

Modernizing Maine's Municipal Shellfish Programs



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Maine Clammers Association



- Represents people and fishing families who care about and rely on healthy Maine marine environments with the spirit of Maine's wild clammers.
- Working to bring attention to ME's Green Crab Crisis and supports efforts to restore native Maine marine resources.

Value of Maine's Shellfish Industry



- essential part of Maine's culture + heritage
- (healthy) local food
 - soft-shell clam is Maine delicacy
- benefits/strengthens local economy
- employs 2nd most amount of fishermen in ME
- currently 3rd most valuable fishery in ME
- economic worth to the state is currently \$56 million/yr
- **However it's economic value could be so much more!**

Imagine: a thriving town resource, managed for the benefit of current and future generations

- **Overlooked for economic and social benefit opportunity!**
- with restoration and Modernized Municipal Management, intertidal areas have the potential to be the economic drivers of our towns.
 - **Access to healthy, local food** (food sovereignty and security)
 - **Renewable, sustainable jobs** (no corporate control)
 - **Increased local businesses** (more \$ stays in local economy)
- similar to community-owned forests

Public Trust Resource

- Unique municipal/state natural resource co-management agreement
- Privilege and responsibility and of managing shellfish as a public trust resource.
- **Resource belongs to all citizens!**



Green Crab Invasion!

- We've lost 90% of our soft-bottom intertidal and shallow subtidal habitat in at least Casco Bay and likely many others all along the coast.
- Clammers first noticed the scope of the invasion around 2007.



