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Mapping on the Edge: shoreline mapping for regulation and voluntary stewardship

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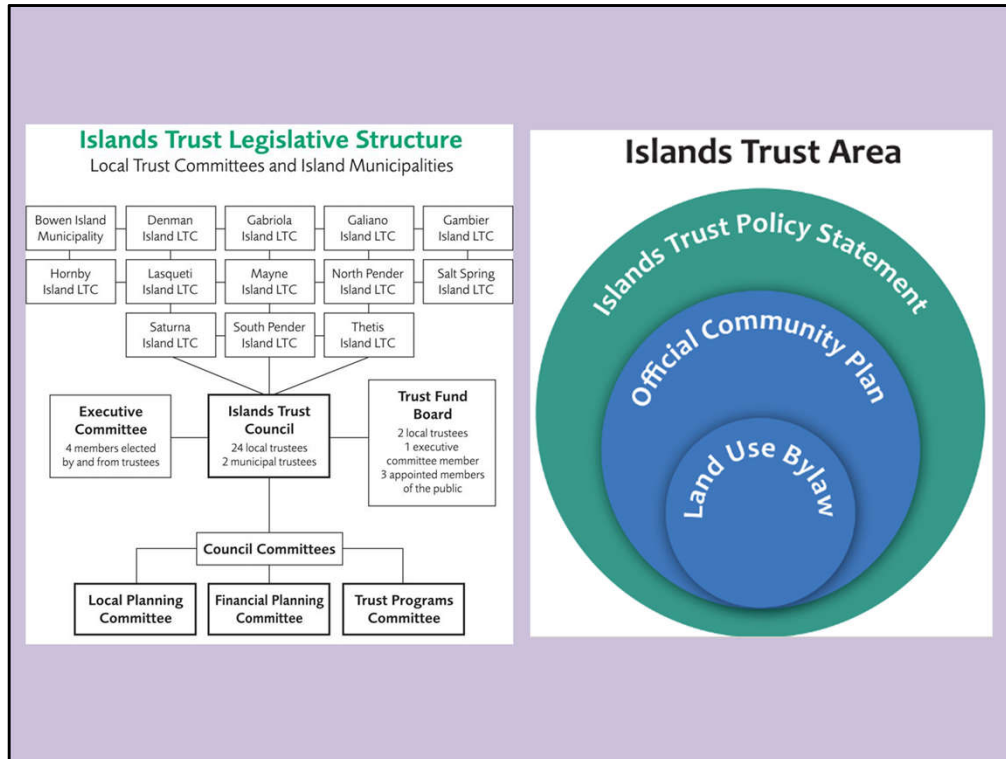
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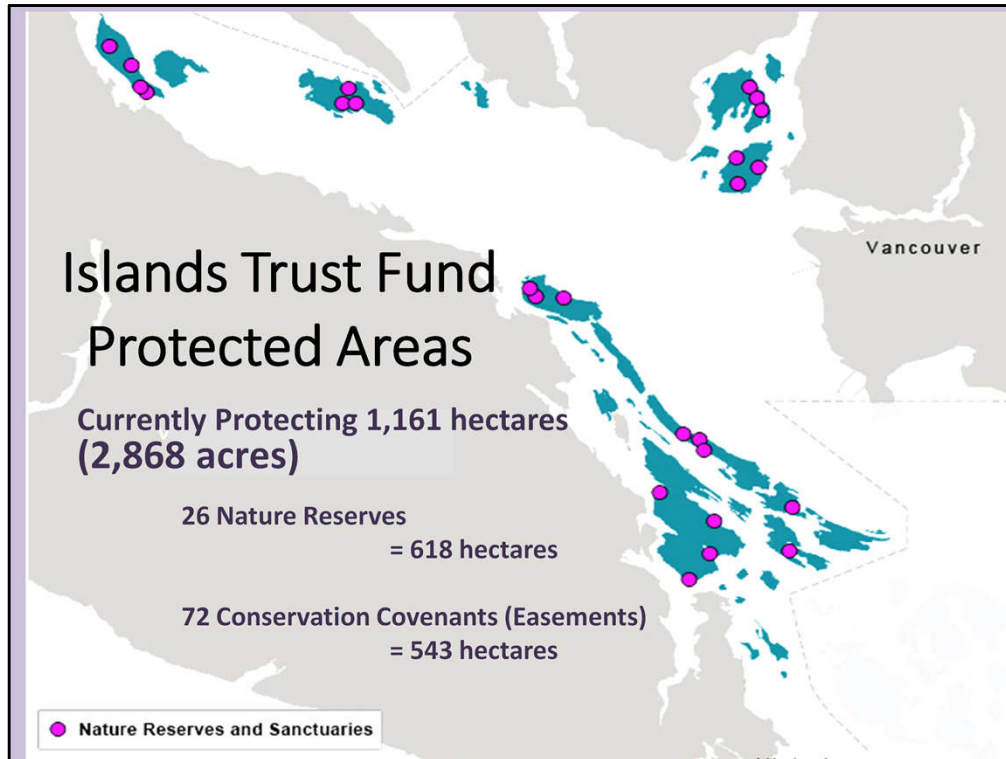
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Good afternoon, my name is Kate Emmings and I am the Ecosystem Protection Specialist with the Islands Trust and Islands Trust Fund. These two affiliated agencies are unique bodies created by BC's *Islands Trust Act* to preserve and protect 650 islands in Canada's Salish Sea.



