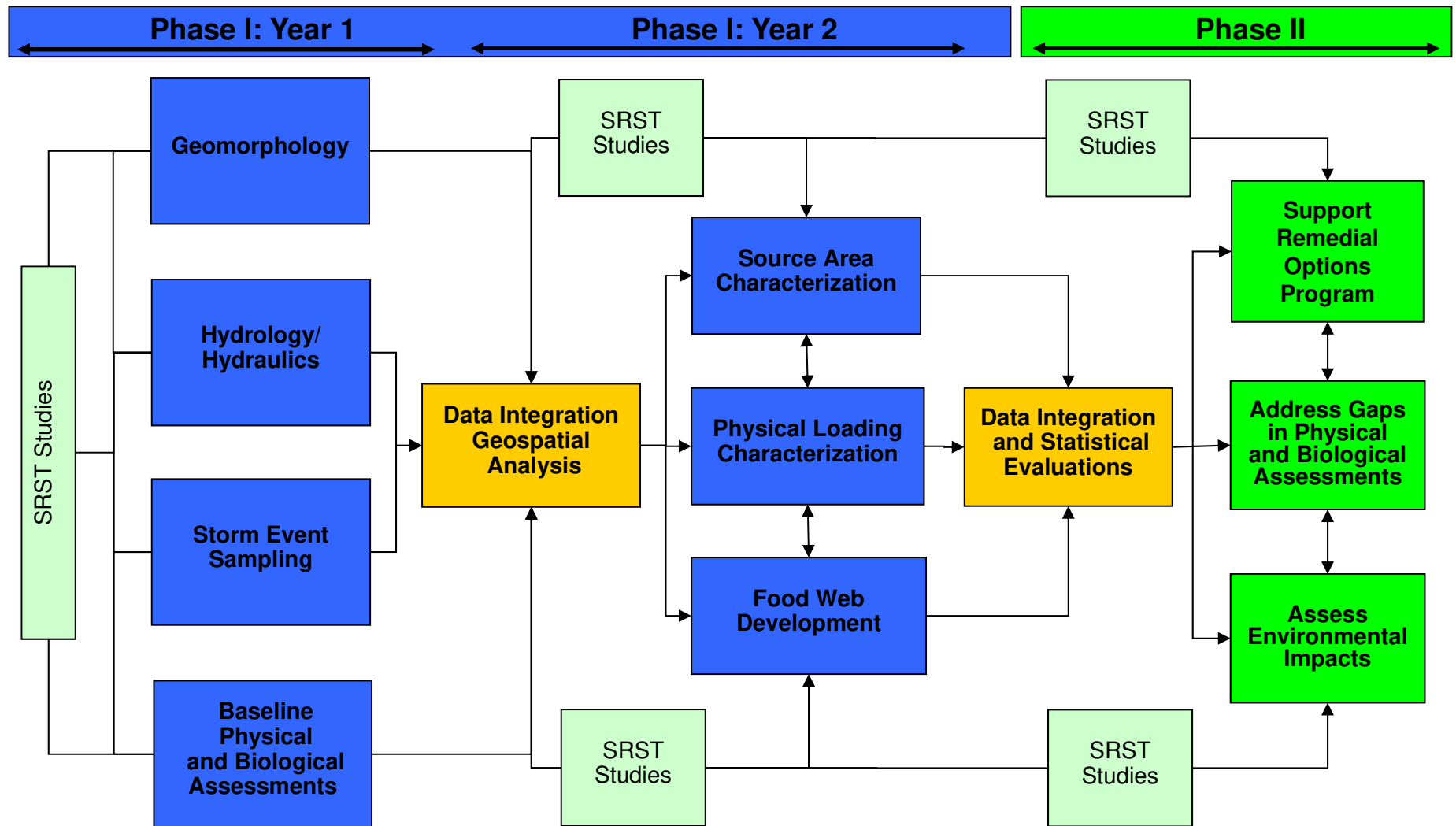


Ecological Study Phase II Progress Update

Expert Panel Meeting: October 7, 2009



Overview: Ecological Study



Phase II Study Plan Elements Completed in 2009

1. Physical and Biological Loading Mechanisms

- Pore water Physical Loading
- Asian Clam Transplant Study
- Aquatic Insect Metamorphosis and Mercury Transfer

2. Phase II Baseline Monitoring for Surface Water and Tissue

- Baseline Surface Water Monitoring
- Bass Tissue Monitoring

Pore Water Physical Loading

- Sample collection events in June and July for IHg and MeHg
- Sample collection in August for THg
- Data evaluations underway to combine data sets for additional analysis and perform mass balance calculations



Asian Clam Transplant Study

- Statistical evaluations for May data completed
- August study experienced significant transplant mortality at study and reference areas
- In August collected seeded clams from May study along with resident clams for evaluation



Aquatic Insect Metamorphosis and Mercury Transfer



Hydropsychidae



Baetidae



Chironomidae



- May data show differences in MeHg body burdens for larvae and adult insects
- August data collections were coordinated with VIMS to evaluate insects at two additional stations

Bass Tissue Monitoring

Progress

- 146 bass sampled in May:
 - 36 at Constitution Park (RRM 0.1), 32 at Augusta Forestry Center (RRM 11.8), and 78 at Grottoes Town Park (RRM 19.5)
- 84 bass sampled in September
 - 29 at Constitution Park (RRM 0.1), 26 at Augusta Forestry Center (RRM 11.8), and 29 at Grottoes Town Park (RRM 19.5)
- Eight fish were re-captured in September (5.5% of May tagged fish) and were in good condition with complete healing of the tissue biopsy sampling location



Ecological Study Path Forward

- Continuing to evaluate physical and biological data
- Preparation for Sediment Effects Study (Triad) in 2010
- Next meeting with NRDC in December 2009