An annotated slide deck covering the 6/7/22 New York Shellfish Restoration Council meeting's notes and ppt

- **Annotations = sections marked by the soft-yellow color** and were not presented at the meeting.

- Linked **HERE** is the meeting's recording

Meeting's Action Items

- Constituents can add any questions to questions log and/or comments to the meeting's breakout notes before **Fri July 8, 2022 5PM ET**.
  - Steering Committee members will address any outstanding questions or comments
- Facilitators send meeting attendees an annotated ppt that includes the meeting's ppt slides, summaries of comments, and a link to the recording
- Facilitators restructure the Working Groups in organizational chart, particularly to:
  - Reflect summary feedback from breakout discussions
  - Clarify and distinguish between the Pre and Post Restoration workgroups
  - Clarify cross-cutting themes (e.g. outreach and education)
- Facilitators schedule a follow-up meeting and monthly meetings for the Steering Committee
- Facilitators + Steering Committee recruit work group co-chairs and members to launch work groups
- Facilitators + Steering Committee continue gathering input from stakeholders

New York Shellfish Restoration Council Meeting

June 7, 2022, 5-7 p.m. ET

June 7 2022 SRC Meeting Agenda

- SRC Membership Updates
- Shellfish Restoration Project Updates
- New York Shellfish Restoration Plan's Development

There will be opportunities throughout the meeting for the SRC and the public to comment and ask questions

Origin of the New York Shellfish Restoration Council

The Shellfish Restoration Council (SRC) was established in 2017 by former Governor Andrew Cuomo as part of the large-scale Shellfish Restoration Initiative to support and guide shellfish restoration efforts throughout New York's coastal waters.

Primary Goals of the SRC:

- Provide recommendations on coordination, management and monitoring of restoration efforts under the current Shellfish Initiative;
- Assist with development of a Shellfish Restoration Plan to help facilitate future restoration efforts;
- Coordinate training and education programs throughout New York’s Marine and Coastal District.

New York Shellfish Restoration Council (SRC) Membership

- **Dr. Christopher Gobler**, SUNY Stony Brook, **Co-chair**
- **Pete Malinowski**, Billion Oyster Project, **Co-chair**
- **Christopher Pickerell,** Cornell Cooperative Extension of Suffolk County, **Co-chair**
- **Dr. Jeffrey Levinton**, SUNY Stony Brook
- **Carl LoBue**, The Nature Conservancy
- **Dr. Emmanuelle Pales Espinosa**, Stony Brook University's Marine Animal Disease Lab
- **Marty Byrnes**, Town of Islip
- **Shavonne Smith**, Shinnecock Indian Nation Environmental Department
- **Karen Rivara**, Long Island Farm Bureau
- **Chuck Westfall**, Long Island Shellfish Grower's Association
- **Jim Lodge**, Hudson River Foundation
- **Elizabeth Cole**, LI Regional Planning Council/Long Island Nitrogen Action Plan
- **Jane Houdek**, Nassau County Department of Public Works
- **Adrienne Esposito**, Citizens Campaign for the Environment
- **Michael Kokell**, Brookhaven's Baymen's Association
- **Susan Filipowich**, Suffolk County Gov't Shellfish Aquaculture Lease Program
- **Vacant,** Shellfish Industry (Harvester)
- **Vacant,** Shellfish Industry (Dealer)
- **DEC**, Ex-Officio **(Dawn McReynolds, Debra Barnes, Wade Carden)**

Name: Newly added to SRC

Long Island Shellfish Restoration Project (LISRP)

Established 5 shellfish sanctuary sites in Nassau and Suffolk Counties to improve water quality, mitigate HABs and restore native shellfish populations. **Total of 141.8 M shellfish stocked, 96% of target met.**

Sanctuary	Adult Shellfish Plantings	Juvenile Shellfish Plantings
Bellport Bay	**Adult target met** 1.6 M adult clams planted through 2019	**Juvenile target 88% met** 51.5 M juvenile shellfish stocked
Huntington Harbor	**Adult target met** 650 K adult clams planted through 2020	**Juvenile target met** 13.6 M juvenile shellfish stocked.
Shinnecock Bay	**Adult target met** 1.5 M adult clams planted through 2021	**Juvenile target 92% met** 38.4 M juvenile oysters stocked
Oyster Bay	**In Progress:** 507 K adult clams purchased to date - 1.5 M adult clam target expected to be met through 2022.	**Juvenile target 95% met** 20.4 M Juvenile shellfish stocked
Hempstead Bay	**In Progress:** Adult clam stocking to commence this summer and will continue until 1.5 M target met	**Juvenile target met** 14 M Juvenile shellfish stocked

