

# FRIENDS

of the San Juans

Photo Contest Winners

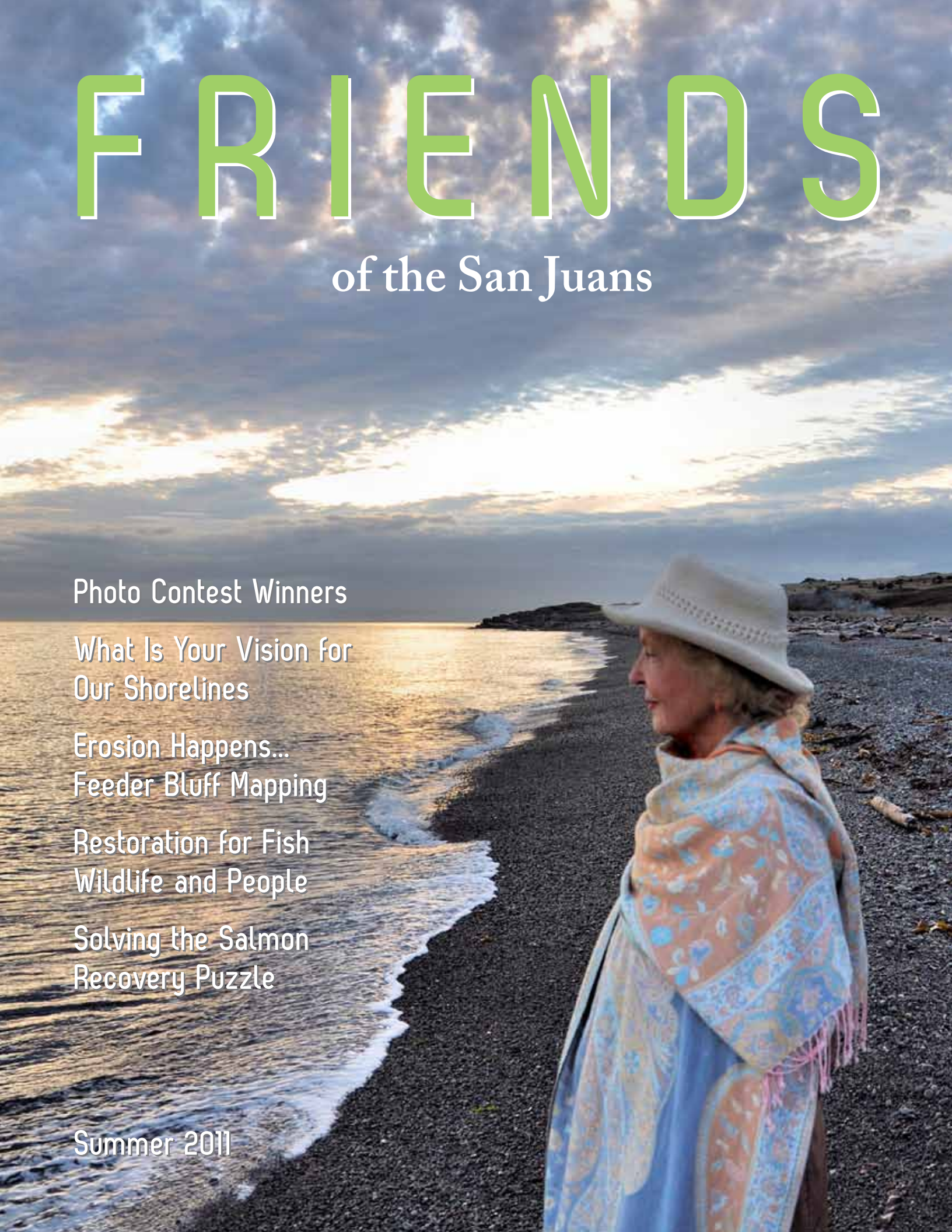
What Is Your Vision for  
Our Shorelines

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Feeder Bluff Mapping

Restoration for Fish  
Wildlife and People

Solving the Salmon  
Recovery Puzzle

Summer 2011



# Executive Director's Report

This year, the San Juans were ranked as a world class destination. The New York Times identified the San Juan Islands as the #2 best place to visit, and National Geographic Traveler ranked the islands the #3 best summer trip for 2011. Orca, salmon, stunning protected vistas and incredible shorelines are some of the major reasons we are receiving this attention. Managing visitors to the San Juans is a challenge for our small rural community and our natural resources.

