



State Water Plan Resource Assessment

Elizabeth A. Booth, Ph.D., P.E.

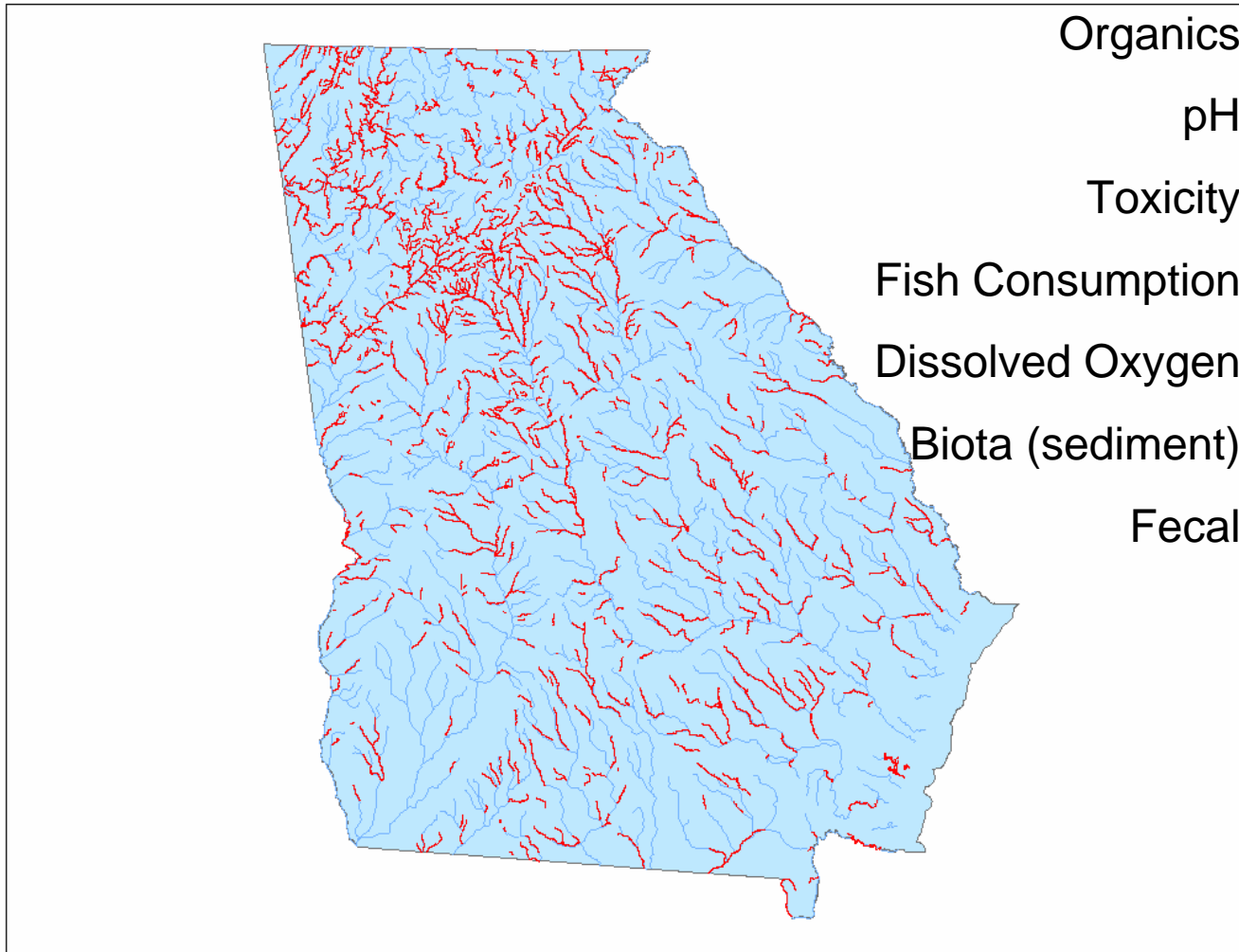
Watershed Planning and
Monitoring Program Manager

Surface Water Quality

The Georgia Environmental Protection Division (EPD) is preparing an assessment of assimilative capacity availability state-wide using a variety of computer models.



