BEYOND 2025: SHALLOW WATER HABITATS SMALL GROUP Listening Session

January 8, 2024

BREAKOUT GROUP: 3 of 3
FACILITATOR: Denice Wardrop

QUESTION 1: What do healthy and sustainable shallow water habitats look like to you?

Fish, inverts, vegetation, birds

Goldilocks amount of sediment loading? (combat SLR, supply to marshes)

Should have SAV and clear water. No excess growth of epiphytes.

I think a question we need to ask is what does this mean to property owners around these shallow waters??

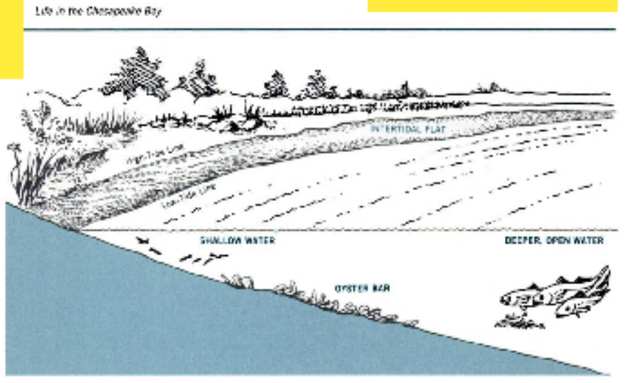
Net gain in fish passage, freshwater mussel abundance and diversityProtection and expansion of Atlantic sturgeon spawning habitats

30% of historic oyster bottom restored and protected in sanctuaries

No trash, oil spills, algal blooms, pollutants

No big fish kills

Managers should realize the area beyond 2 meters is much more socially-restricted part of the domain affordable only to those with boats.



Fewer/no untreated direct outfall discharges & CSOs

(Re: streams) vegetated with native species and connected to floodplain (where it's safe for human habitation to have that connection)

Base level: resources that have typical hydrodynamics for the watershed/landscape positions and resource type [chat]

Continuous Net decrease in Blue catfish, Flathead catfish, and Snakehead populations throughout shallow water domain

Have connectivity for aquatic organism movement across estuarine to freshwater tidal to non-tidal gradient. ✓

Net reduction in tidal wetlands loss rate (extend timelines for loss due to sea level rise by addressing shoreline armoring and marsh migration corridors)

DEFN Shallow water = Habitats in the photic zone (currently or historically) that are occasionally to permanently inundated or connected to surface or groundwater?

As little flow alteration in watershed as possible (e.g., stormwater controls in urban watersheds that slow stream flow off impervious surfaces)

High functional value to society and resilient to disturbances and watershed and SLR changes

Low impact public access/per Bruce's comment

Tidal: good light for primary productivity (SAV) in regions, oysters in others, bare regions in others for diversity...

10-30% hardened shoreline is what we use on the forage group based on a few studies, beyond 10-30% hardened is when we saw declines in key forage species


each of the eight habitats with descriptions of the biological community and illustrations of the animals found there. Many species, such as waterfowl, shorebirds, birds of prey, blue crabs, and fish that roam the Bay, are common to more than one type of habitat; others are restricted to a single habitat.

Sand Beaches

Sand beaches in the Chesapeake Bay are not buffeted by waves and winds as are the turbulent ocean beaches. They are not as broad and do not form the high, protective dune lines of the seacoast. However, like the ocean beaches, they present different beach zones according to the tides. The intertidal zone existing along the lower reach of the beach is intermittently submerged as the tide ebbs and flows, whereas the upper beach zone is wet only during the very highest tides.

The fauna is not generally as diverse on sand beaches as it is in areas with muddier bottoms. Oftentimes the most abundant indications of life are heron tracks or empty sea shells and other dead remains blown up onto the beach, frequently concentrated in the beach wrack, a windrow of debris along the beach.

Intertidal Flats

Intertidal flats occur along the shore where the bottom is alternately exposed and covered by the tides. The bottom may be very soft and oozy, composed of fine silts and muds, or it may be relatively firm, with much sand intermixed with the muds. The landward boundary may be a mud bank or may gradually rise to a marsh habitat. Sandy-mud flats often merge with a sand beach. A flat with a deep slope toward the channel will be only a narrow band at low tide, whereas one with a gentle slope will extend for hundreds of feet toward the channel. In some smaller creeks or streams, the bottom may be totally exposed during low tide. Intertidal flats harbor a wide diversity of plants and animals buried in the muds or crawling over the surface, including bacteria, algae, worms, snails, and little buglike crustaceans called amphipods.