To help improve the management of our existing federal Bureau of Land Management lands and National Parks, I recently met with Ken Salazar, the head of the U.S. Department of Interior. I don't recall a time in the past decade when opportunities to protect both federal and local lands in San Juan County were so within our reach. Whether it is the renewal of the Land Bank, the National Conservation Area designation (p. 11), or updates to the Shoreline Master Program and Critical Areas Ordinance (p. 2), this is the year to pay attention and get involved.

We believe science, not political pressure, should inform policy. In recent years, FRIENDS has supported extensive research and mapping of local habitats to support the application of sound science to decision making. All of our data is available to the public and has been provided to the County to inform the Critical Areas Ordinance and the Shoreline Master Program updates. Through 2011, there will be many public hearings and opportunities for

## Photo Contest Winners



Photo by Marc Grotle

FRIENDS recently asked members to share their favorite picture of people interacting with the shorelines of the San Juan Islands. Our judges included two professional photographers, two professional graphic designers, one FRIENDS member and one legal intern.

Thank you to all who shared their wonderful images and to our judges.

First - Paul Walsh (cover)

Second - West Howland (p.3)

Third - Peter Cavanagh (p.2)

you to participate in these planning processes. FRIENDS will be there and we hope you will also express what you value about life here in the islands and share your vision for protecting our critical areas and shorelines.

Please join us in our mission of protecting this special place on earth for future generations.

A handwritten signature in blue ink that reads 'Stephanie Buffum Field'.

*P.S. FRIENDS recently created the San Juan Islands Legacy Circle to honor members who have included FRIENDS in their estate plans through a bequest in a will, life insurance policy, or individual retirement account. If you are interested in the long-term health of the San Juan Islands, please call me to discuss how to include FRIENDS in your estate plans.*

## FRIENDS of the San Juans

**MISSION:** To protect the land, water, sea, and livability of the San Juan Islands through science, education and advocacy.

P.O. Box 1344, Friday Harbor, WA 98250  
360-378-2319 [www.sanjuans.org](http://www.sanjuans.org)

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# Critical Areas Ordinance Update...

## Lurching toward the finish line

This spring and summer, FRIENDS continued to advocate for strong protections for our islands' natural communities as San Juan County moves toward adoption of the Critical Areas Ordinance (CAO) update. The CAO must protect the "functions and values" of the following: critical aquifer recharge areas, fish and wildlife habitat conservation areas, geologically hazardous areas, wetlands, and frequently flooded areas.

The Growth Management Act (GMA) directs counties to include and consider the Best Available Science (BAS) when adopting a CAO update. To comply with the BAS requirement, counties must craft critical area regulations through a reasoned process that relies on valid scientific information. In May, the County Council held a public hearing on the Best Available Science (BAS) that County planning staff and consultants had compiled over the past year. They later adopted the lengthy BAS summary documents and their underlying scientific reports.

Although the CAO update is nearly 6 years behind schedule, the County's recent progress is encouraging. In addition to adopting its BAS, the County Council held workshops in June and July to review its staff recommendations for amending our existing critical areas regulations to bring them into compliance with the GMA. At press time, the County is drafting regulations and scheduling public hearings.