Impaired Stream Segments



Organics

pH

Toxicity

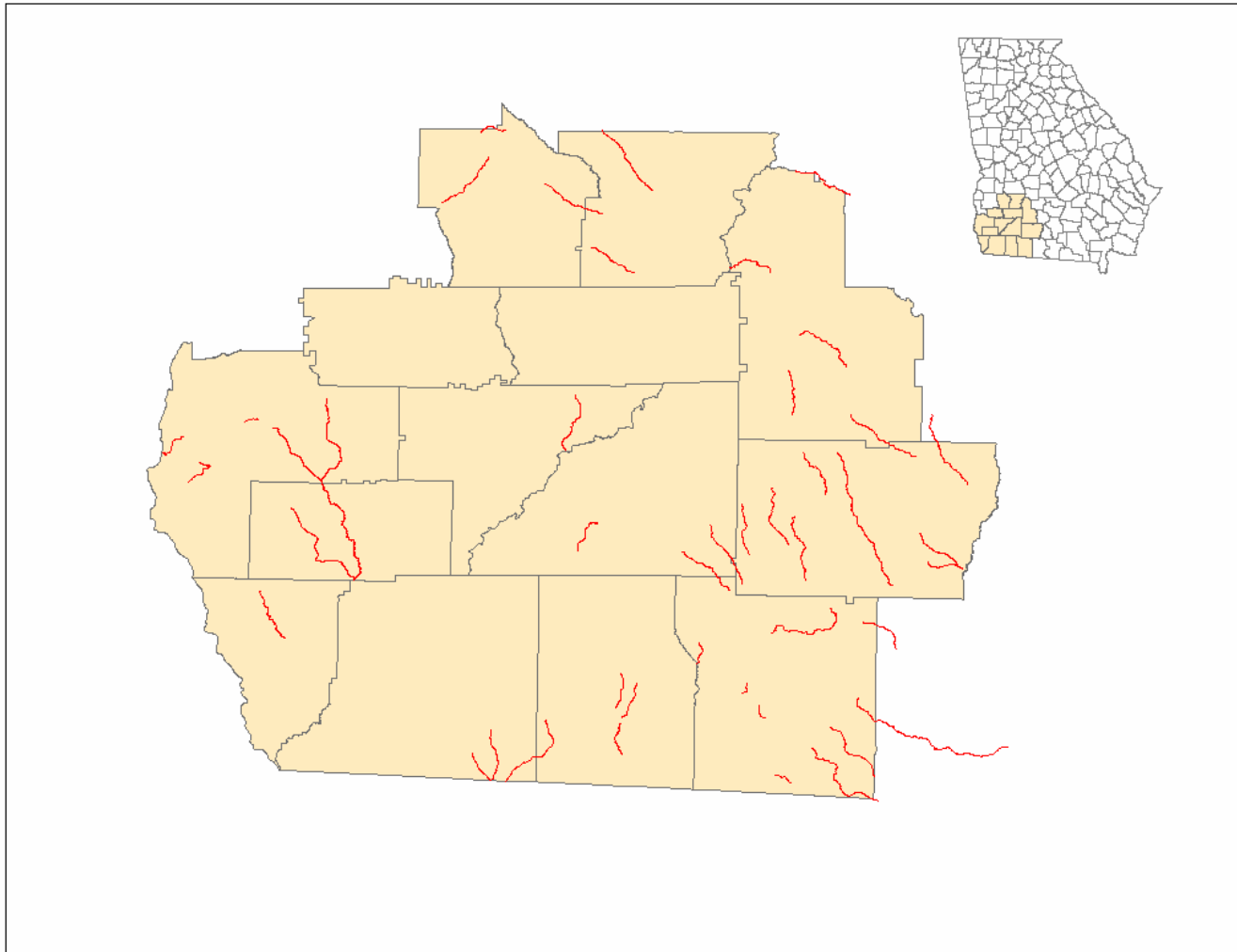
Fish Consumption

Dissolved Oxygen

Biota (sediment)

