

# Technical Appendix

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## Question 4.a – Water Quality and Quantity Protection - Location

- A. The project is located in a Hydrologic Unit Code (HUC) 12 watershed identified by the Georgia Environmental Protection Division (GAEPD) as a priority watershed for water quality purposes.

**Resource:** Map and list of priority watersheds (Attachment 1). This map is available as GIS and KMZ files (can be viewed in Google Earth) on EPD’s GIS Databases and Documentation website, <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>. This map is referred to as “EPD’s 2015 319(h) Priority Watersheds” map on this website. If the project falls into a purple area on the map, then it meets this category.

**Preparing a map as supporting documentation to your GOSA application:** Using the GIS or KMZ map of EPD’s 2015 319(h) Priority Watersheds map, please zoom into your project area and generate a map showing that your project area falls within a priority watershed area.

**Additional Information:** Current Approved Georgia Nonpoint Source Management Plan. <https://epd.georgia.gov/nonpoint-source-program>

**Contact Person:** Joy Hinkle, EPD Watershed Protection Branch Grants Unit Manager, (470) 524-0692 or [Joy.Hinkle1@dnr.ga.gov](mailto:Joy.Hinkle1@dnr.ga.gov).

- B. The project is located in a HUC-12 or equivalent size area identified as impacted by or sensitive to hydrologic alteration.

**Resource:** The Capacity Use Areas and Restricted Use Areas identified by GAEPD in the 2006 Flint River Basin Plan (<https://epd.georgia.gov/georgia-flint-river-basin-plan>), or a similar document. See Attachment 2 for excerpted Figures from this Plan. This map is available as a KMZ file (can be viewed in Google Earth) on EPD’s GIS Databases and Documentation website, <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>. This map is referred to as “...” map on this website. If the project falls into a yellow or red area on the map, then it meets this category.

**Preparing a map as supporting documentation to your GOSA application:** Using the KMZ map of the 2006 Flint River Basin Plan Capacity Use Areas and Restricted Use Areas, please zoom into your project area and generate a map showing that your project area falls within a yellow or red area.

**Contact Person:** Jennifer Welte, EPD Watershed Protection Branch, (470) 384-7450 or [Jennifer.Welte@dnr.ga.gov](mailto:Jennifer.Welte@dnr.ga.gov).

- C. The project is located in a HUC-12 watershed identified by GAEPD as a healthy watershed.

**Resource:** The most recent approved Georgia 305(b)/303(d) list, as provided on this page: <https://epd.georgia.gov/water-quality-georgia>. Mapped waterbodies from the most recent approved list are available as GIS shapefiles and KMZ files on EPD’s GIS Databases and Documentation website, <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>. The files are under the “305(b)/303(d) Integrated Report (Water Quality in Georgia Report)” table on this website. Those waters identified as “Supporting” are shown as blue on the KMZ version of the map. If your project is located in a watershed of a “Supporting” waterbody, then it meets this category.

**Preparing a map as supporting documentation to your GOSA application:** Using the GIS or KMZ of the Georgia 305(b)/303(d) list, please zoom into your project area and generate a map showing that your project area falls within the watershed of a “Supporting” waterbody.

**Contact Person:** Susan Salter, Watershed Planning & Monitoring Program, (470) 524-0731 or [Susan.Salter@dnr.ga.gov](mailto:Susan.Salter@dnr.ga.gov).

- D. The project is located in a HUC-12 watershed with waters identified by GAEPD as impaired with any of the following criteria violated: Algae, Biota Impacted (Fish Community), Biota Impacted (Macroinvertebrate Community), Bacteria (E coli, Enterococci, Bacteria, FC), Chlorophyll a, or Dissolved Oxygen.

**Resource:** The most recently approved Georgia 305(b)/303(d) list is provided on this page: <https://epd.georgia.gov/water-quality-georgia>. Mapped waterbodies from the most recent approved list are available as GIS shapefiles and KMZ files on EPD’s GIS Databases and Documentation website, <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>. The files are under the “305(b)/303(d) Integrated Report (Water Quality in Georgia Report)” table on this website. Those waters identified as “Not Supporting” are shown as purple on the KMZ version of the map. In the descriptive information for each waterbody assessed as “Not Supporting”, there is a “Cause” identified. If the “Cause” is noted as one of the following for the particular waterbody, then it meets this category.