During the CAO update process, FRIENDS has become concerned that County decision makers may:

- Aim for bare minimum environmental protections, contrary to the San Juans' rich ethic for protecting the beauty and vigor of our natural surroundings
- Favor a management approach that would allow some level of impact and then attempt to later fix it, without acknowledging the County's extremely limited financial, technical or staffing capacity to do so

- Not identify or address the total cumulative impacts from all development in critical areas
- Fail to acknowledge or plan appropriately for climate change impacts such as sea level rise and increased storminess
- Suggest allowing new shoreline impacts in exchange for unproven mitigation methods, rather than protecting those areas in the first place

If you have concerns, share them with County Planner Janice Biletnikoff 370-7572, [janiceb@co.san-juan.wa.us](mailto:janiceb@co.san-juan.wa.us)

There are several opportunities for public comment as the Planning Commission (PC) and the County Council reviews each element. As of the date this newsletter went to press, the schedule is:

**Aug. 10 - PC Public Hearing on General Section (includes rules for reasonable use exceptions, and general exemptions)**

**Aug. 16 - County Council Workshop on Marine Fish and Wildlife Habitat Conservation Areas**

**Aug. 19 - PC Deliberations on General Section**

**Aug. 25 - PC Deliberations on General Section**

**Sept. 16 - PC Public Hearing on Wetlands**

**Sept. 27 and 28 - PC Deliberations on Wetlands**

**Oct. 19 - PC Public Hearing on Fish & Wildlife Habitat Conservation Areas (FWHCAs)**

**Oct. 21 - PC Deliberations on FWHCAs**

**Oct. 28 - PC Deliberations on FWHCAs**

All dates subject to change. To learn how you can participate in these events, please contact FRIENDS at 360-378-2319 or visit our website at [www.sanjuans.org](http://www.sanjuans.org).

*Beach seines have documented 69 species of fish using the shallow waters of San Juan County, including juvenile salmon. Photo by Peter Cavanagh*

# Shoreline Master Program Update:

## What is Your Vision for San Juan County's Shorelines?

By Nicholas Sciretta, FRIENDS Legal Intern

*San Juan County's picturesque shoreline provides more than just beautiful views. Underwater, the nearshore eelgrass meadows and kelp beds serve as feeding, refuge and migration corridors for forage fish, salmon, and whales. However, these sensitive ecosystems are suffering from the ongoing impacts of shoreline modifications. For example, current regulations are not preventing new armoring on documented forage fish spawning habitats, or docks over eelgrass, which challenges the success of local and regional marine ecosystem recovery efforts.*

San Juan County's Shoreline Master Program (SMP) is the local land use regulation designed to protect shorelines for people and wildlife. The SMP is authorized by the State Shoreline Management Act (Act). The Act governs the shoreline area that extends 200 feet upland from the high water mark of all marine waters and the following lakes: Dream, Sportsmans, Briggs, Trout, Woods, Zylstra, Horseshoe, Spencer, Martin, Cascade, Mountain, and Hummel.

### Origins of the Act

In 1969, the Washington Supreme Court ruled that a landowner could not fill in his lake shoreline below the high water mark. The Court reached this conclusion by holding that all state waterways are reserved for public access and recreation. In response to the resulting uncertainty about the extent of the public's rights in shoreline areas, the state legislature established the Act in 1971.

The Act recognizes the value and fragility of Washington's shoreline ecosystems and emphasizes protection against adverse impacts to the land, water, native vegetation, and wildlife. These protections support our economy by preserving fishing stock and attracting tourists to the beauty of the San Juans. While establishing natural protection as its primary focus, the Act also recognizes the likelihood of limited

*Guests on an Outdoor Odysseys kayak tour looking at eelgrass off Posey Island. Photo by West Howland.*

shoreline alteration, particularly for public water-dependent uses, and directs them to account for natural protections and aesthetic concerns.