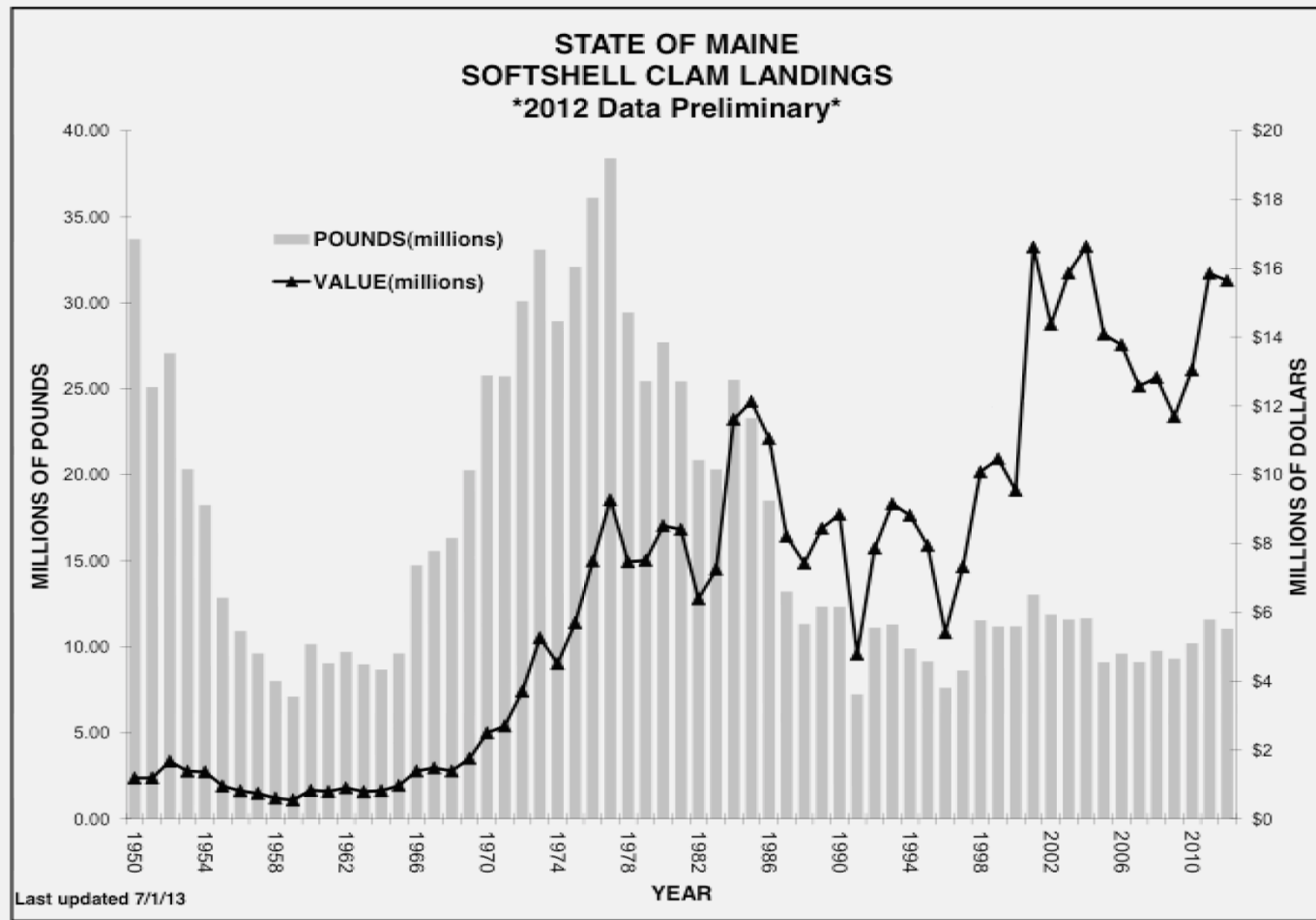
First Invasion: 1950's

- Similar infestation occurred in 1950's due to a warm period.
 - 1950-1959 the annual average temperature was 49.5°
 - clam landings very low (in 1959 less than 100,000 bushels)
- DMR's Dana Wallace found a distinct correlation between a rise in water temperature and the green crab population explosion.

1950's Green Crab Invasion

- State forced to take action due to collapse of Shellfish industry.
 - DMR developed and promoted fencing to protect the resource from the crabs.
 - 1960's legislation helped towns finance the building of the fences.
- However, shellfish was actually saved by the return of cold weather in the 1960's.

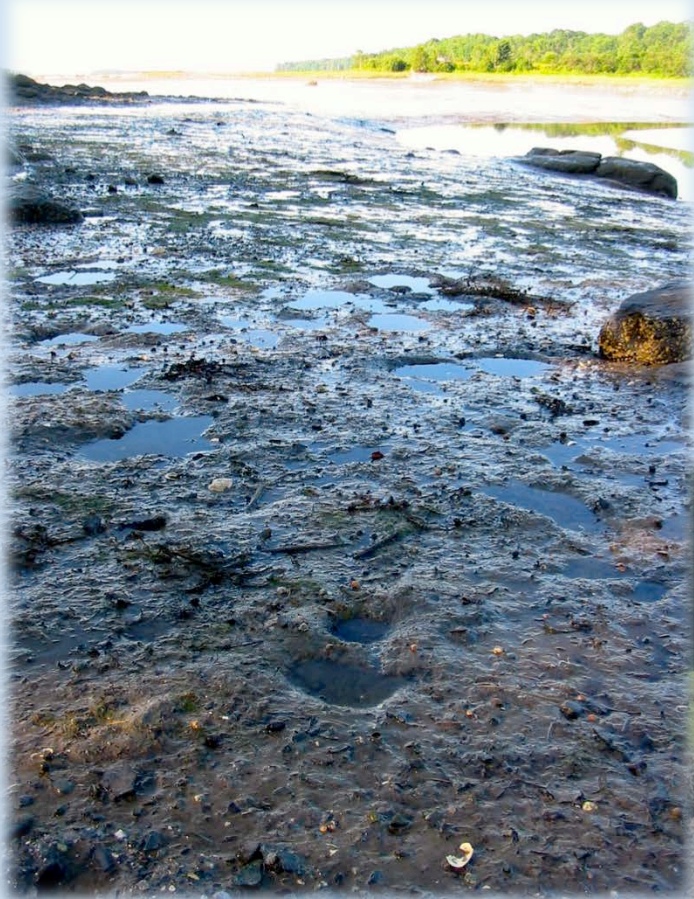
Landings data clearly shows a correlation between green crab population increases and decreased clam landings



Climate Change exacerbates Green Crab Invasion

- Due to predictions of continued increased average temperatures in ME, we can't depend on sustained cold weather to save the resource as it did in the 1960's.

