DEKALB COUNTY *	130065	2-4 FAMILY	NO	0	6437.95	2	6437.95	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	42090.22	7660.66	4	49750.88	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	22315.7	19966.05	6	42281.75	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DECATUR, CITY OF	135159	SINGLE FMLY	YES	7679.32	745.31	2	8424.63	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	45460.85	0	2	45460.85	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	223922.72	64614.7	2	288537.42	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	15122.28	0	4	15122.28	Y	N	N	N	N
TUCKER, CITY OF	130681	SINGLE FMLY	NO	21260.8	0	2	21260.8	Y	N	N	N	N
TUCKER, CITY OF	130681	SINGLE FMLY	NO	33878.9	0	2	33878.9	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	NO	259760.54	0	2	259760.54	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	18282.65	0	2	18282.65	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	NO	235586.91	0	2	235586.91	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	2-4 FAMILY	NO	101230.88	0	2	101230.88	Y	N	N	N	N
DEKALB COUNTY *	130065	OTHER RESID	NO	254215.41	0	2	254215.41	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	71434.02	0	2	71434.02	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	22514.46	6249.74	2	28764.2	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	18283.03	0	3	18283.03	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	20742.38	632.01	2	21374.39	Y	N	N	N	N
DEKALB COUNTY *	130065	BUSI-NONRES	NO	99584.8	87652.38	6	187237.18	Y	Y	N	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	5200.72	0	2	5200.72	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	10092.86	0	3	10092.86	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
DEKALB COUNTY *	130065	SINGLE FMLY	NO	75879.33	0	2	75879.33	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	43194.54	0	3	43194.54	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	23942.62	0	2	23942.62	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	27031.58	6121.76	3	33153.34	Y	N	N	N	N
DEKALB COUNTY *	130065	BUSI-NONRES	NO	57389.39	0	3	57389.39	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	22661.18	0	2	22661.18	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	37839.05	0	2	37839.05	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	15741.24	0	2	15741.24	Y	N	N	N	N
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	58655.32	0	2	58655.32	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	25635.48	0	3	25635.48	Y	N	N	N	N
DUNWOODY, CITY OF	130679	SINGLE FMLY	NO	14095.46	0	3	14095.46	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	42518.79	0	2	42518.79	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	3588.18	0	2	3588.18	Y	N	N	N	N
DECATUR, CITY OF	135159	OTHER RESID	NO	41171.6	0	2	41171.6	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	201120.17	57072.87	5	258193.04	Y	Y	Y	Y	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	128689.68	41901.41	3	170591.09	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	236563.03	41161.39	3	277724.42	Y	N	Y	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	9106.11	0	2	9106.11	Y	N	N	N	N

Repetitive Loss Properties, DeKalb County												
Community Name	Community Number	Occupancy 1	Mitigate	Cumulative Building Payment	Cumulative Contents Payment	Total Losses	Total Paid	Is NFIP Repetitive Loss Flag	Is NFIP Severe Repetitive Loss Flag	Is FMA Repetitive Loss Flag	Is FMA Severe Repetitive Loss Flag	Not Repetitive Loss Flag
BROOKHAVEN, CITY OF	135175	SINGLE FMLY	NO	18089.02	2472.07	2	20561.09	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	6782.13	2699.75	2	9481.88	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	25124.75	0	2	25124.75	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	7485.7	6479.36	2	13965.06	Y	N	N	N	N
DUNWOODY, CITY OF	130679	SINGLE FMLY	NO	16791.17	0	2	16791.17	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	12727.21	0	2	12727.21	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	19097.9	0	2	19097.9	Y	N	N	N	N
DEKALB COUNTY *	130065	SINGLE FMLY	NO	29824.3	10512.12	2	40336.42	Y	N	N	N	N

Data Source: Georgia Emergency Management Agency (GEMA)

4.4.3A – Probability of Future Events

Table 32: Probability of Future Events, Flood

Probability of Future Events, Flood	
Decade	**Number of Events**
1990s	4
2000s	24
2010s	17
2020	2
Total	47
Years	23
Average	**2.04/year**
Likelihood of a Flood Events Each Year = 204%	

Data Source: NOAA/NCEI Storm Events Database

According to the Association of State Dam Safety Officials, there have been no instances of dam failure in DeKalb County. There is no single, comprehensive source of open-source information about a dam failure in the State of Georgia. Though some private dams may have been breached, no records have been found to indicate an emergency response related to it. The probability of a dam failure event occurring within the planning area is reduced due to the continued monitoring and compliance of the Georgia Safe Dam Program.

Based on this data, it is **highly likely** a flooding event will occur every year in DeKalb County and the incorporated jurisdictions within its boundaries. Flooding events will most likely be caused by excessive rainfall. However, it is possible that a flooding event due to a dam failure could occur given the aging infrastructure of dams in the community.

4.4.4 – Vulnerability of Community Assets

Note: As part of the hazard analysis conducted by the University of Georgia's Carl Vinson Institute of Government, a hypothetical scenario involving flooding was run using Hazus-MH. The Hazus-MH simulation considered the likely impacts of the DeKalb County 1% riverine flooding event.

Vulnerability of People

If evacuation orders are not heeded, or floodwaters rise quickly enough, residents within the planning area can be swept away by floodwater currents, become trapped on rooftops or other points of high elevations, and even sustain injury or death. Depending upon the conditions, this will expose them to the elements and deprive them of basic needs and services.

Still water that is long-lasting and slow to drain will encourage the growth of mold and other bio-hazardous material, rendering a facility unusable. Extra care, assessment, and sanitization are required before residents can re-inhabit a facility, or they may face serious health concerns. Long-term care facilities housing vulnerable populations can take longer to evacuate.

Additionally, the potential presence of mold after a flood requires extra care to be taken before DeKalb County's population can re-inhabit a long-term care facility.

One of the greatest risks to the jurisdiction's population is the inability to predict a dam failure due to it being uncontrollable by humans. DeKalb County and its participating jurisdictions have a total population of 749,323 that would be at risk for a dam failure in the planning area. It is important to note that no injuries or deaths have occurred in DeKalb County or its participating jurisdictions as a direct result of dam failure.

All of DeKalb County's population are susceptible to flood hazards. Low-income individuals are more vulnerable to flood hazards. Low-income individuals also experience greater difficulties in recovering from flood hazard impacts. According to U.S. Census Bureau data, 15.1% of DeKalb County's population live in poverty. This represents 113,148 people. The cities of Lithonia (38.9%), Clarkston (30.9%), and Doraville (22.8%) have the highest levels of poverty in DeKalb County. The DeKalb County 2021 Comprehensive Plan 5-Year Update notes that poverty rates have increased in certain sections of central and south DeKalb County(https://www.dekalbcountyga.gov/planning-and-sustainability/2021-comprehensive-plan-5-year-update).

Individuals with access and functional needs are more vulnerable to flood hazard impacts. This may include children, the elderly, they physically or mentally disabled, non-English speakers, the medically or chemically dependent, and the transportation disadvantaged (https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-planning-handbook_03-2013.pdf). In DeKalb County, this includes the following:

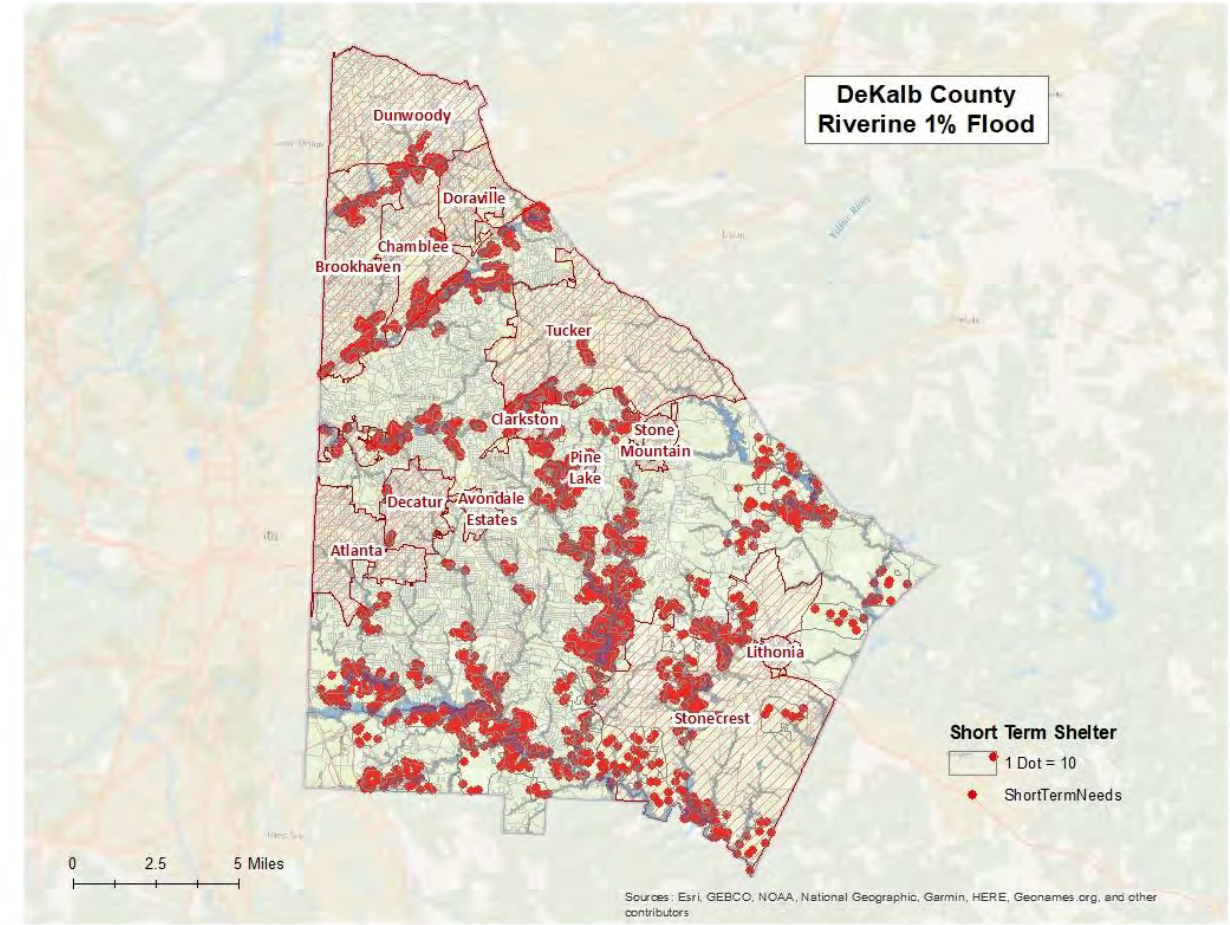
- Individuals with a disability: 10.2% (75,923 people)
- Persons 65 years and over: 11.9% (89,507 people)
- Persons under 9 years: 13.5% (101,416 people)
- Speak English less than "very well" (age 5 years+): 8.7% (60,536 people)
- Households with no vehicles available: 8.6% (24,418 households)

The City of Stonecrest (11.4%) has the highest percentage of individuals with a disability. The City of Avondale Estates (23.4%) has the highest ratio of population aged 65 years or older. The City of Lithonia (22.3%), City of Clarkston (18.3%), and City of Decatur (18.2%) have the greatest percentage of people under 9 years. The City of Doraville (42.4%), City of Clarkston (40.9%), and City of Chamblee (28.7%) have the highest percentage of people who speak English less than "very well." The City of Lithonia (14.7%) and City of Clarkston (14.3%) have the highest ratio of households with no vehicle available.

This data, retrieved from the American Community Survey and the DeKalb County 2021 Comprehensive Plan 5-Year Update, provides insight into certain characteristics of DeKalb County that are likely indicators of vulnerability. Based on this data, the greatest population vulnerabilities to flood hazards in DeKalb County are in the City of Clarkston, the City of Lithonia, and unincorporated areas of the county.

The Hazus-MH simulation considered the likely impacts of the DeKalb County 1% riverine flooding event. Hazus-MH estimated 13,994 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 41,982 individuals, of which 34,704 may require short term publicly provided shelter. The results are mapped below.

Map 40: DeKalb County Flood Risk Map



Map Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Vulnerability of the Economy

Building losses are broken into two categories: direct building and business interruption. Direct building losses are the estimated costs to repair or replace damage to the building and its contents. Business interruption losses are losses associated with the inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The leading industries in DeKalb County are Healthcare and Social Services (14.9% jobs), Retail Trade (10.9% of jobs), Accommodations and Food Services (7.2% of jobs), and Administrative and Support and Waste Management and Remediation Services (7.2% of jobs). Educational Services is another important industry in DeKalb County as it provides the fifth largest percentage of jobs (6.6%) and the highest average weekly wages of all industries ($2105). The private sector provides 85.6% of employment, while the Federal, State, and local governments provide 14.4% of DeKalb County employment (https://explorer.gdol.ga.gov/vosnet/mis/Profiles/Counties/DeKalb.pdf). The largest employers in DeKalb County are, (1) Centers for Disease Control and Prevention (CDC); (2) Veterans Affairs Medical Center Atlanta; (3) Emory University Hospital; (4) Emory DeKalb Medical; (5) Children's Healthcare of Atlanta; (6)

AT&T Mobility LLC; (7) State Farm Insurance Company/Atlanta Perimeter; (8) InterContinental Hotels Group Inc; (9) AirWatch LLC; and (10) Georgia Regional Hospital Atlanta (https://www.dekalbchamber.org/why-dekalb/).

All sectors of DeKalb County's economy are susceptible to the impacts of flood hazards. The loss of any of DeKalb County's leading industries could severely disrupt the community and its ability to recover from a disaster. Given the significance of the Healthcare industry in DeKalb County, a flood-related disaster impacting one of the community's hospitals would severely stress the capabilities of the community to respond to the medical needs of the community. The CDC, located in DeKalb County, is a Federal agency under the United States Department of Health and Human Services which works to protect America from health, safety and security threats, both foreign and in the United States (https://www.cdc.gov/about/organization/mission.htm). Its loss would not only affect DeKalb County's economy but would affect the entire nation.

Vulnerability of the Built Environment

Buildings in DeKalb County are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. The hypothetical 1% flooding event was simulated to impact DeKalb County and its participating jurisdictions using the Hazus-MH system. The simulated event generated damage to 4416 buildings in DeKalb County and its participating jurisdictions for a total of $619,240,534 in damage.

The following tables provide a summary of the potential flood-related building damage in DeKalb County by jurisdiction that might be experienced from the 1% flood. The following maps shows the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and illustrates the relationship of building locations to the 1% flood inundation boundary.

Table 33: DeKalb County Riverine 1% Building Losses

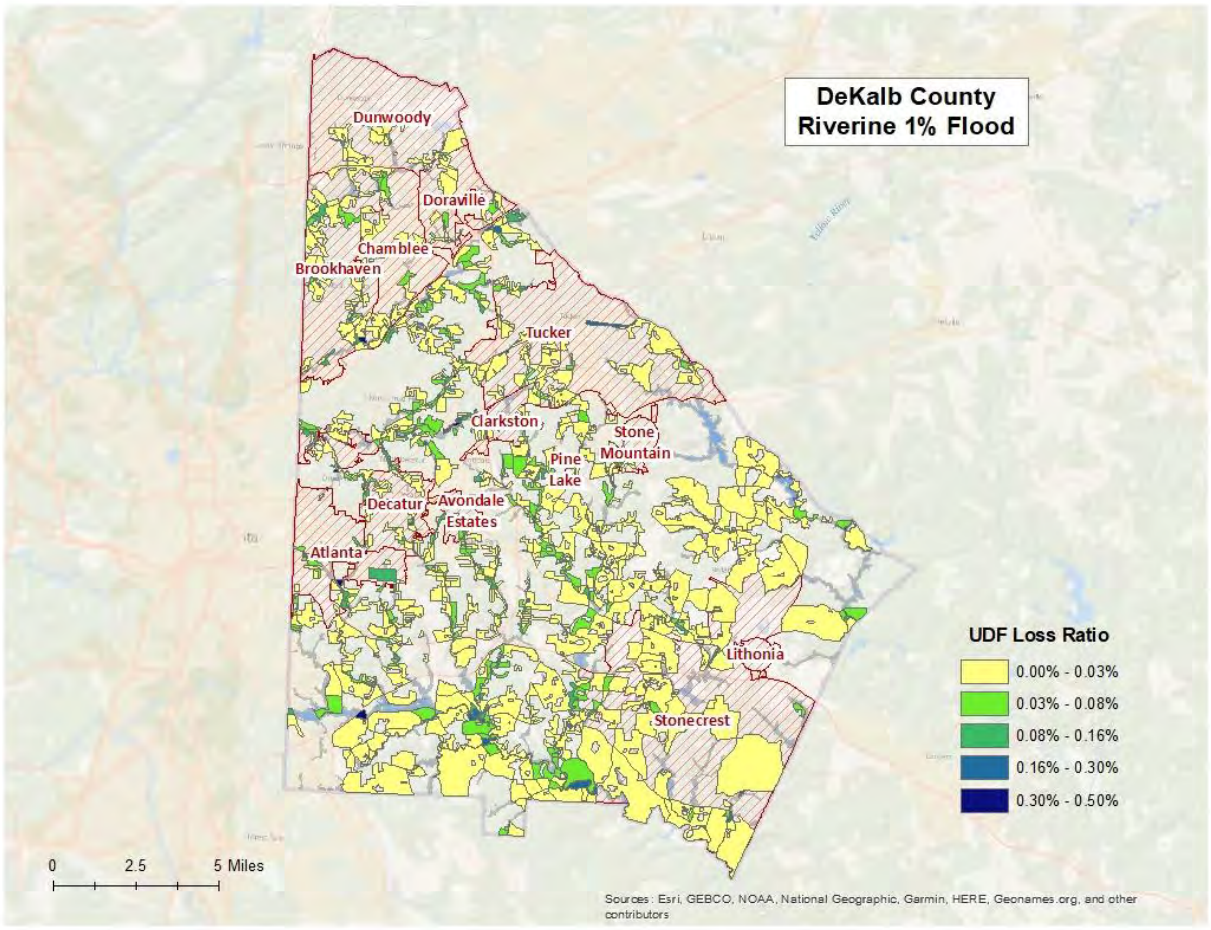
Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Atlanta					
Commercial	291	9	$268,698,650	$1,791,840	0.67%
Religious	33	1	$26,063,010	$47,676	0.18%
Residential	12,181	182	$9,728,152,969	$30,868,391	0.32%
Avondale Estates					
Residential	1,495	12	$1,118,375,123	$3,669,867	0.33%
Commercial	74	1	$33,711,240	$27,701	0.08%
Brookhaven					
Residential	13,616	241	$13,731,481,344	$46,482,665	0.34%
Commercial	327	6	$1,984,293,540	$28,361,187	1.43%

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Industrial	19	2	$32,860,630	$920,356	2.80%
Chamblee					
Commercial	685	7	$1,020,323,120	$1,253,667	0.12%
Industrial	149	1	$168,908,930	$181,776	0.11%
Residential	5,726	118	$3,592,454,771	$14,851,744	0.41%
Clarkston					
Residential	1,160	15	$364,225,849	$516,595	0.14%
Decatur					
Commercial	288	1	$550,474,460	$95,611	0.02%
Industrial	15	1	$3,801,220	$120,631	3.17%
Residential	7,362	207	$8,584,234,852	$33,093,188	0.39%
Doraville					
Residential	2,292	57	$1,145,344,710	$7,160,796	0.63%
Commercial	447	4	$577,378,570	$1,438,878	0.25%
Industrial	97	2	$172,759,740	$496,380	0.29%
Dunwoody					
Residential	12,607	42	$10,478,841,349	$5,619,995	0.05%
Commercial	400	2	$2,254,785,560	$13,026	0.00%
Pine Lake					
Residential	343	10	$153,868,426	$920,951	0.60%
Stone Mountain					
Residential	1,978	29	$571,337,319	$1,906,618	0.33%
Stonecrest					
Commercial	453	8	$877,969,346	$4,508,706	0.51%
Industrial	120	1	$231,795,755	$515,005	0.24%
Residential	16,683	377	$6,635,461,086	$38,526,782	0.58%
Tucker					

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Industrial	216	3	$523,171,040	$269,764	0.05%
Residential	11,302	162	$6,939,302,119	$18,903,800	0.27%
Commercial	756	4	$1,363,291,350	$18,882,002	1.39%
Unincorporated					
Industrial	251	8	$286,170,621	$4,214,169	1.47%
Religious	153	8	$154,474,160	$5,370,178	3.48%
Commercial	2,680	53	$3,097,482,997	$8,977,502	0.29%
Residential	126,579	2,842	$61,044,179,900	$339,233,087	0.56%
County Total					
	220,778	4,416	$137,697,673,756	$619,240,534	

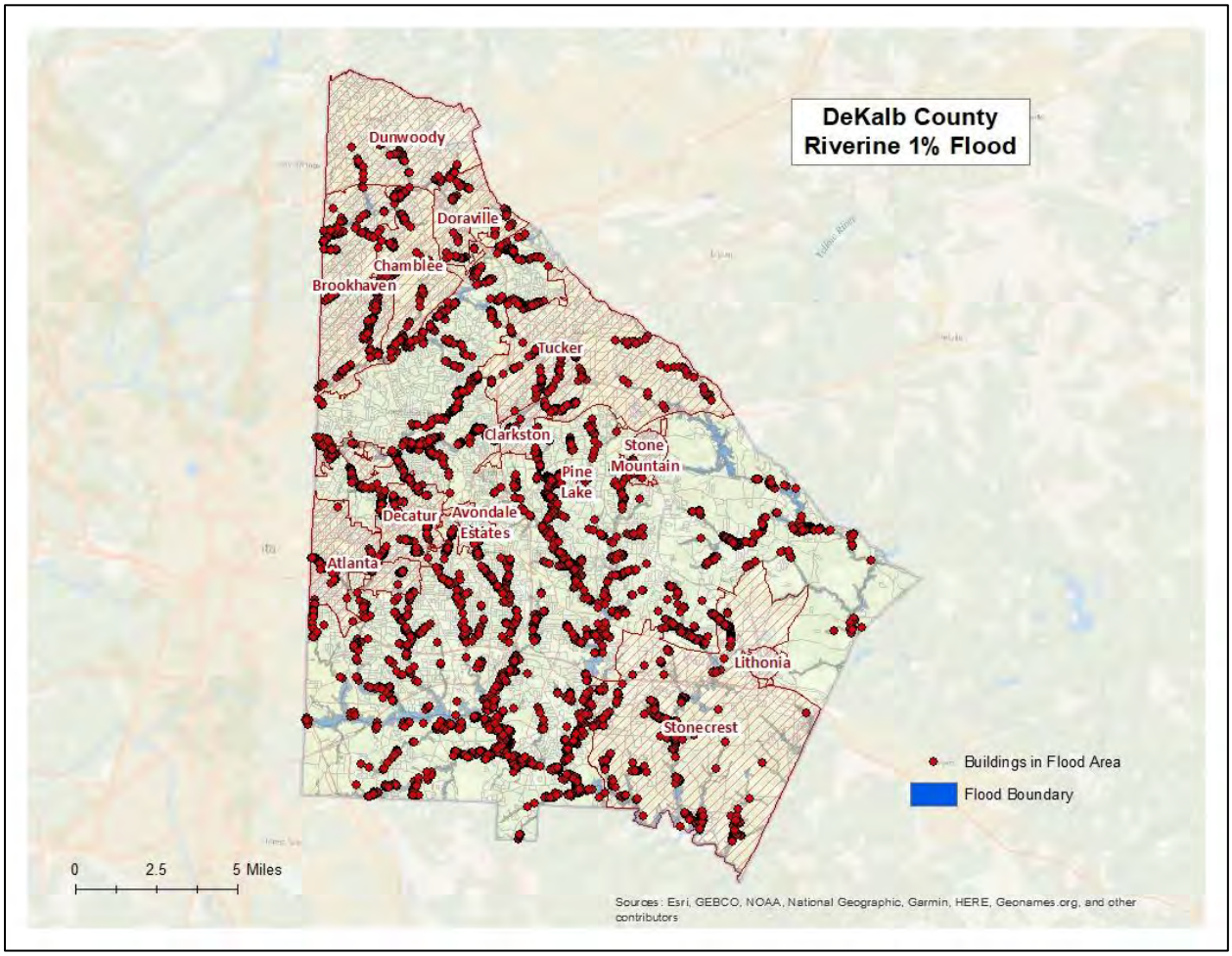
Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Map 41: DeKalb County Potential Loss Ratio of Total Building Exposure to Losses Sustained to Buildings from the 1% Riverine Flood by 2010 Census Block



Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Map 42: DeKalb County Damaged Buildings in Riverine Floodplain (1% Flood)



Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

An essential facility may encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility and loss of facility functionality (e.g., a damaged police station will no longer be able to serve the community). The analysis identified one essential facility that was subject to damage in the DeKalb County riverine 1% probability floodplain.

Table 34: Riverine 1% Flood Damaged Essential Facilities

Name	Category	City
Fire Station 24	Fire Station	Stone Mountain

Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Hazus-MH estimated the amount of debris that would be generated by the hypothetical flood event. The model broke debris into three general categories:

- Finishes (dry wall, insulation, etc.)

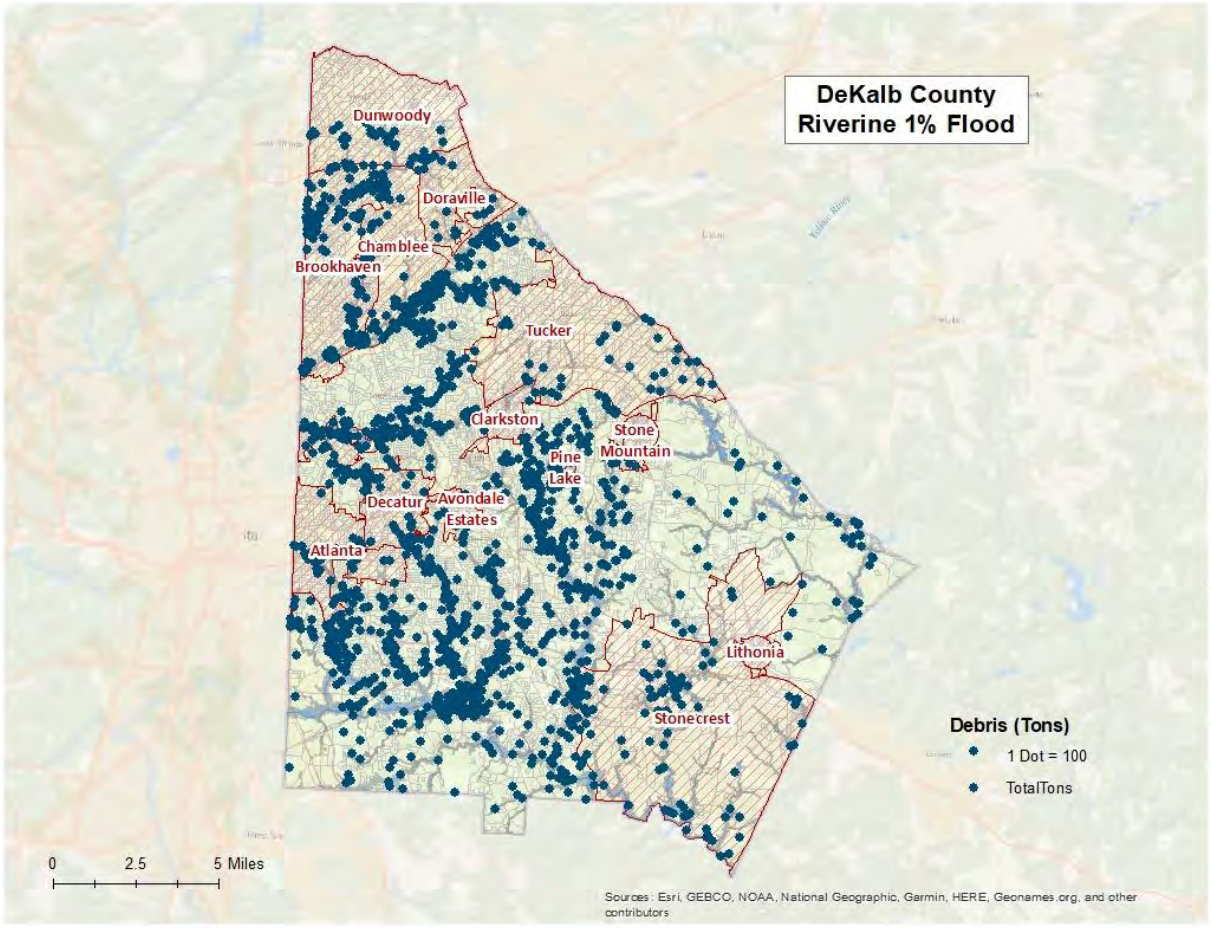
- Structural (wood, brick, etc.)
- Foundations (concrete slab, concrete block, rebar, etc.)

Debris definitions applied in Hazus-MH are unique to the Hazus-MH model and so do not necessarily conform to other definitions that may be employed in other models or guidelines.

The analysis estimates that an approximate total of 172,505 tons of debris might be generated:

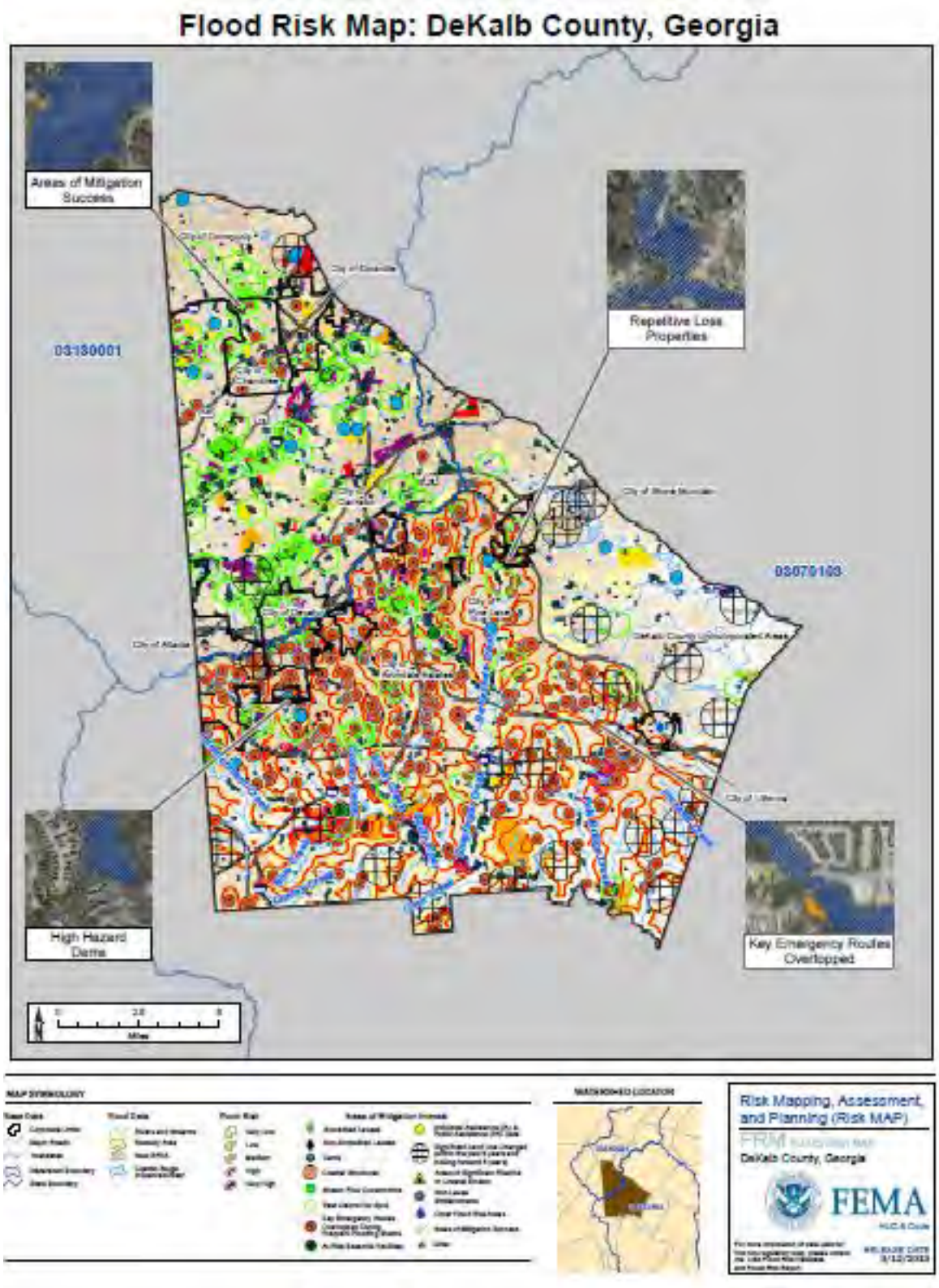
1) Finishes- 58,632 tons; 2) Structural – 58,251 tons; and 3) Foundations- 55,622 tons. The results are mapped below.

Map 43: Riverine 1% Flood Debris Weight (Tons)



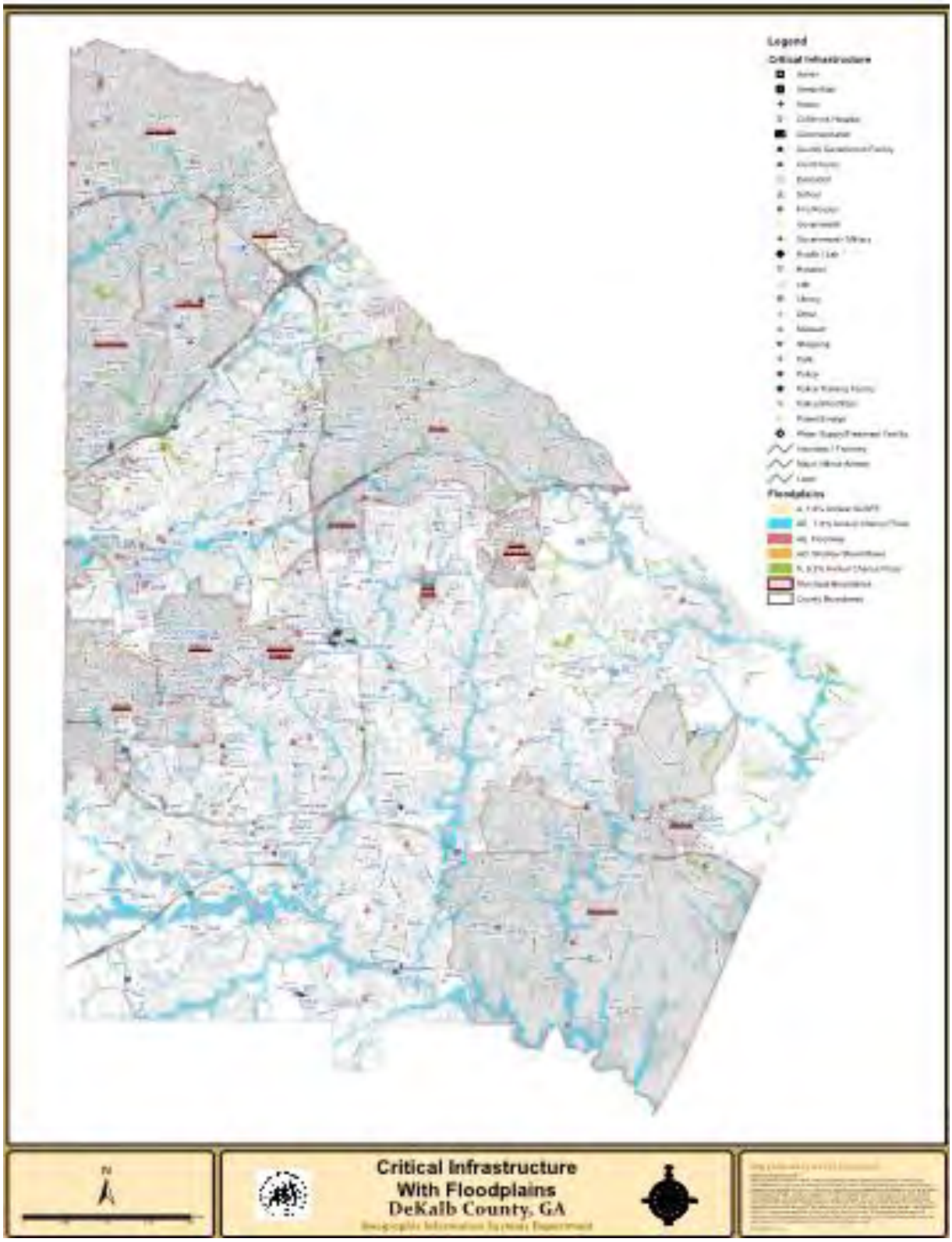
Source: Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Map 44: DeKalb County Flood Risk Map



Map Source: FEMA Flood Risk Map Service Center

Map 45: DeKalb County Critical Infrastructure with Floodplains



Map Source: DeKalb County Geographics Information Department

Map 46: DeKalb County, Riverine 100-yr Flood (has been requested)

Map Source: GEMA, Hazard Risk Analysis, Supplement to the DeKalb County Joint Hazard Mitigation plan

Map 47: DeKalb County Riverine 100-yr Flood Loss Ratio by 2010 Census Block (has been requested)

Map Source: GEMA, Hazard Risk Analysis, Supplement to the DeKalb County Joint Hazard Mitigation plan

Map 48: DeKalb County Riverine 100-yr Flood with Critical Facilities (has been requested)

Map Source: GEMA, Hazard Risk Analysis, Supplement to the DeKalb County Joint Hazard Mitigation plan

Map 49: DeKalb County Riverine 100-yr Flood, Short-Term Shelter Needs (has been requested)

Map Source: GEMA, Hazard Risk Analysis, Supplement to the DeKalb County Joint Hazard Mitigation plan

Map 50: DeKalb County Riverine 100-yr Flood, Debris Weight (Tons) (has been requested)

Map Source: GEMA, Hazard Risk Analysis, Supplement to the DeKalb County Joint Hazard Mitigation plan

Vulnerability of Natural Environment

The 2021 DeKalb County Comprehensive Plan – 5 Year Update lists two significant and unique geological features. Soapstone Ridge, located in the southwestern portion of the county, contains aboriginal steatite quarries which are of archeological and historic significance. Stone Mountain, located in the eastern area of the county, is the largest exposed granite outcropping in the world. The 2021 DeKalb County Comprehensive Plan – 5 Year Update also notes there are various Federally protected wetlands in the area, mostly in the flood prone areas of perennial creeks. These natural environmental resources are minimally vulnerable to flooding impacts.

4.4.5 – Risk Analysis

FEMA's NRI on provides estimates on riverine flooding risk, and not flash flooding. The NRI estimates that DeKalb County and the jurisdictions which lie within its boundaries have 24,440 people, $188,645,903,590 worth of structures, and $36,048 worth of agriculture exposed to riverine flood hazard impacts each year. The NRI projects annual losses of 0.54 people, $926,049 worth of structures, and $518 worth of agriculture to riverine flooding hazard impacts each year. HAZUS® estimates individuals would be displaced due to flooding and the potential for evacuation and may require short-term publicly provided shelter. This

information is from the Hazard Risk Analysis provided by the University of Georgia, Carl Vinson Institute of Government.

Table 35: Risk Analysis of Community Lifeline Systems to Floods, DeKalb County

Risk Analysis of Community Lifeline Systems to Floods, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Search and Rescue	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Government Services	**High Risk.** Impacts may: • damage critical facilities and historical sites • disrupt power and communications to emergency operations centers • disrupt essential government functions • cause short-term or long-term school cancellations.

Risk Analysis of Community Lifeline Systems to Floods, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
	Community Safety	**High Risk.** Impacts may: • damage or overtop flood control systems • create secondary hazards
Food, Water, Shelter	Food	**Moderate Risk.** Impacts may: • disrupt commercial food distribution and supply chains • affect commercial and home perishable food supplies
	Water	**High Risk.** Impacts may: • generate secondary hazards which can contaminate drinking water systems • damage wastewater systems
	Shelter	**High Risk.** Impacts may: • damage homes • damage shelters • damage lodging facilities
	Agriculture	**High Risk.** Impacts may: • injure livestock • damage crops • damage farm structures and equipment
Health and Medical	Medical Care	**High Risk.** Impacts may: • damage hospitals, pharmacies, long-term care facilities, and veterinary clinics • disrupt power and communications • contaminate water supply, affecting the provision of care • expend resources
	Patient Movement	**High Risk.** Impacts may: • injure personnel

Risk Analysis of Community Lifeline Systems to Floods, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Public Health	**High Risk.** Impacts may: • damage facilities • disrupt power and communications • expend resources
	Fatality Management	**Moderate Risk.** Impacts may: • expend resources • damage facilities and equipment • disrupt power and communications
	Medical Supply Chain	**Moderate Risk.** Impacts may: • expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials) • damage or block transportation routes
Energy	Power (Grid)	**High Risk.** Impacts may: • damage generation systems • damage transmission systems • damage distribution systems
	Fuel	**High Risk.** Impacts may: • damage fuel storage resources • damage pipelines • damage fuel distribution locations
Communications	Infrastructure	**High Risk.** Impacts may: • damage or cause wireless systems to become overburdened

Risk Analysis of Community Lifeline Systems to Floods, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• damage cable and wireline systems • damage or disrupt broadcast and satellite systems • damage or cause internet systems to become overburdened
	Alerts, Warnings, and Messages	**Moderate Risk.** Impacts may: • damage physical warning systems • disrupt the delivery of emergency alerts and warnings
	911 and Dispatch	**High Risk.** Impacts may: • damage public safety answering points or dispatch centers • damage communication systems • overburden communication systems
	Responder Communications	**High Risk.** Impacts may: • damage communication systems • overburden communication systems
	Finance	**High Risk.** Impacts may: • damage banking facilities and equipment • disrupt communications
Transportation	Highway/Roadway	**High Risk.** Impacts may: • damage or block roads and bridges
	Mass Transit	**Moderate Risk.** Impacts may: • damage buses or trains • damage or block transportation routes • delay routes
	Railway	**Moderate Risk.** Impacts may: • damage freight or passenger trains • damage or block transportation routes

Risk Analysis of Community Lifeline Systems to Floods, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• delay routes
	Aviation	**Moderate Risk.** Impacts may: • damage airports • damage aircraft • delay routes
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**High Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from fixed facilities • damage facilities • disrupt power supply to facilities
	Hazmat, Pollutants, Contaminants	**High Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from non-fixed facilities, rail, and roadways

4.4.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL1	**Flooding and people** Low-income individuals, and individuals with functional and access needs (children, elderly, disability, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In DeKalb County and the jurisdictions that lie within its boundaries: • 14% of the population is ≤9 years old • 12% of the population is ≥65 years old • 10% of the population has a disability • 9% of the population speak English less than "very well" • 8.6% of households have no vehicle available	Over 25% of the population in DeKalb County and the jurisdictions that lie within its boundaries are vulnerable to extreme heat impacts.
FL2	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Avondale Estates: • 11% of the population is ≤9 years old • 23% of the population is ≥65 years old • 9% of the population has a disability • 2% of the population speak English less than "very well" • 3% of households have no vehicle available	Over 30% of the population in the City of Avondale Estates are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL3	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Brookhaven: • 15% of the population is ≤9 years old • 10% of the population is ≥65 years old • 6% of the population has a disability • 17% of the population speak English less than very well • 7% of households no vehicle available	Over 25% of the population in the City of Brookhaven are vulnerable to extreme heat impacts.
FL4	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Chamblee: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 7% of the population has a disability • 29% of the population speak English less than "very well" • 9% of households have no vehicle available	Over 30% of the population in the City of Chamblee are vulnerable to extreme heat impacts.
FL5	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Clarkston: • 18% of the population is ≤9 years old • 4% of the population is ≥65 years old • 8% of the population has a disability • 41% of the population speak English less than "very well" • 14% of households have no vehicle available	Over 40% of the population in the City of Clarkston are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL6	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Decatur: • 18% of the population is ≤9 years old • 12% of the population is ≥65 years old • 8% of the population has a disability • 3% of the population speak English less than "very well" • 13% of household have no vehicle available	Over 30% of the population in the City of Decatur are vulnerable to extreme heat impacts.
FL7	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Doraville: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 5% of the population has a disability • 42% of the population speak English less than "very well" • 9% of households have no vehicle available	Over 40% of the population in the City of Doravillle are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL8	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Dunwoody: • 16% of the population is ≤9 years old • 14% of the population is ≥65 years old • 7% of the population has a disability • 8% of the population speak English less than "very well" • 5% of households have no vehicle available	Over 30% of the population in the City of Dunwoody are vulnerable to extreme heat impacts.
FL9	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Lithonia: • 22% of the population is ≤9 years old • 7% of the population is ≥65 years old • 9% of the population has a disability • 4% of the population speak English less than "very well" • 15% of households have no vehicle available	Over 30% of the population in the City of Lithonia are vulnerable to extreme heat impacts.
FL10	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Pine Lake: • 17% of the population is ≥65 years old • 6% of the population has a disability • 1% of the population speak English less than "very well" • 2% of households have no vehicle available	Over 15% of the population in the City of Pine Lake are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL11	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Stone Mountain: • 10% of the population is ≤9 years old • 9% of the population is ≥65 years old • 11% of the population has a disability • 6% of the population speak English less than "very well" • 10% of households have no vehicle available	Over 20% of the population in the City of Stone Mountain are vulnerable to extreme heat impacts.
FL12	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Stonecrest: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 11% of the population has a disability • 1% of the population speak English less than "very well" • 10% of households have no vehicle available	Over 20% of the population in the City of Stonecrest are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL13	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Tucker: • 12% of the population is ≤9 years old • 15% of the population is ≥65 years old • 10% of the population has a disability • 13% of the population speak English less than "very well" • 6% of the population have no vehicle available	Over 25% of the population in the City of Tucker are vulnerable to extreme heat impacts.
FL14	**Flooding and people/built environment** Nancy Creek has experienced significant flooding six times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from Nancy Creek.	People and structures along Warrenhall Lane, Durret Way are regularly affected by flooding from Nancy Creek.
FL 15	**Flooding and people/built environment** Peachtree Creek has experienced significant flooding six times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from Peachtree Creek.	People and structures along Hanover West Drive, Clairmont Road, and Buford Road are regularly affected by flooding from Peachtree Creek.
FL16	**Flooding and people/built environment** North Fork Peachtree Creek has experienced significant flooding five times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from North Fork Peachtree Creek.	People and structures along Bamby Lane, Cove Circle, Victory Drive, Dunwoody Place, Converse Drive are regularly affected by flooding from North Fork Peachtree Creek.
FL17	**Flooding and people/built environment** South Fork Peachtree Creek has experienced significant flooding five times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from South Fork Peachtree Creek.	People and structures along Lansbury Village Drive, Orion Drive, Lawrenceville Highway, Noble Drive, Helen Drive, and Kay Lane are regularly affected by flooding from Peachtree Creek.



Photo Source: istockphoto.com

4.5(SWW) – Severe Winter Weather

4.5.1 – Hazard Description

Severe winter weather includes ice storms, heavy or prolonged snow, sleet, and extreme temperatures. Severe winter weather can be increasingly hazardous in areas and regions that only experience it intermittently. This plan defines severe winter weather as a combination of the following events as defined by NOAA.

Cold Wave/Extreme Cold: A cold wave is a weather phenomenon that is distinguished by a cooling of the air. Specifically, as described by NWS, a cold wave is a rapid fall in temperature within a 24-hour period requiring substantially increased protection to agriculture, industry, commerce, and social activities. As evidenced by past events across the U.S., extreme cold can cause impact to human life and property.

Ice Storm: An ice storm is used to describe occasions when damaging accumulations of ice are expected during freezing rain situations. Significant accumulations of ice pull down trees and utility lines resulting in loss of power and communication. These accumulations of ice make walking and driving extremely dangerous. Significant ice accumulations are usually accumulations of ¼" or greater.

Heavy Snow: This generally means snowfall accumulating to 4 inches or more in depth in 12 hours or less; or snowfall accumulating to 6 inches or more in depth in 24 hours or less. In forecasts, snowfall amounts are expressed as a range of values, e.g., "8 to 12 inches." However, in heavy snow situations where there is considerable uncertainty concerning the range of values, more appropriate phrases are used, such as "...up to 12 inches..." or alternatively "...8 inches or more." A blizzard, on the other hand, is a storm with "considerable falling or blowing snow" and winds in excess of 35 mph and visibilities of less than 1/4 mile for at least three hours.

Winter Storm: A winter storm comes in the form of heavy snow, heavy freezing rain, or heavy sleet. Such hazardous storms may also include extremely low temperatures and increased wind.

Interestingly, NWS refers to winter storms as “deceptive killers.” People are at greater risk to dangerous injuries, including frostbite and hypothermia due to the wind and cold. Most deaths caused by winter storms

are from vehicle accidents due to ice and snow. Heart attacks brought on by overexertion from shoveling or clearing snow also increase during and after storms.

Aside from the inherent dangers of severe winter weather, rising temperatures and the melting of ice and snow can cause fast surface water runoff and potentially flash flooding.

Fortunately, significant winter storms form well in advance and can, therefore, be anticipated by weather experts. However, like other large storm fronts, the severity of winter storms is not as easily predicted. Snow and ice accumulations, as well as wind speed, will inevitably vary by location.

4.5.2 – Location & Extent

Severe winter weather can occur anywhere in DeKalb County. While not as common as severe thunderstorms, snow and ice can impact the area given the right ingredients. First, cold air must be in place. This usually occurs a few times in the winter months when the polar jet stream moves southward into the eastern United States. Second, moisture is necessary for the formation of precipitation. When the subtropical jet stream moves across the southern portion of the United States, it allows disturbances to track across the area, which provides atmospheric lift. Given these ingredients, snow, sleet, and/or freezing rain can form (https://weather.com/storms/winter/news/what-to-know-about-snow-and-ice-in-south).

Dangerously cold temperatures can also occur in DeKalb County. In extreme cases, temperatures have dropped below 0ºF in the area. These extreme cold weather events often occur in conjunction with snowfall.

Table 36: Record Low Temperatures, Atlanta Area

Record Low Temperatures, Atlanta Area	
Date	**Temperature**
February 13, 1899	-9ºF
January 21, 1985	-8ºF
January 20, 1985	-6ºF
January 11, 1982	-5ºF
January 30, 1966	-3ºF
January 24, 1963	-3ºF

Data Source: National Weather Service, Peachtree City, GA (https://www.weather.gov/wrh/Climate?wfo=ffc)

NOAA's National Centers for Environmental Information (NCEI) is now producing the Regional Snowfall Index (RSI) for significant snowstorms that impact the eastern two thirds of the U.S. The RSI ranks snowstorm impacts on a scale from 1 to 5, like the Fujita scale for tornadoes or the Saffir-Simpson scale for hurricanes. The RSI differs from these other indices because it includes population. RSI is based on the spatial extent of the storm, the amount of snowfall, and the juxtaposition of these elements with population. The RSI is important because of the need to place snowstorms and their societal impacts into a historical perspective on a regional scale. For example, in February 1973, a major snowstorm hit the Southeast affecting areas not prone to snow. The storm stretched from the Louisiana and Mississippi Gulf coasts northeastward to the Carolinas. Over 11 million people received more than 5" of snow and three quarters of a million people in Georgia and South Carolina experienced over 15" of snow. This is currently the 10th highest ranked storm for the Southeast region. This storm would not even be ranked in NESIS. This example illustrates why it is important to discriminate impacts between regions. It is important to note that currently, the RSI does not consider the impacts of ice accumulations.

Table 37: Regional Snowfall Index

Regional Snowfall Index		
Category	**RSI Value**	**Description**
1	1–3	Notable
2	3–6	Significant
3	6–10	Major
4	10–18	Crippling
5	18.0+	Extreme

Data Source: NOAA/NCEI (https://www.ncdc.noaa.gov/snow-and-ice/rsi/)

4.5.3 – Previous Occurrences

Severe Winter Weather Events

Between 1996 and 2020, severe winter weather events have impacted DeKalb County and the incorporated communities within its boundaries 47 times. This includes events labeled in the NCDC database as Cold/Wind Chill, Extreme Cold/Wind Chill, Frost/Freeze, Heavy Snow, Ice Storm, Sleet, Winter Storm, and Winter Weather. The NCDC lists no severe winter weather events in DeKalb County prior to 1996. Therefore, this plan will only evaluate the period between 1996-2020. These events caused no deaths, no injuries, and approximately $1.533 million in property damage. Between January 1, 2016, and December 31, 2020, severe winter weather events have impacted DeKalb County and the incorporated communities within its boundaries six times. These events caused no death, no injuries, and no recorded property damage.

Table 38: Severe Winter Weather Events (1996-2020)

Severe Winter Weather Events (1996-2020)					
Decade	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
1990s	4	0	0	$0	$0
2000s	27	0	0	$1.533M	$0
2010s	15	0	0	$0	$0
2020	1	0	0	$0	$0
Total	**47**	**0**	**0**	**$1.533M**	**$0**

Data Source: NOAA/NCEI Storm Events Database

Table 39: Severe Winter Weather Events (2016-2020)

Severe Winter Weather Events (2016-2020)					
Year	**No. of Events**	**Deaths**	**Injuries**	**Property Damage**	**Crop Damage**
2016	2	0	0	$0	$0
2017	2	0	0	$0	$0
2018	1	0	0	$0	$0
2019	0	0	0	$0	$0
2020	1	0	0	$0	$0
Total	**6**	**0**	**0**	**$0**	**$0**
Average	**1.2**	**0**	**0**	**$0**	**$0**

Data Source: NOAA/NCEI Storm Events Database

January 22, 2000, Ice Storm (RSI 0.83). Wintry precipitation plagued the northern third of Georgia beginning Saturday and continued into Sunday. A shallow cold airmass with single-digit dewpoint temperatures was in place over north Georgia, with temperatures in the upper 20s to lower 30s over much of the area. An upper-level disturbance moved rapidly over the area in a fast zonal flow, bringing an increase in mid-tropospheric moisture. At the same time, lower-level moisture spread into the area from the Gulf of Mexico. Precipitation began falling into the colder layer of air near the surface by mid-morning on the 22nd. The mixture of light rain, snow and sleet had spread from northwest to northeast Georgia by early afternoon. By noon, reports began coming in of icy spots on bridges and some roadways. By late afternoon, the precipitation north of a line from Rome to Gainesville to Commerce became a mixture of freezing rain, sleet and snow. Up to 3 inches of snow fell in the mountains of northeast Georgia by the end of the event. Rain mixed with sleet fell over much of the rest of north Georgia into the late afternoon. As the event continued into Saturday night, freezing rain and sleet began falling further south in the Atlanta to Athens areas. Ice accumulated to around a half inch on tree limbs and power lines. There was ice and snow accumulation on roads as well, mainly north of an Atlanta to Athens line. Bridges and overpasses became treacherous for travelers and numerous accidents were reported. A ten-year-old Rockdale County girl was injured when an large ice-laden limb fell and hit her in the head, causing spinal damage. The major problem was power outages. Power lines snapped, and trees and limbs fell onto power lines breaking them. Trees and debris blocked roads in many areas. As many as 500,000 customers lost power across north Georgia. About 3,000 Georgia power workers worked around the clock to restore power, but 50,000 to 75,000 customers were still without electricity Tuesday morning. A few areas did not regain electric power until Wednesday. As many as 40,000 telephone customers also lost service due to lines downed by limbs and trees. Around 3,000 phones customers in the Atlanta metro area alone were without service Sunday. Trees heavy with ice fell on homes and cars causing other damage. Hartsfield International Airport was open Sunday, but many flights were cancelled or had long delays in the morning. Precipitation slowly diminished from west to east across north Georgia during the morning and early afternoon on Sunday January 23rd. Luckily the storm occurred on the weekend, but some school systems still were closed Monday. The governor of Georgia declared a state of emergency for 39 counties. A Federal Disaster Declaration covered 34 Georgia counties. Georgia Emergency Management estimated 48 million dollars in damage. The devastation from the storm was compared to Hurricane Opal in 1995 and the blizzard of 1993. This event caused no deaths or injuries, and approximately $980,000 in property damage. It is the costliest severe winter weather event since 1996.

January 28-30, 2000, Ice Storm (RSI 1.38): A series of short waves in the upper air pattern produced periods of mostly light to occasionally moderate precipitation over the north half of Georgia from Friday morning to Sunday afternoon. Patchy light snow began in west central and northwest Georgia around daybreak on the 28th. There was a light dusting on the ground by mid-morning from Troup to Carroll County, east to Fayette County. Due to the dry layer of air aloft, much of the precipitation evaporated before reaching the ground, so eastward progression of the area of snow was slow. By evening, a mixture of light snow, sleet and freezing rain became more widespread over west central and northwest Georgia. Although the precipitation remained light and temperatures hovered in the low to mid 30s, ice began to accumulate on roads, bridges and overpasses. There was a 47-car pile-up on I-20 in downtown Atlanta late Friday night that backed up traffic into early Saturday morning. By Saturday morning, the 29th, temperatures had slowly fallen to near or just below the freezing mark over the north half of Georgia with a mix of light freezing drizzle, freezing rain, and sleet, with light snow in the mountains. The last batch of significant precipitation moved from Alabama into west central Georgia and on into the Atlanta metro area on Sunday morning. There were even one or two claps of thunder in Spalding County. Overall, the event generally produced 1/4 to 1/2 inch of ice accumulation, with isolated areas getting 1/2 to 1 inch of ice. The main problems seemed to be traffic accidents due to icy roads and bridges. There were scattered areas of trees and power lines down, but damage from this storm was nowhere as much as that from the storm the previous weekend. This event cause approximately $32,790 in property damage.

January 28-30, 2005, Winter Storm (RSI 0.00): A significant and prolonged winter storm/ice storm affected nearly all North and Central Georgia from the evening of Friday January 28th to late morning on Sunday January 30th. The winter storm was a result of a very strong and very cold Arctic surface high pressure system located across the Mid-Atlantic states and an upper-level disturbance moving across the region from the west. North of a line from La Grange to Thomaston, to Sandersville, the precipitation fell mostly as a mixture of sleet and freezing rain, with typical accumulations of one-half inch glaze ice and one to two inches of sleet. Some areas in North Central and Northeast Georgia experienced significant glaze ice accumulations of three-fourths to one inch. Further south, mainly south of a La Grange, to Thomaston, to Sandersville line, most of the frozen precipitation fell as freezing rain, with 1/4-to-1/2-inch accumulations of glaze ice common as far south as McRae, Abbeville, and Americus. In the southern areas, however, the ice accumulations were generally confined to trees, power lines, and other exposed objects with little or no accumulation of ice on the ground. Extensive damage to trees and power lines were reported throughout the area, especially in North Central, Northeast, and Central Georgia. Damage estimates were in the millions. Numerous vehicle accidents were also reported on the slick ice and sleet covered roads, especially in the Atlanta Metropolitan area. The summary below provides ice and sleet accumulations by county for this event as well as damage information received for that county. The ice and sleet accumulations were largely provided by the county 911 centers or respective Emergency Management Directors. The damage information was provided by the local county/city newspaper. In DeKalb County, 1/4 inch of glaze ice and 1.5 inches of sleet accumulated on the ground and infrastructure. Hundreds of trees fell on power lines and in roadways. Several thousand people were left without power for one to two days. This event caused no deaths or injuries, and approximately $500,000 in property damage.

December 15, 2005, Ice Storm (RSI 0.00): A low pressure system moving out of the Gulf of Mexico and a strong upper-level trough pushed an area of rain across Georgia late on the 14th and early on the 15th. Meanwhile, a wedge of cold, dry air had slid down the east side of the Appalachians into north central and northeast Georgia. As the rain overspread the wedge of cold air, temperatures dropped to near or just below the freezing mark. Rainfall amounts across north and northeast Georgia averaged in the 0.50-to-0.80-inch range, resulting in substantial and damaging accumulations of ice. Ice accumulations on trees, power lines, and other elevated objects were mostly in the 0.25-to-0.33-inch range in an area bounded by Helen, Dahlonega, Ellijay, northeast Atlanta, Covington, and Athens. However, ice accumulations up to 0.50 inch were reported across Gwinnett, Hall, and White counties resulting in a number of downed trees and power lines. Only minor ice accumulations were reported immediately west and south of this area in the western and southern suburbs of Atlanta. Warm ground temperatures prevented significant ice

accumulations on roads, although some minor ice accumulation was reported on the roads across Banks, Gwinnett, Hall, and White counties. Approximately 220,000 residents, mostly in northeast Georgia, were left without power during the morning hours. The power outages also left traffic signals out of service in many of these areas, resulting in several traffic backups. Nearly 100,000 were still without power in the late afternoon. Several roads were also blocked from downed trees, especially across Hall, White, and Gwinnett counties. In DeKalb County, 0.25 inches of ice accumulated on infrastructure causing numerous power outages. This event caused no deaths or injuries, and approximately $10,000 in property damage.

March 1, 2009, Heavy Snow Event (RSI 3.423): A vigorous closed upper-level low, with very cold temperatures aloft, continued to intensify as it moved rapidly southeast from the Midwest into the southeast U.S. from the evening of February 28th into the afternoon of March 1st. At the same time, a polar air mass (marked by a 1040+ mb surface high) was spreading southeast from the central Canadian provinces into the eastern half of the U.S. The combination of these events brought a rare late season heavy snowstorm to parts of north and central Georgia. Rain early in the morning changed to moderate to heavy snow just before noon on the 1st and spread from west to east across west central, north central, central, east central, and northeast Georgia. Even some thunderstorms and cloud-to-ground lightning strikes were observed during the height of the storm from late morning through mid-afternoon across north central, west central, northeast, and central Georgia. Measurable snowfall was confined to an area generally south of a Buchanan, to Canton, to Gainesville line and north of a Lumpkin, to Americus, to Warner Robins, to Gibson line. Snowfall averaged two to three inches within most of the snow area, but pockets of five to six inches of snow were recorded across parts of west central Georgia from the north side of Columbus, through Pine Mountain and into Troup and Meriwether County. The heaviest snow fell in northeast and parts of east central Georgia where a deformation zone developed on the back side of the departing upper low during the early evening. Snowfall from Lawrenceville, to Athens, to Danielsville averaged six to seven inches. The water content of the snow was high, which resulted in extensive downed trees, power lines, and telephone cables in areas that saw three or more inches of snow. Widespread power outages to thousands of people were observed in the Clarke, Morgan, Oconee, Jackson, and Madison County areas of northeast Georgia. Many residents in this part of the state were left without power for two to three days. The maximum snowfall ranged from 1.5 inches in the northern part of the county to 2.5 inches in the southern part. Some trees and power lines were down from the weight of the heavy, wet snow. This event caused no deaths or injuries, and approximately $5,000 in property damage.

January 21-22, 2016, Winter Weather Event (RSI 12.616): Very cold air was entrenched across the southeastern states as a deep surface low developed in the lower Mississippi Valley and swept northeast across the southern Appalachians. A wintry mix of some freezing rain and sleet, but mostly snow, covered north Georgia with snow flurries extending as far south as central Georgia. Strong pressure gradient winds associated with this low-pressure system produced northwest winds 20 to 25 MPH with gusts of 30 to 40 MPH across north and central Georgia during the day on the 23rd. A CoCoRaHS observer reported .8 inches of snow southeast of Decatur and a report of .5 inches of snow in North Decatur was received on social media. The COOP observer north northeast of Doraville reported .1 inches of snow and a National Weather Service employee in East Lake Highlands reported a trace of snow. This event caused no deaths, injuries, or property damage.

February 9-10, 2016, Winter Weather Event (RSI 0.00): A strong and deep upper-level trough remained anchored across the eastern half of the country resulting in an extended period of very cold temperatures and scattered light to occasionally moderate snow showers across northern Georgia from late in the evening on Monday, February 8th through early in the morning on Friday, February 12th. Most areas saw only trace amounts of snow accumulation, however 1 to 2 inches of snow accumulated across the higher elevations of the North Georgia mountains. A COOP observer northeast of Doraville reported a trace of snow. This event caused no deaths, injuries, or property damage.

January 6-7, 2017, Winter Storm (3.50): During the afternoon of January 6th through the morning of January 7th a fast moving but strong storm system swept across the southeastern U.S. A cold airmass

across north and central Georgia combined with rich moisture drawn north from the Gulf of Mexico to produce a mixture of rain, sleet, freezing rain and snow across north and portions of central Georgia. Several reports of a quarter on an inch of freezing rain were received from the public in the Decatur, Northwoods, and Emory areas, including .24 inches from the ASOS at DeKalb-Peachtree Airport, KPDK. Several CoCoRaHS reports of a quarter of an inch or less of snow were received from the Tucker and Decatur areas. This event caused no deaths, injuries, or property damage.

December 8-9, 2017, Winter Storm (RSI 3.07): With cold air in place across the southeastern U.S., a deep upper-level trough and associated surface low brought an extended period of moderate to heavy snow across parts of north Georgia beginning the morning of December 8th and continuing through the early morning of December 9th. The snowfall spread south and east overnight on the 8th into the morning of the 9th bringing light to moderate snowfall amounts to the remainder of north Georgia and portions of central Georgia. From the Atlanta metropolitan area northward and westward, many roads became impassable for several hours to over 2 days. Numerous trees and power lines were damaged or downed by the weight of the heavy, wet snow with many customers without electricity for hours if not days. Between 1 and 6 inches of snow were estimated across the county. Reports from CoCoRaHS observers included 1.5 to 5.5 inches in Decatur and 3.5 to 5.5 inches in Tucker as well as 3.5 inches in Dunwoody and 4 inches along the Fulton County line in east Atlanta. This event resulted in no deaths, injuries, or property damage.

January 16-17, 2018, Winter Storm (RSI 0.00): A strong surface low and cold front associated with a large and deep upper-level trough, brought light to moderate snow to much of north and central Georgia from the afternoon of the January 16th through the morning of January 17th. With most of the precipitation post-frontal, temperatures were well below freezing (lower to mid-20s) as the snow occurred. This resulted in widespread icy and snow-packed roadways across the area, especially those that were not pre-treated by GDOT or Public Works. Reports were received from a National Weather Service employee, CoCoRaHS observers and over social media of one to two inches of snow accumulation across the area. This event caused no deaths, injuries, or damage.

February 8, 2020, Winter Weather Event (RSI 0.00): A fast-moving mid-level short wave swept through the region during the morning and early afternoon. With a cold airmass in place over north Georgia and ample mid-level moisture, moderate to heavy snow quickly accumulated across a large portion of north Georgia. CoCoRaHS observers reported .5 inches of snow 1 mile southeast of Decatur, 3 miles north-northeast of North Decatur and 1 mile north-northwest of Tucker. This event caused no deaths, injuries, or property damage.

4.5.3A – Probability of Future Events

Table 40: Probability of Future Events, Severe Winter Weather

Probability of Future Events, Severe Winter Weather	
Decade	**Number of Events**
1990s	4
2000s	27
2010s	15
2020	1
Total	47
Years	70
Average	**0.67**
Likelihood of a Severe Winter Weather Event Each Year = 67%	

Data Source: NOAA/NCEI Storm Events Database

Based on this data, it is **highly likely** a severe winter weather event will occur every year in DeKalb County and the incorporated jurisdictions within its boundaries.

4.5.4 – Vulnerability of Community Assets

Vulnerability of People

All of DeKalb County's population are at risk for severe winter weather hazard impacts. Individuals with no access to a heating source are much more vulnerable to the dangers of extremely cold temperatures. According to the American Community Survey, 0.2% (584 people) of DeKalb County's population have no access to home heating fuel. The highest percentage of people experiencing this issue is in the City of Lithonia, where 1.4% (13 people) of the population have no access to home heating fuel. The highest number of people is in the City of Decatur, where 44 people have no access to home heating fuel. Another consideration is the loss of electricity as the source of home heating fuel. 37.5% (105,902 people) of DeKalb County's population use electricity as their source of for home heating fuel. A long-term power outage combined with extreme cold temperature could expose many individuals to extreme cold temperatures. In addition, carbon monoxide exposure and poisonings occur more often during the fall and winter when people are more likely to use gas furnaces and heaters. The CDC finds that approximately 480 U.S. residents die each year from non-fire-related carbon monoxide poisoning, and an estimated 15,200 people in the U.S. are treated each year for carbon monoxide poisoning or exposure.

Like other hazards, low-income individuals and individuals with functional and access needs are more vulnerable to severe winter weather hazard impacts. In DeKalb County, this includes the following:

- Individuals living in poverty: 15.1% (113,148 people)
- Individuals with a disability: 10.2% (75,923 people)
- Persons 65 years and over: 11.9% (89,507 people)
- Persons under 9 years: 13.5% (101,416 people)
- Speak English less than "very well" (age 5 years+): 8.7% (60,536 people)
- Households with no vehicles available: 8.6% (24,418 households)

The cities of Lithonia (38.9%), Clarkston (30.9%), and Doraville (22.8%) have the highest levels of poverty in DeKalb County. The DeKalb County 2021 Comprehensive Plan 5-Year Update notes that poverty rates have increased in certain sections of central and south DeKalb County). The City of Stonecrest (11.4%) has the highest percentage of individuals with a disability. The City of Avondale Estates (23.4%) has the highest ratio of population aged 65 years or older. The City of Lithonia (22.3%), City of Clarkston (18.3%), and City of Decatur (18.2%) have the greatest percentage of people under 9 years. The City of Doraville (42.4%), City of Clarkston (40.9%), and City of Chamblee (28.7%) have the highest percentage of people who speak English less than "very well." The City of Lithonia (14.7%) and City of Clarkston (14.3%) have the highest ratio of households with no vehicle available.

This data, retrieved from the American Community Survey and the DeKalb County 2021 Comprehensive Plan 5-Year Update, provides insight into certain characteristics of DeKalb County that are likely indicators of vulnerability. Based on this data, the greatest population vulnerabilities to severe winter weather hazards in DeKalb County are in the City of Clarkston, the City of Lithonia, and unincorporated areas of the county.

Vulnerability of the Economy

All sectors of DeKalb County's economy are vulnerable to the impacts of severe winter weather hazards. The primary impact to the economy is the loss of work time and production due to power outages and disrupted transportation. Given the significance of the Healthcare industry in DeKalb County, these impacts could stress the capabilities of the community to respond to the medical needs of the community.

Vulnerability of the Built Environment

The build environment includes infrastructure systems, critical facilities, and cultural resources. Infrastructure systems are critical for life safety and economic viability and include transportation, power, communication, and water and wastewater systems. Critical facilities are structures and institutions which are necessary for the community's response to and recovery from emergencies. These critical facilities must continue to operate during and following disasters to reduce the severity of impacts and accelerate recovery. Appendix C of this plan lists the community's infrastructure and critical facilities. Appendix C of this plan lists the places in DeKalb County which are part of the National Register of Historic Places and are considered important cultural resources.

Considering the entire planning area is susceptible to severe winter weather impacts, increased development and population growth can reasonably translate to exposure. The DeKalb County 2021 Comprehensive Plan 5-Year Update visualizes the development of three types of Activity Centers: Neighborhood Centers, Town Centers, and Regional Centers. There are 46 Activity Centers countywide. In addition, the plan includes residential designations: Rural, Suburban, and Traditional. DeKalb County's Future Land Use Map can be accessed via https://dekalbgis.maps.arcgis.com/apps/webappviewer/index.html?id=f241af753f414cdfa31c1fdef0924584.

Vulnerability of Natural Environment

The 2021 DeKalb County Comprehensive Plan – 5 Year Update lists two significant and unique geological features. Soapstone Ridge, located in the southwestern portion of the county, contains aboriginal steatite quarries which are of archeological and historic significance. Stone Mountain, located in the eastern area of the county, is the largest exposed granite outcropping in the world. The 2021 DeKalb County Comprehensive Plan – 5 Year Update also notes there are various Federally protected wetlands in the area, mostly in the flood prone areas of perennial creeks. These natural environmental resources are minimally vulnerable to severe winter weather impacts.

4.5.5 – Risk Analysis

All community assets in DeKalb County and the jurisdictions within it boundaries are exposed to severe winter weather impacts. FEMA's National Risk Index (NRI) estimates that DeKalb County and the jurisdictions within its boundaries have $84,788,355,420 worth of structures exposed to severe winter weather hazards each year. The NRI projects annual losses of 0.15 lives and $88,756 worth of structures to winter weather hazard impacts each year. This includes impacts associated with cold waves, ice storms, and other winter weather events. According to the NRI, the most significant projected losses to population are from general winter weather events (0.13 deaths). The most significant projected losses to structures are from ice storms ($74,587).

DeKalb County's most costly wind event in the past 24 years was the January 22, 2000, Ice Storm. The event caused ice accumulations of between1/4" – 1". This ice storm generated approximately $980,000 in damage. A similar event now would cost $1,512,231.

A more significant ice storm would cause greater damage and potentially some deaths or injuries. An analog for a worst-case scenario is the January 2009 Kentucky Ice Storm (https://www.wdrb.com/weather/wdrb-

weather-blog/10-years-later-remembering-the-2009-ice-storm/article_b825a46a-215c-11e9-b295-d3cb4d55a68c.html). In this event, between 1" – 2" of ice accumulated in southwestern Kentucky (and other areas of the Midwest). At one point, over 609,000 homes and businesses were without power, which is Kentucky's largest outage on record. Many were without power for a week or more. Trees fell on homes, cars, power lines, and roads. There were at least 24 fatalities in Kentucky related to the storm. These fatalities were caused by a combination of traffic accidents, hypothermia, and carbon monoxide poisoning.

Table 41: Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County

Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Search and Rescue	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Government Services	**High Risk.** Impacts may: • damage critical facilities • disrupt power and communications to emergency operations centers

Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• disrupt essential government functions • cause short-term or long-term school cancellations.
	Community Safety	**Low Risk.** Impacts may: • damage flood control systems • create secondary hazards
Food, Water, Shelter	Food	**High Risk.** Impacts may: • disrupt commercial food distribution and supply chains • affect commercial and home perishable food supplies
	Water	**High Risk.** Impacts may: • damage pipes • generate secondary hazards which can contaminate drinking water systems • damage wastewater systems
	Shelter	**High Risk.** Impacts may: • damage homes • damage shelters • damage lodging facilities • overburden shelter resources
	Agriculture	**High Risk.** Impacts may: • injure livestock • damage crops
Health and Medical	Medical Care	**High Risk.** Impacts may: • damage hospitals, pharmacies, long-term care facilities, and veterinary clinics • disrupt power and communications

Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• contaminate water supply, affecting the provision of care • expend resources • make it difficult or impossible for staff to come to work
	Patient Movement	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Public Health	**Moderate Risk.** Impacts may: • damage facilities • disrupt power and communications • expend resources
	Fatality Management	**Moderate Risk.** Impacts may: • expend resources • damage facilities and equipment • disrupt power and communications
	Medical Supply Chain	**High Risk.** Impacts may: • expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials) • damage or block transportation routes
Energy	Power (Grid)	**High Risk.** Impacts may: • damage generation systems • damage transmission systems • damage distribution systems

Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
	Fuel	**Moderate Risk.** Impacts may: • damage fuel storage resources • damage fuel distribution locations
Communications	Infrastructure	**High Risk.** Impacts may: • damage or cause wireless systems to become overburdened • damage cable and wireline systems • damage or disrupt broadcast and satellite systems • damage or cause internet systems to become overburdened
	Alerts, Warnings, and Messages	**Moderate Risk.** Impacts may: • damage physical warning systems • disrupt the delivery of emergency alerts and warnings
	911 and Dispatch	**High Risk.** Impacts may: • damage public safety answering points or dispatch centers • damage communication systems • overburden communication systems
	Responder Communications	**High Risk.** Impacts may: • damage communication systems • overburden communication systems
	Finance	**Low Risk.** Impacts may: • damage banking facilities and equipment • disrupt communications
Transportation	Highway/Roadway	**High Risk.** Impacts may: • damage or block roads and bridges • create hazardous driving conditions

Risk Analysis of Community Lifeline Systems to Severe Winter Weather, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• expend resources
	Mass Transit	**Moderate Risk.** Impacts may: • damage buses or trains • damage or block transportation routes • delay routes
	Railway	**Low Risk.** Impacts may: • damage freight or passenger trains • damage or block transportation routes • delay routes
	Aviation	**Moderate Risk.** Impacts may: • damage airports • damage aircraft • delay routes
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**Moderate Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from fixed facilities • damage facilities • disrupt power supply to facilities
	Hazmat, Pollutants, Contaminants	**Moderate Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from non-fixed facilities, rail, and roadways

4.5.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
WW1	**Severe Winter Weather and People** Severe winter weather events, especially ice storms, can cause extended power outages in DeKalb County.	According to the U.S. Census Bureau, 37.5% of residents in DeKalb County use electricity as their primary energy source for heating.	Ice and snowstorms often create extended power outages. Extended power outages in the winter creates dangers in the form of cold weather exposure and carbon monoxide exposure from the improper use of gas furnaces and heaters.
WW2	**Severe Winter Weather and Economy** Severe winter weather events often create hazardous travel conditions.	Between 80% - 90% of DeKalb County residents community to work via roadways.	Snow and ice events in DeKalb County often cause roads to become impassible. southeastern United States where motorist have less experience driving in the conditions and local governments are less equipped to deal with the impacts. Because of this, businesses often close which negatively affects economy.
WW3	**Severe Winter Weather and the Built Environment** Severe winter weather events, especially ice storms, can cause extended power outages in DeKalb County.	DeKalb County has identified critical facilities which are necessary for the community's response to emergencies and disasters.	Ice and snowstorms often create power outages in DeKalb County. If a power outage affects the community's critical facilities, the ability of governmental officials, first responders, emergency managers, healthcare workers, and other essential workers ability to respond effectively may be hindered.



Photo Source: MDJonline.com – Most Georgia Counties, including Fulton in Severe

4.6(D) – Drought

4.6.1 – Hazard Description

Drought is defined as an abnormally dry period lasting months or years when an area has a deficiency of water and precipitation in its surface and or underground water supply. It is, however, a normal, seasonal, and recurrent feature of climate that occurs in virtually all climate zones—typically in late spring through early fall. The duration of drought varies widely. There are cases when drought develops relatively quickly and lasts a very short period, exacerbated by extreme heat and/or wind. There are other cases when a drought spans multiple years, or even decades. The hydrological imbalance can be grouped into the following non-exclusive categories:

- **Agricultural:** When the amount of moisture in the soil no longer meets the needs of previously grown crops,
- **Hydrological:** When surface and subsurface water levels are significantly below their normal levels,
- **Meteorological:** When there is a significant departure from the normal levels of precipitation, and
- **Socio-Economic:** When the water deficiency begins to significantly affect the population.

When little or no rain falls, soil can dry out and plants can die. If unusually dry weather persists and water supply problems develop, the period is defined as a drought. Human activity such as over-farming, excessive irrigation, deforestation, and poor erosion controls can exacerbate a drought's effects. It can take weeks or months before the effects of below average precipitation on bodies of water are observed. Depending upon the region, droughts can happen more quickly, be noticed sooner, or have their effects naturally mitigated. The more humid and wet an area is, the faster the affects will be realized. A naturally dry region, which typically relies more on subsurface water will take more time to actualize its effects.

