



Oysters

in the Chesapeake Bay



Harvest & Restoration Options:

Sanctuaries

No harvest areas populated with disease-resistant stocks that can serve as base stocks for harvested regions.

Harvest Reserves

Open harvest allowed until a minimum amount of oysters exists, after which, the reserve is closed for a set period.

Private Aquaculture

Bottom and off-bottom private leases.

Open Harvest

Harvest is open to any permitted fisherman.

A successful strategy will likely involve all four harvest options.

Benefits of Oyster Harvest & Restoration:

Cultural Significance

The Chesapeake Bay region has a long history of oyster and water-related activities and culture. Ensuring the future of the Bay oyster and increasing water quality will allow those traditions to continue.

Increased Catches

Healthy oyster reefs can provide food and shelter for many species, especially when they are juveniles. This can increase future adult catches of oysters, fin fish, crabs, and others.

Coastal Protection

Oyster reefs protect shorelines against coastal flooding and erosion by decreasing wave height and wave energy. Sea level rise will increase the future value of coastal protection.

Pollution Removal

As oysters filter water when they feed, they take up excess nutrients such as nitrogen and phosphorus that pollute the Bay. This can augment the cost associated with cleaning up the Bay.

Jobs

A healthy oyster population ensures fishing jobs for harvest of oysters and species that rely on reefs for protection and food. Restoration also creates construction and monitoring jobs.

Sustainability

Utilizing an optimal mixture of harvest and restoration strategies will help ensure that the oyster population continues to grow, which will allow more oysters to be harvested and ensure its sustainability.

Costs of Oyster Harvest & Restoration:

Infrastructure

Constructing reefs is expensive and time consuming and must include seeding and shell/substrate costs. Costs can be exacerbated if a restored reef fails. Therefore, sound construction and best practices need to be administered.

Closed Harvest Access

In a perfectly regulated and enforced fishery, open access harvest would generate the most overall benefit. However, the difficulty associated with setting perfect catch limits and enforcing those limits, requires a restricted fishery be enacted.

Monitoring & Research

Restored oyster reefs will require monitoring to ensure their success. Continued research will also be necessary to identify best practices and ensure potential future issues, like diseases, are identified and a solution is found.

Uncertainty and Risk

There are risks involved in working with any natural system and fishery. Risks and unknowns such as diseases, climate change, illegal harvest, predation, changes in broodstock, and future budgets all account for a potential cost that must be accounted for.

Show me the money!

Present: Costs > Benefits

Upfront costs will likely outweigh the upfront benefits. Infrastructure costs will be the most immediate. Following infrastructure, monitoring and research as well as enforcement will be required to ensure the growth of the oyster population.

Future: Benefits >> Costs

As restoration efforts mature, spillover from restored reefs will benefit the harvest areas. Aquaculture and the increased total number of oysters will increase catches as well as water quality and coastal protection. Benefits will likely far outweigh costs.