The Islands Trust does this through land use planning, including zoning and regulation, as well as through related advocacy work. It functions very much like a local government and can regulate shoreline uses including docks, seawalls, and building setbacks.



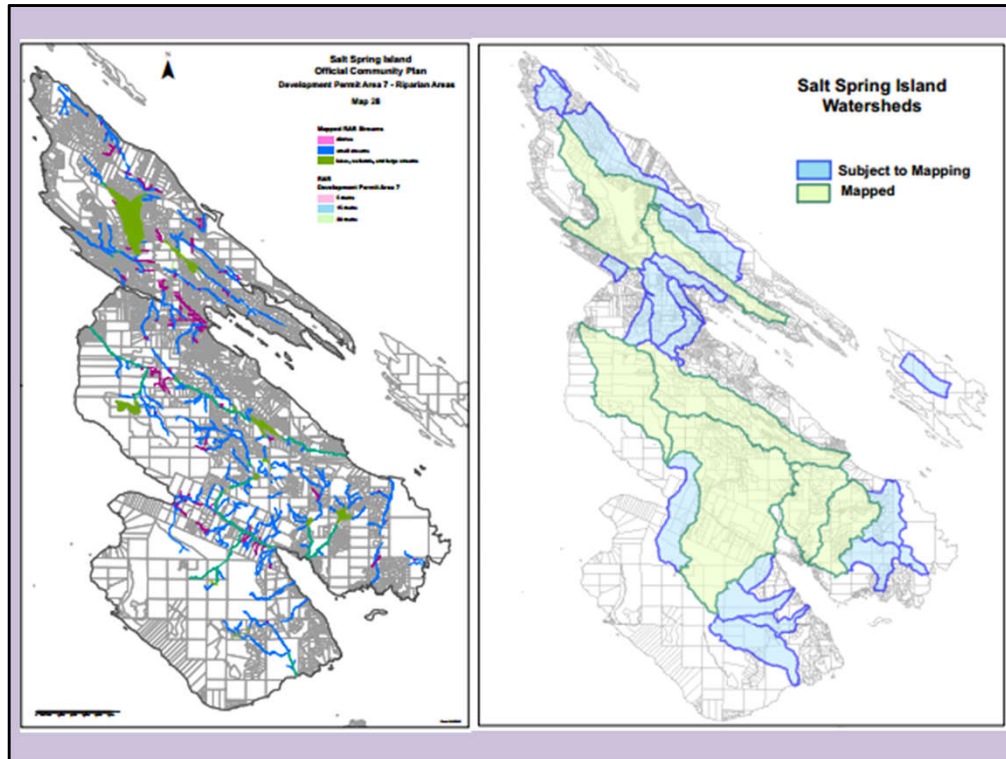
The Islands Trust Fund works to protect the islands through land securement, proper management of conservation lands and facilitation of land and marine stewardship. Currently, the Islands Trust Fund manages 1,161 hectares (2,868 acres) of land and 13 km of shoreline.