Updates on New York Shellfish Restoration Projects

Cornell Cooperative Extension
Marine Program

CHRIS PICKERELL
Marine Program Director
SRC co-chair

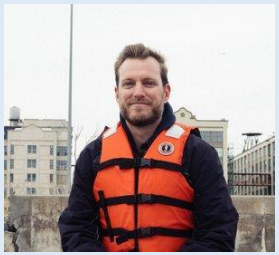
LISRP

Stony Brook University
School of Marine and Atmospheric Sciences

CHRIS GOBLER
SoMAS Director
SRC co-chair

LISRP

BILLION OYSTER PROJECT



PETE MALINOWSKI
Executive Director
SRC co-chair

NYC-based

Cornell Cooperative Extension (CCE): Updates

Leading the production of seed clams (previous years) and Spat-on-Shell oysters for all sanctuaries.

Hatchery Operation

- Continue to staff and operate the shellfish hatchery in Southold producing Clams, Oyster, Scallops and now Ribbed Mussels
- Modified SOS tank stocking density (fewer larvae per shell) to achieve higher survival. Also, noted that SOS is often moving outside of designated planting plots due to wave activity and storms.

LISRP Production since last meeting:

- 36,600,000 SOS oysters (5-25mm) across three sanctuaries (Bellport, Shinnecock & Hempstead)
- 5,000,000 eyed larvae to the Shinnecocks

LISRP Milestones & Targets for 2022:

- 5,000,000 SOS oysters to Bellport sanctuary (complete)
- 10,000,000 eyed larvae to the Shinnecocks (pending)
- 16,200,000 additional SOS (pending)

Stony Brook University (SBU): Updates

Leading the creation of hard clam spawner sanctuaries and benthic monitoring for the Long Island Shellfish Restoration Program

SBU's Top Milestones for 2022:

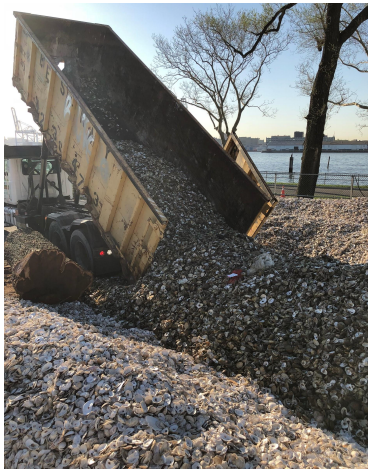
1. 1.5 million adult clams planted in Shinnecock Bay in 2021 to complete third LISRP restoration site (in addition to Bellport Bay, Huntington Harbor)
2. Monitoring shows near-100% survival of adults in all spawner sanctuaries; low survival of seed bivalves.
3. Developed a new digital PCR method to quantify hard clam larvae and new hydrodynamic models that demonstrates clam larvae spawned in western Shinnecock Bay spawner sanctuaries are transported to, and settle in, eastern Shinnecock Bay over two week larval cycle; eastern Bay larvae exported to Atlantic Ocean
4. Hard clam densities and landings in regions that models predict larval settlement have increased by 20-fold since creation of spawner sanctuaries.
5. Biological filtration times have decreased from weeks to days in Shinnecock Bay
6. Concurrently, levels of brown tide and chlorophyll a have significantly increased, and light and seagrass levels have significantly increased.

Billion Oyster Project (BOP): Updates

- 75 Million oysters introduced to New York Harbor
- 18 Restoration sites
- Creating 16 acres of oyster reef habitat

BOP's Top Milestones for 2022:

1. On track to restore our 100 millionth oyster - 10% of the way to our 1 Billion Oysters goal
2. Approaching 2 million pounds of reclaimed shell – for reuse in oyster reef restoration — diverted from landfills
3. Scaling oyster production capacity to remain on track to set and deploy one billion oysters to NY Harbor by 2035
4. Reaching 10,000+ students in hands-on learning since our founding in 2014



SRC's Development of a New York Shellfish Restoration Plan

The goal of the Plan will be to provide science-based and constituent-driven recommendations on improving shellfish restoration efforts and associated-processes in New York's marine waters.