- Algae = Objectionable Algae
- Bio F = Biota Impacted (Fish Community)
- Bio M = Biota Impacted (Macroinvertebrate Community)
- Chlorophyll a
- E. Coli

- Enterococci
- Bacteria
- FC = Fecal Coliform Bacteria
- DO = Dissolved Oxygen

**Preparing a map as supporting documentation to your GOSA application:** Using the GIS or KMZ of the Georgia 305(b)/303(d) list, please zoom into your project area and generate a map showing that your project area falls within the watershed of a “Not Supporting” waterbody, with the “Cause” noted on the map.

**Contact Person:** Susan Salter, Watershed Planning & Monitoring Program, (470) 524-0731 or [Susan.Salter@dnr.ga.gov](mailto:Susan.Salter@dnr.ga.gov).

- E. The project is located in one of the Most Significant Groundwater Recharge Areas in Georgia.

**Resource:** Hydrologic Atlas 18 (HA-18), prepared by the Georgia Geologic Survey, which is available here: <https://epd.georgia.gov/georgia-geologic-survey-atlases>

A digitized version of Hydrologic Atlas 18 is also available on this website: <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>

If the project is located in one of the highlighted areas identified in HA-18 (areas shown on Attachment 3, or included as a colored area in the digitized version), then it meets this category.

**Preparing a map as supporting documentation to your GOSA application:** Using the GIS or KMZ of HA-18, please zoom into your project area and generate a map showing that your project area falls within a colored portion of the map.

**Contact Person:** For any needed technical assistance, please contact the Source Water Assessment Team at (470) 524-0728.

- F. The project is located in the Inner or Outer Management Zone identified in a Wellhead Protection Plan or a Source Water Protection Plan.

**Resource:** Information regarding the locations of inner and outer management zones are reviewed and maintained by EPD’s Drinking Water Program, Source Water Assessment Team. Project proponents can determine whether their project boundaries lie in either type of management zone by sending their project boundary map and the following inquiry to [askepd@gaepd.org](mailto:askepd@gaepd.org): “I am writing to inquire whether the attached project boundaries are located within an Inner or Outer Management Zone identified in a Wellhead Protection Plan or a Source Water Protection Plan. This information is being requested to support the project’s consideration for funding under the Georgia Outdoor Stewardship Act.”

**Contact Person:** For any needed technical assistance, please contact the Source Water Assessment Team at (470) 524-0728.

#### **Question 4.b – Water Quality and Quantity Protection – Best Management Practices**

Any improvements, restoration, or management activities associated with the project must include Best Management Practices (BMPs) with demonstrable water quality and water quantity benefits: protection or restoration of vegetated buffers in a condition appropriate for the region; restoration of streambanks and natural hydrologic processes; protection of wetland/marshland or stream buffers, with minimization of impacts from improvements and management activities; or use of green infrastructure (e.g., bioretention areas, grass swales, and trails constructed with mulch, gravel, or other pervious materials rather than concrete or asphalt).

#### **Resources:**

For BMPs intended to mitigate the impact of development, such as impervious trails, gazebos, or viewing platforms, please see the Green Infrastructure and Low Impact Development (GI/LID) structural controls described in the Georgia Stormwater Management Manual, Volume 2. These BMPs include bioretention areas, grass swales, and pervious pavers, among others. <https://cdn.atlantaregional.org/wp-content/uploads/2017/03/gsmm-2016-edition-final-v2.pdf>

For BMPs intended to protect land through conversation or the minimization of the impacts of development, see the Georgia Stormwater Management Manual, Volume 1. <https://cdn.atlantaregional.org/wp-content/uploads/gsmm-2016-edition-final-v1.pdf>

For information about stream restoration, see the GAEPD Streambank and Shoreline Stabilization Guidance and the Georgia Soil and Water Conservation Commission Guidelines for Streambank Restoration.