The Act protects 28,000 miles of marine, lake, and river shores across the state through local SMPs. The Act directs counties, cities, and towns to encourage citizen involvement as they create their SMPs. In 1995, as it became apparent that 1970s-vintage SMPs had grown increasingly outdated, the state legislature instructed the Department of Ecology (Ecology) to update the guidelines used to create SMPs. The Ecology guidelines require application of “the most current, accurate, and complete” scientific information and shoreline management practices through every step to achieve no net loss of ecological functions. As Friday Harbor and San Juan County update their SMPs, they will need to meet the updated guidelines.

### Drafting an SMP update

Community goals guide SMP updates in a multi-step process that fosters public participation. The first

step is the creation of a Shoreline Inventory and Analysis Report that shows existing shoreline conditions. Next, zoning designations, such as urban or conservancy, are chosen for each stretch of shoreline based on its characteristics. Policies and regulations are then developed to guide conservation and development in each zone. Finally, a restoration plan is prepared to actively improve damaged shoreline functions.

After public hearings, the County Council adopts the SMP and sends it to Ecology for review and final approval. Both San Juan County and the Town of Friday Harbor are scheduled to complete their separate updates by June 30, 2013.

### How to get involved

Currently, the County and Friday Harbor are each developing vision statements for their SMP updates that will apply new information to shoreline protection and development. Both will accept and consider community input as they develop the goals and standards for the SMP update. The County and

the Town have prepared Shoreline Characteristics Inventory and Analysis reports. Once the County’s Technical Advisory Committee is formed and reviews its report, it will be released to the public for review in advance of the drafting of SMP regulations. For its part, the Town will draft its regulations this summer and fall and document any changes from the current SMP in preparation for public comments.

Call FRIENDS at 360-378-2319 for more information, or contact the County or Town directly.

San Juan County: Check [www.co.san-juan.wa.us/smp/default.aspx](http://www.co.san-juan.wa.us/smp/default.aspx) for more information. County staff will also be available for questions and input at the Lopez Island Farmer’s Market, August 13; the Fair, August 19-20; Orcas Island Farmer’s Market, August 27. Or contact County Planner Colin Maycock at (360) 370-7573, or [colinm@sanjuanco.com](mailto:colinm@sanjuanco.com).

Friday Harbor: Check [www.fridayharbor.org/SMP/smp.htm](http://www.fridayharbor.org/SMP/smp.htm) for information on commenting at a Nov. 2011 planning commission meeting.

## Attend a San Juan County Visioning Meeting

All members of the community can help ensure the health of our shorelines by expressing the importance of lowering impacts today for the benefit of tomorrow. Share ideas by asking yourself questions such as: What views are important to preserve? What areas are important for public access? What are your perceptions of how the shoreline is currently managed and enforced? What changes have you noticed in the shoreline over the years?

This September San Juan County is hosting a series of Shoreline Visioning Meetings. County staff will focus on gathering and understanding the public’s preferences regarding the future development of the shoreline. The goal is to develop a written statement or vision that describes the County’s shoreline in 20 years or so. The vision is a vital component of the Shoreline Master Program update.

- Tues Sept. 20 - San Juan Island at the Grange  
1pm (outer islands focus)  
5pm (San Juan Island focus)
- Wed Sept. 21 - Orcas Island  
5pm at the Orcas Center
- Thurs Sept. 22 - Lopez Island  
5pm at the Lopez Center for Community and the Arts

*Herring, Salmon, Seabirds and Orca all need healthy eelgrass to thrive!*



*Photo by Coastal Geologic Services*

**Feeder Bluff Exceptional** - There are 2.6 miles of these rapidly eroding bluffs in SJC; this type of feeder bluff provides the highest level of sediment input.



*Photo by Coastal Geologic Services*

**Feeder bluff** - There are 20 miles of feeder bluffs in SJC that provide substantial, but periodic sediment input to the system.



*Photo by Coastal Geologic Services*

**Transport Zone** - Sediment is not eroding or deposited in transport zones. Sediment just moves along these 33 miles of transport areas. A modification like a groin cuts off the movement of sediment.