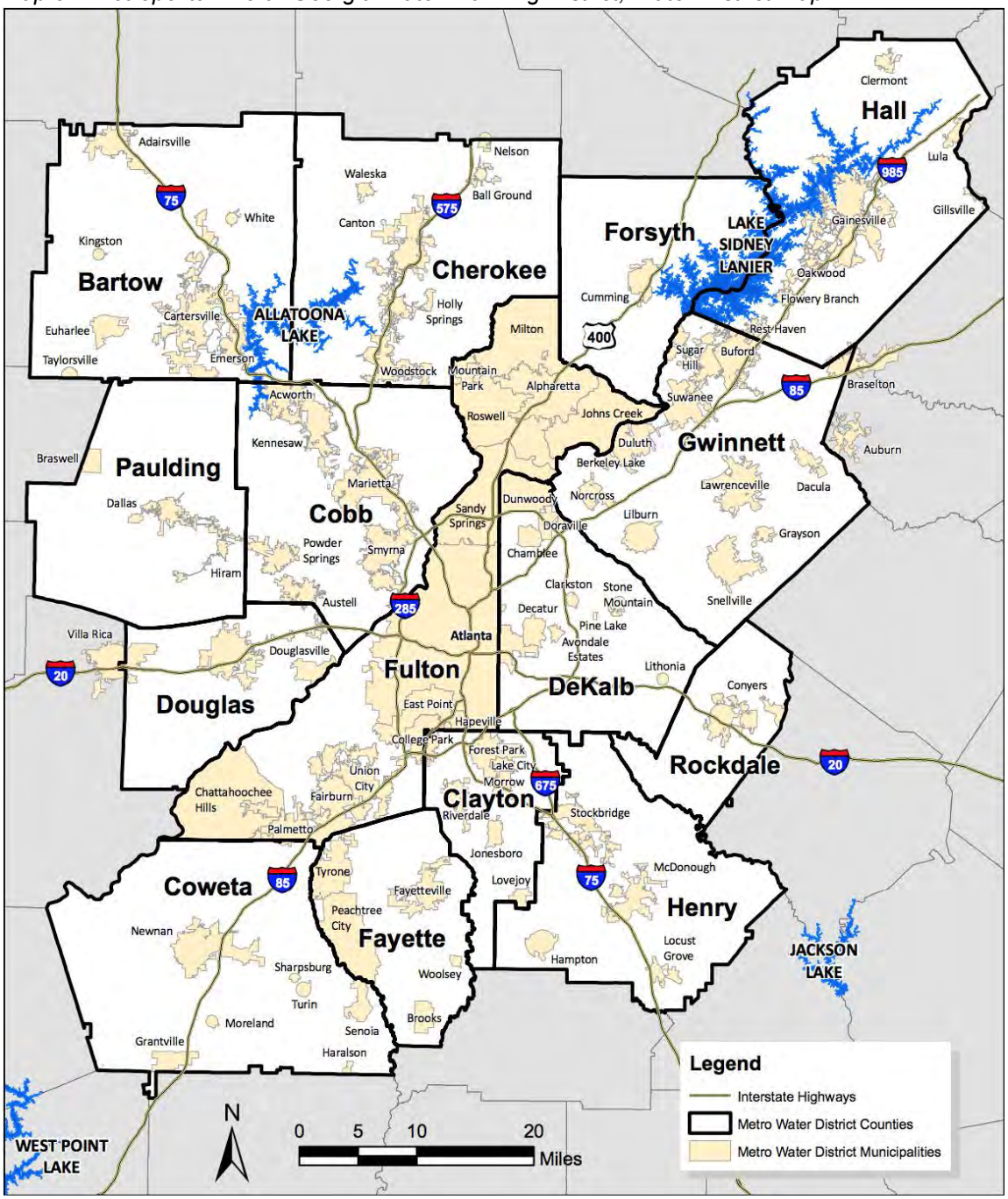
FEMA Region IV notes that drought is a cascading hazard; when it occurs, it can make other hazards more dangerous. Dry fuel increases wildfire risk. Expansive soils can shrink during a drought, causing damage to foundations. Loss of ground water can increase sinkholes. Trees are more vulnerable to windstorms as hard, dry soils may not soak up rain, leading to an increased chance of flooding (FEMA Region IV Mitigation Planning Job Aid, Drought Risk Assessment).

4.6.2 – Location & Extent

All of DeKalb County is susceptible to droughts. Droughts in Georgia can affect municipal and industrial water supplies, agriculture, stream water quality, recreation at major reservoirs, hydropower generation, navigation, and forest resources (https://pubs.usgs.gov/of/2000/0380/pdf/ofr00-380.pdf).

The DeKalb County Department of Watershed Management protects the public health, safety, and welfare through the provision of safe drinking water and quality wastewater treatment. DeKalb County is part of the Metropolitan North Georgia Water Planning District. The Metropolitan North Georgia Water Planning District implements a comprehensive regional water management plan. It is staffed by the Atlanta Regional Commission (ARC) and includes 15 counties and 95 cities. It is the only major metropolitan area in the country with more than 100 jurisdictions implementing a long-term comprehensive water management program that is required and enforced.

Map 51: Metropolitan North Georgia Water Planning District, Water District Map



*Map Source: Metropolitan North Georgia Water Planning District (*https://northgeorgiawater.org/what-is-the-metro-water-district/*)*

Map 52: Water Withdrawal, Metro Atlanta, GA Area



Map Source: https://northgeorgiawater.org/

The U.S. Drought Monitor provides a summary of drought conditions across the U.S. and Puerto Rico. The map is updated weekly by combining a variety of data-based drought indices and indicators, along with local expert input, into a single composite drought indicator.

The Palmer Drought Index (PDI), devised in 1965, was the first drought indicator to assess moisture status comprehensively. It uses temperature and precipitation data to circulate water supply and demand; incorporates soil moisture; and is considered most effective for unirrigated cropland. It primarily reflects long-term drought and has been used extensively to initiate drought relief.

Table 42: Palmer Drought Severity Index

Palmer Drought Severity Index	
Category	**Index**
Extremely Wet	4.0 or more
Very Wet	3.0 to 3.99
Moderately Wet	2.0 to 2.99
Slightly Wet	1.0 to 1.99
Incipient Wet Spell	0.5 to 0.99
Near Normal	0.49 to -0.49
Incipient Dry Spell	-0.5 to -0.99
Mild Drought	-1.0 to -1.99
Moderate Drought	-2.0 to -2.99
Severe Drought	-3.0 to -3.99
Extreme Drought	-4.0 or less

The Standardized Precipitation Index (SPI) is an index to characterize meteorological drought on a range of timescales, ranging from 1 to 72 months. The SPI is the number of standard deviations that observed cumulative precipitation deviates from the climatological average. NOAA's National Centers for Environmental Information produce the 9-month SPI values below monthly, going back to 1895.

Table 43: Standard Precipitation Index

Standard Precipitation Index	
Category	**Index**
Extremely Wet	2.0+
Very Wet	1.5 to 1.99
Moderately Wet	1.0 to 1.49
Near Normal	-.99 to .99
Moderately Dry	-1.0 to -1.49
Severely Dry	-1.5 to -1.99
Extremely Dry	-2 and less

Drought is a persistent problem across the nation, as evidenced by its widespread presence in 2018. Early in the year (February 2018), the U.S. Drought Monitor reported that 38.4% of the continental U.S. was in drought. That was the highest percentage since the 40% recorded in May 2014. Additionally, consider there is technically no longer a “fire season” for the State of California, as it has become a tinderbox for drought-related wildfires year-round. Other states across the country are, unfortunately, following suit.

4.6.3 – Previous Occurrences

Drought events and periods are not as clearly defined as other hazard events. For this plan, the planning team used data from the National Centers for Environmental Information (NCEI), U.S. Drought Atlas, and National Drought Center – Drought Mitigation Report. The planning team used the Standard Precipitation Index (SPI) because it uses precipitation only and can characterize drought or abnormal wetness at different time scales which correspond with the time availability of different water resources. Drought events reaching at least SPI Drought Classification -1.0 (Moderately Dry) are recorded in this plan. The drought period ends with the index returns to zero. For example, if the SPI reached “-1.0” on January 1, 2020, a drought period would begin. The drought period would end when the SPI reach “0”. The planning team analyzed U.S.

Drought Atlas data from the Atlanta Hartsfield International Airport (latitude 33.63, longitude -84.442). This is the nearest reporting station to DeKalb County.

Between 1950 and 2020, drought events have impacted DeKalb County and the incorporated communities within its boundaries for 1017 of the 3640 weeks. Between January 1, 2016, and December 31, 2020, droughts have impacted DeKalb County and the incorporated communities within its boundaries for 40 of the 260 weeks.

Table 44: Drought Weeks (1950-2020)

Drought Weeks (1950-2020)			
Decade	**Moderately Dry Weeks**	**Severely Dry Weeks**	**Extremely Dry Weeks**
1950s	68	51	60
1960s	45	54	24
1970s	69	19	55
1980s	54	40	65
1990s	73	25	28
2000s	51	43	72
2010s	61	25	35
2020	0	0	0
Total	**421**	**257**	**339**

Data Source: Drought Risk Atlas (https://droughtatlas.unl.edu/Data/Climate.aspx)

Table 45: Drought Weeks (2016-2020)

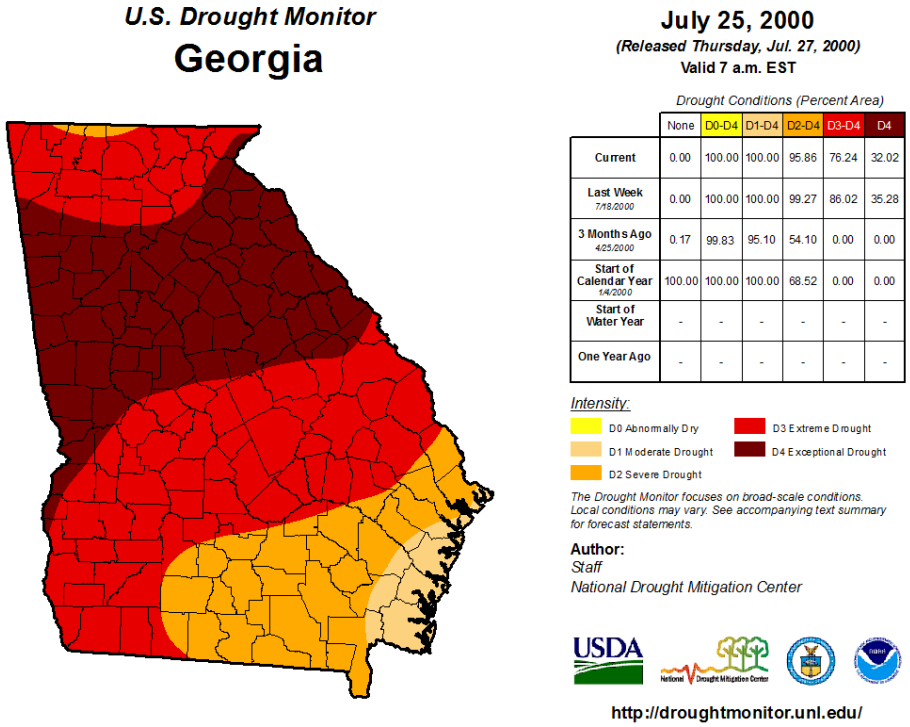
Drought Weeks (2016-2020)			
Year	**Moderately Dry Weeks**	**Severely Dry Weeks**	**Extremely Dry Weeks**
2016	2	4	24
2017	8	2	0
2018	0	0	0
2019	0	0	0
2020	0	0	0
Total	**10**	**4**	**24**

Data Source: NOAA/NCEI Storm Events Database

April 2000 – August 2000, Drought: The drought began in April 2000, as the area was experiencing a rainfall deficit of between 12 to 15 inches. At the height of the drought, the Center for Climate Prediction

and the U.S. Department of Agriculture classified most of central Georgia in an exceptional drought. Water supplies continued to dwindle in most areas. Stream flows were at or below the lowest 10th percentile of the historical distribution for June at 90 percent of Georgia's observing sites. Twenty-nine percent of Georgia's cotton crop was rated in a poor to very poor condition. University of Georgia cumulative crop damage estimates for the whole state were placed at $689 million dollars, plus another $50 million dollars in increased irrigation costs, for a total estimate of $739 million in losses statewide. Water shortages prompted the Georgia Department of Natural Resources to institute statewide restrictions on outdoor water use.

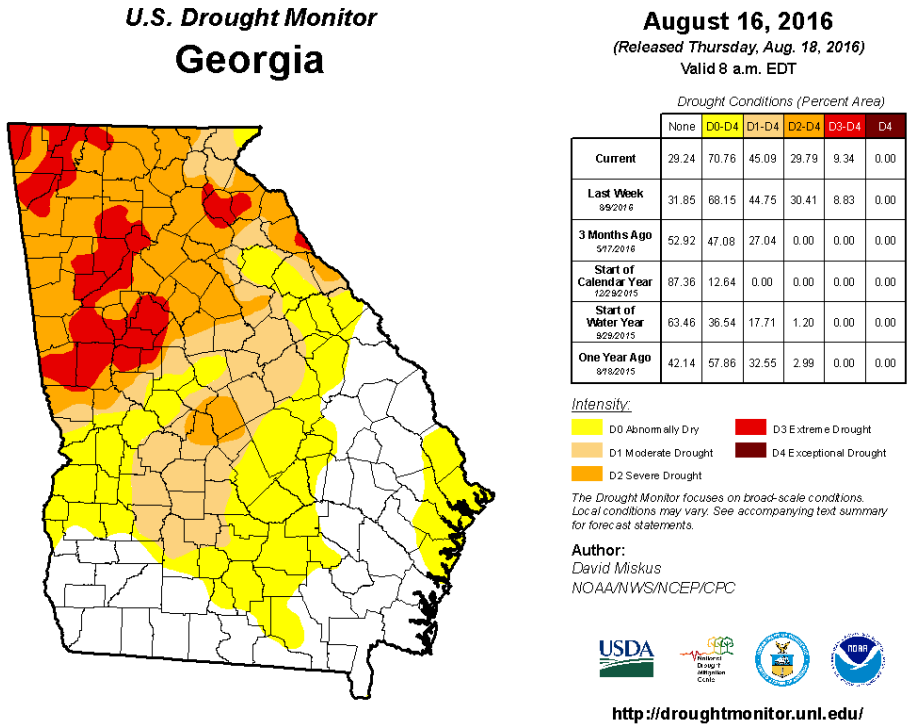
Map 53: U.S. Drought Monitor, Georgia, July 25, 2000



Source: U.S. Drought Monitor (https://droughtmonitor.unl.edu/Maps/MapArchive.aspx)

March 2016 – August 2016, Drought: The drought began in March and continued through the summer months of 2016. The drought severely affected corn and peanut crops across the area. Area farmers also suffered losses on the sale of hay. Pastureland across the region was so dry that farmers had to let cattle graze on land normally used to grow hay, and in some cases, had to feed their cattle hay. The DeKalb County Department of Watershed Management implemented water restrictions. The Georgia Forestry Commission also issued advisories for outdoor burning due to the elevated fire risk.

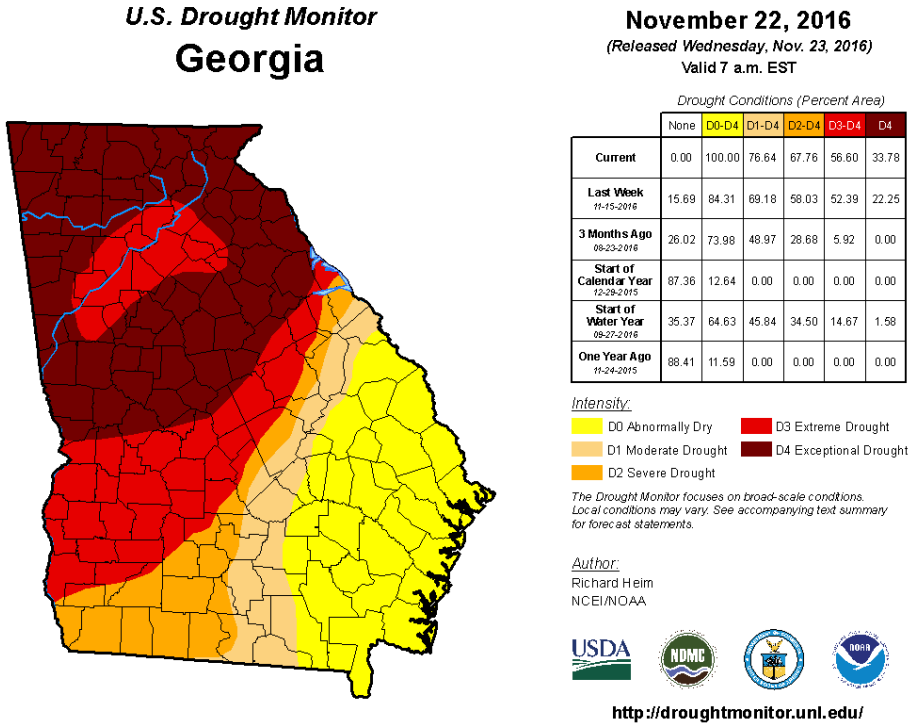
Map 54: U.S. Drought Monitor, Georgia, August 16, 2016



Source: U.S. Drought Monitor (https://droughtmonitor.unl.edu/Maps/MapArchive.aspx)

October 2016 – November 2016, Drought: After a brief break, the second drought of 2016 began on October 14th. Soil, streams and vegetation did not have enough time to recover from the previous 22 week-long drought, which made the situation worse. On November 17th, Georgia Governor Nathan Deal raised 52 counties from Level I to Level II Drought Response. This designation prohibited many outdoor water uses including washing hard surfaces such as streets and sidewalks, water for ornamental purposes, the use of fire hydrants except for firefighting and public safety, non-commercial washing of vehicles, non-commercial pressure washing, and fundraising car washes. (https://www.walb.com/story/33736857/governor-raises-drought-designations-prompting-restrictions/)

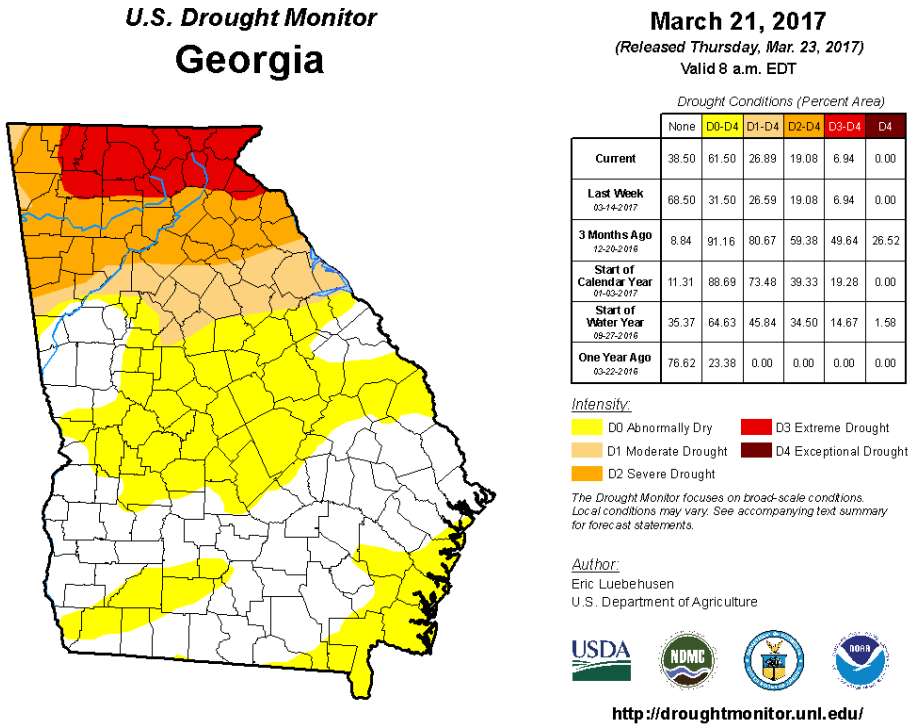
Map 55: U.S. Drought Monitor, Georgia, November 22, 2016



Source: U.S. Drought Monitor (https://droughtmonitor.unl.edu/Maps/MapArchive.aspx)

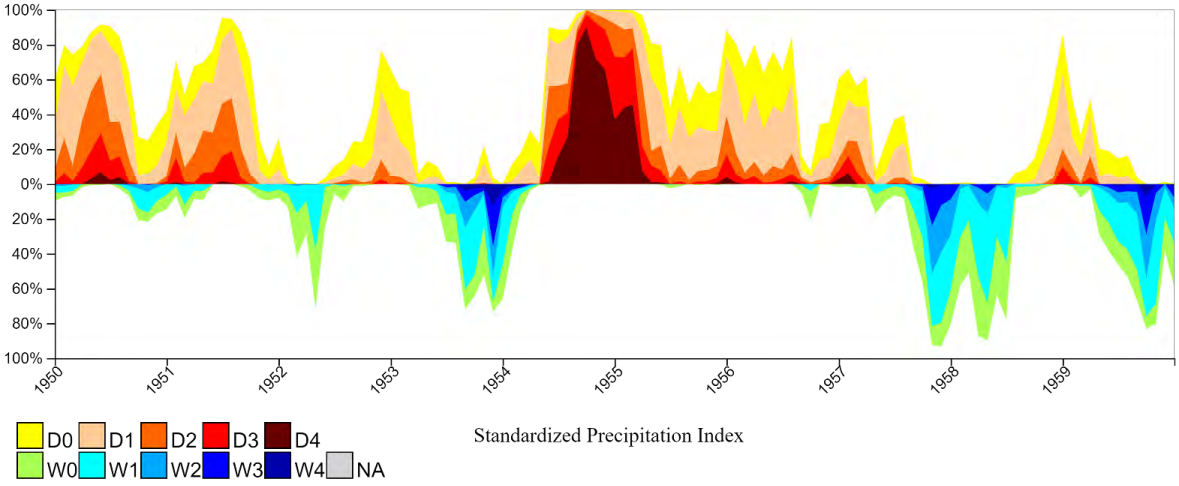
March 2017 – April 2017, Drought: Long-term drought conditions, experience since early 2016, were finally improving in early 2017 due to an active weather pattern. However, a short-term drought occurred in early spring. The active weather patter quickly ended the short-term drought, and ultimately, the long-term drought.

Map 56: U.S. Drought Monitor, Georgia, March 21, 2017



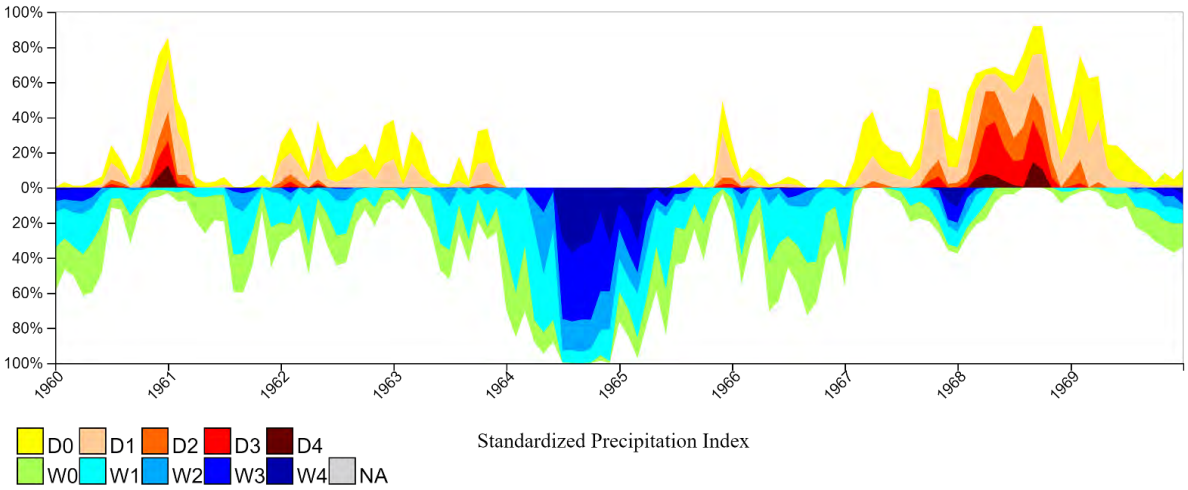
Source: U.S. Drought Monitor (https://droughtmonitor.unl.edu/Maps/MapArchive.aspx)

Illustration 5: Georgia Drought Graph – 1950s



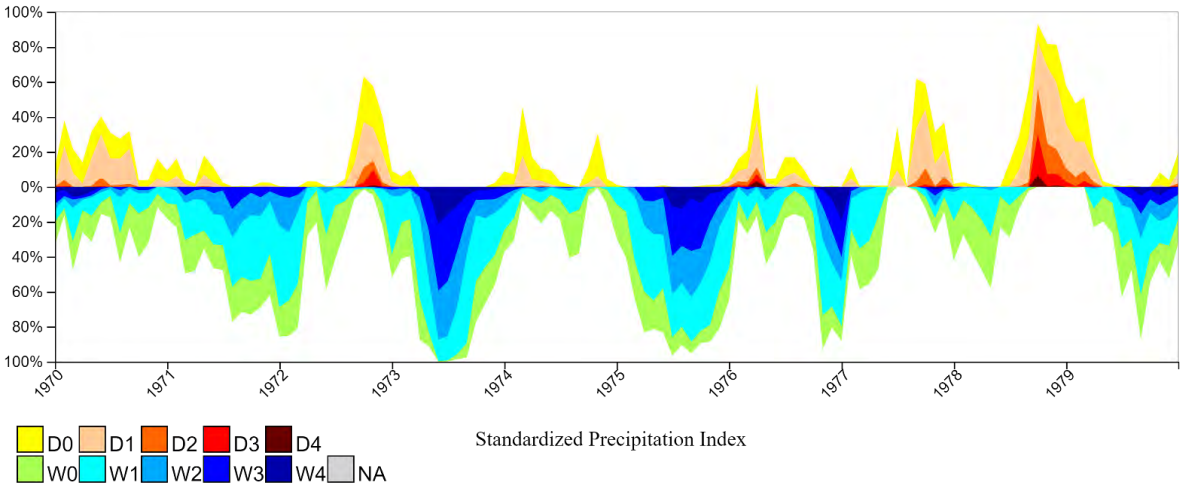
Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 6: Georgia Drought Graph – 1960s



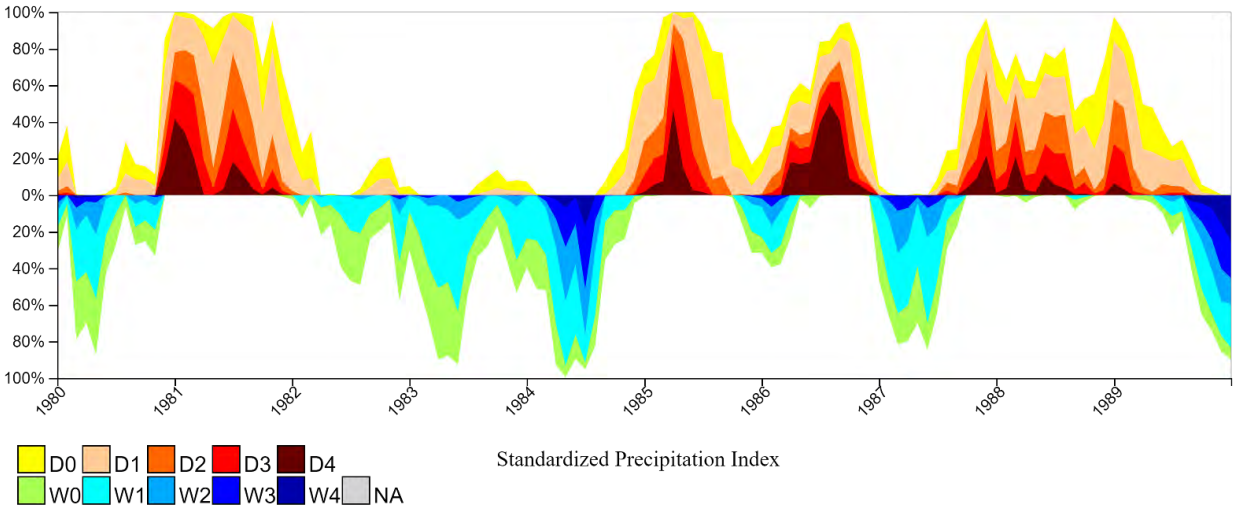
Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 7: Georgia Drought Graph – 1970s



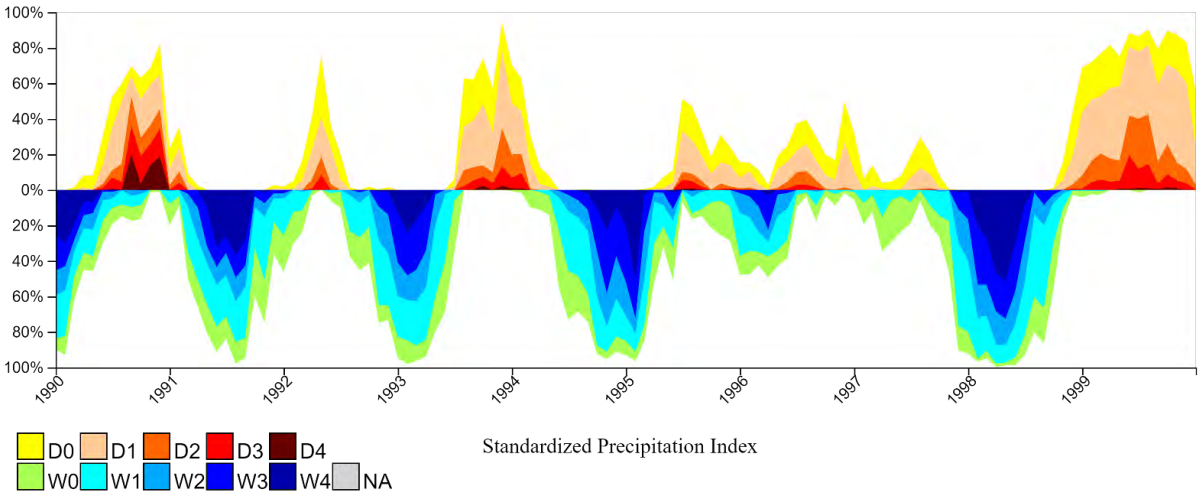
Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 8: Georgia Drought Graph – 1980s



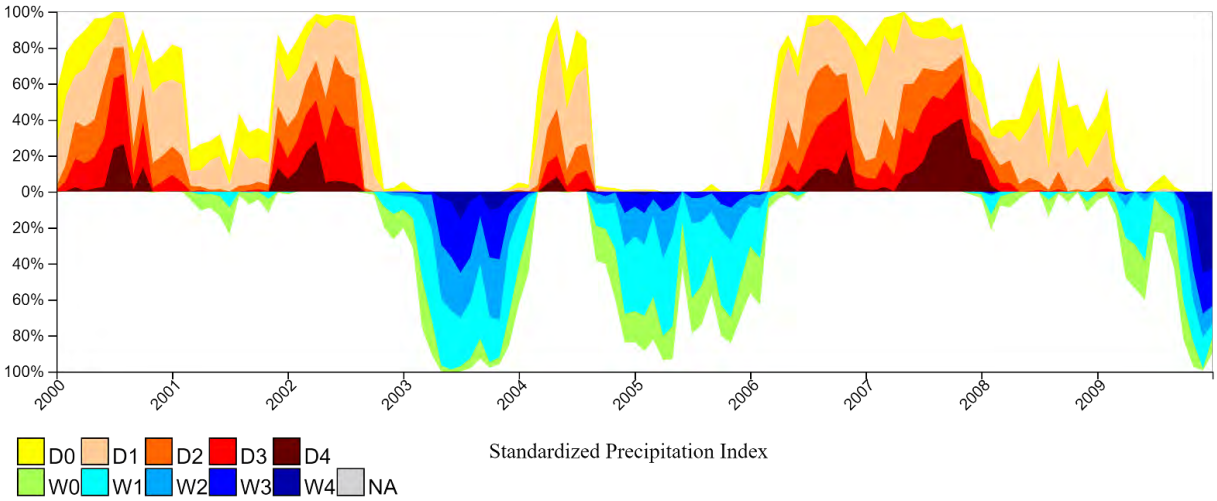
Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 9: Georgia Drought Graph – 1990s



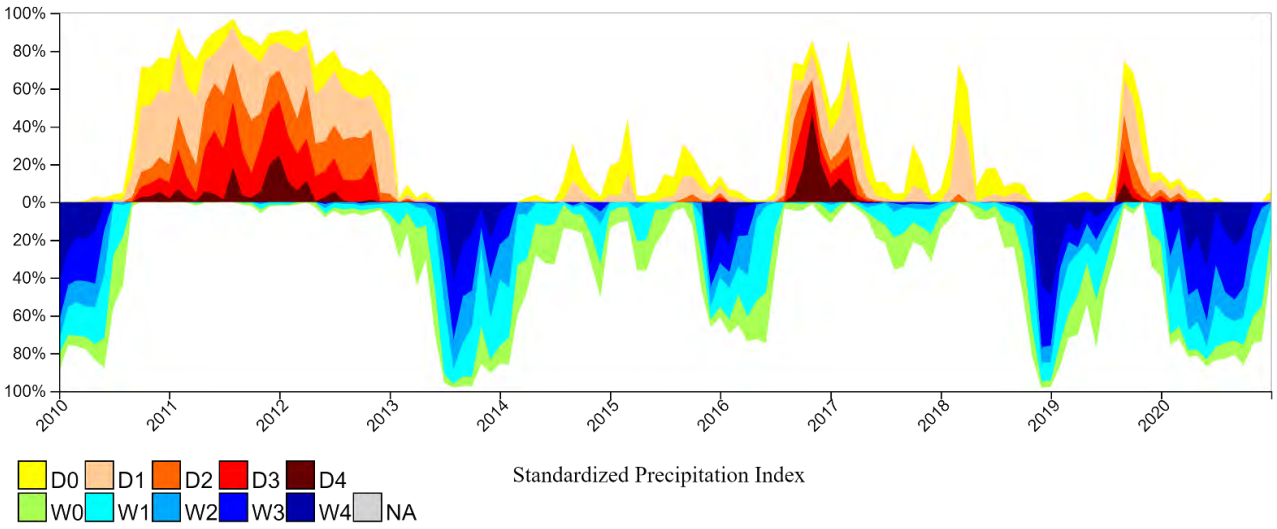
Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 10: Georgia Drought Graph – 2000s



Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

Illustration 11: Georgia Drought Graph – 2010s



Source: NOAA NIDIS (https://www.drought.gov/states/georgia/county/Dekalb)

4.6.3A – Probability of Future Events

Table 47: Probability of Future Events, Drought

Probability of Future Events, Drought			
Decade	**Moderately Dry Weeks**	**Severely Dry Weeks**	**Extremely Dry Weeks**
1950s	68	51	60
1960s	45	54	24
1970s	69	19	55
1980s	54	40	65
1990s	73	25	28
2000s	51	43	72
2010s	61	25	35
2020	0	0	0
Total	**421**	**257**	**339**
Weeks	**3640**		
Probability Each Week	**12%**	**7%**	**9%**
Total Drought Weeks	**1017**		
Probability of a Drought Each Week (Total Drought Weeks/Total Weeks)	**28%**		

Data Source: NOAA/NCEI Storm Events Database

Between 1950 – 2020, moderately dry weeks have occurred 421 of the 3640 weeks. Severely dry weeks have occurred 257 of the 3640 weeks. Extremely dry weeks have occurred 339 of the 3640 weeks. Wet and dry periods often occur over an extended period, based on the prevailing weather pattern. Based on this data, it is **likely** a drought of some magnitude will occur in DeKalb County during the next five-years.

4.6.4 – Vulnerability of Community Assets

Vulnerability of People

Severe drought can pose a significant risk to public health if water sources become scarce, or worse, contaminated. This is especially true for those who get their drinking water from private wells. Per the Centers for Disease Control (CDC), viruses, such as E. coli and salmonella, as well as protozoa and bacteria, can pollute both groundwater and surface water when rainfall decreases. Additionally, acute respiratory and gastrointestinal illnesses are more easily spread from person-to-person when hand washing is compromised by a perceived or real lack of available water.

Vulnerability of the Economy

DeKalb County and its participating jurisdictions have significant agricultural areas which are vulnerable to drought. According to the 2017 USDA Census of Agriculture DeKalb County contained 34 farms, covering 468 acres of land. Total commodity sales equal $547,000 per year. This includes at total of $388,000 in crop sales and $158,000 in animal product sales. (https://www.nass.usda.gov/Quick_Stats/CDQT/chapter/2/table/1/state/GA/county/089/year/2017).

Vulnerability of the Built Environment

Drought typically does not have a direct impact on critical facilities or infrastructure. However, possible losses/impacts to them can include loss of critical functions due to low water supplies. Severe droughts can negatively affect drinking water supplies. Should a public water system be affected, the losses could total into the millions if water must be purchased and shipped from other locations.

Vulnerability of Natural Environment

Droughts can increase an area's vulnerability to wildfire due to dry vegetation. Dry, hot, and windy weather combined with dry vegetation and a spark, whether through human intent, accident, or lightning, can trigger a blaze. Such fires, as experienced in Georgia's Okefenokee National Wildlife Refuge in April 2017, can scorch hundreds of thousands of acres of land.

Droughts also decrease streamflow and groundwater supplies. During a drought period in November 2016, a United States Geological Survey (USGS) Groundwater Watch station, located at Latitude 33°55'17", Longitude 84°16'40" in DeKalb County recorded groundwater depth at 8.94 feet below the surface, which was the lowest since the station became operational in 1980. This type of groundwater depletion can impact water supplies and agricultural production.

Because the population of DeKalb County continues to grow and development projects are underway, people and facilities within the planning area are increasingly vulnerable to the short- and long-term effects of drought. Water conservation is a major need during drought events.

The DeKalb County Department of Watershed Management, Metropolitan North Georgia Water Planning District, and Georgia Environmental Protection Division encourages water conservation and water-saving habits within the planning area. Residents are encouraged to take steps to conserve water in their homes and places of business. Additionally, they are reminded to abide by the State of Georgia's permanent "Year-Round Outdoor Water Restrictions" which limit outdoor watering to before 10:00 AM and after 4:00 PM in order to avoid the hottest part of the day when more evaporation occurs. Both the DeKalb County Department of Watershed Management and the Metropolitan North Georgia Water Planning District

encourages the community to conserve water during drought events and provides this information through its website (https://www.dekalbcountyga.gov/watershed-management/dekalb-county-drought-restrictions) and public outreach events within the communities they serve.

4.6.5 – Risk Analysis

DeKalb County's natural environment is most at risk to drought. Water resources are depleted by droughts. Wildfire risk also increases as vegetation becomes dry. These risks naturally have trickle-down effects on the people, built environment, and economy of DeKalb County. Low water supply creates water restrictions, which affect people. Droughts also can cause the water supply to be contaminated by biological agents. The operations of critical facilities, such as hospitals, may be affected by low or contaminated water supply. Farmers, who depend on rainfall for their agricultural production, are often most at risk of drought-related impacts.

FEMA's National Risk Index (NRI) estimates that DeKalb County and the jurisdictions within its boundaries have $518,283 worth of agriculture are exposed to drought hazards impacts each year. The NRI projects annual losses of $21,144 worth of agriculture to drought hazard impacts each year.

A long period of extreme or critical drought conditions, such as the 2016 drought, will expose farmers to lost revenue, estimated to be $547,000 in the 2017 USDA Agricultural Census. It will cause the need for water restrictions, such as those placed by local and state entities in response to the 2016 drought. It will expose the land to wildfire dangers, such as occurred during the Okefenokee National Wildlife Refuge in April 2017.

Table 48: Risk Analysis of Community Lifeline Systems to Drought, DeKalb County

Risk Analysis of Community Lifeline Systems to Drought, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**No Risk.**
	Fire Services	**High Risk.** Droughts may deplete firefighting water supplies. Droughts may also create extreme wildfire dangers.
	Search and Rescue	**No Risk.**
	Government Services	**No Risk.**
	Community Safety	**No Risk.**
Food, Water, Shelter	Food	**Moderate Risk.** Droughts may affect food production.
	Water	**High Risk.** Droughts may cause water supplies to become contaminated or limited.
	Shelter	**No Risk.**
	Agriculture	**High Risk.** Droughts may limit agricultural production.
Health and Medical	Medical Care	**Low Risk.** Droughts may cause water supplies to be contaminated or limited, affecting hospitals and other medical facilities.

	Patient Movement	**No Risk.**
	Public Health	**Low Risk.** Droughts may cause water supplies to become contaminated, causing a public health emergency.
	Fatality Management	**No Risk.**
	Medical Supply Chain	**No Risk.**
Energy	Power (Grid)	**Low Risk.** Droughts may affect hydro-electrical generation.
	Fuel	**No Risk.**
Communications	Infrastructure	**No Risk.**
	Alerts, Warnings, and Messages	**No Risk.**
	911 and Dispatch	**No Risk.**
	Responder Communications	**No Risk.**
	Finance	**No Risk.**
Transportation	Highway/Roadway	**Low Risk.** Droughts increase the occurrences of sinkholes, which may impact roadways.
	Mass Transit	**No Risk.**
	Railway	**No Risk.**
	Aviation	**No Risk.**
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**Low Risk.** Droughts may cause water supplies to hazardous materials facilities to become limited.
	Hazmat, Pollutants, Contaminants	**No Risk.**

4.6.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
D1	**Drought and Economy** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	Agricultural production generates over a half-million dollars of income for farmers in DeKalb County.	Agricultural production is at a high-risk during drought periods. This risk affects the economy and people of DeKalb County.
D2	**Drought and Natural Environment** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	DeKalb County residents and critical facilities depend upon surface and groundwater reservoirs for the community's water supply.	Rivers, streams, and groundwater reservoirs are at a high-risk during drought periods. This risk affects the people, businesses, and critical facilities of DeKalb County.
D3	**Drought and Natural Environment** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	DeKalb County's natural environment consists of woodland areas. Numerous people live in and around these wooded areas.	Woodlands are at high-risk of wildfire during long-term drought periods. This risk affects people living near the wooded areas.



4.7(WF) – Wildfire

4.7.1 – Hazard Description

The National Weather Service (NWS) defines a wildfire as "any free-burning, uncontainable wildland fire not prescribed for the area which consumes the natural fuels and spreads in response to its environment." Wildfires can occur naturally from a lightning strike; by human accident from a non-fully extinguished campfire; and on rare occasions, by human actions, or arson. The threat of wildfire increases in areas prone to intermittent drought, or that are generally arid and dry. Regardless of how they begin, wildfires can consume large areas including infrastructure, property, and resources.

There are three general types of wildfires—ground, surface, and crown. Ground fires, often referred to as underground or subsurface fires, occur in deep accumulations of organic matter such as humus, peat and similar dead vegetation that are dry enough to burn. These fires move very slowly and become difficult to fully extinguish or suppress. Occasionally, during prolonged drought, ground fires can smolder all winter underground and then emerge at the surface again in the spring. Surface fires burn only surface litter and duff, including leaves and fallen branches, and are the easiest of all fires to extinguish. Crown fires, on the other hand, are the most intense and most difficult to maintain. They burn trees up their entire length, and usually occur where there are strong winds, steep slopes, and a heavy fuel load (e.g., densely wooded forests).

Wildfires are also notorious for spawning secondary hazards long after the original fire is extinguished. Such hazards include flash flooding, debris flows, and landslides. All result from fire consuming the vegetation that provides precipitation interception and infiltration as well as slope stability.

Fire services can mitigate wildfires by regularly engaging in preventative burns and proactive land use measures. Homeowners and business owners can also do their part by taking precautionary efforts, such as following local fire-related ordinances; removing leaves, limbs, and other debris from property; and creating a defensible space around structures. Among those emphasizing the need for such preemptive actions is Firewise USA™, a national recognition program that provides instructional resources to inform people how to adapt to living with the risk of wildfire.

4.7.2 – Location & Extent

According to the 2019 Georgia Hazard Mitigation Strategy, all of Georgia is prone to wildfire due to the presence of wildland fuels associated with wildfires, which include coniferous, deciduous, and mixed forest; shrublands, grasslands and herbaceous, and woody/emergent wetlands.

With more people making their homes in wooded settings near forests and remote mountain sites, the threat of wildfire is steadily on the rise. This is because the demographic change is expanding the size of the area where structures and other human development meet or intermingle with undeveloped wildland, otherwise known as the wildland urban interface (WUI). The U.S. Fire Administration defines the WUI as the zone of transition between unoccupied land and human development. It is the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels (https://www.usfa.fema.gov/wui/what-is-the-wui.html). The WUI creates an environment in which fire can move readily between structure and vegetation fuels, often resulting in massive fires, or conflagrations, that may lead to widespread evacuations.

The WUI is composed of interface and intermix communities. Intermix WUI refers to areas where housing and wildland vegetation intermingle. Interface WUI refers to areas where housing is in the vicinity of a large area of dense wildland vegetation. Georgia has a large percentage of homes in the WUI. According to the USDA, 47.7% of homes in Georgia are in the WUI; 20.3% are in the interface and 27.4% are in the intermix. Also, 47.5% of the population reside in the WUI; 20.1% are in the interface and 20.1% are in the intermix (https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf).

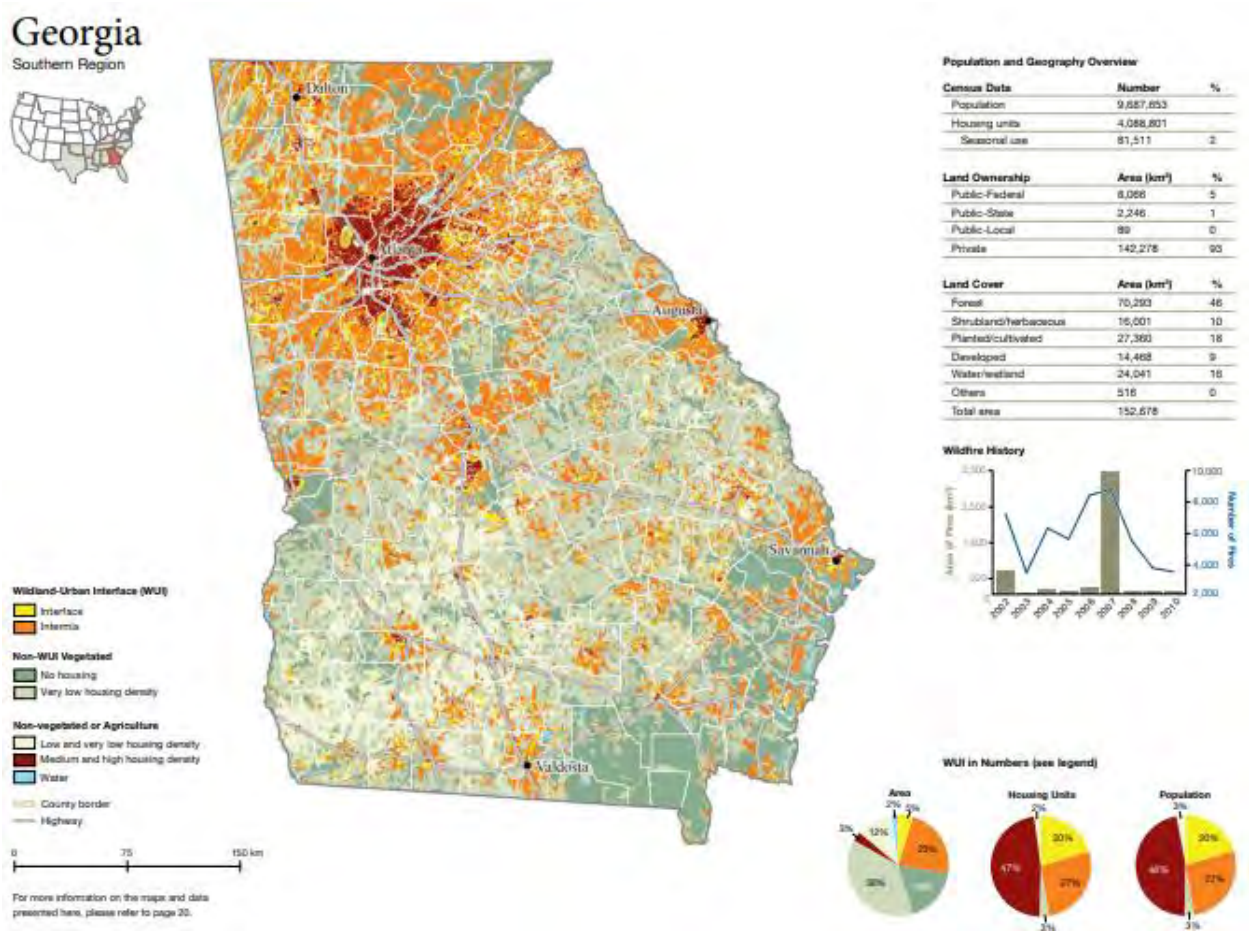
Table 49: Definition of WUI and non-WUI land-use classes

Definition of WUI and non-WUI land-use classes	
WUI	**Definition**
Intermix	Areas with ≥6.18 houses per square km and ≥50% cover of wildland vegetation
Interface	Areas with ≥6.18 houses per square km and ≤50% cover of vegetation located <2.4 km of an area ≥5 square km in size that is ≥75% vegetated
Non-WUI, Vegetated	**Definition**
No housing	Areas with ≥50 percent cover of wildland vegetation and no houses (e.g., protected areas, steep slopes, mountain tops)
Very low housing density	Areas with ≥50 percent cover of wildland vegetation and <6.18 houses per km2 (e.g., dispersed rural housing outside neighborhoods)
Non-Vegetated or Agriculture	**Definition**
Low and very low housing density	Areas with <50 percent cover of wildland vegetation and <49.42 houses per square mile (e.g., agricultural lands and pasturelands)

Medium and high housing density	Areas with <50 percent cover of wildland vegetation and ≥49.42 houses density per square km (e.g., urban and suburban areas, which may have vegetation, but not dense vegetation)

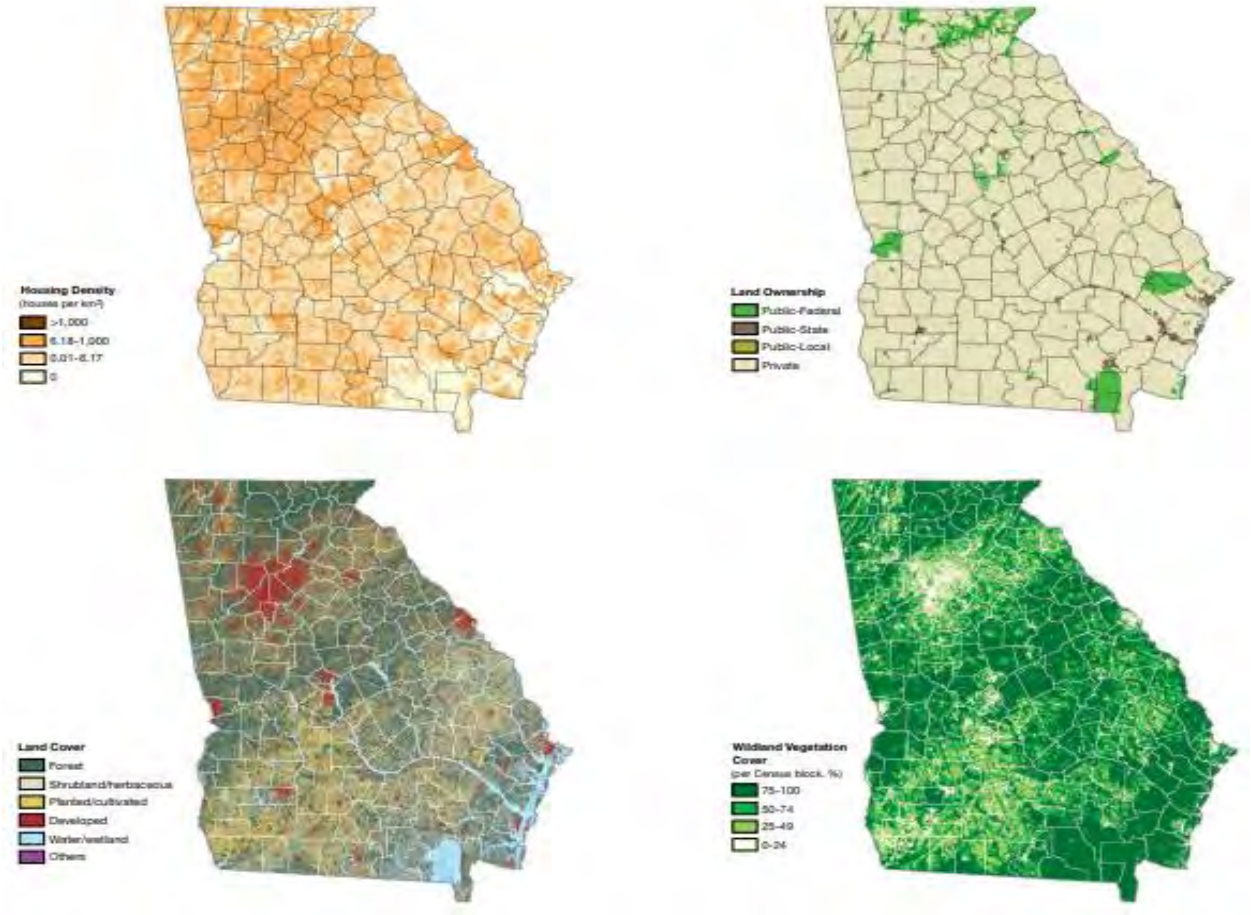
Data Source: USDA, The 2010 Wildland-Urban Interface of the Conterminous United States (https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf)

Map 57: Georgia Wildland Urban Interface Map



Data Source: USDA, The 2010 Wildland-Urban Interface of the Conterminous United States (https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf)

Map 58: Georgia WUI Auxiliary Maps



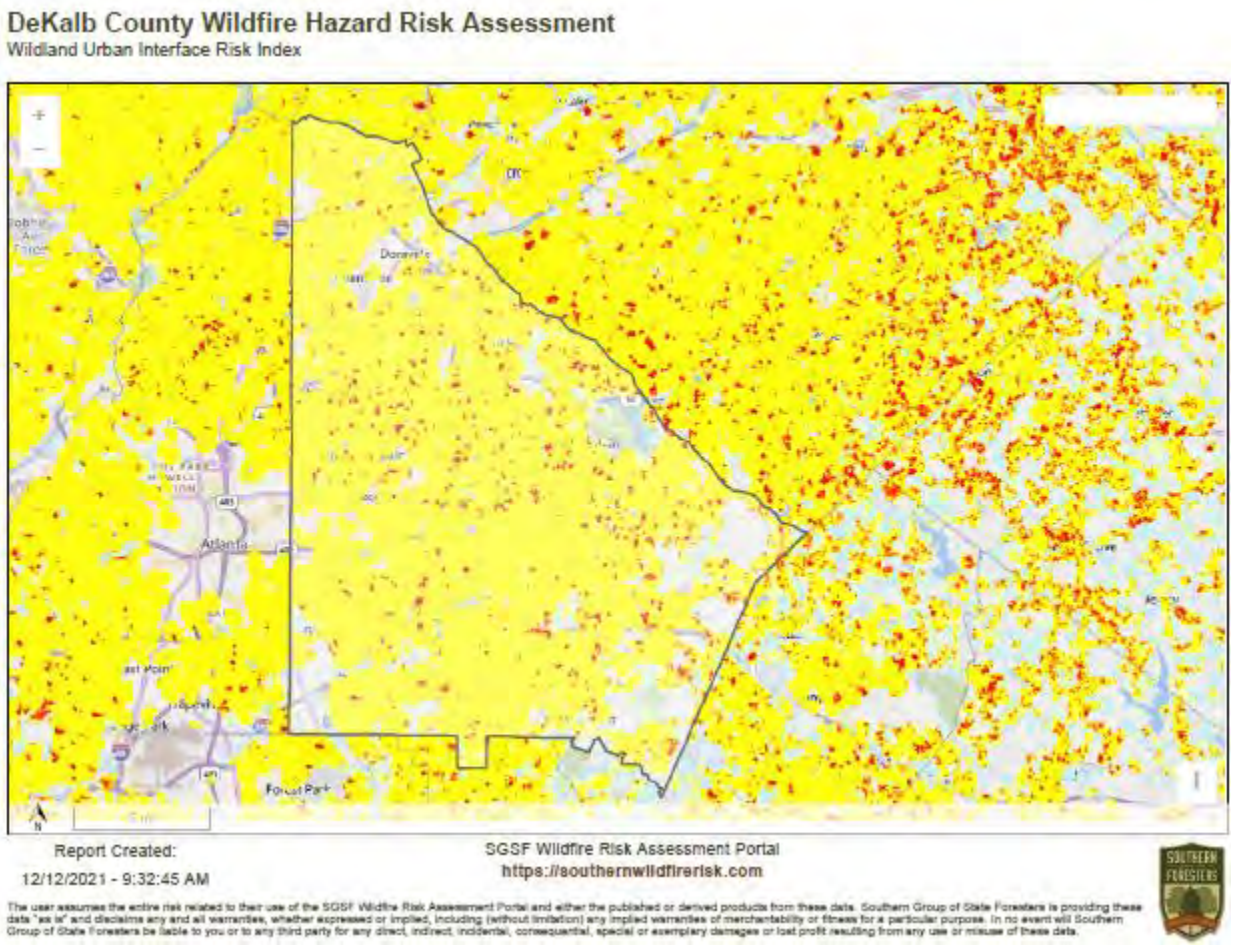
Data Source: USDA, The 2010 Wildland-Urban Interface of the Conterminous United States (https://www.fs.fed.us/nrs/pubs/rmap/rmap_nrs8.pdf)

The WUI Risk Index is a rating of the potential impact of a wildfire on people and their homes. The key input, WUI, reflects housing density (houses per acre) consistent with Federal Register National standards. The location of people living in the WUI, and rural areas is key information for defining potential wildfire impacts to people and homes.

The WUI Risk Index is derived using a Response Function modeling approach. Response functions are a method of assigning a net change in the value to a resource or asset based on susceptibility to fire at different intensity levels, such as flame length. The WUI Risk Index range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. Areas with high housing density and higher flame lengths with be lower on the scale (i.e., -9) while areas with low housing density and high flame lengths will be rated higher (i.e., -1). To calculate the WUI Risk Index, the WUI housing density data was combined with Flame Length data and response functions were applied to represent potential negative impacts for all unique conditions of WUI housing density and flame length. The response functions were defined by a team of experts based. By combining flame length with the WUI housing density data, a community can determine where the greatest potential impact to homes and people is likely to occur.

Flame Length is used as a measure of fire intensity. With the WUI Risk Index the analysis incorporates penetration into urban fringe areas so that outputs better reflect real world conditions for fire spread and impact in urban interface areas. This allows houses in urban areas adjacent to wildland fuels to be incorporated into the WUI risk modeling. (https://southernwildfirerisk.com/)

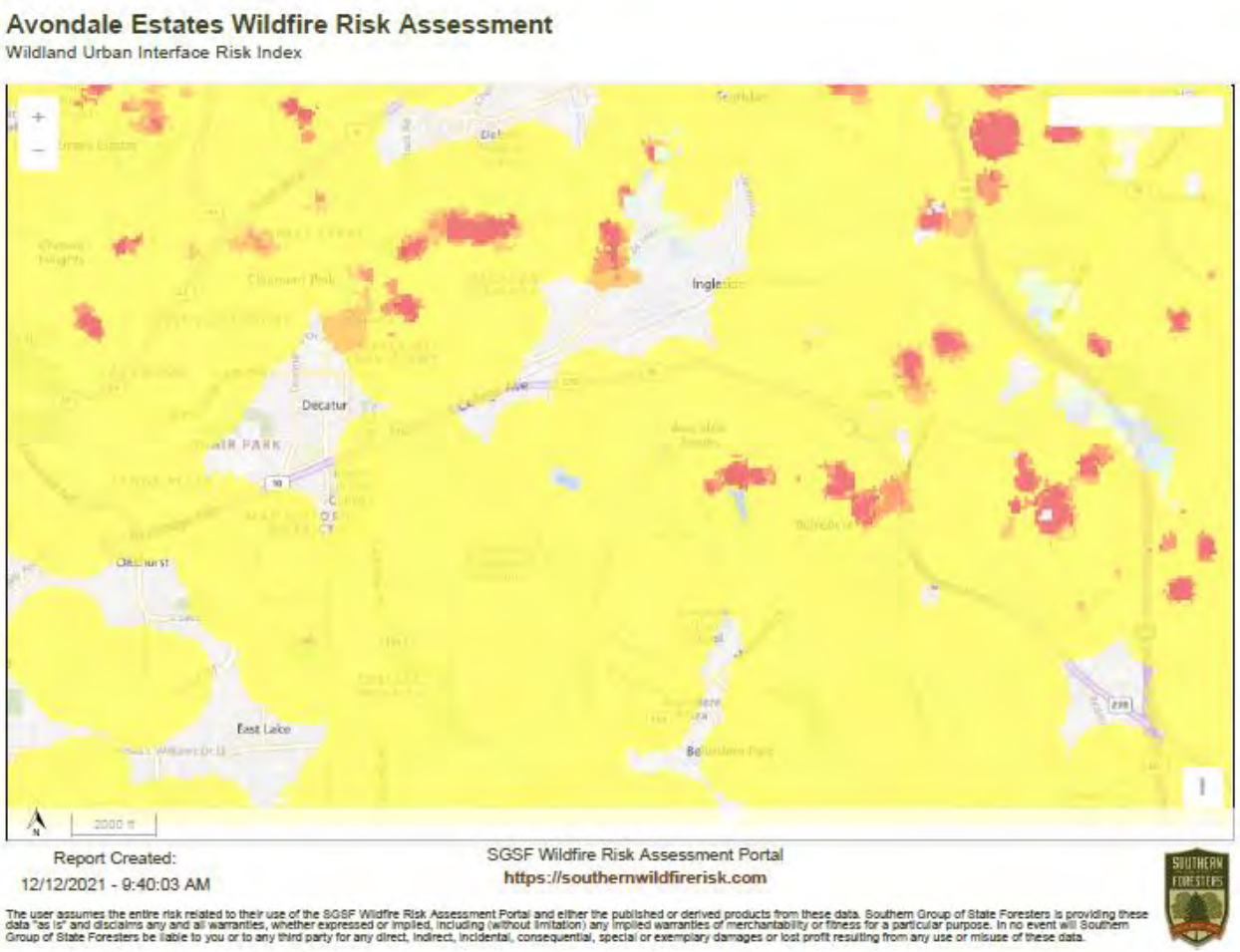
Map 59: DeKalb County WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

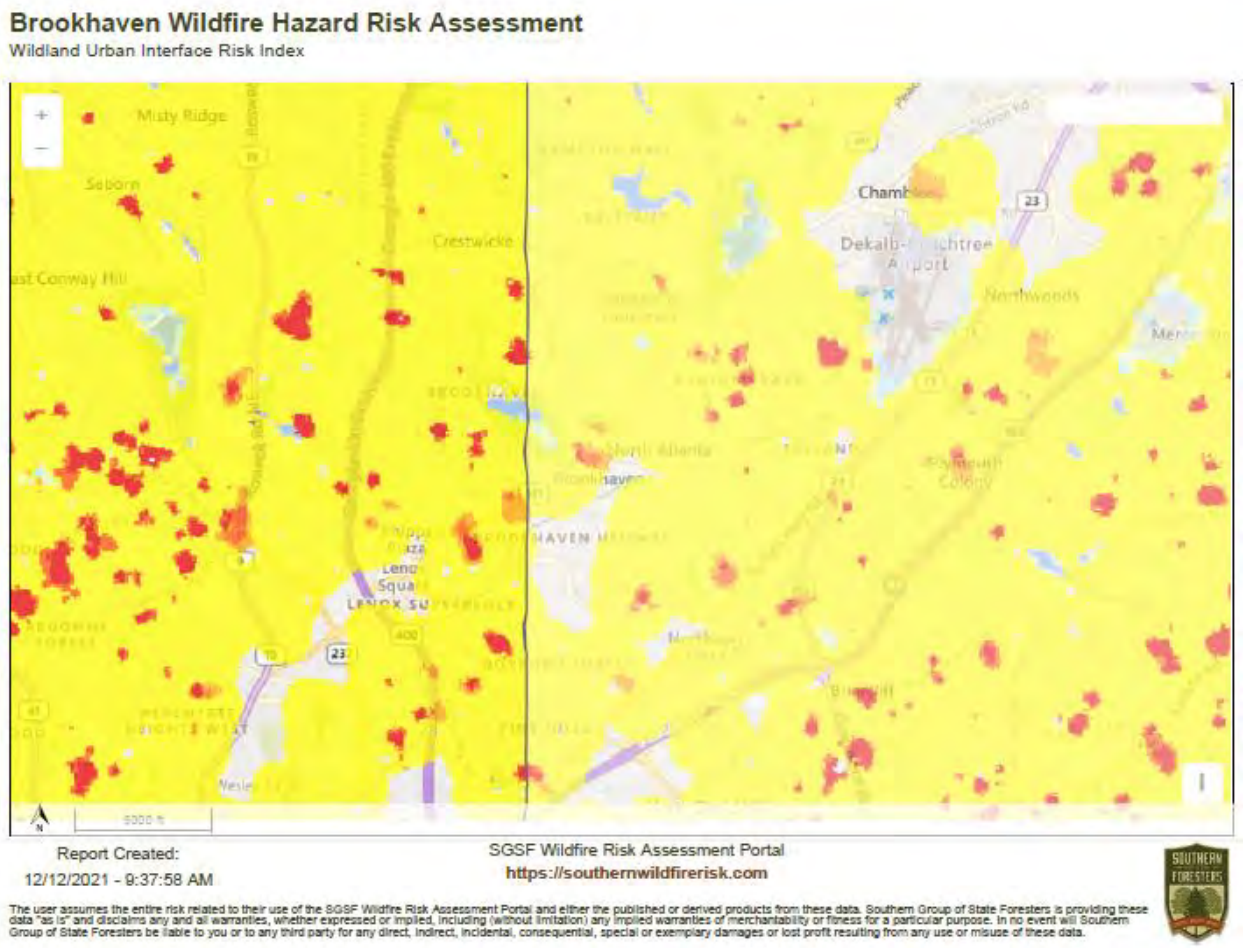
Map 60: City of Avondale Estates WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

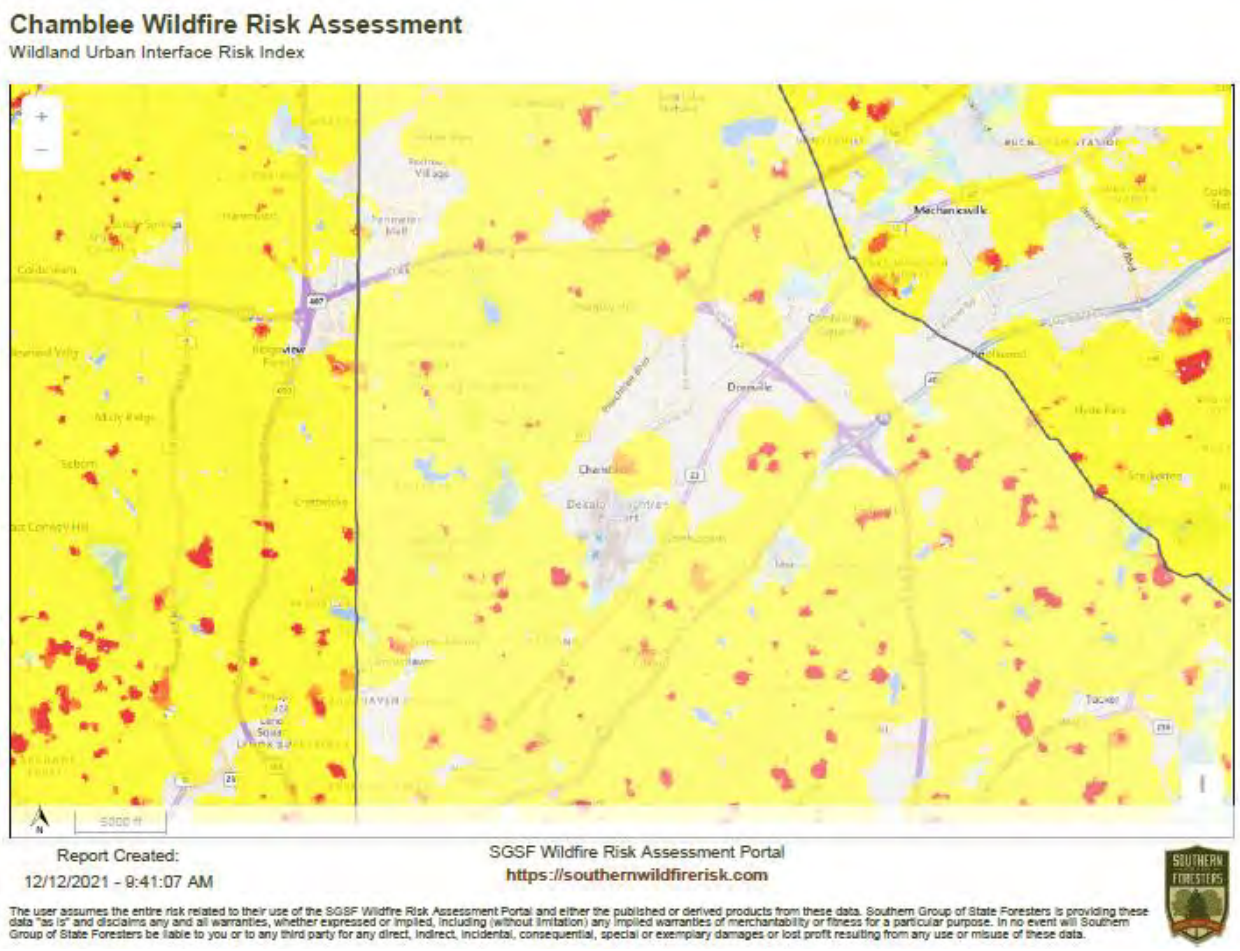
Map 61: City of Brookhaven WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

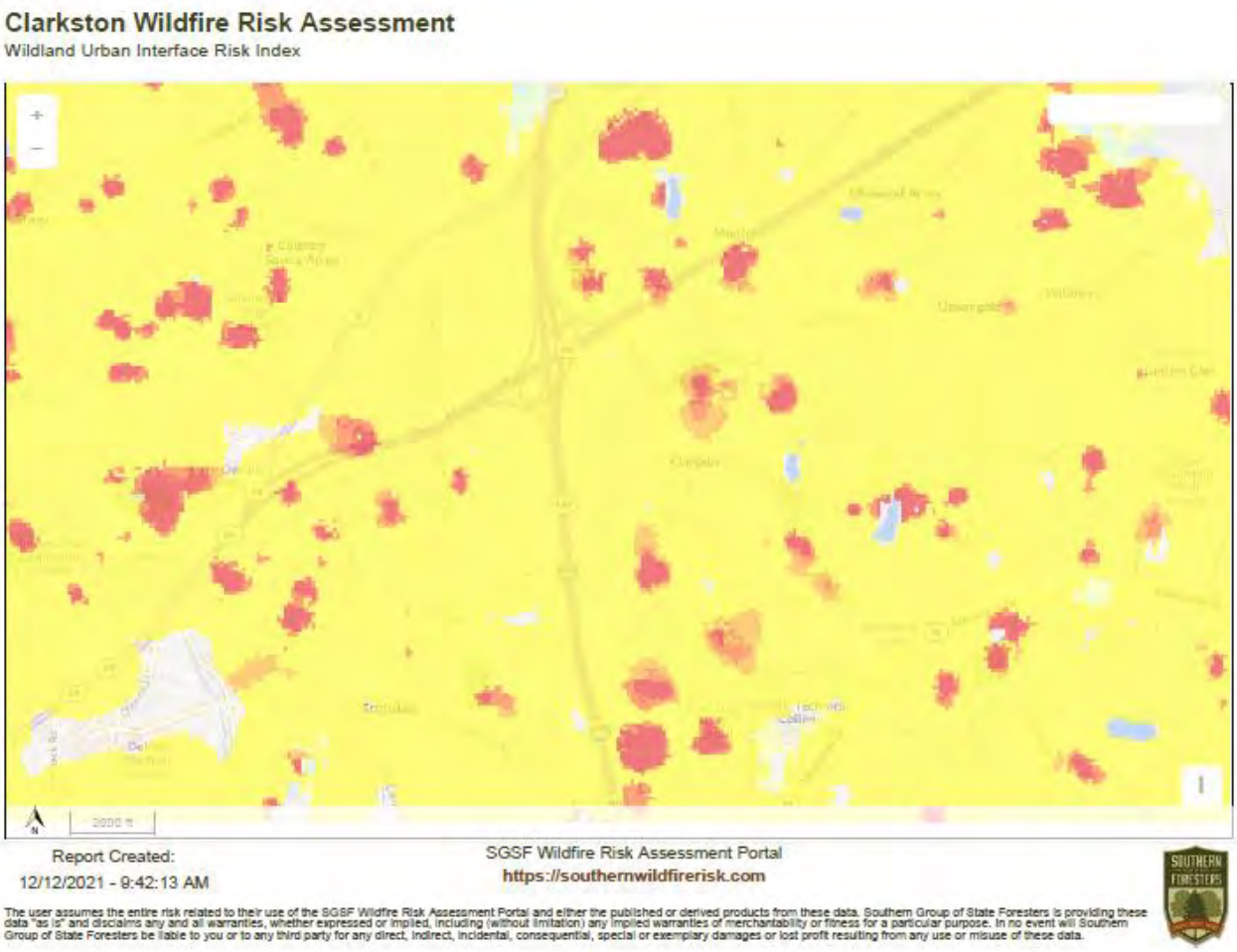
Map 62: City of Chamblee WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -6

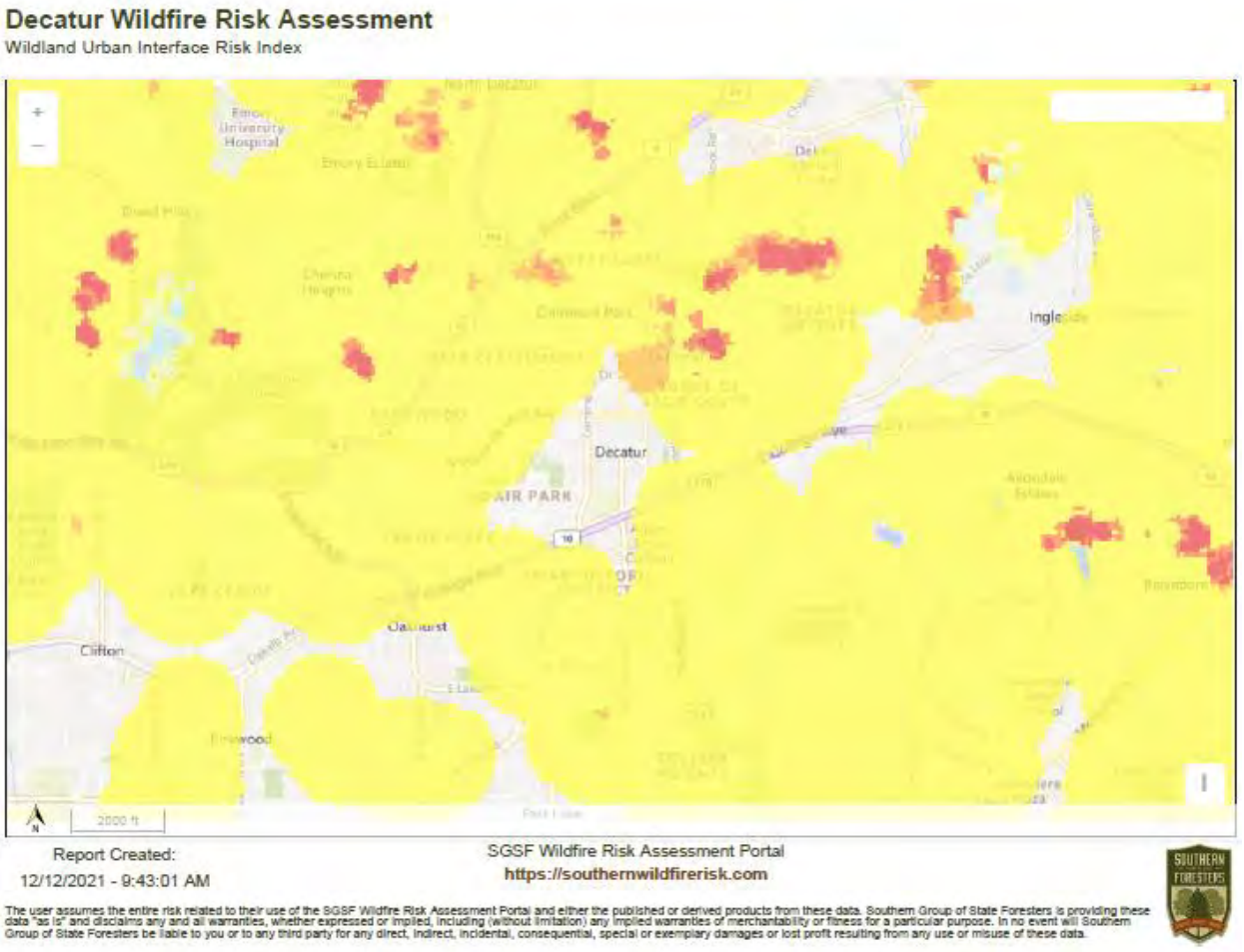
Map 63: City of Clarkston WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

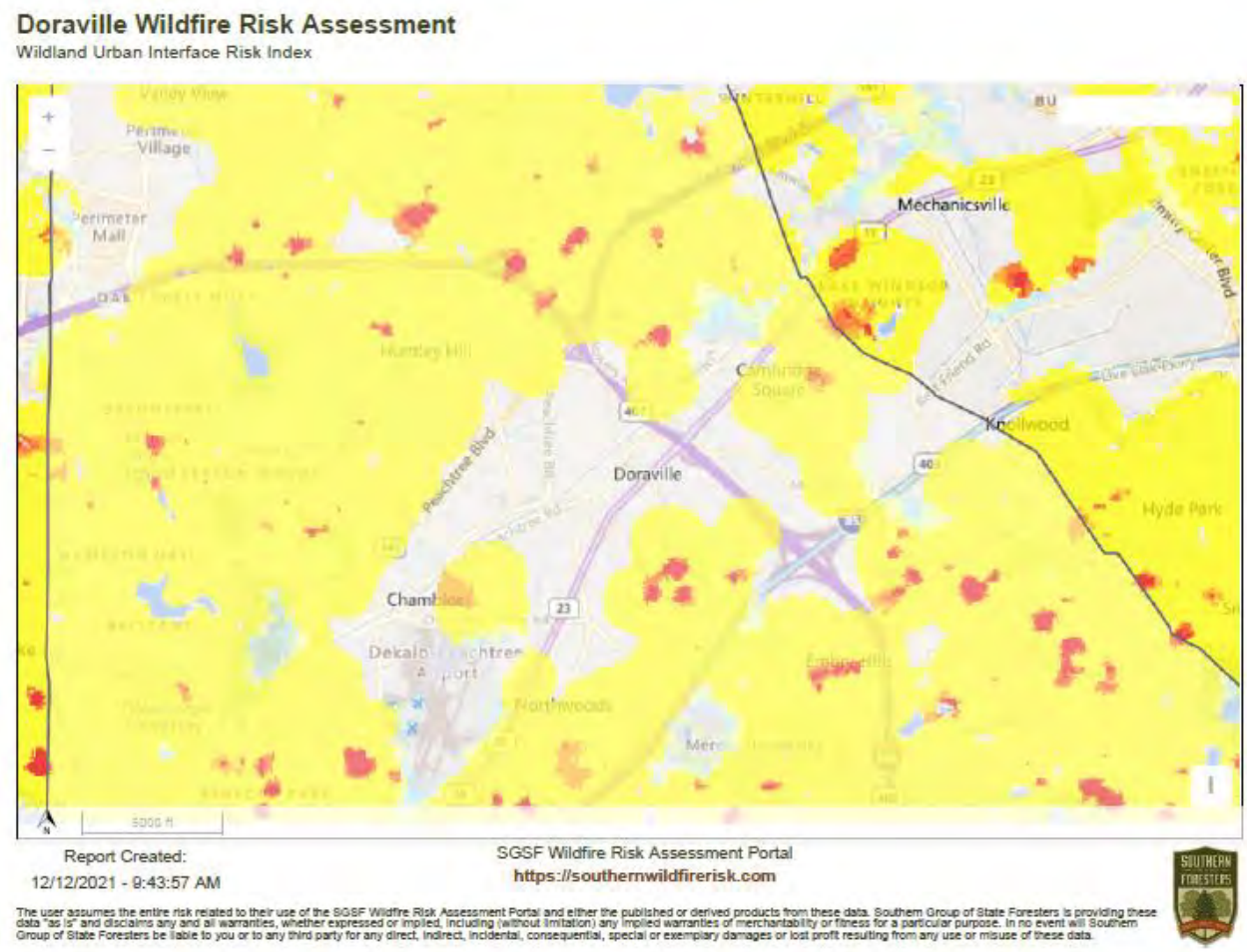
Map 64: City of Decatur WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