[https://epd.georgia.gov/sites/epd.georgia.gov/files/related\\_files/site\\_page/Streambank\\_and\\_Shoreline\\_Stabilization\\_Guidance\\_Book\\_Revised\\_April\\_2011.pdf](https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Streambank_and_Shoreline_Stabilization_Guidance_Book_Revised_April_2011.pdf)

[https://epd.georgia.gov/sites/epd.georgia.gov/files/related\\_files/site\\_page/Guidelines\\_Streambank\\_Restoration\\_GSWCC\\_Revised\\_2000.pdf](https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Guidelines_Streambank_Restoration_GSWCC_Revised_2000.pdf)

Some projects may require a stream buffer variance. To identify opportunities to go above and beyond in mitigating buffer impact, review the Buffer Mitigation Guidance and the GAEPD Erosion and Sedimentation webpage.

[https://epd.georgia.gov/sites/epd.georgia.gov/files/related\\_files/site\\_page/Buffer%20Mitigation%20Guidance%20September-2017.pdf](https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Buffer%20Mitigation%20Guidance%20September-2017.pdf)

**Additional Information:** <https://epd.georgia.gov/erosion-and-sedimentation>

**Contact Person:** Veronica Craw, Nonpoint Source Program Manager, (470) 938-3384 or [Veronica.Craw@dnr.ga.gov](mailto:Veronica.Craw@dnr.ga.gov).

