

# 2015 Patuxent River Conference

## Most Fundamental Questions

Following the small group discussions on the second day, the questions that each group synthesized were presented to the group as a whole. Live polling ensued, resulting in the most fundamental questions to all participants under each of three themes: Watershed / Upland Species and Habitat; Tidal Species and Habitat; and Conservation, Restoration, Management, and Monitoring strategies. The questions generated by the discussion groups, the percentage and number of votes cast for each question, and the overall questions of greatest concern are summarized below. This information can also be found under the Polling Results section in pictorial form. More in depth dialogue from each discussion group is found elsewhere in this section, each breakout session identified by the name of the lead.

### Watershed / Upland Species and Habitat

What is the most fundamental scientific question concerning watershed / upland habitat and species that would enhance our understanding of the Patuxent River ecosystem?

	n	Fundamental Question
29%	13	How do we effectively communicate the connection between land management and the Patuxent River watershed?
27%	12	How do we monitor and evaluate restoration practices through the lens of water quality, habitat connectivity, and species conservation?
18%	8	How do stream water condition and ecosystem function vary between physiographic provinces and land uses in ways relevant to people and policy makers?
18%	8	What interventions would be most effective in reducing sediment and nutrient loading?
9%	4	What is the baseline of the current health (nutrients, sediments, chemical contaminants) of the nontidal portion of the Patuxent River?
	45	

### **Watershed / Upland Species and Habitat: Most Fundamental Questions**

1. How do we monitor and evaluate restoration practices through the lens of water quality, connectivity of habitats, and species of conservation?
2. How do we effectively communicate the connection between land management and the Patuxent River watershed?

### Tidal Species and Habitat

What is the most fundamental scientific question concerning tidal habitat and species that would enhance our understanding of the Patuxent River ecosystem?

	n	Fundamental Question
26%	12	What role do tidal creeks and wetlands play in processing land-based or Patuxent tidal fluxes of nutrients and sediments?
26%	12	How effective are different management strategies (i.e. Citizen Science, Living Shorelines, adaptive management, BMPs <Best Management Practices>) in improving water quality / habitat quality, and how do we measure that effectiveness?
20%	9	How do we synthesize long-term monitoring and apply that data to improve water quality?
15%	7	How do we prepare for impending climate change through improved understanding of salinity changes, sea level rise, ground water, storm events, and the role of the keystone areas (marshes, forest buffers, and tidal streams)?
13%	6	What is the most significant impact of climate change on tidal systems?
	46	

**Tidal Species and Habitat: Most Fundamental Questions**

1. What role do tidal creeks and wetlands have on processing land-based or Patuxent tidal fluxes of nutrients and sediments?
2. How effective are different management strategies (i.e. Citizen Science, Living Shorelines, adaptive management, BMPs <Best Management Practices>) in improving water quality / habitat quality, and how do we measure that effectiveness?

**Conservation, Restoration, Management, and Monitoring**

What is the most significant conservation, restoration, management, or monitoring strategy that would enhance water quality in the Patuxent River over the next 5 years?

	n	Fundamental Question
30%	14	How do we make integrated local demonstration projects to show stakeholders of the Patuxent River watershed that effective land management can improve the social and economic value of the land?
24%	11	How do we engage the public through education, knowledge, and attitude?
20%	9	Can we put together a dynamic, complete, and current database to reveal gaps in the data in order to determine additional research needs?
17%	8	How do we move across policy “stovepipes” or structures to address cross-cutting goals wherein one management action may have unintended consequences which are contrary to other goals in tidal waters?

9%	4	Where and why are counties falling short on WIPs (Watershed Implementation Plans) and TMDLs (Total Maximum Daily Loads)? Emphasize the evaluation of BMPs (Best Management Practices) for agricultural practices and engagement of the agriculture community to promote change.
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**Conservation, Restoration, Management, and Monitoring: Most Fundamental Question**

How do we make integrated local demonstration projects for the stakeholders of the Patuxent River watershed to show how effective land management can improve the social and economic value of that land?