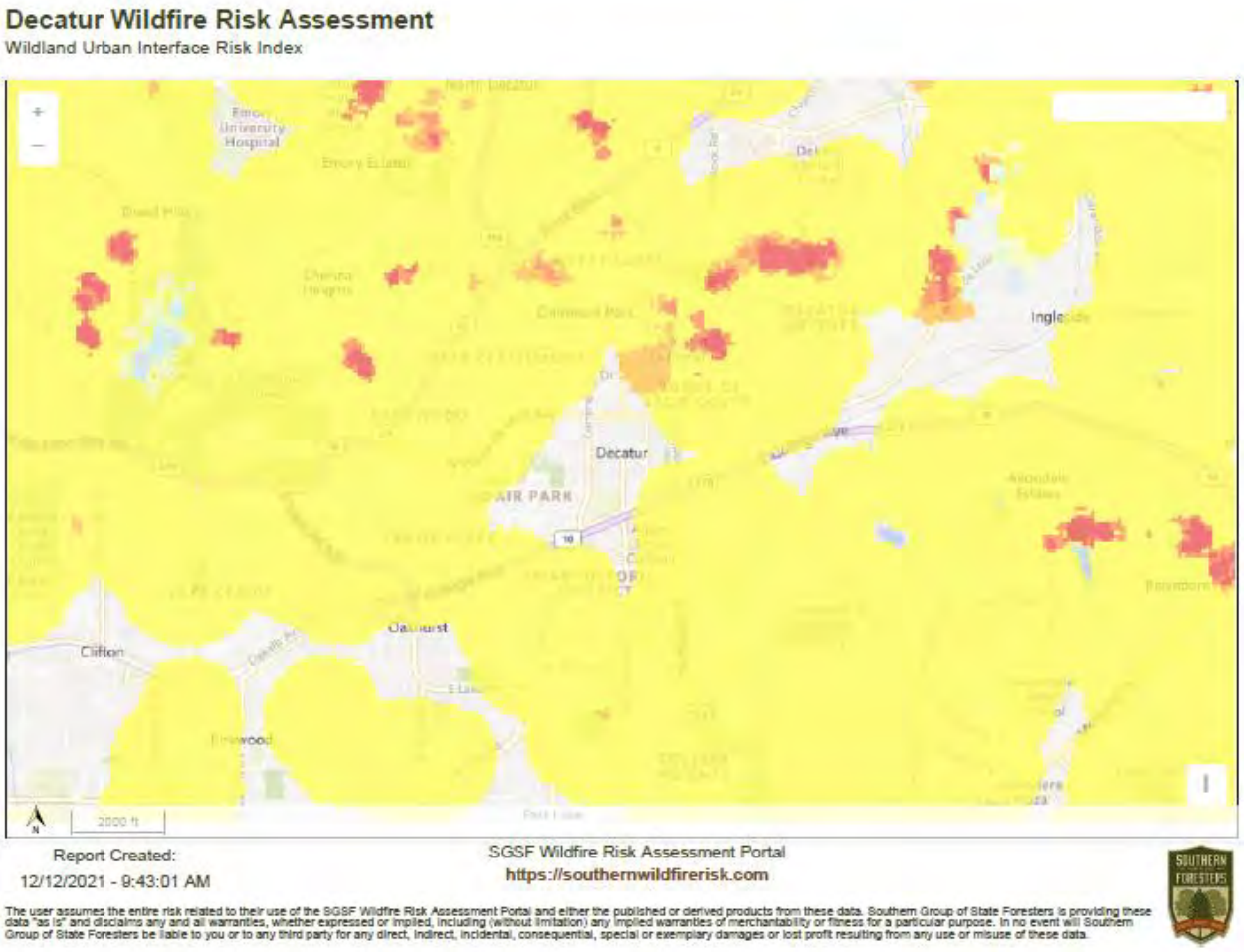
Map 65: City of Doraville WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

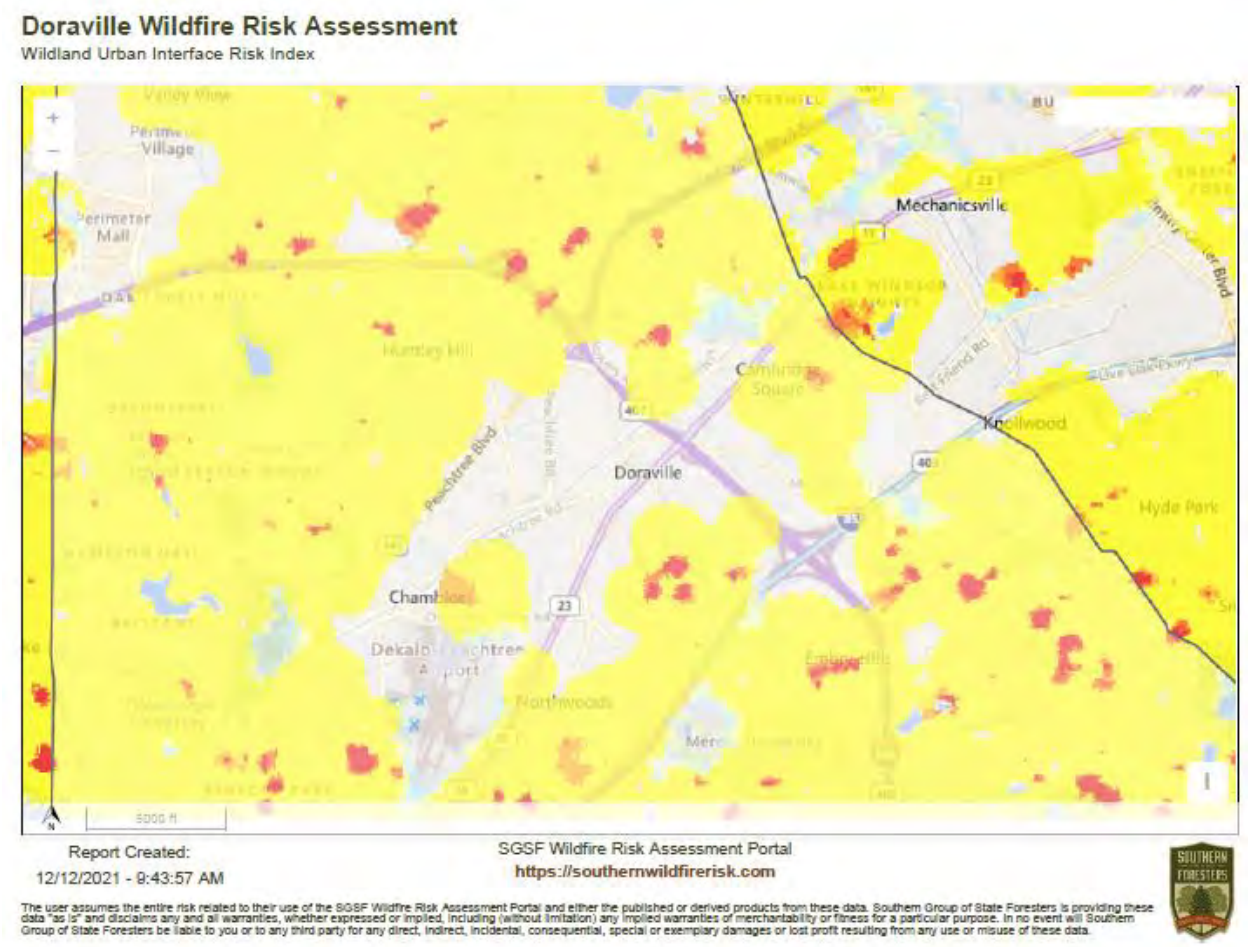
Map 66: City of Decatur WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

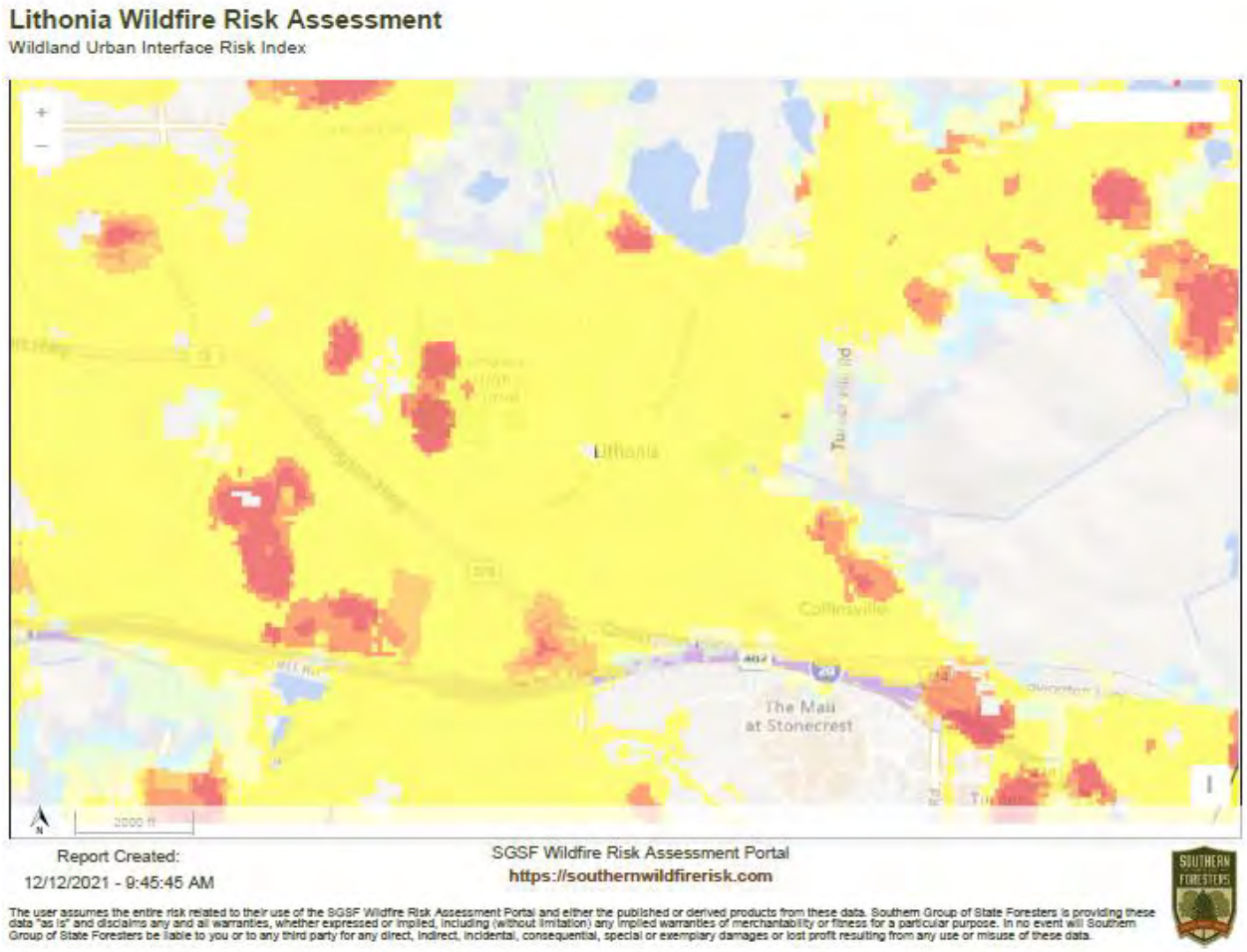
Map 67: City of Doraville WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

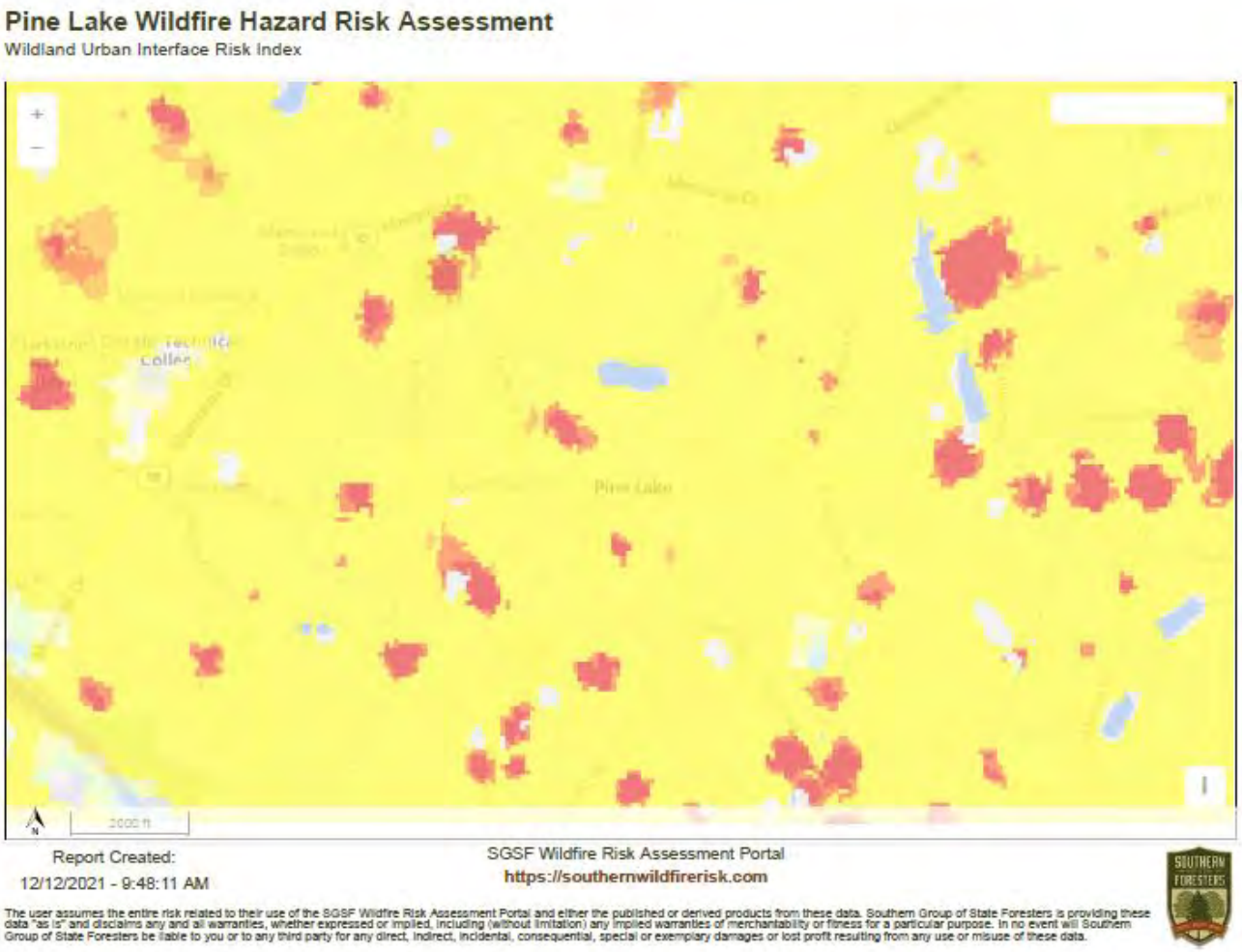
Map 68: City of Lithonia WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

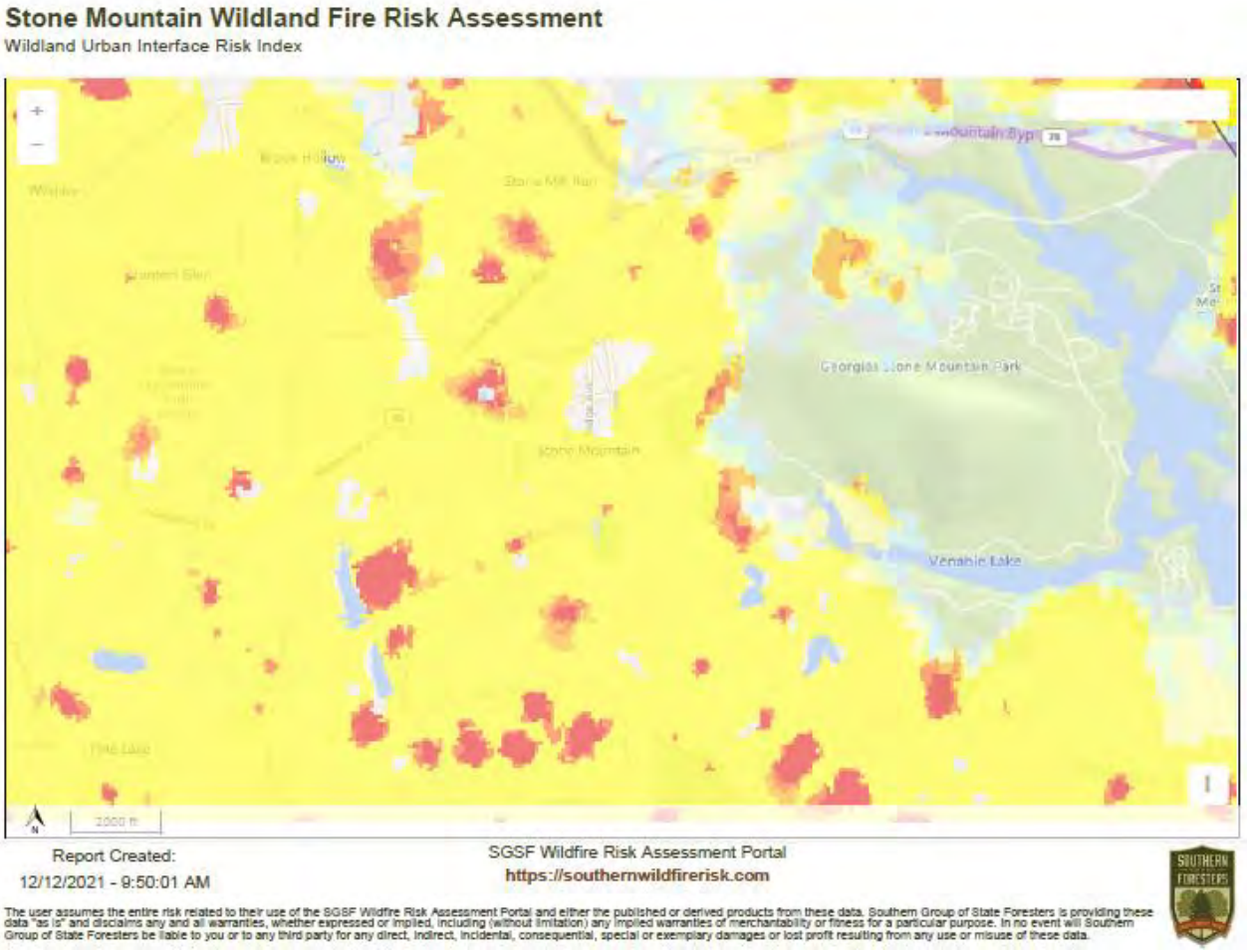
Map 69: City of Pine Lake WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

Map 70: City of Stone Mountain WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

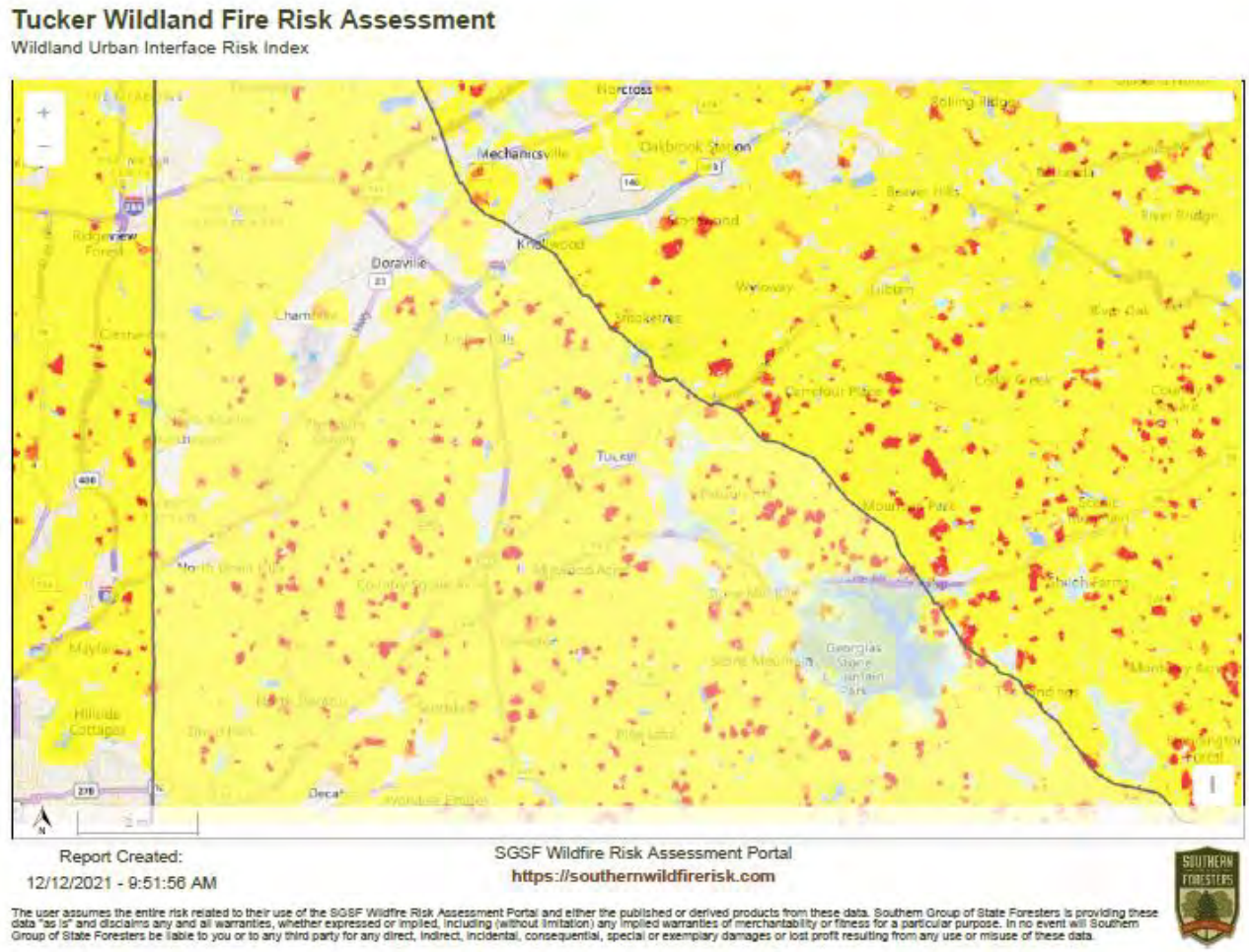
Map 71: City of Stonecrest WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

Map 72: City of Tucker WUI Risk Index



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Peak Value: -8

Fire intensity is a measure of the rate of heat (energy) released by a fire. It is directly proportional to the fuel condition, amount, and rate of fuel consumed. Therefore, fuels, weather, and topography are important in determining the rate of heat released by a fire. (https://ucanr.edu/sites/prepostwildfire/files/2670.pdf).

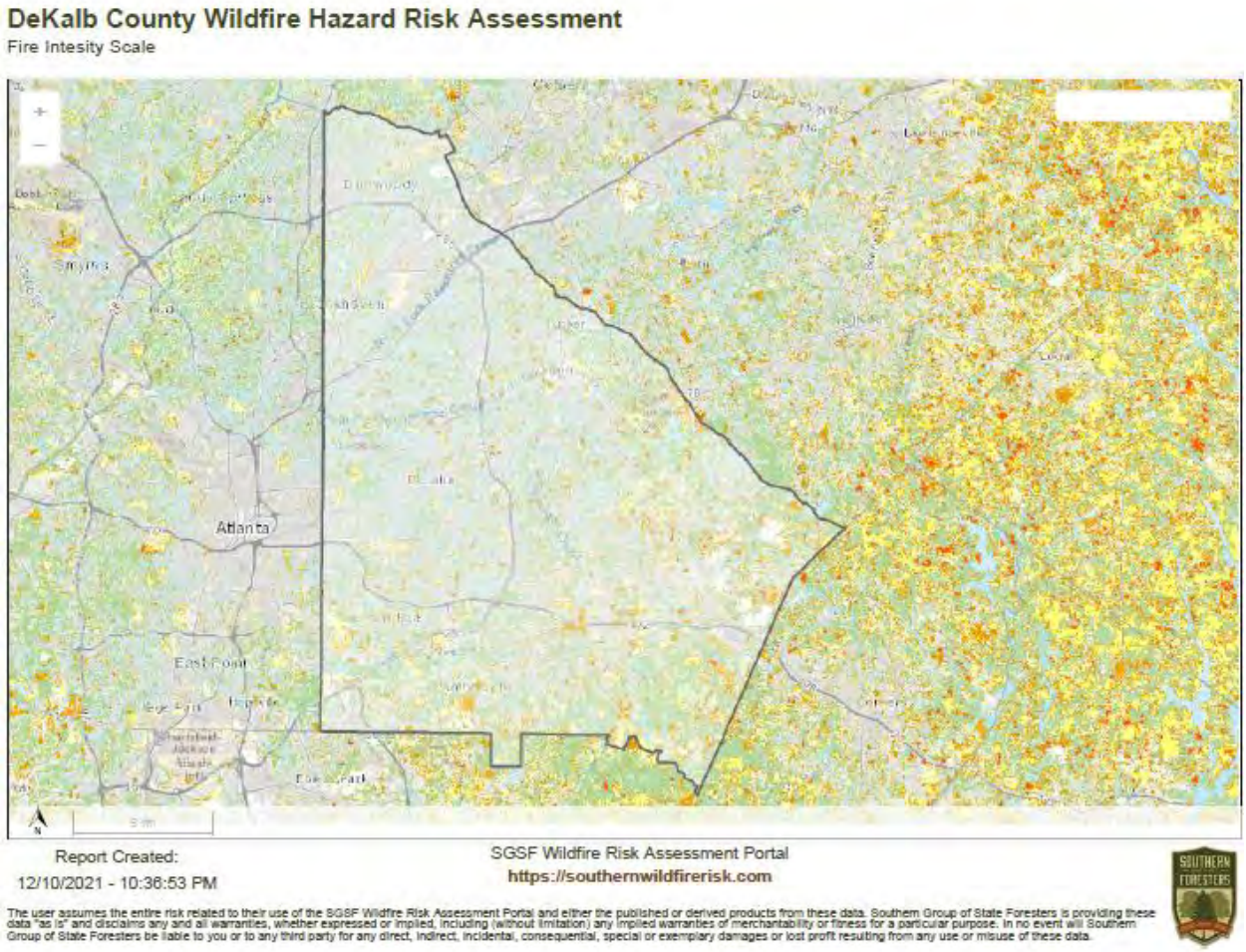
The Fire Intensity Scale (FIS) specifically identifies where significant fuel hazards and associated dangerous fire behavior potential exist based on weighted average of four percentile weather categories. Like the Richter Scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consists of five classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. (https://southernwildfirerisk.com/)

Table 50: Fire Intensity Scale

Fire Intensity Scale		
Class Number	**Category**	**Description**
1	**Very Low**	Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.
1.5		
2	**Low**	Small flames, usually less than two feet long; small amount of very short-range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
2.5		
3	**Moderate**	Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.
3.5		
4	**High**	Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.
4.5		
5	**Very High**	Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

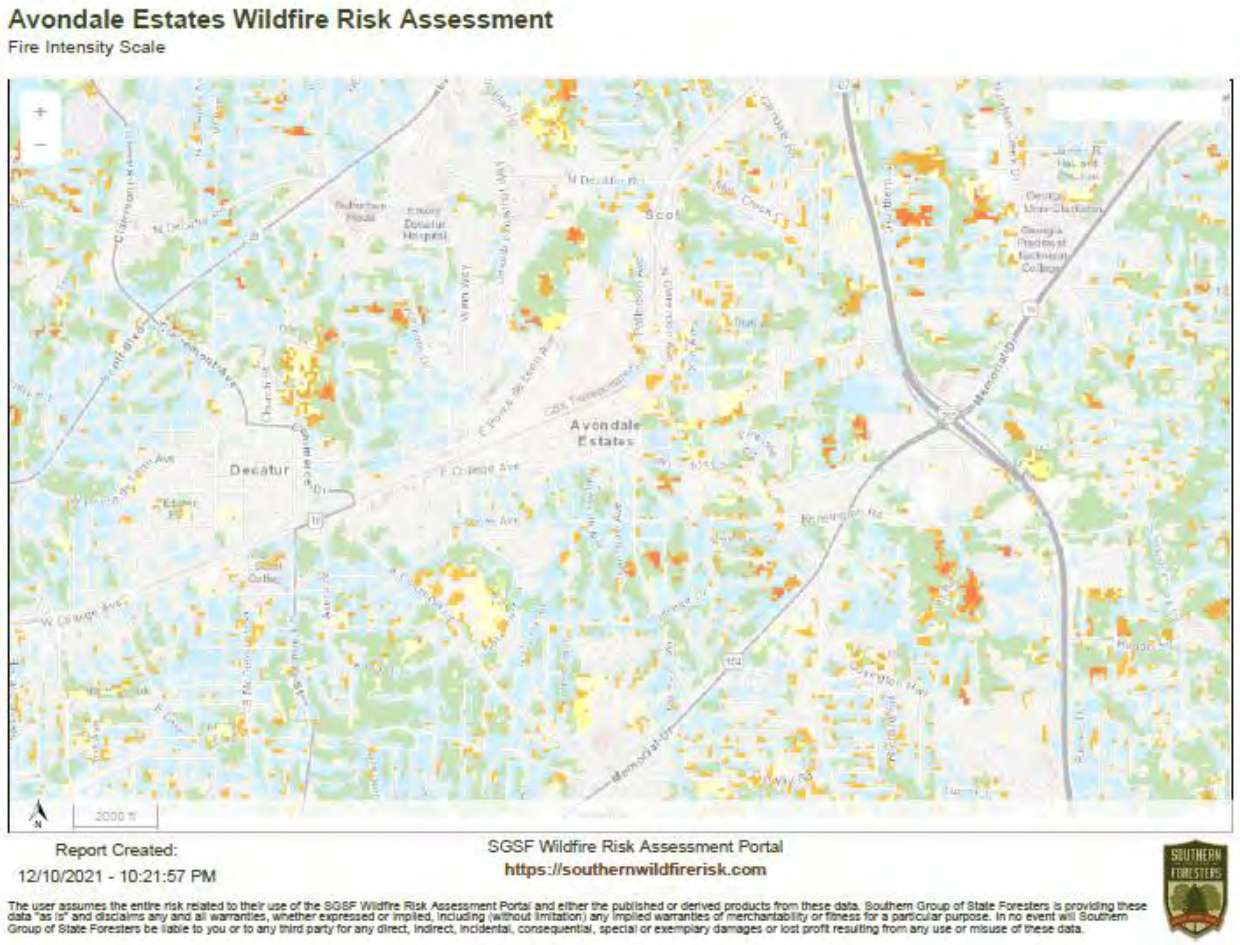
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 73: DeKalb County Fire Intensity Scale



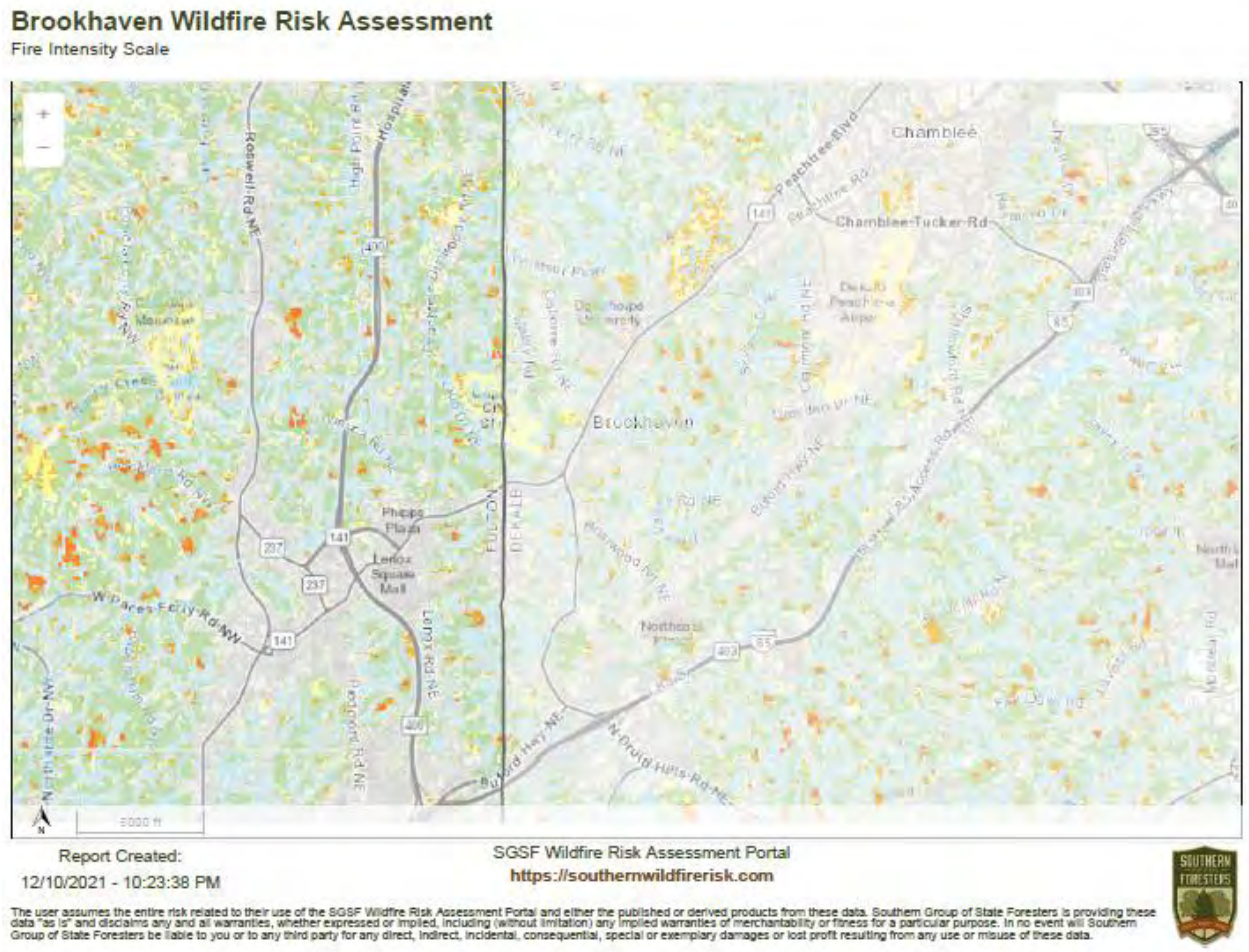
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 74: City of Avondale Estates Fire Intensity Scale



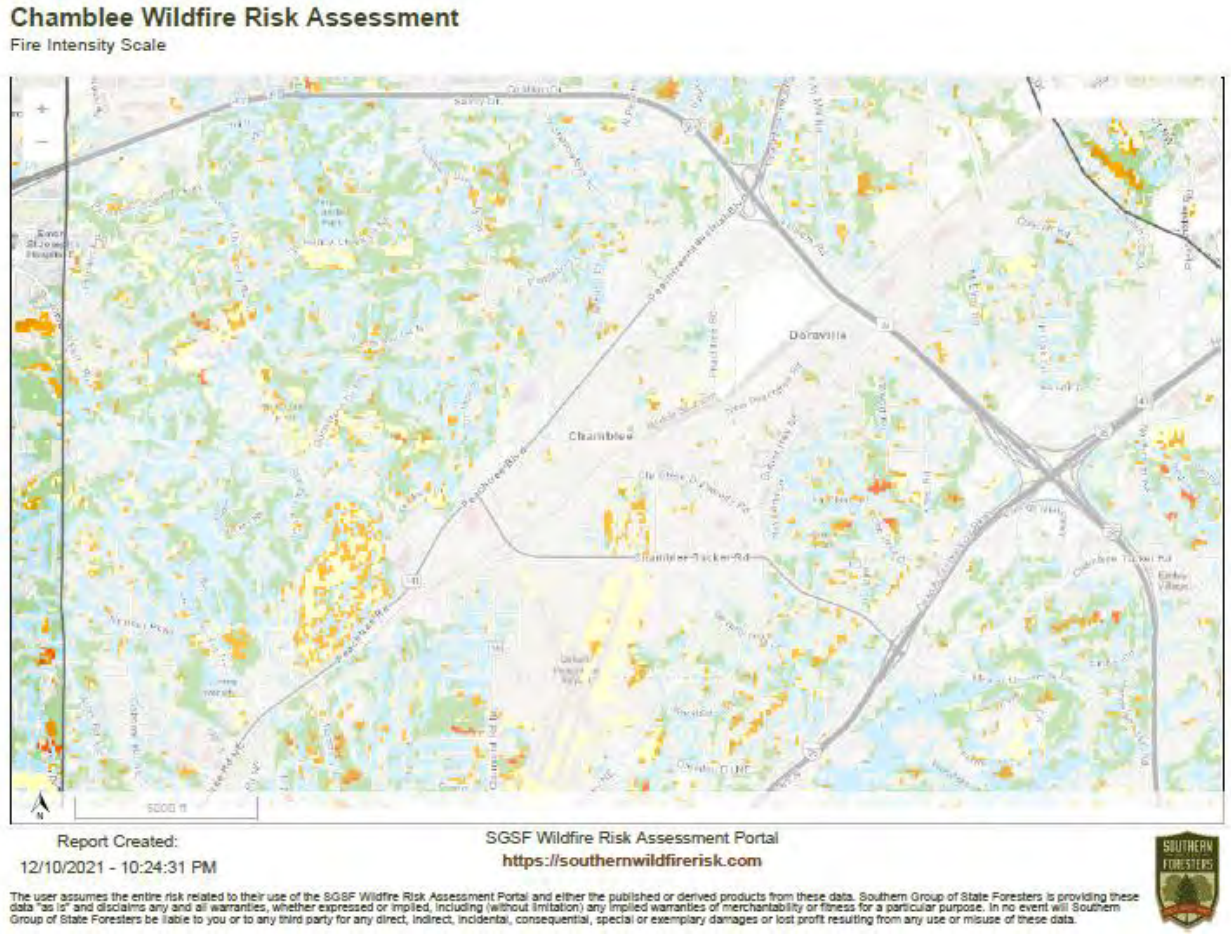
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 75: City of Brookhaven Fire Intensity Scale



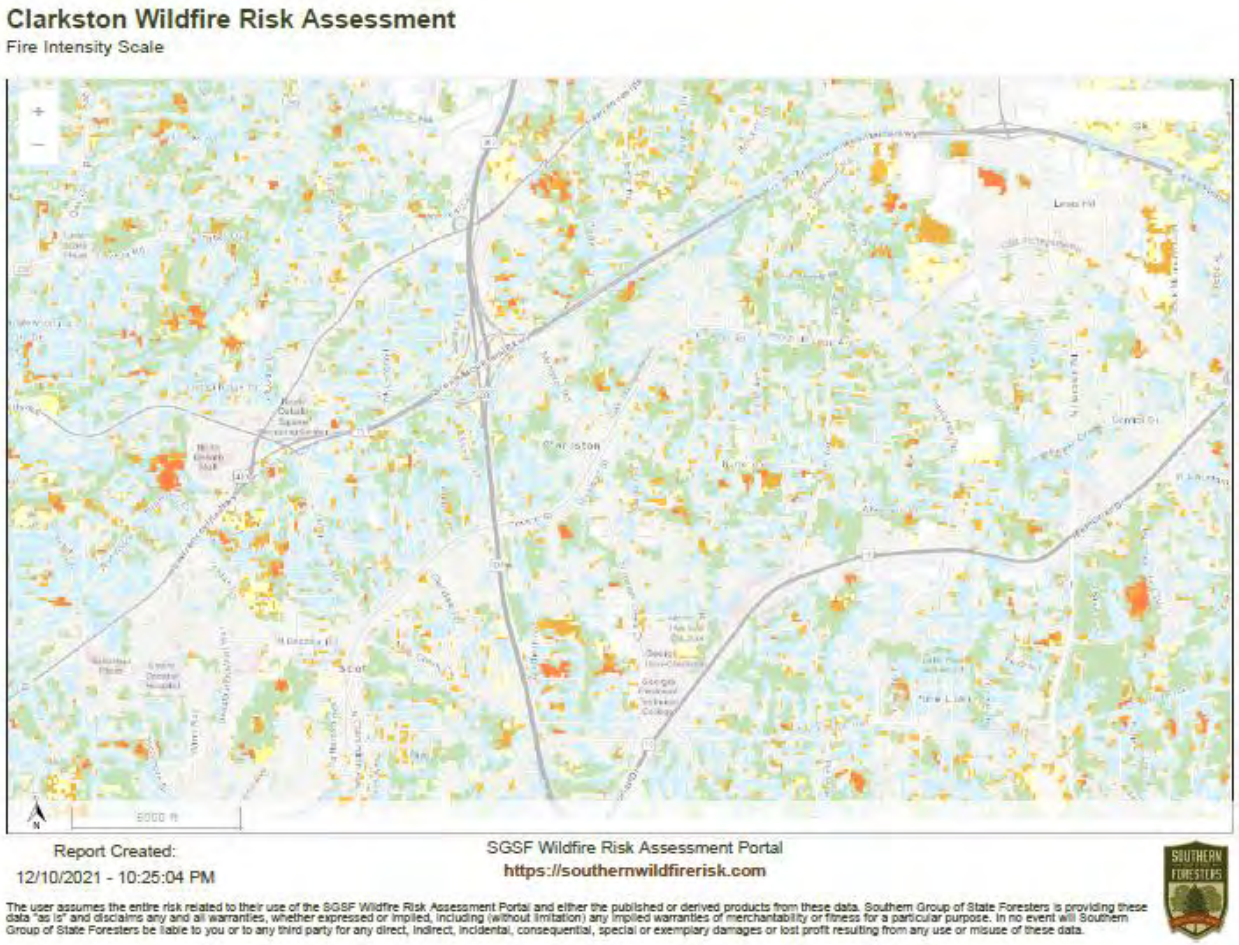
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 76: City of Chamblee Fire Intensity Scale



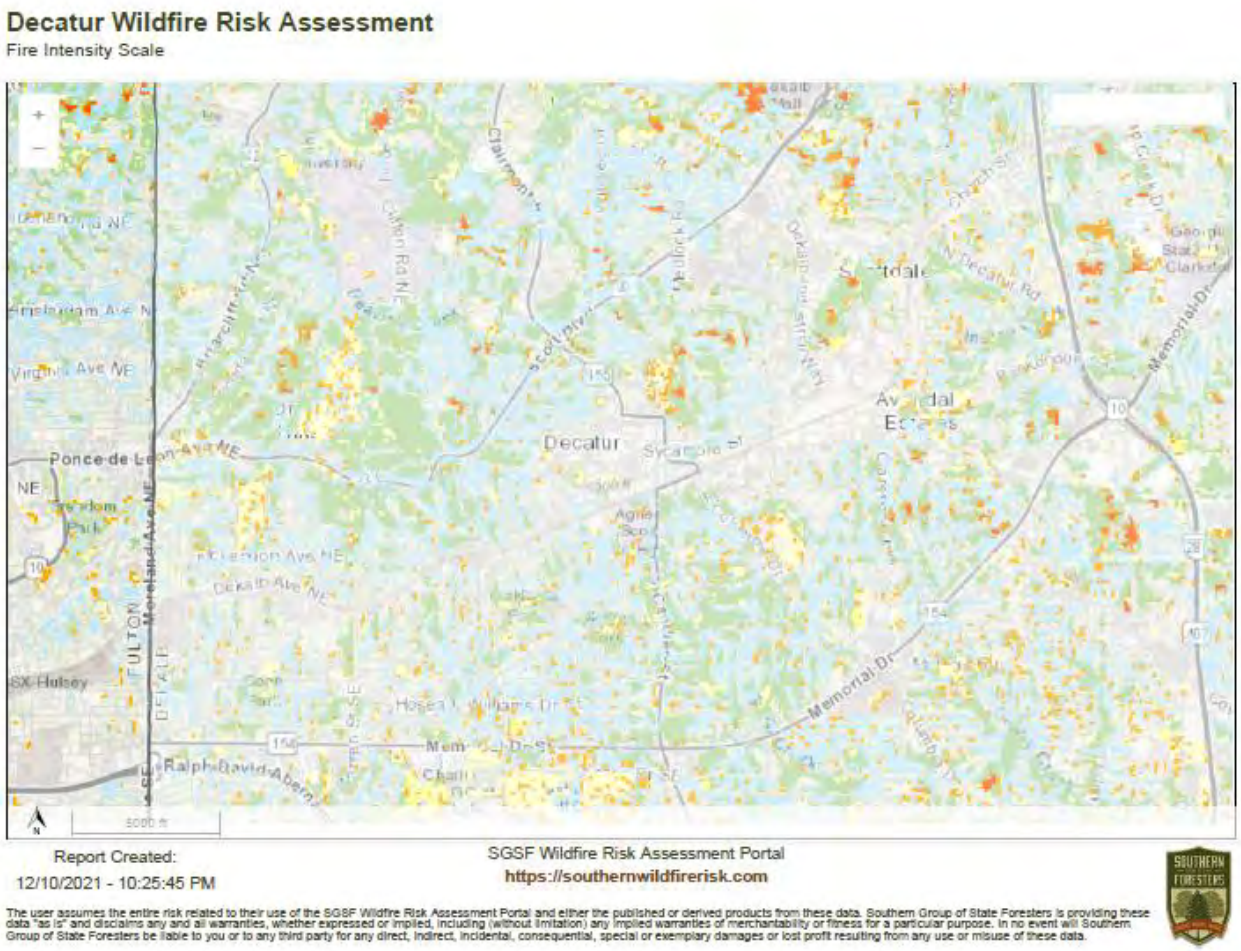
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 77: City of Clarkston Wildfire Fire Intensity Scale



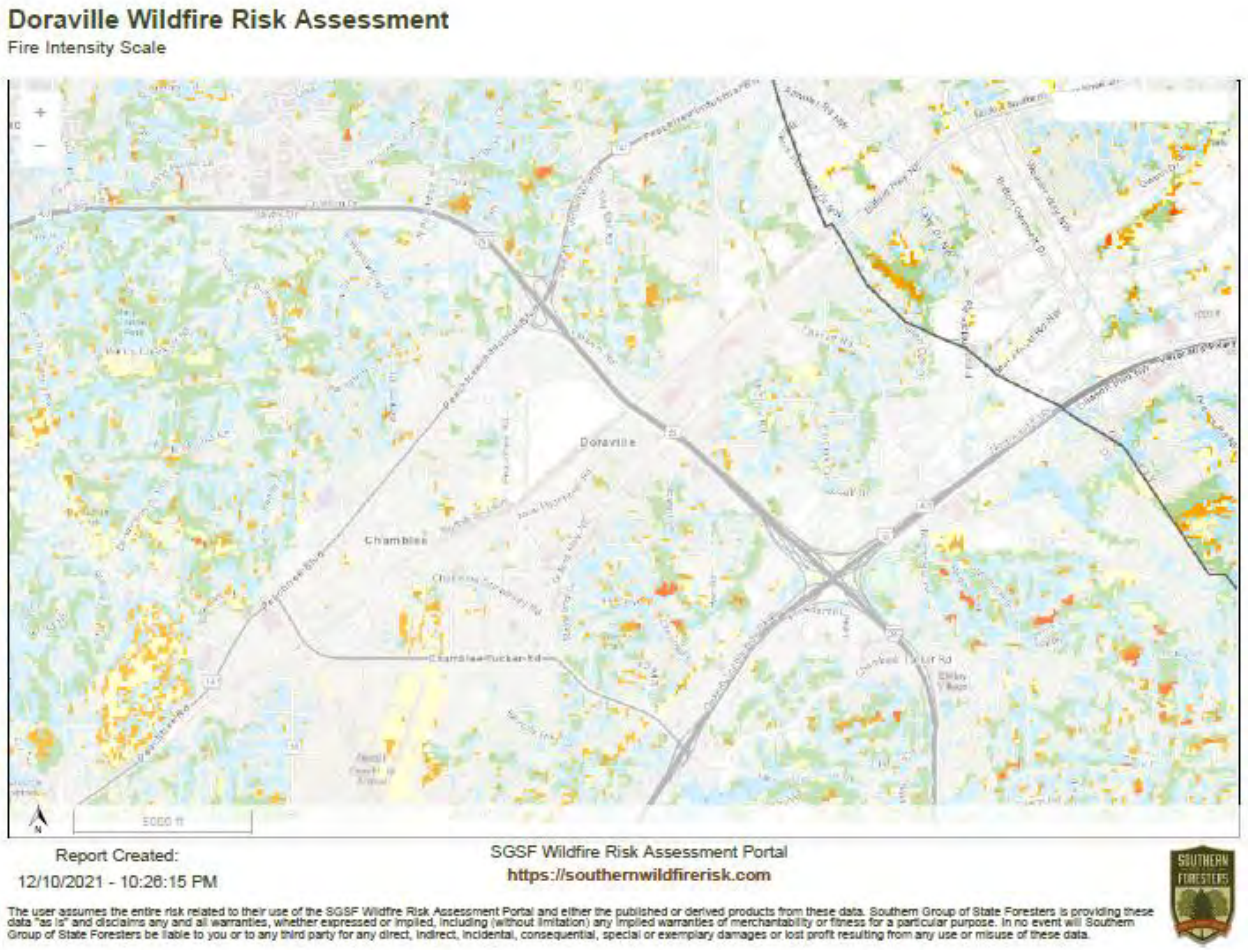
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 78: City of Decatur Fire Intensity Scale



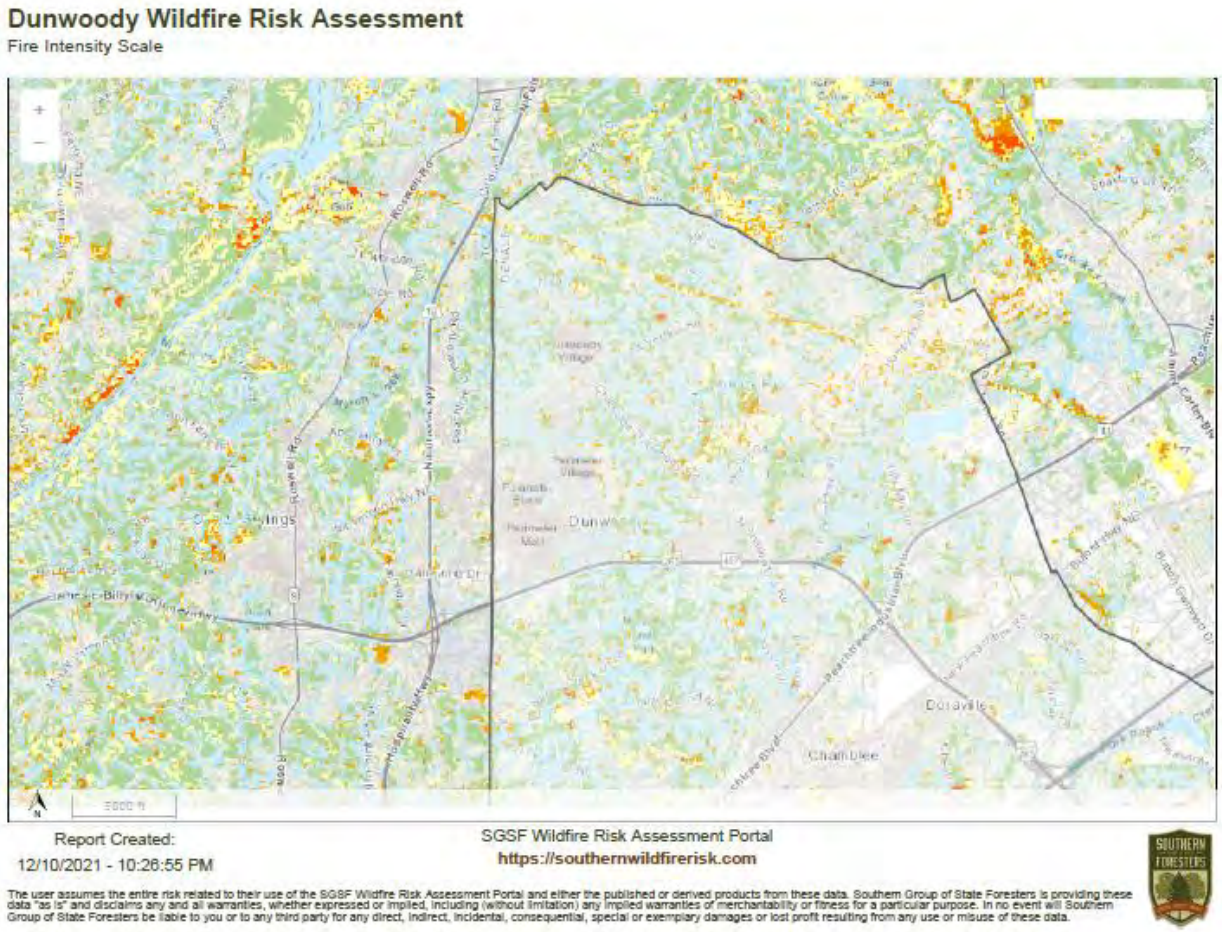
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 79: City of Doraville Fire Intensity Scale



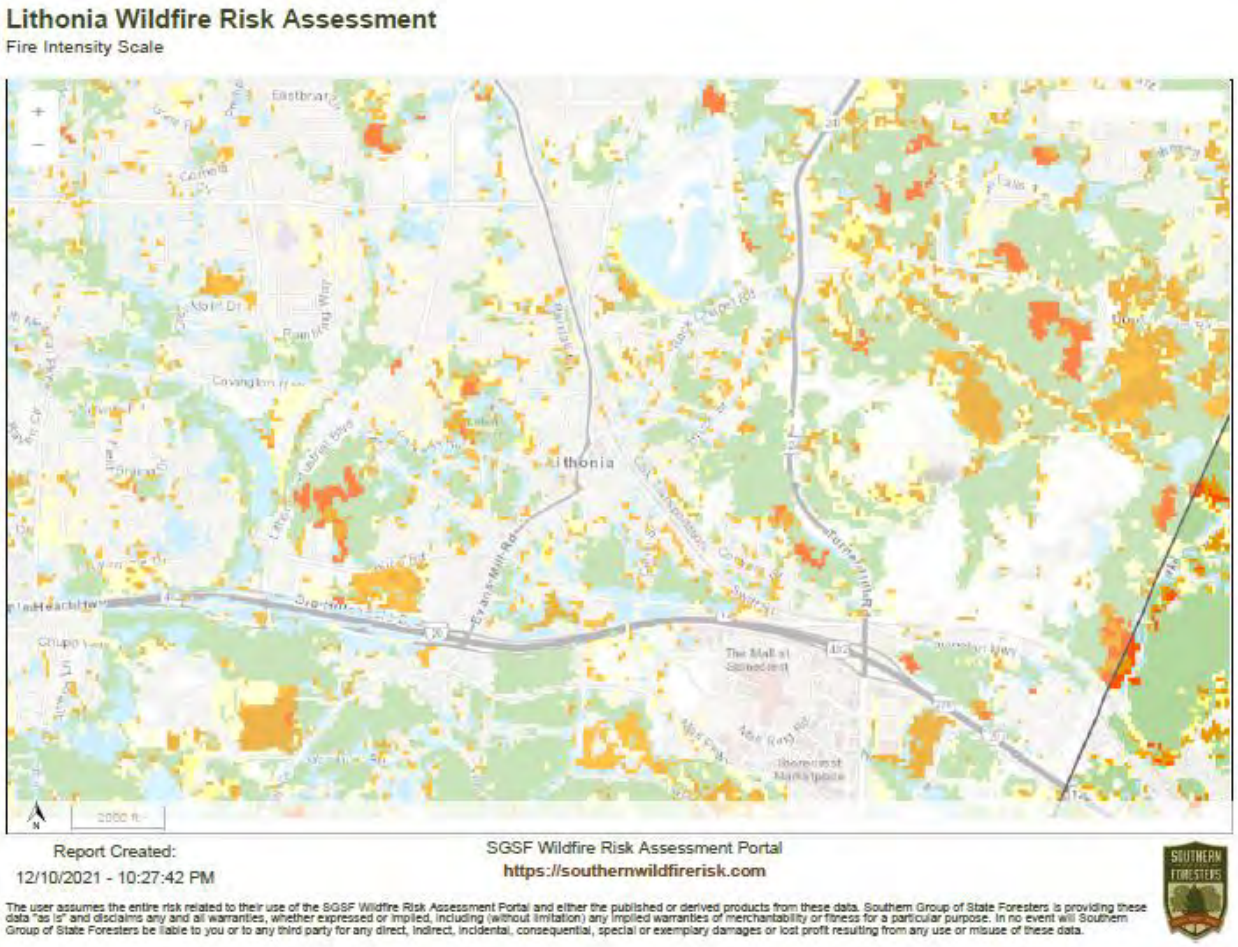
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 80: City of Dunwoody Fire Intensity Scale



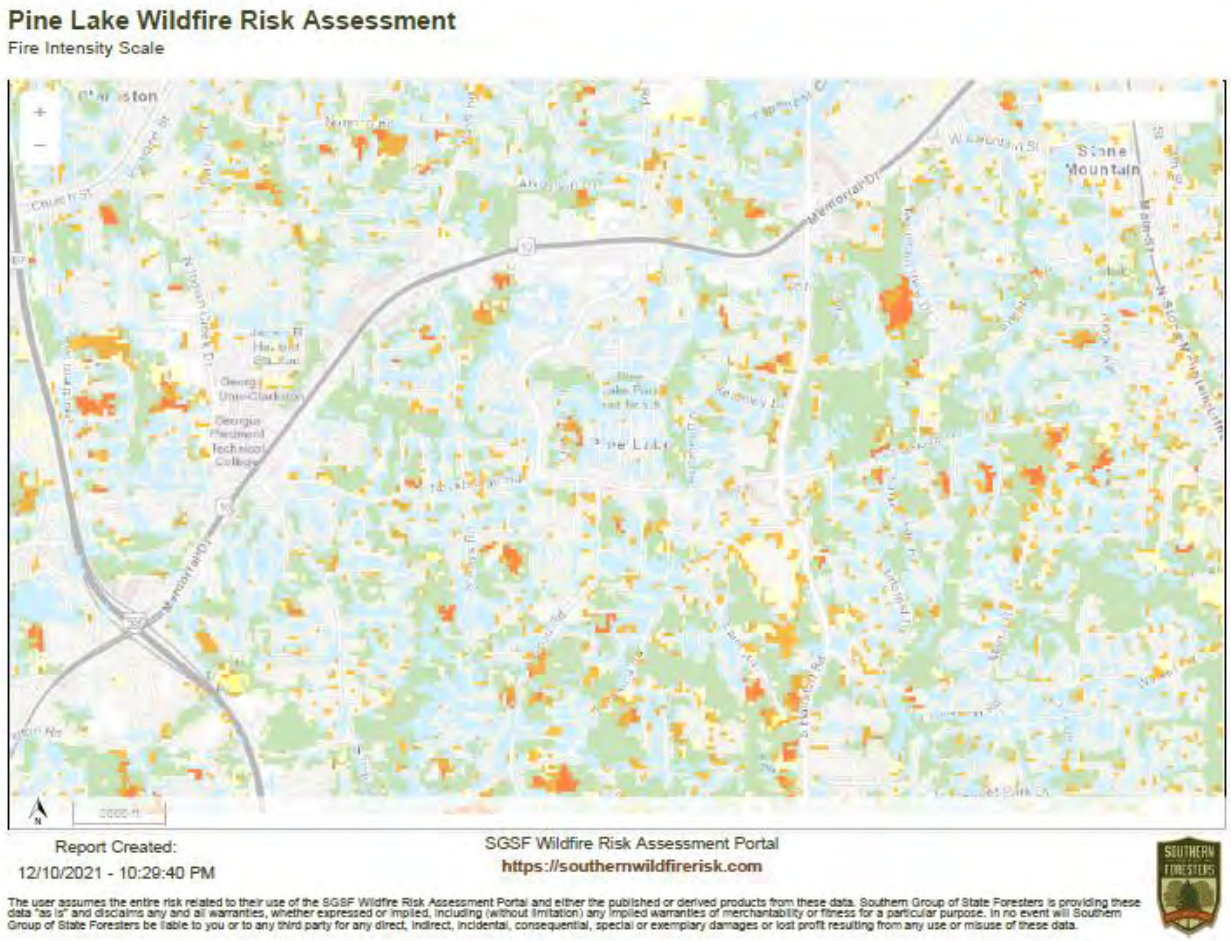
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 81: City of Lithonia Fire Intensity Scale



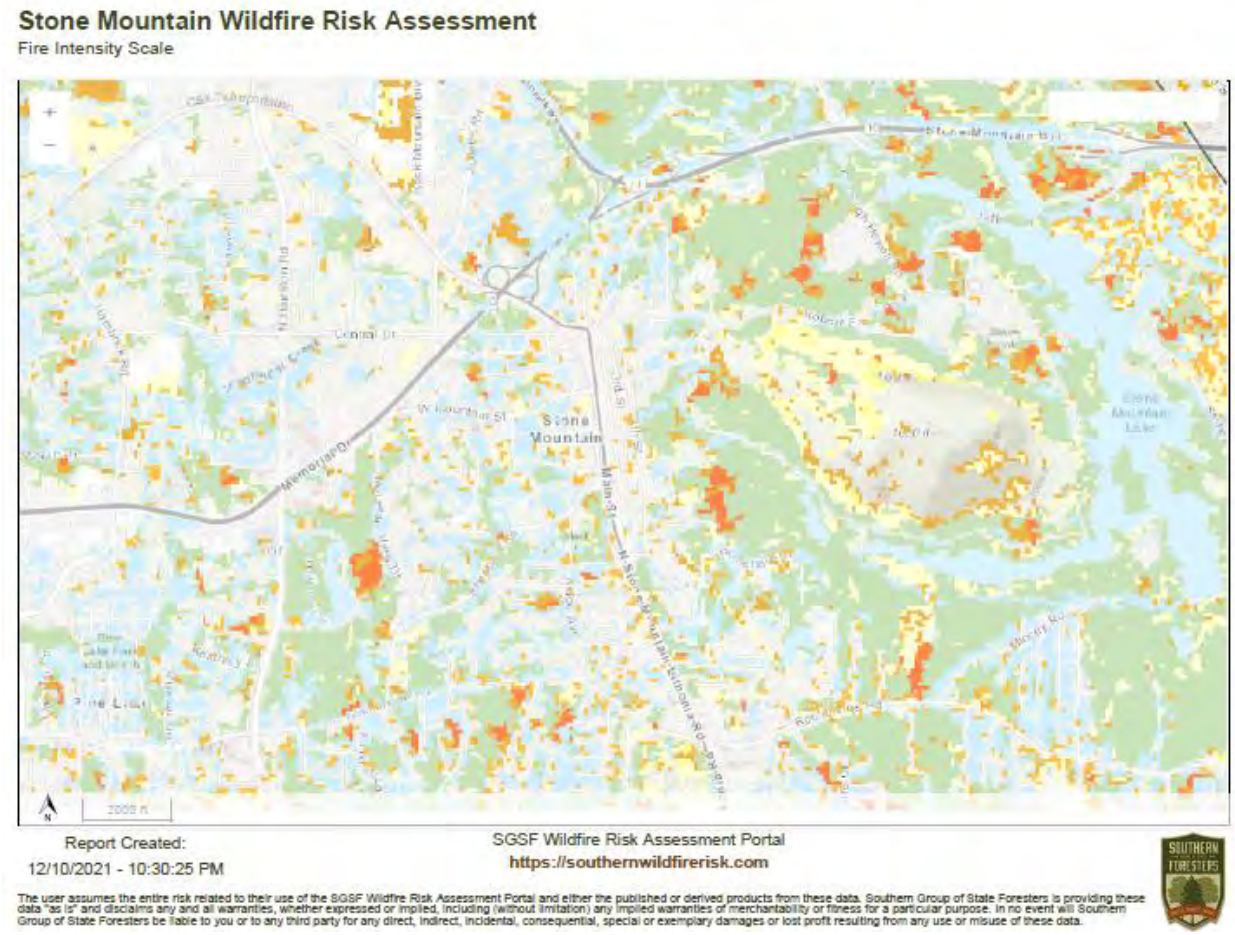
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 82: City of Pine Lake Fire Intensity Scale



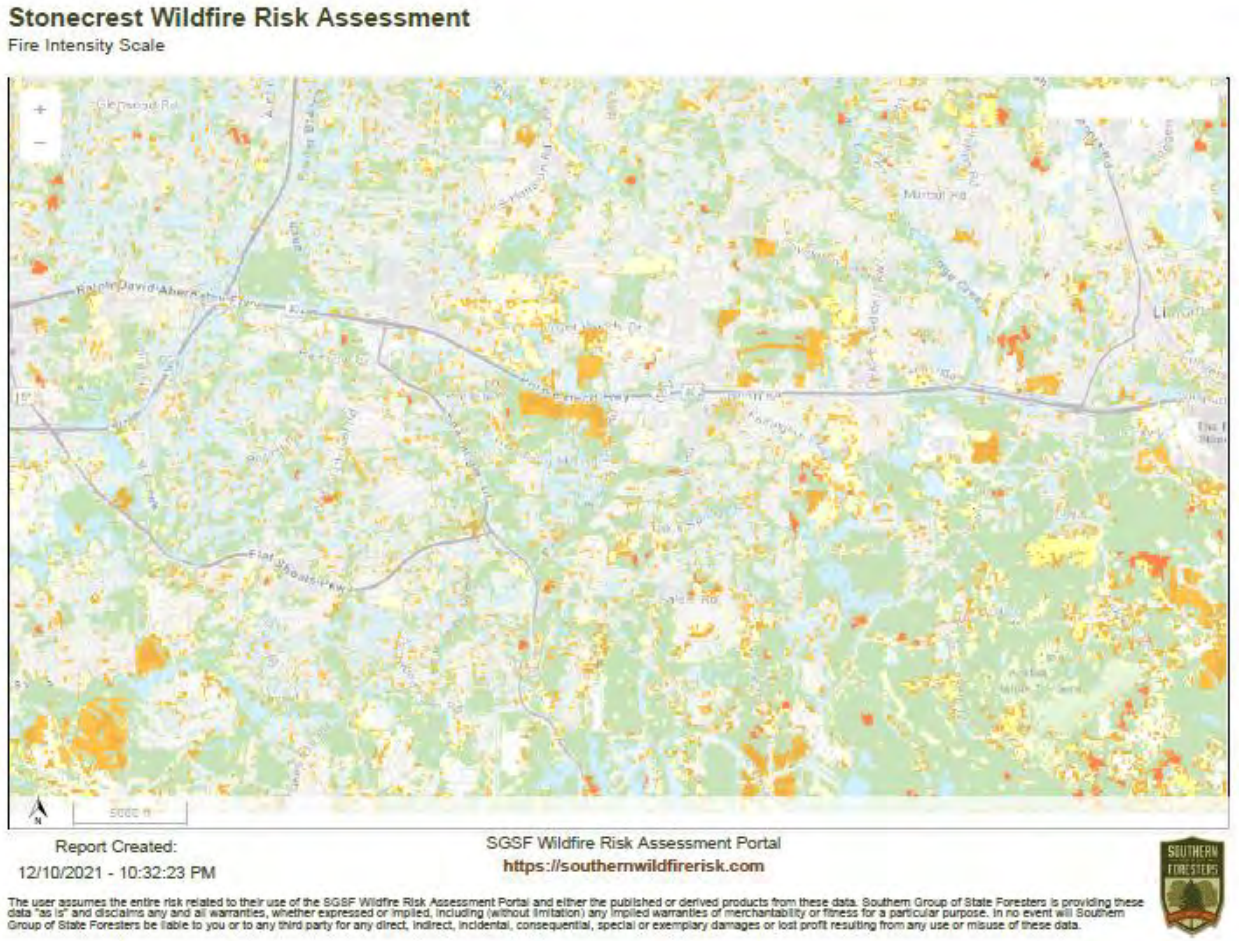
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 83: City of Stone Mountain Fire Intensity Scale



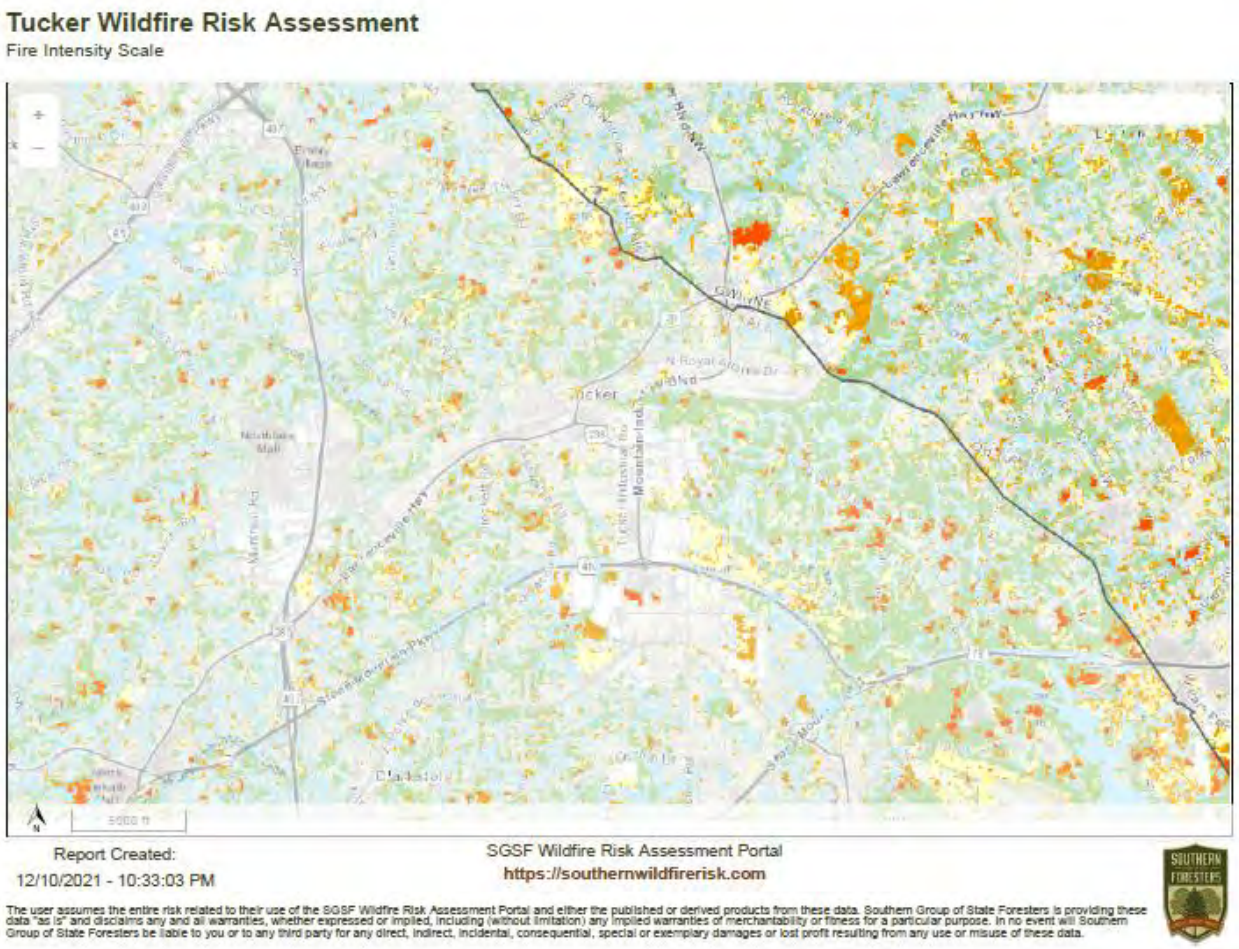
Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 84: City of Stonecrest Fire Intensity Scale



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

Map 85: City of Tucker Fire Intensity Scale



Data Source: Southern Group of State Foresters Wildfire Risk Assessment Portal (https://southernwildfirerisk.com/)

4.7.3 – Previous Occurrences

Wildfire Events

Table 51: Wildfire Response (2010-2020)

Wildfire Events (2016-2020)					
Date of Event	**Number of Incidents**	**Acres Burned**	**Number of Responding Units**	**Number of Personnel Responded**	**Total Man Hours**
2010-11	0	0	0	0	0
2012	26	60	67	184	345
2013-14	-	14	64	163	209
2015-17	0	0	0	0	0

Wildfire Events (2016-2020)					
Date of Event	**Number of Incidents**	**Acres Burned**	**Number of Responding Units**	**Number of Personnel Responded**	**Total Man Hours**
2018	6	17.5	30	86	390.75
2019	31	46	120	486	31
2020	7	12.5	32	79	189
Total	**70**	**150**	**313**	**998**	**1164.75**

Data Source: DeKalb County Fire Rescue

4.7.3A – Probability of Future Events

Table 52: Probability of Future Events, Wildfire

Probability of Future Events, Wildfire	
Decade	**Number of Events**
2010s	63
2020	7
Total	70
Years	11
Average	**6.36**
Likelihood of a Wildfire Event Each Year = 636%	

Data Source: NOAA/NCEI Storm Events Database

Based on this data, it is **highly likely** a wildfire event will occur every year in DeKalb County and the incorporated jurisdictions within its boundaries. FEMA's National Risk Index (NRI) estimates that DeKalb County has a 0.003% chance of experiencing a wildfire event every year.

4.7.4 – Vulnerability of Community Assets

Vulnerability of People

Wildfires also generate dense smoke that can affect air quality and pose a serious health risk. This is especially true for the elderly or those, young and old, who have breathing conditions such as asthma or Chronic Obstructive Pulmonary Disorder (COPD). Experts agree that smoke inhalation is the number one cause of death related to fires.

Vulnerability of the Economy

Wildfires may have direct and indirect impacts on DeKalb County's economy. Major employers and industries located in the WUI are at an increased risk for exposure to wildfires. Their facilities and resources are subject to loss if impacted by a wildfire. Functional downtime and lost wages because of wildfire impacts to major employers can cause impact people and the tax base. Farms in the WUI may suffer crop, livestock, structure, and equipment loses.

Vulnerability of the Built Environment

The "boundary" WUI is characterized by areas of development where critical facilities, homes, cultural resources, and infrastructure press against public and private wildlands, such as private or commercial forest land, or public forests or parks. There is a clearly defined boundary between the suburban fringe and the rural countryside. WUI areas deemed as "intermix" are places where improved property and/or structures are scattered and interspersed in wildland areas. These may be isolated rural homes or an area that is just starting to transition from rural to urban land use. "Island" WUI areas, also called occluded interface, are plots of undeveloped wildland, such as remnant forests and parks, within predominately urban or suburban locales.

Vulnerability of Natural Environment

The natural environment is highly vulnerable to wildland fire impacts. Wildland fires increase the potential for flooding, debris flows, and landslides. Smoke can cause significant air pollution. In the short-term, wildfires can destroy timber, forage, wildlife habitats, and watersheds. In the long-term, wildfires can reduce access to recreational areas, which can also impact the economy.

4.7.5 – Risk Analysis

FEMA's National Risk Index (NRI) estimates that DeKalb County and the jurisdictions which lie within its boundaries have 467 people, $57,902,948 worth of structures, and $2,680 worth of agriculture are exposed to wildfire hazard impacts each year. The NRI projects annual losses of 0 people, $1,164 worth of structures, and $0 worth of agriculture to wildfire hazard impacts each year.

Table 53: Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**Moderate Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Search and Rescue	**Moderate Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Government Services	**Low Risk.** Impacts may: • damage critical facilities and historical sites • disrupt communications to emergency operations centers • disrupt essential government functions • cause short-term or long-term school cancellations.
	Community Safety	**High Risk.** Impacts may: • create secondary hazards (flooding, debris flows, landslides)
Food, Water, Shelter	Food	**Low Risk.** Impacts may: • disrupt commercial food distribution and supply chains • affect commercial and home perishable food supplies
	Water	**Low Risk.** Impacts may: • generate secondary hazards which can contaminate drinking water systems • damage wastewater systems
	Shelter	**Moderate Risk.** Impacts may: • damage homes • damage shelters • damage lodging facilities
	Agriculture	**High Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• injure livestock • damage crops • damage farm structures and equipment
Health and Medical	Medical Care	**Low Risk.** Impacts may: • damage hospitals, pharmacies, long-term care facilities, and veterinary clinics • disrupt communications • contaminate water supply, affecting the provision of care • expend resources
	Patient Movement	**Moderate Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Public Health	**High Risk.** Impacts may: • create dangerous air quality • damage facilities • disrupt communications • expend resources
	Fatality Management	**Low Risk.** Impacts may: • expend resources • damage facilities and equipment • disrupt communications
	Medical Supply Chain	**Moderate Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials) • damage or block transportation routes
Energy	Power (Grid)	**Moderate Risk.** Impacts may: • damage generation systems • damage transmission systems • damage distribution systems
	Fuel	**Low Risk.** Impacts may: • damage fuel storage resources • damage pipelines • damage fuel distribution locations
Communications	Infrastructure	**Low Risk.** Impacts may: • damage or cause wireless systems to become overburdened • damage cable and wireline systems • damage or disrupt broadcast and satellite systems • damage or cause internet systems to become overburdened
	Alerts, Warnings, and Messages	**Low Risk.** Impacts may: • damage physical warning systems • disrupt the delivery of emergency alerts and warnings
	911 and Dispatch	**Moderate Risk.** Impacts may: • damage public safety answering points or dispatch centers • damage communication systems • overburden communication systems

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
	Responder Communications	**Moderate Risk.** Impacts may: • damage communication systems • overburden communication systems
	Finance	**Low Risk.** Impacts may: • damage banking facilities and equipment • disrupt communications
Transportation	Highway/Roadway	**Moderate Risk.** Impacts may: • damage or block roads and bridges
	Mass Transit	**Low Risk.** Impacts may: • damage buses or trains • damage or block transportation routes • delay routes
	Railway	**Low Risk.** Impacts may: • damage freight or passenger trains • damage or block transportation routes • delay routes
	Aviation	**Low Risk.** Impacts may: • damage airports • damage aircraft • delay routes
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**Moderate Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from fixed facilities • damage facilities • disrupt power supply to facilities
	Hazmat, Pollutants, Contaminants	**Low Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wildfire, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• generate oil/hazardous materials/toxic incidents from non-fixed facilities, rail, and roadways

4.7.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
WF1	**Wildfire and people** The Wildfire Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that 467 people are exposed to hazard impacts each year.	Many people in DeKalb County live in areas where human development meets or intermingles with undeveloped wildland. This increases the wildfire risk for people living in DeKalb County and exposes them to dangers associated with wildfires. Wildfire smoke may also generate smoke that can affect air quality. This poses a serious health risk to the elderly, the young, and people with breathing conditions.
WF 2	**Wildfire and people** The Wildfire Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that $2,680 work of agriculture are exposed to wildfire hazard impacts each year.	Some businesses and farms are in areas where human development meets or intermingles with undeveloped wildland. This increases the risk to crop, livestock, structures, production, wages, and equipment loses.
WF3	**Wildfire and built environment** The Wildland Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that $57,902,948 worth of structures are exposed to wildfire hazard impacts each year.	Some critical facilities, homes, cultural resources, and infrastructure are in areas where human development meets or intermingles with undeveloped wildland. FEMA's National Risk Index (NRI) projects $1,164 work of structure losses each year due to wildfire hazard impacts. A major wildfire may cause much more damage.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
WF4	**Wildfire and natural environment** The Wildland Urban Interface (WUI) Index is high in many areas of DeKalb County.	DeKalb County consists of numerous natural resources which may be exposed to wildfires.	A major wildfire may destroy parts of DeKalb County's natural environment and cause secondary hazards such as flooding, debris flows, and landslides. This may impact DeKalb County's people, economy, and build environment.