Where are we now?

Spring 2021: The SRC gave support for the development of the state's first Shellfish Restoration Plan

Summer 2022: Drafting out the process and structure for the plan's development

- Formation of a Steering Committee
- Facilitators: Pew and Due East

Introductions

The Pew Charitable Trusts

Aaron Kornbluth

Zoe Yuki Goozner

Mike Skuja

Due East Partners

Lauren Maddox

Trayshelle Cherry

Facilitators of the New York SRC Plan's Development

Overview of Public Comments

Please refer to 27:50 in the meeting's recording

- **Concern about conflicting user-needs for New York's marine coastal areas**
  - There are so many different users of New York's marine coastal areas, all with different needs that sometimes are conflicting. One of the intentions of the New York Shellfish Restoration Plan is to use mapping tools, ecological data inventories, and constituent feedback to inform solutions that will address and mitigate those user-conflicts.
- **Would like to see more commercial shellfishers represented on the SRC**
  - DEC-DMR is working with DEC's Executive office to seek approval for shellfish industry appointments to the SRC
- **How can I increase shellfish restoration in bodies of waters in my community?**
  - One of the intentions of the New York Shellfish Restoration Plan is to develop and recommend specific pathways for coastal communities to introduce and increase shellfish restoration/sanctuaries in their local waters
- **There are many small-scale oyster shell collections/recycling programs and groups in New York – most are run by volunteers and constantly need more financial support.**
  - One of the intentions of the New York Shellfish Restoration Plan is to increase, support and unify (when appropriate) the various shell collection and recycling activities to ensure the long-term access to substrate for restoration efforts.
  - Half Shells for Habitat is an example of a shell collection group and they have donated a lot of shell for CCE's work.
- **Why was TNC NY's hard clam restoration work in Long Island less successful than the LISRP's efforts?**
  - TNC NY was unable to choose the location of this work. The location was the middle of Great South Bay, which experiences some of the most severe brown tides. In contrast, the 5 LISRP clam sanctuaries are located in sites that do not experience intense harmful algal blooms, including brown tides.
  - Last brown tide was in summer 2021 and linked HERE is a resource on the conditions and organisms that cause brown tide.
- **What is the next step for increasing hard-shell clam recruitment in the Great South Bay.**
  - The LISRP is establishing hard clam spawner sanctuaries at the edges of the center of the Bay where the poorest water quality is found, specifically in Bellport Bay and South Oyster Bay.

Overview of Public Comments cont…

- Is there interest in streamline, merging, and updating the permitting application process for restoration projects?

- While DEC cannot overwrite other state and federal agencies' processes and requirements, DEC is committed to working with and supporting efforts via the development of the New York Shellfish Restoration Plan to streamline and update the oyster restoration project permitting process to reduce constituents' fatigue.

- What is the comparison of the metrics of success and cost-effectiveness between Pew/TNC SOAR's use of big fecund oysters vs. the traditional spat-on-shell approach for restoration? And is there an opportunity for a long-term SOAR-like program?

- SOAR's bio and eco monitoring data (across 7 states) is being collected and a review of this data will inform the program's metrics of success.
- Defining and selecting the best approach (big fecund oysters vs spat-on-shell) for oyster restoration in New York waters will be a task of the New York Shellfish Restoration Plan's *Shellfish Aquaculture* workgroup.

- What are the efforts to restore shellfish in Jamaica Bay?

- BOP was involved in a 3-yr restoration project (ended in ~2019). The parks that make up Jamaica Bay are owned by a variety of agencies: NYC Parks, NYS Parks, and NPS; these state agencies own and manage parks property in this area. This is one of the reasons why it is a challenge to introduce new species to those lands.
- Buro Happold is a consultant group working on making Jamaica Bay a great NY urban park and there is strong interest in increasing restoration in the Bay.

- What are the primary regulatory and/or permitting challenges preventing the expansion of shellfish restoration projects?

- This is a very loaded question. Answering this question and providing subsequent solutions will be a main task of the New York Shellfish Restoration Plan's *Regulatory* workgroup

- Is there interest in placing shellfish restoration projects adjacent to shellfish farms? This could allow a large amount of spawning oysters in the vicinity of the farms.

