

Regional Source Water Assessment and Protection Program for Surface Water Systems

October 22, 2019

History

- The Source Water Assessment Program (SWAP) is a study that provides information about a watershed that serves as a drinking water source.
- The 1996 Amendments to the Federal Safe Drinking Water Act (SDWA) brought new pollution prevention and protection measures to ensure clean and safe water.
- CWW and regional partners completed the first SWAP in 2001.
- The SWAP was updated in 2018.

Regional Partners

- City of West Point
- The Chattahoochee Valley Water Supply District
- Opelika Water Works
- Harris County Water Department
- Smiths Water and Sewer District
- Columbus Water Works
- Phenix City Utilities

Regional Partners Population

Surface Water System	Service Population
City of West Point	3,600
Chattahoochee Valley WSD	6,000
Opelika Water Works	30,000
Harris County	8,330
Smiths Water and Sewer Authority	10,000
Columbus Water Works	230,000
Phenix City	37,000

Regulatory Requirements

- Define the assessment area
- Inventory of potential contaminant sources
- Assessment of a water supply's susceptibility to the potential pollutants
- Comprehensive reporting

Source Water Protection Area

- All land draining to the Chattahoochee River between West Point Dam and Georgia Power's North Highlands Dam in Columbus, Georgia.
- 1,014 square miles

