



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Agricultural Water Withdrawal Permitting Update

Public Meeting
June 13, 2024





LOWER FLINT RIVER BASIN

- From Hartsfield-Jackson International Airport in Atlanta to the most southwestern corner of Georgia.
- Subarea 4 of the ACF basin – south of Dooly County, area of significant hydraulic connection between the Flint River and its tributaries with the Floridan aquifer.
- Small portions of Chattahoochee, Ochlockonee, and Suwannee River Basins are included in Subarea 4.

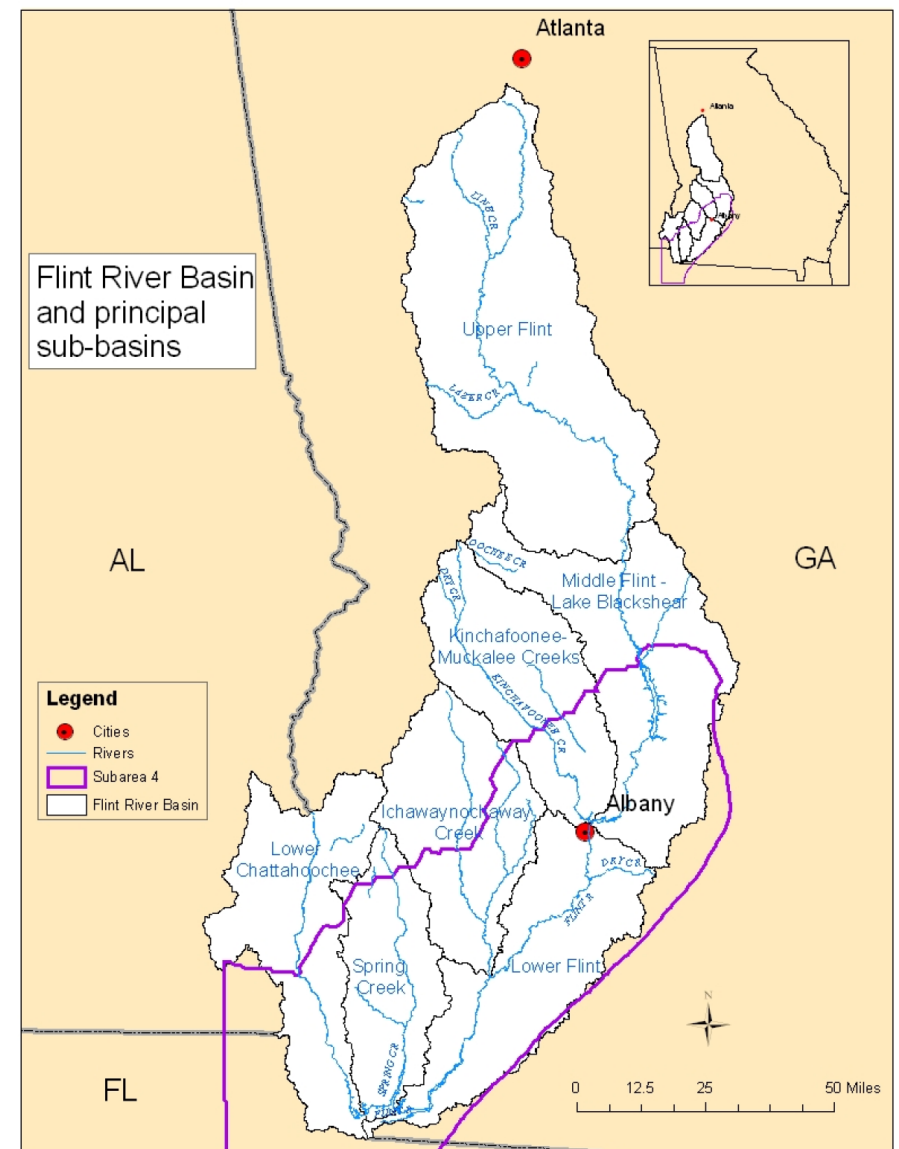


Figure 0.1: The Flint River Basin and sub-basins



LOWER FLINT RIVER BASIN

- Agricultural water withdrawal permitting – 1988
- Water withdrawal permitting moratorium – 1999
- Flint River Drought Protection Act – 2000
- Flint River Basin Regional Water Development and Conservation Plan – 2006
- Original Regional Water Plans for Upper & Lower Flint – 2011
- Water withdrawal permitting suspension – 2012
- Florida v. Georgia – 2013
- First update of the RWP for Upper & Lower Flint – 2017
- Florida v. Georgia – 2021
- Agricultural Water Source Conversion for Streamflow Resilience (ASU and EPD ARPA grant) – 2022
- Second update of the RWP for Upper & Lower Flint – 2023