Fecal

Impaired Stream Segments



Assimilative Capacity

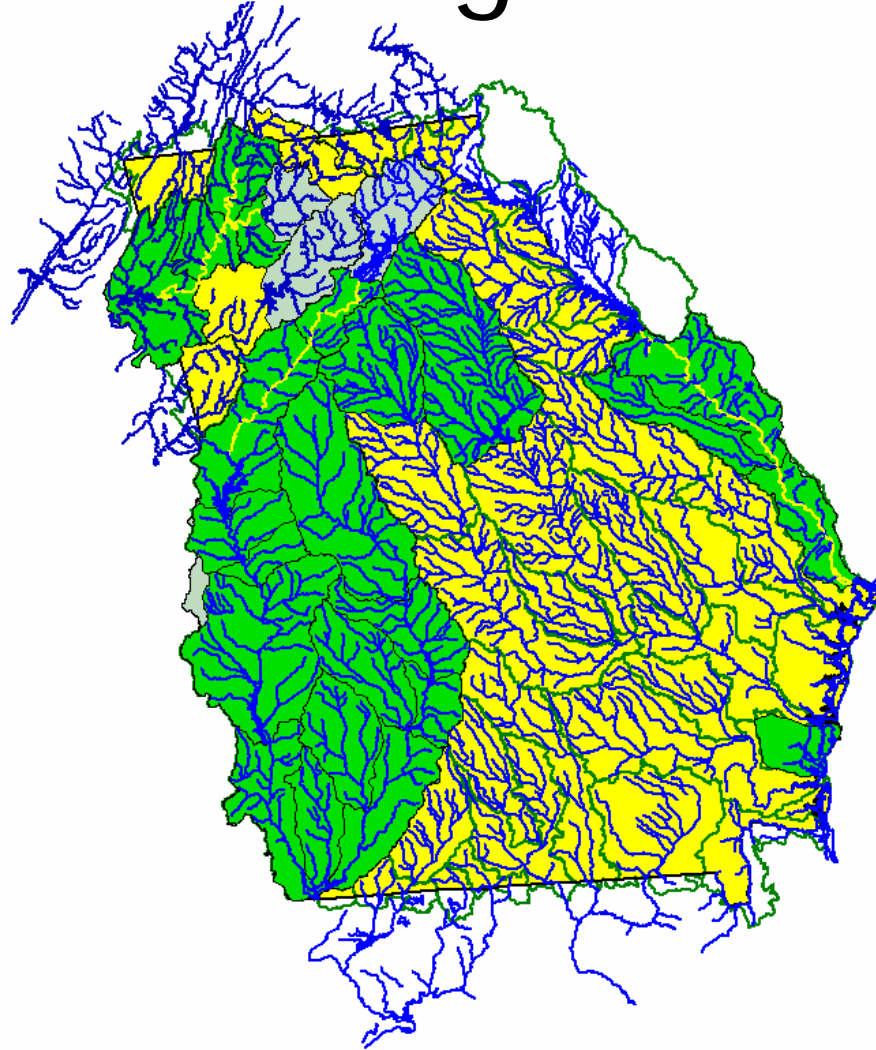
- Develop water quality models
- Calibrate models to existing conditions
- Use models to conduct resource assessment and to evaluate current and future wasteloads