Source Water Area Map

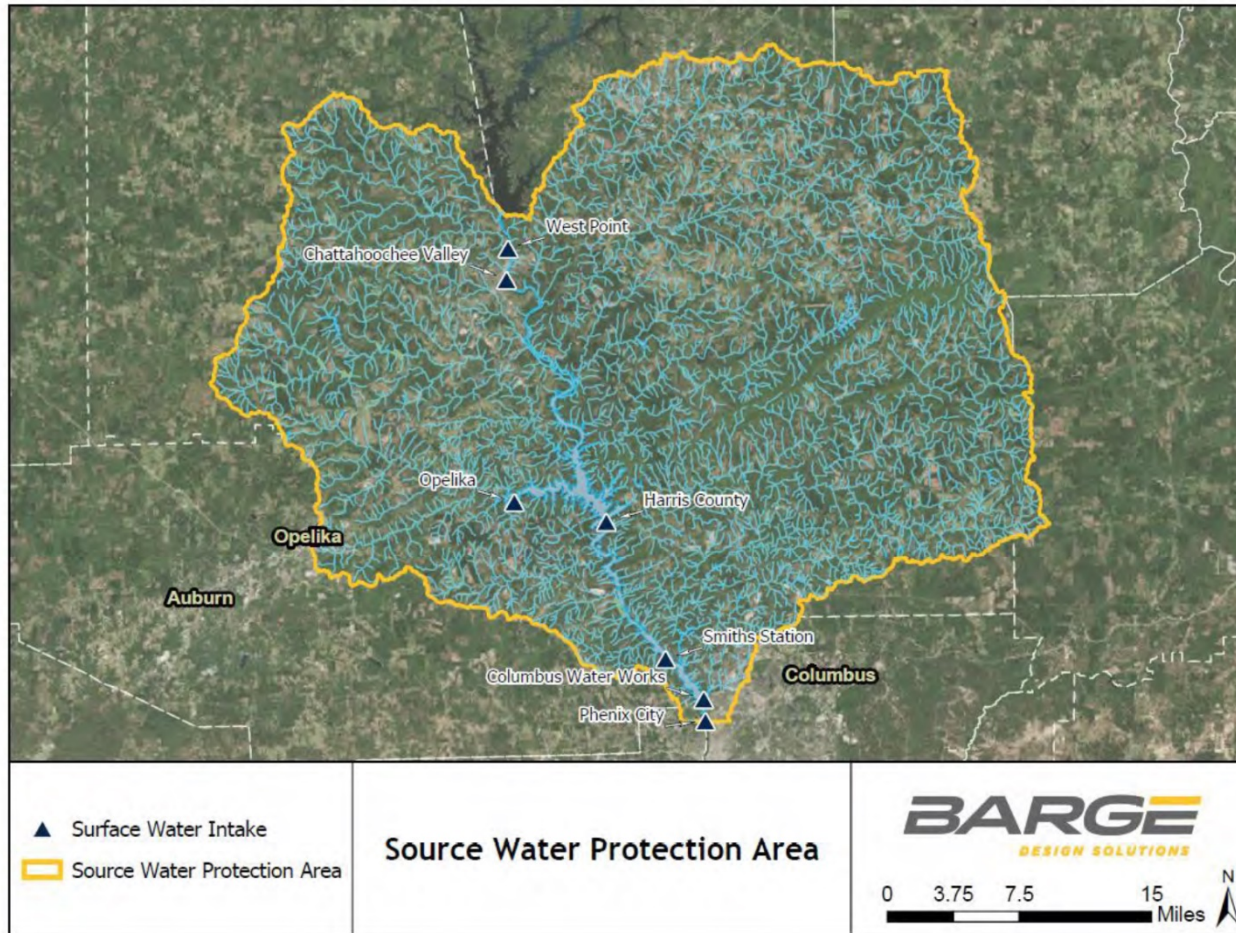


Figure 1 – SWAP Surface Water Systems

River Use

- Drinking water
- Fishing
- Power generation
- Recreation – swimming, boating, skiing etc.
- Lake/riverfront development