Photo Courtesy of CNN

4.8(E) – Earthquake

According to the U.S. Geological Survey (USGS), it is estimated that there are 500,000 detectable earthquakes in the world each year; 100,000 of those can be felt, and 100 of them cause damage. Earthquakes are much less common in the eastern United States than in California, with most events imperceptible by the public. This leads to a dangerous complacency that may be unwarranted.

The first earthquakes reported felt in Georgia were the great New Madrid series of 1811-1812. Most Georgians are largely unaware of the last large event that struck Charleston, South Carolina, in 1886, killing almost 60 people and causing complete devastation to the city. Unfortunately, earthquakes in the eastern United States are very efficient at transmitting seismic energy over large distances, such that the damage area of a magnitude 6.0 here is comparable to a magnitude 7.0 in the western United States.

4.8.1 – Hazard Description

An earthquake is the vibration of the earth's surface following a release of energy in the earth's crust. This energy can be generated by a sudden dislocation of the crust or by a volcanic eruption. Most destructive quakes are caused by dislocations of the crust. The crust may first bend and then, when the stress exceeds the strength of the rocks, break and snap to a new position. In the process of breaking, vibrations called "seismic waves" are generated. These waves travel outward from the source of the earthquake at varying speeds. The movement of these tectonic plates creates stress that can be released as earthquakes. An earthquake's point of initial rupture is called its focus or hypocenter; and the point of ground directly above the hypocenter is called the epicenter.

Earthquakes tend to reoccur along faults, which are zones of weakness in the crust. Even if a fault zone has recently experienced an earthquake, there is no guarantee that all the stress has been relieved. Another earthquake could still occur.

Faults are more likely to have earthquakes on them if they have more rapid rates of movement, have had recent earthquakes along them, experience greater total displacements, and are aligned so that movement can relieve accumulating tectonic stresses. A direct relationship exists between a fault's length and location and its ability to generate damaging ground motion at a given site. In some areas, smaller, local faults produce lower magnitude quakes, but ground shaking can be strong, and damage can be significant because of the fault's proximity to the area. In contrast, large regional faults can generate great magnitudes but, because of their distance and depth, may result in only moderate shaking in the area.

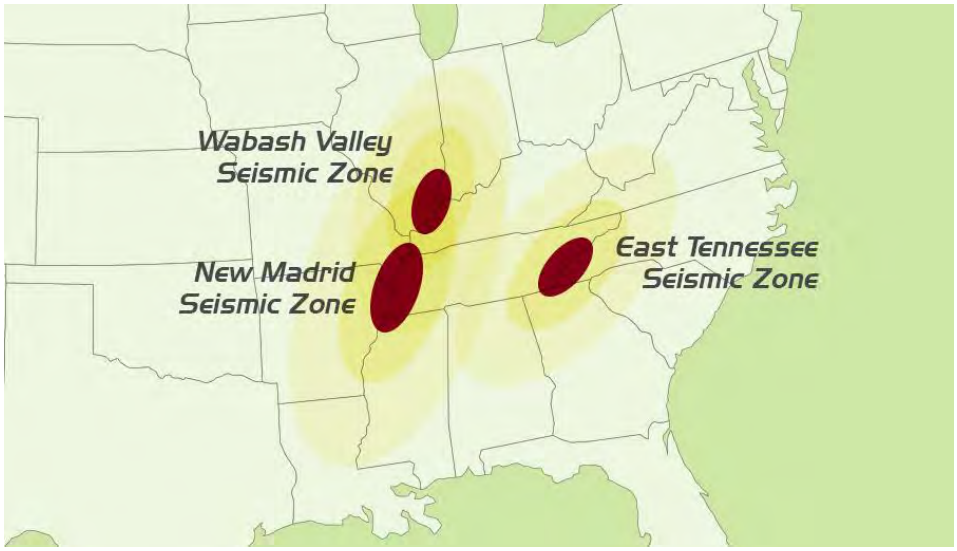
An earthquake's effect(s) can be compounded by the soil type underlying a community's buildings and infrastructure. If the soil is not composed of bedrock and consists of clays, silts, and other types of sand, the pressure generated by an earthquake can force brittle soil and water up toward the surface. These upward forced materials will then destabilize buildings and infrastructure, causing damage that can range from minor cracks to complete destruction. Smaller upward forced materials can destabilize slopes and building foundation further compounding the potential damage to a community.

Geologists classify faults by their relative hazards. Active faults, which represent the highest hazard, are those that have ruptured to the ground surface during the Holocene period (about the last 11,000 years). Potentially active faults are those that displaced layers of rock from the Quaternary period (the last 1,800,000 years). Determining if a fault is "active" or "potentially active" depends on geologic evidence, which may not be available for every fault. Although there are probably still some unrecognized active faults, nearly all the movement between the two plates, and therefore most of the seismic hazards, are on the well-known active faults. However, inactive faults, for which no displacements have been recorded, maintain the potential to reactivate or experience displacement along a branch sometime in the future.

4.8.2 – Location & Extent

According to the Emergency Manager's Guide to Earthquakes in Georgia (1999), Georgia and the Southeastern United States are not typically known for seismic activity but documented incidents in the State of Georgia have shown minor to moderate earthquakes. Earthquakes in northwestern Georgia are clustered along a northeast trending line that represents the southwest extension of the Southeastern Tennessee Seismic Zone. Based on seismicity, the Southeastern Tennessee Seismic Zone is second only to the New Madrid Seismic Zone in the Eastern United States for its size and rate of earthquake production. In both seismic zones, the earthquake hypocenters are at mid-crustal depths (14 ± 10 km) and outline a 150-mile-long narrow active zone.

Map 86: Seismic Zone of the Central United States



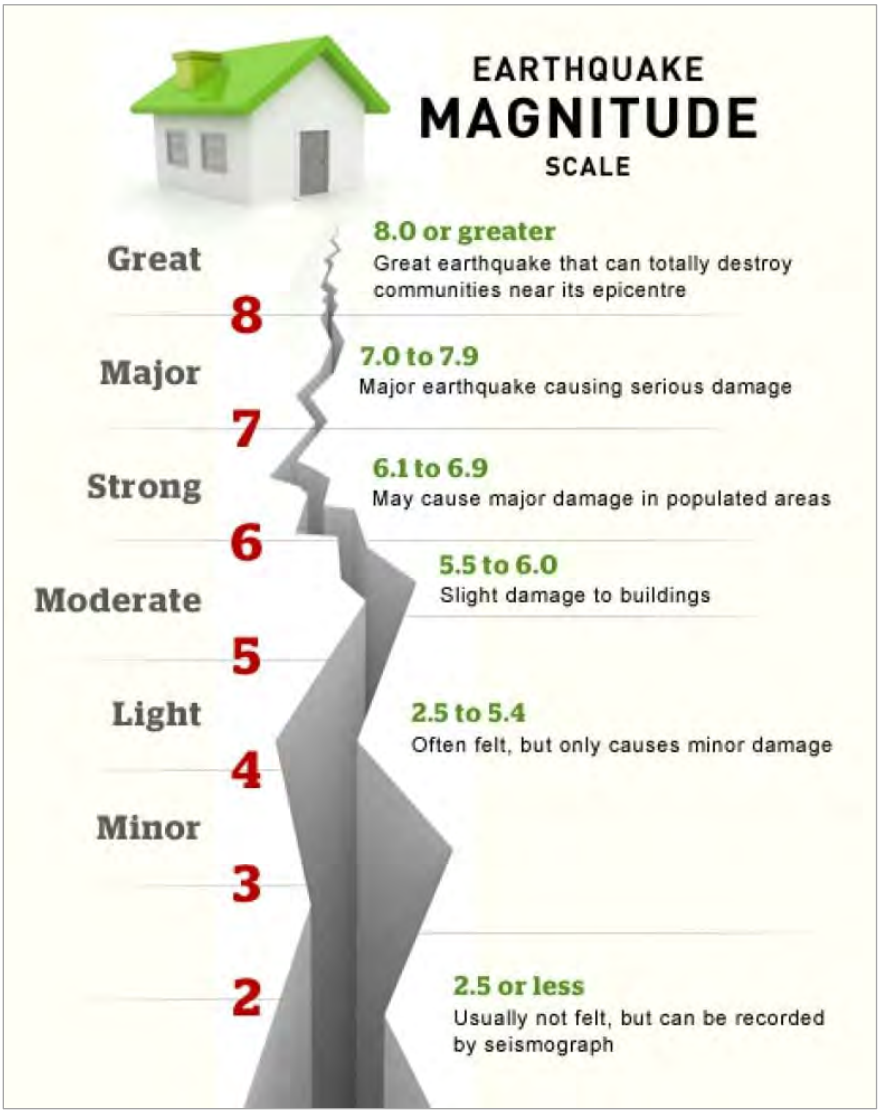
Map Source: Central United States Earthquake Consortium (https://cusec.org/our-earthquake-risk/)

These similarities and the existence of the great 1811-12 New Madrid earthquakes suggest that southeastern Tennessee, or Northwest Georgia, could also be the site of a similar great earthquake. This area currently experiences one magnitude 4.0 earthquake about every ten years. A magnitude 4.0 earthquake is generally perceived as a startling vibration that may rock objects off shelves and may cause some cracking of plaster.

There are numerous characteristics measured when observing earthquake activity; however, four of them—force, depth, peak ground acceleration and the distance to the epicenter—are most influential in determining damage. Two scales are used when referring to earthquake activity: the Richter Scale, which estimates the total force of the earthquake; and the Modified Mercalli Intensity Scale, which categorizes the observed damage from the earthquake.

The Richter Scale is a scientific measurement based on the magnitude of the earthquake. It provides seismic experts greater accuracy in comparing the strength of earthquakes across time and at different locations in all areas of the world. The measurements of the Richter Scale are further explained in the diagram below:

Illustration 5: Richter Scale



Data Source: UPSeis / Michigan Tech

The Modified Mercalli Intensity value assigned to a specific site after an earthquake has a more meaningful measure of severity to the nonscientist than the magnitude because intensity refers to the effects experienced at that place. The lower numbers of the intensity scale generally deal with the way the earthquake is felt by people. The higher numbers of the scale are based on observed structural damage. Structural engineers usually contribute information for assigning intensity values of VIII or above. The table below is an abbreviated description of the levels of Modified Mercalli intensity.

Table 54: Modified Mercalli Intensity Scale

Modified Mercalli Intensity Scale		
Intensity	**Shaking**	**Description / Damage**
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum in clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plates. Damage slight.
VII	Very Strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built, ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designated structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage greater in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundation. Rails bent.

Data Source: The Severity of an Earthquake (abridged), USGS General Interest Publication 1989-288-913

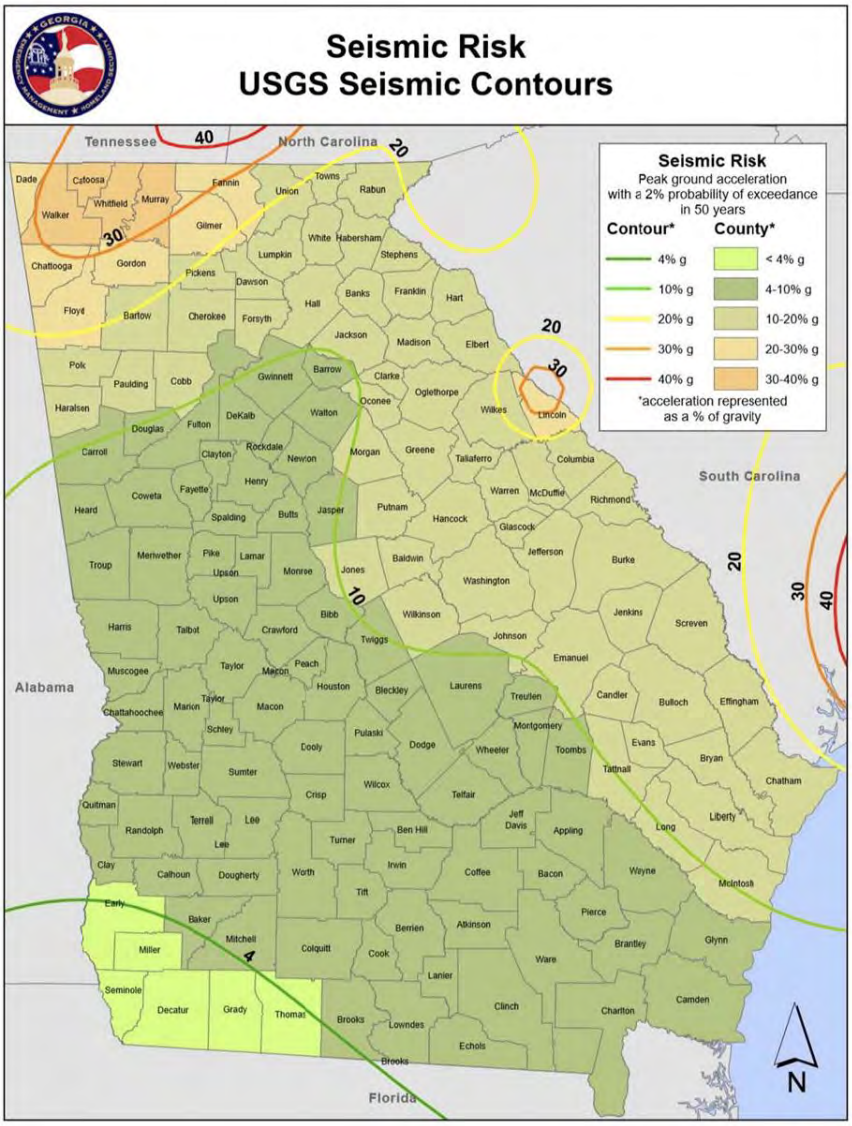
Earthquakes can last from a few seconds to over five minutes; they may also occur as a series of tremors over several days. The actual movement of the ground in an earthquake is seldom the direct cause of injury or death. Casualties generally result from falling objects and debris, because the shocks shake, damage, or demolish buildings and other structures. Disruption of communications, electrical power supplies and

gas, sewer and water lines should be expected. Earthquakes may trigger fires, dam failures, landslides, or releases of hazardous material, compounding their disastrous effects. Such secondary impacts could be magnified by the effects of climate change, though there are currently no models available to estimate them.

Earthquakes large enough to cause damage can be felt in most, if not all, of Georgia's counties. Earthquakes may be felt in any area of Georgia, but the northwestern Georgia counties of Bartow, Catoosa, Chattoga, Dada, Fannin, Floyd, Gilmer, Gordon, Murray, Pickens, Rabun, Towns, Union Walker, and Whitfield, have experienced earthquakes in the past. The Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan (2019), states that Georgia has been seismically active, but no earthquakes were reported, nor seismic disasters declared, between 1952 and 2017.

The following map depicts the State of Georgia's seismic risk.

Map 87: Georgia Seismic Risk Map



Map Source: Georgia Hazard Mitigation Strategy, Standard and Enhanced Plan (2019-2024) (https://gema.georgia.gov/sites/gema.georgia.gov/files/related_files/document/2019%20Georgia%20Hazard%20Mitigation%20Strategy.pdf)

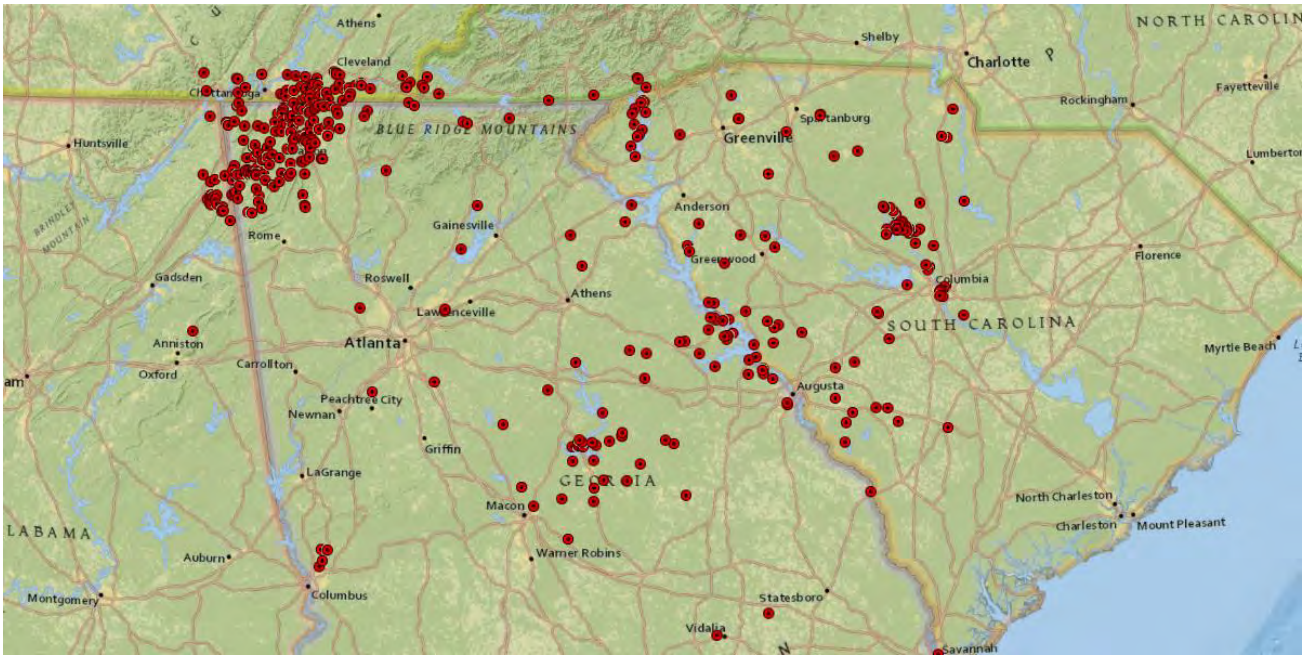
4.8.3 – Previous Occurrences

ABC Events

Between 1970 and 2020, earthquake events of 1.0M or greater have occurred within 250 miles of DeKalb County 357 times. Most of these were less than 4.0M and are considered minor. This data shows that the region is seismically active.

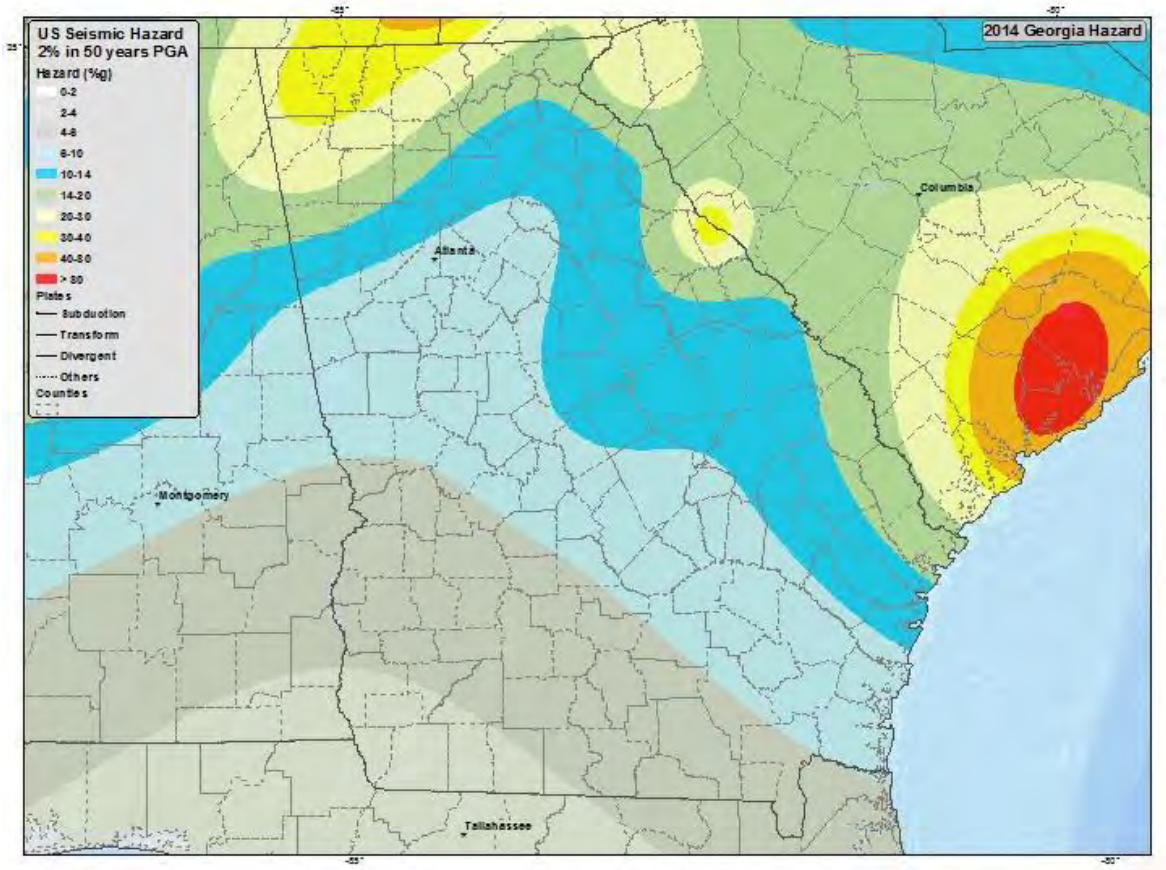
The strongest earthquake in the region was an estimated 5.5M in Union County, South Carolina on January 1, 1913. Shock waves moved out from the western portion of South Carolina into adjacent Georgia and North Carolina, and even up into parts of Virginia. Fortunately, damage was minimal, and no deaths resulted. This event is significant because it demonstrates that large, destructive earthquakes can strike the region. (https://www.dnr.sc.gov/geology/earthquake-info.html)

Map 88: Earthquakes 1900 - 2020, ≤250 miles



Map Source: U.S. Geological Survey

Map 89: 2014 Seismic Hazard Map, State of Georgia



Map Source: United States Geologic Survey (https://www.usgs.gov/media/images/2014-seismic-hazard-map-georgia)

Table 55: Earthquake Events by Magnitude within 250 miles of DeKalb County (1970-2020)

Earthquake Events by Magnitude within 250 miles of DeKalb County (1970-2020)		
Decade	**No. of Events**	**Percentage**
4.0M+	8	2%
3.0M – 3.9M	31	9%
2.0M – 2.9M	204	57%
1.0M – 1.9M	114	32%
Total	**357**	**100%**

Data Source: U.S. Geological Survey

4.8.3A – Probability of Future Events

Based on this data, it is **likely** an earthquake event will occur within 250 miles of DeKalb County and the incorporated jurisdictions within its boundaries every year. However, it is most likely these earthquakes will be minor and cause no damage or injuries.

4.8.4 – Vulnerability of Community Assets

Vulnerability of People

All of DeKalb County's population are susceptible to earthquakes. Low-income individuals are more vulnerable to earthquake impacts. Like extreme weather, it is likely that low-income people will be disproportionately affected by earthquakes due to shoddy housing construction and the age of affordable housing. Low-income individuals also experience greater difficulties in recovering from earthquake impacts. Housing is also an important factor in determining the vulnerability of people to earthquake impacts. There are indicators of increased vulnerability of some people in DeKalb County to earthquake impacts due to housing characteristics. Many older multi-family developments are suffering from physical deterioration and are often concentrated in areas with higher poverty rates.

According to U.S. Census Bureau data, 15.1% of DeKalb County's population live in poverty. This represents 113,148 people. The cities of Lithonia (38.9%), Clarkston (30.9%), and Doraville (22.8%) have the highest levels of poverty in DeKalb County. The DeKalb County 2021 Comprehensive Plan 5-Year Update notes that poverty rates have increased in certain sections of central and south DeKalb County(https://www.dekalbcountyga.gov/planning-and-sustainability/2021-comprehensive-plan-5-year-update).

Individuals with access and functional needs are more vulnerable to earthquake impacts. This may include children, the elderly, they physically or mentally disabled, non-English speakers, the medically or chemically dependent, and the transportation disadvantaged (https://www.fema.gov/sites/default/files/2020-06/fema-local-mitigation-planning-handbook_03-2013.pdf). In DeKalb County, this includes the following:

- Individuals with a disability: 10.2% (75,923 people)
- Persons 65 years and over: 11.9% (89,507 people)
- Persons under 9 years: 13.5% (101,416 people)
- Speak English less than "very well" (age 5 years+): 8.7% (60,536 people)
- Households with no vehicles available: 8.6% (24,418 households)

The City of Stonecrest (11.4%) has the highest percentage of individuals with a disability. The City of Avondale Estates (23.4%) has the highest ratio of population aged 65 years or older. The City of Lithonia (22.3%), City of Clarkston (18.3%), and City of Decatur (18.2%) have the greatest percentage of people under 9 years. The City of Doraville (42.4%), City of Clarkston (40.9%), and City of Chamblee (28.7%) have the highest percentage of people who speak English less than "very well." The City of Lithonia (14.7%) and City of Clarkston (14.3%) have the highest ratio of households with no vehicle available.

This data, retrieved from the American Community Survey and the DeKalb County 2021 Comprehensive Plan 5-Year Update, provides insight into certain characteristics of DeKalb County that are likely indicators of vulnerability. Based on this data, the greatest population vulnerabilities to earthquake hazards in DeKalb County are in the City of Clarkston, the City of Lithonia, and unincorporated areas of the county.

Vulnerability of the Economy

The leading industries in DeKalb County are Healthcare and Social Services (14.9% jobs), Retail Trade (10.9% of jobs), Accommodations and Food Services (7.2% of jobs), and Administrative and Support and Waste Management and Remediation Services (7.2% of jobs). Educational Services is another important industry in DeKalb County as it provides the fifth largest percentage of jobs (6.6%) and the highest average weekly wages of all industries ($2105). The private sector provides 85.6% of employment, while the Federal, State, and local governments provide 14.4% of DeKalb County employment

(https://explorer.gdol.ga.gov/vosnet/mis/Profiles/Counties/DeKalb.pdf). The largest employers in DeKalb County are, (1) Centers for Disease Control and Prevention (CDC); (2) Veterans Affairs Medical Center Atlanta; (3) Emory University Hospital; (4) Emory DeKalb Medical; (5) Children's Healthcare of Atlanta; (6) AT&T Mobility LLC; (7) State Farm Insurance Company/Atlanta Perimeter; (8) InterContinental Hotels Group Inc; (9) AirWatch LLC; and (10) Georgia Regional Hospital Atlanta (https://www.dekalbchamber.org/why-dekalb/).

All sectors of DeKalb County's economy are susceptible to the impacts of earthquake hazards. The loss of any of DeKalb County's leading industries could severely disrupt the community and its ability to recover from a disaster. Given the significance of the Healthcare industry in DeKalb County, an earthquake-related disaster impacting one of the community's hospitals would severely stress the capabilities of the community to respond to the medical needs of the community. The CDC, located in DeKalb County, is a Federal agency under the United States Department of Health and Human Services which works to protect America from health, safety and security threats, both foreign and in the United States (https://www.cdc.gov/about/organization/mission.htm). Its loss would not only affect DeKalb County's economy but would affect the entire nation.

Vulnerability of the Built Environment

The build environment includes infrastructure systems, critical facilities, and cultural resources. DeKalb County and each of its participating jurisdictions have developed a list of infrastructure and critical facilities which are vital to the community. The National Park Service's National Register of Historic Places is the official list of the Nation's historic places worthy of preservation.

Infrastructure systems are critical for life safety and economic viability and include transportation, power, communication, and water and wastewater systems. Critical facilities are structures and institutions which are necessary for the community's response to and recovery from emergencies. These critical facilities must continue to operate during and following disasters to reduce the severity of impacts and accelerate recovery. Appendix C of this plan lists the community's infrastructure and critical facilities. Appendix C of this plan lists the places in DeKalb County which are part of the National Register of Historic Places and are considered important cultural resources.

Considering the entire planning area is susceptible to earthquakes, increased development and population growth can reasonably translate to exposure. The DeKalb County 2021 Comprehensive Plan 5-Year Update visualizes the development of three types of Activity Centers: Neighborhood Centers, Town Centers, and Regional Centers. There are 46 Activity Centers countywide. In addition, the plan includes residential designations: Rural, Suburban, and Traditional. DeKalb County's Future Land Use Map can be accessed via https://dekalbgis.maps.arcgis.com/apps/webappviewer/index.html?id=f241af753f414cdfa31c1fdef0924584.

Vulnerability of Natural Environment

The 2021 DeKalb County Comprehensive Plan – 5 Year Update lists two significant and unique geological features. Soapstone Ridge, located in the southwestern portion of the county, contains aboriginal steatite quarries which are of archeological and historic significance. Stone Mountain, located in the eastern area of the county, is the largest exposed granite outcropping in the world. The 2021 DeKalb County Comprehensive Plan – 5 Year Update also notes there are various Federally protected wetlands in the area, mostly in the flood prone areas of perennial creeks. These natural environmental resources are minimally vulnerable to earthquake impacts.

4.8.5 – Risk Analysis

Like EF5 tornadoes and a "500-year flood," a strong earthquake is a low probability, high consequence event for DeKalb County. Unlike tornadoes and flooding, there are few events which can realistically be used as analogs to project future losses.

For this plan, FEMA's National Risk Index (NRI) will be used to identify risk project potential losses. The NRI estimates that DeKalb County and the jurisdictions which lie within its boundaries have 691,893 people and $85,060,191,000 worth of structures exposed to earthquake hazard impacts each year. The NRI projects annual losses of 0.02 people and $2,339,138 worth of structures to earthquake hazard impacts each year. It is important to reemphasize that due to the low probability and high consequences of an earthquake-related disaster in the planning area, these losses are unlikely to occur. However, if a large earthquake struck the planning area, the losses could be much greater than the NRI projects.

Table 56: Risk Analysis of Community Lifeline Systems to Earthquakes, DeKalb County

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Search and Rescue	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
	Government Services	**High Risk.** Impacts may: • damage critical facilities and historical sites • disrupt power and communications to emergency operations centers • disrupt essential government functions • cause short-term or long-term school cancellations.
	Community Safety	**High Risk.** Impacts may: • damage flood control systems • create secondary hazards such as fires, landslides, and liquefaction
Food, Water, Shelter	Food	**Moderate Risk.** Impacts may: • disrupt commercial food distribution and supply chains • affect commercial and home perishable food supplies
	Water	**High Risk.** Impacts may: • generate secondary hazards which can contaminate drinking water systems • damage wastewater systems
	Shelter	**High Risk.** Impacts may: • damage homes • damage shelters • damage lodging facilities
	Agriculture	**High Risk.** Impacts may: • injure livestock • damage farm structures and equipment • destroy flood control systems • damage irrigation systems

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Health and Medical	Medical Care	**High Risk.** Impacts may: • damage hospitals, pharmacies, long-term care facilities, and veterinary clinics • disrupt power and communications • contaminate water supply, affecting the provision of care • expend resources
	Patient Movement	**High Risk.** Impacts may: • injure personnel • damage facilities and equipment • disrupt responder communications • damage or block transportation routes • expend resources
	Public Health	**High Risk.** Impacts may: • damage facilities • disrupt power and communications • expend resources • increase susceptibility to diseases
	Fatality Management	**High Risk.** Impacts may: • expend resources • damage facilities and equipment • disrupt power and communications
	Medical Supply Chain	**High Risk.** Impacts may: • expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials) • damage or block transportation routes

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Energy	Power (Grid)	**High Risk.** Impacts may: • damage generation systems • damage transmission systems • damage distribution systems
	Fuel	**High Risk.** Impacts may: • damage fuel storage resources • damage pipelines • damage fuel distribution locations
Communications	Infrastructure	**High Risk.** Impacts may: • damage or cause wireless systems to become overburdened • damage cable and wireline systems • damage or disrupt broadcast and satellite systems • damage or cause internet systems to become overburdened
	Alerts, Warnings, and Messages	**Moderate Risk.** Impacts may: • damage physical warning systems • disrupt the delivery of emergency alerts and warnings
	911 and Dispatch	**High Risk.** Impacts may: • damage public safety answering points or dispatch centers • damage communication systems • overburden communication systems
	Responder Communications	**High Risk.** Impacts may: • damage communication systems • overburden communication systems
	Finance	**High Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Wind, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• damage banking facilities and equipment • disrupt communications
Transportation	Highway/Roadway	**High Risk.** Impacts may: • damage or block roads and bridges
	Mass Transit	**High Risk.** Impacts may: • damage buses or trains • damage or block transportation routes • delay routes
	Railway	**High Risk.** Impacts may: • damage freight or passenger trains • damage or block transportation routes • delay routes
	Aviation	**High Risk.** Impacts may: • damage airports • damage aircraft • delay routes
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**High Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from fixed facilities • damage facilities • disrupt power supply to facilities
	Hazmat, Pollutants, Contaminants	**High Risk.** Impacts may: • generate oil/hazardous materials/toxic incidents from non-fixed facilities, rail, and roadways

4.8.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E1	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, over a quarter of DeKalb County residents either live below the poverty line and/or have access and functional needs.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 25% of residents in DeKalb County have low-income and/or functional and access needs and are at a greater risk for injury due to an earthquake and will likely require more assistance recovering from the event.
E2	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 23.4% of Avondale Estates residents are aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a quarter of the City of Avondale's residents are at a greater risk for injury due to an earthquake and may require greater assistance recovery from the event.
E3	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 22.4% of Brookhaven residents are children, of which 20% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Brookhaven has a large population of children, of which about 20% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.
E4	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 28.7% of Chamblee residents speak English less than "very well".	Individuals who don't speak English well are more vulnerable to disasters. The City of Chamblee has a large population of residents that do not speak English well and are therefore at a greater risk of injury due an earthquake.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E5	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Clarkston, 30.9% of residents live below the poverty line, 32.4% are children, 40.9% do not speak English "very well", and 14.3% of households have no vehicle available.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Clarkston have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E6	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 32.2% of Decatur residents are children, of which 9.1% of live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Decatur has a large population of children, of which 9.1% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.
E7	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Doraville, 22.8% of residents live below the poverty line, and 42.4% speak English less than "very well".	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Doraville have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E8	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 21.9% of Dunwoody residents are children, of which 10.8% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Dunwoody has a large population of children, of which about 11% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E9	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Lithonia, 38.9% of residents live below the poverty line, 42.3% are children, and 14.7% have no access to a vehicle.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 38% of residents in the City of Lithonia have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E10	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 16.8% of Pine Lake's population is aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a 17% of the City of Pine Lake's residents are at a greater risk for injury due to an earthquake and may require greater assistance recovery from the event.
E11	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 10.9% of Stone Mountain's population have a physical or mental disability. 10.3% have no vehicle available, and 21.8% are children.	Individuals with functional and access needs are more vulnerable to disasters. Over 20% of residents in the City of Stone Mountain have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
E12	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Stonecrest, 11.4% of the population have a disability. Also, 26.7% of the population are children, of which 20.3% live in poverty.	Individuals with functional and access needs are more vulnerable to disasters. Over a quarter of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E13	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Tucker, 9.5% of residents have a disability. Also, 21.8% of the population are children.	Individuals with functional and access needs are more vulnerable to disasters. Over a 20% of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E14	**Earthquakes and built environment** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	Infrastructure systems and critical facilities are important for life safety, economic viability, disaster response operations, and disaster recovery operations.	Infrastructure systems and critical facilities are vulnerable to earthquake impacts. A strong earthquake near DeKalb County could damage or destroy key lifeline systems, hinder response operations, and prolong recovery operations.



Photo Source: istockphoto.com

4.9(EH) – Extreme Heat

4.9.1 – Hazard Description

According to the National Weather Service, extreme heat, also known as heat waves, is a period of abnormally hot weather generally lasting more than two days. Heat waves can occur with or without high humidity. They have the potential to cover a large area, exposing a high number of people to hazardous heat (https://www.weather.gov/safety/heat-during).

Heat can be taxing on the body. During extremely hot weather, the body's ability to cool itself is challenged. According to the Centers for Disease Control and Prevention (CDC), an average of 702 heat-related deaths occurred annually in the United States between 2004-2018 (https://www.cdc.gov/mmwr/volumes/69/wr/mm6924a1.htm). The National Highway Traffic Safety Administration (NHTSA) reports that children dying from heatstroke in cars, either because they were left or became trapped, has increased in recent years. Since 1998, over 900 child hot car deaths have occurred in the United States (https://www.nhtsa.gov/child-safety/you-can-help-prevent-hot-car-deaths).

Heat cramps may be the first sign of heat-related illness and are characterized heavy sweating and by painful muscle cramps and spasms usually in the legs and abdomen. Heat exhaustion symptoms include heavy sweating, weakness, clammy skin, fast or weak pulse, muscle cramps, dizziness, nausea and vomiting, headache, and fainting. A heat stroke is the most dangerous heat-related illness. It is characterized by a throbbing headache, confusion, nausea, dizziness, body temperature greater than 103ºF, fainting, and loss of consciousness.

Climate change is having an impact on the frequency of extreme heat. According to the Climate Science Special Report, annual average temperature over the contiguous United States has increased by 1.2°F for the period 1986–2016 relative to 1901–1960 and by 1.8°F based on a linear regression for the period 1895–2016. Annual average temperature over the contiguous United States is projected to rise. Increases of about 2.5°F are projected for the period 2021–2050 relative to 1976–2005, implying recent record-setting years may be "common" in the next few decades. Much larger rises are projected by the late century (Vose, R.S., D.R. Easterling, K.E. Kunkel, A.N. LeGrande, and M.F. Wehner, 2017: Temperature changes in the United States. In: Climate Science Special Report: Fourth National Climate Assessment, Volume I [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 185-206, doi: 10.7930/J0N29V45).

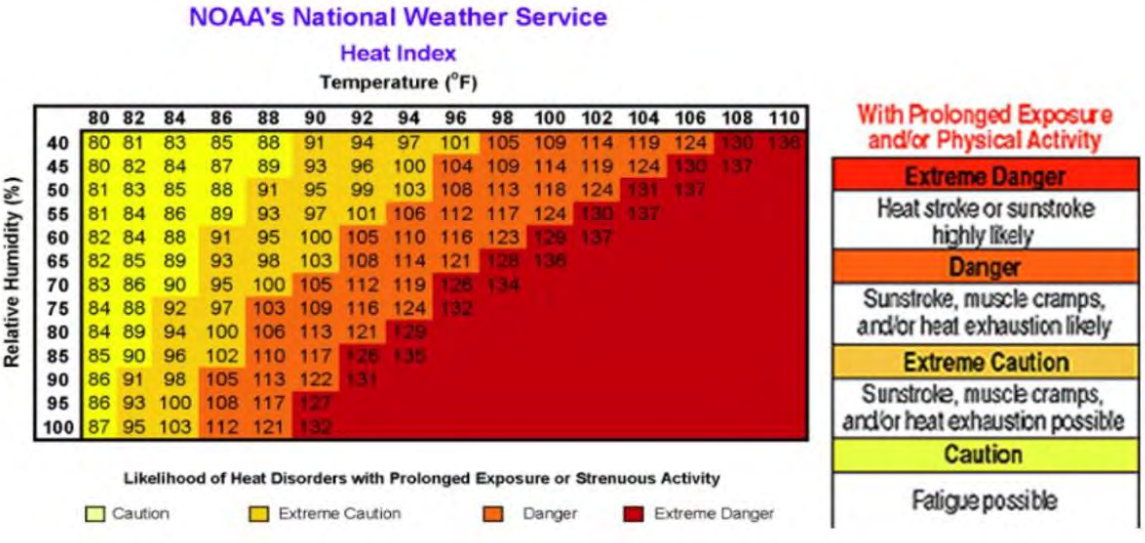
4.9.2 – Location & Extent

Extreme heat can occur anywhere in DeKalb County. Urban areas are more prone to extreme heat due to the heat island effect. According to the U.S. Environmental Protection Agency (EPA), heat islands are urbanized areas that experience higher temperatures due to structures such as buildings, roads, and other infrastructure absorbing and re-emitting the sun's heat more than natural landscapes such as forests and water bodies (https://www.epa.gov/heatislands). Extreme heat is much more likely to occur in the summer.

The hottest temperature recorded in the area was 106ºF on June 30, 2012. This broke the previous record of 105ºF, which was set on July 17, 1980. Extreme heat often comes in waves that lasts over a period of days. Four of the hottest days on record in the area occurred over a six-day period in 1980. Three of the hottest days on record occurred over three consecutive days in 2012.

In order to measure the extent of Excessive Heat, the National Weather Service, uses the Heat Index (HI), a chart that accurately measures the apparent temperature of the air as it increases with the relative humidity. The Heat Index can be used to determine what effects the temperature and humidity can have on the population. To determine the Heat Index, you need the temperature and the relative humidity.

Illustration 6: Extreme Heat Extent by the National Weather Service



Source: NOAA's National Weather Service

4.9.3 – Previous Occurrences

Table 57: Record High Temperatures, Atlanta Area

Record High Temperatures, Atlanta Area	
Date	**Temperature**
June 30, 2012	106ºF
July 1, 2012	105ºF
July 17, 1980	105ºF
July 13, 1980	105ºF
June 29, 2012	104ºF
August 22, 2007	104ºF
July 16, 1980	104ºF
August 10, 2007	103ºF
August 9, 2007	103ºF
July 12, 1980	103ºF
July 29, 1952	103ºF
July 12, 1930	103ºF

Data Source: National Weather Service, Peachtree City, GA (https://www.weather.gov/wrh/Climate?wfo=ffc)

2012 Extreme Heat Event: A strong upper-level ridge responsible for record-breaking heat across the Plains and Midwest slid toward the Southeast on June 28, 2012. This was one of the hottest events in Georgia state history, with multiple all-time heat records tied or broken, including Athens (109 degrees on June 29th broke the previous record of 108 set on 7/12/1930), Macon (108 degrees on June 30th tied the record last set on 7/17/1980), Atlanta (106 degrees on June 30th broke the old record of 105 set on 7/17/1980), and Columbus (106 degrees on June 30th tied the record last set on 9/5/1925).

4.9.4 – Vulnerability of Community Assets

Vulnerability of People

The CDC identifies the following six groups as being especially vulnerable to extreme heat (https://www.cdc.gov/disasters/extremeheat/specificgroups.html):

- **Older Adults (aged 65+):** Older adults do not adjust as well as young people to sudden temperature change. They are more likely to have a chronic medical condition that changes normal body responses to heat. Older adults are more likely to take prescription medicines that affect the body's ability to control its temperature or sweat.
- **Infants and Children:** Infants and young children rely on others to keep them cool and hydrated when it's hot outside. The NHTSA reports that child hot car deaths have increased in recent years. In 2018 and 2019, a record 53 children died of vehicular heat strokes each year. Most hot car deaths – 53% - happen because someone forgets a child in a car. About 46% of the time

when a child was forgotten, the caregiver meant to drop the child off at a daycare or preschool. Nearly 75% of children who are forgotten, and die are less than 2 years old.

- **Individuals with Chronic Conditions:** People with chronic conditions are less likely to sense and respond to changes in temperature. They may be taking medications that can make the effect of extreme heat worse. Conditions like heart disease, mental illness, poor blood circulation, and obesity are risk factors for heat-related illness.
- **Low-income Individuals:** People with limited income are less likely to have access to air conditioning. Individuals with low-income also are much more likely to be unable to afford their energy bills, especially during summer months when the cost is higher.
- **Athletes:** People who exercise in extreme heat are more likely to become dehydrated and get heat-related illness.
- **Outdoor workers:** People who work outdoors are more likely to become dehydrated and get heat-related illness.

Because the population of DeKalb County continues to grow and development projects are underway, people within the planning area are increasingly vulnerable to the short- and long-term effects of extreme heat. More development will expose more areas and more people to the heat island effect.

Vulnerability of the Economy

Extreme heat can have some effects on the economy, particularly agriculture. Heat stress can harm livestock. According to the USDA, farmers have lost over $75 million in the midwestern cattle industry from 2007-2016 (https://www.ars.usda.gov/plains-area/clay-center-ne/marc/docs/heat-stress/impactofheatstress/). Extreme heat can also affect the development of row crops and many fruit crops. For example, soybeans exposed to heat stress during flowering can result in pollen sterility and reduced seed set (https://mrcc.purdue.edu/living_wx/heatwaves/index.html).

Vulnerability of the Built Environment

Extreme can have a negative impact on infrastructure systems, particularly transportation and utilities. Heat waves will generate a greater demand on local utility systems' ability to deliver water and power. Water resources are strained due to power generation. Extreme heat may also damage roads, bridges, and railroads. Higher temperatures can cause pavement to soften and expand. This can create rutting and potholes, particularly in high-traffic areas and can place stress on bridge joints. High temperatures cause rail tracks to expand and buckle. Periods of extreme heat can affect aircraft performance and may cause airplanes to face cargo restrictions, flight delays, and cancellations. During the 2021 Pacific Northwest Heatwave, pavement was observed to soften and expand in Portland, Oregon (https://www.npr.org/2021/06/29/1011269025/photos-the-pacific-northwest-heatwave-is-melting-power-cables-and-buckling-roads).

High heat can deteriorate and buckle pavement, warp, or buckle railway tracks, and exceed certain types of aircraft operational limits. Demands for electricity increase to keep homes, workspaces, and food storage areas cool. This demand can strain the electrical grid.

Because the population of DeKalb County continues to grow and development projects are underway, the built environment within the planning area will be increasingly vulnerable to the short- and long-term effects of extreme heat. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies.

Vulnerability of Natural Environment

Excessive heat events often occur in tandem with droughts. In fact, droughts can make heat waves worse because the sun can heat dry ground more efficiently than wet ground. The two work together to impact the natural environment. Trees and plants can be damaged and die due to extreme heat and drought. Bodies of water can dry up. The heat and reduced water supply can cause harm to the region's wildlife, as well.

4.9.5 – Risk Analysis

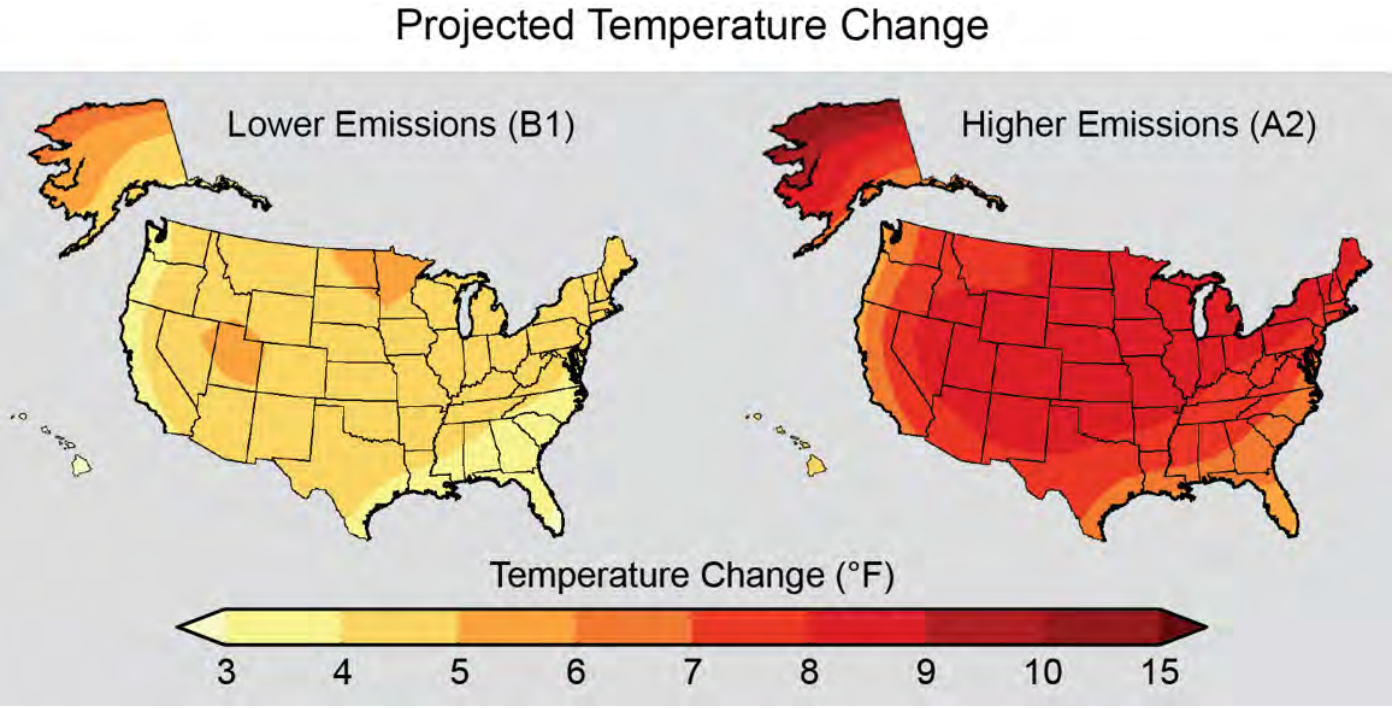
All people, elements of the economy, built environment, and natural environment are exposed to extreme heat impacts. Young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts. The economy, particularly agriculture, are at risk of losses due to extreme heat impacts. Transportation and energy infrastructure can be negatively impacted by extreme heat events. Forests, water bodies, and wildlife are subject to damage from extreme heat exposure.

An analog for an extreme heat risk analysis is the 1980 heat wave. It was one of the worst in United States history. It's estimated that there were up to 10,000 fatalities directly or indirectly caused by the heat and drought, and approximately $20 billion in crop damages in the United States (https://www.hsdl.org/c/tl/1980-us-heat-wave/). Georgia suffered approximately $500 million in economic losses, mainly due to crop and livestock losses, increased energy demand, and highway damage (https://journals.ametsoc.org/view/journals/mwre/109/10/1520-0493_1981_109_2055_tshwad_2_0_co_2.xml?tab_body=pdf). In Alabama, the sustained period of extreme heat and high humidity took its toll on the state. In the month of July alone, there was an estimated 120 heat-related deaths along with the loss of more than 200,000 chickens and half the state's corn crop (https://www.weather.gov/bmx/climo_1980heatwave).

Less severe, but somewhat similar heat waves occurred in the 1950s and 2010s. So, it appears that about every 30 years, a severe extreme heat event occurs in Georgia. If an event like the 1980 heat wave occurred in Georgia, the event would cause approximately $1.7 billion dollars in economic losses. It is likely it would cause heat-related illness and deaths, but probably not on the level the 1980 event caused. This is due to the increased usage of air conditioning in homes now compared to 1980.

The risk for extreme heat events is likely to be exacerbated by climate change. According to the Georgia Hazard Mitigation Strategy, climate change has generally increased the probability of heat waves, and prolonged extreme heat events have been unprecedented since the start of reliable instrumental records in 1895. The National Climate Assessment projects an increase in average temperature of 8ºF - 9ºF by the end of the century if carbon emissions increase.

Illustration 7: Projected Temperature Change



Data Source: National Weather Service, Peachtree City, GA (https://www.weather.gov/wrh/Climate?wfo=ffc)

Table 58: Risk Analysis of Community Lifeline Systems to Extreme Heat, DeKalb County

Risk Analysis of Community Lifeline Systems to Extreme Heat, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Safety and Security	Law Enforcement /Security	**Moderate Risk.** Impacts may: • injure personnel • damage transportation routes
	Fire Services	**High Risk.** Impacts may: • injure personnel • damage transportation routes • expend resources
	Search and Rescue	**Moderate Risk.** Impacts may: • injure personnel • damage transportation routes
	Government Services	**Low Risk.** Impacts may:

Risk Analysis of Community Lifeline Systems to Extreme Heat, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
		• cause short-term or long-term school cancellations.
	Community Safety	**No Risk.**
Food, Water, Shelter	Food	**Low Risk.** Impacts may: • affect commercial and home perishable food supplies
	Water	**No Risk.**
	Shelter	**No Risk.**
	Agriculture	**High Risk.** Impacts may: • injure livestock • damage crops
Health and Medical	Medical Care	**Low Risk.** Impacts may: • expend resources
	Patient Movement	**Moderate Risk.** Impacts may: • injure personnel • expend resources
	Public Health	**Moderate Risk.** Impacts may: • expend resources
	Fatality Management	**Low Risk.** Impacts may: • expend resources
	Medical Supply Chain	**Low Risk.** Impacts may: • expend resources (e.g., blood supply, pharmaceuticals, devices, medical gases, raw materials • damage transportation routes
Energy	Power (Grid)	**High Risk.** Impacts may: • overwhelm resources
	Fuel	**No Risk.**

Risk Analysis of Community Lifeline Systems to Extreme Heat, DeKalb County		
Community Lifeline System	**Lifeline Component**	**Risk**
Communications	Infrastructure	**No Risk.**
	Alerts, Warnings, and Messages	**No Risk.**
	911 and Dispatch	**Low Risk.** Impacts may: • overburden communication systems
	Responder Communications	**No Risk.**
	Finance	**No Risk.**
Transportation	Highway/Roadway	**Moderate Risk.** Impacts may: • damage roads and bridges
	Mass Transit	**Low Risk.** Impacts may: • damage transportation routes
	Railway	**No Risk.**
	Aviation	**No Risk.**
	Maritime	**No Risk.**
Hazardous Materials	Facilities	**No Risk.**
	Hazmat, Pollutants, Contaminants	**No Risk.**

4.2.5A – Problem Statements

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH1	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In DeKalb County and the jurisdictions that lie within its boundaries: • 14% of the population is ≤9 years old • 12% of the population is ≥65 years old • 10% of the population has a disability	Over 25% of the population in DeKalb County and the jurisdictions that lie within its boundaries are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH2	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Avondale Estates: • 11% of the population is ≤9 years old • 23% of the population is ≥65 years old • 9% of the population has a disability	Over 30% of the population in the City of Avondale Estates are vulnerable to extreme heat impacts.
EH3	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Brookhaven: • 15% of the population is ≤9 years old • 10% of the population is ≥65 years old • 6% of the population has a disability	Over 25% of the population in the City of Brookhaven are vulnerable to extreme heat impacts.
EH4	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Chamblee: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 7% of the population has a disability	Over 20% of the population in the City of Chamblee are vulnerable to extreme heat impacts.
EH5	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Clarkston: • 18% of the population is ≤9 years old • 4% of the population is ≥65 years old • 8% of the population has a disability	Over 20% of the population in the City of Clarkston are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH6	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Decatur: • 18% of the population is ≤9 years old • 12% of the population is ≥65 years old • 8% of the population has a disability	Over 30% of the population in the City of Decatur are vulnerable to extreme heat impacts.
EH7	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Doraville: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 5% of the population has a disability	Over 20% of the population in the City of Doravillle are vulnerable to extreme heat impacts.
EH8	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Dunwoody: • 16% of the population is ≤9 years old • 14% of the population is ≥65 years old • 7% of the population has a disability	Over 30% of the population in the City of Dunwoody are vulnerable to extreme heat impacts.
EH9	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Lithonia: • 22% of the population is ≤9 years old • 7% of the population is ≥65 years old • 9% of the population has a disability	Over 30% of the population in the City of Lithonia are vulnerable to extreme heat impacts.
EH10	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Pine Lake: • 17% of the population is ≥65 years old • 6% of the population has a disability	Over 15% of the population in the City of Pine Lake are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH11	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Stone Mountain: • 10% of the population is ≤9 years old • 9% of the population is ≥65 years old • 11% of the population has a disability	Over 20% of the population in the City of Stone Mountain are vulnerable to extreme heat impacts.
EH12	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Stonecrest: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 11% of the population has a disability	Over 20% of the population in the City of Stonecrest are vulnerable to extreme heat impacts.
EH13	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Tucker: • 12% of the population is ≤9 years old • 15% of the population is ≥65 years old • 10% of the population has a disability	Over 25% of the population in the City of Tucker are vulnerable to extreme heat impacts.
EH14	**Extreme Heat and economy** Extreme heat event can have a devastating effect on the agricultural industry.	There are 34 farms in DeKalb County which generate approximately $546,000 in revenue from crop and livestock sales each year.	An extreme heat event can have a devastating effect on DeKalb County's agricultural industry.

4.10 – Hazard Risk Summary

The table below outlines each participating jurisdictions' general risk to this plan's profiled hazards. The rankings are based on a composite evaluation of this plan's risk assessment, namely, a hazard's probability of occurring in the future, the vulnerability of a jurisdiction to a specific hazard, the intensity of past

Category	Range (Per Year)
Unlikely	0%
Occasional	1% -10%
Likely	11% - 50%
Highly Likely	51% - 100%

hazard impacts, and a joint evaluation of local experts and stakeholders. For reference, the probability categories/percentages previously indicated in Illustration are shown to the right.

Table 59: Hazard Risk Summary, DeKalb County

HAZARD RISK SUMMARY, DEKALB COUNTY							
Jurisdictions	**Hazards**						
	Drought	**Earthquake**	**Extreme Heat**	**Flood**	**Severe Winter Weather**	**Wildfire**	**Wind**
DeKalb County	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Avondale Estates	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Brookhaven	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Chamblee	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Clarkston	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Decatur	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Doraville	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Dunwoody	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Lithonia	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Pine Lake	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Stone Mountain	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Stonecrest	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely
Tucker	Likely	≤2.0 Likely ≥2.0 Occasional	Highly Likely	Highly Likely	Highly Likely	Highly Likely	Highly Likely

4.10.1 – Problem Statement Summary

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W1	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, over a quarter of DeKalb County residents either live below the poverty line and/or have access and functional needs.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 25% of residents in DeKalb County have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance recovering from the event.
W2	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 23.4% of Avondale Estates residents are aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a quarter of the City of Avondale's residents are at a greater risk for injury due to a high wind event and may require greater assistance recovery from the event.
W3	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 22.4% of Brookhaven residents are children, of which 20% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters The City of Brookhaven has a large population of children, of which about 20% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.
W4	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 28.7% of Chamblee residents speak English less than "very well".	Individuals who don't speak English well are more vulnerable to disasters. The City of Chamblee has a large population of residents that do not speak English well and are therefore at a greater risk of injury due to a high wind event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W5	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Clarkston, 30.9% of residents live below the poverty line, 32.4% are children, 40.9% do not speak English "very well", and 14.3% of households have no vehicle available.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Clarkston have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W6	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 32.2% of Decatur residents are children, of which 9.1% of live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Decatur has a large population of children, of which 9.1% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.
W7	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Doraville, 22.8% of residents live below the poverty line, and 42.4% speak English less than "very well".	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Doraville have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W8	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 21.9% of Dunwoody residents are children, of which 10.8% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Dunwoody has a large population of children, of which about 11% live below the poverty line and are at a greater risk for injury due to a high wind event and may require more assistance recovering from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W9	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Lithonia, 38.9% of residents live below the poverty line, 42.3% are children, and 14.7% have no access to a vehicle.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 38% of residents in the City of Lithonia have low-income and/or functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W10	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 16.8% of Pine Lake's population is aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a 17% of the City of Pine Lake's residents are at a greater risk for injury due to a high wind event and may require greater assistance recovery from the event.
W11	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, 10.9% of Stone Mountain's population have a physical or mental disability. 10.3% have no vehicle available, and 21.8% are children.	Individuals with functional and access needs are more vulnerable to disasters. Over 20% of residents in the City of Stone Mountain have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W12	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Stonecrest, 11.4% of the population have a disability. Also, 26.7% of the population are children, of which 20.3% live in poverty.	Individuals with functional and access needs are more vulnerable to disasters. Over a quarter of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
W13	**Wind and People** Low-income individuals, older individuals, and individuals with a functional or access need are especially vulnerable to and may require more assistance recovering from wind hazard impacts.	According to the U.S. Census Bureau, in Tucker, 9.5% of residents have a disability. Also, 21.8% of the population are children.	Individuals with functional and access needs are more vulnerable to disasters Over a 20% of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
W14	**Wind and built environment** High wind events are highly likely to occur in DeKalb County each year.	Infrastructure systems and critical facilities are important for life safety, economic viability, disaster response operations, and disaster recovery operations.	Infrastructure systems and critical facilities are vulnerable to wind hazard impacts. A major wind-related disaster in DeKalb County could damage or destroy key lifeline systems, hinder response operations, and prolong recovery operations.
FL1	**Flooding and people** Low-income individuals, and individuals with functional and access needs (children, elderly, disability, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In DeKalb County and the jurisdictions that lie within its boundaries: • 14% of the population is ≤9 years old • 12% of the population is ≥65 years old • 10% of the population has a disability • 9% of the population speak English less than "very well" • 8.6% of households have no vehicle available	Over 25% of the population in DeKalb County and the jurisdictions that lie within its boundaries are vulnerable to extreme heat impacts.
FL2	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Avondale Estates: • 11% of the population is ≤9 years old • 23% of the population is ≥65 years old • 9% of the population has a disability • 2% of the population speak English less than "very well" • 3% of households have no vehicle available	Over 30% of the population in the City of Avondale Estates are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL3	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Brookhaven: • 15% of the population is ≤9 years old • 10% of the population is ≥65 years old • 6% of the population has a disability • 17% of the population speak English less than very well • 7% of households no vehicle available	Over 25% of the population in the City of Brookhaven are vulnerable to extreme heat impacts.
FL4	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Chamblee: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 7% of the population has a disability • 29% of the population speak English less than “very well” • 9% of households have no vehicle available	Over 30% of the population in the City of Chamblee are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL5	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Clarkston: • 18% of the population is ≤9 years old • 4% of the population is ≥65 years old • 8% of the population has a disability • 41% of the population speak English less than "very well" • 14% of households have no vehicle available	Over 40% of the population in the City of Clarkston are vulnerable to extreme heat impacts.
FL6	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Decatur: • 18% of the population is ≤9 years old • 12% of the population is ≥65 years old • 8% of the population has a disability • 3% of the population speak English less than "very well" • 13% of household have no vehicle available	Over 30% of the population in the City of Decatur are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL7	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Doraville: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 5% of the population has a disability • 42% of the population speak English less than "very well" • 9% of households have no vehicle available	Over 40% of the population in the City of Doravillle are vulnerable to extreme heat impacts.
FL8	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Dunwoody: • 16% of the population is ≤9 years old • 14% of the population is ≥65 years old • 7% of the population has a disability • 8% of the population speak English less than "very well" • 5% of households have no vehicle available	Over 30% of the population in the City of Dunwoody are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL9	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Lithonia: • 22% of the population is ≤9 years old • 7% of the population is ≥65 years old • 9% of the population has a disability • 4% of the population speak English less than "very well" • 15% of households have no vehicle available	Over 30% of the population in the City of Lithonia are vulnerable to extreme heat impacts.
FL10	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Pine Lake: • 17% of the population is ≥65 years old • 6% of the population has a disability • 1% of the population speak English less than "very well" • 2% of households have no vehicle available	Over 15% of the population in the City of Pine Lake are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL11	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Stone Mountain: • 10% of the population is ≤9 years old • 9% of the population is ≥65 years old • 11% of the population has a disability • 6% of the population speak English less than "very well" • 10% of households have no vehicle available	Over 20% of the population in the City of Stone Mountain are vulnerable to extreme heat impacts.
FL12	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Stonecrest: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 11% of the population has a disability • 1% of the population speak English less than "very well" • 10% of households have no vehicle available	Over 20% of the population in the City of Stonecrest are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
FL13	**Flooding and people** Low-income individuals, and individuals with functional and access needs (disability, elderly, children, non-proficient English speakers, no vehicle) are more vulnerable to flood hazard impacts.	In the City of Tucker: • 12% of the population is ≤9 years old • 15% of the population is ≥65 years old • 10% of the population has a disability • 13% of the population speak English less than "very well" • 6% of the population have no vehicle available	Over 25% of the population in the City of Tucker are vulnerable to extreme heat impacts.
FL14	**Flooding and people/built environment** Nancy Creek has experienced significant flooding six times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from Nancy Creek.	People and structures along Warrenhall Lane, Durret Way are regularly affected by flooding from Nancy Creek.
FL 15	**Flooding and people/built environment** Peachtree Creek has experienced significant flooding six times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from Peachtree Creek.	People and structures along Hanover West Drive, Clairmont Road, and Buford Road are regularly affected by flooding from Peachtree Creek.
FL16	**Flooding and people/built environment** North Fork Peachtree Creek has experienced significant flooding five times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from North Fork Peachtree Creek.	People and structures along Bamby Lane, Cove Circle, Victory Drive, Dunwoody Place, Converse Drive are regularly affected by flooding from North Fork Peachtree Creek.
FL17	**Flooding and people/built environment** South Fork Peachtree Creek has experienced significant flooding five times since 1997.	Several people, structures, and transportation corridors are at risk for flooding impacts from South Fork Peachtree Creek.	People and structures along Lansbury Village Drive, Orion Drive, Lawrenceville Highway, Noble Drive, Helen Drive, and Kay Lane are regularly affected by flooding from Peachtree Creek.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
WW1	**Severe Winter Weather and People** Severe winter weather events, especially ice storms, can cause extended power outages in DeKalb County.	According to the U.S. Census Bureau, 37.5% of residents in DeKalb County use electricity as their primary energy source for heating.	Ice and snowstorms often create extended power outages. Extended power outages in the winter creates dangers in the form of cold weather exposure and carbon monoxide exposure from the improper use of gas furnaces and heaters.
WW2	**Severe Winter Weather and Economy** Severe winter weather events often create hazardous travel conditions.	Between 80% - 90% of DeKalb County residents community to work via roadways.	Snow and ice events in DeKalb County often cause roads to become impassible. southeastern United States where motorist have less experience driving in the conditions and local governments are less equipped to deal with the impacts. Because of this, businesses often close which negatively affects economy.
WW3	**Severe Winter Weather and the Built Environment** Severe winter weather events, especially ice storms, can cause extended power outages in DeKalb County.	DeKalb County has identified critical facilities which are necessary for the community's response to emergencies and disasters.	Ice and snowstorms often create power outages in DeKalb County. If a power outage affects the community's critical facilities, the ability of governmental officials, first responders, emergency managers, healthcare workers, and other essential workers ability to respond effectively may be hindered.
D1	**Drought and Economy** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	Agricultural production generates over a half-million dollars of income for farmers in DeKalb County.	Agricultural production is at a high-risk during drought periods. This risk affects the economy and people of DeKalb County.
D2	**Drought and Natural Environment** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	DeKalb County residents and critical facilities depend upon surface and groundwater reservoirs for the community's water supply.	Rivers, streams, and groundwater reservoirs are at a high-risk during drought periods. This risk affects the people, businesses, and critical facilities of DeKalb County.
D3	**Drought and Natural Environment** Some magnitude of drought is likely to occur in DeKalb County during the next five years.	DeKalb County's natural environment consists of woodland areas. Numerous people live in and around these wooded areas.	Woodlands are at high-risk of wildfire during long-term drought periods. This risk affects people living near the wooded areas.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
WF1	**Wildfire and people** The Wildfire Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that 467 people are exposed to hazard impacts each year.	Many people in DeKalb County live in areas where human development meets or intermingles with undeveloped wildland. This increases the wildfire risk for people living in DeKalb County and exposes them to dangers associated with wildfires. Wildfire smoke may also generate smoke that can affect air quality. This poses a serious health risk to the elderly, the young, and people with breathing conditions.
WF 2	**Wildfire and people** The Wildfire Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that $2,680 work of agriculture are exposed to wildfire hazard impacts each year.	Some businesses and farms are in areas where human development meets or intermingles with undeveloped wildland. This increases the risk to crop, livestock, structures, production, wages, and equipment loses.
WF3	**Wildfire and built environment** The Wildland Urban Interface (WUI) Index is high in many areas of DeKalb County.	FEMA's National Risk Index (NRI) estimates that $57,902,948 worth of structures are exposed to wildfire hazard impacts each year.	Some critical facilities, homes, cultural resources, and infrastructure are in areas where human development meets or intermingles with undeveloped wildland. FEMA's National Risk Index (NRI) projects $1,164 work of structure losses each year due to wildfire hazard impacts. A major wildfire may cause much more damage.
WF4	**Wildfire and natural environment** The Wildland Urban Interface (WUI) Index is high in many areas of DeKalb County.	DeKalb County consists of numerous natural resources which may be exposed to wildfires.	A major wildfire may destroy parts of DeKalb County's natural environment and cause secondary hazards such as flooding, debris flows, and landslides. This may impact DeKalb County's people, economy, and build environment.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E1	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, over a quarter of DeKalb County residents either live below the poverty line and/or have access and functional needs.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 25% of residents in DeKalb County have low-income and/or functional and access needs and are at a greater risk for injury due to an earthquake and will likely require more assistance recovering from the event.
E2	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 23.4% of Avondale Estates residents are aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a quarter of the City of Avondale's residents are at a greater risk for injury due to an earthquake and may require greater assistance recovery from the event.
E3	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 22.4% of Brookhaven residents are children, of which 20% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Brookhaven has a large population of children, of which about 20% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.
E4	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 28.7% of Chamblee residents speak English less than "very well".	Individuals who don't speak English well are more vulnerable to disasters. The City of Chamblee has a large population of residents that do not speak English well and are therefore at a greater risk of injury due an earthquake.
E5	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Clarkston, 30.9% of residents live below the poverty line, 32.4% are children, 40.9% do not speak English "very well", and 14.3% of households have no vehicle available.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Clarkston have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E6	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 32.2% of Decatur residents are children, of which 9.1% of live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Decatur has a large population of children, of which 9.1% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.
E7	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Doraville, 22.8% of residents live below the poverty line, and 42.4% speak English less than “very well”.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 40% of residents in the City of Doraville have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E8	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 21.9% of Dunwoody residents are children, of which 10.8% live below the poverty line.	Children and low-income individuals are more vulnerable to disasters. The City of Dunwoody has a large population of children, of which about 11% live below the poverty line and are at a greater risk for injury due to an earthquake and may require more assistance recovering from the event.
E9	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Lithonia, 38.9% of residents live below the poverty line, 42.3% are children, and 14.7% have no access to a vehicle.	Low-income individuals and individuals with functional and access needs are more vulnerable to disasters. Over 38% of residents in the City of Lithonia have low-income and/or functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
E10	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 16.8% of Pine Lake's population is aged 65 or older.	Older individuals are more vulnerable to disasters. Nearly a 17% of the City of Pine Lake's residents are at a greater risk for injury due to an earthquake and may require greater assistance recovery from the event.
E11	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, 10.9% of Stone Mountain's population have a physical or mental disability. 10.3% have no vehicle available, and 21.8% are children.	Individuals with functional and access needs are more vulnerable to disasters. Over 20% of residents in the City of Stone Mountain have functional and access needs, are at a greater risk for injury due to a high wind event and will likely require more assistance to recover from the event.
E12	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Stonecrest, 11.4% of the population have a disability. Also, 26.7% of the population are children, of which 20.3% live in poverty.	Individuals with functional and access needs are more vulnerable to disasters. Over a quarter of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E13	**Earthquakes and people** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	According to the U.S. Census Bureau, in Tucker, 9.5% of residents have a disability. Also, 21.8% of the population are children.	Individuals with functional and access needs are more vulnerable to disasters. Over a 20% of residents in the City of Stonecrest have functional and access needs, are at a greater risk for injury due to an earthquake and will likely require more assistance to recover from the event.
E14	**Earthquakes and built environment** Earthquakes are low-probability, high consequence events for DeKalb County and the jurisdictions that lie within its boundaries.	Infrastructure systems and critical facilities are important for life safety, economic viability, disaster response operations, and disaster recovery operations.	Infrastructure systems and critical facilities are vulnerable to earthquake impacts. A strong earthquake near DeKalb County could damage or destroy key lifeline systems, hinder response operations, and prolong recovery operations.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH1	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In DeKalb County and the jurisdictions that lie within its boundaries: • 14% of the population is ≤9 years old • 12% of the population is ≥65 years old • 10% of the population has a disability	Over 25% of the population in DeKalb County and the jurisdictions that lie within its boundaries are vulnerable to extreme heat impacts.
EH2	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Avondale Estates: • 11% of the population is ≤9 years old • 23% of the population is ≥65 years old • 9% of the population has a disability	Over 30% of the population in the City of Avondale Estates are vulnerable to extreme heat impacts.
EH3	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Brookhaven: • 15% of the population is ≤9 years old • 10% of the population is ≥65 years old • 6% of the population has a disability	Over 25% of the population in the City of Brookhaven are vulnerable to extreme heat impacts.
EH4	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Chamblee: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 7% of the population has a disability	Over 20% of the population in the City of Chamblee are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH5	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Clarkston: • 18% of the population is ≤9 years old • 4% of the population is ≥65 years old • 8% of the population has a disability	Over 20% of the population in the City of Clarkston are vulnerable to extreme heat impacts.
EH6	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Decatur: • 18% of the population is ≤9 years old • 12% of the population is ≥65 years old • 8% of the population has a disability	Over 30% of the population in the City of Decatur are vulnerable to extreme heat impacts.
EH7	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Doraville: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 5% of the population has a disability	Over 20% of the population in the City of Doravillle are vulnerable to extreme heat impacts.
EH8	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Dunwoody: • 16% of the population is ≤9 years old • 14% of the population is ≥65 years old • 7% of the population has a disability	Over 30% of the population in the City of Dunwoody are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH9	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Lithonia: • 22% of the population is ≤9 years old • 7% of the population is ≥65 years old • 9% of the population has a disability	Over 30% of the population in the City of Lithonia are vulnerable to extreme heat impacts.
EH10	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Pine Lake: • 17% of the population is ≥65 years old • 6% of the population has a disability	Over 15% of the population in the City of Pine Lake are vulnerable to extreme heat impacts.
EH11	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Stone Mountain: • 10% of the population is ≤9 years old • 9% of the population is ≥65 years old • 11% of the population has a disability	Over 20% of the population in the City of Stone Mountain are vulnerable to extreme heat impacts.
EH12	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Stonecrest: • 15% of the population is ≤9 years old • 8% of the population is ≥65 years old • 11% of the population has a disability	Over 20% of the population in the City of Stonecrest are vulnerable to extreme heat impacts.

Problem Statements			
Number	**Area of Focus**	**Community Characteristic**	**Problem Statement**
EH13	**Extreme Heat and people** Extreme heat events are dangerous for young children, elderly people, and people with chronic medical conditions like heart disease, mental illness, poor blood circulation, and obesity are most vulnerable to extreme heat impacts.	In the City of Tucker: • 12% of the population is ≤9 years old • 15% of the population is ≥65 years old • 10% of the population has a disability	Over 25% of the population in the City of Tucker are vulnerable to extreme heat impacts.
EH14	**Extreme Heat and economy** Extreme heat event can have a devastating effect on the agricultural industry.	There are 34 farms in DeKalb County which generate approximately $546,000 in revenue from crop and livestock sales each year.	An extreme heat event can have a devastating effect on DeKalb County's agricultural industry.

4.11 – Excluded Hazards

Coastal Hazards

Coastal Hazards was excluded from DeKalb County's HMP because it is not a coastal county.

Geological Hazards

The Georgia Hazard Mitigation Strategy does not identify DeKalb County as being at risk from geological hazards, including landslides. The USGS's landslide risk database also corroborates this claim. Accordingly, the hazard has been excluded from this plan.

***Note**: Human-caused hazards, though identified in the State of Georgia Multi-Hazard Mitigation Plan and Statewide Hazard Assessment, are not included in DeKalb County's previous HMP (2016) nor this plan update. This includes: Communicable Disease.*

***Note**: Related to Communicable Disease, as of March 2020, the United States is fighting the coronavirus (COVID-19) pandemic. COVID-19 is a respiratory illness that can spread from person to person. The virus that causes COVID-19 is a novel coronavirus, first identified during an investigation into an outbreak in Wuhan, China. The Georgia Department of Public Health (DPH), in consultation with the Centers for Disease Control and Prevention (CDC), is evaluating patient information received from healthcare providers about potential cases of coronavirus in Georgia. As of March 26, 2020, a State of Emergency that includes a "Shelter in Place" order was declared for DeKalb County. This declaration took effect Thursday, March 26, 2020, and ended on Thursday, April 30, 2020. More information about this pandemic can be found on DeKalb County's website at* https://www.dekalbcountyga.gov/Covid-19/Response.

4.12 – Special Consideration, Climate Change



Photo Source: Google

Climate change, as described by the National Aeronautics and Space Administration (NASA), is "a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates."

Climate change, as described by the National Aeronautics and Space Administration (NASA), is "a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates."

Further, NASA states, "Changes observed in Earth's climate since the early 20th century are primarily driven by human activities, particularly fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere, raising Earth's average surface temperature. These human-produced temperature increases are commonly referred to as global warming. Global warming is the long-term heating of Earth's climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere."

Scientific observations, coupled with climate data records, provide evidence of climate change "key indicators." Among them are global land and ocean temperature increases; rising sea levels; ice loss at Earth's poles and in mountain glaciers; frequency and severity changes in extreme weather such as hurricanes, heatwaves, wildfires, droughts, floods and precipitation; and cloud and vegetation cover changes, to name a few.

Many of the hazards identified within this update to DeKalb County's HMP are, in one way or another, potentially affected by climate change. These include Drought, Flood (Inland), Severe Weather (including thunderstorm, hail, lightning, wind, and winter storms) and Tornadoes. Climate change can also have an effect on wildfires, as rising temperatures and drought can create fire tinderboxes.

Health Risks

Certain people are more vulnerable to emerging climate change impacts. Climate change raises health risks for people with existing physical or mental illness, children, and older adults, those who work outdoors, and those living in areas prone to flooding. Climate change can lead to weather events and conditions that are associated with health hazards such as 1) heat waves, which can cause heat-related illnesses, heat

stroke, and other serious health problems, 2) extreme drought and flooding, 3) disruptions to agriculture, i.e., altered growing and storage conditions requiring changes in crop and livestock species or food production practices.

Given the potential for climate change to increase the frequency and magnitude of natural hazards, FEMA encourages states, regions, counties, and municipalities to consider climate change when mitigating hazards.