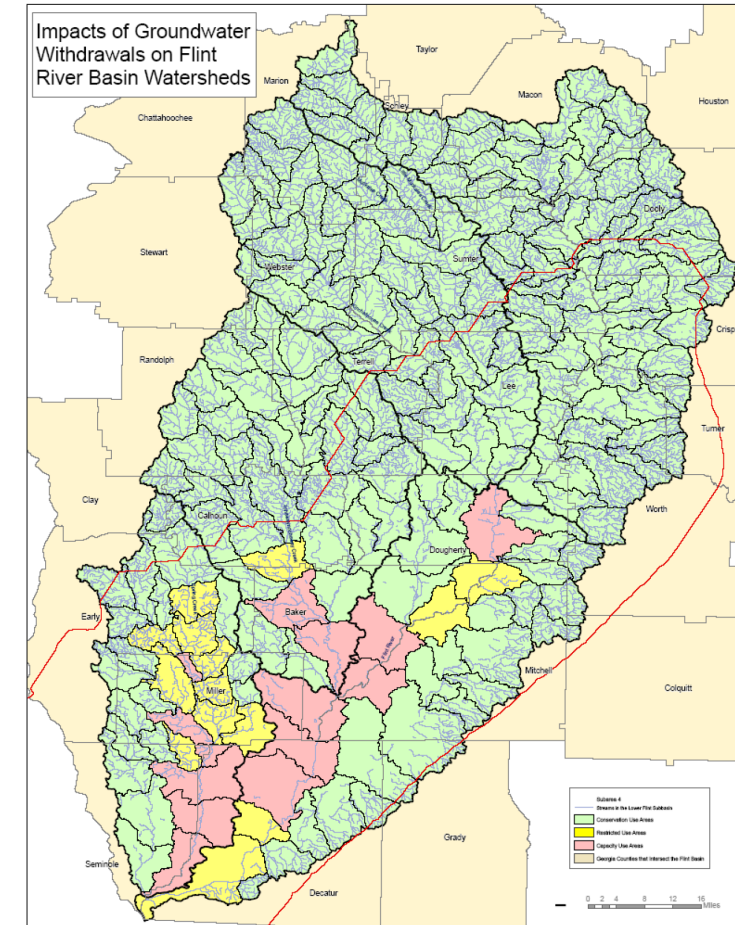


Figure 0.2. Classification of HUC-12 watersheds in the lower Flint River Basin.



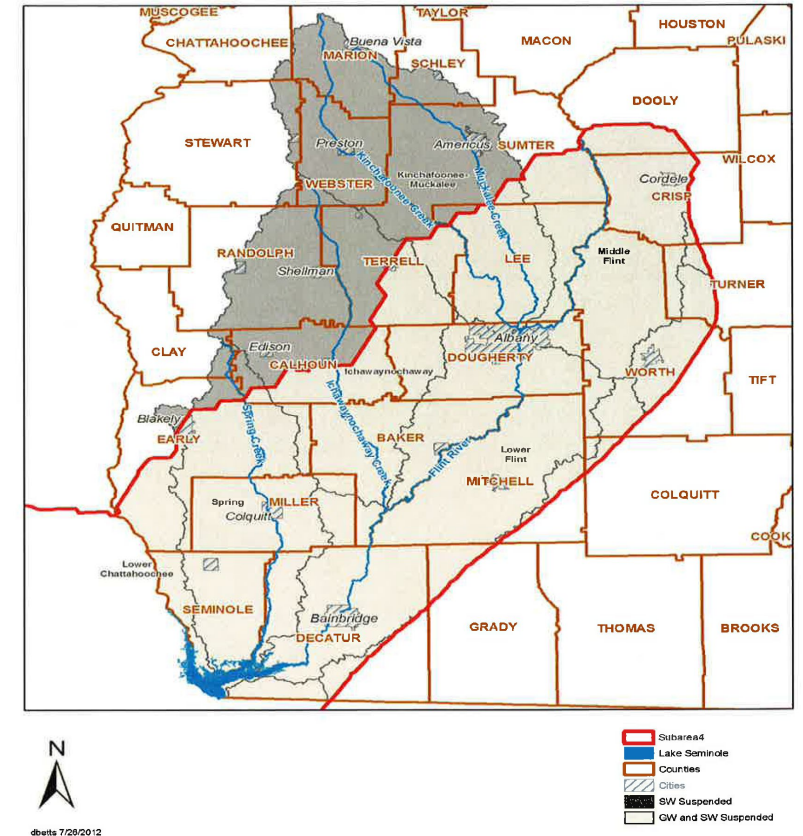
HABITAT CONSERVATION PLAN

- EPD is working with ASU-GWPPC on the development of an Incidental Take Permit and associated Habitat Conservation Plan to address threatened and endangered mussels in the Lower Flint River Basin.
- Because water withdrawals directly from the Flint River, its tributaries, and the Floridan Aquifer can affect flows throughout the Lower Flint River Basin, EPD's farm use water withdrawal permitting program is the activity covered by the Incidental Take Permit.
- USFWS will need assurance that the State's actions to reduce take are completed. A strong agricultural water withdrawal compliance program is critical for that assurance.
- The inclusion of EPD's water withdrawal permitting and compliance program in the HCP offers the opportunity to set expectations and allows EPD to evaluate new and expanded permits, as well as compliance tools.



2012 SUSPENSION

- The 2012 suspension was intended to protect existing users and the water resource.
- The Habitat Conservation Plan provides a comprehensive way of modifying the suspension and developing an informed and defensible water management approach, particularly for drought.
- The development of a Habitat Conservation Plan includes technical activities that will provide important information about capacity; where capacity exists, new and expanded permits could be considered.
- Farmers in the area have experienced five different permitting regimes in the last 40 years. The process of developing the Habitat Conservation Plan will be engage stakeholders and be important for making a practical water management program that can provide farmers with regulatory certainty and protect the water resource.





MODIFYING THE 2012 SUSPENSION

- Modifying the existing permitting suspension depends on:
 - Additional capacity being identified
 - Protecting existing users and the water resource.
- The water resources may have capacity to support additional groundwater withdrawals. These areas would need to be identified through careful data analysis and modeling, which is happening concurrently with HCP development.
- **One central objective is to limit the overall burden onto the Floridan Aquifer to levels equivalent to what was experienced in the 2011 and 2012 critical drought.**



PREVIOUS MODIFICATIONS TO THE 2012 SUSPENSION

- 2023 frost protection permits.
- 2024 modification to remove surface waters in the Ochlockonee and Suwannee basin.