Opelika Intake



Harris County Intake



CWW Intake



Land Use

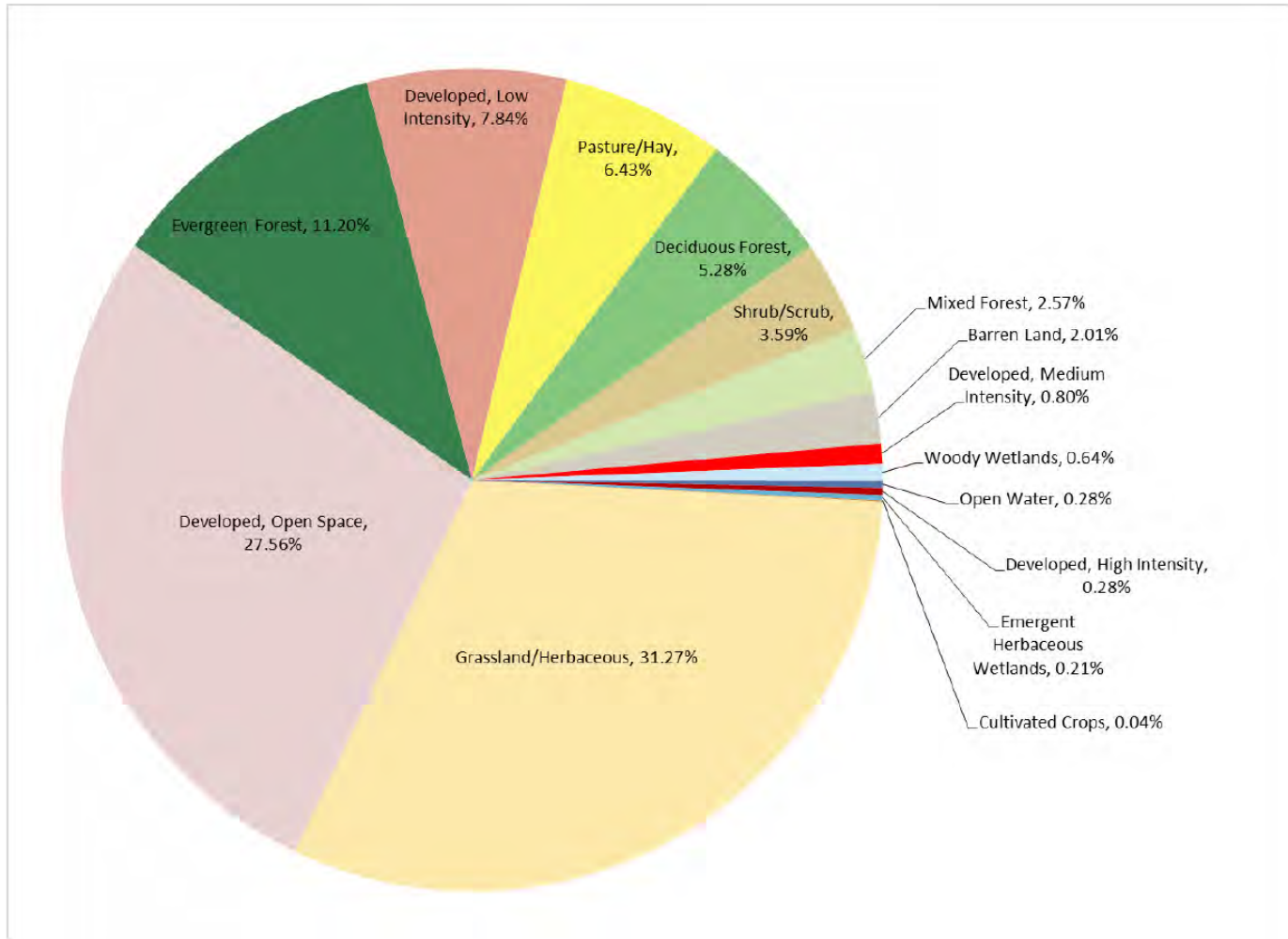


Figure 2 – SWAP Area Land Use Classifications

Land Use Data

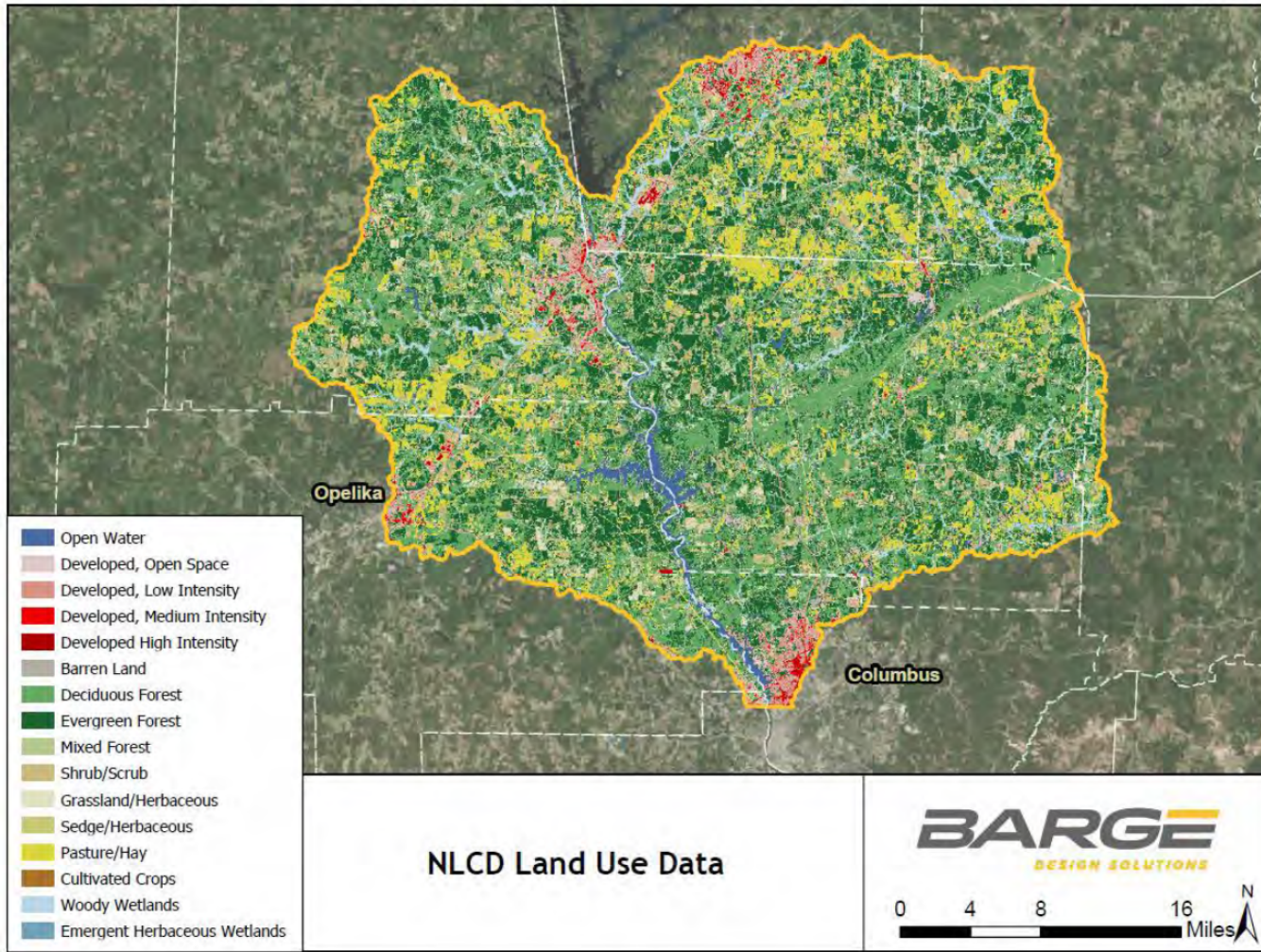


Figure 3 – NLCD Land Use Data

Inventory of Potential Contaminants

- The inventory process consist of a two-phased approach.
 - The first phase – looks at environmental databases.
 - NPDES Permits
 - Stormwater Permits
 - Second phase - focuses on field reconnaissance - site by site listings .
 - Boat
 - Windshield tours.



Table 2 – Potential Pollution Sources for Surface Water

Inner Management Zone (IMZ) 7-mile Radius	Outer Management Zone (OMZ) 20-mile Radius	Non-Management Zone (NMZ)
<ul style="list-style-type: none"> • Agricultural Waste Lagoons • Airports • Confined Animal Feedlot • Garbage Transfer Stations • Hazardous Waste Facilities • LAS Permit Holders • Landfills • Large Industries with hazardous chemicals • Large Industries with bulk chemical and petroleum storage • Large Industries with federal categorical standards • Large Quantity Generators • Lift Stations • Marinas • Military Bases • Mining • NPDES Permit Holders • Non-sewer areas • Oil Pipelines • Power Plants • Railways adjacent to or crossing over streams • Roads adjacent to or bridges crossing over streams • Sewer Pipelines adjacent to or crossing streams • Sewer Areas • Wastewater Plants • Water Plants 	<ul style="list-style-type: none"> • Agricultural