

# Eyes On Eelgrass

## What is eelgrass?

Eelgrass (*Zostera marina*) is a flowering plant that grows in marine and estuarine waters across the northern hemisphere. Within our coastal embayments and along the shoreline, it provides critical habitat for hundreds of important marine species, including Dungeness crab, juvenile salmon, Pacific herring, black brant and river otters. Eelgrass meadows are exquisitely sensitive to disturbance. Recent surveys indicate that more than 35 acres of eelgrass disappeared from two sites in Northwest San Juan County, Washington in just three years. In light of recent losses, and because eelgrass is important for so many marine animals, Washington State declared in 1991 that it would tolerate no net loss of eelgrass.

### The SeaDoc Society

Ensuring the health of marine wildlife and their ecosystems through science and education

“The loss of eelgrass on our shorelines and estuaries has reached critical proportions.

This native grass provides important environmental benefits for a number of species, including our endangered salmon. We must take action now to prevent the loss of any further eelgrass habitat, as well as taking necessary steps to restore eelgrass where possible.”

– Governor Gary Locke

## Why is It disappearing?

Why and how eelgrass meadows are disappearing in San Juan County is not well understood. Loss of this critical habitat is likely costing the citizens of San Juan County and Washington State over \$800,000 per year in lost revenues from reduced availability of Dungeness crab and Pacific herring. To prevent further losses in the county, we need to first understand why it is dying.

On July 26, 2003 a group of ten experts met to evaluate potential causes for the eelgrass declines in San Juan County. Important stressors and potential causes warranting immediate research may include:

- local increases in water temperatures
- eelgrass wasting disease
- toxins and pesticides such as atrazine, cadmium, tributyltin
- nutrient overload coming from land source
- increased water turbidity (cloudiness)

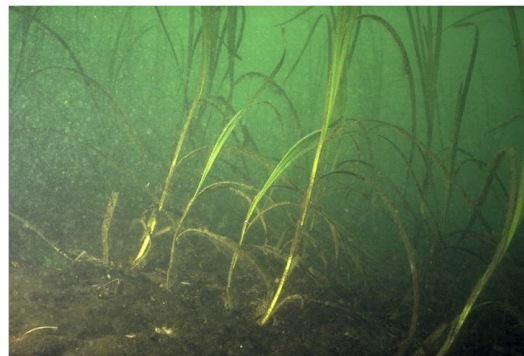
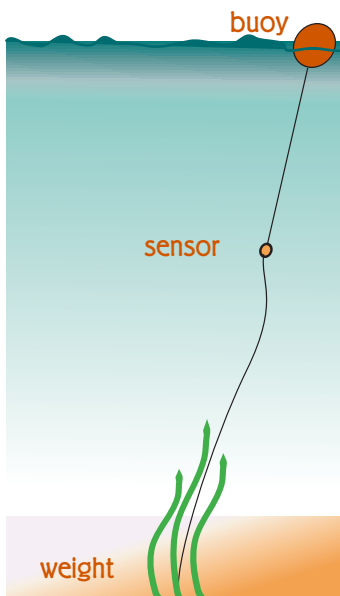


Photo Courtesy R.C. Phillips



## What are we doing about it?

To help answer some of these questions, the SeaDoc Society proposes to place over two dozen underwater sensors in embayments throughout the county. The majority of these sensors will measure local changes in water temperature, while others will also measure light, turbidity, dissolved oxygen and salinity. These sensors will provide us with critical information on the multiple factors that could be contributing to the loss of eelgrass in our county. They are an important first step to understanding why eelgrass is disappearing.

# Help Be Our Eyes On Eelgrass

“There is a forest beneath the Puget Sound and the coastal waters. It’s a forest of eelgrass and seaweed, and it’s just as critical to the wellbeing of the Northwest as the upland forests are. When that underwater forest is healthy, it means the fish are healthy. And that affects us all.”

– Billy Frank, Jr.

Chair, Northwest Indian Fisheries Commission

You can help sponsor this important research by adopting a sensor for an embayment or stretch of shoreline in your part of San Juan County. While the success of our Eyes on Eelgrass Initiative is leveraged by the guidance of marine biologists and state agencies, ultimately it will depend upon a unique collaboration between the scientists, agencies and citizens of San Juan County. A contribution of \$5,000 to the Eyes on Eelgrass Initiative will provide a year’s worth of continuous data on the temperature in which eelgrass meadows are living—and disappearing. The data obtained from your sensor will be analyzed by scientists, and used to make recommendations for how better to steward our marine backyard. Your participation in the SeaDoc Society’s Eyes on Eelgrass initiative is an investment in a healthy and sustainable marine ecosystem for herring, crabs, salmon and YOU.