# Erosion Happens...

## Feeder Bluff Mapping in San Juan County

During the summer, the feeling of warm sand between your toes is hard to beat. As we explore our favorite sandy beach, we rarely think about the source of that sand. Have you ever wondered how popular sandy beaches such as Crescent Beach on Orcas, Jackson's Beach on San Juan, South Beach on Shaw, or Odlin on Lopez came to exist amidst the many miles of rocky shoreline here? Geologists explain that beaches are linked by a trail of gravel and sand back to "feeder bluffs" -- a term coined in the 1970s by local engineer Wolf Bauer to describe the role that bluffs play in providing the materials that create and sustain beaches. In many places, rivers supply sand and gravel to shorelines, but the islands' lack of major streams means that more than 90% of beach sediments likely comes from feeder bluffs.

The shorelines around our islands contain many feeder bluffs, which are just one component of "drift cells." Each of these cells contains a source of sediment and debris, such as feeder bluffs, and a sink, where the sediment is dropped off. There are approximately 90 miles of drift cells along 16 islands in SJC. A drift cell is generally comprised of several different coastal landforms or shoretypes including: feeder bluffs, transport zones, accretion shoreforms, and modified shores. Outside of drift cells, rocky shores and pocket beaches are the most prevalent shoreforms (see pictures for details).

Because feeder bluffs play such a crucial role in creating the beaches that people, animals, fish and shellfish enjoy and depend on, FRIENDS and the Marine Resources Committee collaborated with Coastal Geologic Services to map current and predevelopment feeder bluffs in San Juan County (SJC). That mapping identified 22 miles of feeder bluffs in SJC. Waldron Island offers some of the most stunning examples of feeder bluffs while Lopez has the most feeder bluffs. On Orcas, feeder bluffs were most abundant in Ship Harbor, Deer Harbor, Orcas Village, and at West Beach. On Shaw the largest and highest quality feeder bluffs are located in Indian Cove. Feeder bluffs on San Juan Island were most abundant along southern Griffin Bay, the southeast shore on the Strait of Juan de Fuca, and within False Bay.

In addition to mapping the feeder bluffs through extensive field work, the survey looked at the health of those bluffs. Scientists found that a considerable portion of SJC's 22 miles of bluffs are compromised by shoreline modifications, like bulkheads and armored roads. Such structures impede the ability of the feeder bluff to provide beaches with essential gravel and sand. Historic analysis also found that an additional five miles of feeder bluffs no longer function due to development impacts from residential bulkheads, docks, roads, and marinas.

The highest numbers of feeder bluffs in need of restoration were located on Orcas, Lopez and San Juan, respectively. FRIENDS and Coastal Geologic Services are now exploring opportunities to restore these bluffs and beaches with interested landowners (see p.7). Results are being applied to countywide salmon recovery planning (see p.10).

The survey found the highest numbers of intact bluffs in need of conservation are found on Lopez Island, followed by Orcas, Decatur and Waldron Islands. These feeder bluff protection priorities are also included in the SJC salmon recovery prioritization project (see p. 10). FRIENDS also shared the results with the Land Bank and the Preservation Trust.

FRIENDS has provided project reports and maps to coastal researchers, planners and managers to inform the local SMP update and salmon recovery efforts. For the full report and detailed color maps of each island, check out a copy at the Orcas, San Juan, Lopez, and Shaw libraries. Maps are also available in Google Earth on the FRIENDS website [www.sanjuans.org](http://www.sanjuans.org). FRIENDS thanks the following funders for supporting the SJC Feeder Bluff Mapping Project: the Puget Sound Partnership, the Northwest Straits Foundation and the WA State Salmon Recovery Funding Board.



*Photo by Coastal Geologic Services*

**Accretion Shoreform** - An accretion shoreform is an area where fine sediment is deposited. There are 22 miles of these wide backshore beaches in SJC.