MODIFYING THE 2012 SUSPENSION

- EPD recommends maintaining the suspension on surface water withdrawals.
- EPD is exploring modifying the suspension to allow new or modified permits for Floridan wells in the suspension area.
- EPD would include specific conditions in the permits to ensure protection of flows in the Flint River and its tributaries, particularly during times of drought, including:
 - 25-year terms
 - Irrigation efficiency requirements
 - Water conservation plans
 - Restriction on aesthetic and recreational uses
 - Telemetry
 - Drought conditions



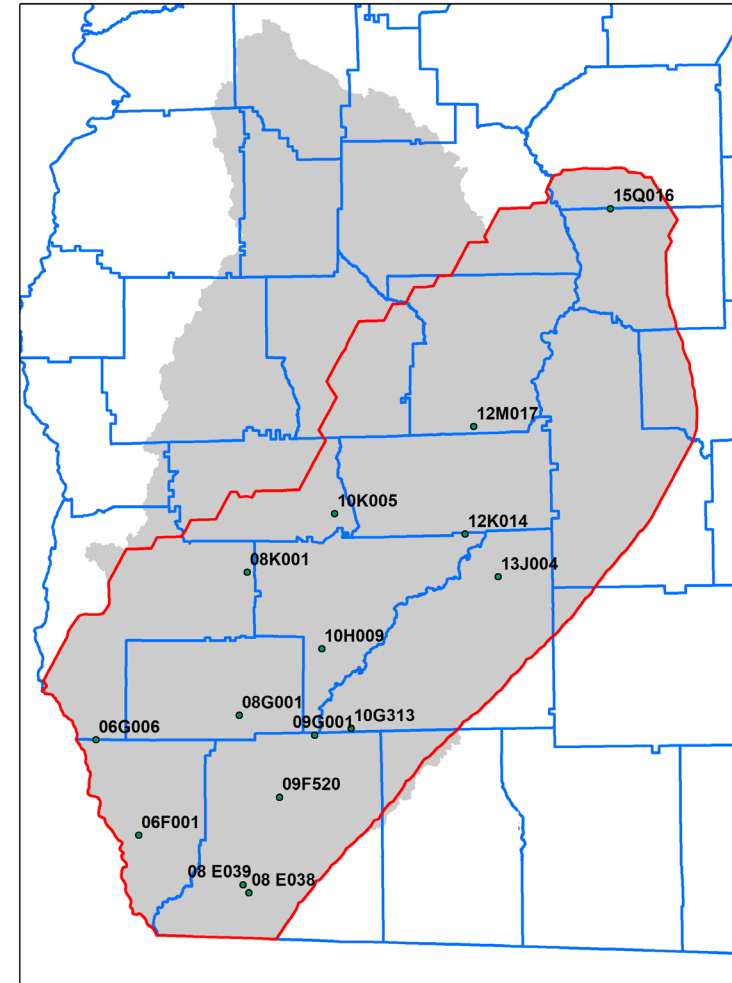
DROUGHT CONDITIONS

- EPD will make a drought restriction determination daily. This determination will be posted to the EPD website and shared through text and email.
- Permittees must check daily whether a drought restriction is in place.
 - If a drought restriction is not in place, the permittee may withdraw water from the Floridan aquifer.
 - If a drought restriction is in place, the permittee may not withdraw water from the Floridan aquifer. Permittees must complete any irrigation application initiated before drought restrictions are put in place within 24 hours of a drought restriction being put in place.



DROUGHT RESTRICTION DETERMINATION

- EPD will use data from 15 USGS monitoring wells located in the suspension area.



