

ADF&G Fishing Management Area Ma www.adfg.alaska.gov



"CONTEXT: Invasive species" = "not native" & causes economic or environmental harm or harm to human health. Examples: local extinction of native species, spread parasites, alter food webs, alter habitat, alter energy flux in ecosystem.

"Once widespread and abundant, aquatic invaders are extremely difficult to eradicate. However, if they are detected soon after initial establishment, removal efforts can be successful. Successful management depends on early detection of new invasions within this window of opportunity.* • Purpose of Community Monitoring for Marine Invasive Species in Southeast Alaska since 2007.

"Why Do"

Southeast Alaska is "Gateway" for Invasions from West Coast Early Detection/Rapid Response Most Cost Effective Management Approach to Invasions

"Why Do with Community Monitoring"

Early Detection Ease of Sampling – Only Requires Presence/ Absence Data

Leverage Scarce Resources

Community Monitoring has benefit of Outreach and Education Community Monitoring has benefit of Human Capital*



• Designing a Process for What to Collect How to Collect It

Community Programs already being done in other AK Regions: SERC, KBERR, PWSRCAC Species of concern identified, both present and possible: Know what invaders are moving north up west coast Scientific protocols and methodology already developed for both green crab and tunicates: focused on these species, developed a habitat suitability model for green crab using Shorezone program to guide site selection



Dvex: colonial tunicate



Photos: L. Shaw



Environmental Professionals are Leading Regular Efforts:

Alaska SeaGrant in Ketchikan (2007- PRESENT)

Sitka Tribe, US Forest Service, National Park Service and Southeast Long Term Monitoring Network in Sitka (sequentially 2007-PRESENT)

National Park Service in Gustavus (2007-2010)

Prince of Wales Watershed Association (2013-PRESENT)

Broader Interest from Community Reached through 2 Bioblitzes:

Sitka – June, 2010, SERC, Sitka Tribe, ADF&G, UAS, SFU, NMFS Ketchikan – September, 2013, SERC, AK SeaGrant, UAS



Training Local Monitors:

Southeast Alaska training event in Juneau in summer, 2007, invited interested persons from various natural resource entities, paid travel, PWSRCAC supplied teacher, both presentations and field components

Provide supplies (Traps for green crab, settling plates for tunicates (SERC), Temp/Salinity meters, Misc. Field Equipment

Provide protocols, data sheets, ID aids (field guides, specimens)

Bioblitzes reinforce these and draw in more people, allow for advancement of techniques and testing (penny test to see how much people see from docks). Has led to school group taking on monitoring in Ketchikan.



Facilitate Communication and Cooperation: Regular marine inavasive species teleconferences give monitors the opportunity to share information, solve problems and brainstorm new ideas with others in the State and beyond.

Support Monitors to Recruit others:

Freitag – Allen Marine, Sea Plane time Sitka – Sitka Tribe to NPS to Southeast Long Term Monitoring Network – then POW Watersheds

OTHERS WILL DROP OUT – ITS OK and DRIVE ON!

Supplies, permits: Provide traps, data loggers, protocols, etc. Apply for and report to ADF&G collection permits.

Data sharing on websites and newsletters: Share data on websites (SERC Plate Watch and Sitka SALMoN). KBERR newsletters give feedback on results.

Listen and Act on Monitor Input: Sitka Bioblitz was a result of Sitka Tribe Monitor wanting to know what tunicate monitoring was leading to. This in turn resulted in holding a "biobltiz" focused on marine invasive species and the discovery of a Dvex infestation in Whiting Harbor

The Moment of Discovery!!



Apply Results to Research: Marine Invasive monitoring is blended with research. Two peer-reviewed published scientific papers from Sitka (Discovery of Dvex) and Ketchikan (bioblitz methodolgy) bioblitzes and ongling NFWF grant to study Dvex impacts to herring.

Apply Results to Management and Policy Action: This goal is facilitated by broad community outreach, contact with media:

Examples from SEAK Invasive Monitoring:

AK Legislature funded eradication effort in Whiting Harbor for Dvex

Corps of Engineers required upland disposal of pilings from ANB harbor, known to be contaminated with invasive tunciates from monitoring

Corps General Permit for Docks in SEAK being drafted for only new materials to discourage movement of invasives between areas.

Combine with other monitoring efforts: can monitors combine/expand sampling without compromising original intent (for example ocean acidification?) How much time and effort can be asked of monitors?

Statewide clearinghouse of community monitoring for State?



LEVERAGE! Part of a Broader Network Communities/Organizations that **Have or Are** Supporting Green