- Yes, there is interest and figuring out how to do this while ensuring public health and safety. Identifying and vetting these opportunities for mutualistic collaboration between restoration and shellfish industry will be a task of the New York Shellfish Restoration Plan's *Regulatory* and *Shellfish Aquaculture* workgroups.

What is the New York Shellfish Restoration Plan?

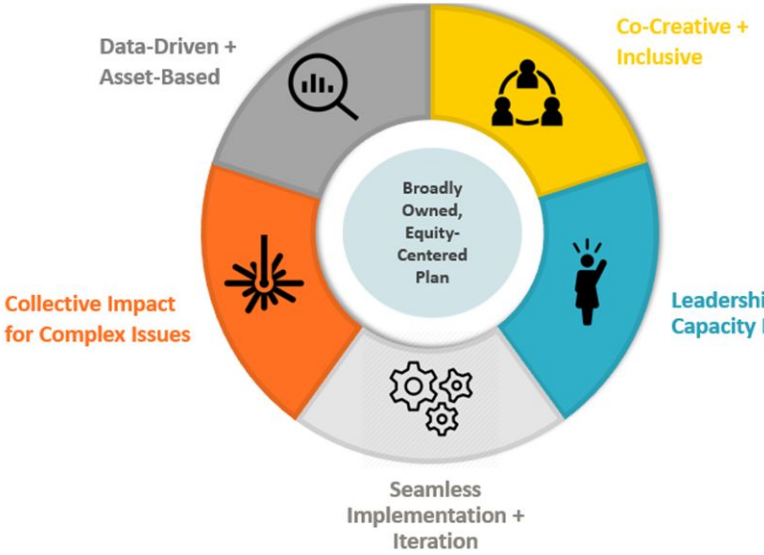
A comprehensive, science-based and constituent-driven plan to advance the recovery of New York's important marine shellfish resources by:

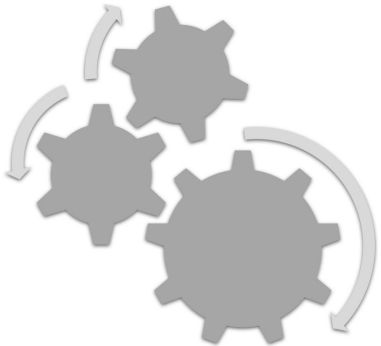
- Improving and unifying existing efforts;
- Launching new efforts;
- Clarifying and bolstering natural resource management;
- Addressing user conflicts;
- Increasing public knowledge;
- and more.

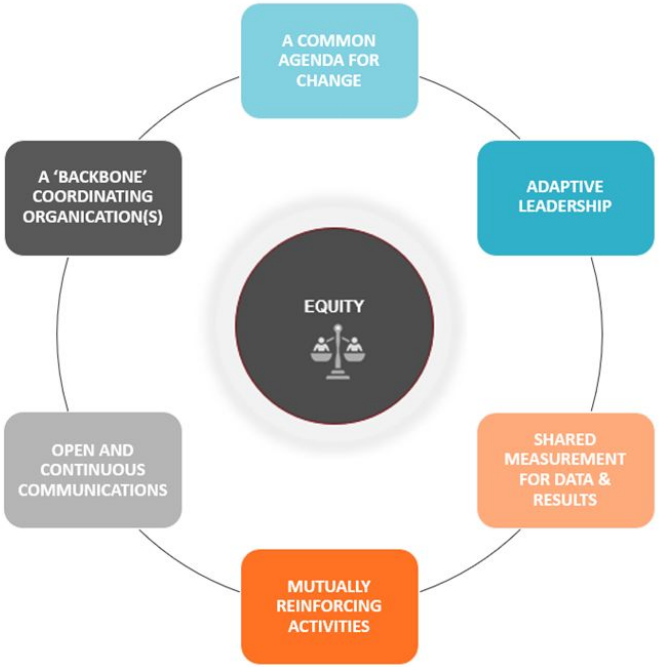
What Needs will this Plan address?