Living shorelines

Habitable pH and conductivity levels in non-tidal fresh waters

Clean, clear, and safe water where people can wade in to fish and swim.

Connected to floodplain

5% or less impervious surface. Fresh tidal and mesohaline; reasonable clarity

For wetlands, a diversity of microhabitats

Tidal estuarine: Shoreline that maintains coastal process, access (humans & critters), and a balanced ecosystem. Important transition zone into upland

Robust Forest/Meadow Riparian Buffer

QUESTION 2: Where should focus be given to maintain or improve shallow water habitats? For example, this could be geographic focus, modeling focus, people focus.

People focus- address the causes of vibrio bacteria infections that make people sick, cause serious bodily damage (amputations), and/or death.

It's all about people, their perceptions and willingness to participate. We can't be prescriptive from above and have to find ways to reach them on their level.

Eliminate worst known pollutant sources/hotspots. (i.e., AMD?)

People focus- if there is not enough public access to water why would the public advocate to protect healthy shallow waters?

HABs- is there a place in CBP to respond to/help locals address HABs

Focus on land use and the connection between that and shallow waters --> provide public access to get people to care more about their local waterways

Geographic Focus- I think CBP has a minimal responsibility to address environmental injustices and support communities who are caused harm by pollution.

Conserving the best of the best could be a prioritization strategy.

Support/implement forest and riparian buffer protections

Protection, enhancement and restoration of wetlands of all types.

Best landscape management of waterfront landscapes (move away from mowed grass).

Reduced & better land development - policy advances/local land use.

Sedimentation

Perhaps there could be monitoring targeted at representative sentinel shallow water sites in the watershed to track changes and facilitate modeling.

Where other TMDLs (local TMDLs) have been established and implementation is underway

Holistic ecosystem restoration, where needed. In some cases, some impacts may be needed to existing resources (such as SAV) to restore the complete ecosystem

Conservation and restoration of adjacent shallow slope zones to support SLR and flood expansion

Support research & monitoring of resource trade offs (Beaches, marshes, SAV, riparian). Impacts of hard / soft shorelines. Address regulatory process & expand cost share ops

Spatially evaluate areas with the highest potential for ecosystem service benefits, target those areas within target watersheds

Tidal waters- upstream habitats/headwaters

Riparian buffers as a relatively low cost/high ecosystem service benefit BMP

Public lands; fund staff, planning and contracts to ensure all streams on public land have healthy geometry/vegetation/ protection from trampling

Consider the status of subwatersheds or catchments and their integrity to determine where shallow water can best contribute.

QUESTION 3: How would you go about getting to your vision of healthy and sustainable shallow water habitats? You can't do everything so think about the top two things you would focus on?

Educate target audiences about need for natural shorelines for local water quality and resilience (e.g. new homeowners, real estate agents, planners etc.)

Establish Enhanced Local Technical Assistance Centers: Similar to Soil Conservation Districts or County Agricultural Centers.

We need more trusted community "ambassadors" to help us in promoting projects that meet property owner needs (e.g. water access/views) with ecological needs.

In Virginia, expand the reach of the Chesapeake Bay Preservation Act. I believe it is currently focused on areas east of I-95.

Invest federal funds first in improvements aimed at water quality standards attainment in shallow areas (rather than deep channel)

Aggregate private properties into large scale riparian buffer living shoreline and fund it with infrastructure funds (build wetlands and pay for it)

Buy the buffer and plant trees and wetlands everywhere

Zoning - prioritize exploring use of grants/leverage (or carrot & stick) to get better zoning/local changes

1. Education of public on why these projects are necessary and the water quality, habitat, etc uplift

2. Government funding allocated for pre-project data collection, project designs, implementation, and post-project monitoring - on private property too

Massive expansion of wetlands in all three zones: pass laws, work with people who have to agree and who have to implement, create incentives.