Section 5 – Mitigation Strategy

Planning Process
Local Procedures & Resources
Planning Area
Risk Assessment
Mitigation Strategy

Each type of plan stakeholder provides a set of capabilities, in some cases broad and in some cases narrow, by which they can increase the planning area's resiliency.

County and Municipal Governments

The broadest form of mitigation capabilities come from county and municipal governments. Their inherent legal authority allows them to institute the greatest regulatory and developmental changes.

Institutional Capability

DeKalb County is a whole community that can implement the mitigation strategies identified herein. In addition, the County can promote the mitigation process, further educating the public about the hazards prevalent to the area, as well as the mitigation process necessary to mitigate those hazards.

In an emergency, county/municipality response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activity. Normal governmental duties will be maintained, with emergency operations carried out by those agencies assigned specific emergency functions under the DeKalb County Local Emergency Operations Plan, or LEOP.

Political Capability

During the process of developing this HMP update, opposition to mitigation measures was not evident from DeKalb County, the Cities of Avondale Estate, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain and Tucker, GA, and the many plan stakeholders. The primary limiting factor is funding, which is made more difficult by the current situation in the local, state, and national economy.

DeKalb County, through partnerships with the participating agencies, is well-organized and responsive to community needs. Leadership is informed and remains up to date on the hazards that threaten the area. Citizens who participated in the public meetings and presentations showed a genuine interest in doing things to promote a safer and more resilient community. All (the governing board, staff, and citizen population) appear willing to promote the economic efficiency and social utility of the mitigation measures contained in this plan, if appropriate funding can be identified.

Technical Capability

DeKalb County and its participating jurisdiction(s) have the basic technology needed to mitigate and respond to natural disasters. They are equipped with phone and fax lines and a functional Emergency Operations Center (EOC) in case of disaster. Most key persons are equipped with cell phones, which can act as a backup to landlines in case service is lost. The County is connected to the internet, which is a valuable source of information on approaching hazards and mitigation measures. The County sponsors a website where there is a link to the DeKalb County Emergency Management Agency. The County's GIS (mapping) services are limited, but until municipal governments fully implement GIS standard services, appropriate state agencies, like the Georgia Mitigation Information System supported by GEMA, will provide the necessary support.

Fiscal Capability

The stakeholders of this mitigation plan are not unique in the issues felt by small governments to retain the staff and resources necessary to accomplish the strategies necessary to mitigate local hazards. However, they are aware of potential diverse funding sources available to communities for assisting in the fiscal needs required to implement local hazard mitigation plans, including both government and private programs.

While federal and state programs carry out the bulk of disaster relief programs that provide funds for mitigation, local governments can search for alternative funding sources to supplement the local hazard mitigation budget. The participants in the mitigation planning process are aware that before effective mitigation strategies can be applied, stable funding sources and effective incentives must be established on a per project basis to encourage participation by the private and public sectors.

Land Use Planning

Through land use regulatory powers granted by the state, local governments can control the location, density, type and timing of land use and development in the community. Provisions of the land use plans are implemented through regulatory tools that include zoning and subdivision ordinances, and taxation. All participating municipal governments have direct land use planning programs through ordinances, codes, and zoning policies.

Taxation

Taxation can be a powerful mitigation tool by providing local governments with a way to guide development. Tax abatements may be used to encourage landowners and developers to integrate mitigation measures into the process of building new developments and retrofitting existing properties in the floodplain. These tools can be especially effective in encouraging the mitigation of existing structures.

5.1 – Floodplain Programs

Floodplain management is the operation of a community program of measures for reducing flood damage. These measures take a variety of forms; and generally, include zoning, subdivision, or building requirements, and special-purpose floodplain ordinances. The National Flood Insurance Program is aimed at reducing impact of flooding on private and public structures. This is achieved by providing affordable insurance for property owners and by encouraging communities to adopt and enforce floodplain management regulations. These efforts help mitigate the effects of flooding on new and improved structures. Overall, the program reduces the socio-economic impact of disasters by promoting the purchase and retention of Risk Insurance in general, and National Flood Insurance in particular.

The County's Floodplain Administrator administers each NFIP participating community's floodplain program. NFIP Coordinators/Floodplain Administrators utilize by adoption, federally created flood hazard maps to administer their programs and to actuarially rate new construction for flood insurance or development restrictions.

Following is a brief description of the participating jurisdictions Building Code office information and procedures. (Has been requested)

City of Avondale Estates– (Has been requested)

City of Brookhaven – (Has been requested)

City of Chamblee – (Has been requested)

City of Clarkston – (Has been requested)

City of Decatur– (Has been requested)

City of Doraville– (Has been requested)

City of Dunwoody– (Has been requested)

City of Lithonia – (Has been requested)

City of Pine Lake– (Has been requested)

City of Stone Mountain – (Has been requested)

City of Tucker - (Has been requested)

Unincorporated DeKalb County enforces the local floodplain management ordinance that exceeds requirements set forth by NFIP. The DeKalb County Community Development Agency and the DeKalb County Water System also devote resources to enforce local floodplain management requirements. This ordinance exists as Section 58 of the Official Code of DeKalb County, and in Chapters 409 and 418 of the DeKalb County Development Standards. In DeKalb County, for residential development, 3 feet of freeboard is required between the lowest (habitable) finished floor elevation and the base flood elevation. DeKalb County also regulates new development out of the regulatory floodway; and dam breach zones.

DeKalb County has other floodplain management programs to:

- Determine Dam Breach Zones for high hazard Category 1 Dams
- Require stream buffers that far exceed minimum State requirements
- Acquire chronically flooded homes
- Acquire vacant floodplain land
- Assist Dam Owners financially, to make their high hazard dams safe through DeKalb County's Storage Volume Purchase Program.

In DeKalb County, new residential construction is prohibited within the floodplain and any other construction is restricted. This restriction is enforced through the building permit application process. When an individual or business applies for a construction permit, its location within or outside of an identified floodplain is noted and reviewed by DeKalb County's Stormwater Management Division.

The DeKalb County Stormwater Management Division reviews all plans requiring a land disturbance permit (LDP) for compliance with NFIP and local floodplain regulations. This includes construction adjacent to and within the floodplain. This process meets the minimum federal regulations set forth by the NFIP.

City/County Name	CID/Date
Avondale	130528C/ 05/07/01
Brookhaven	135175F 06/070
Chamblee	130066C/ 06/07/74
Clarkston	130067C/ 02/21/75
Decatur	135159C/ 06/16/70

Doraville	130069C/ 06/07/74
Dunwoody	130679C/ 06/02/70
Lithonia	130472C/ 05/07/01
Pine Lake	130070#/ 06/15/81
Stonecrest	130268C/ 05/15/80
Stone Mountain	130260C/ 08/01/86
Tucker	130681C/ 05/15/80

5.2 – Mitigation Goals

Goals for Berrien County and its participating jurisdiction(s) were established based upon results from the local and state risk assessments, stakeholder meetings, and input from non-planning team local jurisdiction and state officials. These goals represent Berrien County and its participating jurisdiction(s)' long-term vision for the continued reduction of hazard risks and the enhancement of mitigation capabilities.

Goal 1: Reduce the risk from natural hazard events utilizing community cooperation and an all-hazards approach.

Goal 2: Pursue additional, complete, and accurate data in support of mitigation planning, disaster preparedness, disaster response, and disaster recovery operations.

Goal 3: Integrate the pre-disaster mitigation plan's findings into the planning, and decision- making processes for all current and future emergency management and preparedness related activities.

5.3 – Mitigation Projects

To support its mitigation goals, the DeKalb County Hazard Mitigation Planning Committee (HMPC) identified a comprehensive range of (62) possible mitigation projects and activities (see Table 62) in this plan update for details). The selected set carefully takes an all-hazards approach to mitigation while simultaneously addressing each of the plan's profiled hazards.

The 2012 DeKalb County Hazard Mitigation Plan (update) contained a risk assessment of identified hazards for the County and participating municipalities, and a mitigation strategy to address these hazards' risk and vulnerability. Accordingly, an open discussion took place with the HMPC during the planning phase to determine the current mitigation action/priorities to include in this plan update. Among them, and considered a key part of the planning process, DeKalb County Emergency Management solicited participation from the County's participating jurisdictions and stakeholders in order to help identify mitigation activities/goals/projects for plan inclusion. Typically, mitigation activities/goals/projects focus on strengthening infrastructure and facilities. DeKalb County's jurisdictions and stakeholder's participation in the activities related to the mitigation strategy allowed for EMA to learn more about each jurisdictions' needs, facilities, and infrastructure. A Mitigation Strategy Update Meeting facilitated by DeKalb County EMA and BOLDplanning, provided DeKalb County's jurisdictions with information on how to offer valuable insight related to the hazards within the County. The DeKalb County mitigation planning points of contact (POCs) learned how BOLDplanning would assist them in providing input to update the mitigation projects from the previous plan as well as how and when to offer any new/proposed projects to include in the current HMP update.

Following this meeting, representatives from BOLDplanning worked with the DeKalb County EMA and the County's participating jurisdictions to provide updates relevant to previous mitigation projects (2012), including the current status (completed, deferred, or carryover). The HMPC was also tasked with identifying any new mitigation projects for this plan update and entering them into the BOLDplanning.com platform created specifically for DeKalb County, DekalbReady.com. During the planning process, DeKalb County was able to update the online system with its mitigation projects from the 2012 plan update along with the new/proposed projects for the next five-year plan cycle.

The list of mitigation projects and actions selected for this plan update is based upon the potential to reduce risk to life and property with an emphasis on new and existing infrastructure, ease of implementation, community and agency support, consistency with local jurisdictions' plans and capabilities, available funding, vulnerability, and total risk.

As with previous HMP updates (2012), the planning area will continue to take a multi-jurisdictional approach to mitigation planning with this update and subsequent ones. The goals and objectives for the County and its participating jurisdictions will continue to no longer differentiate from that of the County in order to facilitate a more thorough and standardized approach to mitigation planning. This plan update includes "carryover" projects from DeKalb County's previous HMP (2012), as they are still relevant, in progress, or ongoing. Also, the hazards, mitigation goals, objectives, and measures that were developed jointly between Berrien County and Cities of Atlanta, Avondale Estates, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stonecrest, Stone Mountain, and Tucker, (in the previous plan - 2012) have been carried over to this plan update due to being deferred because of a lack of funding and/or resources to complete the mitigation projects/actions during the last five-year cycle. All priorities can be assessed using STAPLE+E for this plan update to ensure that the projects reflect current priorities. More details on these projects can be found in Section 5 – Mitigation Strategy.

For further information on evaluation criteria for the proposed and carry over mitigation projects/actions, please see Section 5.4 – Mitigation Project Evaluations & Prioritization. Mitigation Projects can be prioritized by STAPLE+E score for each mitigation project in all jurisdictions.

Note: Some projects and actions mitigate risk and vulnerability to multiple hazards. Some projects and actions list participating jurisdictions which are only at risk from one or more mitigated hazards. For instance, the project: "Provide public outreach, education and awareness programs related training materials to better educate the public as part of a public awareness campaign about natural hazards of All-Hazards mitigate against multiple hazards, including drought, hazardous materials, flooding (inland), severe weather, tornadoes, dam failure, wind, and terrorism

5.4 – Mitigation Project Evaluations & Prioritization

5.4.1 – STAPLE+E

Berrien County and its participating jurisdiction(s)' primary hazard risks, and thus priorities are dam failure, droughts, flood (inland), earthquakes, geological hazards, heat wave, severe weather, severe winter weather, tornado, tropical systems, wildfire/urban interface fires, and wind.

A composite evaluation matrix was used to prioritize Berrien County and its participating jurisdiction(s)' mitigation projects and activities. The evaluation was conducted for each mitigation project and activity for each participating jurisdiction. All priorities were re-assessed using STAPLE+E for this plan update to ensure that the projects reflect current priorities. The composite evaluation matrix comprises the three factors detailed below.

The first factor is the STAPLE+E evaluation which is best for measuring feasibility and ease of implementation. The tables in Section 5.4.1 provide the STAPLE+E evaluation criteria and the evaluation itself.

The second factor is the effectiveness of the mitigation project. How well does it mitigate the impact of a particular hazard? This is determined by its ability to protect citizens, property, and systems. For instance, wires installed to pin down trees and other objects will reduce their ability to become uprooted or take flight during hazards of high wind but are not as effective at reducing impacts from tornadoes or strong winds as are properly constructed and reinforced buildings. This factor is rated as: Low = 0.5, Medium = 1, and High = 1.5.

The third factor is a hazard risk-based evaluation. It draws on the hazard risk summary found in Section 4.3 of this plan. Each risk rating is assigned a value based on the assessment (None = 0, Low = 5, Medium = 10, and High = 15).

$$(HRT) = (HR1 + HR2 + HRn)$$

The total evaluation score is based on the hazard risk total multiplied by the effectiveness factor, added to the STAPLE+E score.

Hazard Risk Total (HRT): The sum of values (low through high) of each hazard the project is designed to mitigate.

Mitigation Project Effectiveness (MPE): A multiplier based on the project's effectiveness to mitigate against a chosen hazard.

STAPLE+E Evaluation: A raw score comprised of positive and negative feasibility.

$$(Priority) = (STAPLE+E) + (MPE * HRT)$$

Upon completing the evaluations, a composite score is calculated and prioritized based on their total score (Low = 0 – 25, Medium = 26 – 50, High = > 50)

Table 60: STAPLE+E Criteria

STAPLE+E Criteria	
Evaluation Category	**Sources of Information**
Social	Mitigation actions are acceptable to the community if they do not adversely affect a particular segment of the population, do not cause relocation of lower income people, and if they are compatible with the communities' social and cultural values.
Technical	Mitigation actions are technically most effective if they provide long-term reduction of losses and have minimal secondary adverse impacts.
Administrative	Mitigation actions are easier to implement if the jurisdiction has the necessary staffing and funding.
Political	Mitigation actions can truly be successful if all stakeholders have been offered an opportunity to participate in the planning process and if there is public support for the action.
Legal	It is critical that the jurisdiction or implementing agency have the legal authority to implement and enforce a mitigation action.
Economic	Budget constraints can significantly deter the implementation of mitigation actions. Hence, it is important to evaluate whether an action is cost-effective, as determined by a cost-benefit review, and possible to fund.
Environmental	Sustainable mitigation actions that do not have an adverse effect on the environment, that comply with Federal, State, and local environmental regulations, and that are consistent with the community's environmental goals, have mitigation benefits while being environmentally sound.

Table 61: Previous Projects, not being carried over

Previous Project	Jurisdiction	Hazard Addressed	Project Status/Carried over
FLD #1: Cooperating technical Partner-Georgia Flood Map Modernization Program	Brookhaven	Flood	Completed/do not carry over
FLD #2: Stormwater System Inventory and Assessment	Brookhaven	Flood	Completed/do not carry over
FLD #3: South Bamby Lane watershed improvements	Brookhaven	Flood	Completed/do not carry over
FLD #4: Evaluation of Dresden Drive Culvert at North Fork Peachtree Creek tributary A	Brookhaven	Flood	Completed/do not carry over
FLD #1: Drainage improvements at Peachtree Industrial Blvd	Chamblee	Flood	Completed/do not carry over

Table 62: Mitigation Projects for the New HMP Cycle

Project Name	Jurisdiction	Project Update	Hazard Addressed	Responsible Department	Cost Estimate	Timeline	Potential Funding Source	Comment
City's stormwater system require the installation of catch basins, inlets, curbing, downstream storm lines and other methods of diverting storm water at various locations	Avondale Estates	Deferred due to lack of funding	Flooding; Severe Weather; Tropical Systems	Avondale Estates	$1,000,000 - $50,000,000	2022-2027	Local funding	New contact: Kristen Moretz kmoretz@avondaleestates.PAUL Hanebuth/404)294-5400
Education and Awareness: ET-2 Increase Awareness of Extreme temperature risk and safety	Avondale Estates	New	All hazards	Avondale Estates	Staff time and resources	2022-2027	Local Funding	Educating citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur.
ET-3 Assist Vulnerable Populations, Measures should be taken to ensure vulnerable populations are adequately protected from the impacts of extreme	Avondale Estates	New	All Hazards	Avondale Estates	Staff time and resources	2022-2027	Local Funding	Requiring minimum temperatures in housing/landlord codes. Encouraging utility companies to offer special arrangements for paying heating bills, if not already required by state law.

temperatures								
GEN #1: City Facility Feasibility Study and Development of Permanent Facilities	Brookhaven	In Progress	All Hazards	City Manager, Council, and City Departments	$150,000 - $300,000	2022-2027	Local Funding	
Adopt County Hazard Mitigation Plan	Brookhaven	New	All Hazards	County EMA	Staff resources	2022-2027	Local Funding	
FLD #2: Floodplain Property Acquisitions	Chamblee	Deferred	Flood	City Administrator or Floodplain Manager	$150,000 - $300,000	2022-2027	Local Funding	Chamblee would like to coordinate with the county to incorporate some properties within the City of Chamblee into the County's existing property acquisition program.
FLD #3: Map of Storm Drain System	Chamblee	In Progress	Flood	Chamblee Public Works	Staff resources	2022-2027	Local Funding	Conduct a survey of the storm drains in the city. Mark locations with GPS and input into a GIS database. Map the remaining portions of the system including pipes and pipe sizes, flow direction, etc. Work with the county to resolve any boundary discrepancies, as the City of Chamblee has locations of both inflow and outflow that are shared with the County

GEN #1: Ongoing Program for Transporting Seniors during Extreme Weather	Chamblee	In Progress	All Hazards	Chamblee Parks and Recreation	$150,000 - $300,000	2022-2027	Local Funding	The City of Chamblee already has a program in place, operated by Parks and Recreation, which heats the Civic Center during ice storms, and picks up the senior citizens from their homes and delivers them to the Civic Center. The City will continue to operate this program into the future. The City will also expand this program to operate during extreme heat events, in the event that there is a power outage, or for senior citizens who do not have air conditioning.
Gen #2: Identify Overnight Shelters	Chamblee	Ongoing	All Hazards	Chamblee Parks and Recreation	Staff resources	2022-2027	Local Funding	The City of Chamblee will attempt to identify other possible locations for sheltering needs. If none are found, Chamblee will attempt to find other solutions to the overnight sheltering needs of its citizens, including possible resources for bringing cots or beds to the Civic Center.
WIN #1: Extension of County's Tornado	Chamblee	Deferred	Wind	Chamblee Parks and Recreation	Staff resources	2022-2027	Local Funding	Coordinate with the County to bring a warning siren into or near the borders of

Warning Siren Project								Chamblee so that all the hearing residents of the City are aware of approaching tornadoes.
WIN #2: Civic Center Roof Retrofit	Chamblee	Deferred	Wind	Chamblee Parks and Recreation	$1,000,000 - $10,000,000	2022-2027	Local Funding	Retrofit the roof on the Civic Center in order to withstand more serious/stronger wind events.
FLD #1: Stormwater System Infrastructure Improvements	Decatur	In Progress	Flood	Public Works - Jennings Bell, Project Civil Engineer	$1,700,000 in Stormwater Utility -capital outlay budget	2022-2027	Annually in Stormwater Utility Fund Budget	We have applied for a FEMA grant for a flood prone property with a repetitive flood loss history at 475 Landover Drive. We are waiting to hear if we receive the grant. We do have the matching funds in our budget.
FLD #2: Flood-Prone Property Acquisition	Decatur	In Progress - FEMA Application	Flood	Public Works - David Junger, Assistant City Manager	Approximately $800,000	2022-2027	Pending FEMA Approval FY22/23 Budget	
ICE/WIND #1: City Tree Maintenance	Decatur	On Going	Wind	Public Works - Kay Evanovich, City Arborist	Approximately $75,000 annually for tree removal and tree maintenance	2022-2027	Annually General Fund Budget	We are also working to implement the capital improvement program outlined in the Stormwater Master Plan.
Extreme Temperatures ET-1: Urban Heat Island	Decatur	On Going	Extreme Temperature	Public Works - Kay Evanovich, City Arborist	$5,000-$10,000	2022-2027	Annually General Fund Budget	

Effect								
Extreme Temperatures ET-2: Increase Awareness of Extreme Temperature Risks and Safety	Decatur	On Going	Extreme Temperature	Public Works - Kay Evanovich, City Arborist David Nifong, Energy and Sustainability Manager	$10,000 FY21/22 $20,000 Fy22/23 Heat Study and data review	2022-2027	FY21/22 for purchase of heat sensors to better understand heat island effects throughout the city	An item not listed but I am not sure if it should be added somewhere is our work to install solar/battery backup systems for our critical city facilities to insure backup power during power outages related to events describe in the mitigation plan. We are actively working on two projects: 1) Public Works, 2) Decatur Recreation Center.
SW-4 Protect Power Lines and Infrastructure: Installing redundancies, Power Resiliency	Decatur	Solar and Battery Power Resiliency projects: Police Department 2023-2024, Recreation Center 2023, Public Works facility 2022	Severe Wind	Public Works - David Nifong, Energy and Sustainability Manager	$1,250,000 Capital Improvement Fund	2022-2027	Projects underway for FY21/22, FY22/23, FY23/24	Replace culverts and downstream storm lines with a system that provides adequate capacity to provide relief for minor localized flooding.
FLD #2: Stormwater System Infrastructure	Dunwoody	In Progress	All Hazards	Dunwoody Public Works	$1,000-000 - $50,000,000	2022-2027	Local Funds	Replace culverts and downstream storm lines with a system that provides adequate

Improvements								capacity to provide relief for minor localized flooding.
FLD #3: Floodplain Mapping	Dunwoody	In Progress	All Hazards	Dunwoody Public Works	Staff time and resources	2022-2027	Local Funds	Update the floodplain maps in conjunction with FEMA using the most current data and calculation techniques. Additionally, expanding the data to include the "Future" floodplain based on a comprehensive plan.
FLD #4: Flood-Prone Property Acquisition	Dunwoody	In Progress	All Hazards	Community Development Department and Public Works	$1,000-000 - $50,000,000	2022-2027	Local Funds	Remove structures from floodplain and return area to its natural state
FLD #1: Map of Storm Drain System	Doraville	In Progress	Flood	Doraville Maintenance/Inspection	Staff time and resources	2022-2027	Local Funds	Conduct a survey of, at a minimum, the storm drains in the city. Mark locations with pinpoints on the city map. With additional funds, map the remaining portions of the system including pipes and pipe sizes, flow direction, etc.
FLD #2: Storm Drain Infrastructure	Doraville	In Progress	Flood	Engineering Consultant/Contracting w/ DeKalb County	$1,000-000 - $50,000,000	2022-2027	Local Funds	Implement a priority list of outdated or faulty storm drain infrastructure and start replacing outdated or faulty storm drain infrastructure.

LIT #1: Surge Protection	Doraville	In Progress	Flood	Doraville Maintenance	$1,000-000 - $50,000,000	2022-2027	Local Funds	Determine which facilities in the City are at risk for such a lightning strike, and which would most seriously be impacted by such an event. Implement a program to install surge protection where it is needed most.
ICE/WIN #1: Tree Trimming Program	Doraville	In Progress	Flood	Doraville Maintenance/Power Companies	$150,000 - $300,000	2022-2027	Local Funds	Implement a tree-trimming program. Work with power companies to identify those branches that are threatening power lines. Perform some outreach to the community so residents know to call and report limbs that may threaten roads and other infrastructure
Adopt County hazard mitigation plan	Tucker	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	
Continue to participate in the NFIP	Tucker	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	
Educational Outreach for preparedness events for the jurisdiction	Tucker	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	
FLD #1:	Stone	On Going	Flood	Stone	$1,000,000 -	2022-2027	Local Funding	P.O.Contact, Jeff

Increase Capacity of Stormwater Infrastructure	Mountain			Mountain Public Works	$50,000,000			Mueller, PE
FLD #2: Repair Existing Stormwater Infrastructure	Stone Mountain	On Going	Flood	Stone Mountain Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	P.O.Contact, Jeff Mueller, PE
WIN/ICE #2: Tree Pruning Program	Stone Mountain	On Going	Wind	Stone Mountain Public Works	$150,000 - $300,000	2022-2027	Local Funding	P.O.Contact, Jeff Mueller, PE
ICE #1: Maintain treatment Capability	Stone Mountain	On Going	Winter	Stone Mountain Public Works	Staff resources	2022-2027	Local Funding	P.O.Contact, Jeff Mueller, PE
FLD #1: Construct flood control structures which address the flooding problem at Max Cleland Blvd and the Railroad Tracks	Lithonia	Deferred	Flood	Lithonia Maintenance	$150,000 - $300,000	2022-2027	Local Funding	The City will assemble a sub-committee to explore the use of Hazard Mitigation Funds in conjunction with other grants to fund the project. Once funds are secured it will be the Maintenance department who oversees the construction and completion of the project. The actual construction will be completed by an entity other than the City.
WND #1: Retrofit Critical Facilities to protect first	Lithonia	Deferred	Wind	Outside Contractor	$1,000,000 - $50,000,000	2022-2027	Local Funding	Installation of storm shutters, replacement of doors amongst other structural improvements.

responders in a wind event								
ICE #1: Improve drainage to prevent icing of roads during winter events	Lithonia	Deferred	Winter Storm	Lithonia Maintenance	$1,000,000 - $50,000,000	2022-2027	Local Funding	In conjunction with Action 1, coordinate to prevent icing of roadway under the railroad bridge. Also, identify other areas and address them as necessary
FLD #1: Hydrology and Hydraulic	Pine Lake	In Progress	Flood	Pine Lake Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	Hire a consultant to analyze Snapfinger Creek and its watershed. Determine peak flows, and determine location of 100-year floodplain along the creek. Create some informal maps showing where this is expected to be. Possibly analyze other recurrence intervals in addition to the 100-year event.
FLD #2: Stream Restoration	Pine Lake	In Progress	Flood	Pine Lake Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	The process of restoring the stream is an ongoing project, already being performed by the City of Pine Lake.
FLD #3: Land Acquisition for Detention	Pine Lake	In Progress	Flood	Pine Lake Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	Implement best solution proposed in H&H study (see previous Action # FLD 1)
Commission a study to determine the	City of Clarkston	In Progress	Flood	Clarkston Public Works	$150,000 - $300,000	2022-2027	Local Funding	

cause of the flooding and after affected pooling areas and recommend solutions to the problem.								
Commission a study with a structural engineer to survey the buildings to make recommendations on the structural integrity of the buildings for upgrades and expansions.	City of Clarkston	In Progress	Extreme Heat, Flooding, Hurricanes, Tornados, Winter Storms, Windstorms	Clarkston Public Works	$150,000 - $300,000	2022-2027	Local Funding	
FLD #1: Norman Road Drainage Study	City of Clarkston	In Progress	Flood	Clarkston Public Works	$150,000 - $300,000	2022-2027	Local Funding	Commission a study for determining the cause of flooding in the Norman Road neighborhood. The study will recommend possible solutions to the problem. Eventually one of the solutions will be implemented to solve the problem.
FLD #2: Flooding South of Montreal Road	City of Clarkston	In Progress	Flood	Clarkston Public Works	$150,000 - $300,000	2022-2027	Local Funding	Study the flooding source and the surrounding drainage system to determine the likely cause of flooding

								and to determine some possible solutions to the problem. Determine the best solution and implement it.
FLD #3: Acquisition of Property on Hill Street	City of Clarkston	Deferred	Flood	Director of Public Works: Mike Shipman	$1,000,000 - $50,000,000	2022-2027	Local Funding	Acquire the property at 3489 Hill Street and permanently turn the property into open space.
FLD #4: Purchase Clark Lake	City of Clarkston	In Progress	Flood	Clarkston Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	Purchase the lake from the homeowner's association and maintain it (dredge first, then prevent further siltation) to keep the lake from flooding.
GEN #2: Right-of-Way Determination and Possible Acquisition	City of Clarkston	In Progress	All Hazards	Clarkston Public Works/Planning, also Administration Department	$1,000,000 - $50,000,000	2022-2027	Local Funding	A survey should be taken to determine precisely where the cities right-of-way currently lies. Next, those areas that would most benefit from an expanded right-of-way should be identified, and steps should be taken to acquire those pieces of land.
THD #2: Retrofit of Police Station to Protect Against Wind Damage	City of Clarkston	Deferred	Wind	Clarkston Public Works	$1,000,000 - $50,000,000	2022-2027	Local Funding	Hire a structural engineer to survey the building and make recommendations. Secure funds for the retrofit.

Continue to enforce building and sign ordinances with contractors and require them to build at minimum safe wind speeds	City of Clarkston	New	Windstorms, Tornadoes	City of Clarkston	Staff resources	2022-2027	Local Funding	
Outreach coordination with residents and property owners in loss area and flood zones for compliance updates with Digital Flood Insurance Rate Maps (DFIRM)	City of Clarkston	New	Flooding, Winter storms	City of Clarkston	Staff resources	2022-2027	Local Funding	Update Floodplain maps when required
Continue to coordinate with building officials to enforce building codes and flood management regulations to maximize property and safety of residents for flood insurance programs	City of Clarkston	New	Flooding, Thunderstorms	City of Clarkston	Staff resources	2022-2027	Local Funding	Floodplain management regulations
Update the	City of	New	Flooding,	City of	Staff	2022-2027	Local funds	Update Stormwater

stormwater mitigation plan to ensure consistency with Digital Flood Insurance Rate Maps (DFIRM)	Clarkston		Thunderstorms	Clarkston	resources			Mitigation Plan
Perform an analysis of additional back up or alternative power resources for the city	City of Clarkston	New	Winter Weather, Thunderstorms, Tornado	City of Clarkston	Staff resources	2022-2027	Local funds	Backup Power
Develop services to monitor, update map and utilize GIS systems that will coordinate with citywide subscriptions of notifications to make city aware of actions for services of weather events.	City of Clarkston	New	Winter Weather, Thunderstorms, Tornado	City of Clarkston	Staff resources	2022-2027	Local funds	Mapping/ Notification Services
Create a survey to determine plan of actions for business owners for natural disaster emergencies	City of Clarkston	New	All Hazards	City of Clarkston	Staff resources	2022-2027	Local Funding	Encourage business owners to create emergency plans
Create a tool to	City of	New	Flooding,	City of	Staff	2022-2027	Local Funding	Update Stormwater

monitor and protect city facilities that are prone to flooding	Clarkston		Winter Weather, Thunderstorms, Tornado, Fire	Clarkston	resources			Mitigation Plan
Adopt County hazard mitigation plan	Stonecrest	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	Adopt County hazard mitigation plan
Continue to participate in the NFIP	Stonecrest	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	Continue to participate in the NFIP
Educational Outreach for preparedness events for the jurisdiction	Stonecrest	New	All Hazards	EMA	Staff resources	2022-2027	Local Funding	Educational Outreach for preparedness events for the jurisdiction
Lightning protection devices and methods, such as lightning rods and grounding on communications infrastructure	Dekalb; all jurisdictions	New	Lightning	DeKalb County 911	$150,000 - $300,000	2022-2027	Local Funding	
Increase Awareness of Flood risk and	Dekalb; all jurisdictions	New	Flood	DeKalb EMA	Staff resources	2022-2027	Local Funding	Educating citizens about safety during flood conditions, including the

Safety								dangers of driving on flooded roads.
Encouraging homeowners to install carbon monoxide monitors and alarms.	Dekalb; all jurisdictions	New	Winter Weather	DeKalb EMA	Staff resources	2022-2027	Local Funding	Using outreach programs to advise homeowners of risks to life, health, and safety
Informing the public about severe winter weather impacts	Dekalb; all jurisdictions	New	Winter Weather	DeKalb EMA	Staff resources	2022-2027	Local Funding	
Lightning protection devices and methods, such as lightning rods to be used to warn visitors in order to seek refuge	Dekalb; all jurisdictions	New	Flood	DeKalb Parks and Recreation	$150,000 - $300,000	2022-2027	Local Funding	
Generators to serve as backup power for DeKalb County Parks and Rec.Parks and recreation centers throughout the county	Dekalb; all jurisdictions	New	Winter Weather, Thunderstorms, Tornado	DeKalb Parks and Recreation	$150,000 - $300,000	2022-2027	Local Funding	

5.5 – Planning Integration

Mitigation does not end at plan approval. Plan approval is only the beginning. The successful implementation of any number of mitigation activities and projects requires the coordination and collaboration of a number of local agencies, departments, and organizations. Each group has varying decision-making processes and authorities governing their actions. This plan, once approved, must be integrated into their decision-making processes as a tool for improving their respective resiliencies.

DeKalb County intends to incorporate this DeKalb County Hazard Mitigation Plan (update) into other planning documents the County and participating jurisdiction(s) utilizes. Where applicable, portions of the previous HMP were considered for incorporation into other local plans and programs. This includes some form of incorporation into the DeKalb County, GA Comprehensive Plan Update (December 2018). The DeKalb County, GA Comprehensive Plan, which focuses on land use and community development, is required of all local governments by the Georgia Department of Community Affairs (DCA). The DeKalb County Hazard Mitigation Plan Update (2022) will be included in the DeKalb County, GA, and the Cities of Avondale Estate, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain, and Tucker, GA Comprehensive Plans.

Portions of this HMP (update) may also be integrated into the DeKalb County Local Emergency Operations Plan (LEOP), emergency plans for the Cities of Avondale Estate, Brookhaven, Chamblee, Clarkston, Decatur, Doraville, Dunwoody, Lithonia, Pine Lake, Stone Mountain, and Tucker, GA, and other existing or future public safety-related plans. This plan is not only useful for implementing mitigation activities and projects but also critical in creating development plans and capital improvement projects. The risk assessment in this plan can prevent unmanaged and dangerous development in identified hazard areas or other portions of the planning area that decrease a community's overall resiliency.

Democratic Governments and Boards

These organizations rely on agenda proposals, deliberation, and discussion, and voting to solidify their decision-making. This type of decision-making makes up the majority of DeKalb County's participating jurisdiction(s)' and stakeholders.

This plan should be integrated into proposed agendas and cross-referenced during deliberation and discussion of the proposed activity. By using this plan's risk assessment, development and capital improvement projects can be appropriately implemented taking into consideration a community's resiliency.

This DeKalb County Multi-Jurisdictional Hazard Mitigation Plan (update) will be incorporated into existing planning mechanisms in varying processes. These processes will be tailored to the unique characteristics of the planning mechanism and the governing structure of DeKalb County and its participating jurisdiction(s).

Budget Reviews

DeKalb County's budget cycle begins October 1 and runs through September 30th. The annual budget review period for the County begins in February and is adopted in July for the upcoming year. During this period, each adopting jurisdiction will review this and future multi-jurisdictional mitigation plans and conduct a feasibility and resiliency review of the suggested mitigation actions and projects.

DEMA will assist in the process as needed or requested by the jurisdiction(s), providing grant or other funding opportunities, technical assistance, and other relevant support.

Emergency Management Planning

DeKalb County and all municipalities work together as a team during all four phases (Mitigation, Planning, Response and Recovery) of emergency management. Other governing bodies and partners such as the Insert organization, insert organization, insert organization, and Georgia Power, and insert organization are also included in emergency planning and response. Public input is always accepted and appreciated.

Mitigation Projects & Actions Implementation

Upon adoption of an HMP plan or other emergency management-related plans, DEMA will notify all participating jurisdictions when the next mitigation planning committee (MPC) meeting topic will be reviewing mitigation project and action selections. Each jurisdiction then approves a list of mitigation actions and projects they want to pursue according to the mechanism listed in the table on the following page. During the MPC meeting, DEMA will assist the jurisdictions in determining which grant program and path will be appropriate for the project. After selection, the jurisdictions return to DEMA for assistance on funding and managing the project. If additional funding is necessary, the jurisdictions will have to return to their community and pass a resolution to secure the funding. The resolution is subject to the process listed in table on the following page.

DEMA may provide technical assistance in every facet from project inception to completion as well as working with other external organizations for tasks such as grant writing, project monitoring, and project management where appropriate.

APPENDIX A: DATA RESOURCES & REFERENCES

DeKalb County Comprehensive Plan, DeKalb County 2050 Unified Plan

City of Avondale Estates Comprehensive Plan Update (2021)

City of Brookhaven Comprehensive Plan Update (2019)

City of Chamblee Comprehensive Plan 2034

City of Clarkston Comprehensive Plan 2040

City of Decatur Comprehensive Plan

City of Dunwoody Comprehensive Plan

City of Lithonia 2020 Comprehensive Plan Update

City of Pine Lake Comprehensive Plan

City of Stonecrest Comprehensive Plan

City of Tucker - Comprehensive Plan

City of Stone Mountain Comprehensive Plan 2021

APPENDIX B: PUBLIC PARTCIPATION

Throughout the planning process, stakeholders, including the public, were encouraged to take part in various meetings and surveys. Following is information pertaining to these activities:

Hazard Mitigation Plan Update Kick-Off and Public Information Meeting, October 7, 2021 – Hosted by BOLDplanning and conducted remotely using Zoom® web conferencing due to ongoing COVID-19 concerns, this meeting was open to DEMA, the MPC, and the public. Prior to the meeting, a public announcement ran for two weeks on DEMA's Next Door social media page and DeKalb County's Facebook page. During the meeting, everyone was encouraged to ask questions, voice concerns, and provide input to the mitigation plan update. Of the 48 people in attendance, one (1) was from the public. BOLDplanning worked with the MPC to collect contact information, hazard history, facility information, and other pertinent jurisdictional information.

Following is the invitation to the October 7, 2021, meeting.

480 Duke Drive, Suite 130
Franklin, TN 37067-2700
(615) 469-5558
www.BOLDplanning.com

DeKalb County, GA Hazard Mitigation Plan Kick Off Meeting

Hazard Mitigation planning is an initiative to lessen the impact of natural hazards that the County and its jurisdiction face. This is done by completing an assessment of the hazards and how vulnerable the County is to those hazards. The next step is to develop mitigation projects for each hazard that affects the County and its jurisdictions. Best of all, by completing an approved Hazard Mitigation Plan it will open a stream of funds for the County.

This is where each one of you comes in!

Due to your intimate knowledge of the region, we will need your input into the plan. By participating in the planning meeting, you will be able to share ideas and experiences with other community members and add valuable input to the planning process.

To learn more, please join us at the meeting.

The kick-off meeting will be held virtually on Wednesday, September 15, 2021, via Zoom and will last from **1:00 pm – 2:30 pm EST.**

Please Register in Advance here or copy and paste the following link into your browser: **(https://us02web.zoom.us/meeting/register/tZMud-CqpzwoE9VV5jWHI-CUwpxlz0lnIdiR).**

An email confirmation will follow your registration with information about attending the kick-off meeting.

If you wish to invite someone who was not on the invited list, please reach out to Emily Long from BOLDplanning for approval.

For any questions related to the upcoming DeKalb County, GA HMP Kick-Off Meeting, please contact the contractor Emily Long whose email is **Emily_c@boldplanning.com.**

In attendance of the October 7, 2021 meeting were the following individuals.

SIGN IN SHEET

EVENT: _DeKalb County, GA HMP Stakeholder Kickoff Meeting__ DATE / TIME: _October 6, 2021 /_1:00PM -2:00PM EST

Zoom Meeting ID: 84486477089	DeKalb County, GA Hazard Mitigation Plan Update Kick-off Meeting	10/06/2021 11:35:53 AM	10/06/2021 12:55:59 PM

Number	Participant Name	Organization	Title	User Email	Total Duration on Kickoff Call (Minutes)
1	Emily Long (BOLDplanning Meeting Room 6)	BOLDplanning, Inc.	Project Manager/Mitigation Project Lead	meeting6@boldplanning.com	149
2	Will Minkoff	BOLDplanning, Inc.	Regional Director	will@boldplanning.com	11
3	James Woulfe	BOLDplanning, Inc.	Manger, Global Solutions	meeting6@boldplanning.com	149
4	Michael Amberson	BOLDplanning, Inc.	Project Support	Michael.amberson_c@boldplanning.com	61
5	Yolanda Harkley	DeKalb County, GA Emergency Management Agency	Emergency Management Specialist	yaharkley@dekalbcountyga.gov	74
6	DC Ward	DeKalb County, GA Emergency Management Agency	Deputy Director	dcward@dekalbcountyga.gov	108
7	Chief J.K. Cox	DeKalb County, GA Emergency Management Agency	Director	jkcox@dekalbcountyga.gov	38
8	Lucy Herring	Georgia Emergency Management Agency (GEMA)	Hazard Mitigation Planning Specialist	lucy.herring@gema.ga.gov	42

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SIGN IN SHEET

9	Akin Akinsola	DeKalb Roads and Drainage	Floodplain Management Supervisor	aaakinsola@dekalbcountyga.gov	41
10	Alesia Guest	DeKalb County E-911 Communication Center	E-911 Deputy Director	ahguest@dekalbcountyga.gov	44
11	Robin Pits	Member of the Public	Concerned Citizen	ypayo@dekalbcountyga.gov	43
12	Kristopher Mattson	Children's Healthcare of Atlanta	Emergency Manager	kristopher.mattson@choa.org	44
13	Jim Popovitch	Member of the Public	Concerned Citizen	jim@k4vqc.com	43
14	ChaQuias Miller-Thornton	City of Stone Mountain	City Manager	cthornton@stonemountaincity.org	42
15	Matthew Murray	Brookhaven Police Department	EMA Team Lead	matthew.murray@brookhavenga.gov	85
16	Gerald Selby	Member of the Public	Concerned Citizen	g_selby@bellsouth.net	42
17	Courtney Frisch	City of Chamblee	Assistant Director of Public Works	ttaylor@chikamingtownship.org	40
18	Philemon Harrington	DeKalb County Police Department	Detective	pdharrington@dekalbcountyga.gov	39
19	Toni Washington	City of Decatur	Fire Chief/Emergency Manager	toni.washington@decaturga.com	38
20	William Voorhies	DeKalb County Fire Rescue	Deputy Chief of Planning and Risk Reduction	wlvoorhies@dekalbcountyga.gov	38
21	Paul Hanebuth	City of Avondale Estates	Assistant City Manager	phanebuth@avondaleestates.org	38
22	LaThaydra Sands	City of Lithonia	City Administrator	lathaydra.sands@lithoniacity.org	38
23	J Walker	DeKalb County Police Department	Sergeant	jkwalker@dekalbcountyga.gov	38
24	Carl Thomas	City of Dunwoody	Stormwater Utility Manager	carl.thomas@dunwoodyga.gov	38
25	Joseph Whelchel	DeKalb Police	Police Department	jbwhelchel@dekalbcountyga.gov	34
26	Patrick Bailey	DeKalb County Medical Examiner	Director-Medical Examiner	plbailey@dekalbcountyga.gov	26

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SIGN IN SHEET

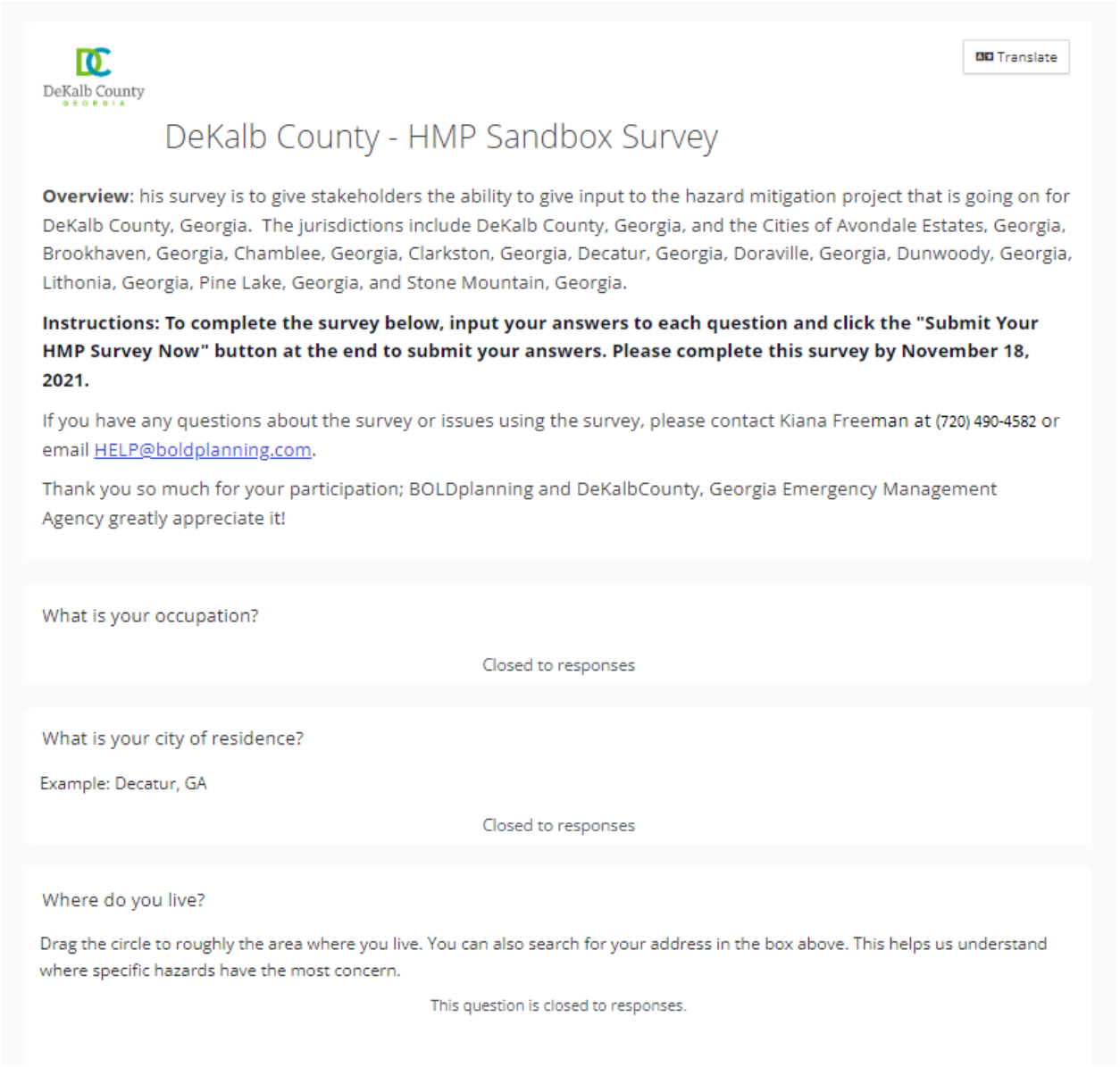
27	Adam Wade	DeKalb County Police Department	Detective	cawade@dekalbcountyga.gov	26
28	Jim Tavenner	City of Stone Mountain Public Works Department	Director	publicworks@stonemountaincity.org	22
29	Donovan Cushnie	DeKalb County Government, Department of Planning and Sustainability	Floodplain Coordinator	dcushnie@dekalbcountyga.gov	18

DeKalb County, GA HMP Kickoff Meeting by Participants by Phone

Number	Phone Number	Total Duration on Kickoff Call (Minutes)
1	1-770-498-8984	42

Hazard Mitigation Plan Update, Public Review Period, TBD – Prior to the Public Review Period, a public announcement ran for x weeks in XXX and for x weeks in the XXX. DeKalb County also utilized social media by posting the public announcement on the county's Facebook page for x days. Additionally, DEMA publicized the Public Review Period on their website for the duration of the period (14 days). Due to the COVID-19 pandemic and DeKalb County government reopening with operations modified for COVID-19 Safe Practices, MPC members and the public were asked to review a draft copy of the updated plan online (available on DEMA's website) before asking questions or expressing concerns. The MPC, plan stakeholders, and the public provided feedback for the plan draft using an online survey tool, i.e., Public Input.

(insert notice when available)



DeKalb County
GEORGIA

Translate

DeKalb County - HMP Sandbox Survey

Overview: his survey is to give stakeholders the ability to give input to the hazard mitigation project that is going on for DeKalb County, Georgia. The jurisdictions include DeKalb County, Georgia, and the Cities of Avondale Estates, Georgia, Brookhaven, Georgia, Chamblee, Georgia, Clarkston, Georgia, Decatur, Georgia, Doraville, Georgia, Dunwoody, Georgia, Lithonia, Georgia, Pine Lake, Georgia, and Stone Mountain, Georgia.

Instructions: To complete the survey below, input your answers to each question and click the "Submit Your HMP Survey Now" button at the end to submit your answers. Please complete this survey by November 18, 2021.

If you have any questions about the survey or issues using the survey, please contact Kiana Freeman at (720) 490-4582 or email HELP@boldplanning.com.

Thank you so much for your participation; BOLDplanning and DeKalbCounty, Georgia Emergency Management Agency greatly appreciate it!

What is your occupation?

Closed to responses

What is your city of residence?

Example: Decatur, GA

Closed to responses

Where do you live?

Drag the circle to roughly the area where you live. You can also search for your address in the box above. This helps us understand where specific hazards have the most concern.

This question is closed to responses.

* Which Hazards is your area MOST at risk for?

Mark all that apply.

Dam Failure	Drought
Earthquake	Extreme Heat
Flood	Hurricane
Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)	Severe Winter Storms
Tornadoes	Wildfire

Closed to responses

* Which Hazards is your area Least at risk for?

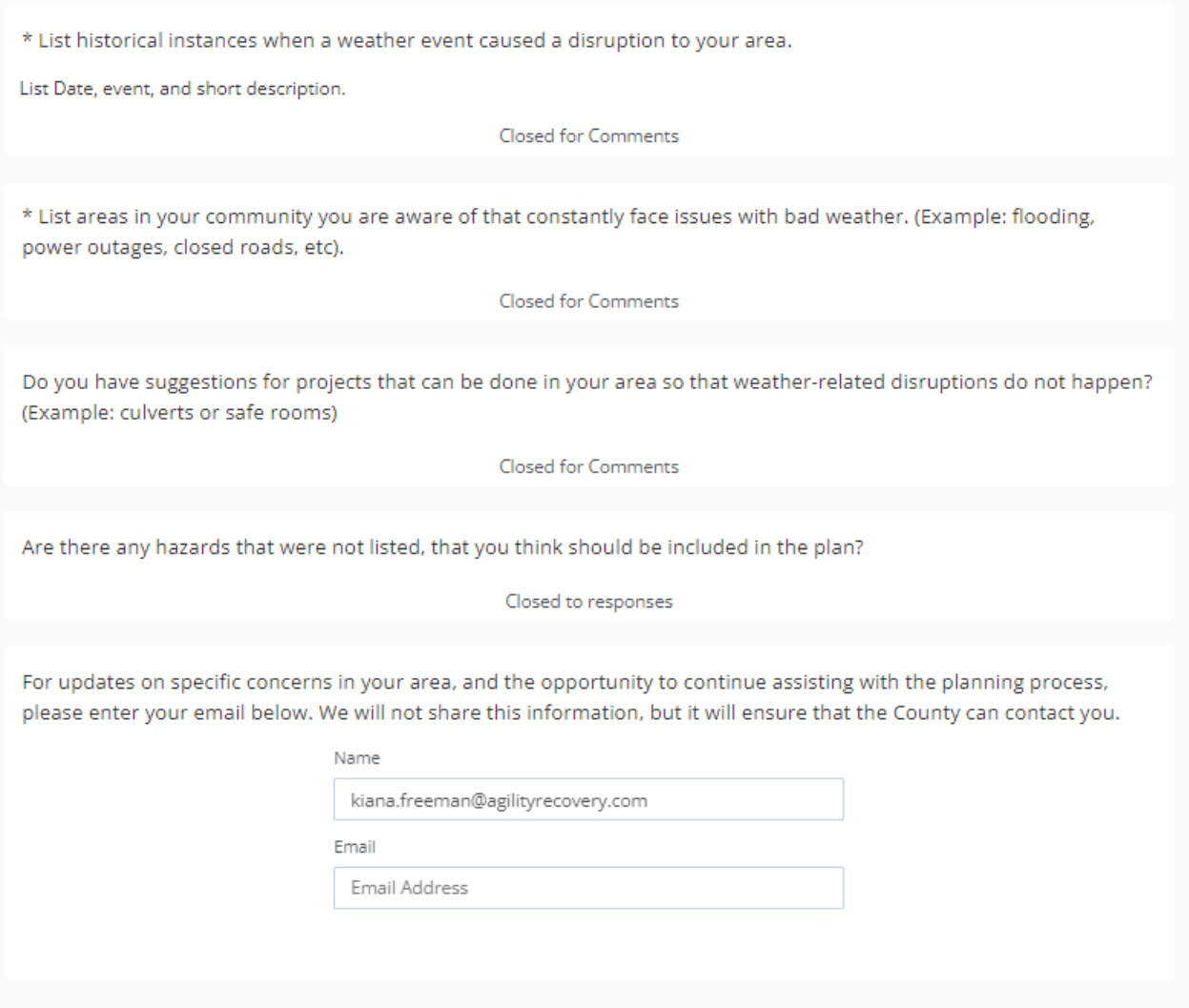
Mark all that apply.

Dam Failure	Drought
Earthquake	Extreme Heat
Flood	Hurricane
Severe Storms (including Lightning, Thunderstorms, Hail, and Wind)	Severe Winter Storms
Tornadoes	Wildfire

Closed to responses

Tell us about your concerns about the following hazards:

	No Concern	Some Concern	Moderate Concern	Significant Concern
Dam Failure	○	○	○	○
Droughts	○	○	○	○
Earthquakes	○	○	○	○
Extreme Heat	○	○	○	○
Flood	○	○	○	○
Hurricane	○	○	○	○
Severe Storm (including Lightning, Thunderstorms, Hails, and Wind)	○	○	○	○
Severe Winter Storms	○	○	○	○
Tornadoes	○	○	○	○
Wildfires	○	○	○	○



Hazard Mitigation Plan Update, Final Review Meeting, Date TBD – The updated DeKalb County mitigation plan was reviewed by the MPC and other stakeholders, as requested, prior to its submission to the Georgia Emergency Management Agency (GEMA). However, due to the ongoing COVID-19 pandemic, the Final Review Meeting was not conducted in person. Rather, DEMA emailed the MPC and plan stakeholders, requesting final plan review and final comments via email reply.

Hazard Mitigation Plan Update, Plan Adoption Signing, Date TBD – Upon plan approval, adoption letters pertaining to the 2022 Countywide Hazard Mitigation Update were disseminated and signed by the 13 plan participants: Unincorporated DeKalb County, Georgia, and the municipalities of Avondale Estates (City), Brookhaven (City), Chamblee (City), Clarkston (City), Decatur (City), Doraville (City), Dunwoody (City), Lithonia (City), Pine Lake (City), Stonecrest (City), Stone Mountain (City), and Tucker (City). The signing of these resolution letters codifies the plan update's adoption.

Additional planning efforts included meetings with representation from other jurisdictions and the public at large. Planning events also included conference calls

APPENDIX C: CRITICAL FACILITIES – DEKALB COUNTY

Name	Address	Type
Police Headquarters HQ/North/Central/911/EOC	1960 West Exchange Place, Tucker, Georgia 30084	Police
Police Tucker Precinct	4451 Lawrenceville Highway, Tucker, Georgia 30084	Police
Police East Precinct	2484 Bruce Street, Lithonia, Georgia 30058	Police
Police South Precinct	2842 H.F. Shepherd Drive, Decatur, Georgia 30034	Police
Police Special Operations	3630 Camp Circle, Decatur, Georgia 30032	Police
Police Outdoor Range	3905 N Goddard Rd, Lithonia, Georgia 30038	Police
South DeKalb Police Precinct Candler Road	1816 Candler Road, Decatur, GA 30032	Police
North DeKalb Police Precinct	1358 Dresden Drive, Atlanta, GA 30319	Police
East DeKalb Police Precinct	2484 Bruce Street, Lithonia, Georgia 30058	Police
Bruce Street Gym	2484 Bruce Street, Lithonia, Georgia 30058	Police
Bruce Street Library	2484 Bruce Street, Lithonia, Georgia 30058	Police
Bruce Street Police Academy	2484 Bruce Street, Lithonia, Georgia 30058	Police Training Facility
Bruce Street Community Center	2484 Bruce Street, Lithonia, Georgia 30058	Police
Sheriff's Office/ Jail	4415 Memorial Drive, Decatur, Georgia 30032	Police/Sheriff/Jail
Fire Station 1	1670 Clifton Road, Decatur, Georgia 30030	Fire Rescue
Fire Station 2	1316 Dresden Drive, Atlanta, Georgia 30319	Fire Rescue
Fire Station 3	24 North Claredon Avenue, Avondale Estates, Georgia 30002	Fire Rescue
Fire Station 4	4540 Flakes Mill Road, Ellenwood, Georgia 30294	Fire Rescue
Fire Station 5	4013 Lawrenceville Highway, Tucker, Georgia 30084	Fire Rescue
Fire Station 6	2342 Flat Shoals Road, Atlanta, Georgia 30349	Fire Rescue
Fire Station 7	1776 Derrill Crive, Decatur, Georgia 30032	Fire Rescue
Fire Station 8	2711 Clarimont Road, Atlanta, Georgia 30329	Fire Rescue
Fire Station 9	3858 North Druid Hills Road, Decatur, Georgia 30033	Fire Rescue
Fire Station 10	1686 Constitution Road, Atlanta, Georgia 30316	Fire Rescue
Fire Station 11	6715 Memorial Drive, Stone Mountain, Georgia 30083	Fire Rescue
Fire Station 12	5323 Roberts Drive, Dunwoody, Georgia 30338	Fire Rescue

Name	Address	Type
Fire Station 13	5619 Redan Road, Stone Mountain, Georgia 30088	Fire Rescue
Fire Station 14	7207 Covington Highway, Lithonia, Georgia 30058	Fire Rescue
Fire Station 15	2017 Flightway Drive, Chamblee, Georgia 30341	Fire Rescue
Fire Station 16	2770 Pleasantwood Drive, Decatur, Georgia 30034	Fire Rescue
Fire Station 17	3900 Evans Mill Road, Lithonia, Georgia 30038	Fire Rescue
Fire Station 18	4588 Barclay Drive, Chamblee, Georgia 30338	Fire Rescue
Fire Station 19	3253 Mercer University Drive, Chamblee, Georgia 30341	Fire Rescue
Fire Station 20	2919 Warren Road, Decatur, Georgia 30034	Fire Rescue
Fire Station 21	1020 Crown Point Parkway, Atlanta, Georgia	Fire Rescue
Fire Station 22	1859 Montreal Road, Tucker, Georgia 30084	Fire Rescue
Fire Station 23	1265 Brockett Road, Clarkston, Georgia 30021	Fire Rescue
Fire Station 24	4154 Redan Road, Stone Mountain, Georgia 30083	Fire Rescue
Fire Station 25	7136 Rockbridge Road, Stone Mountain, Georgia 30087	Fire Rescue
Fire Station 26	2522 McAfee Road, Decatur, Georgia 30032	Fire Rescue
Fire Rescue Headquarters	1950 West Excnage Place, Tucker, Georgia 30084	Fire Rescue
John A. Walker Raw Water Pump Station	4350 Holcomb Bridge Rd, Norcross, Georgia 30071	Water Supply/Treatment Facility
Scott Candler Water Treatment Plant	4830 Winters Chapel Rd, Doraville, Georgia 30360	Water Supply/Treatment Facility
Snapfinger Creek Advanced Wastewater Treatment Plant	4124 Flakes Mill Rd, Decatur, Georgia 30034	Water Supply/Treatment Facility
Pole Bridge Advanced Wastewater Treatment Plant	4664 Flat Bridge Rd, Lithonia, Georgia 30038	Water Supply/Treatment Facility
Columbia GST/RPS	1742 Columbia Dr, Decatur, Georgia 30032	Water Supply/Treatment Facility
Dunwoody GST/RPS	5363 Roberts Rd, Dunwoody, Georgia 30032	Water Supply/Treatment Facility
Lithonia GST/RPS	6670 Parkway Dr, Lithonia, Georgia 30058	Water Supply/Treatment Facility
Redan-Panola GST/RPS	5621 Panola Rd, Stone Mountain, Georgia 30088	Water Supply/Treatment Facility
Tucker GST/RPS	4226 Lawrenceville Hwy, Tucker, Georgia 30084	Water Supply/Treatment Facility
Wesley Chapel GST/RPS	3537 Wesley Chapel Rd, Decatur, Georgia 30032	Water Supply/Treatment Facility
Whites Mill GST/RPS	2463 Jenay Ct, Decatur, Georgia 30032	Water Supply/Treatment Facility
Avondale ET	3250 Covington Hwy, Decatur, Georgia 30032	Water Supply/Treatment Facility
Clairmont ET	1901 Mason Mill Rd, Decatur, Georgia 30329	Water Supply/Treatment Facility

Name	Address	Type
Decatur ET	1127 West Howard Ave, Decatur GA 30030	Water Supply/Treatment Facility
Dunwoody ET	4339 Ashford-Dunwoody Rd, Dunwoody, Georgia 30338	Water Supply/Treatment Facility
McAfee ET	2532 McAfee Rd, Decatur, Georgia 30032	Water Supply/Treatment Facility
Tucker ET	1750 Stone Ridge Dr, Stone Mountain, Georgia 30083	Water Supply/Treatment Facility
Honey creek Water & Sewer	7501 Rockland Rd. Lithonia, GA 30058	Water Supply/Treatment Facility
State/ Superior Court House (Decatur)	556 North McDonough Street, Decatur, Georgia 30030	Court house
Recorders Court	3630 Camp Circle, Decatur, Georgia 30032	Court house
Juvenile Court	4309 Memorial Drive, Decatur, Georgia 30032	Court house
Jail Annex	3631 Camp Circle, Decatur, GA 30032	Court house
Juvenile Court	3631 Camp Circle, Decatur, GA 30032	Court house
Clark Harrison Building (Decatur)	330 West Park Place, Decatur, Georgia 30030	Government
Callaway Building (Decatur) (Scheduled to close)	120 West Trinity Place, Decatur, Georgia 30030	Government
Mexico Consulate Atlanta	1700 Chantilly Drive Northeast, Atlanta, Georgia 30324	Government
Guatemala Consulate Atlanta	2750 Buford Highway Northeast, Atlanta, Georgia 30324	Government
Peru Consulate Atlanta	4360 Chamblee Dunwoody Road, Atlanta, Georgia 30341	Government/Military
US Navy Recruiting Station	9316 Lawrenceville HWY, Ste 120, Tucker Georgia 30084	Government/Military
US Army Recruiting Station	3983 LaVista Rd, Ste 180-A, B, & C, Tucker Georgia 30084	Government/Military
US Air Force Recruiting Station	3983 LaVista Rd, Ste 180-A, B, & C, Tucker Georgia 30084	Government/Military
US Marine Corps Recruiting Station	3983 LaVista Rd, Ste 180-A, B, & C, Tucker Georgia 30084	Government/Military
GA Army National Guard 170th Military Police BN	3736 Durham Park Rd, Decatur Georgia 30032	Government/Military
US Army Reserve Center	1650 Corey BLVD, Decatur Georgia 30032	Government/Military
US Navy Recruiting Station	2801 Candler Rd, Ste 92, Decatur Georgia 30034	Government/Military
GA Army National Guard Recruiting Station	2389 Wesley Chapel Rd, Decatur Georgia 30035	Government/Military
US Army Recruiting Station	6746 Covington HWY, Ste 105, Lithonia Georgia 30058	Government/Military
Manuel J. Maloof Center (Dec.)/BOC/Legal/HR/Econ/Dev/Finance/CEO	1300 Commerce Drive, Decatur, Georgia 30030	Government
Communication Tower 1/Repeater Tower	Three Ravinia Drive, Ravinia Dr NE, Dunwoody, Georgia 30346	Communication
Communication Tower 2/Repeater Tower	3253 Mercer University Drive, Chamblee, Georgia 30341	Communication

Name	Address	Type
Communication Tower 3/Repeater Tower	1800 Briarcliff Rd NE, Atlanta, GA 30329	Communication
Communication Tower 4/Repeater Tower	2055 Robert E Lee Blvd, Stone Mountain, Georgia 30083	Communication
Communication Tower 5/Repeater Tower	701 Camp Rd, Decatur, Georgia 30032	Communication
Communication Tower 6/Repeater Tower	2484 Bruce Street, Lithonia, Georgia 30058	Communication
Communication Tower 7/Repeater Tower	3905 N Goddard Rd, Lithonia, Georgia 30038	Communication
Communication Tower 8/Repeater Tower	1678 Fairlake Dr, Decatur, Georgia 30034	Communication
Communication Tower 9/Repeater Tower	1686 Constitution Road, Atlanta, Georgia 30316	Communication
Communication Tower 10/Microwave	556 North McDonough Street, Decatur, Georgia 30030	Communication
Communication Tower 11/Microwave	6094 Shadow Rock Dr, Lithonia, Georgia 30058	Communication
Communication Tower 12/Dispatch	1960 West Exchange Place, Tucker, Georgia 30084	Communication
Communication Tower 13/Dispatch	3630 Camp Circle, Decatur, Georgia 30032	Communication
Oglethorpe Power Corporation	2100 East Exchange Place, Tucker, Georgia 30084	Power/Energy
Snapping Shoals EMC	190 Fairview Road, Ellenwood, Georgia 30294	Power/Energy
CDC Main	1600 Clifton Road N.E., Atlanta, Georgia 30333	Lab
CDC Corporate Boulevard	8 Corporate Boulevard, Atlanta, Georgia 30329	Admin/Mail
CDC PDK	4770 Buford Highway N.E., Atlanta, Georgia, 30341	Admin
Georgia Public Health Laboratory	1749 Clairmont Road, Decatur, Georgia 30033	Health/Lab
Yerkes National Primate Research Center (YNPRC)	954 Gatewood Road N.E., Atlanta, Georgia 30329	Health/Lab
Stone Mountain Park	1000 Robert E. Lee Boulevard, Stone Mountain, Georgia 30083	Park
Fernbank Museum of Natural History	767 Clifton Road N.E., Atlanta, Georgia 30307	Other/Museum
Perimeter Mall	4400 Ashford Dunwoody Road, Atlanta, Georgia 30346	Other/Shopping
North DeKalb Mall	2050 Lawrenceville Highway, Decatur, Georgia 30033	Other/Shopping
Gallery at South DeKalb (South DeKalb Mall)	2801 Candler Road, Decatur, Georgia 30034	Other/Shopping
Stonecrest Mall	2929 Turner Hill Road, Lithonia, Georgia 30038	Other/Shopping
Northlake Mall	4800 Briarcliff Road Northeast, Atlanta, Georgia 30345	Other/Shopping
Atlanta Veterans Medical Center	1670 Clairmont Road, Decatur, Georgia 30033	Hospital
DeKalb Medical Center	2701 North Decatur Road, Decatur, Georgia 30033	Hospital
DeKalb Medical Center Hillandale	2801 DeKalb Medical Parkway, Lithonia, Georgia 30058	Hospital

Name	Address	Type
Children's Healthcare of Atlanta at Egleston	1405 Clifton Road N.E., Atlanta, Georgia 30322	Children's Hospital
Emory University Hospital	1405 Clifton Road N.E., Atlanta, Georgia 30322	Hospital
Sanitation South Lot, Exchange Park	1755 Fairlake Drive, Decatur, GA 30034	County Government Facility
Sanitation East Lot	1750 Rogers Lake Road, Lithonia, GA 30058	County Government Facility
Sanitation Headquarters	3643 Camp Drive, Decatur, GA 30032	County Government Facility
Traffic Engineering Sign Shop	Camp Way, Decatur, GA 30032	County Government Facility
Sanitation North Lot, Carrol Avenue	2315 Chamblee-Tucker Road, Doraville, GA 30341	County Government Facility
Snapfinger Main Shop W&S	4124 Flakes Mill Road, Decatur, GA 30034	County Government Facility
Snapfinger Plant, Water & Sewer	4124 Flakes Mill Road, Decatur, GA 30034	County Government Facility
Sanitation Welding Shop	Rear of 3700 Camp Circle, Decatur, GA 30032	County Government Facility
RPCA Southern Service Center	1749 Flakes Mill Drive, Decatur, GA 30034	County Government Facility
Sanitation Pulverizer, Buford Highway	4600 Buford Highway, Doraville, GA 30341	County Government Facility
Sanitation Pulverizer, Exchange Park	1755 Fairlake Drive, Decatur, GA 30034	County Government Facility
Sanitation Pulverizer, Site - E	4203 Clevemont Road, Ellenwood, GA 30034	County Government Facility
Sanitation Seminole Road Landfill	4203 Clevemont Road, Ellenwood, GA 30034	County Government Facility
Sanitation Site - E, Seminole Scale House	4203 Clevemont Road, Ellenwood, GA 30034	County Government Facility
Sanitation Transfer Station, Incinerator	3700 Camp Circle, Decatur, GA 30032	County Government Facility
Sheriff's Training Trailer	800 Camp Way, Decatur, GA 30032	County Government Facility
Surplus Shed, Camp Road	Camp Road, Decatur, GA 30032	County Government Facility
Scottdale Tobie Grand	644 Parkdale Drive, Scottsdale, GA 3009	County Government Facility
DeKalb County Tax Comm.	1358 Dresden Drive, Atlanta, GA 30319	County Government Facility
DeKalb Co. Tax Comm.	2389 Wesley Chapel Road Suite 101A, Decatur, GA 30035	County Government Facility
DeKalb Co. Tax Comm.	4380 Memorial Drive Suite 100, Decatur, GA 30032	County Government Facility
Porter Sanford Center for Performing Arts	3181 Rainbow Drive, Decatur, GA 30034	County Government Facility
Administration Building	1300 Commerce Dr, Decatur, GA 30030	County Government Facility
Administration Building Annex	1300 Commerce Dr, Decatur, GA 30030	County Government Facility
Animal Control Center	845 Camp Road, Decatur, GA 30030	County Government Facility
Medical Examiner's Forensic Science Center	3550 Kensington Road, Decatur, GA 30032	County Government Facility
Roads & Drainage Field Office	729 Camp Road, Decatur, GA 30032	County Government Facility

Name	Address	Type
Emory University	201 Dowman Drive, Atlanta, Georgia 30322	Education
Mercer University	3100 Mercer University Drive, Atlanta, Georgia 30341	Education
Agnes Scott College	141 East College Avenue, Decatur, Georgia 30030	Education
Oglethorpe University	4484 Peachtree Road, Atlanta, Georgia 30319	Education
Cox Communications	1400 Lake Hearn Drive Northeast, Atlanta, Georgia 30319	Other
WAGA (Fox 5)	1551 Briarcliff Road N.E., Atlanta, Georgia 30306	Other
Doraville Fuel Terminal (Fuel Farm)	6293 New Peachtree Road, Doraville, Georgia 30340	Other
Decatur Library	215 Sycamore Street, Decatur, GA	Library
Briarcliff Library	2775 Briarcliff Road, Atlanta, GA	Library
BrookHaven	1242 N. Druid Hills Road, Atlanta, GA	Library
CHAMBLEE Library	4115 Clairmont Road, Chamblee, GA	Library
Clarkston Library	951 N. Indian Creek, Clarkston, GA	Library
Covington Library	3500 Covington Hwy, Decatur, Ga	Library
Doraville Library	3748 Central Ave. Doraville, GA	Library
Dunwoody Library	5339 Chamblee-Dunwoody Rd, Dunwoody, GA	Library
Embry Hills Library	3733 Chamblee-Tucker Rd, Chamblee, GA	Library
Flat Shoals Library	4022 Flat Shoals Parkway, Decatur, GA	Library
Gresham Library	2418 Gresham Road, Atlanta, GA	Library
Hairston Crossing Library	4911 Redan Road, Stone Mountain, GA	Library
Lithonia-Davidson Library	6821 Church Street, Lithonia, GA	Library
Northlake-Barbara Loar Library	3772 LaVista Road, Tucker, GA	Library
Redan Trotti Library	1569 Wellborn Road, Lithonia, GA	Library
Salem-Panola Library	5137 Salem Road, Lithonia, GA	Library
Scott Chandler Library	2544 McAfee Road, Decatur, GA	Library
Toco Hill-Avis G. Williams Library	1282 McConnel Drive	Library
DeKalb County Tax Comm.	1358 Dresden Drive	Government
DeKalb Co. Tax Comm.	2389 Wesley Chapel Road Suite 101A	Government
DeKalb Co. Tax Comm.	4380 Memorial Drive Suite 100	Government
Porter Sanford Center for Performing Arts	3181 Rainbow Drive	Government

Name	Address	Type
PeachTree DeKalb Airport		
Post Office	4700 Longmire Ext, Atlanta, GA 30340	Government
Post Office	520 W Ponce de leon Ave Decatur GA 30030	Government
Post Office	1920 Dresden Dr NE, Brookhaven, GA 30319	Government
Post Office	3212 Northlake Pkwy NE, Atlanta, GA 30345	Government
Post Office	3104 Briarcliff Rd NE, Atlanta, GA 30345	Government
Post Office	1785 E Park Pl Blvd Ste 201, Stone Mountain, GA 30087	Government
Post Office	977 Montreal Rd, Clarkston, GA 30021	Government
Post Office	3328 E Ponce de Leon Ave, Scottdale, GA 30079	Government
Post Office	2853 Candler Rd Side, Decatur, GA 30034	Government
Post Office	3035 Stone Mountain St, Lithonia, GA 30058	Government
Post Office	1333 Cedar Grove Rd, Conley, GA 30288	Government
Post Office	3545 Broad St Atlanta, GA 30341 - 2259	Government
Post Office	1799 Briarcliff Rd NE FRNT Atlanta, GA 30333	Government
Post Office	1551 Dunwoody Village Pkwy Atlanta, GA 30338	Government
Post Office	1926 Hosea L Williams Dr. NE Atlanta, GA 30317	Government
Post Office	3631 Chamblee Tucker Rd STE C Atlanta, GA 30341	Government
Post Office	4707 Ashford Dunwoody Rd Atlanta, GA 30338	Government
Post Office	15 Franklin St Avondale Estates, GA 30002	Government
Post Office	2724 Wesley Chapel Rd Decatur, GA 30034	Government
Post Office	5465 Highway 42 Ellenwood, GA 30294	Government
Post Office	1544 Wellborn Rd STE 4 Lithonia, GA 30058	Government
Post Office	4567 Rockbridge Rd Pine Lake, GA 30072	Government
Post Office	5152 Memorial Dr. STE 101 Stone Mountain, GA 30083	Government
Post Office	5181 W Mountain St Stone Mountain, GA 30083	Government
Post Office	4325 1st Ave,. Tucker, GA 30084	Government
Clairemont Elementary	155 Erie Ave, Decatur, GA 30030	Elementary
College Heights Early Childhood Learning	917 S. McDonough St. Decatur, GA 30030	Elementary
Fifth Ave Upper Elementary	101 5th Ave, Decatur, GA 30030	Elementary

Name	Address	Type
Glenwood Elementary	440 E. Ponce de Leon Ave, Decatur, GA 30030	Elementary
Oakhurst Elementary	175 Mead Road, Decatur, GA 30030	Elementary
Talley Street Upper Elementary School	2617 Talley Street, Decatur, GA 30030	Elementary
Westchester Elementary	758 Scott Blvd, Decatur, GA 30030	Elementary
Winnona Park Elementary	510 Avery Street, Decatur, GA 30030	Elementary
Decatur High School	310 N. McDonough Street, Decatur, GA 30030	Elementary
Barack H. Obama Elementary Magnet School	3132 Clifton Church Road, SE ATL, GA 30316	Elementary
John Robert Lewis Elementary School	2630 Skyland Drive, NE Atlanta, GA 30319	Elementary
Peachcrest Elementary School	1530 Joy Lane, Decatur, GA 30032	Elementary
Renfroe Middle School	220 W. College Ave, Decatur, GA 30030	Elementary
Allgood (PK-5)	659 Allgood Road, Stone Mountain, GA 30083	School
Arabia Mountain High (9-12)	6610 Browns Mill Road, Lithonia, GA 30058	School
Ashford Park (PK-6)	2968 Cravenridge Drive, NE, Atlanta, GA 30319	School
Austin (PK-3)	5435 Roberts Drive, Dunwoody, GA 30038	School
Avondale (PK-5)	10 Lakeshore Drive, Avondale Estates, GA 30002	School
Bethune Middle (584) (6-8)	5200 Convington Highway, Decatur, GA 30035	School
Bob Mathis(PK-5)	3505 Boring Road, Decatur, GA 30034	School
Briar Vista (PK-5)	1131 Briar Vista Terrace, Atlanta, GA 30324	School
Briarlake (PK-5)	3590 LaVista Road, Decatur, GA 30033	School
Brockett (PK-5)	1855 Brockett Road, Tucker, GA 30084	School
Browns Mill (PK-5)	4863 Browns Mill Road, Lithonia, GA 30058	School
Canby Lane (PK-5)	4150 Green Hawk Trail, Decatur, GA 30035	School
Cary Reynolds (PK-5)	3498 Pine Street, Doraville, GA 30340	School
Cedar Grove (PK-5)	2330 River Road, Ellenwood, GA 30049	School
Cedar Grove High (9-12)	2360 River Road, Ellenwood, GA 30049	School
Cedar Grove Middle (6-8)	2300 Wildcat Road, Decatur, GA 30034	School
Chamblee High (9-12)	3688 Chamblee Dunwoody Road, Atlanta, GA 30341	School
Chamblee Middle (6-8)	3601 Sexton Woods Drive, Chamblee, GA 30341	School
Champion Theme Middle (6-8)	5265 Mimosa Drive, Stone Mountain, GA 30083	School

Name	Address	Type
Chapel Hill (PK-5)	3536 Radcliffe Boulevard, Decatur, GA 30034	School
Chapel Hill Middle (6-8)	3535 Dogwood Farm Road, Decatur, GA 30034	School
Chesnut (PK-5)	4576 North Peachtree Road, Dunwoody, GA 30338	School
Clarkston High (9-12)	618 N. Indian Creek Road, Clarkston, GA 30021	School
Clifton Elementary Computer Magnet (PK-5)	3132 Clifton Church Road, Atlanta, GA 30316	School
Columbia (PK-5)	3230 Columbia Woods Drive, Decatur, GA 30032	School
Columbia High (9-12)	2106 Columbia Drive, Decatur, GA 30032	School
Columbia Middle (6-8)	3001 Columbia Drive, Decatur, GA 30035	School
Coralwood Center (3yrs/PK/K)	2477 Coralwood Drive, Decatur, GA 30033	School
Cross Keys High (9-12)	1626 North Druid Hills Road, NE, Atlanta, GA 30319	School
DeKalb Academy of Technology and The Environment (D.A.T.E.) (K-8)	1492 Kelton Drive, Stone Mountain, GA 30083	School
DeKalb Alternative	5855 Memorial Drive, Stone Mountain, GA 30083	School
DeKalb Early College Academy (9-12)	1701 Mountain Industrial Blvd, Stone Mountain, GA 30083	School
DeKalb Elementary School of the Arts (PK-7)	797 Fayetteville Road, Atlanta, GA 30316	School
DeKalb High School Tech South	3303 Panthersville Road, Decatur, GA 30030	School
DeKalb Online Academy (DOLA) (9-12)	1804 Bouldercrest Road, SE, Atlanta, GA 30316	School
DeKalb PATH Academy (5-8)	3007 Hermance Drive, Atlanta, GA 30319	School
DeKalb Preparatory Academy (K-4)	1402 Austin Drive, Decatur, GA 30032	School
DeKalb School of the Arts	1192 Clarendon Road, Avondale Estates, GA 30002	School
DeKalb School Public Safety	5857 Memorial Drive, Stone Mountain, GA 30083	School
Destiny Achievers Academy of Excellence Charter School (9-12)	3595 Linecrest Road, Ellenwood, GA 30294	School
Dresden (PK-5)	2449 Dresden Drive, Chamblee, GA 30341	School
Druid Hills High (9-12)	1798 Haygood Drive, NE, Atlanta, GA 30307	School
Druid Hills Middle (6-8)	3100 Mt. Olive Drive, Decatur, GA 30033	School
Dunaire (PK-5)	651 S. Indian Creek Drive, Stone Mountain, GA 30383	School
Dunwoody (4-5)	1923 Womack Road, Dunwoody, GA 30338	School
Dunwoody High (9-12)	5035 Vermack Road, Dunwoody, GA 30338	School
E. L. Miller (PK-5)	919 Martin Road, Stone Mountain, GA 30088	School

Name	Address	Type
Eagle Woods Academy	5931 Shadow Rock Drive, Lithonia, GA 30058	School
Edward L. Bouie (PK-5)	5100 Rock Springs Road, Lithonia, GA 30038	School
Elizabeth Andrews High	1701 Mountain Industrial Blvd, Stone Mountain, GA 30083	School
Evansdale(PK-5)	2914 Evans Woods Drive, Doraville, GA 30340	School
Fairington (PK-5)	5505 Philip Bradley Drive, Lithonia, GA 30038	School
Fernbank (PK-5)	157 Heaton Park Drive, NE, Atlanta, GA 30307	School
Fernbank Science Center	156 Heaton Park Drive, NE, Atlanta, GA 30307	School
Flat Rock (PK-5)	4603 Evans Mill Road, Lithonia, GA 30038	School
Flat Shoals (PK-5)	3226 Flat Shoals Road, Decatur, GA 30034	School
Freedom Middle (6-8)	505 S. Hairston Road, Stone Mountain, GA 30088	School
Gateway to College Academy (10-12)	555 N. Indian Creek Drive, Clarkston, GA 30021	School
Globe Academy (K-3)	2225 Heritage Drive, Atlanta, GA 30345	School
Hambrick (PK-5)	1101 Hambrick Road, Stone Mountain, GA 30083	School
Hawthorne (PK-5)	2535 Caladium Drive, NE, Atlanta, GA 30345	School
Henderson Middle (6-8)	2830 Henderson Mill Road, Chamblee, GA 30341	School
Henderson Mill (PK-5)	2408 Henderson Mill Road, NE, Atlanta, GA 30345	School
Hightower (PK-5)	4236 Tilly Mill Road, Doraville, GA 30360	School
Huntley Hills (PK-5)	2112 Seaman Circle, Chamblee, GA 30341	School
	1484 Idlewood Road, Tucker, GA 30084	School
Idlewood (PK-5)	724 N. Indian Creek Drive, Clarkston, GA 30021	School
Indian Creek (PK-5)	2418 Wood Trail Lane, Decatur, GA 30033	School
International Student Center	2383 North Druid Hills Road, NE, Atlanta, GA 30329	School
Jolly (PK-5)	1070 Otello Avenue, Clarkston, GA 30021	School
Kelley Lake (PK-5)	2590 Kelly Lake Road, Decatur, GA 30032	School
Kingsley (PK-5)	2051 Brendon Drive, Dunwoody, GA 30338	School
Kittredge (PK-6)	1663 E. Nancy Creek Drive, NE, Atlanta, GA 30319	School
Knollwood (PK-5)	3039 Santa Monica Drive, Decatur, GA 30032	School
Lakeside High (9-12)	3801 Briarcliff Road, NE, Atlanta, GA 30345	School
Laurel Ridge (PK-5)	1215 Balsam Drive, Decatur, GA 30033	School

Name	Address	Type
Leadership Preparatory Academy (K-5)	6400 Woodrow Road, Lithonia, GA 30038	School
Lithonia High (9-12)	2440 Phillips Road, Lithonia, GA 30058	School
Lithonia Middle (6-8)	2451 Randall Avenue, Lithonia, GA 30058	School
Livsey (PK-5)	4137 Livsey Road, Tucker, GA 30084	School
Marbut (PK-5)	5776 Marbut Road, Lithonia, GA 30058	School
Margaret Harris	1634 Knob Hill Drive, NE, Atlanta, GA 30329	School
McLendon (PK-5)	3169 Hollywood Drive, Decatur, GA 30033	School
McNair Elementary Discovery Learning Academy (PK-5)	2162 Second Avenue, Decatur, GA 30032	School
McNair High (9-12)	1804 Bouldercrest Road, SE, Atlanta, GA 30316	School
McNair Middle (6-8)	2190 Wallingford Drive, Decatur, GA 30032	School
Meadowview (PK-5)	1879 Wee Kirk Road, Atlanta, GA 30316	School
Midvale (PK-5)	3836 Midvale Road, Tucker, GA 30084	School
Midway (PK-3)	3318 Midway Road, Decatur, GA 30032	School
Miller Grove High (9-12)	2645 DeKalb Medical Parkway, Lithonia, GA 30058	School
Miller Grove Middle (6-8)	2215 Miller Road, Decatur, GA 30035	School
MLK, Jr. High (9-12)	3991 Snapfinger Road, Lithonia, GA 30038	School
Montclair (PK-5)	1680 Clairmont Place NE, Atlanta, GA 30329	School
Montgomery (PK-6)	3995 Ashford-Dunwoody Road, Atlanta, GA 30319	School
Murphey Candler (PK-5)	6775 South Goddard Road, Lithonia, GA 30038	School
Narvie J. Harris (PK-5)	3981 McGill Drive, Decatur, GA 30034	School
Oak Grove (PK-5)	1857 Oak Grove Road, NE, Atlanta, GA 30329	School
Oak View (PK-5)	3574 Oakvale Road, Decatur, GA 30034	School
Oakcliff (PK-5)	3150 Willow Oak Way, Doraville, GA 30340	School
Panola Way (PK-5)	2170 Panola Way Court, Lithonia, GA 30058	School
Peachtree Middle (6-8)	4664 North Peachtree Road, Atlanta, GA 30338	School
Pine Ridge (PK-5)	750 Pine Ridge Drive, Stone Mountain, GA 30087	School
Pleasantdale (PK-5)	3695 North Lake Drive, Doraville, GA 30340	School
Princeton (PK-5)	1321 South Deshon Road, Lithonia, GA 30058	School

Name	Address	Type
Rainbow (PK-5)	2801 Kelley Chapel Road, Decatur, GA 30034	School
Redan (PK-5)	1914 Stone Mountain-Lithonia Rd, Lithonia, GA 30058	School
Redan High (9-12)	5247 Redan Road, Stone Mountain, GA 30088	School
Redan Middle (6-8)	1775 Young Road, Lithonia, GA 30058	School
Robert Shaw (PK-5)	362 Glendale Road, Scottdale, GA 30341	School
Rock Chapel (PK-5)	1130 Rock Chapel Road, Lithonia, GA 30058	School
Rockbridge (PK-6)	445 Halwick Way, Stone Mountain, GA 30083	School
Rowland (348) (V) (PK-5)	1317 S. Indian Creek Drive, Stone Mountain, GA 30083	School
Sagamore Hills (PK-5)	1865 Alderbrook Road, Atlanta, GA 30345	School
Salem Middle (6-8)	5333 Salem Road, Lithonia, GA 30058	School
Sequoyah Middle (6-8)	3456 Aztec Drive, Doraville, GA 30340	School
Shadow Rock (PK-5)	1040 Kingway Drive, Lithonia, GA 30058	School
Shadow Rock Center	1040 Kingway Drive, Lithonia, GA 30058	School
Smoke Rise (PK-5)	1991 Silver Hill Road, Stone Mountain, GA 30087	School
Snapfinger (PK-5)	1365 Snapfinger Road, Decatur, GA 30032	School
Southwest DeKalb High (9-12)	2683 Kelley Chapel Road, Decatur, GA 30034	School
Stephenson High (9-12)	701 Stephenson Road, Stone Mountain, GA 30087	School
Stephenson Middle (6-8)	922 Stephenson Road, Stone Mountain, GA 30087	School
Stone Mill (PK-5)	4900 Sheila Lane, Stone Mountain, GA 30083	School
Stone Mountain (PK-5)	6720 James B. Rivers Drive, Stone Mountain, GA 30083	School
Stone Mountain High (9-12)	4555 Central Drive, Stone Mountain, GA 30083	School
Stone Mountain Middle (6-8)	4301 Sarr Parkway, Stone Mountain, GA 30083	School
Stoneview (PK-5)	2629 Huber Street, Lithonia, GA 30058	School
Tapestry Public Charter School	4046 Chamblree-Tucker Road, Atlanta, GA 30340	School
The Museum School of Avondale Estates (K-7)	923 Forrest Blvd, Decatur, GA 30030	School
Toney (PK-5)	2701 Oakland Terrace, Decatur, GA 30032	School
Towers High (9-12)	3919 Brookcrest Circle, Decatur, GA 30032	School
Tucker High (9-12)	5036 LaVista Road, Tucker, GA 30084	School
Tucker Middle (6-8)	2160 Idlewood Road, Tucker, GA 30084	School

Name	Address	Type
Vanderlyn (PK-5)	1877 Vanderlyn Drive, Dunwoody, GA 30338	School
Wadsworth Magnet (PK-5)	2084 Green Forest Drive, Decatur, GA 30032	School
Warren Tech	3075 Alton Road, Atlanta, GA 30341	School
Woodridge (PK-5)	4120 Cedar Ridge Trail, Stone Mountain, GA 30083	School
Woodward (PK-5)	3034 Curtis Drive, NE, Atlanta, GA 30019	School
Wynbrooke Theme (PK-5)	440 Wicksbury Way, Stone Mountain, GA 30087	School
Ivy Preparatory Academy At Kirkwood (IPA)	1807 Memorial Drive, Atlanta, Georgia 30317	School
Charles Drew Charter School	301 E Lake Blvd, Atlanta, Georgia 30317	School
Atlanta Charter Middle School	820 Essie Ave, Atlanta, Georgia 30316	School
Path Academy	3007 Hermance Drive, NE, Atlanta, Georgia 30319	School
St. Pius X Catholic High School, Atlanta	2674 Johnson Road NE, Atlanta, Georgia 30345	School
The Paideia School, Atlanta	1509 Ponce De Leon Avenue Northeast, Atlanta, GA 30307	School
Marist High School	3790 Ashford Dunwoody Road Northeast, Atlanta, GA 30319	School
Academy of Lithonia Charter School, Lithonia	3235 Evans Mill Road, Lithonia, Georgia 30038	School
Friends School of Atlanta, Decatur	862 South Columbia Drive, Decatur, Georgia 30030	School
Greenforest McCalep Christian Academic Center, Decatur	3250 Rainbow Drive, Decatur, Georgia 30034	School
Yeshiva Ohr Yisrael	1458 Holly Lane Northeast, Atlanta, Georgia 30329	School
Temima High School for Girls	1985 Lavista Road Northeast, Atlanta, Georgia 30329	School
Torah Day School of Atlanta	1985 Lavista Road Northeast, Atlanta, Georgia 30329	School
Immacualte Heart of Mary Catholic School (K-8)	2855 Briacliff road, NE, Atlanta, Georgia 30329	School

APPENDIX D: HAZARD RISK ANALYSIS



Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan

Carl Vinson Institute of Government
UNIVERSITY OF GEORGIA

Introduction

The Federal Disaster Mitigation Act of 2000 (DMA2K) requires state, local, and tribal governments to develop and maintain a mitigation plan to be eligible for certain federal disaster assistance and hazard mitigation funding programs.