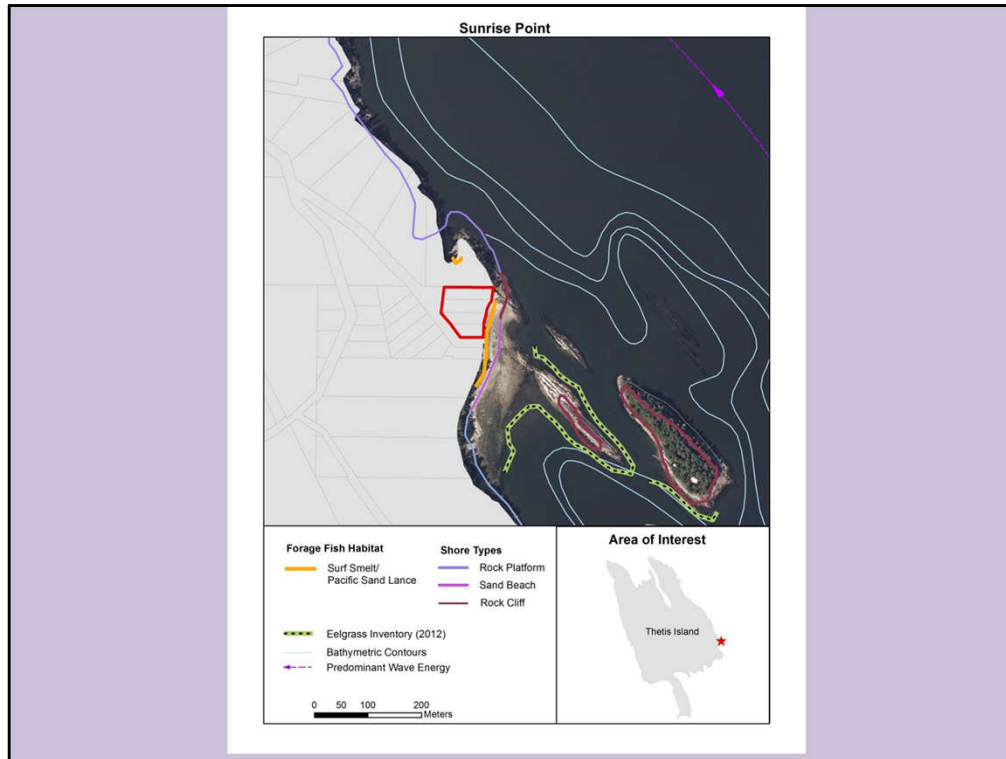
Most of the work done by the Islands Trust and the Islands Trust Fund is terrestrially based. However, being islands, we have jurisdiction over nearly 1800 km of shoreline. Because of the land/sea connection, we have been identifying sensitive shorelines through mapping.



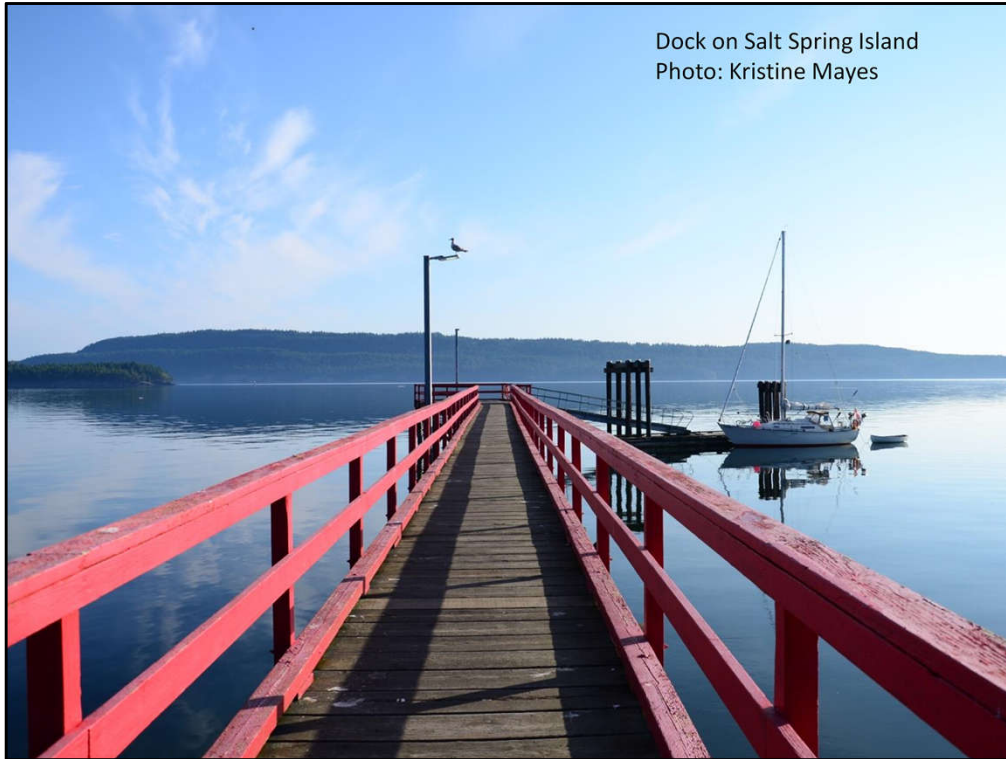
In particular, we've been working in collaboration with two non-profit agencies – SeaChange Marine Conservation Society and the BC Marine Conservation and Research Society – to identify shorelines with eelgrass habitat and potential forage fish spawning areas for Surf Smelt and Pacific Sandlance.