# ATTACHMENT 1

# ATTACHMENT 2

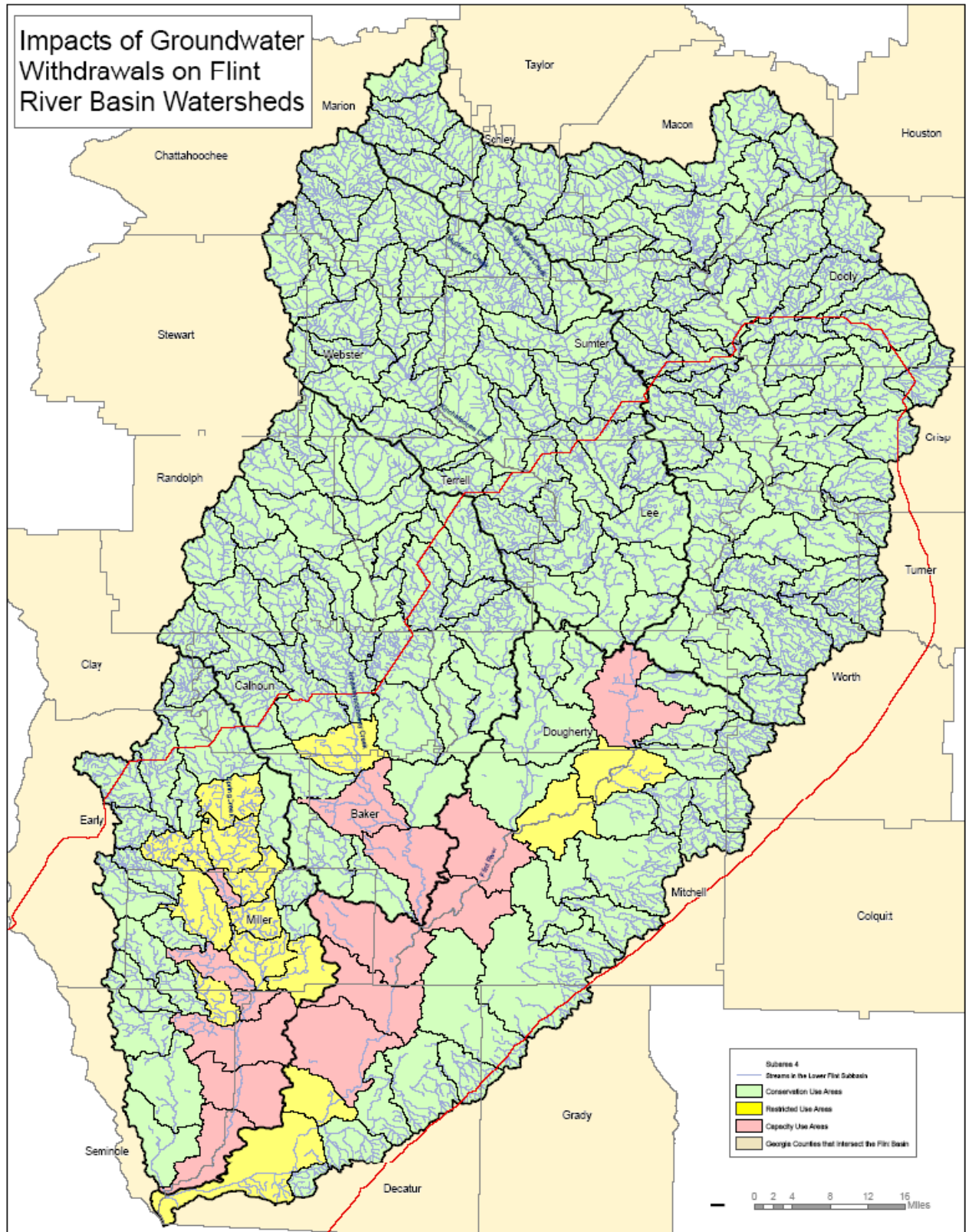


Figure 0.2 Classification of HUC-12 watersheds in the lower Flint River Basin.