Mitigation seeks to reduce a hazard's impacts, which may include loss of life, property damage, disruption to local and regional economies, and the expenditure of public and private funds for recovery. Sound mitigation must be based on a sound risk assessment that quantifies the potential losses of a disaster by assessing the vulnerability of buildings, infrastructure, and people.
In recognition of the importance of planning in mitigation activities, FEMA Hazus-MH, a powerful disaster risk assessment tool based on geographic information systems (GIS). This tool enables communities of all sizes to predict estimated losses from floods, hurricanes, earthquakes, and other related phenomena and to measure the impact of various mitigation practices that might help reduce those losses.

In 2022, the Georgia Department of Emergency Management partnered with the Carl Vinson Institute of Government at the University of Georgia to develop a detailed risk assessment focused on defining hurricane, riverine flood, and tornado risks in DeKalb County, Georgia. This assessment identifies the characteristics and potential consequences of the disaster, how much of the community could be affected by the disaster, and the impact on community assets.

Risk Assessment Process Overview

Hazus-MH Version 2.2 SP1 was used to perform the analyses for DeKalb County. The Hazus-MH application includes default data for every county in the US. This Hazus-MH data was derived from a variety of national sources and in some cases the data are also several years old. Whenever possible, using local provided data is preferred. DeKalb County provided building inventory information from the county's property tax assessment system. This section describes the changes made to the default Hazus-MH inventory and the modeling parameters used for each scenario.

County Inventory Changes

The default Hazus-MH site-specific point inventory was updated using data compiled from the Georgia Emergency Management Agency (GEMA). The default Hazus-MH aggregate inventory (General Building Stock) was also updated prior to running the scenarios. Reported losses reflect the updated data sets.

General Building Stock Updates

General Building Stock (GBS) is an inventory category that consists of aggregated data (grouped by census geography — tract or block). Hazus-MH generates a combination of site-specific and aggregated loss estimates based on the given analysis and user input.

The GBS records for DeKalb County were replaced with data derived from parcel and property assessment data obtained from DeKalb County. The county provided property assessment data was current as of November 2021 and the parcel data current as of November 2021. Records without improvements were deleted. The parcel boundaries were converted to parcel points located in the centroids of each parcel boundary; then, each parcel point was linked to an assessor record based upon matching parcel numbers. The parcel assessor match-rate for DeKalb County is 100%. The generated building inventory represents the approximate locations (within a parcel) of structures. The building inventory was aggregated by census block. Both the tract and block tables were updated. Table 1 shows the results of the changes to the GBS tables by occupancy class.

Table 1: GBS Building Exposure Updates by Occupancy Class*

General Occupancy	Default Hazus-MH Count	Updated Count	Default Hazus-MH Exposure	Updated Exposure
Commercial	13,947	6,670	$13,046,956,000	$12,186,755,000
Industrial	3,328	951	$2,315,533,000	$1,871,459,000
Residential	206,947	213,813	$65,913,862,000	$124,235,839,000
Agricultural	525	0	$196,471,000	$0
Religious	1,583	230	$1,526,135,000	$250,159,000
Government	491	0	$547,765,000	$0
Education	639	89	$1,513,469,000	$323,004,000
Total	**227,460**	**221,753**	**$85,060,191,000**	**$138,867,216,000**

*The exposure values represent the total number and replacement cost for all DeKalb County Buildings

For DeKalb County, the updated GBS was used to calculate hurricane wind losses. The flood losses and tornado losses were calculated from building inventory modeled in Hazus-MH as User-Defined Facility (UDF)[2], or site-specific points. Figure 1 shows the distribution of buildings as points based on the county provided data.

[2] The UDF inventory category in Hazus-MH allows the user to enter site-specific data in place of GBS data.

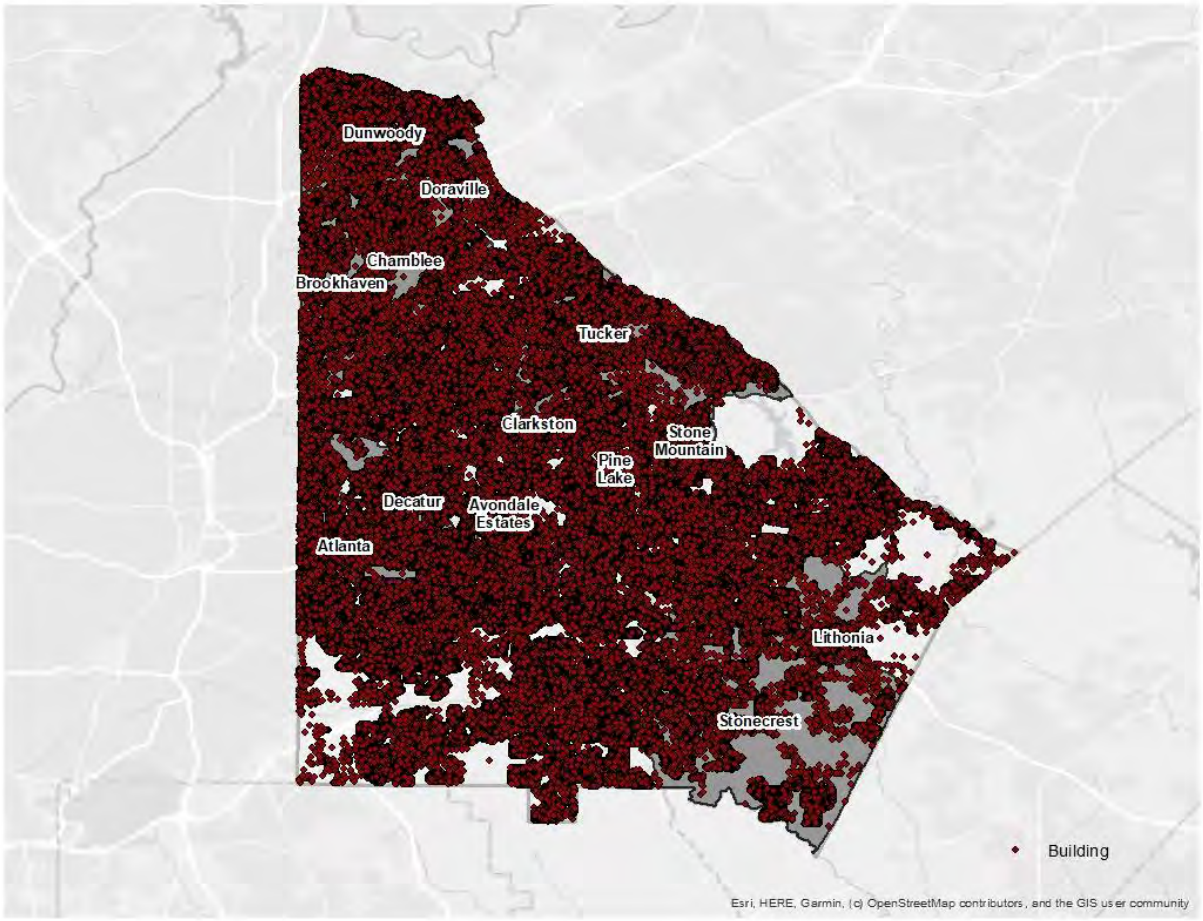


FIGURE 1: DEKALB COUNTY OVERVIEW

Essential Facility Updates

The default Hazus-MH essential facility data was updated to reflect improved information available in the Georgia Mitigation Information System (GMIS) as of November 2021. For these risk analyses, only GMIS data for buildings that Hazus-MH classified as Essential Facilities was integrated into Hazus-MH because the application provides specialized reports for these five facilities. Essential Facility inventory was updated for the analysis conducted for this report. The following table summarizes the counts and exposures, where available, by Essential Facility classification of the updated data.

Essential facilities include:

- Care facilities
- EOCs
- Fire stations
- Police stations
- Schools

Table 2: Updated Essential Facilities

Classification	Updated Count	Updated Exposure
Atlanta		
EOC	0	$0
Care	3	$45,209,000

Classification	Updated Count	Updated Exposure
Fire	0	$0
Police	0	$0
School	3	$183,199,000
Total	6	$228,408,000
Avondale Estates		
EOC	0	$0
Care	0	$0
Fire	1	$114,000
Police	0	$0
School	1	$863,000
Total	2	$977,000
Brookhaven		
EOC	0	$0
Care	0	$0
Fire	1	$45,000
Police	1	$34,000
School	11	$75,038,000
Total	13	$75,117,000
Chamblee		
EOC	0	$0
Care	0	$0
Fire	1	$119,000
Police	0	$0
School	5	$14,227,000
Total	6	$14,346,000
Clarkston		
EOC	0	$0
Care	0	$0
Fire	1	$418,000
Police	0	$0
School	0	$0
Total	1	$418,000
Decatur		
EOC	0	$0
Care	0	$0
Fire	0	$0
Police	0	$0
School	12	$55,715,000

Classification	Updated Count	Updated Exposure
Total	12	$55,715,000
	Doraville	
EOC	0	$0
Care	0	$0
Fire	0	$0
Police	0	$0
School	2	$10,568,000
Total	2	$10,568,000
Dunwoody		
EOC	0	$0
Care	0	$0
Fire	3	$31,755,000
Police	0	$0
School	7	$35,409,000
Total	10	$67,164,000
Lithonia		
EOC	0	$0
Care	0	$0
Fire	0	$0
Police	1	$1,133,000
School	1	$4,631,000
Total	2	$5,764,000
Pine Lake		
EOC	0	$0
Care	0	$0
Fire	0	$0
Police	0	$0
School	0	$0
Total	0	$0
Stone Mountain		
EOC	0	$0
Care	0	$0
Fire	1	$439,000
Police	0	$0
School	2	$6,351,000
Total	3	$6,790,000
Stonecrest		
EOC	0	$0

Classification	Updated Count	Updated Exposure
Care	1	$6,655,000
Fire	2	$809,000
Police	1	$268,000
School	13	$49,522,000
Total	17	$57,254,000
Tucker		
EOC	1	$17,950,000
Care	0	$0
Fire	2	$733,000
Police	2	$18,117,000
School	9	$25,004,000
Total	14	$61,804,000
Unincorporated Areas of DeKalb County		
EOC	0	$0
Care	3	$60,133,000
Fire	14	$9,008,000
Police	5	$8,339,000
School	93	$242,528,000
Total	115	$320,008,000

Assumptions and Exceptions

Hazus-MH loss estimates may be impacted by certain assumptions and process variances made in this risk assessment.

- The DeKalb County analysis used Hazus-MH Version 2.2 SP1, which was released by FEMA in May 2015.
- County provided parcel and property assessment data may not fully reflect all buildings in the county. For example, some counties do not report not-for-profit buildings such as government buildings, schools and churches in their property assessment data. This data was used to update the General Building Stock as well as the User Defined Facilities applied in this risk assessment.
- Georgia statute requires that the Assessor's Office assign a code to all of the buildings on a parcel based on the buildings primary use. If there is a residential or a commercial structure on a parcel and there are also agricultural buildings on the same parcel Hazus-MH looks at the residential and commercial "primary" structures first and then combines the value of all secondary structures on that parcel with the value of the primary structure. The values and building counts are still accurate but secondary structures are accounted for under the same classification as the primary structure. Because of this workflow, the only time that a parcel would show a value for an agricultural building is when there are no residential or commercial structures on the parcel thus making the agricultural building the primary structure. This is the reason that agricultural building counts and total values seem low or are nonexistent.
- GBS updates from assessor data will skew loss calculations. The following attributes were defaulted or calculated:
  - Foundation Type was set from Occupancy Class
  - First Floor Height was set from Foundation Type
  - Content Cost was calculated from Replacement Cost
- It is assumed that the buildings are located at the centroid of the parcel.

- The essential facilities extracted from the GMIS were only used in the portion of the analysis designated as essential facility damage. They were not used in the update of the General Building Stock or the User Defined Facility inventory.

The hazard models included in this risk assessment included:

- Hurricane assessment which was comprised of a wind only damage assessment.
- Flood assessment based on the 1% annual chance event that includes riverine assessments.
- Tornado assessment based on GIS modeling.

Hurricane Risk Assessment

Hazard Definition

The National Hurricane Center describes a hurricane as a tropical cyclone in which the maximum sustained wind is, at minimum, 74 miles per hour (mph)[3]. The term hurricane is used for Northern Hemisphere tropical cyclones east of the International Dateline to the Greenwich Meridian. The term typhoon is used for Pacific tropical cyclones north of the Equator west of the International Dateline. Hurricanes in the Atlantic Ocean, Gulf of Mexico, and Caribbean form between June and November with the peak of hurricane season occurring in the middle of September. Hurricane intensities are measured using the Saffir-Simpson Hurricane Wind Scale (Table 3). This scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time.

Hurricanes bring a complex set of impacts. The winds from a hurricane produce a rise in the water level at landfall called storm surge. Storm surges produce coastal flooding effects that can be as damaging as the hurricane's winds. Hurricanes bring very intense inland riverine flooding. Hurricanes can also produce tornadoes that can add to the wind damages inland. In this risk assessment, only hurricane winds, and coastal storm surge are considered.

Table 3: Saffir-Simpson Hurricane Wind Scale

Category	Wind Speed (mph)	Damage
1	74 - 95	Very dangerous winds will produce some damage
2	96 - 110	Extremely dangerous winds will cause extensive damage
3	111 - 130	Devastating damage will occur
4	131 -155	Catastrophic damage will occur
5	> 155	Catastrophic damage will occur

The National Oceanic and Atmospheric Administration's National Hurricane Center created the HURDAT database, which contains all of the tracks of tropical systems since the mid-1800s. This database was used to document the number of tropical systems that have affected DeKalb County by creating a 20-mile buffer around the county to include storms that didn't make direct landfall in DeKalb County but impacted the county. Note that the storms listed contain the peak sustained winds, maximum pressure and maximum attained storm strength for the entire storm duration. Since 1859, DeKalb County has had 16 tropical systems within 20 miles of its county borders (Table 4).

Table 4: Tropical Systems affecting DeKalb County[4]

YEAR	DATE RANGE	NAME	MAX WIND(Knots)	MAX PRESSURE	MAX CAT
1859	September 15-18	UNNAMED	81	0	H1

[3] National Hurricane Center (2011). "Glossary of NHC Terms." National Oceanic and Atmospheric Administration. http://www.nhc.noaa.gov/aboutgloss.shtml#h. Retrieved 2012-23-02.

[4] Atlantic Oceanic and Meteorological Laboratory (2012). "Data Center." National Oceanic and Atmospheric Administration. http://www.aoml.noaa.gov/hrd/data_sub/re_anal.html. Retrieved 7-20-2015.

YEAR	DATE RANGE	NAME	MAX WIND(Knots)	MAX PRESSURE	MAX CAT
1887	July 20-28	UNNAMED	98	0	H2
1893	September 27 - October 05	UNNAMED	132	948	H4
1900	September 11-15	UNNAMED	52	0	TS
1902	October 03-13	UNNAMED	104	970	H2
1903	September 09-16	UNNAMED	92	988	H1
1907	September 18-23	UNNAMED	46	0	TS
1911	August 23-31	UNNAMED	98	972	H2
1912	June 07-17	UNNAMED	69	0	TS
1940	August 05-14	UNNAMED	98	1008	H2
1959	October 06-09	IRENE	46	1003	TS
1994	June 30 - July 07	ALBERTO	63	1014	TS
1994	August 14-19	BERYL	58	1013	TS
1995	August 22-28	JERRY	40	1010	TS
1997	July 16-27	DANNY	81	1013	H1
2004	August 25 - September 10	FRANCES	144	1009	H4

Category Definitions:
TS – Tropical storm
TD – Tropical depression
H1 – Category 1 (same format for H2, H3, and H4)
E – Extra-tropical cyclone

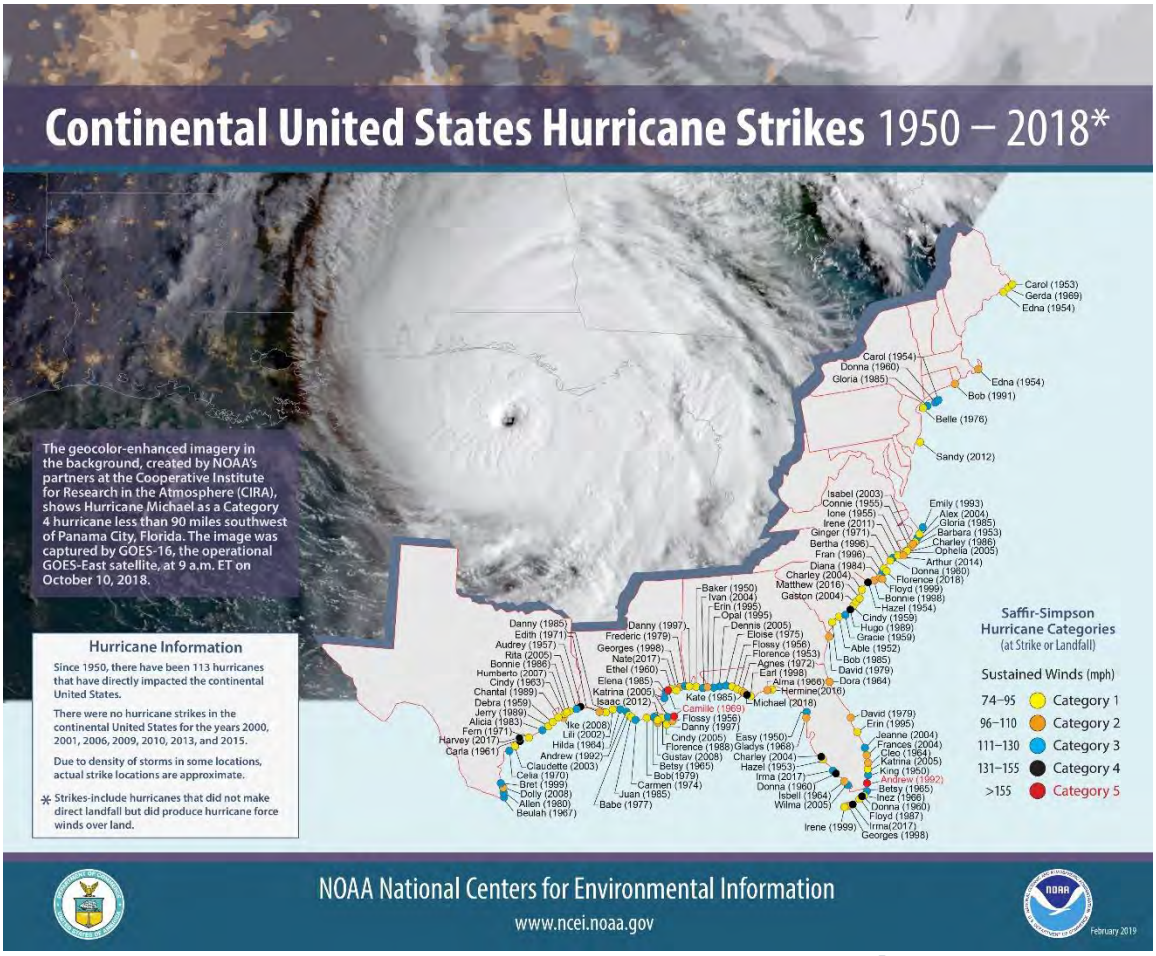


FIGURE 2: CONTINENTAL UNITED STATES HURRICANE STRIKES: 1950 TO 2018[5]

Probabilistic Hurricane Scenario

The following probabilistic wind damage risk assessment modeled a Tropical Storm with maximum winds of 67 mph.

Wind Damage Assessment

Separate analyses were performed to determine wind and hurricane storm surge related flood losses. This section describes the wind-based losses to DeKalb County. Wind losses were determined from probabilistic models run for the Tropical Storm which equates to the 1% chance storm event. Figure 3 shows wind speeds for the modeled Tropical Storm.

[5] Source: NOAA National Centers for Environmental Information

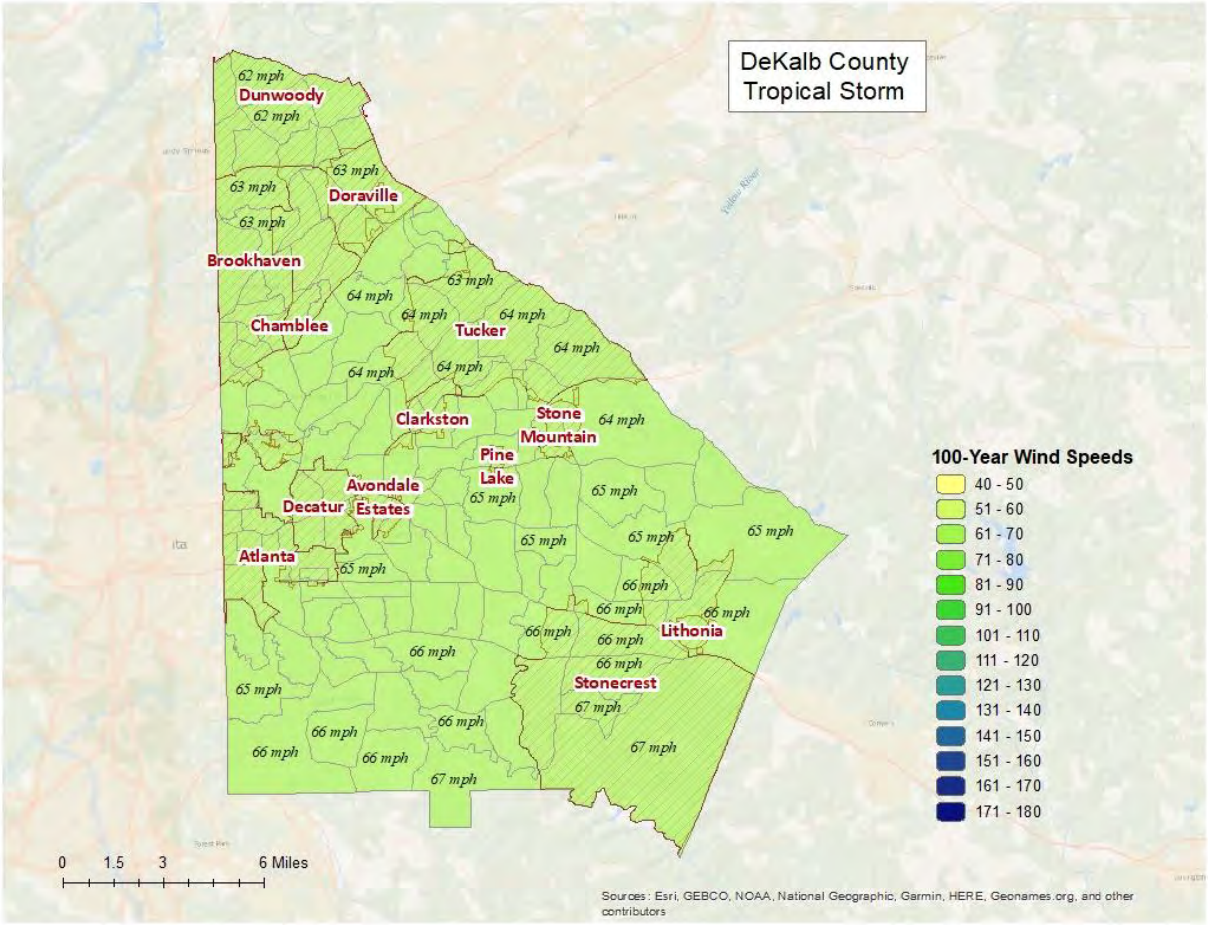


FIGURE 3: WIND SPEEDS BY STORM CATEGORY

Wind-Related Building Damages

Buildings in DeKalb County are vulnerable to storm events, and the cost to rebuild may have significant consequences to the community. The following table shows a summary of the results of wind-related building damage in DeKalb County for the Tropical Storm (100 Year Event). The loss ratio expresses building losses as a percentage of total building replacement cost in the county. Figure 4 illustrates the building loss ratios of the modeled Tropical Storm.

Table 5: Hurricane Wind Building Damage

Classification	Number of Buildings Damaged	Total Building Damage	Total Economic Loss[6]	Loss Ratio
Tropical Storm	232	$53,991,190	$69,558,650	0.04%

Note that wind damaged buildings are not reported by jurisdiction. This is due to the fact that census tract boundaries – upon which hurricane building losses are based – do not closely coincide with jurisdiction boundaries.

[6] Includes property damage (infrastructure, contents, and inventory) as well as business interruption losses.

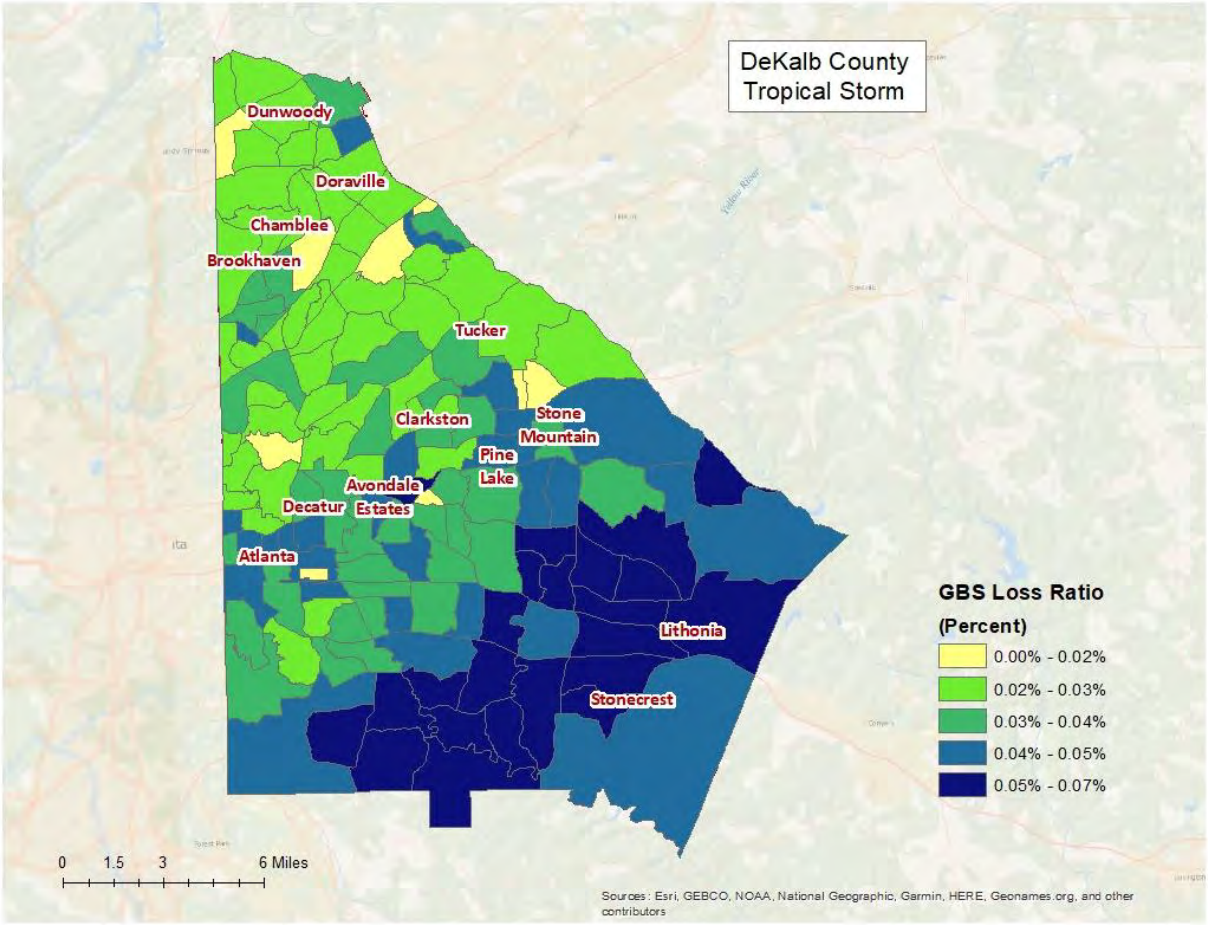


FIGURE 4: HURRICANE WIND BUILDING LOSS RATIOS

Essential Facility Losses

Essential facilities are also vulnerable to storm events, and the potential loss of functionality may have significant consequences to the community. Hazus-MH identified the essential facilities that may be moderately or severely damaged by winds. The results are compiled in Table 6.

There are 203 essential facilities in DeKalb County.

Classification	Number
EOCs	1
Fire Stations	26
Care Facilities	7
Police Stations	10
Schools	159

Table 6: Wind-Damaged Essential Facility Losses

Classification	Facilities At Least Moderately Damaged > 50%	Facilities Completely Damaged > 50%	Facilities with Expected Loss of Use (< 1 day)
Tropical Storm	1	0	203

Shelter Requirements

Hazus-MH estimates the number of households evacuated from buildings with severe damage from high velocity winds as well as the number of people who will require short-term sheltering. Since the 1% chance storm event for DeKalb County is a Tropical Storm, the resulting damage is not enough to displace Households or require temporary shelters as shown in the results listed in Table 7.

Table 7: Displaced Households and People

Classification	# of Displaced Households	# of People Needing Short-Term Shelter
Tropical Storm	0	0

Debris Generated from Hurricane Wind

Hazus-MH estimates the amount of debris that will be generated by high velocity hurricane winds and quantifies it into three broad categories to determine the material handling equipment needed:

- Reinforced Concrete and Steel Debris
- Brick and Wood and Other Building Debris
- Tree Debris

Different material handling equipment is required for each category of debris. The estimates of debris for this scenario are listed in Table 8. The amount of hurricane wind related tree debris that is estimated to require pick up at the public's expense is listed in the eligible tree debris column.

Table 8: Wind-Related Debris Weight (Tons)

Classification	Brick, Wood, and Other	Reinforced Concrete and Steel	Eligible Tree Debris	Other Tree Debris	Total
Tropical Storm	757	0	5,922	3,259	9,938

Figure 5 shows the distribution of all wind related debris resulting from a Tropical Storm. Each dot represents 20 tons of debris within the census tract in which it is located. The dots are randomly distributed within each census tract and therefore do not represent the specific location of debris sites.

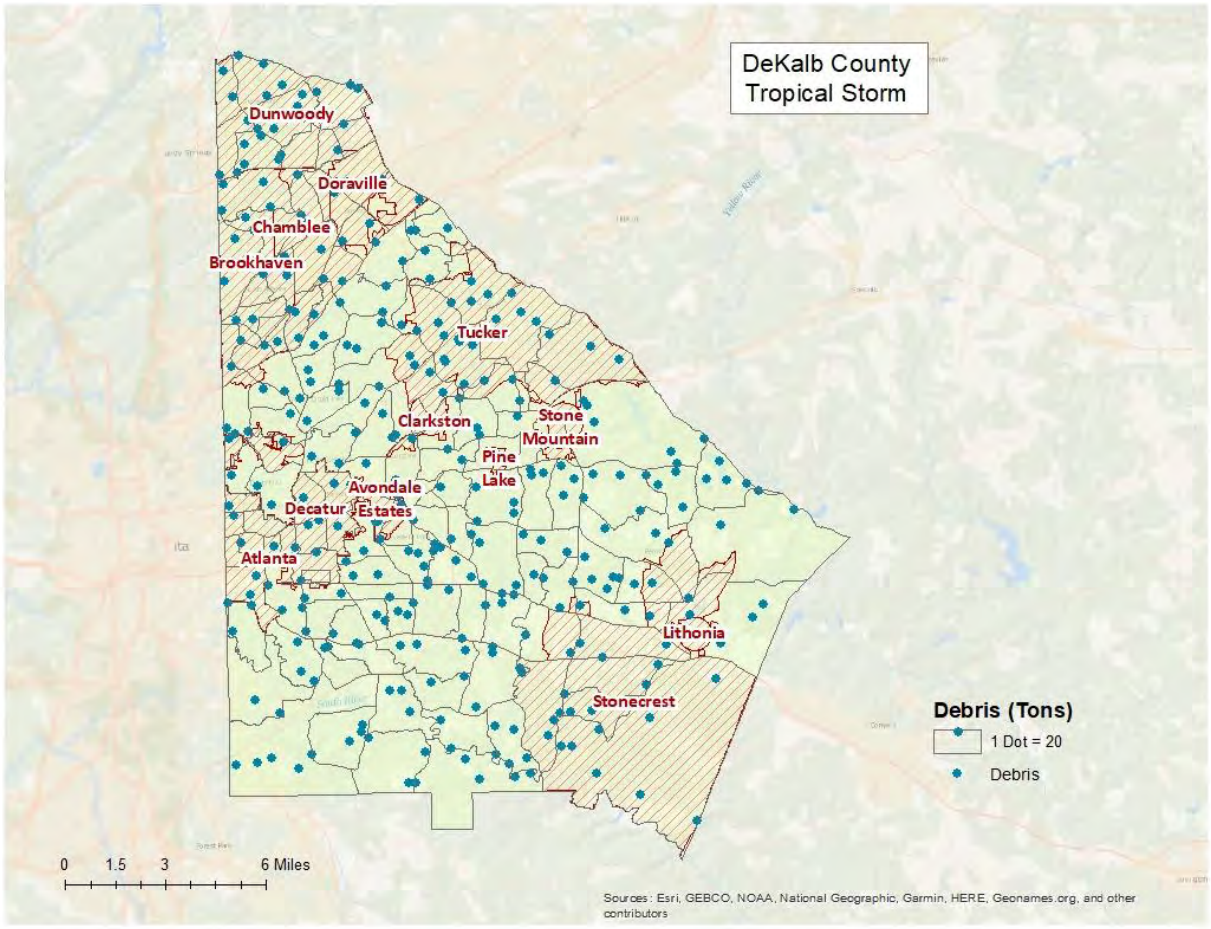


FIGURE 5: WIND-RELATED DEBRIS WEIGHT (TONS)

Flood Risk Assessment

Hazard Definition

Flooding is a significant natural hazard throughout the United States. The type, magnitude, and severity of flooding are functions of the amount and distribution of precipitation over a given area, the rate at which precipitation infiltrates the ground, the geometry and hydrology of the catchment, and flow dynamics and conditions in and along the river channel. Floods can be classified as one of three types: upstream floods, downstream floods, or coastal floods.

Upstream floods, also called flash floods, occur in the upper parts of drainage basins and are generally characterized by periods of intense rainfall over a short duration. These floods arise with very little warning and often result in locally intense damage, and sometimes loss of life, due to the high energy of the flowing water. Flood waters can snap trees, topple buildings, and easily move large boulders or other structures. Six inches of rushing water can upend a person; another 18 inches might carry off a car. Generally, upstream floods cause damage over relatively localized areas, but they can be quite severe in the local areas in which they occur. Urban flooding is a type of upstream flood. Urban flooding involves the overflow of storm drain systems and can be the result of inadequate drainage combined with heavy rainfall or rapid snowmelt. Upstream or flash floods can occur at any time of the year in Georgia, but they are most common in the spring and summer months.

Downstream floods, also called riverine floods, refer to floods on large rivers at locations with large upstream catchments. Downstream floods are typically associated with precipitation events that are of relatively long duration and occur over large areas. Flooding on small tributary streams may be limited, but the contribution of increased runoff may result in a large flood downstream. The lag time between precipitation and time of the flood peak is much longer for downstream floods than for upstream floods, generally providing ample warning for people to move to safe locations and, to some extent, secure some property against damage.

Coastal floods occurring on the Atlantic and Gulf coasts may be related to hurricanes or other combined offshore, nearshore, and shoreline processes. The effects of these complex interrelationships vary significantly across coastal settings, leading to challenges in the determination of the base (1-percent-annual-chance) flood for hazard mapping purposes. Land area covered by floodwaters of the base flood is identified as a Special Flood Hazard Area (SFHA). The DeKalb County flood risk assessment analyzed at risk structures in the SFHA.

> The SFHA is the area where the National Flood Insurance Program's (NFIP) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. The owner of a structure in a high-risk area must carry flood insurance, if the owner carries a mortgage from a federally regulated or insured lender or

The following probabilistic risk assessment involves an analysis of a 1% annual chance riverine flood event (100-Year Flood) and a 1% annual chance coastal flood.

Riverine 1% Flood Scenario

Riverine losses were determined from the 1% flood boundaries downloaded from the FEMA Flood Map Service Center in January 2022. The flood boundaries were overlaid with the USGS 10 meter DEM using the Hazus-MH Enhanced Quick Look tool to generate riverine depth grids. The riverine flood depth grid was then imported into Hazus-MH to calculate the riverine flood loss estimates. Figure 6 illustrates the riverine inundation boundary associated with the 1% annual chance.

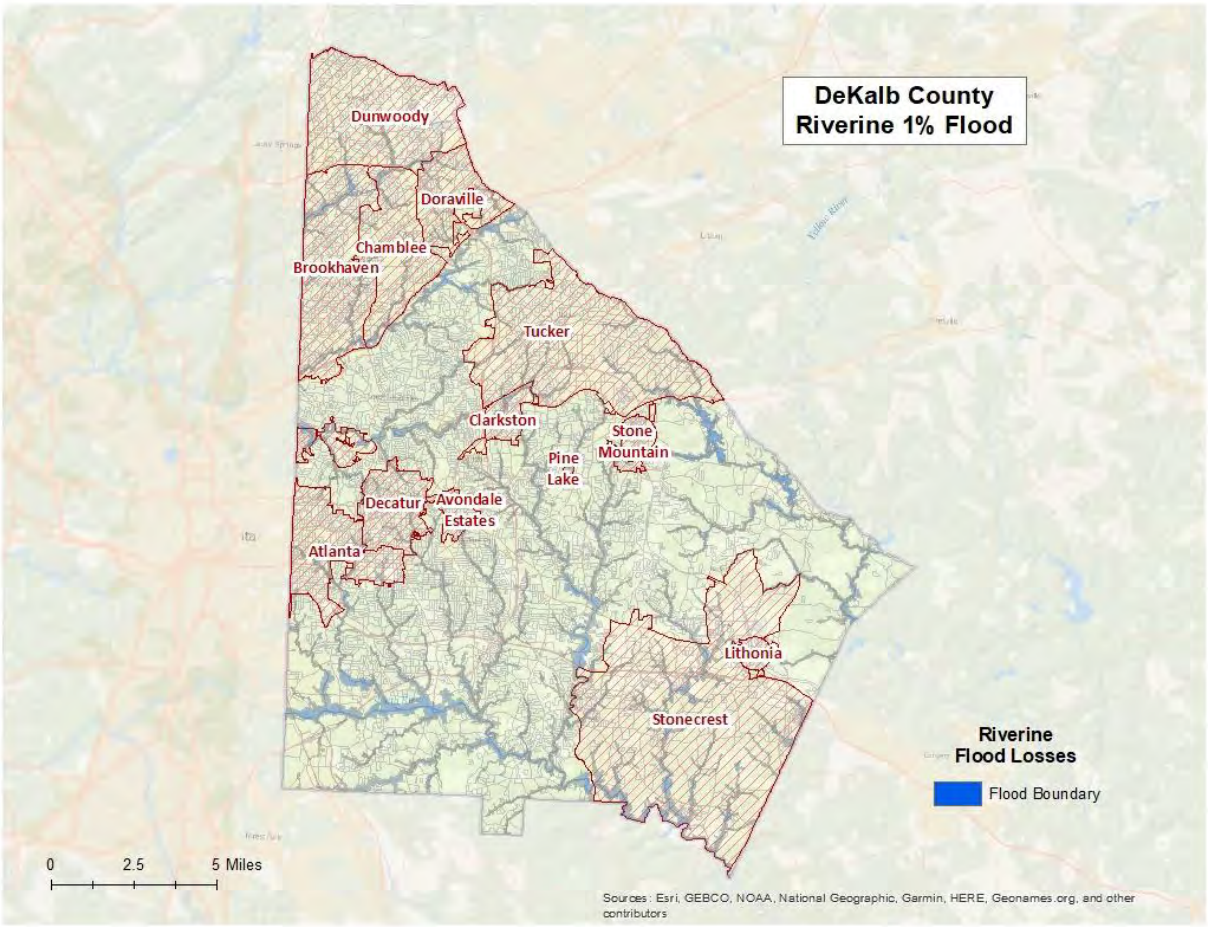


FIGURE 6: RIVERINE 1% FLOOD INUNDATION

Riverine 1% Flood Building Damages

Buildings in DeKalb County are vulnerable to flooding from events equivalent to the 1% riverine flood. The economic and social impacts from a flood of this magnitude can be significant. Table 9 provides a summary of the potential flood-related building damage in DeKalb County by jurisdiction that might be experienced from the 1% flood. Figure 7 maps the potential loss ratios of total building exposure to losses sustained to buildings from the 1% flood by 2010 census block and Figure 8 illustrates the relationship of building locations to the 1% flood inundation boundary.

TABLE 9: DEKALB COUNTY RIVERINE 1% BUILDING LOSSES

OCCUPANCY	TOTAL BUILDINGS IN THE JURISDICTION	TOTAL BUILDINGS DAMAGED IN THE JURISDICTION	TOTAL BUILDING EXPOSURE IN THE JURISDICTION	TOTAL LOSSES TO BUILDINGS IN THE JURISDICTION	LOSS RATIO OF EXPOSED BUILDINGS TO DAMAGED BUILDINGS IN THE JURISDICTION
ATLANTA					
COMMERCIAL	291	9	$268,698,650	$1,791,840	0.67%
RELIGIOUS	33	1	$26,063,010	$47,676	0.18%
RESIDENTIAL	12,181	182	$9,728,152,969	$30,868,391	0.32%
AVONDALE ESTATES					
RESIDENTIAL	1,495	12	$1,118,375,123	$3,669,867	0.33%
COMMERCIAL	74	1	$33,711,240	$27,701	0.08%
BROOKHAVEN					
RESIDENTIAL	13,616	241	$13,731,481,344	$46,482,665	0.34%
COMMERCIAL	327	6	$1,984,293,540	$28,361,187	1.43%
INDUSTRIAL	19	2	$32,860,630	$920,356	2.80%
CHAMBLEE					
COMMERCIAL	685	7	$1,020,323,120	$1,253,667	0.12%
INDUSTRIAL	149	1	$168,908,930	$181,776	0.11%
RESIDENTIAL	5,726	118	$3,592,454,771	$14,851,744	0.41%
CLARKSTON					
RESIDENTIAL	1,160	15	$364,225,849	$516,595	0.14%
DECATUR					

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Commercial	288	1	$550,474,460	$95,611	0.02%
Industrial	15	1	$3,801,220	$120,631	3.17%
Residential	7,362	207	$8,584,234,852	$33,093,188	0.39%
Doraville					
Residential	2,292	57	$1,145,344,710	$7,160,796	0.63%
Commercial	447	4	$577,378,570	$1,438,878	0.25%
Industrial	97	2	$172,759,740	$496,380	0.29%
Dunwoody					
Residential	12,607	42	$10,478,841,349	$5,619,995	0.05%
Commercial	400	2	$2,254,785,560	$13,026	0.00%
Pine Lake					
Residential	343	10	$153,868,426	$920,951	0.60%
Stone Mountain					
Residential	1,978	29	$571,337,319	$1,906,618	0.33%
Stonecrest					
Commercial	453	8	$877,969,346	$4,508,706	0.51%
Industrial	120	1	$231,795,755	$515,005	0.24%
Residential	16,683	377	$6,635,461,086	$38,526,782	0.58%
Tucker					
Industrial	216	3	$523,171,040	$269,764	0.05%
Residential	11,302	162	$6,939,302,119	$18,903,800	0.27%

Occupancy	Total Buildings in the Jurisdiction	Total Buildings Damaged in the Jurisdiction	Total Building Exposure in the Jurisdiction	Total Losses to Buildings in the Jurisdiction	Loss Ratio of Exposed Buildings to Damaged Buildings in the Jurisdiction
Commercial	756	4	$1,363,291,350	$18,882,002	1.39%
Unincorporated					
Industrial	251	8	$286,170,621	$4,214,169	1.47%
Religious	153	8	$154,474,160	$5,370,178	3.48%
Commercial	2,680	53	$3,097,482,997	$8,977,502	0.29%
Residential	126,579	2,842	$61,044,179,900	$339,233,087	0.56%
County Total					
	220,778	4,416	$137,697,673,756	$619,240,534	

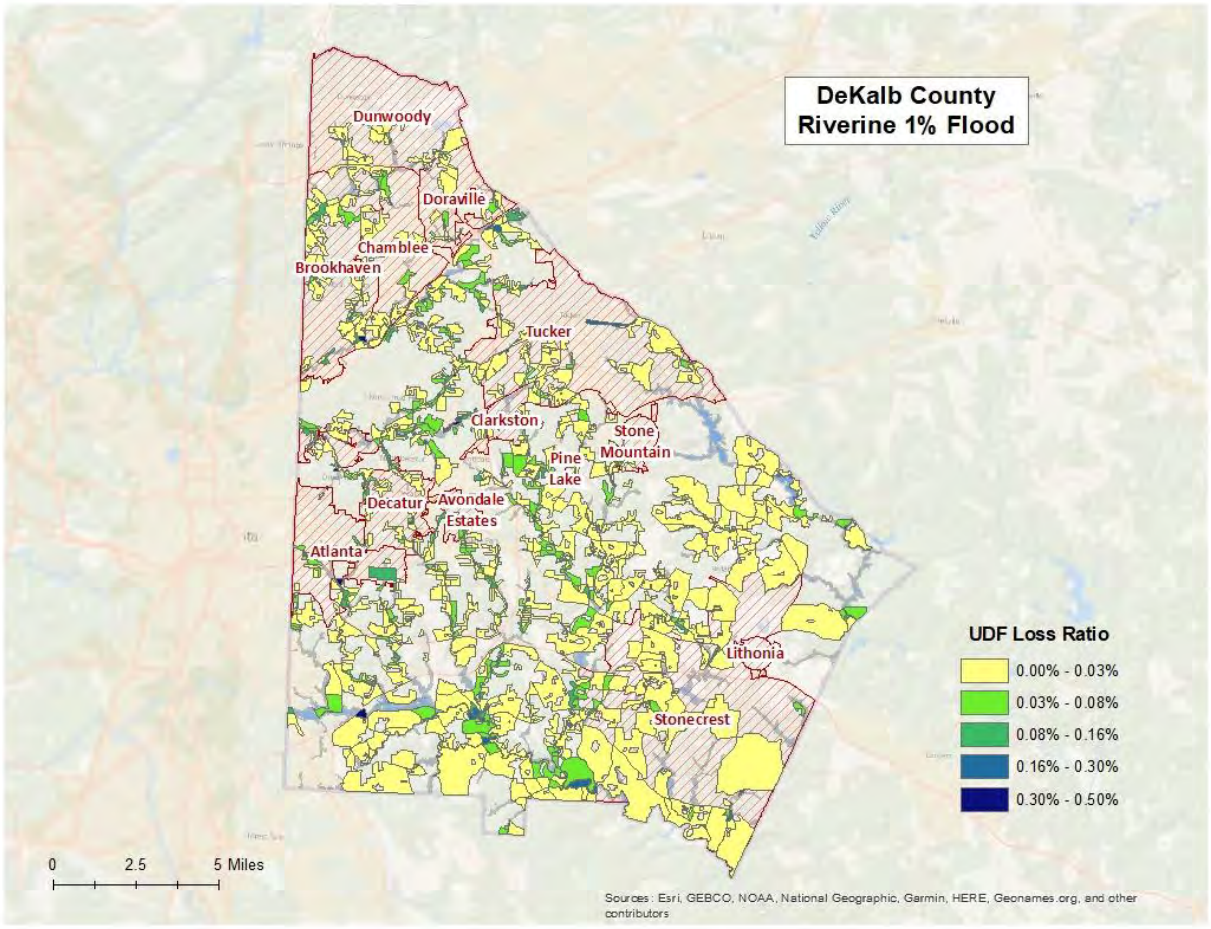


FIGURE 7: DEKALB COUNTY POTENTIAL LOSS RATIOS OF TOTAL BUILDING EXPOSURE TO LOSSES SUSTAINED TO BUILDINGS FROM THE 1% RIVERINE FLOOD BY 2010 CENSUS BLOCK

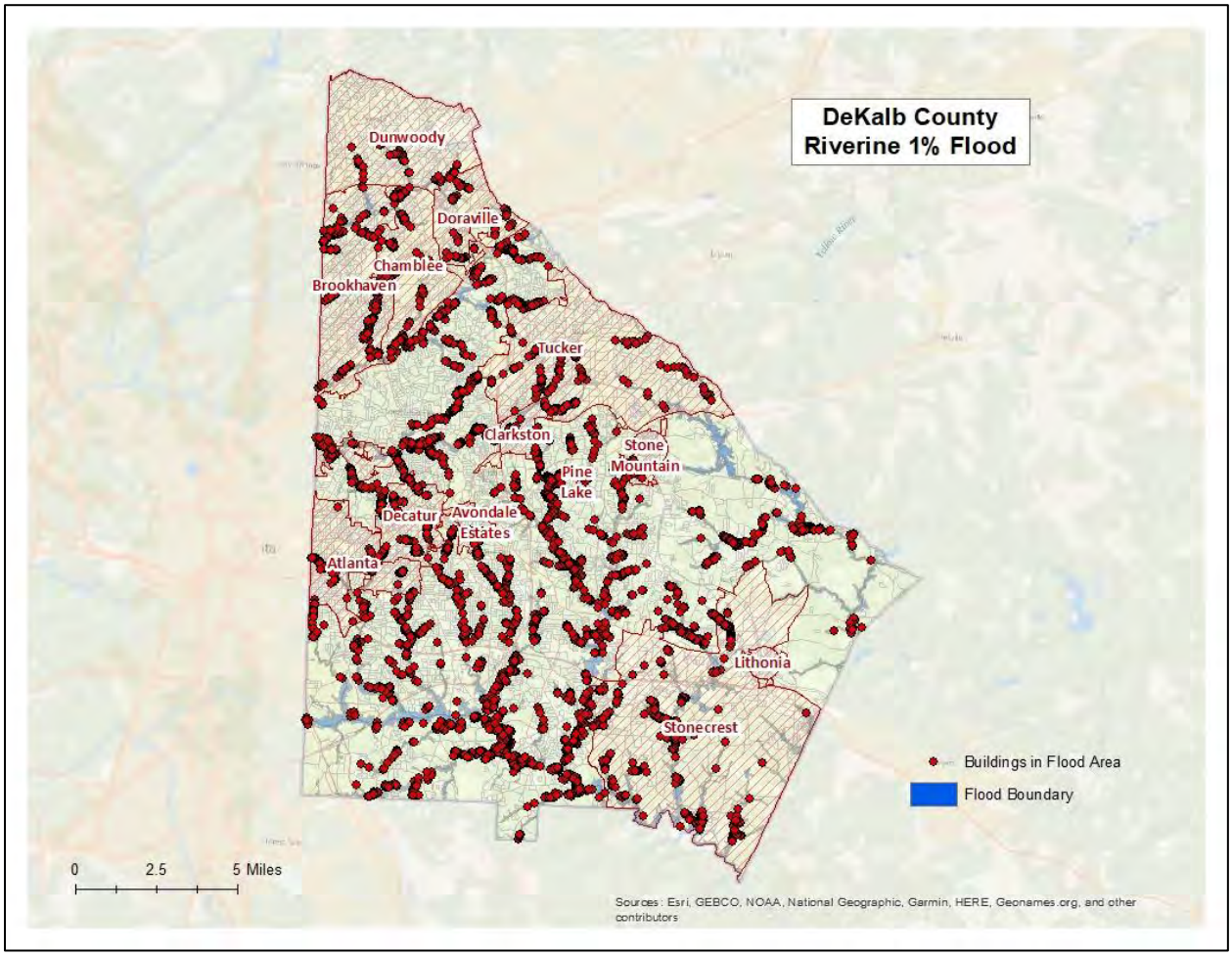


FIGURE 8: DEKALB COUNTY DAMAGED BUILDINGS IN RIVERINE FLOODPLAIN (1% FLOOD)

Riverine 1% Flood Essential Facility Losses

An essential facility may encounter many of the same impacts as other buildings within the flood boundary. These impacts can include structural failure, extensive water damage to the facility and loss of facility functionality (e.g. a damaged police station will no longer be able to serve the community). The analysis identified one essential facility that was subject to damage in the DeKalb County riverine 1% probability floodplain.

TABLE 10: RIVERINE 1% FLOOD DAMAGED ESSENTIAL FACILITIES

Name	Category	City
Fire Station 24	Fire Station	Stone Mountain

Riverine 1% Flood Shelter Requirements

Hazus-MH estimates that the number of households that are expected to be displaced from their homes due to riverine flooding and the associated potential evacuation. The model estimates 13,994 households might be displaced due to the flood. Displacement includes households evacuated within or very near to the inundated area. Displaced households represent 41,982 individuals, of which 34,704 may require short term publicly provided shelter. The results are mapped in Figure 9.

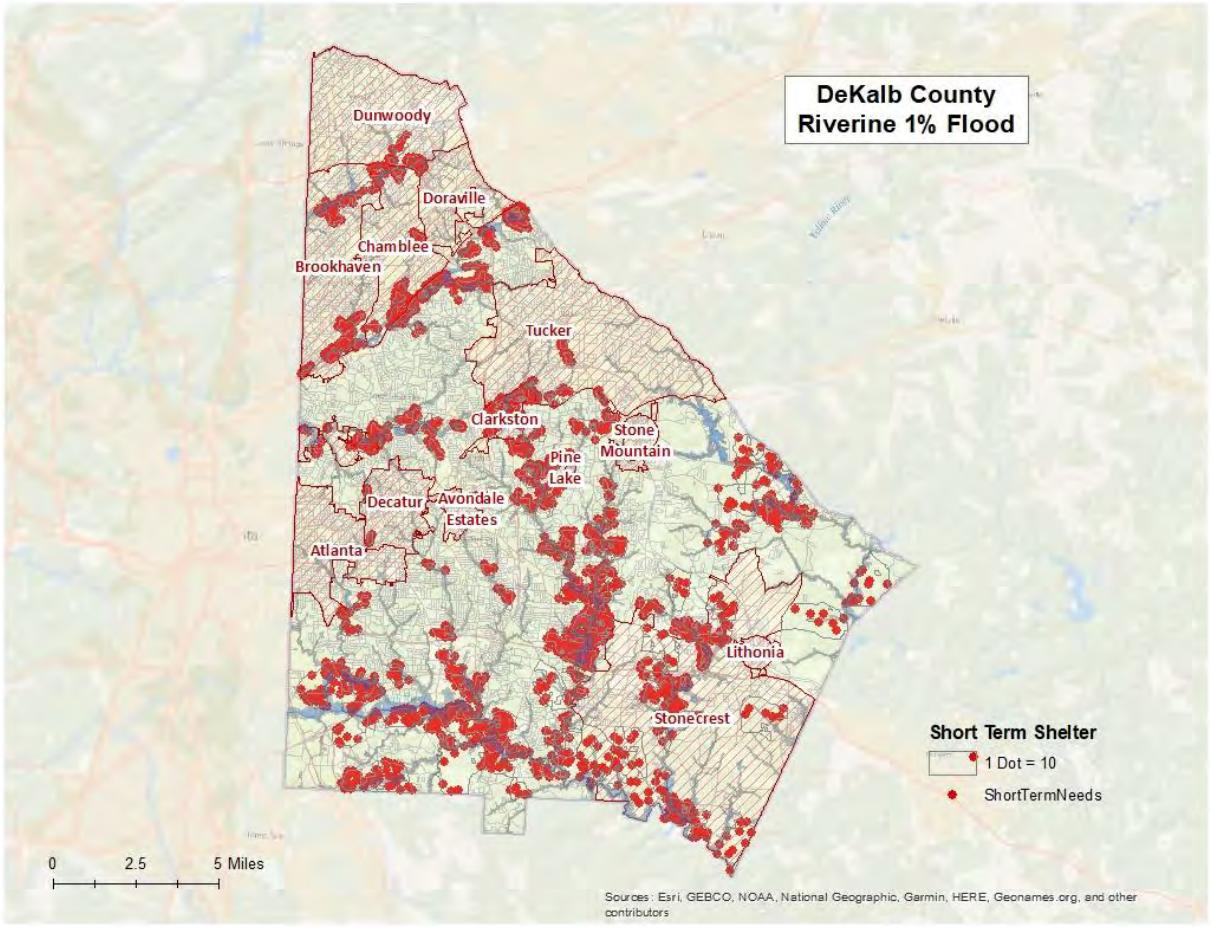


FIGURE 9: RIVERINE 1% ESTIMATED FLOOD SHELTER REQUIREMENTS

Riverine 1% Flood Debris

Hazus-MH estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories:

- Finishes (dry wall, insulation, etc.)
- Structural (wood, brick, etc.)
- Foundations (concrete slab, concrete block, rebar, etc.)

Different types of material handling equipment will be required for each category. Debris definitions applied in Hazus-MH are unique to the Hazus-MH model and so do not necessarily conform to other definitions that may be employed in other models or guidelines.

The analysis estimates that an approximate total of 172,505 tons of debris might be generated: 1) Finishes- 58,632 tons; 2) Structural – 58,251 tons; and 3) Foundations- 55,622 tons. The results are mapped in Figure 10.

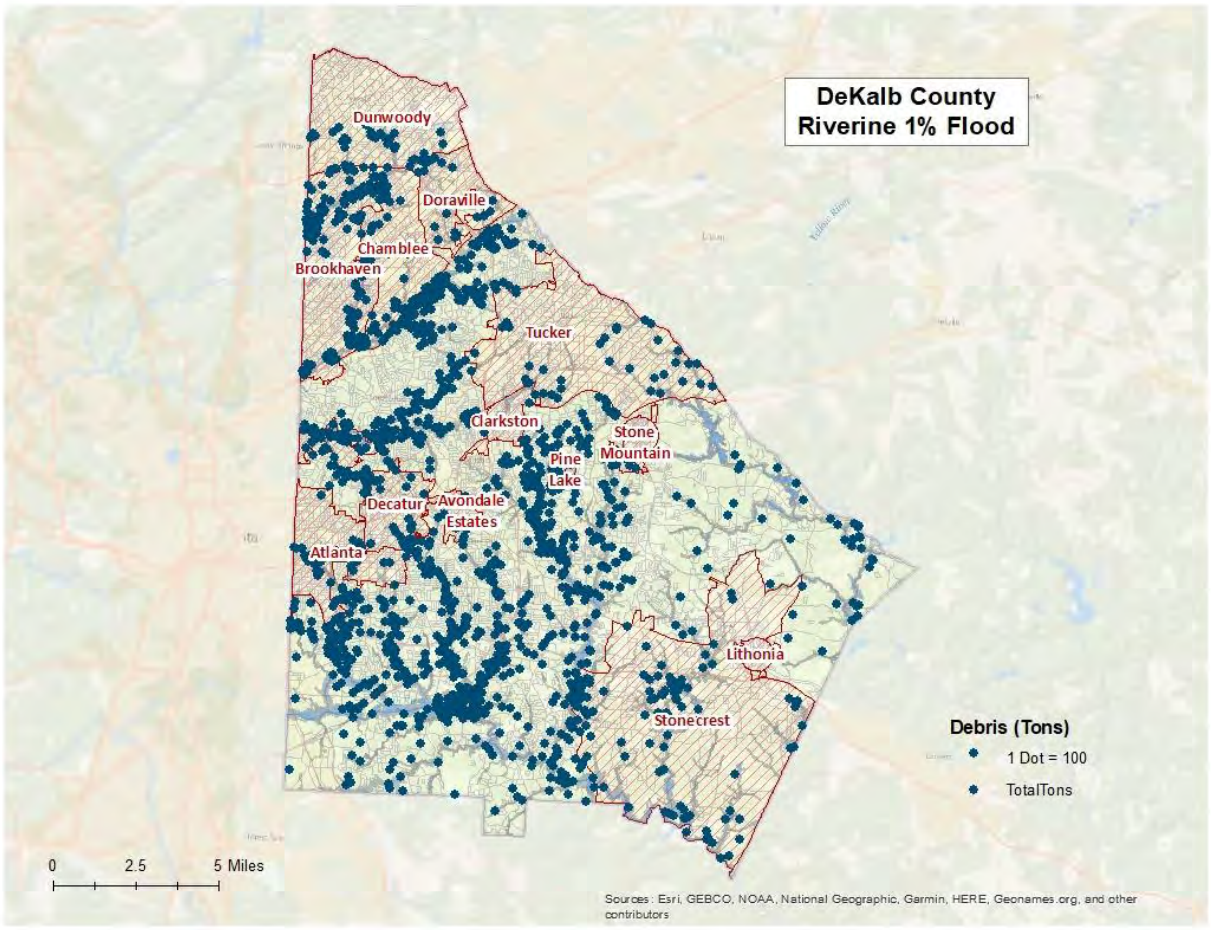


Figure 10: Riverine 1% Flood Debris Weight (Tons)

Tornado Risk Assessment

Hazard Definition

Tornadoes pose a great risk to the state of Georgia and its citizens. Tornadoes can occur at any time during the day or night. They can also happen during any month of the year. The unpredictability of tornadoes makes them one of Georgia's most dangerous hazards. Their extreme winds are violently destructive when they touch down in the region's developed and populated areas. Current estimates place the maximum velocity at about 300 miles per hour, but higher and lower values can occur. A wind velocity of 200 miles per hour will result in a wind pressure of 102.4 pounds per square foot of surface area—a load that exceeds the tolerance limits of most buildings. Considering these factors, it is easy to understand why tornadoes can be so devastating for the communities they hit.

Tornadoes are defined as violently-rotating columns of air extending from thunderstorms and cyclonic events. Funnel clouds are rotating columns of air not in contact with the ground; however, the violently-rotating column of air can reach the ground very quickly and become a tornado. If the funnel cloud picks up and blows debris, it has reached the ground and is a tornado.

Tornadoes are classified according to the Fujita tornado intensity scale. Originally introduced in 1971, the scale was modified in 2006 to better define the damage and estimated wind scale. The Enhanced Fujita Scale ranges from low intensity EF0 with effective wind speeds of 65 to 85 miles per hour, to EF5 tornadoes with effective wind speeds of over 200 miles per hour. The Enhanced Fujita intensity scale is included in Table 11.

TABLE 11: ENHANCED FUJITA TORNADO RATING

Fujita Number	Estimated Wind Speed	Path Width	Path Length	Description of Destruction
EF0 *Gale*	65-85 mph	6-17 yards	0.3-0.9 miles	Light damage, some damage to chimneys, branches broken, sign boards damaged, shallow-rooted trees blown over.
EF1 Moderate	86-110 mph	18-55 yards	1.0-3.1 miles	Moderate damage, roof surfaces peeled off, mobile homes pushed off foundations, attached garages damaged.
EF2 Significant	111-135 mph	56-175 yards	3.2-9.9 miles	Considerable damage, entire roofs torn from frame houses, mobile homes demolished, boxcars pushed over, large trees snapped or uprooted.
EF3 Severe	136-165 mph	176-566 yards	10-31 miles	Severe damage, walls torn from well-constructed houses, trains overturned, most trees in forests uprooted, heavy cars thrown about.
EF4 Devastating	166-200 mph	0.3-0.9 miles	32-99 miles	Complete damage, well-constructed houses leveled, structures with weak foundations blown off for some distance, large missiles generated.
EF5 Incredible	> 200 mph	1.0-3.1 miles	100-315 miles	Foundations swept clean, automobiles become missiles and thrown for 100 yards or more, steel-reinforced concrete structures badly damaged.

Source: http://www.srh.noaa.gov

Hypothetical Tornado Scenario

For this report, an EF3 tornado was modeled to illustrate the potential impacts of tornadoes of this magnitude in the county. The analysis used a hypothetical path based upon an EF3 tornado event running along the predominant direction of historical tornados (southeast to northwest). The tornado path was placed to travel through Atlanta, Decatur and Avondale Estates. The selected widths were modeled after a re-creation of the Fujita-Scale guidelines based on conceptual wind speeds, path widths, and path lengths. There is no guarantee that every tornado will fit exactly into one of these categories. Table 12 depicts tornado path widths and expected damage.

TABLE 12: TORNADO PATH WIDTHS AND DAMAGE CURVES

Fujita Scale	Path Width (feet)	Maximum Expected Damage
EF-5	2,400	100%
EF-4	1,800	100%
EF-3	1,200	80%
EF-2	600	50%
EF-1	300	10%
EF-0	300	0%

Within any given tornado path there are degrees of damage. The most intense damage occurs within the center of the damage path, with decreasing amounts of damage away from the center. After the hypothetical path is digitized on a map, the process is modeled in GIS by adding buffers (damage zones) around the tornado path. Figure 11 describes the zone analysis.

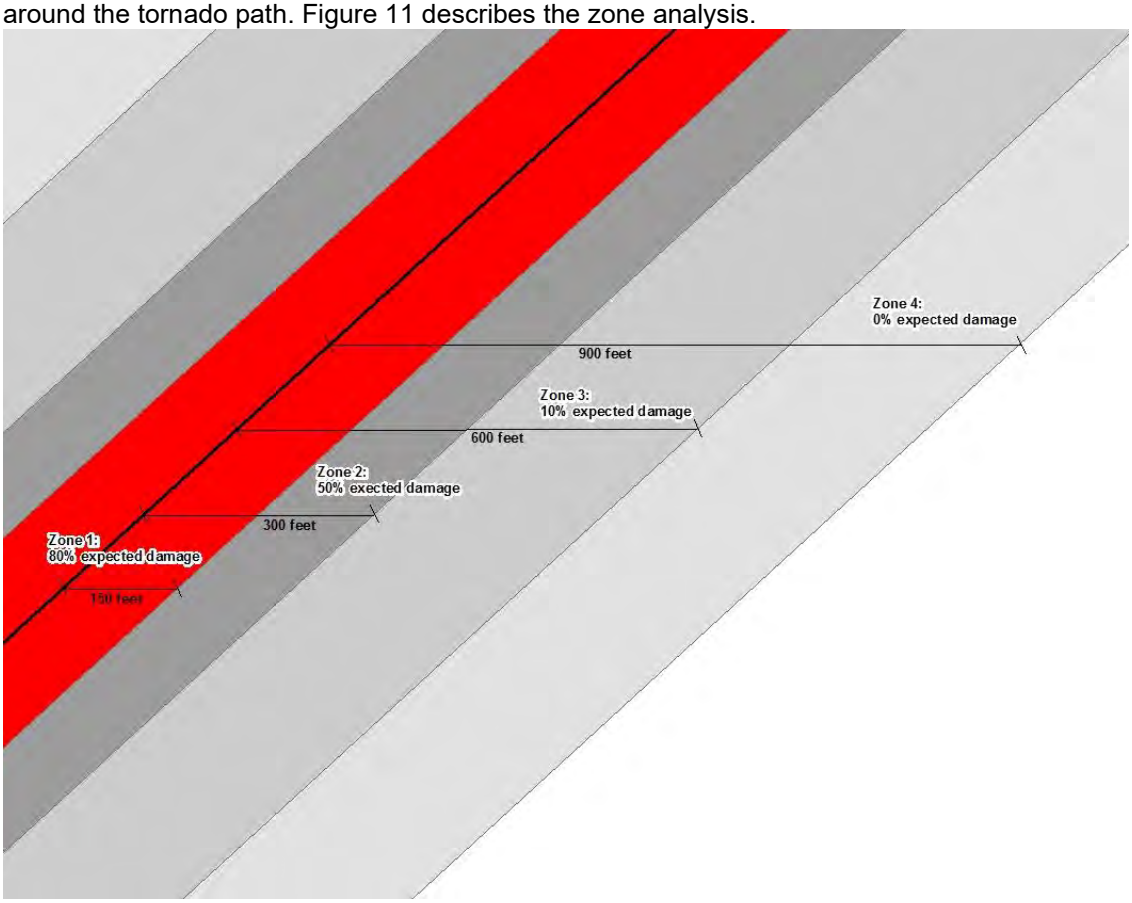


FIGURE 11: EF SCALE TORNADO ZONES

AN EF3 TORNADO HAS FOUR DAMAGE ZONES, DEPICTED IN TABLE 13. MAJOR DAMAGE IS ESTIMATED WITHIN 150 FEET OF THE TORNADO PATH. THE OUTER BUFFER IS 900 FEET FROM THE TORNADO PATH, WITHIN WHICH BUILDINGS WILL NOT EXPERIENCE ANY DAMAGE. THE SELECTED HYPOTHETICAL TORNADO PATH IS DEPICTED IN FIGURE 12 AND THE DAMAGE CURVE BUFFER ZONES ARE SHOWN IN FIGURE 13.