Water Quality Models

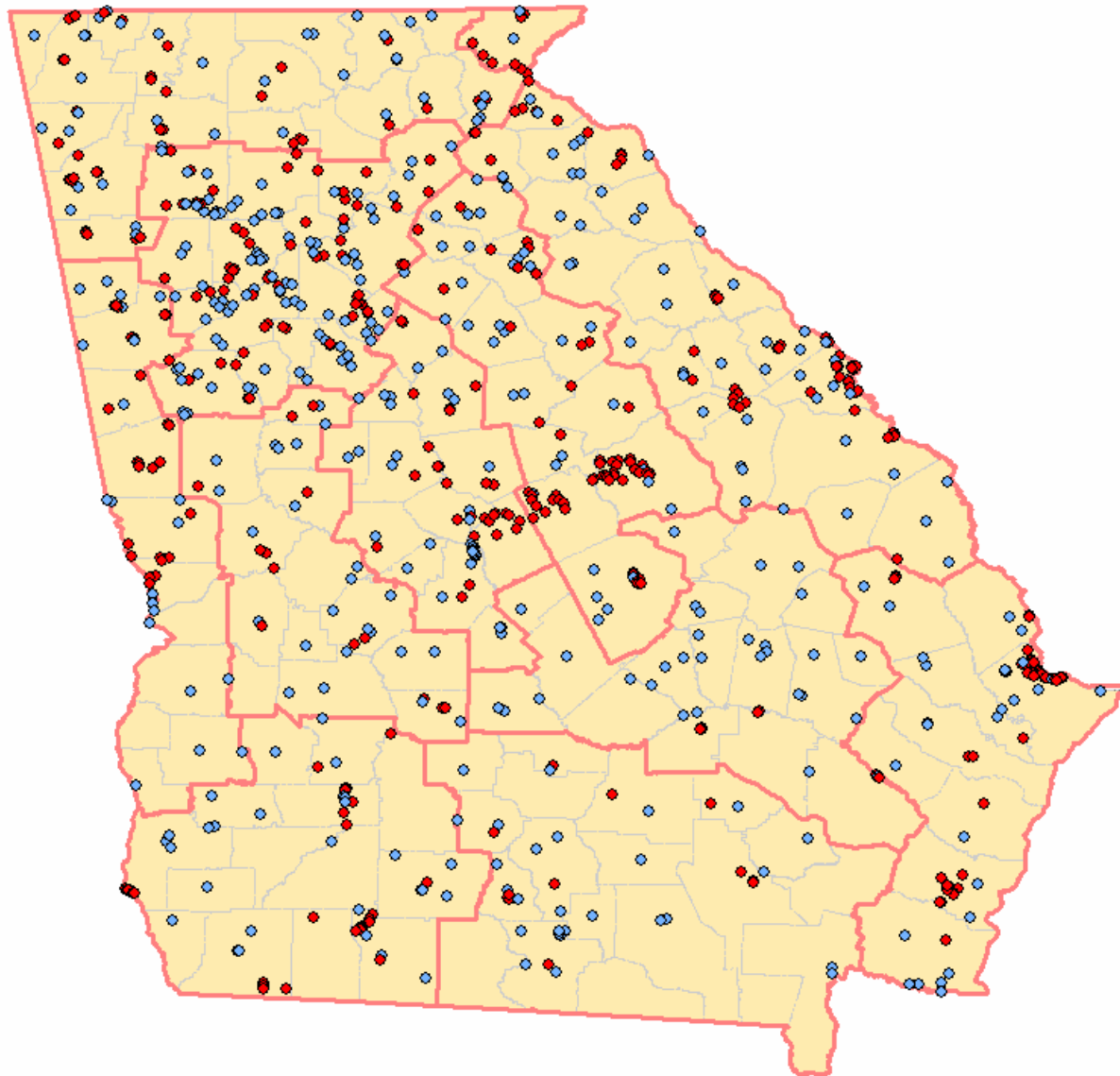
- Steady State River and Stream Models
- Steady State Estuary Models
- Hydrodynamic River Models
- Watershed model
- Lake and Estuary Models