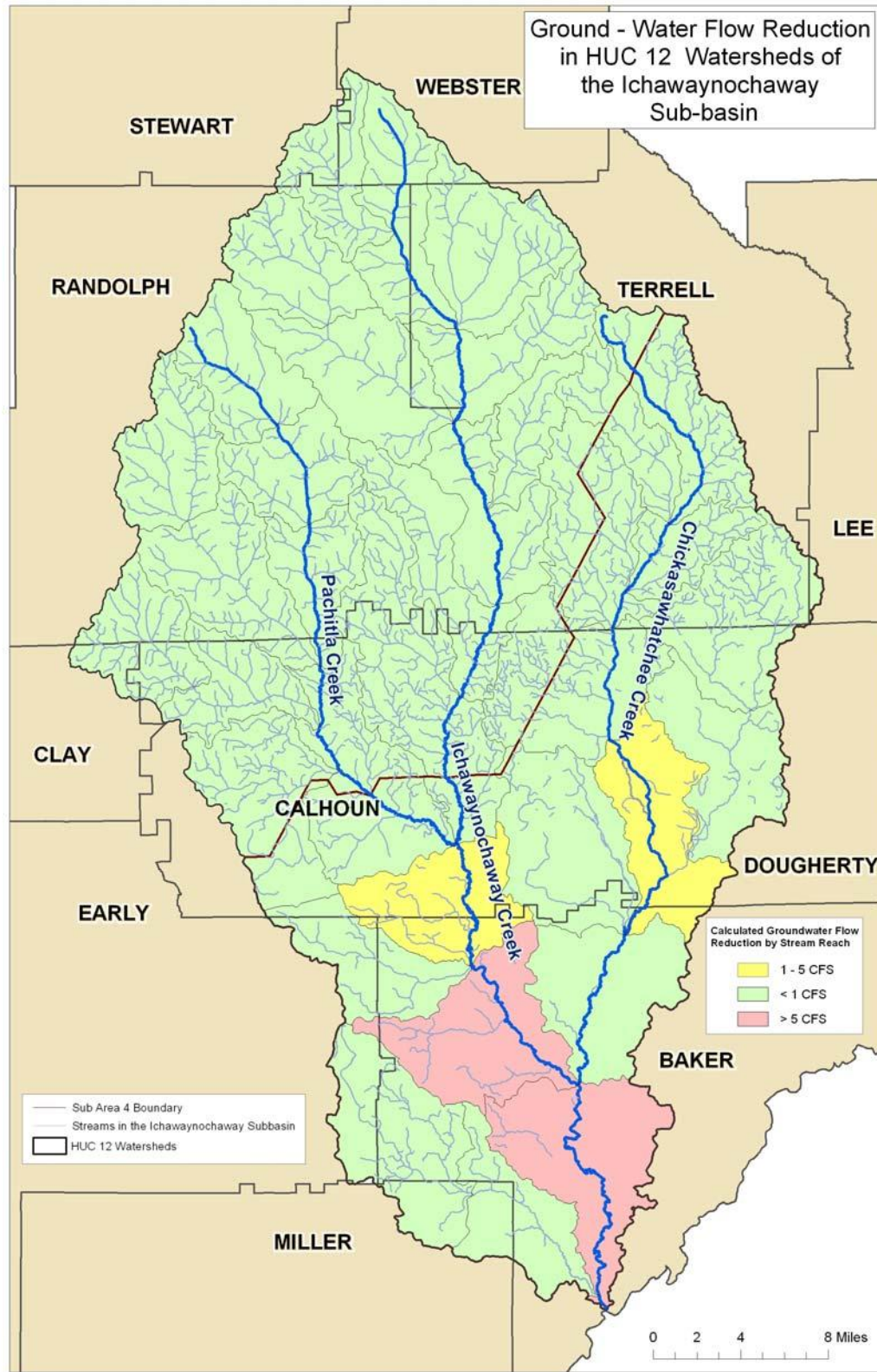


Figure 0.3 Classification of HUC-12 watersheds in the Ichawaynochaway Creek sub-basin.