TABLE 13: EF3 TORNADO ZONES AND DAMAGE CURVES

Zone	Buffer (feet)	Damage Curve
1	0-150	80%
2	150-300	50%
3	300-600	10%
4	600-900	0%

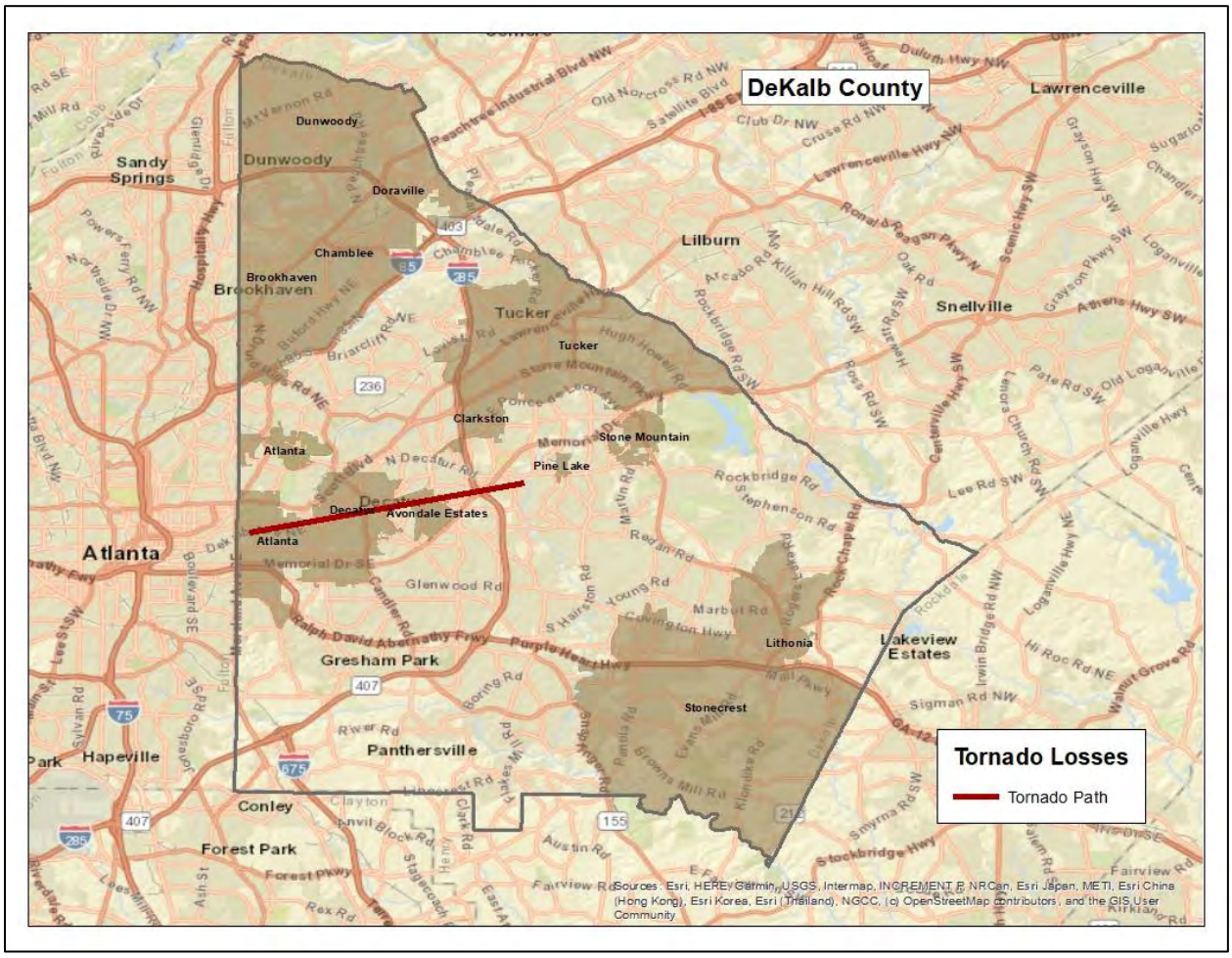


FIGURE 12: HYPOTHETICAL EF3 TORNADO PATH IN DEKALB COUNTY

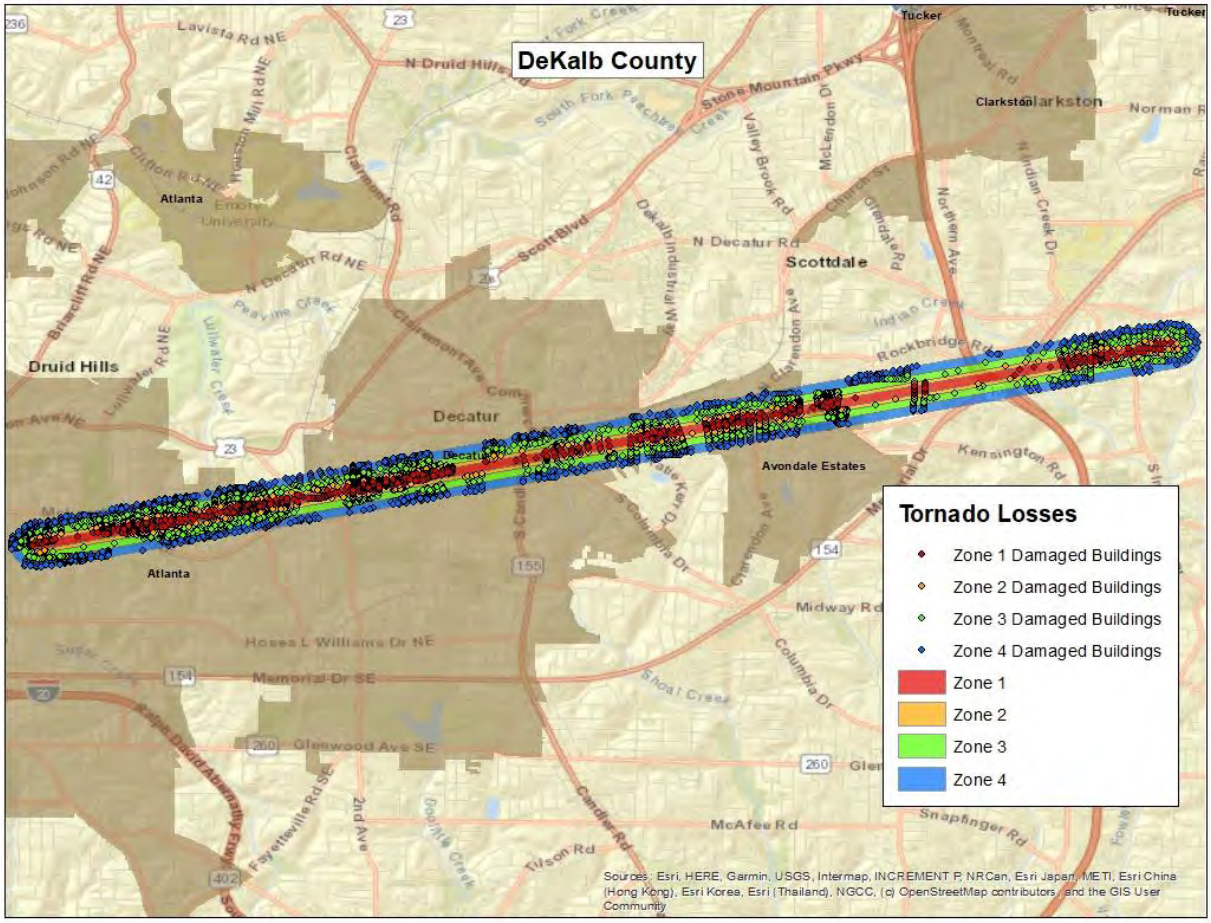


FIGURE 13: MODELED EF3 TORNADO DAMAGE BUFFERS IN DEKALB COUNTY

EF3 Tornado Building Damages

The analysis estimated that approximately 3708 buildings could be damaged, with estimated building losses of $745 million. The building losses are an estimate of building replacement costs multiplied by the percentages of damage. The overlay was performed against parcels provided by DeKalb County that were joined with Assessor records showing estimated property replacement costs. The Assessor records often do not distinguish parcels by occupancy class if the parcels are not taxable and thus the number of buildings and replacement costs may be underestimated. The results of the analysis are depicted in Table 14.

TABLE 14: ESTIMATED BUILDING LOSSES BY OCCUPANCY TYPE

Occupancy	Buildings Damaged	Building Losses
Commercial	184	$29,799,298
Education	6	$4,490,370
Industrial	23	$2,407,978
Religious	2	$44,173
Residential	3,493	$707,780,592
Total	**3,708**	**$744,522,411**

EF3 Tornado Essential Facility Damage

There were six essential facilities located in the tornado path – five schools and one fire station. Table 15 outlines the specific facility and the amount of damage under the scenario.

TABLE 15: ESTIMATED ESSENTIAL FACILITIES DAMAGED

Facility	Amount of Damage
Agnes Scott College	Major Damage
Decatur High School	Minor Damage
Dunaire Elementary School (PK-5)	Minor Damage
Renfroe Middle School	Minor Damage
Talley Street Upper Elementary School	Minor Damage
Fire Station 3	Minor Damage

According to the Georgia Department of Education, Decatur High School's enrollment was approximately 1,732 students, Dunaire Elementary (PK-5) School's enrollment was approximately 409 students, Renfroe Middle School's enrollment was approximately 1,339 students, and Talley Street Upper Elementary School's enrollment was approximately 697 students as of October 2021. Agnes Scott College's enrollment was approximately 1,014 students as of Fall Semester 2020. Depending on the time of day, a tornado strike as depicted in this scenario could result in significant injury and loss of life. In addition, arrangements would have to be made for the continued education of the students in another location.

The location of the damaged Essential Facility is mapped in Figure 14.

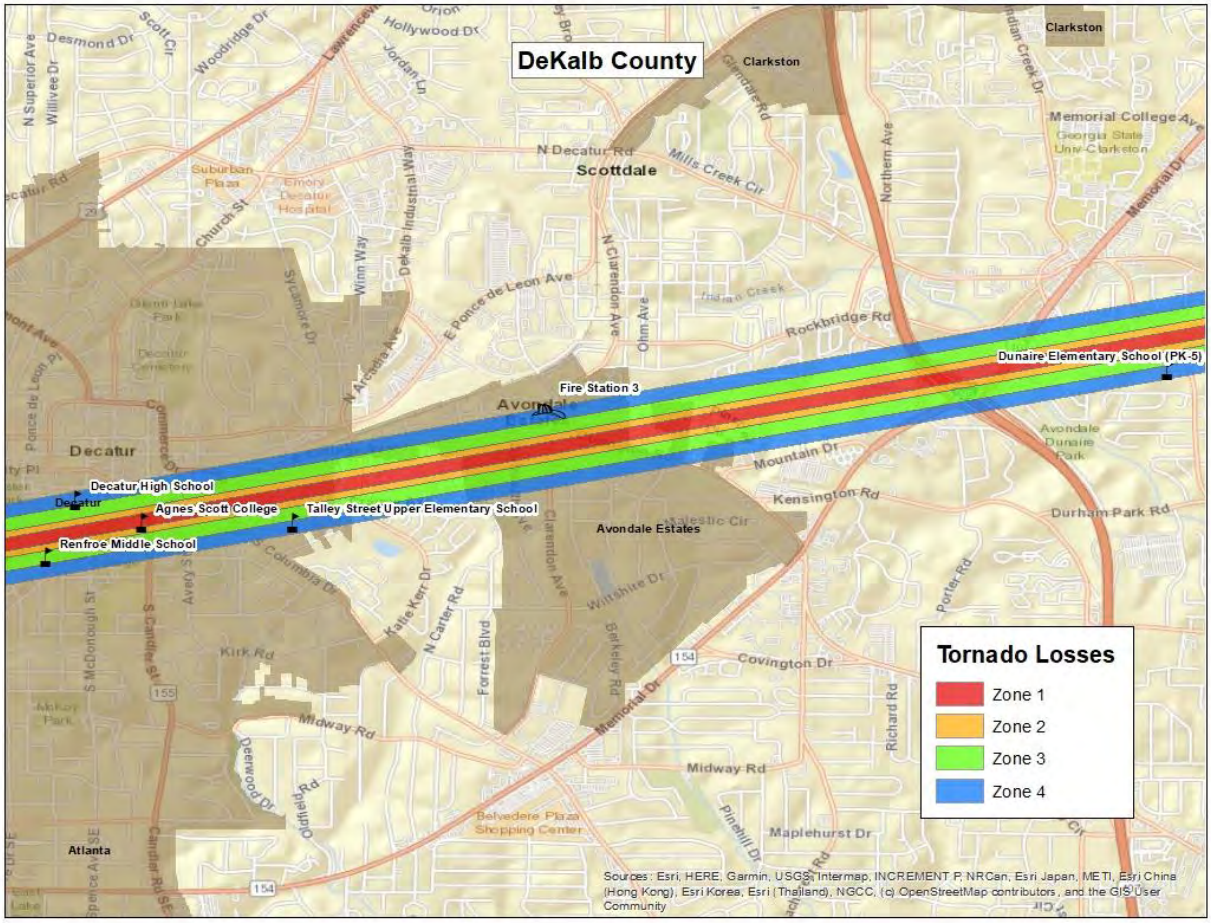


FIGURE 14: MODELED ESSENTIAL FACILITY DAMAGE IN DEKALB COUNTY

Exceptions Report

Hazus Version 2.2 SP1 was used to perform the loss estimates for DeKalb County, Georgia. Changes made to the default Hazus-MH inventory and the modeling parameters used to setup the hazard scenarios are described within this document.
Reported losses reflect the updated data sets. Steps, algorithms and assumptions used during the data update process are documented in the project workflow named PDM_GA_Workflow.doc.

Statewide Inventory Changes

The default Hazus-MH Essential Facility inventory was updated for the entire state prior to running the hazard scenarios for DeKalb County.
Updates to the Critical Facility data used in GMIS were provided by DeKalb County in November 2021. These updates were applied by The Carl Vinson Institute of Government at the University of Georgia. Table 16 summarizes the difference between the original Hazus-MH default data and the updated data for DeKalb County.

TABLE 16: ESSENTIAL FACILITY UPDATES

Site Class	Feature Class	Default Replacement Cost	Default Count	Updated Replacement Cost	Updated Count
EF	Care	$303,084,000	15	$111,997,000	7
EF	EOC	$880,000	1	$17,950,000	1
EF	Fire	$14,271,000	20	$43,440,000	26
EF	Police	$7,999,000	11	$27,891,000	10
EF	School	$542,613,000	189	$703,055,000	159

County Inventory Changes

The GBS records for DeKalb County were replaced with data derived from parcel and property assessment data obtained from DeKalb County. The county provided property assessment data was current as of November 2021 and the parcel data current as of November 2021.

General Building Stock Updates

The X and Y coordinates for the center point of each parcel and assessor records were provided to The University of Georgia's Carl Vinson Institute of Government from Dekalb County. The X and Y coordinates were converted to parcel points located in the centroids of each parcel. Each parcel point was linked to an assessor record based upon matching parcel numbers. Since these points were created from the tabular assessment records, there is naturally a 100% match between the data and the geography. If there are any records that were not contained in the assessment records, they also did not create a centroid and likewise, do not generate a tax bill. The generated Building Inventory represents the approximate locations (within a parcel) of building exposure. The Building Inventory was aggregated by Census Block and imported into Hazus-MH using the Hazus-MH Comprehensive Data Management System (CDMS). Both the 2010 Census Tract and Census Block tables were updated.

Less than one percent of the CAMA values were either missing (<Null> or '0'), did not match CAMA domains or were unusable ('Unknown', 'Other', 'Pending'). These were replaced with 'best available' values. Missing Year Built values were populated from average values per Census Block. Missing Condition, Construction and Foundation values were populated with the highest-frequency CAMA values per Occupancy Class. Missing Area values were populated with the average CAMA values per Occupancy Class.
The resulting Building Inventory was used to populate the Hazus-MH General Building Stock and User Defined Facility tables. The updated General Building Stock was used to calculate flood and tornado losses. Changes to the building counts and exposure that were modeled in DeKalb County are sorted by General Occupancy in Table 1 at the beginning of this report. If replacements cost or building value were

not present for a given record in the Assessor data, replacement costs were calculated from the Building Area (sqft) multiplied by the Hazus-MH RS Means ($/sqft) values for each Occupancy Class.
Differences between the default and updated data are due to various factors. The Assessor records often do not distinguish parcels by occupancy class when the parcels are not taxable; therefore, the total number of buildings and the building replacement costs for government, religious/non-profit, and education may be underestimated.

User Defined Facilities

Building Inventory was used to create Hazus-MH User Defined Facility (UDF) inventory for flood modeling. Hazus-MH flood loss estimates are based upon the UDF point data. Buildings within the flood boundary were imported into Hazus-MH as User Defined Facilities and modeled as points.

TABLE 18: USER DEFINED FACILITY EXPOSURE

Class	Hazus-MH Feature	Counts	Exposure
BI	Building Exposure	221,753	$138,867,869,333
Riverine UDF	Structures Inside 1% Annual Chance Riverine Flood Area	4,762	$2,679,551,960

Assumptions

- Flood analysis was performed on Building Inventory. Building Inventory within the flood boundary was imported as User Defined Facilities. The point locations are parcel centroid accuracy.
- The analysis is restricted to the county boundary. Events that occur near the county boundary do not contain loss estimates from adjacent counties.
- The following attributes were defaulted or calculated:
  First Floor Height was set from Foundation Type
  Content Cost was calculated from Building Cost

APPENDIX E: GEMHSA WORKSHEET #3A – INVENTORY OF ASSETS

Note: *These worksheets are a requirement for Georgia Emergency Management Agency/Homeland Security (GEMA/HS). This information is used to determine the equivalent process for DeKalb County and its participating jurisdictions' building inventory within the affected hazard area for the spatially (flooding) and non-spatially (all-hazards) that could impact the planning area.*

GEMHSA Worksheet #3a **Inventory of Assets**
Jurisdiction: DeKalb County
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	213,813	213,813	100.000%	124,235,839,000	124,235,839,000	100.000%	764,382	764,382	100%
Commercial	6,670	6,670	100.000%	12,186,755,000	12,186,755,000	100.000%	0	0	0%
Industrial	951	951	100.000%	1,871,459,000	1,871,459,000	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	230	230	100.000%	250,159,000	250,159,000	100.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	89	89	100.000%	323,004,000	323,004,000	100.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	221,753	221,753	100.000%	138,867,216,000	138,867,216,000	100.000%	764,382	764,382	100%

Note: *This table represents all hazards that could affect DeKalb County. The data was taken from GBS Building Exposure Updates by Occupancy Class from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this plan.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Avondale Estates

Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,495	1,495	100.000%	1,118,375,123	1,118,375,123	100.000%	3,567	3,567	100%
Commercial	74	74	100.000%	33,711,240	33,711,240	100.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,569	1,569	100.000%	1,152,086,363	1,152,086,363	100.000%	3,567	3,567	100%

***Note:** *This table represents all hazards that could affect the City of Avondale Estates. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Brookhaven
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	13,616	13,616	100.000%	13,731,481,344	13,731,481,344	100.000%	55,161	55,161	100%
Commercial	327	327	100.000%	1,984,293,540	1,984,293,540	100.000%	0	0	0%
Industrial	19	19	100.000%	32,860,630	32,860,630	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	13,962	13,962	100.000%	15,748,635,514	15,748,635,514	100.000%	55,161	55,161	100%

**Note:* *This table represents all hazards that could affect the City of Brookhaven. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Chamblee
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	5,726	5,726	100.000%	3,592,454,771	3,592,454,771	100.000%	30,164	30,164	100%
Commercial	685	685	100.000%	1,020,323,120	1,020,323,120	100.000%	0	0	0%
Industrial	149	149	100.000%	168,908,930	168,908,930	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	6,560	6,560	100.000%	4,781,686,821	4,781,686,821	100.000%	30,164	30,164	100%

***Note:** This table represents all hazards that could affect the City of Chamblee. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Clarkson

Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,160	1,160	100.000%	364,225,849	364,225,849	100.000%	14,756	14,756	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,160	1,160	100.000%	364,225,849	364,225,849	100.000%	14,756	14,756	100%

**Note:* *This table represents all hazards that could affect the City of Clarkson. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Decatur
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	7,362	7,362	100.000%	8,584,234,852	8,584,234,852	100.000%	24,928	24,928	100%
Commercial	288	288	100.000%	550,474,460	550,474,460	100.000%	0	0	0%
Industrial	15	15	100.000%	3,801,220	3,801,220	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	7,665	7,665	100.000%	9,138,510,532	9,138,510,532	100.000%	24,928	24,928	100%

***Note:** *This table represents all hazards that could affect the City of Decatur. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Doraville
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	2,292	2,292	100.000%	1,145,344,710	1,145,344,710	100.000%	10,623	10,623	100%
Commercial	447	447	100.000%	577,378,570	577,378,570	100.000%	0	0	0%
Industrial	97	97	100.000%	172,759,740	172,759,740	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	2,836	2,836	100.000%	1,895,483,020	1,895,483,020	100.000%	10,623	10,623	100%

***Note:** *This table represents all hazards that could affect the City of Doraville. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Dunwoody
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	12,607	12,607	100.000%	10,478,841,349	10,478,841,349	100.000%	51,683	51,683	100%
Commercial	400	400	100.000%	2,254,785,560	2,254,785,560	100.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	13,007	13,007	100.000%	12,733,626,909	12,733,626,909	100.000%	51,683	51,683	100%

***Note:** This table represents all hazards that could affect the City of Dunwoody. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Lithonia

Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	24,452	24,452	100.000%	22,811,371,129	22,811,371,129	100.000%	2,662	2,662	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	2	2	100.000%	5,764,000	5,764,000	100.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	24,454	24,454	100.000%	22,817,135,129	22,817,135,129	100.000%	2,662	2,662	100%

***Note:** *This table represents all hazards that could affect the City of Lithonia. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Pine Lake
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	343	343	100.000%	153,868,426	153,868,426	100.000%	752	752	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	343	343	100.000%	153,868,426	153,868,426	100.000%	752	752	100%

***Note:** This table represents all hazards that could affect the City of Pine Lake. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a Inventory of Assets

Jurisdiction: City of Stone Mountain
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	1,978	1,978	100.000%	571,337,319	571,337,319	100.000%	6,703	6,703	100%
Commercial	0	0	0.000%	0	0	0.000%	0	0	0%
Industrial	0	0	0.000%	0	0	0.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	1,978	1,978	100.000%	571,337,319	571,337,319	100.000%	6,703	6,703	100%

***Note:** This table represents all hazards that could affect the City of Stone Mountain. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Stonecrest
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	16,683	16,683	100.000%	6,635,461,086	6,635,461,086	100.000%	59,194	59,194	100%
Commercial	453	453	100.000%	877,969,346	877,969,346	100.000%	0	0	0%
Industrial	120	120	100.000%	231,795,755	231,795,755	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	17,256	17,256	100.000%	7,745,226,187	7,745,226,187	100.000%	59,194	59,194	100%

***Note:** This table represents all hazards that could affect the City of Stonecrest. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

GEMHSA Worksheet #3a — Inventory of Assets

Jurisdiction: City of Tucker
Hazard: All Hazards (except flooding)

Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are in hazard areas.

	Number of Structures			Value of Structures			Number of People		
Type of Structure (Occupancy Class)	# in Community of State	# in Hazard Area	% in Hazard Area	$ in Community or State	$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential	11,302	11,302	100.000%	6,939,302,119	6,939,302,119	100.000%	37,005	37,005	100%
Commercial	756	756	100.000%	1,363,291,350	1,363,291,350	100.000%	0	0	0%
Industrial	216	216	100.000%	523,171,040	523,171,040	100.000%	0	0	0%
Agricultural	0	0	0.000%	0	0	0.000%	0	0	0%
Religious/ Non-profit	0	0	0.000%	0	0	0.000%	0	0	0%
Government	0	0	0.000%	0	0	0.000%	0	0	0%
Education	0	0	0.000%	0	0	0.000%	0	0	0%
Utilities	0	0	0.000%	0	0	0.000%	0	0	0%
Total	12,274	12,274	100.000%	8,825,764,509	8,825,764,509	100.000%	37,005	37,005	100%

***Note:** *This table represents all hazards that could affect the City of Tucker. The data was taken from DeKalb County Riverine 1% Building Losses – Total Building and Total Building Exposure value from the Hazard Risk Analyses Supplement to the DeKalb County Joint Hazard Mitigation Plan (HAZUS®) and Community Demographics within this 2022 DeKalb County MJHMP update.*

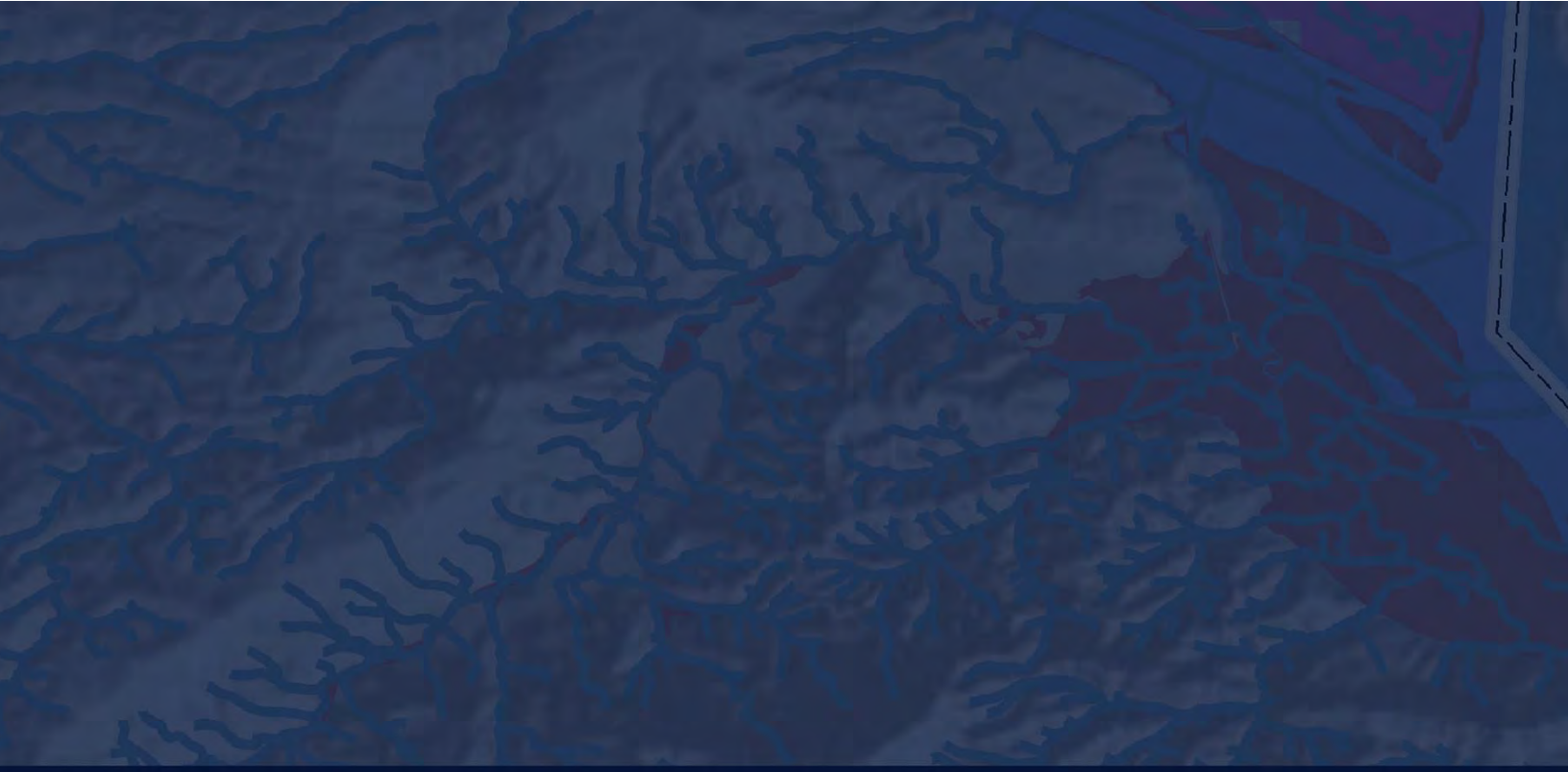
Task B. Determine whether (and where) you want to collect additional inventory data.

	Y	N
1. Do you know where the greatest damages may occur in your area?	**Y**	**N**
2. Do you know whether your critical facilities will be operational after a hazard event?		**N**
3. Is there enough data to determine which assets are subject to the greatest potential damages?	**Y**	
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	**Y**	
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	**Y**	
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	**Y**	
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?		**N**

APPENDIX F: PLAN ADOPTION RESOLUTIONS

APPENDIX G: STATE OF GEORGIA APPROVAL LETTER

APPENDIX H: FEMA APPROVAL LETTER



BOLD planning

480 Duke Drive, Suite 130
Franklin, TN 37067
615.469.5558
boldplanning.com

CITY OF CLARKSTON

ITEM NO: 7B

CLARKSTON CITY COUNCIL MEETING

HEARING TYPE: City Council

BUSINESS AGENDA / MINUTES

ACTION TYPE: Vote

MEETING DATE: December 6, 2022

SUBJECT: To approve the 2023 City Council Work Session and Regular Meetings and City Holiday Calendar.

DEPARTMENT: CITY ADMINISTRATION

PUBLIC HEARING: ☐YES ☒ NO

ATTACHMENT: ☒ YES ☐NO
Pages:

INFORMATION CONTACT Beverly Burks, Mayor
PHONE NUMBER: 404-296-6489

PURPOSE: To approve the 2023 City Council Work Session and Regular meetings and City Holiday Calendar.

NEED/ IMPACT: Annually the City Council Work Session and Regular meetings and City Holiday Calendar are reviewed and discussed for approval.

RECOMMENDATION:
Staff recommends approving the 2023 City Council Work Session and Regular Meetings and City Holiday Calendar.

3921 CHURCH STREET ♦ CLARKSTON, GEORGIA 30021
(404) 296-6489 ♦ WWW.CLARKSTONGA.GOV

2023 CITY COUNCIL MEETINGS SCHEDULE

Unless otherwise noted all meetings are held on Tuesday's at 7:00 p.m.

MEETING DATES	MEETING TYPE & NOTES
JAN 3 JAN 10	WORK SESSION REGULAR MEETING
JAN 31 FEB 7	WORK SESSION REGULAR MEETING
FEB 28 MAR 7	WORK SESSION REGULAR MEETING
MAR 28 APR 4	WORK SESSION REGULAR MEETING
APR 25 MAY 2	WORK SESSION REGULAR MEETING
MAY 30 JUNE 6	SPECIAL CALLED MEETING AT 10:00 AM & 6:30 PM MILLAGE RATE PUBLIC HEARING WORK SESSION AT 7:00 PM REGULAR MEETING – **MILLAGE RATE PUBLIC HEARING – ADOPT MILLAGE RATE**
JUNE 27 JULY 6	WORK SESSION REGULAR MEETING
JULY 25 AUG 3	WORK SESSION REGULAR MEETING – **THURSDAY,** **Due to National Night Out on Tuesday, August 1**
AUG 29 SEPT 5	WORK SESSION REGULAR MEETING
SEPT 26 OCT 3	WORK SESSION REGULAR MEETING
OCT 31 NOV 9	WORK SESSION REGULAR MEETING
NOV 28 DEC 5	SPECIAL CALL MEETING 6:30 PM **FY 2023 BUDGET PUBLIC HEARING & PUBLIC HEARING** WORK SESSION MEETING – **FY 2023 BUDGET** REGULAR MEETING

2023 CITY HOLIDAYS

Unless otherwise noted City Offices are closed on the following 13 days

	DATE	HOLIDAY
1.	MON, JAN 2, 2023	DAY AFTER NEW YEAR'S DAY *(previously adopted in 2021)*
2.	MON, JAN 16	MARTIN LUTHER KING JR DAY
3.	MON, FEB 20	PRESIDENT'S DAY
4.	FRI, APRIL 7	SPRING DAY
5.	MON, MAY 29	MEMORIAL DAY
6.	MON, JUN 19	JUNETEENTH CELEBRATION
7.	TUE, JULY 4	INDEPENDENCE DAY
8.	MON, SEP 4	LABOR DAY
9.	FRI, NOV 10	VETERAN'S DAY
10.	THU, NOV 23	THANKSGIVING DAY
11.	FRI, NOV 24	DAY AFTER THANKSGIVING
12.	MON, DEC 25	CHRISTMAS DAY
13.	MON, JAN 1, 2024	NEW YEAR'S DAY

PENDING COUNCIL APPROVAL

CITY OF CLARKSTON

ITEM NO: 7C

CLARKSTON CITY COUNCIL MEETING

HEARING TYPE: City Council

BUSINESS AGENDA / MINUTES

ACTION TYPE: Vote

MEETING DATE: December 6, 2022

SUBJECT: To approve the reappointments of the expiring terms of Herbert Clark and Charles McFarland to the Planning and Zoning Board.

DEPARTMENT: CITY ADMINISTRATION

PUBLIC HEARING: ☐YES ☒ NO

ATTACHMENT: ☒ YES ☐NO
Pages:

INFORMATION CONTACT: Shawanna Qawiy, City Manager
PHONE NUMBER: 404-296-6489

PURPOSE: To approve the reappointments of expiring terms of Herbert Clark and Charles McFarland to the Planning and Zoning Board.

NEED/ IMPACT: Each board member has a four-year term when appointed to the Planning and Zoning Board.

RECOMMENDATION: N/A.



2023 Preliminary Operating & Enterprise Fund Budget

CITY OF CLARKSTON

Our Community.
Our Possibilities….*we are growing.*

clarkstonga.gov

Clarkston City Council



Beverly H. Burks, Mayor



Awet Eyasu, Vice Mayor



Ytterenickia Bell, City Council



James Carroll, City Council



Susan Hood, City Council



Laura Hopkins, City Council



Debra Johnson, City Council

City Administrative and

Staff for Budget Process

Shawanna N. Qawiy

City Manager

Dan Defnall

Finance Director

BUDGET OVERVIEW

October 26, 2022

Mayor Beverly Burks
Vice Mayor Awet Eyasu
Council Member Yterenickia Bell
Council Member James Carroll
Council Member Susan Hood
Council Member Laura Hopkins
Council Member Debra Johnson

Dear Mayor and City Council Members:

Presented in this document is the Preliminary FY 2023 City of Clarkston Fiscal Budget for all funds. This preliminary budget was compiled with input and assistance from each city department, the mayor and city council members. The proposed preliminary budget is balanced with revenues equaling expenditures, pursuant to Georgia State Code.

The total proposed FY 2023 Expenditure Budget for all funds is **$12,079,688.** The total proposed FY 2023 Revenue Budget for all funds is **$12,079,688**. Both the Expenditure and Revenue estimates represent a 9% decrease of $1,143,787 compared to the FY 2022 budgeted amount of $13,223,475. The primary reason for this budget variance is reduced SPLOST fund budgets in FY2023 as we are wrapping up the 2017 SPLOST referendum projects.

The proposed FY 2023 General Fund Operating Budget of **$7,328,408** represents a $322,286 (4.6%) increase as compared to the FY 2022 amount of $7,006,122. This communication highlights our recommendations on how our continued commitment to the community and people that we serve include added services, resources, proposed programs, and staff and to allow us to continue to grow and make our community a special place to live, work, and play.

The initial stages of the 2023 Budget Process have commenced. The attached document encompass what we have heard thus far allowing amendments and additional considerations along the way. Copies of the 2023 Budget will be made available to the public electronically on the City of Clarkston website. Hard copies of the proposed budget will be available for review at the Clarkston Public Library as well as onsite at the Clarkston City Hall Annex.

The Public Hearings to receive comments on the 2023 Proposed Budget will be held Tuesday, November 29, 2022, and December 6, 2022. Adoption of the 2023 Budget is scheduled to occur during the Regular Council Meeting held on December 6, 2022.

To allow for a more interactive process and to provide for direct input on budget items, you each scheduled meetings with the City Manager during the 2023 Budget Pre-construction process. City management contacted each elected official to facilitate one-on-one meetings the week of October 20th-21st. 2022.

Meetings with the City Manager and the Mayor and City Council, to review the final proposed budget, are scheduled for November 7th-10th 2022. City management will contact each elected official to facilitate scheduling these meetings, during which each Council Member will receive an overview of the 2023 budget final recommendations. City management will also address any questions or concerns regarding the Final 2023 Budget either during or after the briefing sessions.

As you review the preliminary budget, please share any follow up questions that you have. I appreciate your direction and support as we collectively work towards delivering our community the resources, services and leadership that allows us the comforts of home.

Respectfully,

Shawanna N. Qawiy

Shawanna N. Qawiy
City Manager

2022 Budget Calendar

OCTOBER 5	Budget Worksheets to Department Heads from Finance Director
OCTOBER 7-10	Dept. Heads Budget Worksheets/Capital Expenditure Requests Due to City Manager
OCTOBER 10	Capital Expenditure Requests from Department Heads Due
OCTOBER 17-18	City Manager meets with Department Heads to discuss Dept. "wish list."
OCTOBER 20-21	City Manager will meet with Mayor/Council –Pre-Construction Budget Planning
OCTOBER 21	First Draft of Estimated Budget Consolidated
OCTOBER 21	Final Consolidated Draft of Budget for Distribution / October 25 Council Work Session
OCTOBER 26	Ads submitted to Champion News 2023 Budget availability & Public Hearing Notices
NOVEMBER 1	DRAFT 2023 Budget presented to Council* /Regular City Council Meeting
NOVEMBER 7-10	City Manager/Mayor/Council Budget Briefings to discuss feedback from October 25 and November 1st meetings.
NOVEMBER 17	Ad published in Champion News for 2023 Budget availability & Public Hearing Notice* for 11/29/2022 Special Called Meeting
NOVEMBER 24	Ads published in Champion News for 2023 Budget availability, Public Hearing & Adoption Notice* December 6th Meetings.
NOVEMBER 29	Budget presented at Special Call Meeting/Council Work Session at 6:30 PM/7 PM.
NOVEMBER 29	Public Hearing on Budget - 6:30PM – Special Called Meeting and 7 PM City Council Work Session
DECEMBER 6	Public Hearing and Adoption of 2023 Budget at Council Meeting*

Adoption of the Budget Ordinance

The budget must be adopted in the form of an ordinance at a public meeting. The council must wait at least one week after the public hearing is held before meeting to adopt the budget. O.C.G.A. § 36-81-6(a).

A prominent notice of the meeting to adopt the budget ordinance/resolution must be published in the Champion newspaper *(this information will be included in the ad to run on November 17, 2022, and November 24, 2022)* of general circulation (in a location other than where the legal notices are published) at least one week before the meeting to adopt the budget. O.C.G.A. §§ 36-81-6(a) and 36-81-5(e).

ADMINISTRATION 5.0 Full-Time Equivalents (FTE)
STAFF: City Manager, City Clerk, Finance Director, Accountant, Administrative Coordinator

Total expenditures in the Administration Department have decreased from $1,201,939 in FY 2022 to **$1,192,821**, a decrease of $9,118 proposed for FY 2023. The Administration Department budget represents 16.3% of the total General Fund Budget.

Group Health Insurance premium costs for the City increased by 22.7% for FY 2023 compared to a 12.0% increase in FY2022. The overall Group Health Insurance budget for 2022 was $429,888 and increased by 2% to $527,148 for FY2023. Health Insurance premium costs represent 7.2% of total General Fund Operating expenditures.

The City of Clarkston Defined Benefit Retirement Plan contribution costs decreased overall by 7.6% from FY2022, $555,214 to $513,258 in FY 2023. The pension contribution cost as a percentage of gross salaries increased by 2.9% to 17.5% in FY2023. Total Retirement Contributions for FY 2023 represent 7.0% of total General Fund Operating expenditures.

POLICE – 22.0 FTE

STAFF: Police Chief, Assistant Police Chief, Captain DEA Task Force, Lt- Uniform Patrol, (4) Sergeants for Patrol, (9) Patrol Officers, (3) CID Staff, (1) Sergeant/State Certification, (1) TAC Records Clerk

Expenditures in the Police Department are budgeted at **$2,585,597** for FY 2023 compared to $2,395,918 in FY 2022 representing an overall increase of $189,679 or 8% from FY 2022. The Police department budget for FY 2023 represents 35.3% of the total General Fund budget.

For FY 2023, the Clarkston Police Department authorized, and funded staffing level is recommended at 21 approved full time police personnel, with 6 positions unfunded for 2023. After the 2015 annexation, staffing levels were increased to a total of 27 approved police positions. This FY 2023 budget includes a total of six (6) unfunded positions during the year.

Full-time personnel is a Police Chief responsible for the management of the department, an Assistant Chief who commands the operational uniform and criminal investigations divisions, one (1) Sergeant who serves as the department's accreditation and state certification manager and will also serve as the department's training officer to insure all personnel meet P.O.S.T certification requirements and (1) Captain that is currently assigned to a DEA Task force, one (1) Lieutenant who serves as the uniform patrol commander, three (3) detectives, and nine (9) patrol officers, four (4) Sergeants for patrol, and the new position of a TAC records clerk.

The recruitment of qualified and desirable candidates to fill the Patrol Officer positions has increased compared to previous years. There has been a reduction in the number of qualified individuals choosing law enforcement as a profession. Consequently, competition to attract and employ qualified candidates has increased.

Despite efforts taken over the past few years to remain competitive such as increasing the starting salary and providing signing bonuses for new officers, the police department continues to maintain an average of two to four vacant police officer positions at any given point in time over the past several years.

MUNICIPAL COURT – 3.0 FTE
STAFF: Chief Court Clerk, (1) Court Clerk, Records Clerk

Expenditures in Municipal Court department are budgeted at **$448,204** for FY 2023 compared to $489,559 in FY2022 representing an overall decrease of $ 41,355 from FY 2022. The Municipal Court budget for FY 2023 represents 6.1% of the total General Fund budget. The budget decrease was primarily due to the not funding one vacant court clerk position due to declines in court caseloads and hiring of a TAC records clerk in the Police Department for FY2023. Overall fines revenues are expected to continue to decrease in FY2023.

PUBLIC WORKS/BUILDING & GROUNDS/ PARKS 11.6 FTE

STAFF: Public Works Director, Public Works Manager, (4) Laborers, (2) Equipment Operators, (1) CDL Drivers, (2) Crew Leaders

The FY2023 operating budget for Public Works, Building & Grounds and Parks is **$1,012,836 versus 939,493**, in FY 2022 and represents 17.9% of the total General Fund Expenditures budget. We have also budgeted the following capital expenditure items for Public Works in FY 2022 to include two (1) new Ford F-150 crew cab pickup trucks ($48,560) to replace a 2008 model. We have also budgeted $90,000 for improvements at the Public Works facility in the Stormwater Fund for land upgrade of donated property. We are also adding a part-time Park Ranger position to Public Works for FY2023.

Public Works staff continue to ensure the maintenance and care of the City's rights-of-way including streets, sidewalks, and small passive pocket-park areas, as well as our active (Milam) and passive (Friendship Forest and 40 Oaks Nature Preserve) parks. Staff performs a variety of maintenance, beautification, and improvement work including all mowing/weeding including the CSX right-of-way throughout our city limits, tree trimming/removal (parts are contracted out), trash/debris abatement and removal (from rights-of-ways and all City properties), and all other beautification maintenance as needed. Staff are housed out of the Public Works complex located at 3620 Montreal Creek Court.

PLANNING/ECONOMIC & DEVELOPMENT – 4.0 FTE
STAFF: Planning/Economic Development Manager, City Engineer, Code Compliance Officer, Economic Development Coordinator

The Planning/Economic and Development department is responsible for all zoning, plan review, building inspection and permitting functions. The Planning & Development Manager has been assigned to manage the activities of our technical consultants associated with these activities in addition to providing technical assistance to the Planning and Zoning Board, Mayor and City Council, and the City Manager. Professional fees for zoning, planning, and building Inspection services are currently budgeted in this department. The City has added a new City Engineer position for FY2023 to assist the city and department with development reviews and project management for existing and new or future development projects to come into the city.

Effective code enforcement will continue to be critical to the future success of Clarkston's economic development efforts. Given the age of many of our commercial, retail, and multi-family dwellings, the City will continue to focus on addressing property maintenance issues that continue to persist. Therefore, for FY 2023, the city will continue to provide code enforcement services utilizing a full-time staff person employed directly by the City of Clarkston. Additionally, the City will continue to

contract with a third-party vendor to assist staff with providing construction plan review and additional after hours compliance enforcement (by the police department).

The recommended FY2023 budget for Planning and Development is **$657,431** versus $487,900 in FY 2022, an increase of $169,531 primarily due to the addition of the City Engineer position. The FY 2023 Planning and Economic Development budget represents 9% of the total General Fund Expenditures budget.

Community Action Projects

The City of Clarkston believes that it is important to support programs and projects that enhance the quality of life for all residents. Therefore, in FY 2023, this budget appropriates $137,000 to support the following Community Action Projects:

- Urban Agriculture and Environment - $40,000
- Senior Programs - $8,000
- Public Arts Programs - Crosswalks $10,000
- Health Advisory Task Force - $2,000
- Early Learning Task Force $10,000
- Youth Advisory Task Force $7,500
- Recreation Programs - $14,000
- Clarkston Culture Fest Event - $3,500
- Clarkston Community Center - $10,000
- Clarkston Special Events - $25,000
- CDF-Tell Me A Story - $7,000

Community Development projects budgeted at $137,000 represent 1.9% of total general fund expenditures.

Debt Service

The City anticipates the need to obtain a TAN, (Tax Anticipation Note) in FY 2023 as bridge funding until property tax revenues is obtained during the 4th quarter of 2023, in the amount of $600,000. The estimated interest and loan origination fees amount is $12,000 and has been included in the FY 2023 budget.

The FY 2023 General Fund appropriation for Debt Service is **$766,568** compared to $743,179 budgeted in FY 2022. Debt Service Payments represent 10.4% of total general fund expenditures.

SPLOST Fund

The SPLOST referendum was approved by the voters on November 7th, 2017, and collections started in March 2018 and expire on March 31,2024. Expected SPLOST tax proceeds for FY2023 are estimated at **$2,200,000**. In FY 2020, the City secured a SPLOST bond in the amount of $7,282,000 with the principal and interest payments to be paid from SPLOST tax proceeds over the next two (2) years.

The SPLOST Fund expenditures budget for FY 2023 totals **$2,655,821** and includes payment of bond principal in the amount of **$2,158,000** and interest payments (on both bond issues) of **$57,821** to be paid from the SPLOST tax revenues received. SPLOST construction projects for FY2023 are expected to be **$440,000** to close out the 2017 SPLOST projects funded under the 2017 referendum and will be funded by the SPLOST bond proceeds and SPLOST tax revenues received.

Storm Water Utility Fund

Storm Water Utility Revenue is expected to be $331,363 for FY 2023. The City will continue to address storm water maintenance issues throughout the City and implement the City's Storm Water Management Plan as required by the Georgia Environmental Protection Division. Total Storm Water expenditures for FY 2023 include one major repair/replacement project estimated at $100,000 (Partitions Project). The City has also allocated $107,650 in salaries and payroll taxes to the Stormwater Fund from the Public Works department to cover the staff time spent during the late winter/early spring do annual stormwater maintenance and clearance of all storm water structures. Total Storm Water Fund Expenditures in FY 2023 are budgeted at **$331,363.**

Sanitation Enterprise Fund

The Sanitation Enterprise Fund continues to perform adequately. Expenditures and revenues for FY 2023 are projected at **$240,000**. The contract with Waste Management provides for an annual increase commensurate with the CPI.

Grant Funds

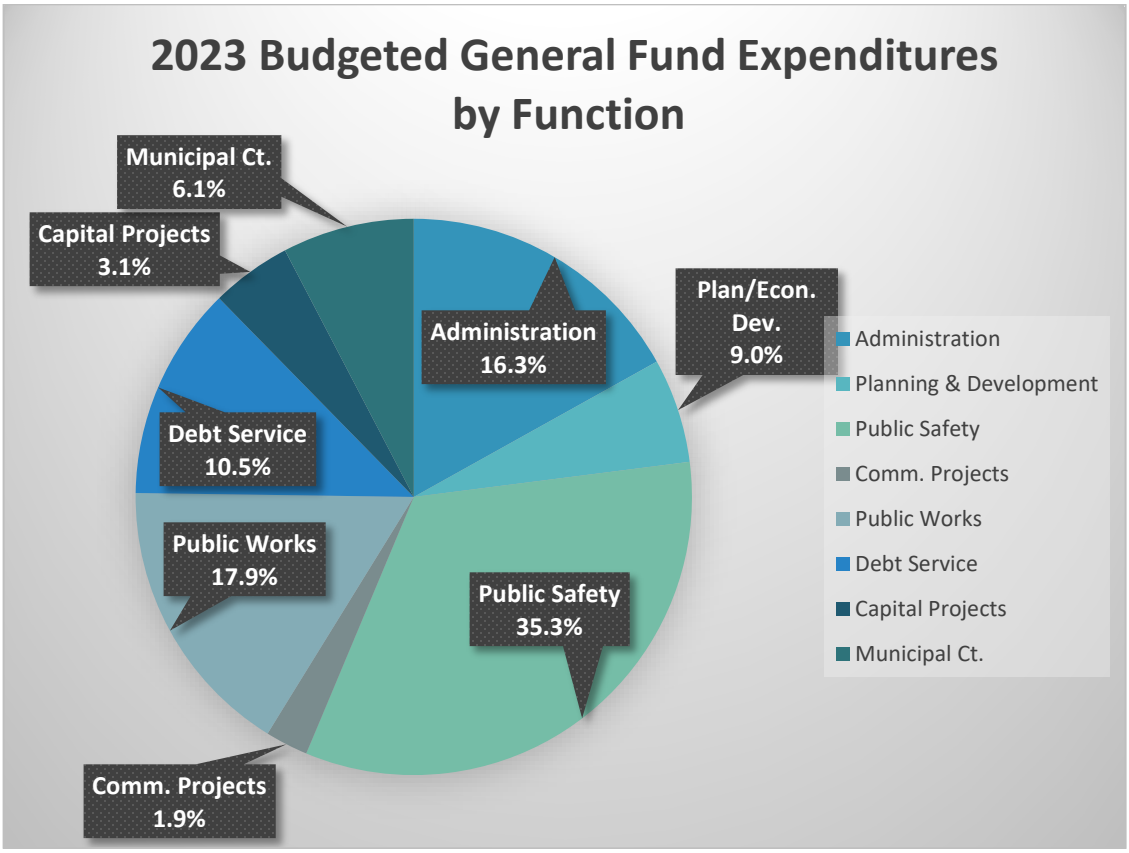
The City of Clarkston received funding from three (3) grant sources during the FY 2023 budget year. The City has budgeted $110,00 for the Local Maintenance & Improvement (LMIG) state grant fund, $4,000 from the US Department of Justice for police ballistic vests. The Atlanta Regional Commission has also awarded City a $340,000 LCI Clarkston Greenway Grant with 80% ($272,000) covered under the grant with a 20% ($68,000) City match is allocated in the Planning and Economic Development budget for FY2023. The city expects to spend $386,00 from grants in FY 2023.

Expenditures Summary

The total proposed FY 2023 Expenditure Budget for all funds is **$12,079,688** which represents a decrease of $1,143,787 as compared to $13,223,475 in FY 2022.

The proposed FY 2023 General Fund operating budget of **$7,328,408** represents a $322,286 **increase** as compared to the FY 2022 amount of $7,006,122.

As depicted in the chart below, the largest expenditure categories by percentage for General Fund Expenditures are Public Safety 35.1%, Public Works at 17.9%, Administration at 16.2% of the total expenditure budget. Debt service costs remain manageable at 10.4% of total FY 2023 expenditures.



Revenues Summary

The proposed FY 2022 Proposed General Fund Total Revenue budget of **$7,328,408** represents an increase of $322,286 or 4.6% as compared to $7,006,122 in FY 2022.

As of October 21, 2022	2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
REVENUES						
General Fund	**6,972,396**	**7,006,122**	**4,655,655**	**66.5%**	**7,371,306**	**7,328,408**
Other Funds:						
Federal Seizures Fund	73,051	80,000	60,041	75.1%	80,000	93,202
City Seizures Fund	3,211	500	-	0.0%	500	500
Grants Fund	88,600	366,718	-	0.0%	366,718	386,000
HOST Fund	-	71,194	-	0.0%	71,194	71,194
Stormwater Fund	640,129	353,789	158,104	44.7%	303,020	331,363
Sanitation Fund	219,938	253,507	132,645	52.3%	240,000	240,000
Affordable Housing Trust Fund	200,000	-	-		-	-
Coronavirus Relief Fund	2,359,757	1,040,947	2,377,985		1,040,947	973,200
SPLOST Fund	2,078,000	4,050,698	1,521,885	37.6%	4,302,560	2,655,821
Total Revenue - All Funds	**12,635,082**	**13,223,475**	**8,906,314**	**67.4%**	**13,776,245**	**12,079,688**

EXPENDITURES						
GENERAL FUND EXPENDITURES						
Administration	1,221,979	1,201,939	860,331	71.6%	1,178,232	1,192,821
Buildings and Grounds	149,894	133,160	82,810	62.2%	121,836	141,148
Planning and Development	383,645	487,900	294,306	60.3%	411,250	657,431
Community Action Projects	48,460	171,500	28,367	16.5%	57,000	137,000
Muncipal Court	440,328	489,559	330,563	0.0%	424,049	448,204
Police	2,163,035	2,395,918	1,763,053	0.0%	2,323,879	2,585,597
Public Works	969,684	939,493	760,693	81.0%	917,962	1,012,836
Parks	125,176	162,380	94,980	58.5%	134,300	157,000
Debt Service	744,408	743,179	503,522	67.8%	743,179	766,568
Capital Projects Fund - General Fund	188,690	281,094	253,183	90.1%	281,684	229,803
Total General Fund Expenditures	**6,435,299**	**7,006,122**	**4,971,808**	**71.0%**	**6,593,371**	**7,328,408**
Other Funds Expenditures						
Federal Seizures Fund	136,376	80,000	36,334	45.4%	80,000	93,202
City Seizures Fund	250	500	110	-	500	500
Grants Fund	2,376	366,718	324,964	89.6%	366,718	386,000
Coronavirus Relief Fund	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
HOST Fund	-	71,194	-	0.0%	-	71,194
SPLOST Fund	3,466,696	4,050,698	3,365,861	83.1%	4,364,845	2,655,821
Affordable Housing Trust Fund						
Stormwater Fund	309,343	353,789	141,278	39.9%	302,868	331,363
Sanitation Fund	219,064	253,607	172,538	68.1%	240,000	240,000
Total Expenditures - ALL FUNDS	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**

General Fund Surplus/(Deficit)	777,935	0

General Fund Expenditures Allocation by Function

	2020 Projected	% of Budget	2021 Budget	% of Budget
Administration	1,178,232	17.9%	1,192,821	16.3%
Planning & Development	411,250	6.2%	657,431	9.0%
Public Safety	2,323,879	35.2%	2,585,597	35.3%
Municipal Court	424,049	6.4%	448,204	6.1%
Community Development Projects	57,000	0.9%	137,000	1.9%
Public Works	1,174,098	17.8%	1,310,985	17.9%
Debt Service	743,179	11.3%	766,568	10.5%
Capital Projects	281,684	4.3%	229,803	3.1%
	6,593,371	100.0%	7,328,409	100.0%

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
GENERAL ADMINISTRATION - 10-1110, 1310, 1330, 1400, 1500							
Council Salaries	511100	69,066	72,000	54,000	75.0%	72,000	72,000
Council Health Insurance	512100	24,373	26,872	20,606	76.7%	24,870	31,464
Council/FICA	512200	4,254	4,464	3,337	74.8%	4,450	4,464
Council Medicare	512300	995	1,044	780	74.8%	1,042	1,044
Council Retirement	512400	12,915	14,688	11,960	81.4%	14,352	12,744
Council/Travel	523500	3,746	8,000	5,232	65.4%	8,000	8,000
Council/Education/Training	523700	3,544	8,000	3,998	50.0%	8,000	8,000
Mayor/ Salary	511100	15,000	15,000	11,250	75.0%	15,000	15,000
Mayor Health Insurance	512100	7,510	8,484	6,698	78.9%	7,038	9,744
Mayor/FICA	512200	930	930	698	75.0%	930	930
Mayor/Medicare	512300	218	218	163	74.8%	218	218
Mayor Retirement	512400	2,691	3,060	2,492	81.4%	3,060	2,655
Mayor/Travel	523500	-	3,000	1,266	42.2%	3,000	3,000
Mayor Education/Training	523510	425	1,500	425	28.3%	1,500	1,500
Gen Adm/Salaries	511100	581,020	478,276	359,705	75.2%	478,276	453,956
Gen Adm/Group Ins	512100	49,092	34,716	42,949	123.7%	51,700	53,760
Gen Adm/FICA	512200	32,343	27,398	21,831	79.7%	29,653	28,145
Gen Adm/Medicare	512300	8,265	6,408	5,106	79.7%	6,935	6,582
Gen Adm/Retirement	512400	75,502	90,147	73,404	81.4%	88,087	80,350
Gen Adm-Unemployment	512600			2,878		2,878	-
Gen Adm/Work Comp	512700	2,727	2,209	1,727	78.2%	1,727	2,270
Tax Billing/Coll Svc	521100	4,018	4,500	4,091	90.9%	4,091	4,500
Gen Adm-Board Elections	521110	5,005	4,000	-	0.0%	-	4,000
City Auditor	521200	47,350	53,000	15,150	28.6%	53,000	47,500
City Attorney	521210	99,654	112,500	70,510	62.7%	112,500	112,500
Gen Adm/Professional	521215	20,859	40,000	5,404	13.5%	10,000	20,000
Computer/Hard& Soft	521300	42,365	51,200	41,600	0.0%	51,200	70,000
Gen Adm/-Repairs/Maint	522200	-	1,000	-	0.0%	1,000	3,000
Equip/Rental/Lease	522320	4,504	4,800	3,357	69.9%	4,500	4,800
Prop/Liability Ins	523100	33,838	40,000	33,166	82.9%	35,000	40,000
Communications	523200	2,565	2,500	1,769	70.8%	2,500	2,500
Postage	523210	2,688	3,600	2,112	58.7%	3,000	3,600
Advertising	523300	3,994	6,000	2,818	47.0%	6,000	6,000
Printing Service	523400	13,612	10,000	3,806	38.1%	10,000	10,000
Travel	523500	608	5,000	1,781	35.6%	5,000	8,000
Dues & Fees	523600	23,867	27,425	27,058	98.7%	27,425	29,445
Education	523700	150	3,000	3,699	123.3%	5,000	7,250
Other Miscellaneous Expense	523910	3,012	3,000	323	10.8%	2,000	3,000
Bank/Finance Chgs	523920	13,974	17,500	9,791	55.9%	16,500	12,400
General Supplies	531100	3,230	3,000	2,456	81.9%	3,500	3,500
Books & Periodcals	531400	-	400	-	0.0%	400	400
Small Equipment	531600	1,813	2,000	436	0.0%	2,000	2,000
Uniform	531700	95	600	432	72.0%	600	600
Other Supplies	531710	164	500	69	13.8%	300	2,000
Furniture and Fixtures	542300	-		-			
Computer Equipment	542400	-		-	0.0%		
TOTALS		**1,221,979**	**1,201,939**	**860,331**	**71.6%**	**1,178,232**	**1,192,821**

CITY HALL- GENERAL ADMINISTRATION BUDGET 2023

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1100	**CITY COUNCIL**	
511100	**City Council Salaries**	**$72,000**
512100	**City Council Health Insurance**	**$31,464**
512200	**City Council FICA**	**$4,464**
512300	**City Council Medicare**	**$1,044**
512400	**City Council Retirement**	**$12,744**
523500	**City Council Travel**	**$8,000**
523700	**City Council Training**	**$8,000**
SUBTOTAL COUNCIL		**$137,716**

1300	**MAYOR**	
511100	**Mayor Salaries**	**$15,000**
512100	**Mayor Health Insurance**	**$9,744**
512200	**Mayor FICA**	**$930**
512300	**Mayor Medicare**	**$218**
512400	**Mayor Retirement**	**$2,655**
523500	**Mayor Travel**	**$3,000**
523700	**Mayor Training**	**$1,500**
SUBTOTAL MAYOR		**$33,047**

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01500	**GENERAL ADMINISTRATION**	
00051	**PERSONAL SERV. & EMPLOYEE BEN.**	
511100	**Administration Full Time/Interim Salaries** Funding for 5 positions: City Manager, City Clerk, Finance Director, Accountant, Admin Coordinator.	**$453,956**
511200	**Administration Salaries Part Time** (none at this time)	**$0**
511300	**Administration Overtime**	**$0**
512100	**Administration Insurance- Health**	**$53,760**
512200	**Administration Social Security FICA (6.2%)**	**$28,145**
512300	**Administration Medicare (1.45%)** Total Salaries – Full-time 1.45% x total	**$6,582**
512400	**Administration Retirement Contributions** GMEMBS Pension Plan 20.4% of annual full-time salaries	**$80,350**
12500	**Administration Tuition Reimbursement**	**$0**
512700	**Administration Worker's Compensation (GMA)**	**$2,270**
SUBTOTAL	**PERSONNEL/EMPLOYEE BENEFITS**	**$625,063**
00052	**PURCHASED CONTRACTED SERVICES**	
521100	**Administration Tax Billing/Collection Services** Dekalb County Tax Commissioner Property Tax Billing	**$4,500**
521110	**Administration Board of Elections Services** Dekalb County Board of Elections Services	**$4,000**
521200	**Administration Audit Fees** Annual Audit $40,000 A133 Single Audit due to Federal Grants $7,500	**$47,500**

521210	**Administration City Attorney Fees** City Attorney Fees $8,000 monthly $96,000 Bond Attorney Fees – Tax Anticipation Note $5,000	**$112,500**
521215	**Administration Professional Services Fees** City Annexation Studies $20,000	**$20,000**
521300	**Administration Information Technology Services** VC3-Website Annual Maintenance $600 x 12 mths $7,200 VC3, Inc – Info Tech Support Svcs $2,800 x 12 mths = $33,600 INOVA Payroll Processing Fees $12,500 OpenRDA Accounting Software Support and Maintenance Fees $7,500 Next Request (Open Records Software) $7,400 ArchiveSocial - Social Media (½ Admin, ½ Police) $1,800	**$70,000**
522200	**Administration-Repairs & Maintenance**	**$3,000**
522320	**Administration Equipment Rental** Neopost Postage Machine Rental $300/qtr = $1,200 Toshiba Copier $300/mth = $3,600	**$4,800**
523100	**Administration Insurance - (GIRMA)** Administration Liability Insurance	**$40,000**
523200	**Administration Communications** AT&T FirstNet Cell Phones/Wireless Devices $208.34 per month = $2,500	**$2,500**
523210	**Administration Postage & Shipping** United States Postal Service, UPS and FedEx charges. $300 per month	**$3,600**
523300	**Administration Advertising - Legal** Cost for advertising public hearings, grant bids, RFPs, and other state requirements.	**$6,000**
523400	**Administration Printing & Binding** Printing and copy costs associated with stationary, envelopes, business cards, forms, etc. $2,000 Municode updates $6,000 Toshiba copier printing overage billings $2,000	**$10,000**

523500 **Administration Travel** **$8,000**

Hotel expense and travel reimbursement for conferences, mileage reimbursements

City Clerk Conference Travel-Hotels, Mileage and Meals	$2,000
City Manager Travel-Hotels Mileage, and Meals	$5,000
Finance Staff Travel	$1,000

523600 **Administration Dues & Subscriptions** **$29,445**

Dues for professional associations and subscriptions

Dekalb Municipal Association	$10,500
GMA Telecom Fees	$8,400
GMA Membership Dues	$5,500
GMA Unemployment Services Fee	$100
National League of Cities Dues	$1,300
Dekalb Chamber of Commerce	$500
GCCMA Dues-City Manager	$200
Institute of Mgmt Accountants Dues-Fin. Dir.	$325
GGFOA Dues – Finance Director	$50
GLGPA Dues – City Clerk	$50
GMCA Dues – City Clerk	$115
IIMC Dues – City Clerk	$200
Welcoming America Dues	$500
National Civic League	$275
ICMA Dues- City Manager	$1,200
NFBPA	$230

523700 **Administration Education & Training** **$7,250**

Total administrative costs associated with registration costs or conferences, certifications, and training for:

City Manager – Conferences	$2,000
City Clerk – GMA City Clerk Conferences	$1,000
City Clerk – GMCA Regional/Virtual Trainings & Conferences	$1,750
City Clerk – IIMC Virtual Athenian Dialogues	$500
Accountant – Training/Conferences	$1,000
GLGPA-CHRM	$1,000

523910 **Administration Miscellaneous Expense** **$3,000**

Drug testing, background checks, employee recognition pins, florist bills, and unforeseen administrative expenses.
Cost of meals for meetings

523920	**Administration Bank Fees & Charges** Wells Fargo Bank Analysis Fees $300/mth = $3,600 Bankcard#8824 Credit Card Processing Fees = $400/mth = $4,800 AMEX #9807 Credit Card Processing Fees = $300/mth =3,600 Banking Supplies-Deposit slips, etc. = $400	**$12,400**
SUBTOTAL	**PURCHASED AND CONTRACT SERVICES**	**$388,495**
00053	**SUPPLIES**	
531100	**Administration Office Supplies** Paper, pens, individual printers, printer cartridges, high quality documents, photos, copied material, folders, spiral notebooks, etc.	**$3,500**
531400	**Administration Books & Periodicals** Books, manuals, and other published information.	**$400**
531600	**Administration Small Equipment** Replacement Equipment as needed $2,000	**$2,000**
531700	**Administration Uniforms**	**$600**
531710	**Administration Other Supplies** Office Furnishings or replacement	**$2,000**
SUBTOTAL	**SUPPLIES**	**$8,500**
TOTAL ADMINISTRATION	**(DEPT 1500)**	**$1,022,058**
TOTAL 1110, 1310, AND 1500		**$1,192,821**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
POLICE DEPARTMENT - 30-3200							
Salaries-Full Time	511100	1,172,620	1,219,212	866,582	71.1%	1,155,000	1,328,605
Salaries-Part Time	511200	-	-	-			-
Overtime	511300	15,512	16,000	16,224	101.4%	24,000	16,000
DEA Task Force Overtime	511310	32,177	18,000	35,081	194.9%	40,000	18,000
Health Insurance	512100	156,258	159,840	123,856	77.5%	150,000	237,804
FICA Contributions	512200	73,003	77,404	55,017	71.1%	75,578	84,482
Medicare Contributions	512300	17,072	18,102	12,867	71.1%	17,676	19,758
Retirement Contribution	512400	225,172	254,683	207,380	81.4%	249,300	241,181
Tuition Reimbursement	512500	-	-				-
Workers Compensation Insurance - GMA	512700	57,948	62,422	63,070	101.0%	63,070	68,130
Uniforms-Protective Gear	512905	4,231	4,536	3,991	88.0%	4,536	4,536
Uniforms	512910	13,455	17,305	12,727	73.5%	17,305	20,630
Professional Services	521220	2,447	3,880	2,600	67.0%	3,880	3,880
Police Admin IT Fee	521300	90,504	102,300	69,652	68.1%	96,000	95,061
Repairs/Maint	522200	17,741	52,500	15,661	29.8%	52,500	52,500
Vehicle Repairs/Maint	522210	38,714	50,000	32,164	64.3%	50,000	50,000
Equip/Rental-Lease	522320	38,218	80,984	73,645	90.9%	80,984	80,984
Liability Insurance -GIRMA	523100	86,415	96,000	85,174	88.7%	90,000	96,000
Communications	523200	18,004	21,600	14,386	66.6%	21,600	21,600
Postage	523210	400	500	67	13.5%	300	500
Advertising	523300	41	2,000	1,020	51.0%	1,200	2,000
Prinitng	523400	3,435	3,000	2,361	78.7%	3,000	3,000
Travel	523500	5,670	6,000	3,766	62.8%	6,000	10,760
Dues & Fees	523600	13,525	15,450	12,750	82.5%	15,450	20,586
Education/Training	523700	8,066	6,000	4,040	67.3%	6,000	6,000
Other Expense	523910	2,534	2,000	1,028	51.4%	1,600	2,000
Office Supplies	531100	3,328	3,000	948	31.6%	3,000	3,000
Supplies-Special Events	531120	-	7,600	7,864		8,000	8,000
Investigative Supplies - CID	531130	1,239	2,500	865	34.6%	2,500	2,500
Gas, Oil & Diesel	531270	51,295	75,000	37,752	50.3%	70,000	70,000
Books & Periodicals	531400	958	400	-	0.0%	400	400
Small Equipment	531600	13,054	17,700	515	2.9%	15,000	17,700
Totals		**2,163,035**	**2,395,918**	**1,763,053**	73.6%	**2,323,879**	**2,585,597**

Clarkston Police Department
2023 Budget

Personnel Services & Employees

511100	**Police Department Salaries Full Time** Annual base salaries for 21 total staff 2 - Police Chief & Assistant Police Chief 1 – Captain DEA Task Force 1 – Lieutenant-Uniform Patrol Commander 4 – Sergeants for Patrol 9 – Patrol Officers 3 - CID Staff 1 – Sergeant Community Relations/State Certification 1- Records clerk/TAC 27 Approved positions, with 6 unfunded 2022	**$1,328,605**
511300	**Police Department Overtime** Used for proactive police operations, emergency situations, special events, and mandatory training.	**$16,000**
511310	**Police Department DEA Taskforce Overtime**	**$18,000**
512110	**Police Department Insurance (Health-Life-Dental)**	**$237,804**
512200	**Police Department Social Security FICA (6.2%)** (6.2% of full, part-time, and overtime salaries)	**$84,482**
512300	**Police Department Medicare** (1.45% of full, part-time & overtime salaries)	**$19,758**
512400	**Police Department Employee Retirement Program** The rates are 17.7% of annual full-time salaries	**$241,181**
512500	**Police Department Tuition Reimbursement**	**$0**
512700	**Police Department Worker's Comp Insurance (GMA)** 5% of regular full-time and part-time salaries.	**$68,130**
512905	**Police Department Uniforms – Protective Gear** Requesting 6 ballistic vests; (1) for normal replacement and (5) for new hires this includes turnover at $756 per vest.	**$4,536**

512910 **Police Department Uniforms** **$20,630**

- $150 per officer (21) for one pair of boots = $3,150
- 3 vacant positions. To outfit a new officer cost is approximately $1,600 for uniforms. 3 x $1,600 = $4,800
- Duty gear for 3 vacant positions $1000 x 3 ==$3,000
- Carriers to carry our issued body cameras need to be replaced 9 x $120 = $1080.
- Normal replacement of uniforms for 14 officers (excluding new hires who will receive new uniforms) $500 x 14 = $7,000

Sub-total Personnel Service & Employees $ 2,039,126

Purchased/Contracted Services

521220 **Police Department Professional Services** **$3,880**

Includes fees for applicant processing, consultants, testing and other professional services.
Physical exams ($85 x 8 = $680)
Psychological exams ($275 x 8 =$2,200)
Polygraph exams ($125 x 8 = $1,000)

521300 **Police Department Information Technology Support** **$95,061**

VC3, Inc. annual IT Support Fees - $5,000x12= $60,000
VC3, Inc. MDT Support Fees - $2,500x12= $30,000
Tritech software annual support- $2,800
LEADS online annual support- $2,261

522200 **Police Department Equipment Repairs & Maintenance** **$52,500**

Rite Weight, Inc $350
Mobile Comm-Dekalb $2,000 x 4 (per quarter) = $8,000
Dragoneye Technology $400
Other Equipment Repairs-Spotlights, Misc = $1,250
Flock Cameras 17 x $2,200 = $42,500

522210 **Police Department Vehicle Repairs & Maintenance** **$50,000**

Upkeep and repairs on our fleet of vehicles.
Tires – Neighborhood Tire
Vehicle Cleaning – Finish Line Car Wash

522320 **Police Department Equipment Rental/Lease Contracts** **$80,984**

Toshiba Copiers $300/ month= $3,600
AXON Tasers Annual Fees = $3,200
AXON Tasers Lease Payments = $6,864
Motorola Radios - $6,200 x 4 = $24,800
Utility Body Worn Camera's $42,520

523100 **Police Department Insurance – GIRMA General** **$96,000**
Automobile Liability & Physical Damage = $45,000
Law Enforcement Liability = $46,000
Deductibles Budget = $5,000

523200 **Police Department Communications** **$21,600**
Includes:
AT&T FirstNet phones 22 @ $50/mth = $1,100 monthly =$13,200 annually
AT&T FirstNet air cards in patrol vehicles 15 @ $39/mth = $585 monthly = $7,020 annually
AT&T FirstNet certified cross carry licenses 5 @ $23/mth = $1,380

523210 **Police Department Postage** **$500**

523300 **Police Department Advertising** **$2,000**
Employment Recruiting Ads

523400 **Police Department Printing** **$3,000**
Includes funds for printing letterhead, business cards and other required forms. Update all business cards with cityofclarkston.com email address.

523500 **Police Department Travel** **$10,760**
Includes travel costs for seminars, conferences, conventions, and other training programs. This includes the travel for all members of the dept. attending training outside of the metro Atlanta area.

- Georgia Chiefs winter conference (Chief and AC) 3 days = **$1,800**
- Georgia Chiefs summer conference (Chief and AC) 4 days = **$2,360**
- International Chiefs conference (Chief and AC) 5 days = **$3,000**
- Georgia Commission on Family Violence conference (Chief) 3days = **$800**
- Georgia Women in Public Safety (Chief) 3 days = **$800**
- Georgia Police Accreditation Coalition (Sgt. Bulcher) 5 days **$1000**
- Georgia Internal Affairs conference (Sgt. Trumble) 5days = **$1,000**

523600 **Police Department Dues and Subscriptions** **$20,587**

- Georgia Association of Chiefs of Police 2x $150 = $300
- International Association of Chiefs of Police 2 x 150 = $300
- International Association of Chiefs of Police NET- $525
- State Re-Certification Annual Fee $300
- Dekalb Chief's Association 2 x $50 = $100
- GA Assoc. Law Enforcement Firearms $110

- GPAC Membership $250
- Georgia Peace Officers Association $75
- LEFTA Tracking-Employee Tracking $2,735
- Power DMS Annual Dues $5,335
- UTILITY Annual Dues $4,000
- Guardian $1311
- Thomson Reuters Research Database Subscription $2,800
- National Internal Affairs Association $100
- Metropol $300
- Other $300
- ArchiveSocial $1,745

523700 **Police Department Education & Training** **$6,000**

Training for all department members includes symposiums and specialized classes that are not readily available at the State or Local Academy.

- GACP Winter conference 2x 325 = **$650**
- GACP Summer conference 2x 325 = **$650**
- IACP conference 2x 450 = **$900**
- GWPS conference **$150**
- GPAC conference **$200**
- GIA conference **$250**
- Virtual Academy **$1,000**
- Training for officers **$2,200**

523910 **Police Department Miscellaneous Expense** **$2,000**

Allows for miscellaneous expenses not specified under other line items such as shipping costs, batteries, coffee, etc. Investigator meetings, and staff meetings. Identification cards for new hires. Physical exams plus drug screening new hires plus employees.

Subtotal Purchased/Contracted Services $438,366

Supplies

531100 **Police Department Office Supplies** **$3,000**

Based on history of usage and anticipated requirements, particularly in printer cartridges, paper and other computer supplies as well as office supplies normally used. Adjusted for thermal paper expenses.

531120 **Supplies for Special Events** **$8,000**

Police swag for giveaways throughout the year.

531130	**Investigative Supplies - CID** Equipment and supplies for proper criminal investigations. Including digital recording for witnesses, safety supplies and equipment, latent fingerprint collection kits and drug field testing refills, and translators as needed.	**$2,500**
531270	**Police Department Fuel and Oil**	**$70,000**
531400	**Police Department Books & Periodicals**	**$400**
531600	**Police Department Small Equipment** Includes ammunition and targets for firearm training to include targets. Taser unlimited live cartridges and PPM batteries. .	**$17,700**

Sub-total Supplies $101,600

Total Operating Budget $2,579,092

Capital Expenditures

Eagle Advantage Solutions Live Scan Fingerprint System $7,741.99 ***Budget from Federal Seizures Fund***

Proposal from Eagle Advantage Solutions for a Live Scan Fingerprint System.

As you know, in addition to our own departmental needs for this system, Court Services has expressed the necessity for some of their courtroom defendants to be fingerprinted. During the fingerprinting process the Live Scan System allows a subject to be positively identified, background-checked, and charged with criminal offenses that are added to the subject's state and federal criminal history record pending final disposition.

Additionally, this system would allow us to offer the additional service of fingerprint-based background searches for a fee to the public as well as add the ability for us to perform our own in-house background checks on all applicants for employment rather than outsourcing that need.

2023 Dodge Durango $42,000 equipment $11,000 Total $53,000(approximately)

As you are aware, we currently have 3 2017 Dodge Charges in our fleet for detectives. These vehicles currently have approximately 83,000miles. I would like to start replacing these 3 vehicles with the purchase of 1 Dodge Durango in the 2023 budget. The reason for the Dodge

over Ford is due to availability of the Fords. This would allow us to have one spare vehicle and, a vehicle for the newly approved position of Clinician.

Rebuild garage located in the police dept. parking lot $44,000

Split Budget 50/50 between General Fund and Federal Seizures Fund

The garage located in the police parking lot is in dire need of being rebuilt to meet State Certification compliance. One of the standards is to have a secure place to keep large items for example bicycles, lawn mowers and vehicles. I received a quote from Mike Leach to bring the garage into compliance with State Cert.

