There are fish consumption advisories for all fresh water impoundments in Maryland. These advisories are linked to the inputs of mercury by atmospheric deposition. Establishing the current baseline of deposition and mercury in selected target species will allow the efficacy of emission controls efforts to be assessed.

YoY Survey

The annual Young of the Year survey by Maryland fishers is used for stock assessment and to set catch limits. The beach seine catch is subsampled and individuals are analyzed for total mercury. The first samples were collected in 2008. This is a simple and cost effective approach to look for trends in body burden in individuals that have not yet accumulated mercury from the food chain.

Watershed Studies

SERC Study Design

- Characterize the flux of Hg and MeHg from the Rhode River watershed to the Rhode River
- Characterize the importance of landuse on yield of Hg and MeHg
- Understand the flow of Hg through the watershed
- Understand the influence of lidos on Hg and MeHg flux through coastal wetlands
- A long-term data base of key mercury indicators in the system: wet deposition; Hg and MeHg flux from watersheds; MeHg bioaccumulation in yearling fish

Effect of land use on watershed yield

Contact: Cindy Gilmour
gilmourc@si.edu

Contact: Tony Prochaska
tprochaska@dnr.state.md.us

Ambient Monitoring

Parameter | Method
--- | ---
Aerosol | IMPROVE
Ammonia | IMPROVE
EC/OC | IMPROVE
PM – speciation | IMPROVE
PM2.5 (BAM) | IMPROVE
PM10 | IMPROVE
SO₂ | IMPROVE
SO₄ | IMPROVE
CO | State/EPA
NO | State/EPA
NO₂ | State/EPA
NOₓ | State/EPA
O₃ | State/EPA
RAS | State
Hg | NADP
Major Ions | NADP
Speciated Hg | State
Temp/Pressure/Humidity | State/EPA
Solar Radiation | State/EPA
Wind Direction/Speed | State/EPA
Precipitation | NADP

Long term air quality monitoring site. A broad range of chemical and physical parameters are monitored. Also the site for new initiatives in dry deposition and soil flux measurements.

Contact: Mark Castro
castro@al.umces.edu

Chris Moore
cmoore@al.umces.edu

Example data summary

See Mark’s poster for more details