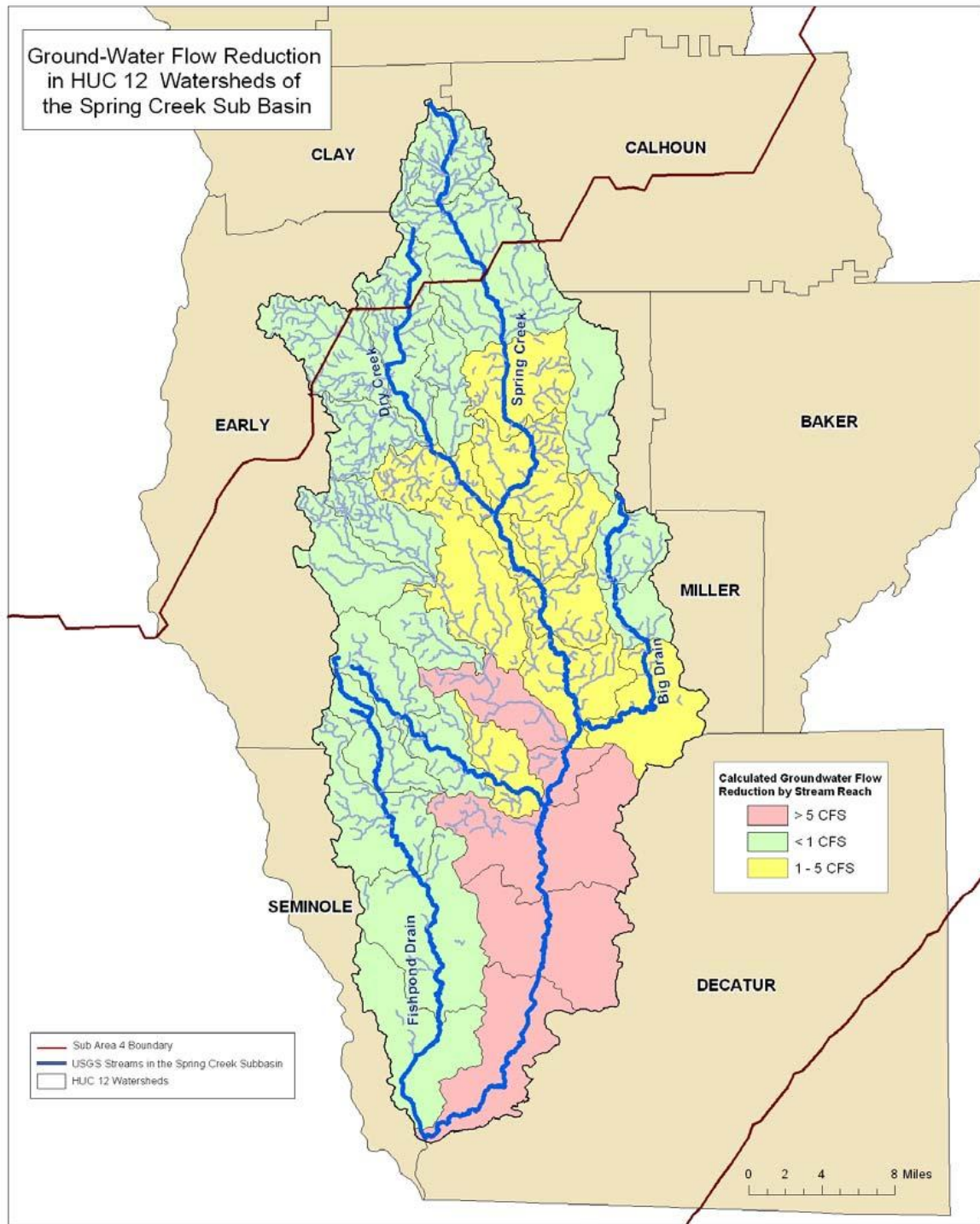


Figure 0.4. Classification of HUC-12 watersheds in the Spring Creek sub-basin.