We've also been working to identify streams with potential to support salmonids to better understand linkages between land and sea. Because our jurisdiction is primarily land-based, our focus has been on what we can do on the land and shoreline to benefit marine environments.



The rationale behind the mapping is twofold: 1) To help us better identify areas that could or should be regulated for development purposes; and 2) To help us better identify suitable shorelines for ongoing stewardship and formal protection. Let me share some examples...



Dock on Salt Spring Island
Photo: Kristine Mayes

For example, Salt Spring Island bylaws, which had previously included general provisions for eelgrass protection could now point to mapping that identified areas of identified habitat and adjust development proposals accordingly.



The Islands Trust Fund has begun using shoreline mapping to identify important areas for conservation and to evaluate conservation properties. We have also begun to support embryo surveys on beaches with suitable forage fish spawning habitat in our nature reserves.



When we began planning our shoreline mapping, in 2012, we were focussed on our needs. What became apparent is that shorelines serve many needs and there were other agencies with different objectives, but a parallel need for mapping that made for excellent partners.

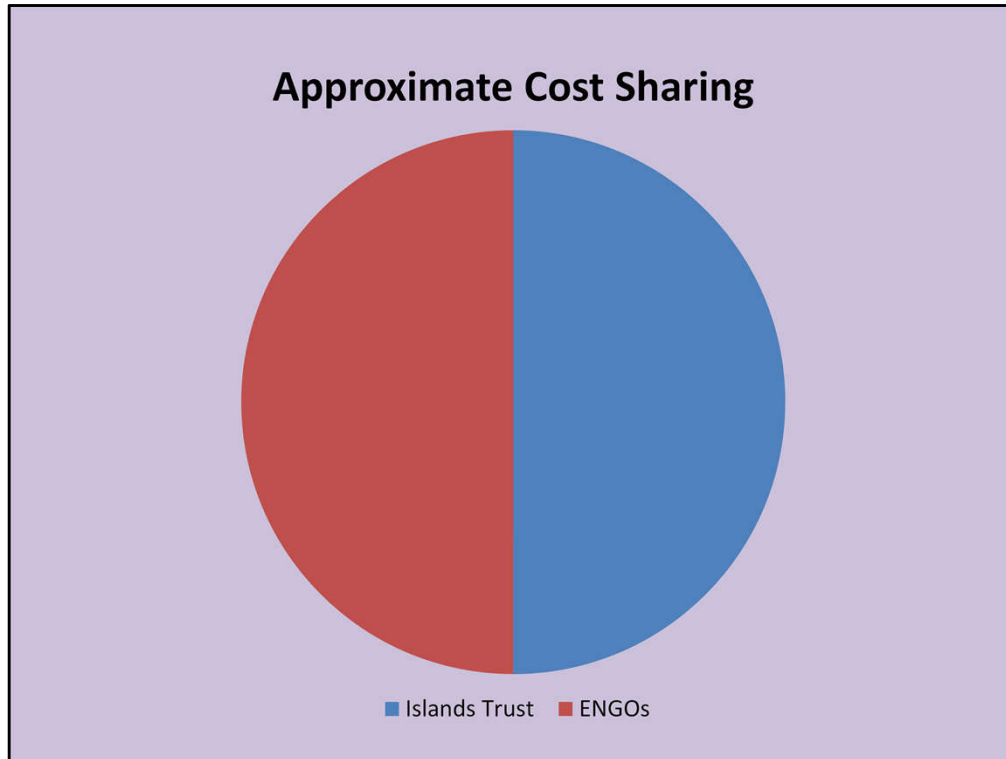


For example, SeaChange Marine Conservation Society was keen to identify sites for potential eelgrass restoration and had the skills and capacity for shoreline mapping. They were also able to apply for grants through agencies like the Pacific Salmon Foundation and the Victoria Foundation.