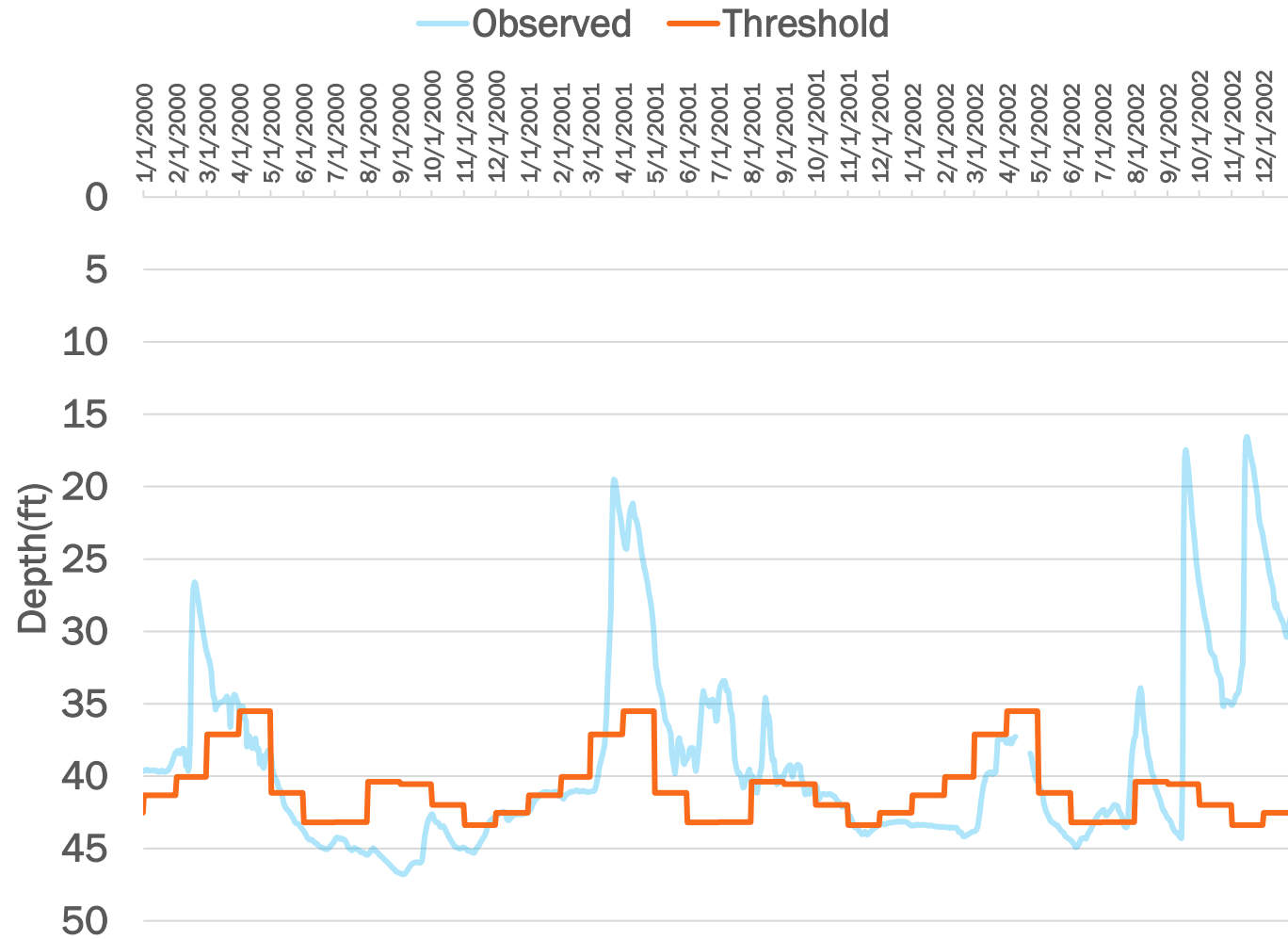


DROUGHT RESTRICTION DETERMINATION

- EPD will use data from 15 USGS monitoring wells located in the suspension area.
- EPD determined that the 10th percentile water level in each month reflects drought conditions at that monitoring site.