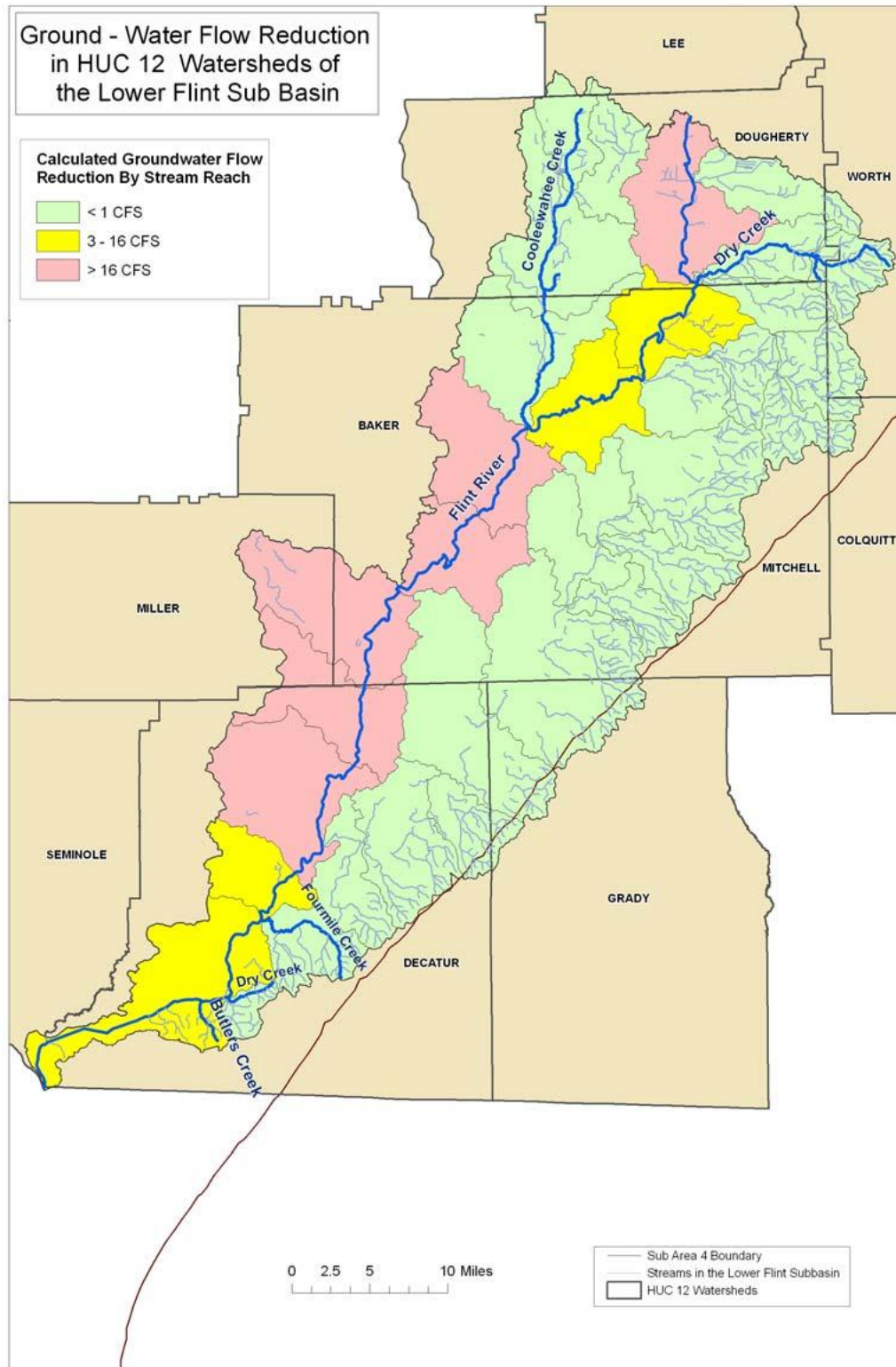
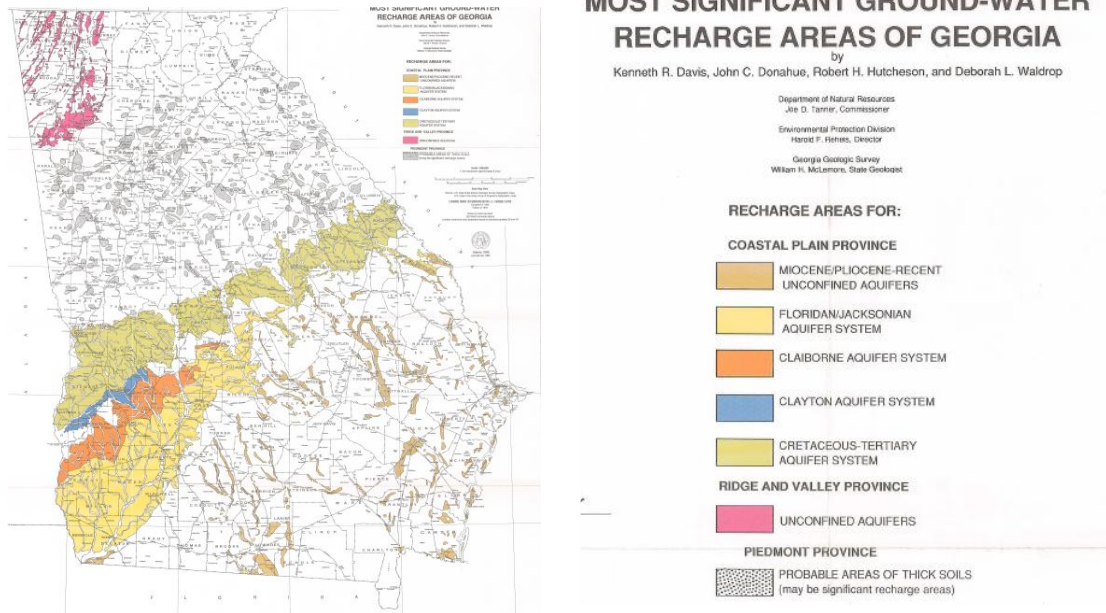


Figure 0.5. Classification of HUC-12 watersheds in the Lower Flint River sub-basin.

# ATTACHMENT 3

## Hydrology Atlas 18 (HA-18)

In the map available at <https://epd.georgia.gov/georgia-geologic-survey-atlases>, the project should be located in one of the areas shaded in accordance with the legend below.



In the digitized version available at <https://epd.georgia.gov/geographic-information-systems-gis-databases-and-documentation>, the project should be located in one of the shaded areas.