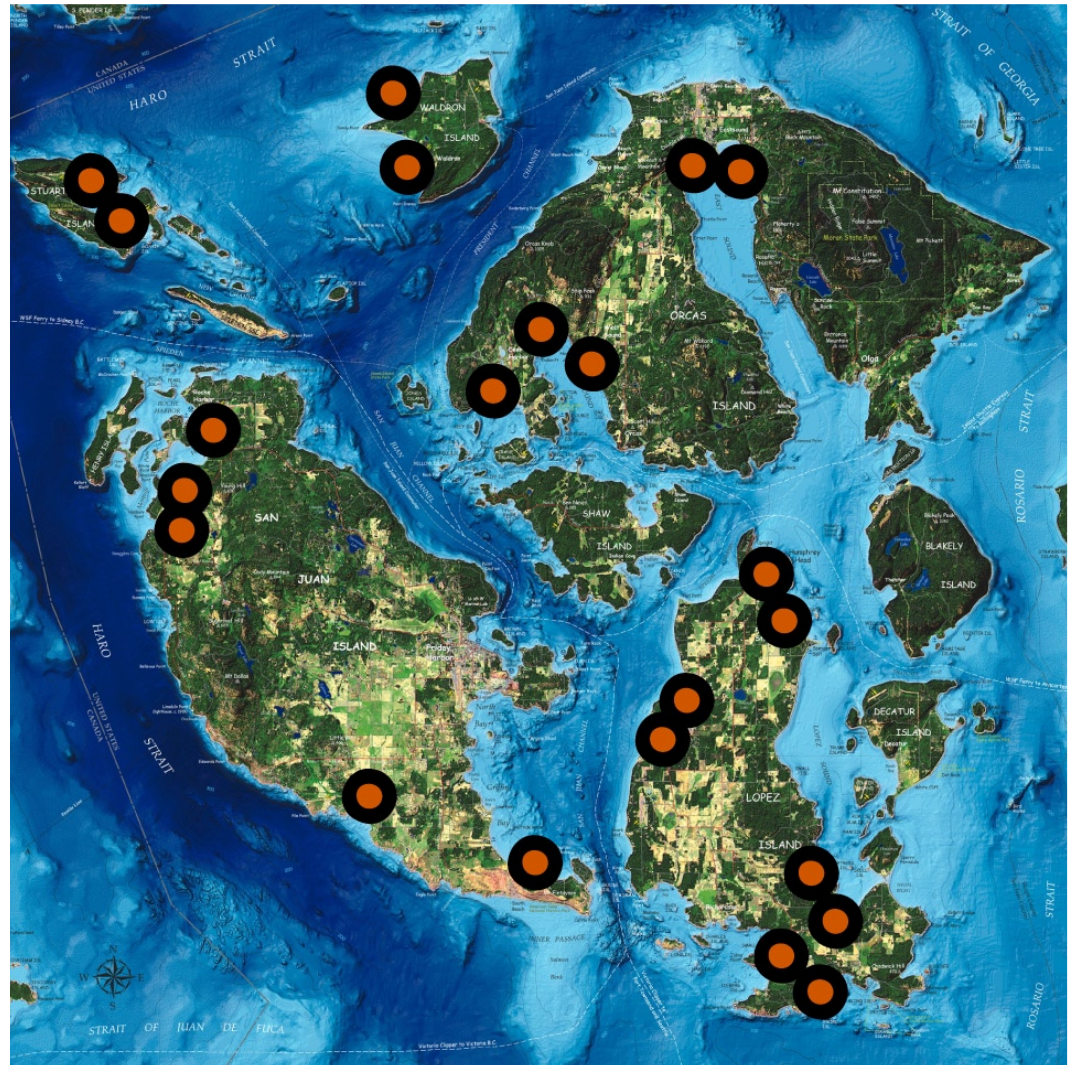
## Our Lead Scientists

**Sandy Wyllie-Echeverria, Ph.D.** is a Research Scientist at the School of Marine Affairs and Center for Urban Horticulture at the University of Washington.

He is an ecologist and ethnobotanist and has studied eelgrass for nearly twenty years; he is a member of WDNR’s Puget Sound Submerged Vegetation Monitoring Project Team.

Publications include *Seagrass science and policy in the Pacific Northwest: Proceedings of a seminar series* (editor) and *Natural and human induced disturbance of seagrasses* (coauthored with F. T. Short).

**Joe Gaydos, VMD, Ph.D.** is Regional Director and Staff Scientist of the SeaDoc Society and co-author, with Wyllie-Echeverria, T.E. Mumford, and S. Buffum, of *Z. marina* declines in San Juan County, WA.



Proposed placement of underwater sensors around the San Juan Islands. Map Source: Tahoe Maps, copyright 2002.

For additional information about eelgrass, please view a list of relevant reports and scientific publications on our website: [www.seadocsociety.org/EyesonEelgrass](http://www.seadocsociety.org/EyesonEelgrass)

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