

## Appendix H: Monitoring

**Monitoring Plan**

**Maps of Monitoring Points**

# Monitoring Plan

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The City of Smiths Station is very active in monitoring the impaired waterbody within the City's MS4. The City is involved with the Mill Creek Watershed Management Plan, a copy is located in Appendix C of this SWMP plan.

## Alabama Water Watch

Alabama Water Watch (AWW) is a citizen volunteer, water quality monitoring program covering all of the major river basins of the state. The mission of AWW is to improve both water quality and water policy through citizen monitoring and action.

AWW uses EPA-approved monitoring plans with a community-based approach to train citizens to monitor conditions and trends of their local waterbodies.

The City of Smiths Station has developed a partnership with AWW and is monitoring their impaired waterbody, Mill Creek, through the AWW programs.



Figure 1: AWW Water Chemistry Kit

## Training

AWW has established a certification program to train and educate citizen monitors to use standardized equipment and techniques to gather credible water information. Personnel from the City of Smiths Station have received training for water chemistry monitoring as well as bacteriological monitoring.

## Water Chemistry Monitoring

This process helps test physical and chemical characteristics of water to determine pollution sources and long-term trends in water quality. Six variables are measured with a customized test kit, and results can be compared with water quality standards that define conditions for healthy waterbodies.

AWW monitoring provides baseline water quality data to help evaluate water chemistry of surface waters. AWW water chemistry monitors:

- Temperature
- Dissolved Oxygen
- Alakalinity
- pH
- Turbidity
- Hardness

## Bacteriological Monitoring

This process helps detect levels of E. coli and other coliform bacteria in water as indicators of contamination to determine if water is safe for drinking, swimming and aquatic life.

## Monitoring Locations

The City of Smiths Station currently performs bacteriological and water chemistry monitoring on the following sites:

AWW Site Code	Location Description	Latitude	Longitude
03015008	2500' from LR 240 - behind Mill Creek Subdivision	32.4989	-85.0742
03015009	2900' from LR 240 - behind Mill Creek Subdivision	32.4994	-85.0753
03015003	LR 728 across from East SS Elementary	32.5336	-85.0959
03015007	LR 246 behind Philadelphia Baptist Church	32.5178	-85.0932

## Monitoring Protocol

All sites will have water chemistry monitoring performed on them once per month in order to determine if any activities are adversely affecting the stream's water quality. If there are discrepancies noted at one of the sites, the City representative will follow the stream to determine the origination of the issue.