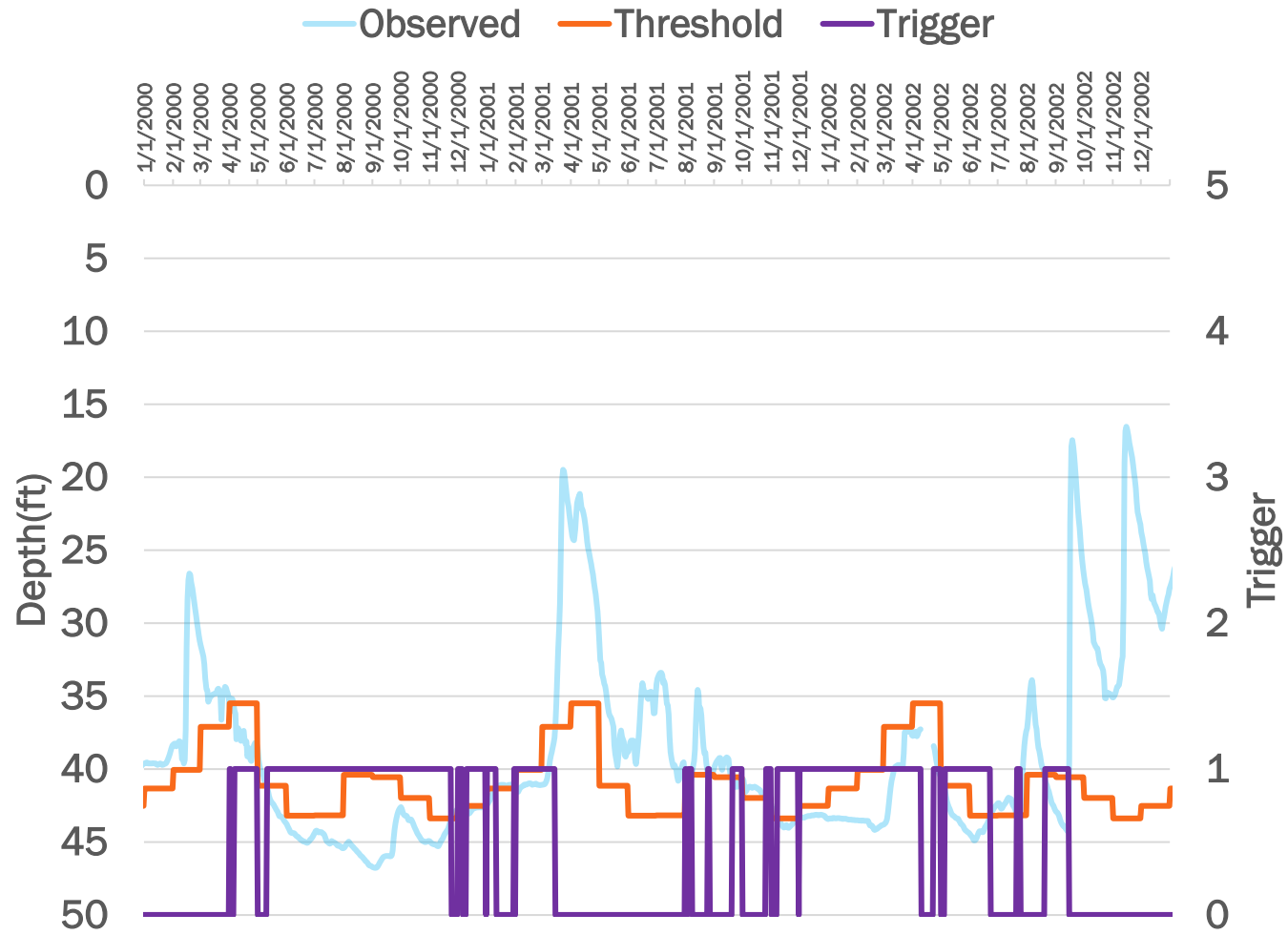


EXAMPLE 10TH PERCENTILES - USGS WELL 08G001





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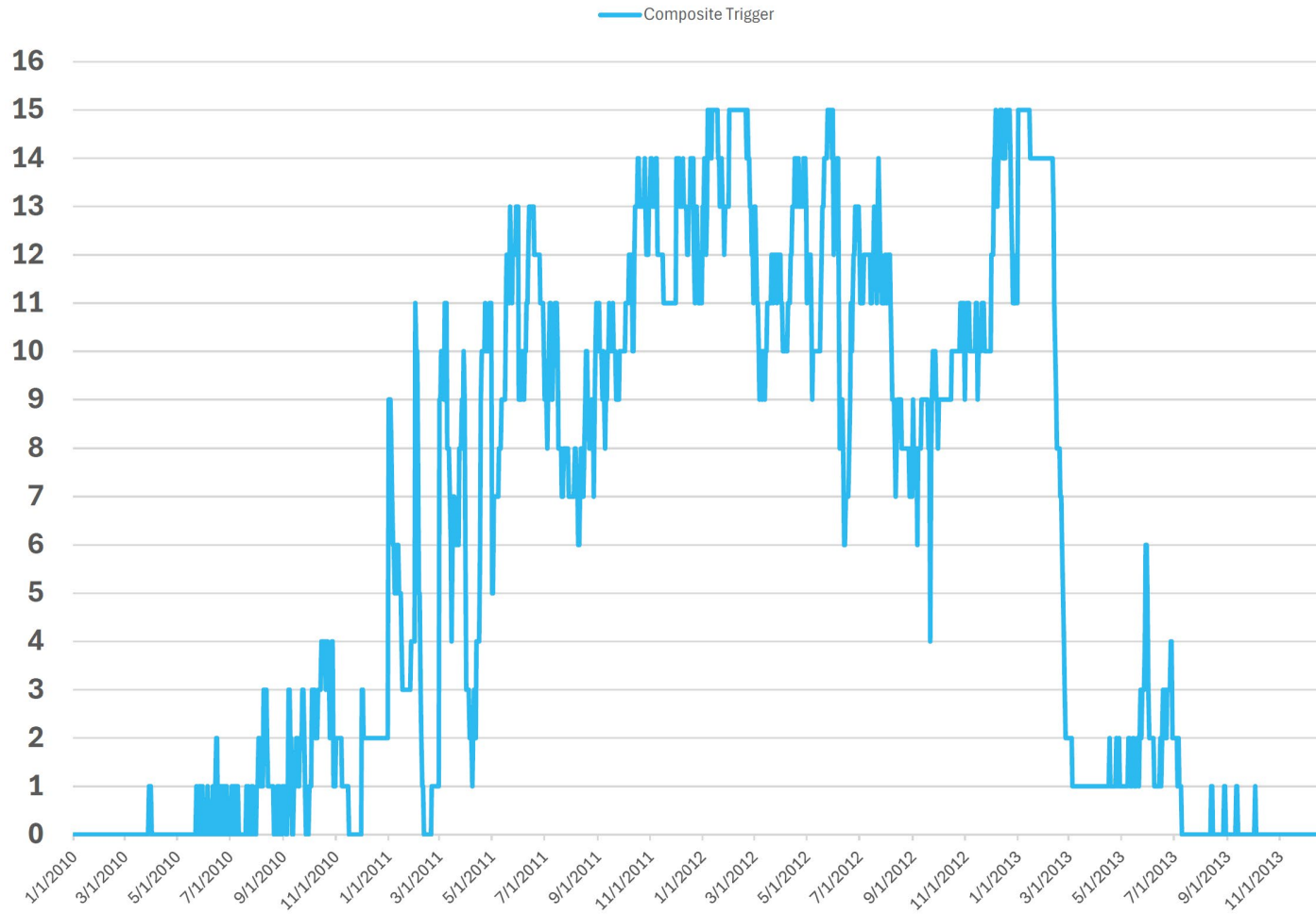


DROUGHT RESTRICTION DETERMINATION

- EPD will use data from 15 USGS monitoring wells located in the suspension area.
- EPD determined that the 10th percentile water level in each month reflects drought conditions at that monitoring site.
- EPD developed a composite trigger: if any five of the 15 wells fall below their monthly 10th percentile water level, the entire suspension area is placed under drought restrictions.



