

Key Messages

2013 Mid-Atlantic Living Shorelines Summit

Key messages are the themes in bold – the statements below these themes demonstrate some of the ideas expressed, but do not reflect the frequency with which that concept was alluded to during the 2013 Mid-Atlantic Living Shorelines Summit.

<u>Highest Frequency by Participants</u>	<u>Highest Frequency by Speakers</u>
<ul style="list-style-type: none">• Regulatory process• Need for Research / Science• Online presence / Information exchange• Accessible database• Funding	<ul style="list-style-type: none">• Adapting projects to sites• Need for Research / Science• Definition of a Living Shoreline• Monitoring / Maintenance• Living Shorelines from a broader perspective• Demonstration Sites

Themes

Regulatory process

- Connecting research to policy will help to move the regulatory process forward.
- There is a great deal of interest by regulators as well as others committed to advancing Living Shorelines to share information and data needed to inform decisions.
- A state requirement for Living Shoreline projects, as well as improved coordination and collaboration between local, state and federal regulatory agencies is necessary.
- Living Shorelines can be incentivized by integration into TMDL requirements, FEMA CRS credits, and a General Permit, thereby increasing their frequency of installation.
- Installations of Living Shorelines will continue to lag until the permitting process between Living Shorelines and armored methods is leveled.
- The Maryland Living Shorelines Protection Act of 2008 requires shoreline property owners to install a living shoreline unless they qualify for a waiver.
- Outreach and education are needed to address challenges in the application and waiver request processes. Permits can only progress when the appropriate paperwork is submitted in a timely manner.
- The problem may not be the need to improve communication about Living Shorelines, rather, that the challenges to Living Shorelines need to be reduced. As long as hardening shorelines is “cheaper, easier and faster”, promoting Living Shorelines will always be an uphill battle.
- The bottom-up process is working – there are examples at the state and local level from which we can all learn.

- We need to standardize the tracking of Living Shoreline projects in every state.

Adapting projects to sites

- In addition to the site, the design of a Living Shorelines project must be adapted to the goals of that project.
- When designing a project for a particular site, the micro-view is very important. Aligning design standards with the unique characteristics of that site (salinity, energy level, availability of oyster spat, etc.) maximizes the likelihood of success.
- It is easier to adopt and then adapt a project, than it is to try to morph the environment.
- Innovation is important, but you have to do your homework.
- Design calculations such as historical shoreline recession analysis, wind wave analysis and boat wake wave analysis are critical in predicting a successful Living Shoreline project.
- Living Shorelines represent adaptive engineering. The practitioner must work within the situation presented.
- Try new things - be bold and experiment. Don't be afraid to fail – that is how we learn.
- Positive change is possible in all projects, at all locales, given an innovative mindset.

Need for Research / Science

- Many of the benefits associated with Living Shorelines are not supported by research data. Reference sites are very limited, restricting the availability and interpretation of data.
- Research focuses on smaller scale issues while current questions revolve around larger concerns such as carbon sequestration, coastal resilience and wetland sustainability.
- Hardening takes away the dynamic aspect of shorelines; the cumulative impact of hardening is rarely examined and needs to be addressed.
- Living Shorelines are thought to have many positive attributes. Many of these assumptions have not been verified through research. A major reason for this is that there are very few reference sites for natural marshes, and even less for Living Shorelines.

Definition of a Living Shoreline

- Controversy continues regarding the definition and function of Living Shorelines.
- Living Shorelines practitioners continue to over-armour shorelines. These systems can be overdesigned, damaging a system we are meaning to protect – are we causing degradation?
- What boundary separates a Living Shoreline from a shoreline stabilization that is not a Living Shoreline?
- Restore the continuum of the system, not just the individual components. This concept is sometimes forgotten.
- Gaps in structures preserve the intertidal zone, allowing water exchange and fish utilization. This relationship should be continued between the intertidal zone and the riparian zone.
- An examination of “Living Shorelines” indicates the need for a reassessment of what “limited use of rock” means, as well as where certain design elements are appropriate and where they are not. This term can be used to justify projects that are just as damaging as the techniques they are meant to replace.
- In terms of structures, less is more.

- Incorporate the least amount of structure necessary to achieve the project's goals. Even in high energy environments, incorporating some living component into a project is recommended. In areas with sufficient oyster spat, integrating an oyster zone should be considered.
- If one of the goals of a Living Shoreline project is to create healthy habitat, unbroken sill are not a technique supportive of that goal.

Funding

- Living Shorelines can be incentivized by integration into TMDL requirements, FEMA CRS credits, and a general permit, thereby increasing their frequency of installation.
- Funding is needed for Living Shoreline research as well as monitoring.
- Incentives are needed to motivate landowners.

Outreach & Education

- Many people are unconvinced of the ability of living components to reduce erosion and protect shorelines; greater exposure of the benefits of Living Shorelines is necessary.
- Demonstration sites are needed to increase familiarity, and authenticate the effectiveness and long-term durability of this method of shoreline stabilization.
- Targeted messaging must be integrated into the strategy of the Living Shorelines mission. Incorporating consistent messaging into talking points will help to move the Living Shorelines agenda forward.
- Training for professionals is needed.

Information-exchange

- There is power in the collective working across constituent groups; this can include information-sharing encouraging advancing science, connecting science to policy, streamlining permitting, etc.
- The priority of establishing an online presence and an accessible database was widely expressed.

Representative organization (C.O.P.)

- A Community of Practice is a crucial part of efficiently addressing challenges in the Living Shorelines field by providing a forum for information exchange, experimentation and effective forward movement.

Monitoring

- .Monitoring is critical.
- Long-term monitoring (10-20 years) is necessary to determine the success of a protected shoreline. Erosion control, marsh health, SAV presence and the physical state of structures can be used as parameters of success.
- Including Living Shorelines in State Wetland Monitoring Programs and requiring monitoring for permits issued to large projects on public lands can promote monitoring as the standard.

Maintenance

- Maintenance and monitoring of Living Shorelines are critical to long-term success.
- A Living Shoreline is like raising child - it needs nurturing. Provide maintenance by developing a long-term relationship with the client. The contractor cannot walk away from a Living Shoreline project, leaving it untended, and expect normal development to occur.

Living Shorelines from a broader perspective

- Monitoring can contribute to the larger issues as well as the smaller scale questions. It can be used to meet regulatory requirements as well as answer questions about the ecosystem.
- By utilizing a watershed scale systems approach, Living Shorelines offer an opportunity to increase the resiliency of our coasts.
- To maintain sustainability in the face of projected coastal changes (sea level rise and other effects of global climate change), marsh systems must be considered on a long-term basis. We can affect marsh sustainability through Living Shoreline design choices, which are most accurately informed by performance data research.
- Natural systems require erosion. Do no harm. If the erosion is natural and no structures are at risk, no action is the right course. Integrity is the best sales tool.
- “It takes a village” to raise a Living Shoreline, that is, a village consisting of project partners such as the marine contractor, the permitter and the landowner.
- Work with the system, not against it. This applies not only to the regulatory community, but also the project partners and the environment or site.
- The future of shorelines and coasts in terms of creating structures that are beneficial to ecosystem enhancement as well as shoreline stabilization depends on the collaboration of engineers and ecologists.
- Hardening shorelines, even with Living Shoreline projects, reduces or eliminates the dynamic aspect of natural shorelines and interrupts the interaction between the water and the land.
- The cumulative effect of many small shoreline projects can alter large geographic areas, even where no structures exist. This occurs when a critical percentage of the shoreline is modified, referred to as the “tipping point”. This critical stage approaches as natural shorelines continue to be replaced with artificial shoreline protection.