- More streamlined permitting process
- Enhanced habitat for shellfish and associated marine species
- Increased nature-based solutions for shoreline stabilization
- Improved water quality
- More cohesion/shared vision among organizations, restoration projects, methods, monitoring, etc.
- Expanded opportunities for industry to engage in restoration efforts

Due East Partner's Collaborative Planning for Collective Impact







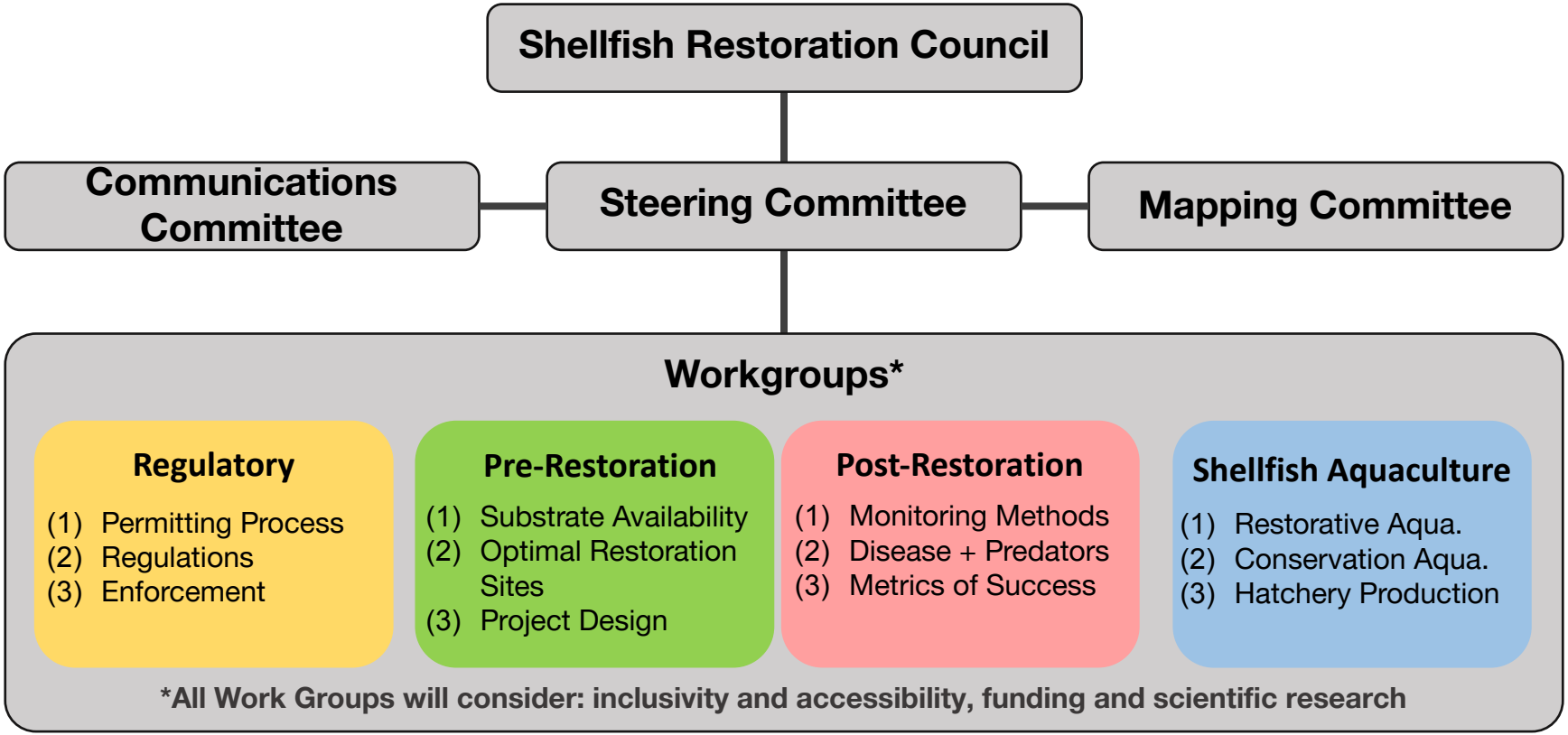
Pew's role as a co-facilitator:

- Mike Skuja, Aaron Kornbluth, Zoe Yuki Goozner are working with CT + RI on the development of their own state plans (other Pew staff are leading similar efforts in other states). The intent of these plans is to increase the pace, scale and efficacy of shellfish restoration.
- Based on these experiences, Pew recommends that the NY plan should have very specific and actionable recommendations to improve state regulations, the permitting process, how restoration groups and industry communities interact, address research gaps, etc.