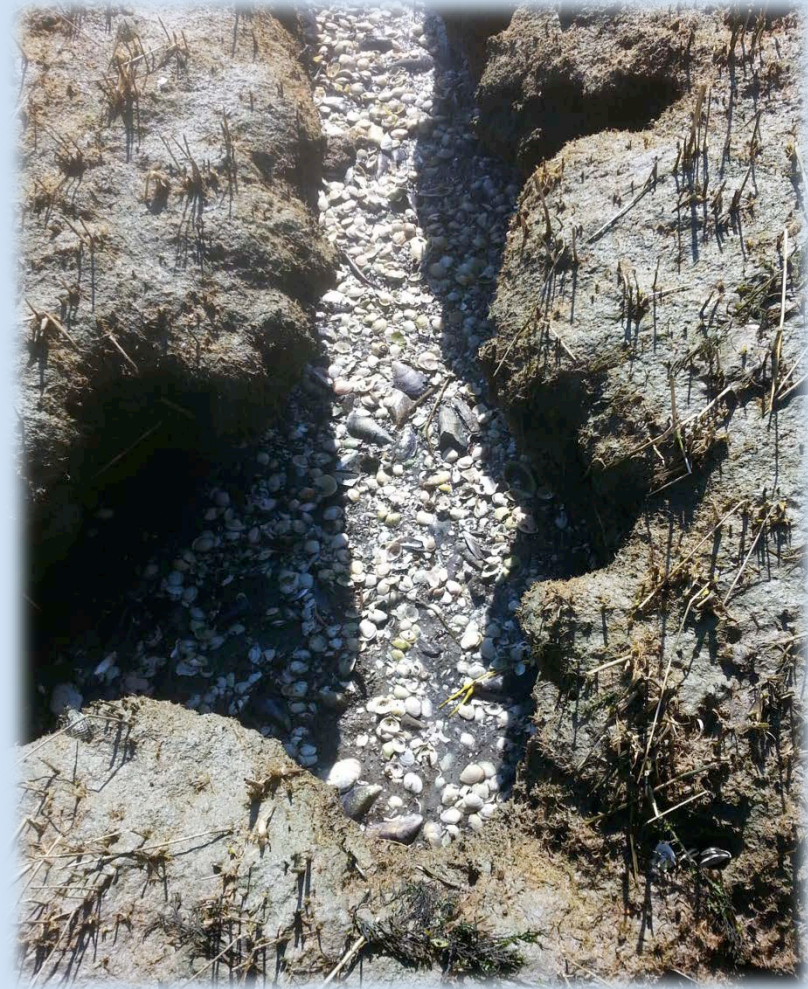




“Pock marks”
indicate green crab
predation



Green Crab burrows



Green Crab Menu:



Freeport's Project

- Freeport recently undertook the most ambitious green crab removal and mitigation project in the state.
- Clammers were the main source of (volunteer) labor for the project.
 - **trapping**
 - designed, built and installed **fencing**
 - * difficult to perform physical labor on the mudflats- only clammers are truly capable of conducting this work on a large scale.
- Shellfish Conservation Days