Waste Lagoons • Hazardous Waste Facilities • LAS Permit Holders • Landfills • Large Industries with hazardous chemicals • Large Industries with bulk chemical and petroleum storage • Large Industries with federal categorical standards • Lift Stations • Mining • NPDES Permit Holders • Oil Pipelines • Power Plants • Railways adjacent to or crossing over streams • Roads adjacent to or bridges crossing over streams • Sewer Pipelines adjacent to or crossing streams • Wastewater Plants • Water Plants 	<p>Reference by River Basin Management Plan:</p> <ul style="list-style-type: none"> • LAS Permit Holders • Landfills • Mining • NPDES Permit Holders

Susceptibility

Susceptibility Index										
Source Water Assessment Area	Overall Susceptibility	Total Potential Pollutant Sources (PPSs)	Low	Percent of PPSs	Medium-Low	Percent of PPSs	Medium-High	Percent of PPSs	High	Percent of PPSs
West Point	Medium	10	2	20.0%	2	20.0%	6	60.0%		
Chattahoochee Valley Water Supply District	Medium	17	9	52.9%	5	29.4%	3	17.6%		
Opelika Water Works	Low	25	16	64.0%	3	12.0%	6	24.0%		
Harris County Water System	Low	113	110	97.3%	3	2.7%				
Smiths Water and Sewer Authority	Low	23	23	100.0%						
Columbus Water Works	Low	51	40	78.4%	5	9.8%	5	9.8%	1	2.0%
Phenix City	Low	60	46	76.7%	9	15.0%	5	8.3%		
Other										
Total		299	246	82.3%	27	9.0%	25	8.4%	1	0.3%

Best Management Practices

- Target landowners
- Conservation easements - 100 feet / 50 feet
- Public education