Due East's role as a co-facilitator:

- Co-create a broadly owned plan that is asset-driven (*what has been working and how can we do more of that?)* with constituent input.
- Lift up various forms of leadership: scientific, policy makers, community members, industry, and people who care passionately about shellfish restoration – bringing the diversity of expertise including those closest to the ground.
- The result is an ongoing process that has collective impact – building something that is equitable and enduring

Organizational Structure: the *Who* and the *How*



Summary of Public Comments on the Organizational Structure

- **Will the Pre-Restoration workgroup consider algal quantity and species that are available to meet the nutritional needs of shellfish?**
  - Yes
- **There needs to be more clarification and distinctions between the Pre-Restoration and Post-Restoration workgroups' functions and possibly the addition of a Construction workgroup**
- **Would like more consideration on science in the Pre-Restoration workgroup's 3 focus areas**
  - Agreed, the Steering Committee (and co-facilitators) will figure out how to consolidate and reflect cross-over between the pre and post restoration workgroups functions and work.
- **Outreach and Education should be a cross-cutting theme for all workgroups**

Organizational Structure: the *Who* and the *How*

Topic-specific Workgroups (WG)

Regulatory

Focus Areas:

Permitting Process: Update and streamline the process.

Regulations: Identify and revise NYS shellfish regulations that significantly hinder restoration.

Enforcement: Identify and find solutions to restoration projects' and decision makers' biggest enforcement challenges.

Pre-Construction

Focus Areas:

Substrate Availability: Inventory and highlight the best practices shell recycling, curing, storage, & distribution.

Optimal Restoration Sites: work with the mapping committee to determine optimal sites for restoration in NY waters.

Restoration Project Design: Develop a best practices guide for gear and methodology to deploy for restoration projects.

Post-Construction

Focus Areas:

Monitoring Methods: Develop a guide of best practices for monitoring that will allow comparisons among NY projects.

Disease and Predators: Develop a set best practices for avoiding and dealing with shellfish disease and predators, including practices for public health safety.

Metrics of Success: Defining/measuring successful shellfish restoration.

Shellfish Aquaculture

Focus Areas:

Restorative Aquaculture: Identify ways to expand the ecological and socioeconomic benefits of shellfish aquaculture.

Conservation Aquaculture: Develop a plan to better integrate the shellfish aquaculture community into restoration.

Hatchery Production: Identify opportunities to expand seed and substrate production.

Cross-cutting Themes

Inclusivity/Accessibility: How can you use inclusivity and accessibility for increased community education and engagement?

Funding: What are opportunities and solutions for the ongoing funding needs?

Scientific Research: What are the scientific/research/data gaps?

Each WG will be tasked with:

- Developing a set of recommendations to revise, update and streamline their WG's most challenging barriers to shellfish restoration efforts in NY waters
- Incorporating the 3 Cross-cutting themes into their set of recommendations

Each WG should have:

- 2 co-chairs
- a *suggested* min. of 3 and max. of 8 members
- at least 1 member (or co-chair) who has specialized expertise for each of the WG's 3 Focus Areas

Jamboard Exercise: Your Expectations for the Process

Breakout Discussions

Co-creating a shared NY Shellfish Restoration Management Plan

- In a small group please discuss the following prompts *(20 mins)*:
  - Have we struck the right balance of efficiency and inclusion? If not, how might we shift?
  - Are the key issues covered? If not, what's missing?
  - Are there some essential partners we should engage in the work groups?
  - Other comments/feedback

- We will come back together for group feedback on the SRC structure

Compilation of Public Comments from the Breakout Discussions

Have we struck the right balance of efficiency and inclusion? If not, how might we shift?