Green Crab Trapping



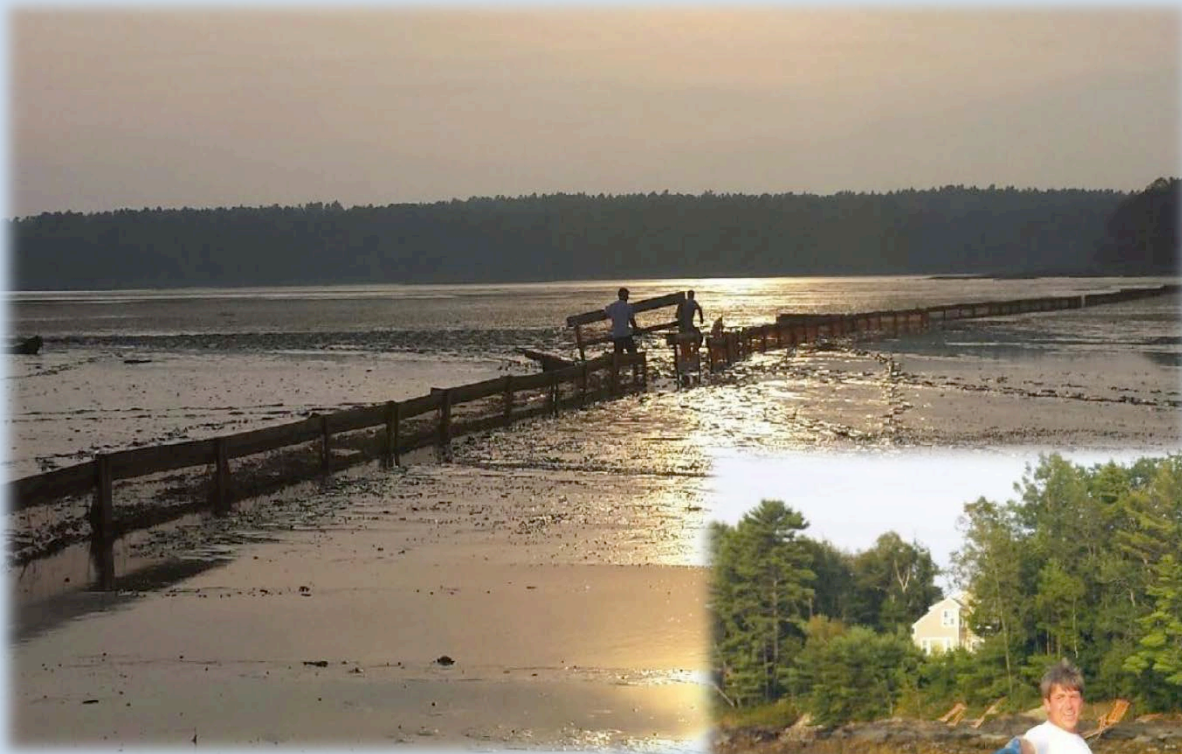
Designing & Building



Installation



Maintenance



Experiments



MANAGEMENT AND CONTROL OF INVASIVE EUROPEAN GREEN CRABS

- Currently, ME's Municipal Shellfish Programs (MMSP) are incapable of mounting large scale efforts aimed at protecting their wild harvest intertidal shellfish growing areas or mudflats.
- Program standards and management strategies need **modernizing** to have any chance of preserving this unique municipal/state natural resource co-management agreement, as well as restore biodiversity and health to Maine's marine habitat.

How do we protect our shellfish resources for future generations?

- Institute modern, stewardship-based conservation requirements.
- Modernization will be a multi- step process.

1) Establish Modern Standards

- Establish minimum number (20) of commercial licenses in each town for co-management eligibility.
- municipal control in towns should require modern standards such as:
 - a well-coordinated conservation program
 - scientific stock assessments

2) Education & Outreach

- Clear, concise message to fisheries.
- DMR marine fisheries stakeholder meetings.
 - zone councils
 - newsletters & website
 - marine industry associations
- Municipal Shellfish meetings and municipal mailings.

3) Licensing

- 20+ years of limited entry = aging clammer population
 - Need clammers to provide labor necessary to implement effective conservation programs.
- Address aging clammer population through:
 - creation of a senior license program
 - student licenses (16 years of age or older)
- Minimum license numbers to be eligible for municipal programs.

4) Leasing of Intertidal Resources

- Current law allows towns to lease up to 25% of the intertidal zone.
- If successful, protected acreage will produce seed that will then circulate on the wild flats.
 - this will result in increased productivity chances for the wild flats.
- But **certain standards must be in place to prevent a resource grab...**

Leasing continued..

- For approval, each lease must have an approved standard resource protection plan that excludes green crabs with fencing or netting.
- municipal lease requirements **MUST limit the ability of large corporations to assume control of large tracts of intertidal resources** through establishing maximum acreage requirements.
 - **3 acres maximum lease area.**

5) Establish conservation requirements that better match needs of modern shellfish management

- **Shoreline cleanup is a waste of time!**
- We must consider the devastating impact invasive green crabs have on our shellfish populations when determining appropriate Conservation activities.
- A modern conservation program needs organization and oversight from paid program staff.
- Activity workload must be realistic, with a focus on follow-through.

6) Transition job description of Municipal Program paid staff (warden) to enforcement of a modern conservation program

- A warden with a pure enforcement role does no longer reflect the needs of the shellfish resource.
 - a warden in a police-like position is no longer needed.
- **Restoration and conservation coordination** is the modern Shellfish Program focus.
- To implement the warden transition, there need to be changes to town budget and job description through a voting process.

Summary:

Transitions required to modernize shellfish management to give the resource a chance against the green crab invasion:

- 1) Establish modern Shellfish Program standards
- 2) Education & Outreach
- 3) Updated licensing system
- 4) Intertidal leasing
- 5) (Effective) conservation requirements
- 6) Transition job description of warden to one of restoration and conservation coordinator

Thank You!