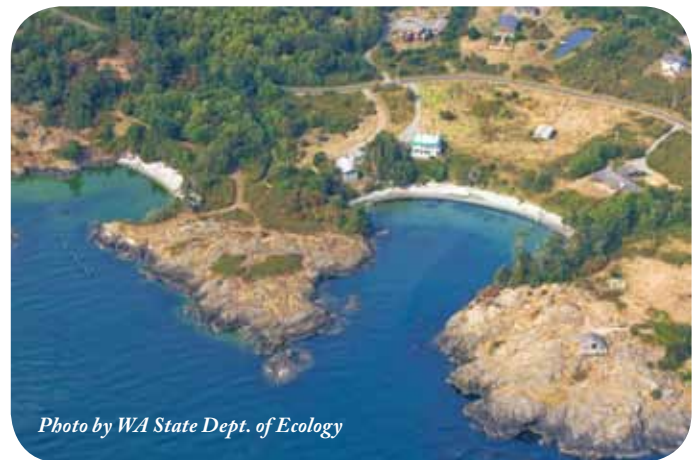
*Photo by Coastal Geologic Services*

**Modified** - Feeder bluff mapping documented 12 miles of modified feeder bluffs, transport zones and accretion shoreforms within the 90 mile study area. A modified area is where the natural sediment process has been altered.



*Photo by Shannon Davis*

**Rocky Shores** - SJC is primarily made up of these bedrock shores, where there is no noticeable sediment drift. There are 283 miles of rocky shorelines in SJC. Approximately 6 miles of rocky shores in the county have been modified.



*Photo by WA State Dept. of Ecology*

**Pocket Beach** - A pocket beach is a sandy area contained between two bedrock outcrops or headlands. There is little or no exchange of sediment with adjacent shores. Recent mapping efforts found 48 miles of pocket beaches in SJC (see p.10). Approximately 7 miles of pocket beaches in SJC have been modified.

# Restoration for Fish, Wildlife and People

Landowners, residents and visitors to the San Juans share the unique benefits and responsibilities of tending for more miles of marine shoreline than any other county in the continental United States. With over 400 miles of marine shores, the shallow water habitats of the San Juans provide critical feeding, resting and migratory habitat to a huge range of fish and wildlife species, including threatened salmon, orca and seabirds.

Shoreline modifications, especially hard armoring such as bulkheads, are a major threat to the health of the marine environment in San Juan County and throughout Puget Sound. In 2009, FRIENDS mapped major shoreline modifications in San Juan County. That survey found 472 docks, 710 armored beaches, 32 groins, 55 marine railways, 70 boat ramps, 425 creosote pilings (not associated with docks), 1,914 mooring buoys and 191 other on-beach structures. With 40% of all shoreline parcels having some form of modification, the San Juans are not as undeveloped or pristine as many assume. Moreover, the majority of impacts are concentrated on the sand and gravel beaches that are essential habitats for our marine fish, birds and whales.

Many of these existing shoreline structures are outdated, degraded or unnecessary. In some cases structures can be removed outright, or relocated and redesigned to improve habitat while still achieving the property protection, moorage or other purpose the structure was installed to provide. See the photos below for an example of soft shore protection and beach restoration techniques that can be used instead of hard armoring even in exposed, high energy locations.

This spring, FRIENDS overlaid the modification inventory results with our database of documented forage fish spawning habitat, eelgrass, feeder bluffs, kelp, and juvenile

salmon presence. FRIENDS then identified and prioritized habitat restoration opportunities using a combination of physical feasibility and habitat benefit factors.

With funding from the US Fish and Wildlife Service, FRIENDS is using these results to identify property owners who are interested in site visits with technical experts to explore habitat restoration options. Experts will discuss stewardship options, including vegetation, drainage and erosion management. Restoration alternatives and feasibility studies will also be developed with willing landowners at a small number of priority sites.