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
MUNCIPAL COURT - 20-2650							
Salaries	511100	189,700	210,736	138,922	65.9%	180,500	173,425
Part Time Salaries	511200	-	-	-			-
Overtime	511300	-	3,000	149	5.0%	500	2,000
Health Insurance	512100	37,181	38,760	25,818	66.6%	29,600	35,196
FICA Contributions	512200	10,863	13,140	7,552	57.5%	11,222	10,876
Medicare Contributions	512300	2,541	3,073	1,766	57.5%	2,625	2,544
Retirement Contribution	512400	36,339	43,235	35,205	81.4%	42,247	31,050
Tuition Reimbursement	512500	-	-	-			-
Workers Compensation Insurance - GMA	512700	921	1,060	1,000	94.3%	1,000	877
Uniforms	512910	-	1,200	-	0.0%	800	1,200
City Judge	521200	24,000	24,000	18,000	75.0%	24,000	24,000
City Solicitor	521210	12,000	12,000	9,000	75.0%	8,000	12,000
Public Defender	521215	9,600	9,600	4,200	43.8%	8,200	9,600
Professional Services	521220	8,157	9,600	5,116	53.3%	8,000	9,600
Information Technology Services	521300	19,430	15,400	25,457	165.3%	28,300	30,631
Equipment Rental	522320	3,316	3,600	2,466	68.5%	3,600	3,600
Communications	523200	1,555	1,560	991	63.5%	1,560	1,560
Prinitng	523400	1,625	2,000	1,589	79.5%	2,000	2,000
Travel	523500	1,610	4,700	2,424	51.6%	4,000	5,300
Dues & Fees	523600	221	720	200	27.8%	720	710
Education/Training	523700	-	1,825	845	46.3%	1,825	1,685
Other Expense	523910	155	300	71	23.7%	300	300
Office Supplies	531100	1,520	3,000	1,761	58.7%	3,000	3,000
Books & Periodicals	531400	-	200	-	0.0%	200	200
Small Equipment	531600	-	1,000	-	0.0%	1,000	1,000
A & B Fund	571000	19,134	20,000	12,098	60.5%	18,000	20,000
Training Fund	571010	18,807	20,000	11,197	56.0%	18,000	20,000
Crime Victim Emer Fund	571020	10,337	11,250	6,271	55.7%	11,250	11,250
Crime Victim DUI Fund	571030	408	600	104	17.3%	600	600
Brain & Spinal Inj Fund	571040	1,099	1,400	471	33.6%	1,400	1,400
Indigent Defense Fund	571060	20,564	22,000	12,569	57.1%	2,000	22,000
Crime Lab Fee	571070	389	600	75	12.5%	600	600
County Drug Treatment	571080	5,203	6,000	2,362	39.4%	5,000	6,000
Drivers Ed/Tng	571090	3,653	4,000	2,885	72.1%	4,000	4,000
Totals		**440,328**	**489,559**	**330,563**	**67.5%**	**424,049**	**448,204**

Clarkston Municipal Court
2023 Budget

Personnel Services & Employees

511100	**Municipal Court Salaries Full Time** Three full-time court staff	**$173,425**
511200	**Municipal Court Salaries Part Time**	**$0**
511300	**Municipal Court Overtime**	**$2,000**
512110	**Municipal Court Insurance (Health-Life-Dental)**	**$35,196**
512200	**Municipal Court Social Security FICA (6.2%)** (6.2% of full, part-time, and overtime salaries)	**$10,876**
512300	**Municipal Court Medicare** (1.45% of full, part-time & overtime salaries)	**$2,544**
512400	**Municipal Court Employee Retirement Program** The rates are 17.7% of annual full-time salaries	**$31,050**
512500	**Municipal Court Tuition Reimbursement**	**$0**
512700	**Municipal Court Worker's Comp Insurance (GMA)** 0.5% of regular full-time and part-time salaries.	**$877**
512910	**Municipal Court Uniforms**	**$1,200**
Sub-total Personnel Service & Employees		**$ 257,168**

Purchased/Contracted Services

521200	**Municipal Court Judge** $2,000 per month	**$24,000**
521210	**Municipal Court Solicitor** $1,000 per month	**$12,000**
521215	**Municipal Court Public Defender** $800 per month	**$9,600**
521220	**Municipal Court Professional Services**	**$9,600**

Interpreters for Court $9,600

521300 **Municipal Court Information Technology Support** **$30,631**
VC3, Inc. annual IT Support Fees $1,100 per month x 12 months =$13,200
Tyler Technologies – Repairs/Upgrades = $16,031
BadgePass Software Annual Support Fee $1,400

522320 **Municipal Court Equipment Rental/Lease Contracts** **$3,600**
Toshiba Copier Lease $300/mth

523200 **Municipal Court Communications** **$1,560**
Includes:
- GTA-GA Technology Authority (GCIC) $40 x 12 = $480
- AT&T First Net- Cell Phones $90x12= $1,080

523400 **Municipal Court Printing** **$2,000**
Includes funds for printing letterhead, business cards and other required forms for court including court summons, arraignment forms, and subpoenas $1,000
Card South Solutions – Card Stock for permit ID Card Printer $1,000.

523500 **Municipal Court Travel** **$5,300**
Judge Will-Municipal Judge Training $500
Georgia Council of Court Administrators Conferences-
Chief Court Clerk – 2 conferences annually May/September, hotel, mileage, & food @ $1,400 each = $2,800
GCIC Symposium (TAC) Conference – Chief Court Clerk (August) = 1 @ $1,400 = $1,400
Georgia Municipal Court Clerk's Council $600

523600 **Municipal Court Dues and Subscriptions** **$710**

Georgia Records Association (GRA) (Dorothy/Susie $30 each)	$60
Georgia Council of Municipal Judges (Judge Will)	$100
GA Institute Continuing Judicial Education (Judge Will)	$325
Georgia Council Court Administrators (GCCA)(Dorothy)	$100
Georgia Municipal Court Clerk's Council (GMCCC) (Dorothy) $55	$55
Georgia Terminal Agency Association (TAC) (Dorothy) $20 each	$20
Notary Fees	$50

523700 **Municipal Court Education & Training** **$1,685**
ICJE-Georgia Municipal Court Clerks Council-

required annual Recertification training for

Chief Court Clerk	$225
Conference Registration (GCCA) (2@$325) (DRJ)	$650
GCIC Symposium (TAC) (Dorothy – 1 @$260)	$260
Georgia Records Association-DRJ or Susie	$350
Other Training for Records Clerks	$200

523910 **Municipal Court Miscellaneous Expense** **$300**
Allows for miscellaneous expenses not specified under other line items such as shipping costs, batteries, coffee, etc.

Subtotal Purchased/Contracted Services $100,986

Supplies

531100 **Municipal Court Office Supplies** **$3,000**
Office supplies including printer cartridges, paper and other supplies.

531400 **Municipal Court Books & Periodicals** **$200**

531600 **Municipal Court Small Equipment** **$1,000**
Replacement printers and other small office equipment

Sub-total Supplies $4,200

Allocations of Municipal Court Fines & Forfeitures

571000	**Municipal Court Police Annuity & Benefit Fund**	**$20,000**
571010	**Municipal Court Police Training Fund**	**$20,000**
571020	**Municipal Court Crime Victim's Emergency Fund**	**$11,250**
571030	**Municipal Court Crime Victim's DUI Fund**	**$600**
571040	**Municipal Court Brain & Spinal Injury Fund**	**$1,400**
571060	**Municipal Court Indigent Defense Fund**	**$22,000**
571070	**Municipal Court Crime Lab Fee**	**$600**
571080	**Municipal Court Dekalb County Drug Treatment Fund**	**$6,000**
571090	**Municipal Court Driver Education Training Fund**	**$4,000**

TOTAL ALLOCATIONS – Court Fines & Forfeitures $85,850

Total Budget $448,204

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
PUBLIC WORKS - 40-4000							
Salaries-Full time	511100	454,039	397,656	333,340	83.8%	390,000	409,503
Salaries - Part time	511200	16,322	41,600	19,333	46.5%	20,000	41,600
Overtime	511300	6,668	7,200	9,297	129.1%	11,000	7,200
Health Insurance	512100	78,589	95,040	60,084	63.2%	71,000	113,652
FICA Contributions	512200	29,364	27,395	22,274	81.3%	26,000	28,415
Medicare Contributions	512300	6,863	6,407	5,209	81.3%	6,000	6,645
Retirement Contribution	512400	96,834	102,052	90,008	88.2%	99,500	91,456
Tuition Reimbursement	512500		-			-	-
Worker's Compensation	512700	26,595	27,093	28,942	106.8%	28,942	27,915
Uniform Rental	512910	7,690	10,900	6,783	62.2%	10,000	10,900
Professional Services	521215	41,375	16,000	31,020	193.9%	46,500	54,000
Computer Information Technology Support	521300	10,032	10,800	7,573	70.1%	10,300	10,800
Landfill	522115	8,817	8,000	4,568	57.1%	8,000	8,000
ROW Grass Cutting	522140	10,244	18,100	7,793	43.1%	16,000	18,100
Repairs/Maintenance	522200	9,098	8,000	7,776	97.2%	8,000	9,000
Vehicle/Repairs/Maint	522210	40,190	17,500	19,742	112.8%	20,000	25,000
Equipment/Rental	522320	5,197	5,000	2,734	54.7%	4,000	5,000
Liability Insurance - GIRMA	523100	8,017	10,000	8,504	85.0%	10,000	10,000
Communication	523200	3,232	3,000	2,820	94.0%	3,820	3,900
Travel	523500	-	3,000	1,492	49.7%	3,000	3,000
Membership Dues and Fees	523600	655	750	522	69.6%	750	750
Education and Training	523700	1,420	2,500	4,150	166.0%	4,150	6,000
Other	523910	1,167	1,500	545	36.3%	1,000	1,000
General Supplies	531100	6,797	7,000	5,995	85.6%	7,000	8,000
Electricity	531230	78,228	80,000	60,460	75.6%	80,000	80,000
Gas, Oil & Diesel	531270	18,319	24,000	15,026	62.6%	24,000	25,000
Small Equipment	531600	3,931	9,000	4,704	52.3%	9,000	8,000
Note: Capital Expenditure Items are included on " Capital Projects" Worksheet							
TOTALS		**969,684**	**939,493**	**760,692.96**	**81.0%**	**917,962**	**1,012,836**

2023 Public Works Budget Request

PERSONNEL COSTS

511100	**Salaries Full Time** Eleven Full-time employees Note: $100,000 of Public Works Salaries has been allocated to the Stormwater Fund for 2023	**$409,503**
511200	**Salaries Part Time** Includes three employees from April – August for right-of-row grass maintenance. One part-time Parks position May-August.	**$41,600**
511300	**Over–Time** As needed for on-call personnel, emergency call-ins, and special events.	**$7,200**
512110	**Insurance Health** 11 Full-Time Employees	**$113,652**
512200	**Social Security FICA** 6.2% of all salaries and overtime	**$28,415**
512300	**Medicare Contributions**	**$6,645**
512400	**Retirement Contributions** 17.7% of payroll	**$91,456**
512700	**Workers Compensation**	**$27,915**
512910	**Uniforms** Prudential Overall Supply-Weekly uniform cleaning/rental service $100/week = $5,200 Boots, jackets and other items for employees @ $400 = $5,200 Seasonal Employees $500	**$10,900**
Subtotal	**Personnel & Employee**	**$737,286**
	Purchased & Contract Services	
521215	**Professional Services** Collaborative	**$54,000**
521300	**Computer Information Technology Support**	**$10,800**

VC3 IT Support $900 per month x 12 = $10,800

522115	**Landfill Use** Landfill tipping fees Roll off container disposal fees (yard waste & metal recycling) Misc projects and removal of large items	**$8,000**
522140	**Right of Way Maintenance** Shades of Green Contract- Brocket Triangle & Refugee Beds	**$18,100**
522200	**Public Works Repairs & Maintenance** Repairs/Maintenance-Traffic Signals Repairs/Maintenance-Fencing on Right of Ways Repairs/Maintenance-Potholes	**$9,000**
522210	**Vehicle Maintenance** Tires, Service, Supplies, Repairs Towing, Accessories, Tags and Titles, Vehicle Cleaning, Mower Repairs	**$25,000**
522320	**Equipment Rental** Toshiba Public Works copier $300/month $3,600 Tool Equipment Rentals-Home Depot $1,400	**$5,000**
523100	**GIRMA Liability** General Liability Coverages Allocated by Dept Automobile Liability Automobile Physical Damage Property Buildings & Contents Deductibles Budgeted	**$10,000**
523200	**Communications** AT&T cell phones	**$3,900**
523400	**Printing & Binding** Letterhead& Envelopes Sanitation Educational material	**$0**
523500	**Travel** Mileage, Meals and Lodging	**$3,000**
523600	**Dues & Subscriptions** APWA Dues – $300 GA Utility Contractors Association $300 Sam's Club Membership fee $150	**$750**

523700	**Education & Training** APWA Public Works Association Executive Leadership Carl Vinson (3,500) GA Utility Contractors Association	**$6,000**
523910	**Miscellaneous**	**$1,000**
Subtotal	**Purchased & Contract Services**	**$154,550**

Supplies

531100	**General Supplies**	**$8,000**
531230	**Electricity-Street Lights** Georgia Power Acct# 11732-85125 Street Lights $4,200/month = $50,400 Georgia Power Acct# 00034-11103 3921 Church St. Mtr & Gvt $800/month = $9,600 Georgia Power Acct# 44694-04004 EPDL Lights $100/month = $1,200 Georgia Power Acct# 59997-86001 New Street Lights $1,500/month = $18,000	**$80,000**
531270	**Gasoline**	**$25,000**
531600	**Small Equipment Purchases** Maintenance Equipment –trimmers, blowers, small power equipment	**$8,000**
Subtotal	**Supplies**	**$121,000**

Total Operating Budget $1,012,836

EXPENDITURE							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
BUILDINGS/GROUNDS - 15-1565							
Professional Svcs	521215	12,951	15,000	7,817	52.1%	15,000	34,308
Pest Control	522145	1,780	3,000	2,276	75.9%	3,000	3,200
Repairs	522200	30,076	25,500	11,502	45.1%	20,000	20,000
GIRMA Liability Insurance	523100	8,988	8,000	9,736	121.7%	9,736	10,800
Communications	523200	43,196	27,960	14,506	51.9%	19,400	19,140
Dues and Fees	523600		-	-		-	
Other Miscellaneous Expense	523910	8,112	3,500	1,852	52.9%	3,500	3,500
Office Supplies	531100	25,378	17,000	15,760	92.7%	18,000	18,000
Street Signs	531190	192	7,500	4,356	58.1%	7,500	6,500
Water/Sewer	531210	4,017	4,500	3,582	79.6%	4,500	4,500
Natural Gas	531220	5,385	7,500	3,886	51.8%	7,500	7,500
Electricity	531230	8,742	9,200	7,062	76.8%	9,200	9,200
Small Equipment	531600	1,078	4,500	474	10.5%	4,500	4,500
TOTALS		**149,894**	**133,160**	**82,810**	**62.2%**	**121,836**	**141,148**

2023 Buildings & Grounds Budget

Purchased & Contract Services

521215 **Professional Services** **$34,308**
Jani-King Cleaning Services-Offices- $1,609/month $19,308
Tree Removals – Average $1,250/tree x 6 trees = $7,500
Security First Alarm Monitoring & Service= $3,040
CHA, City Hall, & Poolhouse Monitoring 4@$510=$2,040
Service Calls = $1,000,
Arbor-Nomics Turf Mgt. 4 @ $250 = $1,000
Consider Replacing CHA Alarm System $2,100
Contingency Funds $1,360

522145 **Pest Control** **$3,200**
Skyline Pest Control-Annex, City Hall, Public Works, Woman's Club

522200 **Repairs & Maintenance** **$20,000**
General Repairs and Maintenance to city buildings to include HVAC systems, plumbing, electrical, light bulbs, equipment service and maintenance, door locks, etc.

523100 **GIRMA Liability** **$10,800**
General Liability Coverages Allocated by Department
Property Buildings & Contents Coverage $9,800
Claim Deductibles $1,000

523200 **Communications** **$19,140**
Comcast Acct# 0196945 Pub Works $300/mth = $3,600
Comcast Acct# 0027322 City Hall $250/mth = $3,000
Comcast Acct# 0505715 Woman's Club $200/mth - $2,400
AT&T Acct# 171-797-7633673 = $800/mth = $9,600
AT&T Online Fax 404-298-1522 $20/mth = $240
CNP Technologies–Annual Phone System Support Fees $900/year

523910 **Miscellaneous** **$3,500**
CSX Annual Real Estate Taxes $800
Dry Cleaning tablecloths for Woman's Club $500
Other Miscellaneous Items $2,200

Subtotal Purchased & Contract Services **$90,948**

Supplies

531100	**General Supplies** Custodial supplies, light bulbs, mulch, bedding plants, Pot hole patch, nails, lumber, paint etc.	**$18,000**
531600	**Street Signs**	**$6,500**
531210	**Water/Sewer** DeKalb County Water-Annex Cust#5739026 DeKalb County Water-City Hall Cust# 1020766 DeKalb County Water- Women's Club Cust#994888 DeKalb County Water- Pub Works Cust# 6168977 DeKalb County Water- Vaughan St Cust# 6785691 Quench USA $45*12= $540 Waterlogic-2 Water Coolers-City Hall $300/qtr = $1,200 Waterlogin-1 Water Cooler-Pub Works $150/qtr = $600	**$4,500**
531220	**Natural Gas** Constellation Gas Women's Club Acct# 6963571473 Constellation Gas Annex Acct# 423795297 Constellation Gas City Hall Acct# 4011935545 Constellation Gas Public Works Acct# 701646356	**$7,500**
531230	**Electricity** Georgia Power City Hall Shed Acct# 59787-86001 Georgia Power Women's Club Acct# 59367-86001 Georgia Power Annex Acct# 61257-86036 Georgia Power Public Works Acct# 34088-90007	**$9,200**
531600	**Small Equipment Purchases**	**$4,500**

Subtotal Supplies	**$50,200**
TOTAL BUILDING & GROUNDS OPERATING BUDGET	**$141,148**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
PARKS 60-6200							
Professional Services	521215	12,403	50,000	1,804	4%	20,000	25,000
Pool Management	522150	47,618	54,000	49,005	91%	52,000	54,000
Repairs/Maintenance	522200	27,089	20,000	14,033	70%	20,000	35,000
Equipment Rental	522320	1,950	1,800	1,350	0%	1,800	1,800
Communication	523200	2,131	3,080	2,445	79%	3,500	4,200
Other Miscellaneous Expense	523910	253	1,000	252	25%	1,000	1,000
General Supplies	531100	6,360	7,000	7,243	103%	9,000	9,000
Water/Sewer	531210	1,224	5,500	1,420	26%	3,000	3,000
Electricity	531230	15,804	15,500	15,719	101%	20,000	20,000
Small Equipment	531600	10,344	4,500	1,708	38%	4,000	4,000
Note: Capital Expenditure Items are included on " Capital Projects" Worksheet							
TOTALS		**125,176**	**162,380**	**94,980**	**58%**	**134,300**	**157,000**

2023 PARKS Budget Request

Purchased & Contract Services

521215	**Professional Services** Tree removal services, Certified Arborist Services $24,000 Arbor-Nomics Herbicide/Pesticide Spraying $1,000	**$25,000**
522150	**Pool Management** Sears Pool Management Contract $54,000	**$54,000**
522200	**Repairs & Maintenance** Pavilions, picnic tables, grills, trash cans, electrical repairs Increased 20% for Friendship Forest	**$35,000**
522320	**Equipment Rental** Portable toilet rental for 40 Oaks 12@$150= $1,800	**$1,800**
523200	**Communications** AT&T Phone – Pool House 404-296-0500 $100 x 12 = $1,200 Comcast Wifi Acct.#646410 $250 x 12 = $3,000	**$4,200**
523910	**Miscellaneous** Drainage issues, dog park items	**$1,000**
Subtotal	**Purchased & Contract Services**	**$121,000**

Supplies

531100	**General Supplies** Mulch, custodial supplies, bedding plants, signage etc.	**$9,000**
531210	**Water/Sewer** DeKalb County Water Cust# 994305 Milam Park DeKalb County Water Cust# 989972 Friendship Forest DeKalb County Water Cust# 77002900 Aquatic Center DeKalb County Water Cust# 995441 3867 Norman Rd Pool	**$3,000**
531230	**Electricity** Georgia Power Acct# 85617-87002 Pavilions Georgia Power Acct# 10381-50016 Aquatic Center Georgia Power Acct# 69867-86007 Tennis Courts Georgia Power Acct# 30186-37032 Friendship Forest temp #1	**$20,000**

	Georgia Power Acct# 71137-00063 Friendship Forest temp #2	
531600	**Small Equipment Purchases** Blowers, weed eaters	**$4,000**
Subtotal	**Supplies**	**$36,000**
Total Parks Operating Budget		**$157,000**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
PLANNING AND DEVELOPMENT - 74-7400							
Zoning & Review Board Stipends	70-511100	400	3,600	-	0.0%	3,600	3,600
Zoning & Review Board Training	70-523700	-	1,000	-	0.0%	-	1,000
Salaries-Reg F/T	74-511100	140,417	177,100	103,935	58.7%	149,414	304,072
Part-Time Salaries	74-511200	-	-	-			
Overtime	74-511300	-	-	-			
Health Insurance	74-512100	19,724	28,020	16,570	59.1%	20,400	45,528
FICA Contributions	74-512200	8,071	14,390	5,963	41.4%	9,264	18,852
Medicare Contributions	74-512300	1,888	3,365	1,394	41.4%	2,167	4,409
Retirement Contribution	74-512400	26,903	47,348	39,152	82.7%	47,200	53,821
Workers Compensation	74-512700	3,453	6,197	3,500	56.5%	2,625	8,119
Uniforms	74-512910	340	900	365	40.5%	900	1,200
Professional Services	74-521215	60,234	100,000	52,125	52.1%	60,000	98,000
Building Inspections/Permitting	74-521220	98,753	72,000	54,443	75.6%	84,000	75,000
Computer and Software Services	74-521300	14,175	16,000	11,866	74.2%	15,000	16,000
Vehicle Repair & Maintenance	74-522210	-	1,300	-	0.0%	-	3,000
Communication	74-522210	2,095	2,280	1,727	75.8%	2,280	2,880
Other Expense-Advertising	74-523300	320	600	220	36.7%	600	600
Printing Service	74-523400	242	1,500	99	6.6%	1,500	1,500
Travel	74-523500	22	3,800	357	9.4%	3,800	6,000
Dues and Fees	74-523600	295	1,400	1,355	96.8%	1,400	1,350
Education/Tng	74-523700	3,747	2,800	300	10.7%	2,800	6,000
General Supplies	74-531100	692	1,000	307	30.7%	1,000	2,000
Gasoline & Fuel	74-531270	301	800	628	0.0%	800	2,000
Small Equipment	74-531600	1,571	2,500	-		2,500	2,500
TOTALS PLANNING & ZONING		**383,645**	**487,900**	**294,306**	**60.3%**	**411,250**	**657,431**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
COMMUNITY ACTION PROJECTS 10-7600							
Urban Agriculture and Environmental Projects	521200	-	40,000	-		-	40,000
Clarkston Special Events	531120	28,671	40,000	10,367	25.9%	30,000	25,000
Tell Me A Story Event	573015	7,000	7,000	7,000	100.0%	7,000	7,000
Recreation Programs	573060	647	10,000		0.0%		14,000
Clarkston Community Center	573010	7,500	10,000	10,000	100.0%	10,000	10,000
Sagal Radio	573020	-	7,000		0.0%		-
Clarkston Community CultureFest Festival	573040		7,500		0.0%		3,500
Public Arts Program/Crosswalk Painting	521215		10,000		0.0%		10,000
Senior Programs			10,000				8,000
Early Learning Task Force		4,642	10,000	1,000		10,000	10,000
2020 Census Complete County Marketing		-	-				
Health Task Force			10,000				2,000
Youth Task Force			10,000				7,500
TOTAL COMMUNITY ACTION PROJECTS		**48,460**	**171,500**	**28,367**	16.5%	**57,000**	**137,000**

2023 Planning & Zoning Budget

511100	**Salaries Full Time – Planning & Zoning Board Stipends** Planning and Zoning Board Member Stipends.	**$3,600**
523700	**Education & Training – Planning & Zoning Board** Training for P&Z Board Members	**$1,000**
Total Planning & Zoning Board		**$4,600**

2023 Planning & Development Budget

PERSONNEL COSTS

511100	**Salaries Full Time - Staff** 1 Full-time Planning Manager 1 Full-time Code Enforcement Officer 1 Full-time Economic Development Coordinator 1 Full-time City Engineer	**$304,072**
511200	**Salaries Part Time**	**$0**
512100	**Insurance Health/Dental @ 4 FT Employees**	**$45,528**
512200	**Social Security FICA – Staff**	**$18,852**
512300	**Medicare – Staff**	**$4,409**
512400	**Retirement Contributions**	**$53,821**
512700	**Workers Compensation @ 4 FT Employees**	**$8,119**
512910	**Uniforms**	**$1,200**
Subtotal	**Personnel & Employee**	**$436,001**

Purchased & Contract Services

521215	**Professional Services**		**$98,000**
	Marketing and Advertising	$30,000	
	LCI Study Clarkston Greenway Grant 20%	$68,000	
521220	**Building Inspection Services**		**$75,000**
	Building Inspections and plan review services for development permits		
521300	**Computer Information Technology Support**		**$16,000**
	I-IWorQ Permitting Maintenance Fees	$6,400	
	VC3 IT Support Fees $800/mth	$9,600	
522210	**Vehicle Maintenance**		**$3,000**
	Tires, Service, Emission Test, Supplies, Repairs Towing, Accessories, Tags and Titles, Vehicle Cleaning		
523200	**Communications**		**$2,880**
	AT&T First Net–Cell Phone P&Z Mgr $50 x12=$600		
	AT&T FirstNet–Air Card Code Enforcement Tablet $40x12=$480		
	AT&T FirstNet-Cell Phone Code Enforcement Officer-$50x12=$600		
	AT&T FirstNet-Cell Phone City Engineer $50x12=$600		
	AT&T FirstNet-Cell Phone Econ Dev Coord $50x12=$600		
523300	**Advertising**		**$600**
	Planning & Zoning Board meeting legal notices and advertisements.		
523400	**Printing & Binding**		**$1,500**
	Letterhead& Envelopes		
	Printing Services		
523500	**Travel**		**$6,000**
	Planning Manager $2,000		
	Code Enforcement Officer – GACE (GA Association of Code Enforcement) Conference (1 per year, 3 days each) $1,000		
	City Engineer - $2000		
	Economic Dev Coordinator Conference $1,000		
523600	**Dues & Suscriptions**		**$1,350**
	Council for Quality Growth	$50	
	GA Assoc of Code Enforcement @ 2	$100	
	APA (American Planning Assoc.)	$400	

	Economic Development Coordinator	$200	
	City Engineer	$600	
523700	**Education & Training**		**$6,000**
	Planning & Development Manager	$2,000	
	GMA Training (4 per year @ $25 =	$100	
	GACE Conference Registration	$300	
	Historic Preservation 4@ $150 =	$600	
	Economic Development Coordinator	$1,000	
	City Engineer	$2,000	
Subtotal	**Purchased & Contract Services**		**$210,330**
Supplies			
531100	**Office Supplies**		**$2,000**
531270	**Gasoline**		**$2,000**
531600	**Small Equipment Purchases**		**$2,500**
	Tools and equipment		
Subtotal	**Supplies**		**$6,500**
Total Planning & Development Budget			**$652,831**
TOTAL PLANNING & ZONING BUDGET			**$657,431**

2023 COMMUNITY ACTION BUDGET
DEPT #7600

521200	**Professional Services – Urban Agriculture/Environmental**		**$40,000**
521215	**Professional Services – Volunteer Advisory/Task Boards**		**$37,500**
	Public Art Projects-Crosswalks	$10,000	
	Health Advisory Task Force	$2,000	
	Early Learning Task Force	$10,000	
	Clarkston Seniors	$8,000	
	Youth Advisory Task Force	$7,500	
531120	**Supplies – Special City Events – City Center**		**$25,000**
	Milam Park Pool Opening Day	$3,000	
	Juneteeth	$5,000	
	Movies at Milam	$2,000	
	National Night Out (Police Budget)		
	Fall Food Truck Festival	$7,000	
	Trunk or Treat	$3,000	
	Christmas Tree Lighting Festival	$5,000	
573010	**Clarkston Community Center**		**$10,000**
	Annual Agreement	$10,000	
573015	**Clarkston Development Foundation-Tell Me A Story**		**$7,000**
573040	**Clarkston Community Festival/CultureFest**		**$3,500**
573060	**Recreation Programs**		**$14,000**
	Projects to consider: Summer/Fall Recreation Programs, Meditation/Yoga at Milam, Forester Program Friendship Forest		
Total Community Action Budget			**$137,000**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
DEBT SERVICE							
DEBT SERVICE- PRINCIPAL PAYMENTS							
Debt Service-Principal-Bonds (581100)							
Friendship Forest Redevelopment-Principal-Bonds	581100	149,913	151,900	-		151,900	153,913
Debt Service-Principal-Capital Leases (582100)							
Debt Service-Principal-City Hall Annex	581200	48,500	50,081	50,080	100%	50,081	51,713
Debt Service-Principal-10 Police Interceptors Take Home Cars	581200	122,968	126,913	94,807	75%	126,913	130,984
New Debt-Public Works Bucket Truck	581200	12,141	16,491	12,336		16,491	16,846
Debt Service - Principal- Two Public Works Trucks/Police Body Cameras	581200	10,850	-			-	-
2023 Lease Two Vehicles-PW &PD	581200						18,700
Subtotal 581200 - Principal on Capital Leases	**581200**	**194,458**	**193,485**	**157,223**	**81%**	**193,485**	**218,243**
Debt Service-Principal-Bonds (581300)							
GTIB/SRTA Loan #1	581300	119,773	122,679	112,343	92%	122,679	125,656
GTIB/SRTA Loan #2	581300	161,376	164,469	150,644	92%	164,469	167,622
Subtotal 581300 - GTIB/SRTA Loans	**581300**	**281,149**	**287,148**	**262,987**	**92%**	**287,148**	**293,278**
Subtotal Debt Service - Principal Payments	**581XXX**	**625,520**	**632,533**	**420,210**	**66%**	**632,533**	**665,434**
DEBT SERVICE - INTEREST PAYMENTS							
Debt Service-Interest-Bonds							
Friendship Forest Redevelopment - Interest	582100	20,397	16,424	8,212	50%	16,424	15,400
Debt Service-Interest-Capital Leases (582200)							
Debt Service-Interest- Capital Lease-City Hall Annex	582200	10,525	8,945	8,944	100%	8,945	7,312
Debt Service-Interest-Capital Lease-Take Home Cars-10 Ford Interceptors	582200	11,680	7,736	6,178	80%	7,736	3,664
New Debt-Public Works Bucket Truck	582200	1,872	2,192	1,677		2,192	1,838
Debt-Service-Interest- Capital Lease-2017 Pub Works Vehicles / Police Body Cameras	582200	249	-			-	-
2023 Lease Two Vehicles-PW &PD	582200						3,700
Subtotal 582200 - Interest of Capital Leases	**582200**	**24,326**	**18,873**	**16,799**	**89%**	**18,873**	**16,514**
Debt Service-Interest-Other Debt							
Debt Service- Interest Payment-GTIB Loan #1	582300	39,130	36,224	32,553	90%	36,224	33,247
Debt Service- Interest Payment-GTIB Loan #2	582300	30,218	27,125	25,748	95%	27,125	23,973
Debt Service-Other Interest Expense-TAN	582300	4,819	12,000	-	0%	12,000	12,000
Subtotal 582300-Interest on Other Debt		**74,166**	**75,349**	**58,301**	**90%**	**75,349**	**69,220**
Subtotal Debt Service - Interest Payments	**582XXX**	**118,889**	**110,646**	**83,312**	**75%**	**110,646**	**101,134**
TOTAL GENERAL DEBT SERVICE		**744,408**	**743,179**	**503,522**	**68%**	**743,179**	**766,568**

City of Clarkston

Debt Service Budget 2023

General Fund - Capital Lease Payments			
GMA Leases-BB&T Governmental Finance	**Principal Capital Leases (581200)**	**Interest Capital Leases (582200)**	**Total**
City Hall Annex - 9910001903-00001	$ 51,713	$ 7,312	$ 59,025
Police Vehicles-10 Police Interceptors	$ 130,984	$ 3,664	$ 134,648
2021 Lease-Bucket Truck	$ 16,846	$ 1,838	$ 18,684
2023-New lease PW & PD Vehicles	$ 18,700	$ 3,700	$ 22,400
	$ 218,243	**$ 16,514**	**$ 234,757**
Bond Debt	**Principal - Bond Debt 581200**	**Interest - Bond Debt - 582100**	
URA Bond-Friendship Forest Redevelopment	$ 153,913	$ 15,400	$ 169,313
Other Debt	**Principal - Other Debt (581300)**	**Interest - Other Debt (582300)**	
GTIB/SRTA Streetscape Loan #1	$ 125,656	$ 33,247	$ 158,903
GTIB/SRTA Streetscape Loan #2	$ 167,622	$ 23,973	$ 191,595
Estimated TAN $900,000 x 2.0% for 8 months		$ 12,000	$ 12,000
Total Other Debt Payments	**$ 293,278**	**$ 69,220**	**$ 362,498**
Total Debt Service - GENERAL FUND	**$ 665,434**	**$ 101,134**	**$ 766,568**
Federal Seizures Fund - Capital Lease Payments			
GMA Leases-BB&T Governmental Finance			
2018 Police Vehicles-3 interceptors	$ 28,488	$ 714	$ 29,202
Total Debt Service - Federal Seizure Fund	**$ 28,488**	**$ 714**	**$ 29,202**
Stormwater Fund - Capital Lease Payments			
GMA Leases-BB&T Governmental Finance			
2021 Sanitation Truck	$ 20,281	$ 2,213	$ 22,494
Total Debt Service - Federal Seizure Fund	**$ 20,281**	**$ 2,213**	**$ 22,494**
Grand Total Debt Payments - ALL FUNDS	**$ 714,203**	**$ 104,061**	**$ 818,264**

As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
GENERAL FUND Capital Projects							
Bldgs/Grounds-Police Garage-State Cerification	541200						22,000
Bldgs/Grounds-Flood Damage Repairs City Hall	541200	28,182					
Bldgs/Grounds-Replace Furnace - Womans Club	541200	6,552					
Bldgs/Grounds-Replace Handicap Ramp CHA	541200		15,000	8,000	53%	8,000	
Bldgs/Grounds-Land Upgrade Public Works Facility	541400						-
Parks-40 Oaks Nature Preserve Improvements							
Parks-Friendship Forest Security Cameras							
Parks-Friendship Forest Replace Damaged Entrance Gate	541200	6,000					
Parks-Milam Park-Replaster Main/Baby Pools	542100						106,243
Parks-Milam Park-Replace Pool Covers	542100		34,000	29,881	88%	29,881	
Parks-Milam Park Water Line Replacement	541200						
Police-New Police Vehicles	542200		36,888	36,888	100%	36,888	53,000
Police-Police Vehicle Body Repairs Covered by Insurane Proceeds	542200			15,684		15,684	
Administration-Vehicles-Replace City Manager Vehicle	542200		30,000	29,325	98%	29,325	
Public Works - Lawn Mower							
Public Works Vehicles	542200	123,423	28,500	-	0%	28,500	48,560
Public Works - Market St Road Construct-Dekalb County			136,706	133,406	98%	133,406	
Public Works-Sidewalk Repairs/Fence Repairs Covered by Insurance Proceeds	541400	11,616					
Public Works-Streetscape Project Backflow Installs	541420	12,917					
Trees Atlanta Installation							
GENERAL FUND CAPITAL PROJECTS		**188,690**	**281,094**	**253,183**	**90%**	**281,684**	**229,803**

SPLOST FUND							
SPLOST FUND Bond Legal/Closing Fees	521200	-	-				
SPLOST FUND Bond Principal Payments	581100	799,000	2,081,000	2,081,000	100%	2,081,000	2,158,000
SPLOST FUND Bond Interest Payment	582100	119,756	94,698	56,402	60%	94,698	57,821
SPLOST FUND Construction	541400	2,547,941	1,875,000	1,228,459	66%	2,189,147	440,000
SPLOST FUND Total Expenditures		**3,466,696**	**4,050,698**	**3,365,861**	**83%**	**4,364,845**	**2,655,821**

Total Capital Projects and SPLOST		**3,655,387**	**4,331,792**	**3,619,045**	**84%**	**4,646,529**	**2,885,624**

Capital Assets – General Fund 2023

BUILDINGS & GROUNDS		**$22,000**
541200	Garage Renovation Police Dept – Renovate garage located in City Hall parking lot to meet State Certification Compliance standards to have a safe place to store large items such as bicycles, lawn mowers and vehicles held as evidence. Total cost to be split 50/50 between General Fund and Federal Seizures Fund	
POLICE		
542200	2023 Dodge Durango to replace one 2017 Dodge Charger Vehicle cost $42,000, equipment $11,000	**$53,000**
PUBLIC WORKS		
542200	2024 Ford F-150 Crew Cab Pickup Truck (replace 2004 F-150)	**$48,560**
PARKS		
541200	Replaster Milam Park Main Pool and Kiddie Pool	**$106,243**
Subtotal	**Public Works Capital Purchases**	**$229,803**

2023 SPLOST Expenditures Budget

SPLOST FUND EXPENDITURES:

SPLOST Bond Principal Payments	$2,158,000
SPLOST Bond Interest Payments	$57,821
SPLOST Construction Projects 2023	
EPDL/Church Street Sidewalk Project	$159,000
Transportation Plan	$78,000
Northern Ave & Mell Intersection Design	$203,000
Total SPLOST Construction	**$440,000**
TOTAL SPLOST FUND EXPENDITURES	**$2,655,821**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 2 - FEDERAL SEIZURE - Expenditures							
Professional Services	521200	-					20,000
Repairs/Maintenance	522200	-					
Vehicle Repairs	522210	26		578		-	-
Communications	523200	-					
Printing	523400	-					
Travel	523500	2,923					4,000
Due & Fees	523600	-					
Education and Training	523700	8,766	5,000	550		5,000	2,000
Other Expense	523910	-					
General Supplies	531100	4,522	5,000	1,734		5,000	2,000
Small Equipment	531600	-	8,000	4,270		8,000	6,200
Buildings & Grounds Improvement	541200						22,000
Vehicles	542200	75,101	32,798	-		32,798	-
Other Capital Equipment-Fingerprint Syste	542500	9,577	-	-			7,800
Vehicle Lease Payments-Principal	581200	32,517	27,379	27,379	100.0%	27,379	28,488
Vehicle Lease Payments-Interest	582200	2,944	1,823	1,823	100.0%	1,823	714
Axon Lasers Lease Payments	522320						
Fund Balance Committed Future Lease Payments			-				
Fund Balance Rollforward							
TOTALS		**136,376**	**80,000**	**36,334**	**45.4%**	**80,000**	**93,202**

EXPENDITURE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 2 - CITY SEIZURE - Expenditures							
Repairs/Maintenance	522200	0.00			0.0%		
Vehicle Repairs	522210	0.00			0.0%		
Communications	523200	0.00			0.0%		
Printing	523400	0.00			0.0%		
Travel	523500	0.00		-	0.0%		
Education	523700	0.00		-	0.0%		
Other Expense	523910	250.00	500	110		500	500
Small Equipment	531600	0.00	-	-	0.0%	-	-
General Supplies	531100	0.00	-	-	0.0%	-	-
Computers	542400	0.00			0.0%		
Other Capital Equip	542500	0.00			0.0%		
Seizure Distributions to Other Agencies	571000						
TOTALS		**250.00**	**500.00**	**110**	**0.0%**	**500**	**500**

Federal and City Seizure expenses fully funded by Seizure revenues.
Seizure accounts are separate funds that may be expended to the full balance available.

2023 Federal Seizures Fund

REVENUES

Distributions from US Department of Justice DEA Seizures	**$93,202**
Total Revenues	**$93,202**

EXPENDITURES

521215	**Professional Services** Contract for consulting/advising for State Certification	**$20,000**
523500	**Travel**	**$4,000**
523700	**Education and Training**	**$2,000**
531100	**Police General Supplies**	**$2,000**
531600	**Small Equipment Purchases** Ammunition and equipment for Police Dept	**$6,200**
541200	**Police Garage Renovation for Certification** Total project estimate $44,000 split 50% Seizure funds and 50% General fund.	**$22,000**
542500	**Other Capital Equipment** Eagle Advantage-Fingerprinting system	**$7,800**
581200	**Debt Service-Principal Payments Police Vehicles** BB&T Loan#991000190300012 –Police Vehicles $28,488	**$28,488**
582200	**Debt Service-Interest Payments-Police Vehicles** BB&T Loan#991000190300008 –Police Vehicles $714	**$714**
Total Expenditures		**$93,202**

2023 City Seizures Fund

REVENUES	**$500**
EXPENDITURES 523910 Other Expense	**$500**

EXPENDITURE							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 3 - SPECIAL REVENUE - MULTIPLE GRANT FUND - Expenditures							
GDOT LMIG-	573030	-	362,718	324,964	89.6%	362,718	110,000
Fulton Dekalb Hospital Authority-Defibrilators		-	-	-			
Dekalb CDBG-EPDL/Church St Sidewalks	511100		-	-			
NRPA 10 Minute Walk Grant			-	-			
Atlanta Regional Comm-LCI Clarkston Greenway Grant		-	-	-			272,000
GDOT-EPDL Sidewalk Market to Montreal	541410	-	-				
Dept of Justice-BVP Vests		2,376	4,000	-		4,000	4,000
TOTALS		**2,376**	**366,718**	**324,964**	**89.6%**	**366,718**	**386,000**

Grant Revenues reimburse grant expenditures only. Expenditures matches revenue

Grant Expenditures funded by Grant Revenue

As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 4 - Enterprise Fund - Storm Water - Expenditures 500-							
Storm Water - Salaries		50,110	100,000	49,674	49.7%	100,000	100,000
Storn Water - FICA Tax		3,086	6,200	3,080	49.7%	6,200	6,200
Storm Water - Medicare Tax		727	1,450	720	49.7%	1,450	1,450
Storm Water - Professional Svcs	521200	154,179	100,000	76,503	76.5%	100,000	78,000
Storm Water - Rep/Maint	522200	14,150	18,000	2,900	16.1%	18,000	18,000
Storm Water - Veh Maint/Rep	522210	5,446	3,000	2,423	80.8%	3,000	3,000
Storm Water- Equipment Lease/Rental	522320	1,911	3,000	-	0.0%	-	3,000
Storm Water - Dues/Fees-Community View	523600	21,035	12,500	2,920	23.4%	12,500	12,500
Storm Water-Training Expense	523700	-	2,000	824		2,000	2,000
Storm Water - General Supplies	531100	4,367	2,000	216	10.8%	2,000	2,000
Storm Water - Small Equipment	531600		3,000			3,000	3,000
Storm Water-Vehicles	542200			-	0.0%	-	
Storm Water- Capital Outlay	542500		100,000	-	0.0%	-	100,000
Storm Water - Depreciation	561000	52,079				52,079	
Storm Water - Interest Expense-Capital Lease	582200	2,254	2,639	2,019		2,639	2,213
TOTAL		**309,343**	**353,789**	**141,278**	**39.9%**	**302,868**	**331,363**

Storm Water Expenditures fully funded by Storm Water Utility Revenues.

As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND -6 -SANITATION ENTERPRISE FUND -							
Waste Management Fees	522110	219,064	253,507	172,538	68.1%	240,000	240,000
Sanitation Bank Charge	523920	-	100	-			
TOTALS		**219,064**	**253,607**	**172,538**	**68.1%**	**240,000**	**240,000**

As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND -330 -HOST REVENUE FUND -							
HOST Expenditures-EPDL Sidewalks-Phase 3	541XXX	-	71,194	-	0.0%		71,194
TOTALS		**-**	**71,194**	**-**	**0.0%**	**-**	**71,194**

2023 Grants Fund

REVENUES

Georgia Department of Transportation LMIG Grants 2023	$110,000
ARC-LCI Clarkston Greenway Grant	$272,000
US Department of Justice-Bullet Proof Vests	$ 4,000

Total Revenues **$386,000**

EXPENDITURES

3200-512905 Police-Protective Gear	**$4,000**
4200-541410 Capital-Repaving	**$110,000**
7400-521215 Professional Services	**$272,000**
Total Expenditures	**$386,000**

2023 Stormwater Fund Budget

PERSONNEL COSTS

511100	**Salaries Full Time** Labor Allocation for Stormwater systems inspections, cleaning and clearing, and reporting	**$100,000**
512200	**Social Security FICA** 6.2% of all salaries and overtime	**$6,200**
512300	**Medicare Contributions**	**$1,450**
Subtotal	**Personnel & Employee**	**$107,650**

Purchased & Contract Services

521215 **Professional Services** **$78,000**

Collaborative Infrastructure Services ***$40,000***
Consulting services on stormwater project management, annual stormwater inspections of businesses, annual reported to EPA/EPD, etc.

Integrated Science & Engineering ***$20,000***

Street Sweeping ***$18,000***
Monthly $1,500 ($18,000) per mile twice annually

522200 **Stormwater Repairs & Maintenance** **$18,000**
Minor Stormwater Repairs with a cost of less than $5,000 each.
Gravel, rock, stone, rip-rap and other materials for minor stormwater repairs.
Stormwater pipe inspections and photography
Stormwater pipe cleaning and vacuuming

522210 **Vehicle Maintenance** **$3,000**
Tires, Service, Emission Test, Supplies, Repairs Towing, Accessories, Tags and Titles, Vehicle Cleaning

522320 **Equipment Rental** **$3,000**
Other Equipment rental as needed $3,000

523600 **Dues & Subscriptions** **$12,500**
Digital Map Products – GovClarity Annual Subscription $9,500
Dekalb County Stormwater Fees on City owned parcels $3,000

523700	**Education & Training** Stormwater Training	**$2,000**
Subtotal	**Purchased & Contract Services**	**$116,500**
	Supplies	
531100	**General Supplies**	**$2,000**
531600	**Small Equipment Purchases** Small Tools and Equipment	**$3,000**
582200	**Debt Service Interest Expense** Interest Expense on Sanitation Truck Lease Purchase	**$2,213**
Subtotal	**Supplies**	**$7,213**
Total Operating Budget		**$231,363**
Stormwater Capital Projects		
542500	**Stormwater Capital Repair Projects**	**$100,000**
	Partitions – Detention Pond and drainage ditch	
Subtotal	**Capital Purchases**	**$100,000**
TOTAL STORMWATER BUDGET		**$331,363**

2023 Sanitation Fund

REVENUES

FY2023 Sanitation Assessments	**$240,000**
1,125 Residences as of October 2022. @ $213.21 per year = $240,000	
Total Revenues	**$240,000**

EXPENDITURES

522110 Waste Management Fees

Residential Garbage Service-Waste Management Contract Contract last updated 1/1/2021 for 3 years through 12/31/2023. Annual CPI fee increase estimate of 3.5% included in this budget. 1,125 Service Addresses by Waste Management $11.84/month for 12 months (1,125 x $11.84 = $13,320/mth x 12 months = $159,840	**$159,840**
Residential Recycling by Latham Home Sanitation Services Current contract started 1/1/2021, concludes 12/31/2023 1 year renewal Period that can be extended for a 2nd year based on terms of contract. 1,125 Service Addresses by Latham Home Sanitation Services (1,125 x $5.57 = $6,267/mth x 12 months = $75,204	**$75,204**
Clarkston United Methodist Church Sanitation in Exchange for Parking Privileges $135/month = $1,620	**$1,620**
Public Works Dumpster $164/month = $1,968	**$1,968**
Contingencies for Public Works Roll-offs, and other fees	**$1,368**
Total Expenditures	**$240,000**

2023 Homestead Option Sales Tax (HOST) Fund

REVENUES	
HOST Revenue-Fund Balance Reserve	**$71,194**
Total Revenues	**$71,194**
EXPENDITURES	
HOST Funds must be spent on Capital Projects- 40 Oaks Improvements	**$71,194**
Total Expenditures	**$71,194**

EXPENDITURE							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND -260 -ARPA CORONAVIRUS RELIEF FUND							
PPE-Gloves, Sanitizer, Masks	531100	5,053	5,000	2,713	54.3%	4,247	15,700
Vehicles	542200	23,000	-				
MOU-Good Samaritan Luthern Ministries	572000	6,873	10,820	10,820	100.0%	10,820	
MOU-CDF Action-Clarkston Story Walk	572000	6,370	19,200	19,179	99.9%	19,179	
MOU-Burmese Rohingya Community	572000	25,000	-				
MOU-Fresh Harvest	572000		-	10,296		10,296	40,000
MOU-GA State University	572010		30,100	30,047	99.8%	30,047	-
MOU-Veterans Community Outreach	572020		19,000	17,023	89.6%	25,023	14,169
MOU-Tekton Career-Empower Clarkston	572025		69,000	123,041	178.3%	123,041	1,958
MOU-Amani Womens Center	572030		42,000	22,000	52.4%	30,000	12,000
Home Weatherization Assistance	573080		50,000	5,000	10.0%	55,000	45,000
Covid19 Rapid Tests	573090		106,000	105,966	100.0%	105,966	-
Health Initiatives	573091	244	54,756	16,887	30.8%	20,887	33,869
Food Distribution	573092	49,538	40,500	22,811	56.3%	40,462	-
Vaccination Incentives	573093	43,022	22,000	21,180	96.3%	21,180	10,797
Business Assistance	573094	5,000	145,000	49,998	34.5%	49,998	-
Façade Improvement Assistance							220,002
Rental Assistance	573095	501,392	-	12,670		146,560	-
Mortgage Assistance	573096	8,177	16,000		0.0%	10,000	8,871
Utility Assistance	573097	12,114	13,000	12,989	99.9%	12,989	-
Quarantine Income Loss Assistance	573098		50,000		0.0%	50,000	50,000
Payroll-Hazard Pay	511xxx	188,944	238,168	175,614	73.7%	211,457	189,531
Payroll-Admin Asst	521200		26,000	15,249	58.6%	15,249	45,000
Payroll-Finance Staff	511XXX		26,000	-	0.0%	-	65,000
Payroll-Grants Administrator	521200		9,000	-	0.0%	-	54,000
Payroll-Public Safety Social Intervention	511xxx		-	-		-	85,000
Payroll-Equity Diversity Inclusion	511xxx						78,000
Communications & Marketing	511xxx	698		-		5,000	4,303
Equipment-Safety, Signage, Banner	531xxx	63,068	3,000	2,383	79.4%	2,383	
Calesthenics/Park Equipment	542xxx		28,000	15,691	56.0%	44,274	
Technology-wifi,laptops accessibility,Council chambers	54xxxx	74,372	18,403	18,403	100.0%	18,403	
Contingency		-					
TOTALS		**1,012,864**	**1,040,947**	**709,960**	***68.2%***	**1,062,461**	**973,200**

ARPA FUND FY 2023 PROPOSED BUDGET												
ACCOUNT CODE	Project Description	City Council Allocations as of 10/04/2022	Actual Spent FY2021	Final Amended Budget FY2022	2022 Expenditures to Date 10/21/2022	Expected for remainder of 2022 thru Dec 2022	Final Projected Expenditures at 12/31/2022	Expected Over / (Under) Final Budget FY2022	Total Cumulative Actual Expenditures FY2021 & FY2022	Balance Available from City Council Allocations as of 10/04/2022 Projected at 12/31/2022	2023 Budget	Carry over Allocations to 2024 Budget Commitments
260-1500-10-511100	Hazard Pay-Admin		22,965.19	18,000.00	12,606.17	2,000.00	14,606.17	(3,393.83)	37,571.36		10,807.00	
260-1500-10-512200	Hazard Pay-Admin		1,423.84	1,100.00	781.59	500.00	1,281.59	181.59	2,705.43		670.00	
260-1500-10-512300	Hazard Pay-Admin		333.00	300.00	182.79	30.00	212.79	(87.21)	545.79		157.00	
260-1500-10-512700	Hazard Pay-Admin			1,900.00	1,900.00	-	1,900.00	-	1,900.00		-	
260-2650-20-511100	Hazard Pay-Court		9,910.98	19,000.00	12,489.18	1,850.00	14,339.18	(4,660.82)	24,250.16		9,740.00	
260-2650-20-512200	Hazard Pay-Court		614.49	1,200.00	774.33	125.00	899.33	(300.67)	1,513.82		604.00	
260-2650-20-512300	Hazard Pay-Court		143.71	300.00	181.09	27.00	208.09	(91.91)	351.80		141.00	
260-2650-20-512700	Hazard Pay-Court			824.00	824.00		824.00	-	824.00		-	
260-3200-30-511100	Hazard Pay-Police		93,867.16	112,000.00	83,553.96	16,500.00	100,053.96	(11,946.04)	193,921.12		97,876.00	
260-3200-30-512200	Hazard Pay-Police		5,819.76	7,000.00	5,180.35	1,025.00	6,205.35	(794.65)	12,025.11		6,068.00	
260-3200-30-512300	Hazard Pay-Police		1,361.07	1,700.00	1,211.54	240.00	1,451.54	(248.46)	2,812.61		1,419.00	
260-3200-30-512700	Hazard Pay-Police		4,492.35	7,710.00	7,710.00	-	7,710.00	-	12,202.35		-	
260-4000-40-511100	Hazard Pay-Pub Works		37,951.31	48,000.00	34,092.56	10,000.00	44,092.56	(3,907.44)	82,043.87		43,774.00	
260-4000-40-512200	Hazard Pay-Pub Works		2,352.98	3,000.00	2,113.75	624.00	2,737.75	(262.25)	5,090.73		2,714.00	
260-4000-40-512300	Hazard Pay-Pub Works		550.29	700.00	494.34	145.00	639.34	(60.66)	1,189.63		635.00	
260-4000-40-512700	Hazard Pay-Pub Works		2,212.65	3,143.00	3,143.00	-	3,143.00	-	5,355.65		-	
260-7400-74-511100	Hazard Pay-Plan & Dev		4,593.93	11,000.00	7,416.99	2,575.00	9,991.99	(1,008.01)	14,585.92		13,865.00	
260-7400-74-512200	Hazard Pay-Plan & Dev		284.82	700.00	459.86	160.00	619.86	(80.14)	904.68		860.00	
260-7400-74-512300	Hazard Pay-Plan & Dev		66.62	200.00	107.54	42.00	149.54	(50.46)	216.16		201.00	
260-7400-74-512700	Hazard Pay-Plan & Dev			391.00	391.00		391.00	-	391.00		-	
Total Hazard Pay		**$ 414,000.00**	**188,944.15**	**238,168.00**	**175,614.04**	**35,843.00**	**211,457.04**	**(26,710.96)**	**400,401.19**	**13,598.81**	**189,531.00**	**need to increase allocation for FY2023**
										-		
260-1500-10-511100	Finance Staff for Two Years	$ 130,000.00		26,000.00		-	-	(26,000.00)	-	130,000.00	65,000.00	65,000.00
260-1500-10-521200	Admin Temp for Two Years	$ 88,741.00	-	26,000.00	15,248.77	-	15,248.77	(10,751.23)	15,248.77	73,492.23	45,000.00	28,492.23
260-1500-10-521200	Grants Adminstrator Two Years	$ 90,000.00		9,000.00		13,500.00	13,500.00	4,500.00	13,500.00	76,500.00	54,000.00	22,500.00
	Equity & Diversity Inclusion	$ 234,000.00								234,000.00	78,000.00	78,000.00
260-3200-30-511100	Public Safety Social Intervention Staffing	$ 85,000.00							-	85,000.00	85,000.00	85,000.00
260-1565-15-523200	COMMUNICATIONS/MARKETING	$ 10,000.00	697.88	-		5,000.00	5,000.00	5,000.00	5,697.88	4,302.12	4,302.12	
260-1565-15-531100, 26	PPE - Covid19 Supplies	$ 25,000.00	5,052.86	5,000.00	2,712.74	1,534.00	4,246.74	(753.26)	9,299.60	15,700.40	15,700.40	5,700.40
260-1565-15-541200, 260-3200-30-531600, 260-7600-10-521300	TECHNOLOGY-Council/Court Chambers Equipment, Laptops for Remote Working, NextRequest Open Records system	$ 79,893.00	74,371.61	18,403.00	18,403.00	-	18,403.00	-	92,774.61	(12,881.61)		Over allocation a
260-3200-30-531600	Police Safety Equipment -Traffic Cones for Officers Vehicle to promote safety	$ 1,500.00	1,423.50	-			-	-	1,423.50	76.50	-	
260-3200-30-542200	Police Equipment	$ 23,000.00	23,000.00	-			-	-	23,000.00	-	-	
260-3200-30-542500	Police Flock Cameras	$ 33,000.00	33,000.00	-			-	-	33,000.00	-	-	
260-4000-40-531600	Public Works Safety Equipment - Cargo Trailer with Drums, Hydros, and Traffic Control Barriers	$ 19,500.00	19,366.19	-			-	-	19,366.19	133.81	-	
260-6200-60-542500	Calesthenics and Park Equipment	$ 44,275.00	-	28,000.00	15,691.29	28,583.00	44,274.29	16,274.29	44,274.29	0.71	-	
260-7600-10-531140	Signage, Banners & Safety Equipment	$ 11,400.00	9,278.72	3,000.00	2,382.82		2,382.82	(617.18)	11,661.54	(261.54)	-	
260-7600-10-572000	MOU-Good Samaritan Lutheran	$ 17,925.00	6,873.00	10,820.00	10,820.00		10,820.00	-	17,693.00	232.00	-	
260-7600-10-572000	MOU-Burmese Rohingya Community	$ 25,000.00	25,000.00	-			-	-	25,000.00	-	-	
260-7600-10-572000	MOU-CDF Storyboards	$ 28,405.52	6,370.00	19,200.00	19,178.59		19,178.59	(21.41)	25,548.59	2,856.93	-	
260-7600-10-572000	MOU-Fresh Harvest	$ 40,000.00		-	-		-	-	-	40,000.00	40,000.00	
260-7600-10-572010	MOU-GA State Univ	$ 30,000.00	-	30,100.00	30,047.00		30,047.00	(53.00)	30,047.00	(47.00)	-	
260-7600-10-572020	MOU-Veterans Comm Outreach	$ 39,193.00	-	19,000.00	17,023.09	8,000.00	25,023.09	6,023.09	25,023.09	14,169.91	14,169.00	
260-7600-10-572025	MOU-Empower Clarkston-Tekton	$ 125,000.00	-	69,000.00	69,000.00		69,000.00	-	69,000.00	56,000.00	1,958.00	
260-7600-10-572030	MOU - Amani Womens Center	$ 42,000.00		42,000.00	22,000.00	8,000.00	30,000.00	(12,000.00)	30,000.00	12,000.00	12,000.00	
260-7600-10-573090	Covid19 Rapid Test	$ 106,000.00	-	106,000.00	105,966.00		105,966.00	(34.00)	105,966.00	34.00	-	
260-7600-10-573091	ARPA Health Initiatives	$ 55,000.00	243.94	54,756.00	16,886.86	4,000.00	20,886.86	(33,869.14)	21,130.80	33,869.20	33,869.00	
260-7600-10-573092	Food Distribution	$ 90,000.00	49,537.86	40,500.00	22,811.11	17,651.03	40,462.14	(37.86)	90,000.00	-	-	
260-7600-10-573093	Vaccine Incentive Gift Cards	$ 75,000.00	43,022.45	22,000.00	21,180.00	-	21,180.00	(820.00)	64,202.45	10,797.55	10,797.00	
260-7600-10-573094	Business Assistance	$ 54,997.56	5,000.00	145,000.00	49,997.56	-	49,997.56	(95,002.44)	54,997.56	-	-	
	Façade Improvement	$ 220,002.44				-				220,002.44	220,002.44	
260-7600-10-573095	Rental Assistance	$ 650,000.00	501,392.00	-	12,670.43	133,890.00	146,560.43	146,560.43	647,952.43	2,047.57	-	
260-7600-10-573096	Mortgage Assistance	$ 25,000.00	8,176.56	16,000.00	-	10,000.00	10,000.00	(6,000.00)	18,176.56	6,823.44	8,871.00	
260-7600-10-573098	Quarantine Income Loss	$ 100,000.00	-	50,000.00	-	50,000.00	50,000.00	-	50,000.00	50,000.00	50,000.00	-
260-7600-10-573080	Home Repair/Weatherization Assistance	$ 100,000.00	-	50,000.00	5,000.00	50,000.00	55,000.00	5,000.00	55,000.00	45,000.00	45,000.00	-
260-7600-10-573097	Utility Assistance	$ 25,000.00	12,113.58	13,000.00	12,988.78	-	12,988.78	(11.22)	25,102.36	(102.36)	-	
		3,137,832.52	1,012,864.30	1,040,947.00	645,622.08	366,001.03	1,011,623.11	(29,323.89)	2,024,487.41	1,113,345.11	973,199.96	284,692.63
					1,658,486.38							
Total Cumulative Spending/Budgeted from ARPA		**4,719,115.00**										
Spent in FY2021		(1,012,864.30)										
Projected to Spend FY2022		(1,011,623.11)										
Projected to Spend FY2023		(973,199.96)										
Project to Spend FY2024		(284,692.63)										
Project to Spend FY2025		(83,000.00)										
Total Estimated Unbudgeted Funding as of 10/21/2022		1,436,735.00										

REVENUES							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 1 -GENERAL FUND - Revenue							
Public Utility R/E Tax - Current	311110	182,886	107,947	88	0%	79,472	80,000
Other Real Prop Tax	311190	3,005,339	3,608,108	1,604,750	44%	3,608,108	3,755,616
Real Property Tax - Prior	311200	142,485	-	102,505		-	-
Public Utility R/E Tax - Prior	311210	-	-	77,606		-	-
Motor Vehicle Tax - Curr	311310	225,018	232,723	193,903	83%	240,000	240,000
Intangible Tax (Reg/Rec)	311340	62,215	30,000	32,849	109%	40,000	30,000
Railroad Equip Tx-Curr	311350	934	934	961	103%	961	980
Personal Prop Tax-Curr	311390	136,324	126,014	73,811	59%	126,014	126,014
Personal Prop Tax-Prior	311400	23	-	2,424		-	-
Real Estate Transfer Tax	311600	49,250	20,000	40,769	204%	41,000	30,000
Franchise Taxes-Electric	311710	349,873	310,000	1,529	0%	350,000	380,000
Franshise Taxes-Gas	311730	47,459	46,503	37,745	81%	50,326	50,000
Franchise Taxes-Cable/T	311750	62,482	6,000	30,518	509%	60,000	60,000
Franchise Taxes-Teleph	311760	1,787	1,600	884	55%	1,700	1,700
Alcoholic Bev Excise Tax	314200	127,514	123,900	98,682	80%	125,000	120,000
Local Option Mix Dr Tax	314300	71,804	50,000	54,674	109%	72,000	70,000
Business/Occupational Tax	316100	220,925	212,555	188,351	89%	212,555	212,555
Insurance Premium Tax	316200	1,006,157	1,006,000	1,191,283	118%	1,191,283	1,191,283
Penalties/Interest-Real Tax	319110	16,996	5,000	10,861	217%	10,000	10,000
Penalties/Interest-Occupation Tax	319400	3,784	3,300	4,300	130%	4,000	4,000
Alcoholic Investigation Fee	321105	8,160	8,160	5,200	64%	5,600	5,600
Retail Beer License	321110	9,000	9,000	9,000	100%	10,000	10,000
Retail Beer License/Drink	321115	4,000	4,000	4,250	106%	4,250	5,250
Retail Wine License	321120	9,000	9,000	9,000	100%	9,000	10,000
Retail Wine License/Drink	321125	4,000	4,000	3,500	88%	4,500	4,500
Retail Liquor License	321130	10,000	10,000	12,500	125%	12,500	12,500
Retail Liquor License/Drink	321135	20,000	20,000	20,000	100%	20,000	20,000
Work Permit & ID Card-Alcohol	321150	6,495	6,000	5,801	97%	7,000	7,000
Work Permiit & ID Card-Entertainme	321151	102,144	100,000	65,058	65%	85,000	85,000
Pawn Shop Permits	321152	-	-	-		-	-
Hookah Permits	321153	2,000	2,000	2,000		2,000	2,000
Ins Co Business License	321220	19,075	19,000	18,400	97%	20,000	20,000
Zoning/Land Use Permits	322210	1,860	2,500	3,292	132%	4,000	4,000
Sign Permits	322230	2,252	2,500	3,591	144%	4,000	4,000
Building Permits	322240	176,225	160,000	104,410	65%	140,000	140,000
Tree Service Permit Fees	322245	1,093	1,200	676	56%	1,000	1,000
Certificate of Occupancy	322250	12,800	2,000	14,137		14,200	14,200
Other Non-Business/Permits	322900	13,774	15,000	7,667	51%	10,000	10,000
Building Inspections	323120	2,489	2,569	587	23%	1,000	1,000
Other Regulatory Fees	323900	-	-	136,706		-	-
Intergovernmental Revenue - Tucker	337000	-	136,706	-		136,706	-
Tree Replacement/Preservation Fees	341390	76,806	-	30,067		30,067	-
Printing & Duplicating	341400	911	1,000	1,146	115%	1,200	1,200
Election Qualifying Fees	341910	4,050	-	-		-	-
Accident Reports	342120	6,497	5,709	5,026	88%	6,500	6,500
Special Pickups	344111	100	100	541	541%	600	600
Backgrd Check Fees/Crim	2104.9	4,200	4,342	3,110	72%	4,000	4,000
Woman Club Reservation	347200	-	10,000	3,579	36%	5,000	5,000
Pool Admissions	347201	21,371	24,000	21,891	91%	21,891	21,891
Pavilion Reservation Fees	347203	2,338	10,000	8,691	87%	10,000	10,000
Program Fees	347500	-	-	609	0%	609	609
Bad Check Fees	349300	-	-	50		50	50

REVENUES							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 1 -GENERAL FUND - Revenue							
Other Fees/Chgs for Svcs	349900	23,380	-	-		-	-
Municpal Court Fines/Forf	351170	372,932	290,000	217,592	75%	280,000	240,000
Police Admin IT Fee	351180	11,172	10,000	6,110	61%	7,500	7,500
Interest Revenues	361000	9	-	6		7	7
Contributions/Donations	371000	1,950	-	1,700		1,700	1,700
Rents & Royalties	381000	85,087	65,764	55,386	84%	66,160	75,000
Reim for Damaged Prop	383000	75,808	76,888	71,437		80,000	50,000
Other Miscellaneous Rev	389000	72	100	2,153	2153%	2,153	2,153
Bus Shelter Revenue	389010	16,966	86,000	38,694	45%	132,694	64,000
Reimburse DEA/OT	389005	28,480	18,000	9,940	55%	18,000	18,000
Sale/General Fixed Assets	392100	1,446	-	3,659	0%	-	
Sale/Land Property	392200		-	-	0%	-	
Transfer from Fund Balance	391100		-		0%	-	
Proceeds from Capital Leases	393130	121,201	-	-	0%	-	102,000
Revenue - Proceeds GTIB Debt	393500		-	-		-	
TOTAL - FUND 1		**6,972,396**	**7,006,122**	**4,655,655**	**66%**	**7,371,306**	**7,328,408**

REVENUE							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 2 - FEDERAL SEIZURE FUND - 210							
Cash Confisications (Illegal Act)	351320	73,030	80,000	47,049	58.8%	80,000	93,202
Other Confiscations/Escheat	351340	-			0.0%		
Proceeds/Sale Confis Prop	351346	-		12,979			
Fed Seiz/Interest Revenue	361000	20		13			
Surplue Funds Prior Year Trans	393510	-		-			
Other Revenue	389000	-		-			
TOTAL - Federal Seizure Account		**73,051**	**80,000**	**60,041**	**75.1%**	**80,000**	**93,202**

REVENUE							
As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	PROJECTED & AMENDED BUDGET	2023 PROPOSED BUDGET
FUND 2 - CITY SEIZURE FUND - 211							
Cash Confiscations (Illeg Ac)	351320	3,211	500	-		500	500
Proceeds/Sales/Confis Prop	351346	-		-			
City Seiz Interest Revenue	361000	-		-			
Other Misc Revenue	389000	-	-	-			-
Fund Balance Reserve							
TOTAL - City Seizure Account		**3,211**	**500**	**-**		**500**	**500**

Note:

Federal and City Seizure expenses fully funded by Seizure revenues.
Seizure accounts are separate funds that may be expended to the full balance available.

REVENUE As of October 21, 2022		2021 ACTUAL	2022 ADOPTED BUDGET	2022 ACTUAL AS OF 10/21/2022	% OF BUDGET	2022 PROJECTED & AMENDED	2023 PROPOSED BUDGET
FUND 3 - MULTIPLE GRANT FUND - 250							
LMIG	3341100	86,224	362,718	-	0%	362,718	110,000
FEMA/GEMA-Hurricane Irma			-	-			
Atlanta Regional Comm-LCI Clarkston Greenway Grant		-	-	-			272,000
CDBG Grant Dekalb County		-	-	-			
NRPA 10 Minute Walk Grant	331155		-				
US Dept of Justice BVP Vests		2,376	4,000	-		4,000	4,000
PATH Foundation-Path Grant	334200	-	-				
Fulton Dekalb Hospital Authority Defibrilators		-	-	-			
TOTAL		**88,600**	**366,718**	**-**	0%	**366,718**	**386,000**
FUND 4 -500 - STORM WATER UTILITY REVENUE							
Storm Water Fees Fund	344190	304,635	303,000	147,994	49%	303,000	303,000
Prior Yr Stormwater fees	344195	(462)	-	10,094			
Storm Water Bank Interest	361000	37	20	16	79%	20	20
Storm Water-Cost Sharing Construction	389000	190,000		-			
Budget from Fund Balance Reserves		145,919	50,769	-			28,343
TOTALS		**640,129**	**353,789**	**158,104**	45%	**303,020**	**331,363**
FUND 6 -540 - SANITATION FUND REVENUE							
Sanitation Fees/Enterprise	344110	219,753	253,507	123,713	49%	240,000	240,000
Prior Yr Sanitaion Fees	344115	185	-	8,932			
Commercial Business Fees	344120	-	-	-			
Sanitation Interest	36100	-	-	-			
TOTALS		**219,938**	**253,507**	**132,645**	**52%**	**240,000**	**240,000**
FUND 330 - HOST FUND REVENUE							
HOST Revenues	313300	-	71,194	-	0%	71,194	71,194
TOTALS		**-**	**71,194**	**-**	**0%**	**71,194**	**71,194**
FUND 260 - CORONAVIRUS RELIEF FUND							
Interest Revenue	361000	200	-	127		-	-
Federal Govt Grants	331110	2,359,557	1,040,947	2,377,858		1,040,947	973,200
			-			-	-
TOTALS		**2,359,757**	**1,040,947**	**2,377,985**		**1,040,947**	**973,200**
FUND 320 - SPLOST FUND							
SPLOST Tax Revenue	313300	2,077,500	1,931,942	1,521,318	79%	2,189,147	2,200,000
Interest Revenue	361000	500	6,000	567	9%	657	500
Funding from Bond Proceeds/Fund Balance		-	2,112,756	-	0%	2,112,756	455,321
TOTALS		**2,078,000**	**4,050,698**	**1,521,885**	**38%**	**4,302,560**	**2,655,821**

ORDINANCE NO. _____

AN ORDINANCE TO PROVIDE THE ADOPTION OF A BUDGET PROPOSED BY THE CITY MANAGER CONTAINING ESTIMATES OF THE PROPOSED REVENUES AND EXPENDITURES OF THE CITY OF CLARKSTON, GEORGIA, AND TO PROVIDE FOR THE LEVY OF TAXES FOR EXPENSES OF SAID CITY FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2023, AND ENDING DECEMBER 31, 2023.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CLARKSTON, GEORGIA:

SECTION 1. That the proposed Fiscal Year 2023 Budget, attached hereto and incorporated herein as a part of this ordinance is hereby adopted as the Budget for the City of Clarkston, Georgia for Fiscal Year 2023, which begins January 1, 2023. and ends on December 31, 2023.

SECTION 2. That the several items of revenues, other financial resources, and source of cash shown in the budget for each fund in the amounts shown anticipated are hereby adopted, and that the several amounts shown in the budget for each fund as proposed expenditures or expenses and uses of cash are hereby appropriated to the departments named in each fund.

SECTION 3. That the “legal level of control” as defined in OCGA §36-81 is set at the departmental level, meaning that the City Manager in the capacity as Budget Officer is authorized to move appropriations from one line item to another within a department, but under circumstances may expenditures or expenses exceed the amount appropriated for a department without a further budget amendment approve by the Mayor and City Council.

SECTION 4. That all appropriations shall lapse at the end of the fiscal year.

SECTION 5. That this ordinance shall be and remain in full force and effect from and after its date of adoption.

SECTION 6. That for the said fiscal year 2023, there are no debt service expenses outstanding for bonds.

SECTION 7. All ordinances or parts of ordinance, inconsistent with this ordinance are hereby repealed.

ADOPTED this 6th day of December, 2022.

_____
Beverly H. Burks, Mayor

ATTEST:

_____
Tomika R. Mitchell, City Clerk

CITY OF CLARKSTON

ITEM NO: 8D

CLARKSTON CITY COUNCIL MEETING

BUSINESS AGENDA / MINUTES

HEARING TYPE:
City Council

ACTION TYPE:
Vote

MEETING DATE: December 6, 2022

SUBJECT: To approve the 2023 Local Maintenance & Improvement Grant (LMIG) program proposed projects.

DEPARTMENT: CITY ADMINISTRATION

PUBLIC HEARING: ☐YES ☒ NO

ATTACHMENT: ☒ YES ☐NO
Pages:

INFORMATION CONTACT: Shawanna Qawiy,
City Manager
PHONE NUMBER: 404 296 6489

PURPOSE: The Fiscal Year 2023 LMIG program is accepting applications for projects.

NEED/ IMPACT: The Office of Local Grants forwarded the FY 2023 Local Maintenance Improvement Grant (LMIG) award letters to the mayors and the chairpersons of all the local governments within the state. The FY 2023 LMIG award letter contains information on how to apply for the LMIG funds, and the total award amount.

To complete the application process, staff is providing the proposed list of projects for consideration under this fiscal year of funding. The formula amount for the Fiscal Year 2023 program is $93,532.50 with a local match of $28,059.75 (30%). The total project budget will be $ 121,592.25.

With an approved listed of projects the mayor will sign a cover letter with a notarized LMIG application. The entire LMIG package will be submitted on-line before the application deadline of February 2023.

RECOMMENDATION: The City Council recommends discussing this item at the January 2023 Work Session and City Council meeting.

CLARKSTON LMIG PROPOSED PROJECTS

PROJECT NOS.	ROAD SEGMENT	TO	FROM	LENGTH OF ROAD (FEET)	DESCRIPTION OF WORK	ESTIMATED COST
1	CHURCH STREET	3895 CHURCH STREET	MARKET STREET	700	RESET GRANITE CURB (1530 LF), REMOVE AND CONSTRUCT 5' CONCRETE SIDEWALK (175 SY), 3-ADA TYPE D WITH YELLOW TRUNCATED DOMES, GRADING COMPLETE, TRAFFIC CONTROL, 55 LF-6-INCH CONCRETE CURB, SOD	$ 83,500.00
2	GINA DRIVE	BROCKETT ROAD	CHAMPION WAY	470	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TWO STOP BARS, CROSSWALK , TRAFFIC CONTROL	$ 73,000.00
3	COLLEGE AVE (WITH SIDEWALK CONSTRUCTION)	MARKET STREET	ROGERS STREET	1310	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, INSTALL 3 SPEED TABLES, TWO STOP BARS, CROSSWALK , 455 LF 5' SIDEWALKS, RETAINING WALL, RESET 2140 LF RECYCLED GRANITE CURB, GRADING TRAFFIC CONTROL	$ 295,000.00
4	COLLEGE AVE (WITHOUT SIDEWALK CONSTRUCTION)	MARKET STREET	ROGERS STREET	1310	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, INSTALL 3 SPEED TABLES, TWO STOP BARS, CROSSWALK , RESET 2140 LF RECYCLED GRANITE CURB, GRADING TRAFFIC CONTROL	$ 180,000.00
5	NORTH INDIAN CREEK DRIVE	EAST PONCE DE LEON AVE	SMITH STREET	40	REMOVE AND RECONSTRUCT (40 LF) 5' CONCRETE SIDEWALK, 2-ADA TYPE D PEDESTRIAN RAMPS WITH TRUNCATED DOMES, 30 LF GUARDRAIL TYPE T, ADJUST MANHOLE TO GRADE, TRAFFIC CONTROL	$ 24,000.00
6	MACLAREN DRIVE	MARKET STREET	CUL-DE-SAC	1015	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME,TRAFFIC CONTROL	$ 121,000.00
7	MONTREAL ROAD GUARDRAIL AT BRIDGE	MONTREAL ROAD	MONTREAL ROAD	200	REMOVE AND RELPACE (200 LF) GUARDRAIL TYPE 2, TRAFFIC CONTROL, GRADE, CONSTRUCT GRAVITY WALL, RECONSTRUCT SIDEWALKS	$ 78,000.00
8	BROCKETT ROAD	EAST PONCE DE LEON AVE	HWY 78	350	REMOVE AND CONSTRUCT 35-ADA TYPE D PEDESTRIAN RAMPS WITH TRUNCATED DOMES, TRAFFIC CONTROL	$ 72,000.00
9	JOLLY AVE	BACON STREET	MELL AVE	1410	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 132,000.00
10	CLARK STREET	SMITH STREET	CUL-DE-SAC	845	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 92,000.00
11	LINCOLN STREET	CLARK STREET	SMITH STREET	390	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 42,000.00
12	LESTER STREET	CLARK STREET	SMITH STREET	280	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 30,000.00
13	SMITH STREET	MONTREAL ROAD	LINCOLN STREET	720	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 84,000.00
14	TRIBBLE STREET	CLARK STREET	DEAD END	222	MILLING 1.5 INCHES, RESURFACING WITH 1.5 INCHES 9.5 TYPE 2 WITH LIME, TRAFFIC CONTROL	$ 27,000.00

Russell R. McMurry, P.E., Commissioner
One Georgia Center
600 West Peachtree Street, NW
Atlanta, GA 30308
(404) 631-1000 Main Office

June 29, 2022

Beverly Burks, Mayor
City of Clarkston
1055 Rowland Street
Clarkston, Georgia 30021-1711

RE: **Fiscal Year 2023 Local Maintenance & Improvement Grant (LMIG) Program**

Dear Mayor Burks:

We are pleased to announce that the Department will begin accepting applications for the Fiscal Year 2023 LMIG Program in July 2022. Grants will be processed electronically through our **GRANTS (LMIG) Application System**. To begin your FY 2023 LMIG Application, please visit the Department's website at www.dot.ga.gov/PS/Local/LMIG. This site provides a link to the LMIG Application, the LMIG Application Tutorial (Manual), and to the General Guidelines and Rules and other pertinent reports. The project list will be entered directly into the LMIG Application System. Please contact your District State Aid Coordinator, **Chartrae Kent**, at **770-216-3880** for assistance with the online application process.

For an application to be processed, the following requirements must be met:

- A local government must be in Department of Audits and Accounts (DOAA) and Department of Community Affairs (DCA) audit compliance.
- A signed cover letter must be attached and include a completion status of the last three fiscal years' LMIG Grants.
- A signature page must include both the local government seal and the notary seal. The application website provides a blank signature page for you to download, complete and upload as an attachment.
- A local government must provide their District State Aid Coordinator with a Statement of Financial Expenditures form and invoices for Fiscal Year 2020 projects and all other prior years unless previously approved to combine funding for Fiscal Years 2020, 2021, and 2022. The forms can be attached in the LMIG Application System if they have not already been provided to your District State Aid Coordinator.

All electronic LMIG applications must be received no later than February 1, 2023. Failure to submit applications by the deadline might result in a forfeiture of funds.

Your formula amount for the Fiscal Year 2023 Program is **$93,532.50** and your local match is **30%**. Each local government is required to match this formula amount in accordance with Code Section 48-8-244(d).

If you have any questions regarding the LMIG Program, please contact the Local Grants Office in Atlanta at (404) 347-0240 or email questions to LocalGrantsProgram@dot.ga.gov.

Sincerely,

Bill Wright

Bill Wright
Local Grants Administrator

cc: The Honorable Kim Jackson, Georgia State Senate
The Honorable Zulma Lopez, Georgia House of Representatives
The Honorable Robert Brown, Jr., State Transportation Board
Paul Denard, P.E., District Engineer
Chartrae Kent, District State Aid Coordinator