The Nature Conservancy NH Research Priorities

Strategy: Turning the Tide at Great Bay

Lead high impact restoration initiatives to improve the health & resilience of imperiled & ecologically significant estuarine/marine habitats

1. Water quality enhancement: clarity, nutrient removal, denitrification, etc.
2. Habitat provision resulting in biological production
3. Watershed & coastal connectivity

Research Priorities:

- Water quality conditions near restoration & aquaculture
- Effects of climate change & environmental stressors to the system: precipitation, ocean acidification, SLR
- Oyster larval dynamics & recruitment patterns
- Native & restored adult oyster demography: growth, survival, size classes, reproductive output
- Eelgrass spatial assessment & documentation of recovery sites
- Sedimentation rates & dynamics
- Ice floe effects
- Eelgrass & oyster (native, restored, aquaculture) interaction & synergy
- Fish & invertebrate density & distribution within the Bay: native oyster reefs, restored oyster reefs, eelgrass beds, aquaculture sites
- Tidal culvert removal & salt marsh dynamics
- Effects of dam removal
- Watershed health & coastal connectivity
- Develop nature based solutions to further climate adaptation strategies

Strategy: Sustainable Fisheries for the Future

Transform fisheries management to stabilize groundfish stocks, improve the ecological resilience of the Gulf of Maine, & anchor access to the fishery for NH fishermen.

1. Foster collaborative research to improve understanding of the Gulf of Maine ecosystem & develop more sustainable fishing practices
2. Fishery data modernization to drive more effective & cost-effective sustainable fisheries management.

Research Priorities:

- Effects of climate change & environmental stressors to the Gulf of Maine: ocean acidification, ocean warming, current regimes, species range shifts
- Groundfish population dynamics: abundance, distribution, growth, age, spawning grounds
- Modernizing information collection by fishermen with tools like digital reporting & electronic monitoring to inform stock assessments & fishermen's ability to fish more sustainably & profitably
- Selective or alternative gear studies
- Diadromous, demersal & forage fish demography
- Understanding & improving habitat management for fish production
- Advance ecosystem based approaches & climate ready fisheries design

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