COMPOSITE TRIGGER EXAMPLE: 2010-2013



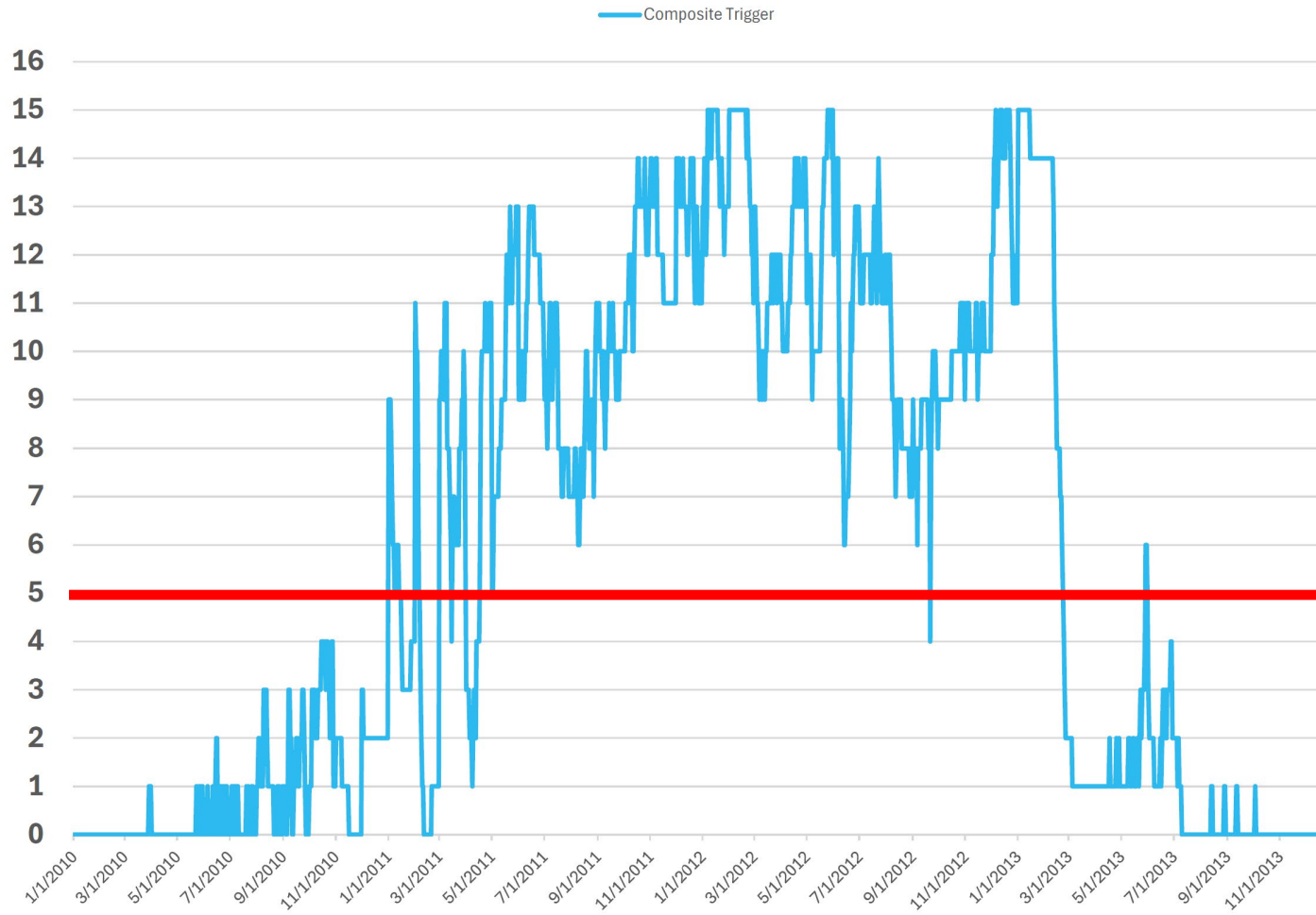


DROUGHT RESTRICTION DETERMINATION

- EPD will use data from 15 USGS monitoring wells located in the suspension area.
- EPD determined that the 10th percentile water level in each month reflects drought conditions at that monitoring site.
- EPD developed a composite trigger: if any five of the 15 wells fall below their monthly 10th percentile water level, the entire suspension area is placed under drought restrictions.
- EPD checked the composite trigger level against historic data:
 - A six-month precipitation deficit of 7-8 inches correlates well to the composite trigger.
 - The composite trigger clearly identifies significant droughts (2000, 2002, 2007, 2011, 2012) and does not capture any non-drought years.