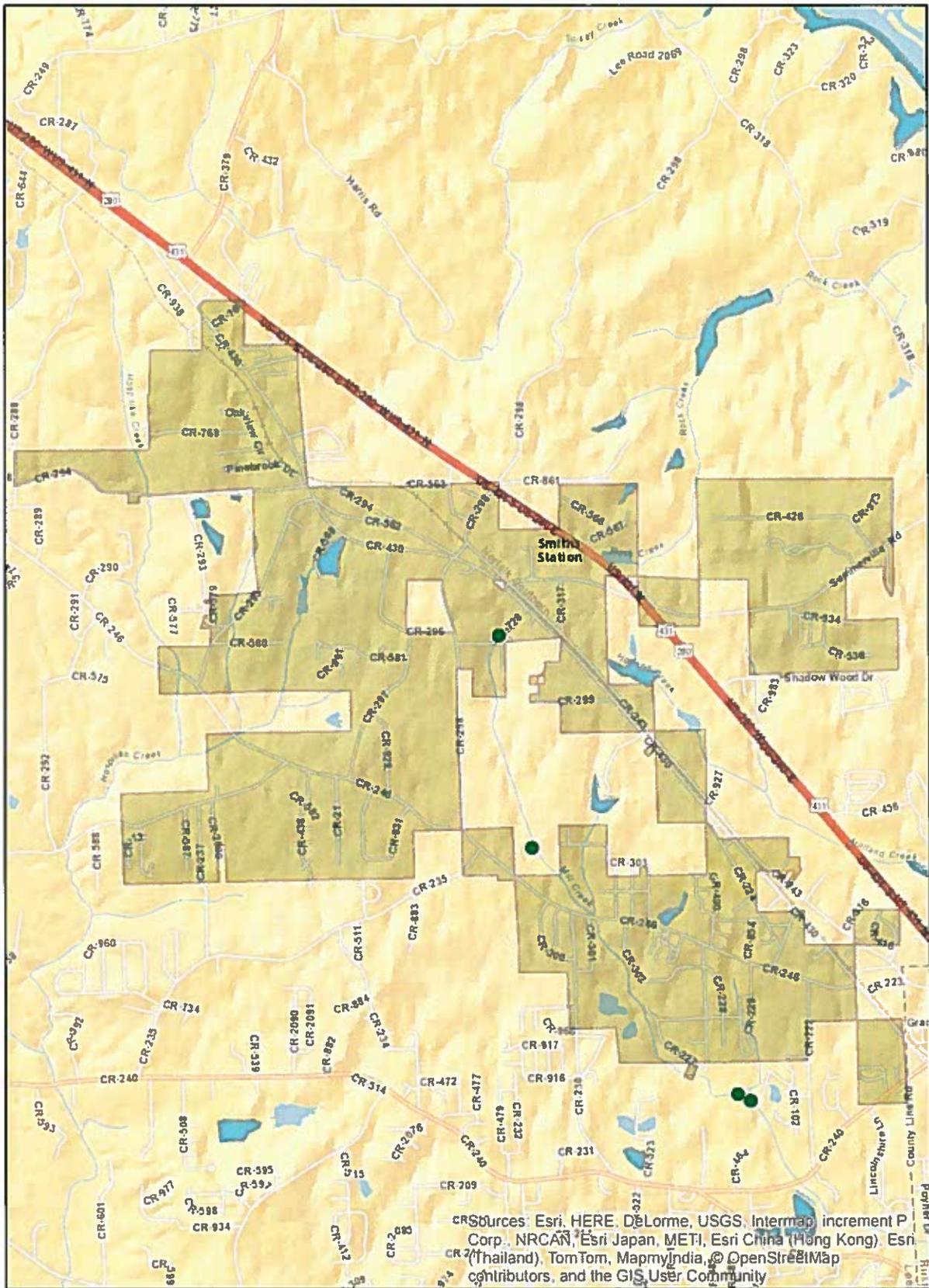
Bacteriological testing will be performed quarterly to assess the quality of the stream. Due to the residential use of septic tanks in the City of Smiths Station the City feels that this practice will help to

provide earlier detection of possible solid waste contamination. If there is an issue noted in this monitoring, the City will follow-up with the Lee County Health Department to correct the problem.

## Results

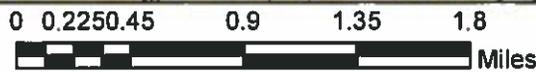
Water quality data collected by water quality monitors is available on AWW's website at <https://fp.auburn.edu/icaae/index.aspx>. The citizens and public can go to the site and review the data that has been collected to date. The City shall review water quality data collected over the permit year and present a summary of the data with the annual report.