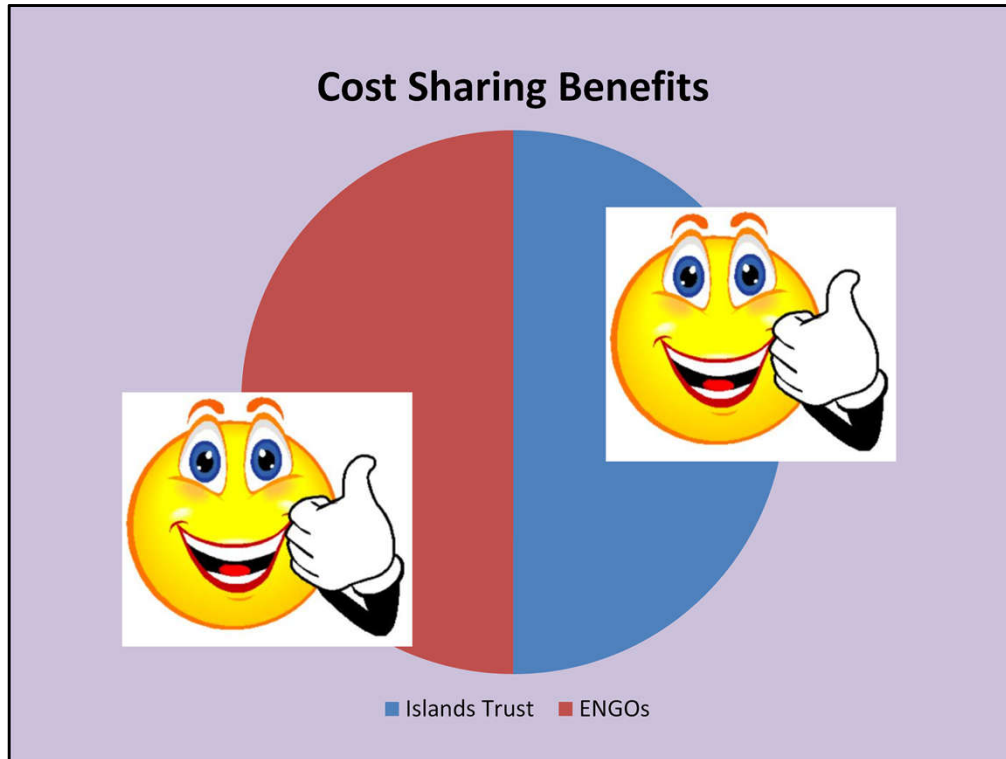


Medicine Beach Nature Sanctuary Embryo Surveys
with Ramona de Graaf, BC Marine Stewardship and Research Society
Photo: Davy Rippner

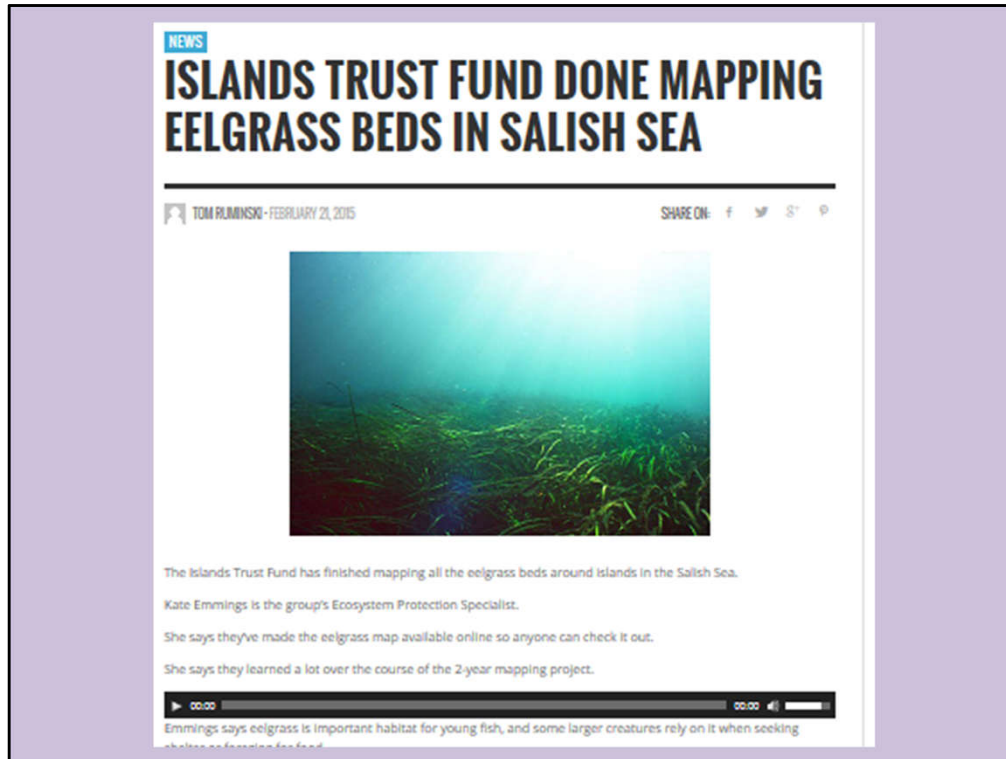
Similarly, the BC Marine Stewardship and Research Society, had been working hard to develop community partnerships for mapping a suitable forage fish spawning habitats with a view towards identifying which beaches to sample for eggs.