1. Conserve the best areas you have now. 2. Influence local government's planning and zoning.

Comprehensive planning process that considers impacts on and desired outcomes for shallow water health

Review progress often - Were policies and restoration practices really implemented? Enforced? What could be done better? Do our indicators really give us useful information?

Make the underlying premise of the Bay agreement to be habitat to support people, living resources and economies (rather than WQ, which is one aspect of habitat)

Cost share programs to encourage land owners for living shorelines

Answer to Q1 was shallow water habitats are connected. To achieve that, need to focus on improving aquatic organism passage, especially road-stream crossings

Convert hardened shorelines to more natural, structured shorelines with more habitat at the land-water interface.

Create and promote a PR campaign that uses social marketing to build more buy-in for living shorelines and wetlands protection/creation.

"Living Shoreline"has sound/ feel of estuary/bay waterfront - use" bay-universal" words in PR/soc mkt campaign

Connect upstream conservation action with shallow water where needed. Use local planning tools. Use protection and restoration tools at the subwatershed scale.

Regarding VA's CBPA, discourage waivers and alternatives and provide more education and enforcement.

"Trust but Verify" - identify management approaches that truly restore and protect and actually improve shallow waters

We are working on historic loss extent characterizations and watershed wetland impairment rating.

Quantifying historic palustrine and riverine wetland losses (pre-modern era) and setting restoration targets and priorities for watersheds.

QUESTION 4: What sort of public or community engagement strategies would be most successful for connecting the public to shallow water habitats?

PR strategy to get the local communities involved - shallow water "is where the food is"

Expand IWLA and states' Save Our Streams programs where residents assess/score their streams and they see the things that contributed to bad score

Have a day where all volunteer scientists in the watershed go to their shoreline/nearshore habitat of choice and measure water clarity at the same time.

I agree w/Kristin Saunders "Local Waters" resonates in PA (been at this 25yrs in PA)

Grant programs to provide $ to give to local organizations to bring community members out to their water ways and learn about the impact that they have in their watershed

World Water Monitoring Day- the 2024 date is Wed, Sept 18th

We need to play the long game to be successful. There is a highly resistant population out there that doesn't trust us!

A certification or award program that gives people/landowners credit for taking conservation actions on their property

Engage public and private land-owners in monitoring and stewarding their local shallow habitats.

Act locally - restore resources based upon local degradation (and not CB goals necessarily), benefits will accrue regionally.

Again- Cost share programs to encourage landowners (living shorelines)

Schools -- they generally no longer do day field trips (or overnight) for outside/nature education, which was a great way to expose them to the issues and build connection.

PA is looking at developing secondary and post ed materials that tie local history and watershed alteration together to assist local pops in understanding how it's been altered.

River Star Homes, River Star Businesses etc.

Healthy waters give us family traditions around food recreation- crab feast, fish fry, oysters, fishing trips with family, etc...

Find out what local watershed groups are doing, who's doing it well? Learn from them and help them to expand their reach and develop new ones. Bottom up approach

QUESTION 5: How can the bay program add value to new or ongoing work in shallow water habitats? (Examples could include coordination, policy, science support)

Share the knowledge and tools around decision science to help local communities manage potential use conflict in these shallow water areas where intervention is needed

Piloting BMP implementation work with local non profits, empower them to experiment with challenging implementation and less risk.

Ramp up communications and simplify the language used around the work so that more people can understand and engage on the topic

Increase funding available to support coordinators of local (e.g. tributary-scale) restoration efforts. Restoration grants often don't allow for enough coordination time in budgets

Continue/expand ts local gov engagement

Use science and siting criteria/GIS analysis to help target

Aggregate information about policy changes that work and amplify circulation of that information through trusted sources to local decision makers and advocates

Acknowledging equivalency between near stream resources (i.e., buffers/wetlands in floodplain).

Identify what is successful at the local level across the watershed (ex River Stars program, ERP) and expand the efforts to other rivers, sub watersheds, communities

QUESTION 6: Are there any other considerations for the Shallow Water Habitat Small Group as we move through our work?

What are the implications of shifting towards a shallow water focus on overall CBP restoration goals, given limited state/federal budgets?

Work with the clean water group to devise a tiered approach to water quality standards attainment in shallow water areas first