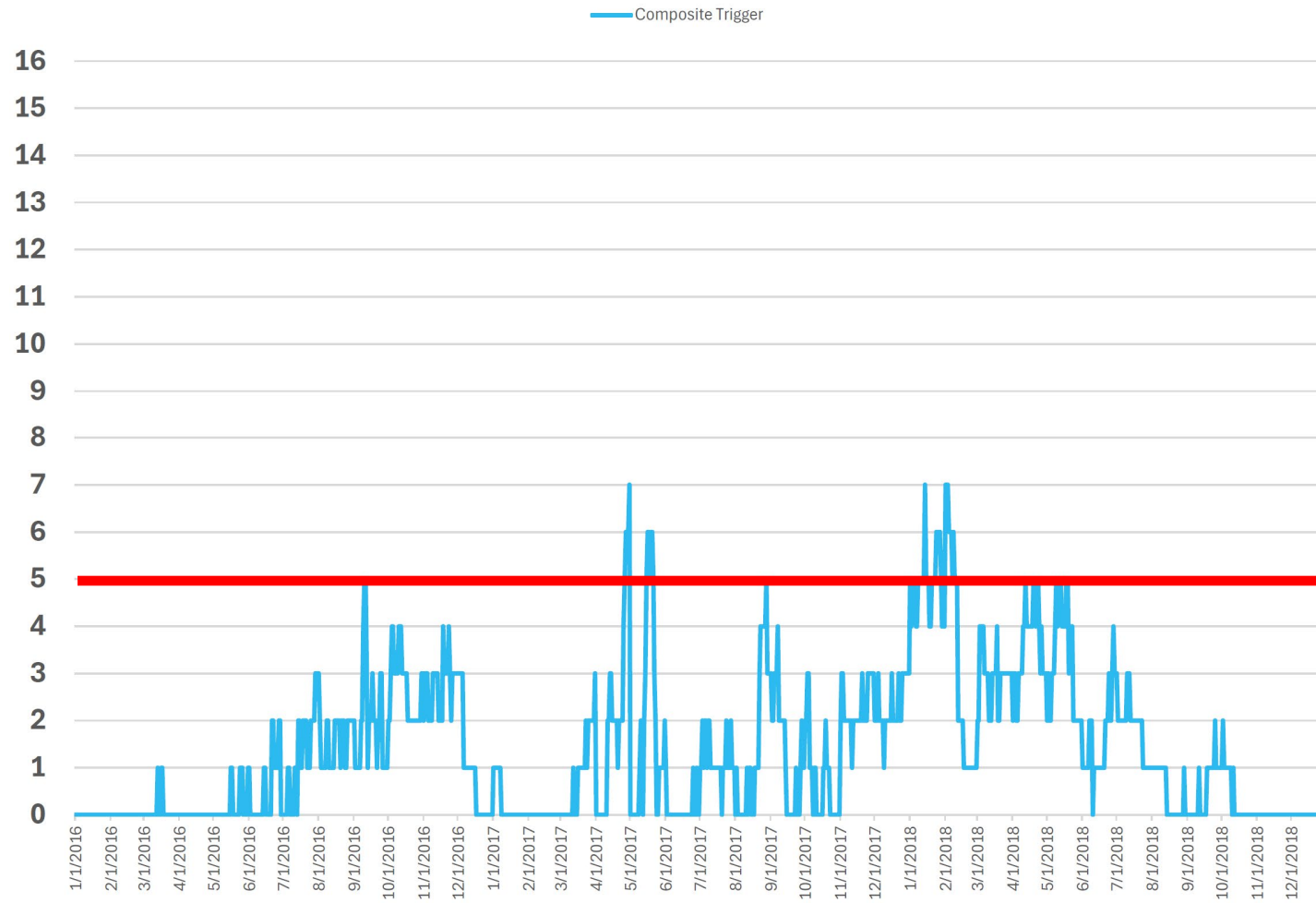


COMPOSITE TRIGGER EXAMPLE: 2010-2013



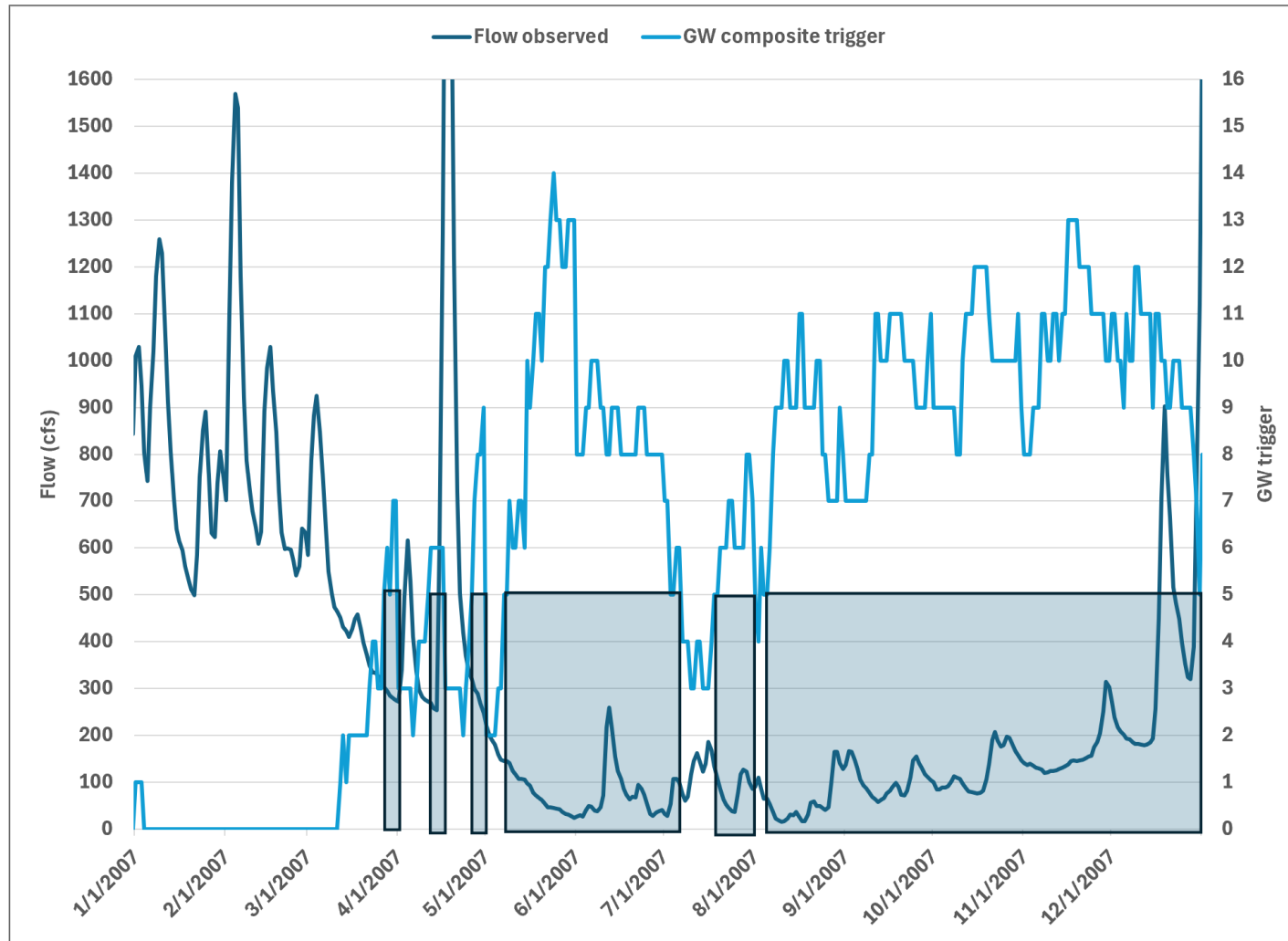


COMPOSITE TRIGGER EXAMPLE: 2016-2018





STREAM FLOW AND COMPOSITE TRIGGER EXAMPLE



Ichawaynochaway Creek at Milford



DROUGHT CONDITIONS

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- Permittees must check daily whether a drought restriction is in place.
 - If a drought restriction is not in place, the permittee may withdraw water from the Floridan aquifer.
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DROUGHT RESTRICTIONS IMPACT

Year	Days of Drought Restrictions	Dates of Drought Restrictions
2023	24	March 8, 9, 11-17, 19-21, 23-28 August 20, 23-25, 28 September 25
2022	1	May 20
2021	0	
2020	0	
2019	2	October 13 and 14
2018	46	January 1, 3-5, 8-17, 20-28, 30 February 1-11 April 12, 19, 20, 22, 23 May 9, 11-13, 18, 19
2017	13	April 26-30 May 15-21 August 29
2016	2	September 10, 11
2015	0	
2014	2	September 2, 3



DROUGHT RESTRICTIONS IMPACT

Year	Days of Drought Restrictions	Dates of Drought Restrictions
2013	56	January 1-February 22 May 29-31
2012	365	The only day without drought restrictions was September 21, 2012.
2011	310	January 1-15 February 1-6 March 1-14, 16-31 April 17-December 31
2010	0	
2009	0	
2008	40	January 1-16, 19, 20 February 1-3 August 1, 2, 4-18, 20, 21
2007	243	March 27-31 April 11-16, 26-30 May 7-July 6 July 18-August 1 August 3-December 31
2006	30	June 22 July 10, 13-25, 30, 31 August 3-7, 19-22 September 1-4
2005	0	
2004	9	April 22-30



COMPLIANCE MANAGEMENT STRATEGY

- EPD is updating its compliance tools to be consistent with the HCP, set clear expectations for water users, and identify feasible pathways to compliance.
- **Compliance options would be used to at a minimum, maintain the permitted acreage at the time of the 2012 suspension, and where possible provide a flow benefit.**



COMPLIANCE MANAGEMENT STRATEGY

- EPD uses escalating enforcement process to address noncompliance. The escalating enforcement process follows these steps:
 - Step 1: Phone call
 - Step 2: Request for Information Letter
 - Step 3: Notice of Violation
 - Step 4: Consent Order
 - Step 5: Administrative Order



COMPLIANCE TOOLBOX

- **Compliance issue: irrigated acres exceeding permitted amount or unpermitted**
- **Options:**
 - Internal adjustment – EPD reviews permit file for any duplicate permit. If EPD revoked a duplicate permit with more acres than the unrevoked permit, EPD will correct the permit to reflect the number of permitted acres on the revoked duplicate permit.
 - Irrigated acre correction – EPD reviews aerial imagery to determine whether the amount of irrigated acres has changed since the permit was issued. Old permits may have relied on rough maps or inaccurate GIS. This option is limited to old permits (applications submitted in 2006 or before).