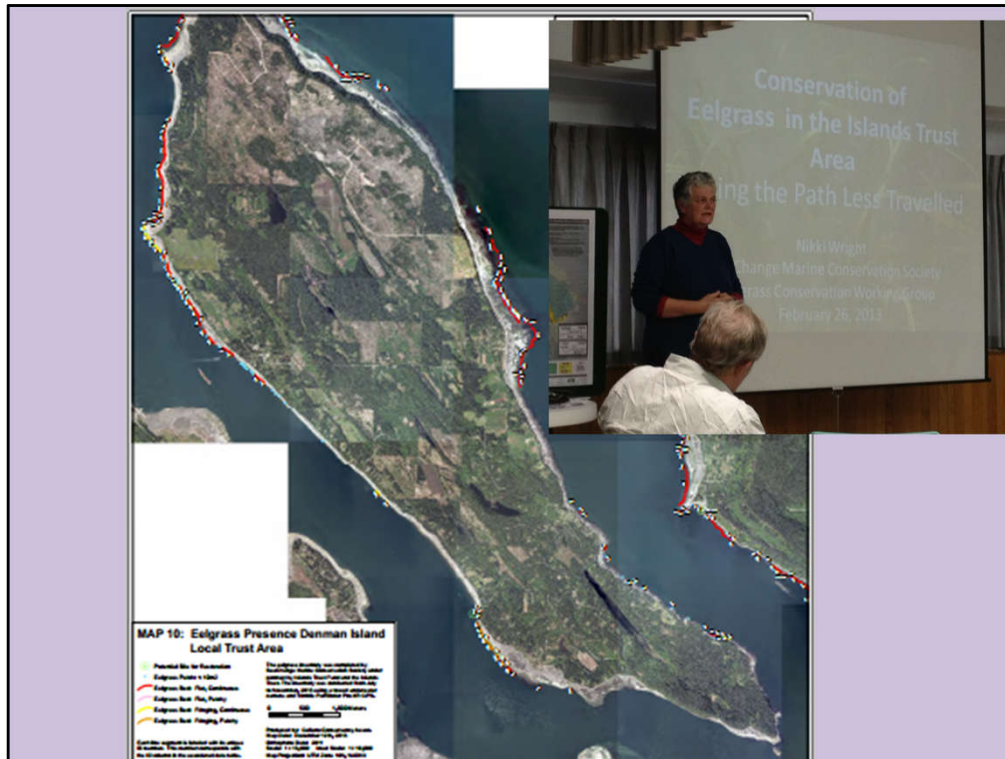
Working with each agency, the Islands Trust and Islands Trust Fund brought 50% to the mapping budgets, while each NGO fundraised 50% for the projects. All of us had to work together to create projects that had multiple goals, but there were budget and communications benefits.



Both the Islands Trust and the project funders were more likely to fund the projects because of the shared costs making the projects more likely to move forward.



The Islands Trust had capacity to issue and manage news releases and got several media hits for the project. Plus, the Islands Trust was able to share mapping with other regulatory bodies. The NGOs, were well suited to community education and brought in volunteers.



We need to tweak mapping procedures to accommodate multiple goals. For example, regulatory bodies like the Islands Trust need a high level of accuracy for presence of eelgrass and forage fish habitat so that the mapping can be well defended in public forums.



While NGOs are looking to better manage species through protection, community education and habitat restoration/remediation. Both goals are compatible, but sometime mapping standards and procedures need to be adapted.



Also, marine products are a hot commodity in our area and there are unanticipated benefits to comprehensive mapping products, including use for Environmental Assessments, Spill Response Planning, cross-border species planning and impacts of sea level rise on species.



Going forward, we would recommend collaborations between NGOs and local governments, provided each agency can agree and have a level of comfort with different goals and mapping uses and can come up with a methodology that meets their multiple goals.