- Will want to hear from those in the industry and in academia
- More representatives from industry - a gap that will be filled
    - Inclusivity of commercial fisherman and pleasure boat groups
- Be willing to adapt on the fly
- Pre- and post- restoration should be coupled so that there's iteration/feedback
- Keep water quality issues in mind
    - Possibly its own group? Focus on monitoring/ contaminants/ public info campaign for watershed residents
- Communication r.e. permitting for pre-restoration workgroups
- Meant to be a go to document for how the state moves forward with restoration projects in the future. A blueprint. Methodology. What works.
- What do you monitor and measure to be able to track success?
- Cohesive plan we can all get behind.
- Affects funding.
- Amplifies voices. Strength in numbers.
- How can we learn from other states?
    - Private aquaculture is contentious, public efforts often lauded, there are similarities though….links to first question asked at meeting…how to move public agencies in the right direction with public involvement when debating control of bottom.
    - We are engaging in the future of where industry is going; working to integrate conservation with industry.
- Site sanctuaries near aquaculture operations?
    - Makes sense, need to look at it more.
- Conflicts with restoration goals and aquaculture goals are big-need to address this upfront in the process. Healthy bottoms can result in conflict. Most oysters come from farms, key to engage b/c they outnumber natural oysters so much, keep cooperative spirit.
- Interest in restoring non-commercial shellfish, like the ribbed mussel. Ribbed mussel restoration could improve ecosystem health/dynamics for commercial shellfish species and other non-shellfish species (e.g. spartina).
- Habitat/oyster reef restoration needs to be addressed and executed comprehensively rather than through a single-species perspective. It is a lot easier to look at one little piece but the result is not as impactful/durable
- Human inclusivity: in previous projects, we've unintentionally excluded expertise from people and it ended up hurting the project's planning process. For example harvest management: we originally thought we just had to come to an agreement with harvest managers but neglected those who used to be in management but are no longer and their expertise.
    - In another project on water quality: we did not include the scientists on drinking water who knew a lot about ground and surface waters. Could see groundwater experts helping in the pre-restoration workgroup

Compilation of Public Comments from the Breakout Discussions

Are the key issues covered among workgroups? If not, what's missing?

- There is a lot of overlap between pre and post restoration WGs
  - Monitoring methods should occur in both spaces (i.e. disease and predators should be included in "Optimal Restoration Sites")
- Will need to measure survivorship in Post Restoration
- Will there be any overlap of members in WGs to address common issues?
- Would like to see greater emphasis on community feedback + engagement; feels like this is missing
- Education/outreach/providing public with more information (as a cross-cutting theme for all WGs)
- For Regulatory WG, add NSSP mandates and how it may restrict activities
- Permitting issue is huge. Very difficult.
- Looking at increasing the survival rates of seed. Best practices. How to protect little seed from predation.
- Connection among the issues - permitting and success of seed.
- Shell recycling and substrate - connect to waste reduction - integrate into other conversations re: reducing waste in landfills (oyster shells for food cycling grants) - are clams better than oysters as substrate for restoration - using surf clam shell now?
- Regulatory, Pre-Restoration, Post Restoration, Shellfish Aquaculture
- Missing species we don't think of as shellfish species: rib mussels and marshes, link to habitat with these other foundational specie
- Pre-restoration? Contracting, construction, is restoration step between pre and post
- Monitoring methods cross over b/t pre and post
- Re. the org chart: the umbrella is here, but the specificity under each of the workgroups and their focus areas matters the most
- Just because an oyster lived/thrived in a geographic location historically, it does not mean it can survive or thrive in that same location present day/into the future. Make sure we are planning for the future and not the past
- Which workgroup will define the amount of shellfish product that can be contributed towards restoration efforts?
  - Response: Aquaculture workgroup

Compilation of Public Comments from the Breakout Discussions

Are there some essential partners we should engage in the work groups?

- ACOE, DOS, Parks (NYC Parks), USFDA, for Regulatory WG;
- NPS for Jamaica Bay
- Municipalities
- Shellfish harvesters
- Other research institutions (perhaps a more formal way to engage academic community)
- Engaging yacht clubs as partners
- Sailing community

Additional comments & feedback

- Shell recycling projects (good/necessary for public outreach for some sites)
- People who don't have time to be on WGs – how can they get involved? How to do better outreach to interested participants
- E.g., HEP Oyster WG can get engaged

Next steps:

- Timeline TBD
- Workgroups/committees will start coming together
- Conversations with stakeholders
- Hear from *Connecticut Shellfish Restoration Guide* Task Force about their effort
- Opportunities for engagement

Thank You!

Connect With Us!

Visit **DEC's Shellfish Restoration Council** webpage for updates & details about future meeting information:

https://www.dec.ny.gov/outdoor/112236.html

NEW YORK STATE | Department of Environmental Conservation