COMPLIANCE TOOLBOX

- **Compliance issue: irrigated acres exceeding permitted amount or unpermitted**
- **Options (continued):**
 - Permit consolidation – Where permits owned by the same person exist on properties that are located on contiguous or adjacent properties, the permits can be consolidated (all permitted sources and permitted acres are listed on one permit).
 - Permit consolidation lite – Acres can be removed from one or more permits and added to one or more permits. This is an option where the conditions for consolidation of permits can be met, along with two additional conditions: the permitted sources are Floridan aquifer wells, and the acres to reassigned are moving from zones of the same impact on surface water or from zones of higher impact to zones of lower impact.
 - Acre exchange – Where a person has more than one permit and is willing to transfer acres from one or more permits to another permit, acre exchanges can be evaluated. For the exchange to be allowed, the exchange will have to demonstrate a flow benefit equal to or greater than discontinuing irrigation of the unpermitted acres.



COMPLIANCE TOOLBOX

- Compliance issue: irrigated acres exceeding permitted amount or unpermitted
- Options (continued):
 - Drought conditions on new acres – In some cases, unpermitted acres could be covered through a permit with drought conditions on those unpermitted acres.

OR

- Volumetric limits – In certain cases, a permittee has irrigated acreage in excess of the permit limitation. A volumetric limit can be developed using the permitted acreage limitation and the basin average application depth during the most critical drought year (2011). **The basin-wide average application depth for the 2011 growing season was 15.94 inches.** The permittee will accept the imposition of an annual volumetric limitation in the permit in exchange for the removal of acreage limitation and thus resolving the compliance case. **For each year, the permittee has a fixed volume of water under the permit and can decide when to apply it, subject to the annual volume limitation.**



NEXT STEPS

- EPD will lead a series of meetings in the affected area throughout 2024 to further develop these permit conditions and compliance tools.
 - April 18 – Bainbridge
 - May 23 – Albany
 - June 13 – Dawson
- EPD invites all of you to participate and share information with interested stakeholders.
- **Please submit comments by June 20 to EPD.Comments@dnr.ga.gov.**



Georgia Recorder photo by Jill Nolin



CONTACT

Anna (Ania) Truszczynski

anna.truszczynski@dnr.ga.gov

470-384-7440