# City of Smiths Station MS4 Monitoring Points



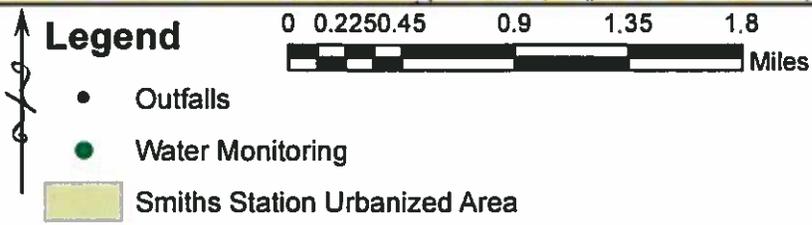
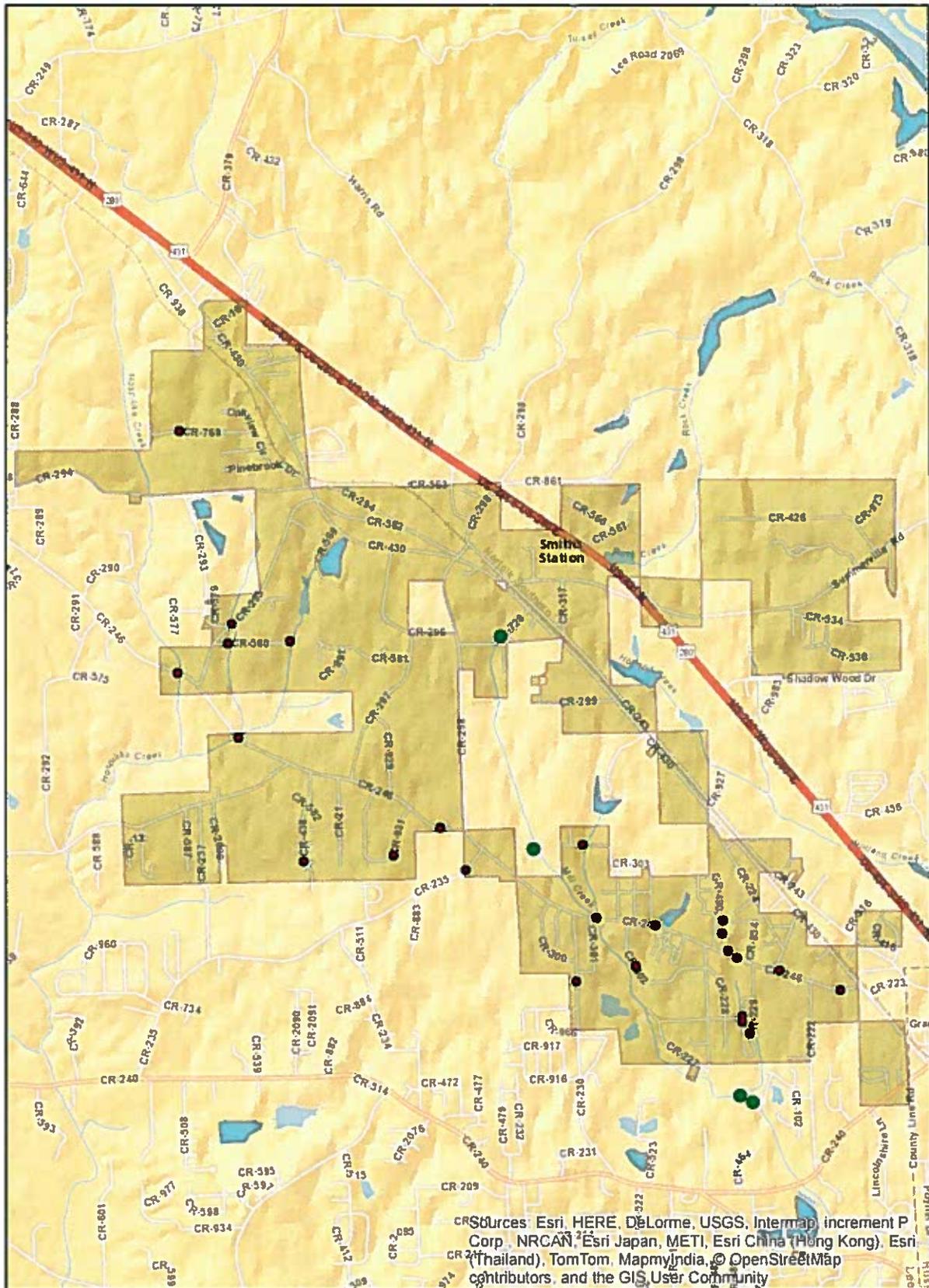
## Legend

- Water Monitoring
- Smiths Station Urbanized Area



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# City of Smiths Station MS4 Outfalls and Monitoring Points



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