## Alternatives to Shoreline Armoring

In many locations, erosion can be managed without the use of bulkheads, reducing impacts to shoreline habitats and keeping costs down. In many cases, proper groundwater and vegetation management protect a home better than bulkheads. Moving or replacing threatened structures, such as stairways or outbuildings, is often cheaper than protecting them in place.

Planting fast growing erosion-resistant plants such as willows can help stabilize eroding areas, while maintaining important habitat. On some sites, nourishing the beach with gravel can reduce wave action.

## Soft Shore Protection and Restoration

If an engineered solution is needed, soft shore protection and restoration techniques can often be used to protect property, habitat and the coastal processes that maintain beaches over time. Natural materials such as logs and gravel are used to enhance beach shape and processes. Soft shore armoring is a successful long-term method of addressing the erosion concerns that led to shoreline armoring while at the same time restoring degraded habitat.



*This example of soft shore restoration was completed in 1992 by Wolf Bauer. This beach located along North Beach, Orcas Island has a lot of exposure to high wind and wave energy. The restoration project made the shoreline healthier for fish, wildlife and people while also protecting the homes from erosion. Before photo courtesy of Wolf Bauer. After photo, taken 12 years later, by Jim Johannessen, Coastal Geologic Services.*



# How Bulkheads Can Change the Beach...

Erosion happens naturally on shorelines (and it's a good thing too, see p. 5-6). However, development activities, such as clearing vegetation and modifying site drainage, can exacerbate these natural processes. Concerns about erosion sometimes lead property owners to seek out engineered solutions such as bulkheads and rock seawalls. While this may be appropriate for some sites, hard armoring is often unnecessary and can be very expensive.

## Impacts from bulkheads include:

**Erosion** - When waves reflect off of shoreline armoring structures, they can scour away sediments and increase erosion. They will not prevent the beach itself from eroding. In fact, bulkheads can increase erosion of the beach in front of it and to the sides, passing problems along to neighbors.

**Loss of Sand and Sediment** - Bulkheads can shut off the supply of sand and gravel to the beach. Over time, a sandy beach can be transformed into gravel or cobbles and may finally be scoured down to bedrock. The result may be loss of the very feature landowners were attracted to in the first place – the beach.

**Loss of Surrounding Beaches** - Where long stretches of shore are lined with bulkheads and other hard armoring, beaches composed of fine sediments like sand can erode down to gravel, cobble, or hardpan within a few decades.

**Loss of Plants** - When bulkheads are built, overhanging trees and shrubs are often removed. This can cause increased siltation, reduced organic matter, and changes in nearshore marine habitat. It also further destabilizes the slope the bulkhead is intended to protect.

**Loss of Shade** - The loss of bank vegetation reduces shade and shelter on the upper beach. As a result, spawning habitat for forage fish may be degraded.

**Loss of Habitat** - Bulkheads and other armor structures can degrade the nearshore habitats that provide food for many fish, including salmon. For example, spawning areas for forage fish may be lost due to direct burial or the loss of fine sediments.

*Sections of this text provided by Jim Johannessen, Coastal Geologic Services*

## Impacts to Marine Food Webs

Forage fish are the small fish eaten by larger fish. Our primary forage fish species are Pacific herring, surf smelt and Pacific sand lance. Surf smelt and sand lance spawn on beaches in the intertidal zone, while herring lay their eggs in shallow water on eelgrass and algae. When these eggs hatch, the tiny larval fish float out with the tide to become part of the food chain.



Orcas, salmon and seabirds need forage fish.



And in order to have forage fish we need healthy beaches for forage fish to spawn on.



In San Juan County, there are limited forage fish spawning grounds and they are very vulnerable to shoreline infrastructure and development activities. A recent study found that shoreline modifications, like bulkheads, can reduce the survival rate of surf smelt embryos as much as 50 percent.