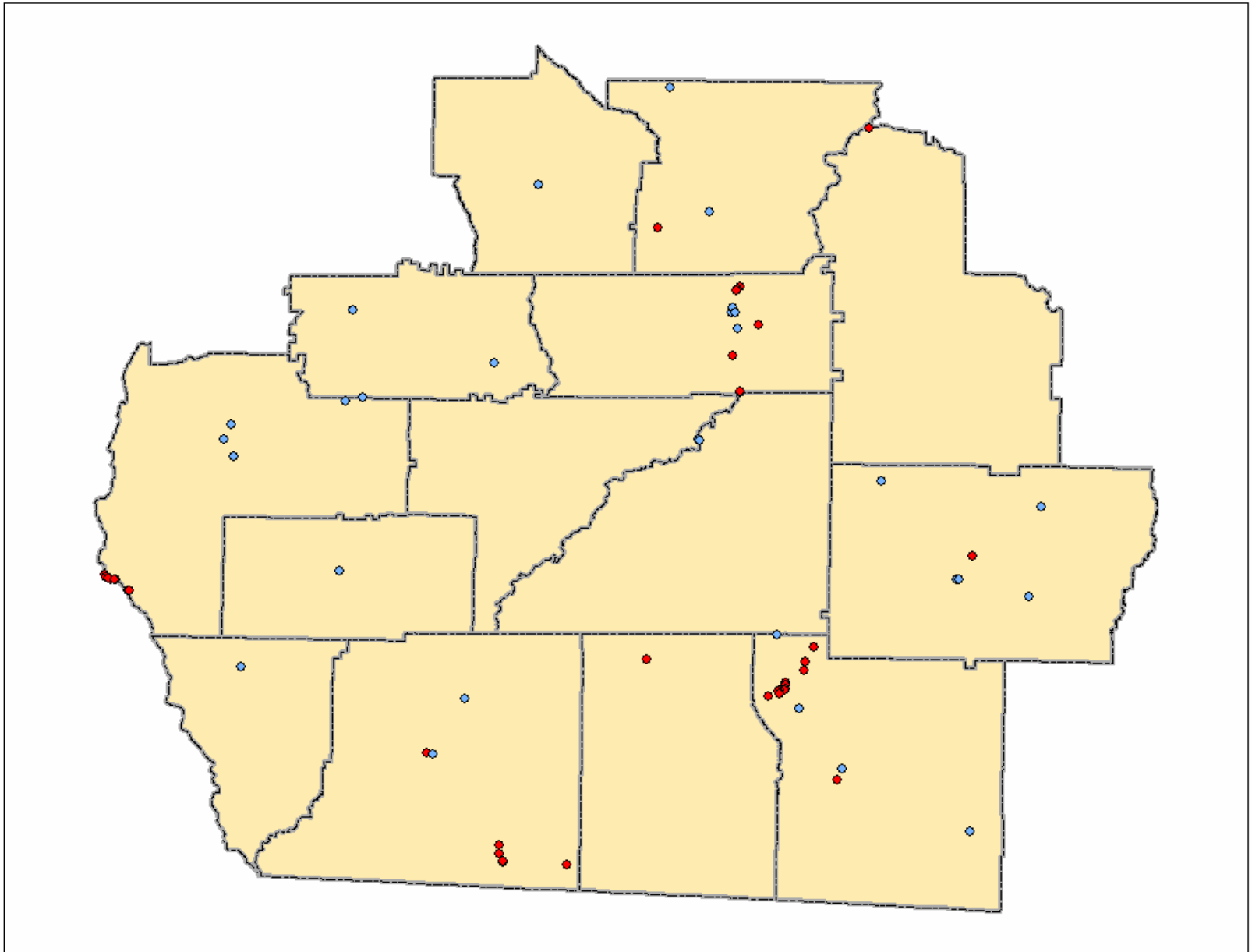
Modeling Work



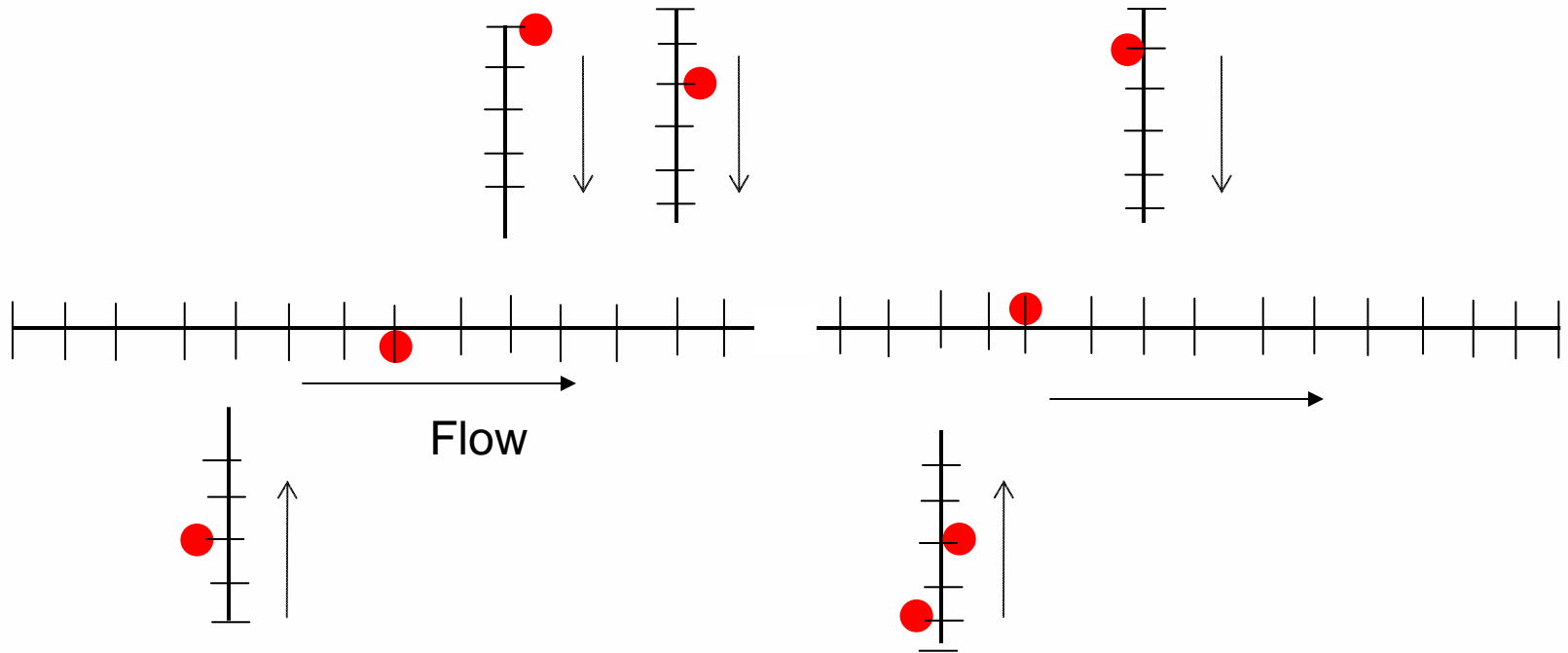
NPDES Permitted Facilities



NPDES Permitted Facilities



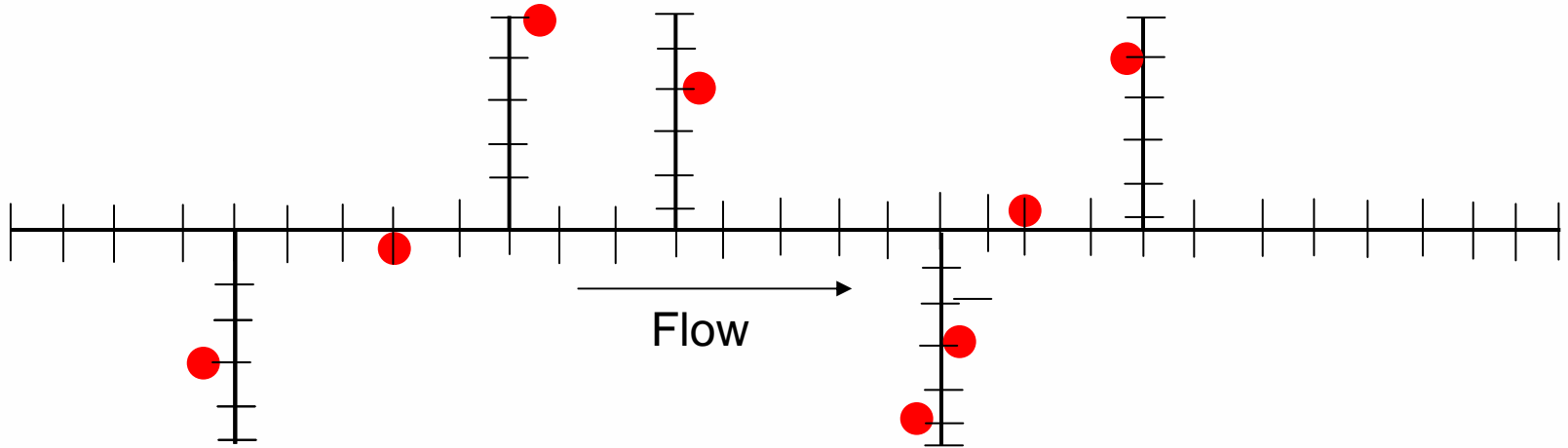
GA DOSAG Models



● Wastewater Treatment Plant



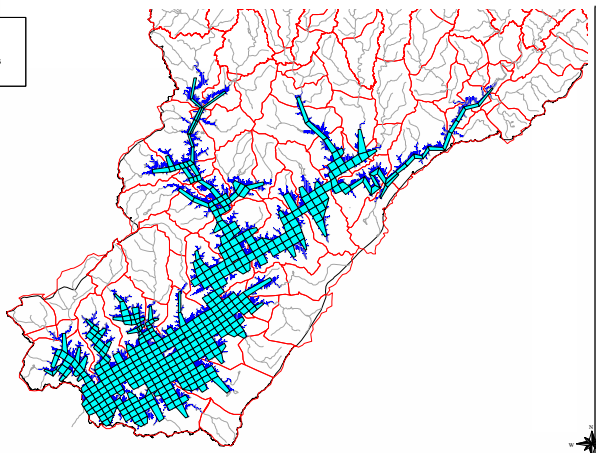
GA DOSAG Models



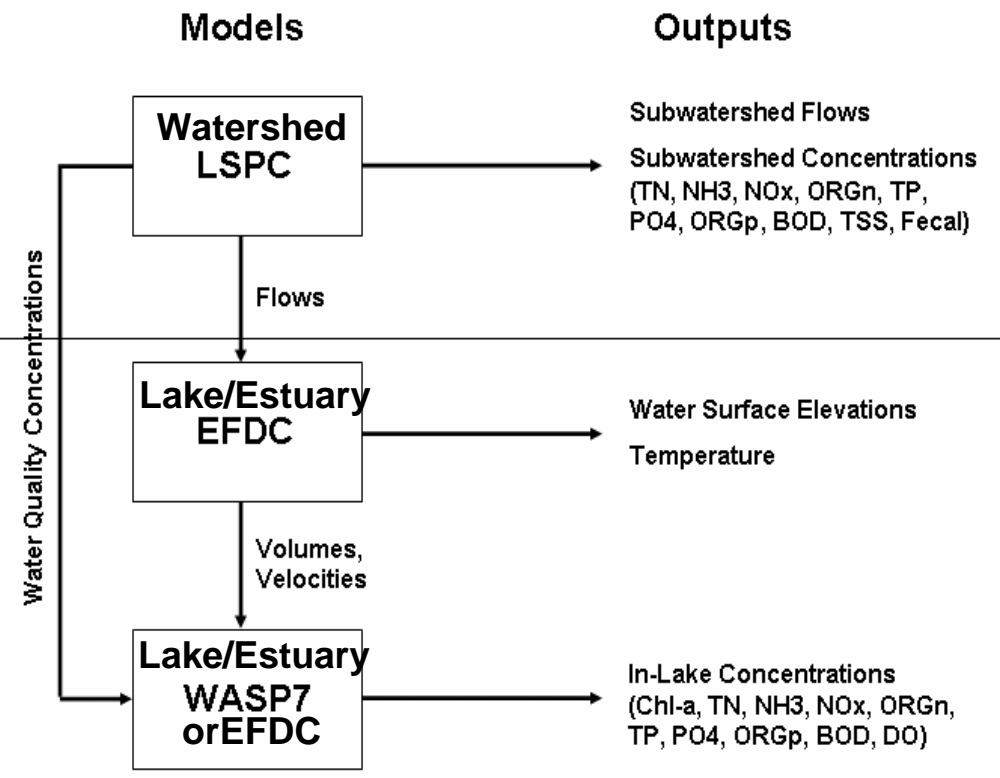
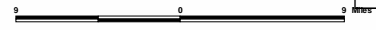
● Wastewater Treatment Plant



Watershed and Lake/Estuary Models



■ Lake Lanier EFDC Grid
■ Lake Lanier
— NHD
— Modified 12-Digit HUCs
 Lake Lanier Watershed



Schedule

- DoSAG Models (Cal/Val) – December 2009
- Current Assimilative Capacity Runs – January 2010
- Watershed Model (Cal/Val) – June 2010
- River Model (Cal/Val) – September 2010
- Lake Blackshear Model (Cal/Val) – September 2010
- Current Assimilative Capacity Runs (Watershed, River and Lake) – November 2010

Future Assimilative Capacity

- Use models to assist in planning by evaluating the water quality impacts of forecasted flows, proposed discharge locations, and future land use patterns
- Using an iterative approach, the Regional Water Planning Councils will evaluate the various options

Questions?

Contact information

Elizabeth A. Booth, Ph.D., P.E

elizabeth.booth@dnr.state.ga.us

404 675-1675