# Eelgrass Protection and Resoration

## Anchor Out to Protect Eelgrass!

Eelgrass grows in shallow bays, coves, and estuaries. Juvenile fish, including salmon, forage fish, bottomfish, cods and flatfish, all rely on eelgrass for nursery habitat, food and shelter, as do Dungeness crabs. Herring spawn their eggs on eelgrass blades. These flowering marine plants also protect shorelines by trapping sediment and absorbing wave energy to offset erosion. In Washington State eelgrass is classified as a priority habitat and is protected under a “No Net Loss” policy.

Eelgrass is easily harmed by human activities like changes in light, temperature, nutrient and chemical conditions. Eelgrass is also directly destroyed by anchors and buoy chains when they drag around and uproot plants, disturb sediment and create a patchwork of bare spots in otherwise healthy eelgrass meadows. While the impact of each individual anchoring event may be small, the combined effects of hundreds of boaters is significant, causing damage that can take years to recover.

If you are a boater or are friends with a boater, you can help protect this valuable resource by knowing what eelgrass looks like and where it typically grows. Since eelgrass depends on light to grow, it can be found thriving at depths of 30 feet in clear waters. In the murkier bays, such as Fisherman, Blind and Westcott Bays, you can avoid the eelgrass habitat zone by anchoring in more than 15 feet of water at low tide. Eelgrass rarely grows deeper than 30 feet in San Juan County, so if you are in doubt about where eelgrass is, anchor deeper than 30 feet.

Eelgrass depth maps, signs and brochures are now available at most marine parks, marinas and boating stores in the San Juans as well as in the July issues of 48° North and NW Yachting, and can be viewed on the FRIENDS of the San Juans website: [sanjuans.org/pdf\\_document/eelgrass\\_map.pdf](http://sanjuans.org/pdf_document/eelgrass_map.pdf)



*Photo by Mark Gardner*

## Innovative FRIENDS Program Restores Eelgrass

In 2009, FRIENDS mapped nearly 2,000 buoys, with half of them either located directly in or adjacent to eelgrass. Buoys that are properly sited and designed with modern methods provide a lower impact moorage alternative than docks or anchoring, but many outdated or improperly located buoys remain in local waters. A study completed in the late 1990s used divers to determine the impacts of different mooring buoys designs on eelgrass. This study concluded that the two thirds of the buoys in eelgrass in San Juan County were causing damage.

In 2010, FRIENDS received grant funding to develop a habitat restoration program to reduce the impacts of mooring buoys on eelgrass by relocating buoys away from eelgrass where possible or upgrading their designs. To date, two outdated buoys have been removed from eelgrass habitat on Orcas Island. FRIENDS is also working with four private landowners and Steve Lillestol of R&R Moorings to remove harmful buoys from multiple priority eelgrass and herring spawning areas on Lopez Island. New, screw anchor design buoys will be installed in close proximity, but away from eelgrass.

Additional cost share funds are available to upgrade or relocate buoys in 2012! Contact FRIENDS at 360-378-2319 or [tina@sanjuans.org](mailto:tina@sanjuans.org) to learn more about the eelgrass habitat improvement program.

*Eelgrass is directly destroyed by anchors and buoy chains. Photo by WA State Parks*



# The Salmon Recovery Puzzle

The shallow waters of the San Juan Islands provide feeding, resting and migratory habitat for juvenile salmon from Puget Sound, Vancouver Island and the Fraser River Watershed. Beach seines conducted at over 80 sites throughout the islands found juvenile Chinook, pink, coho, and chum salmon; and documented a total of 69 different species of marine fish using the shallow waters of the San Juans. Forage fish, such as sand lance, surf smelt and herring, are important food for these young salmon. Surf smelt and sand lance use local beaches to lay their eggs, while Pacific herring prefer to lay their eggs just offshore on eelgrass. Another important component of juvenile salmon diets are insects from terrestrial sources, such as coastal forests, streams, wetlands and agricultural lands. All of these elements highlight the values healthy local shorelines contribute to the regional recovery of salmon.

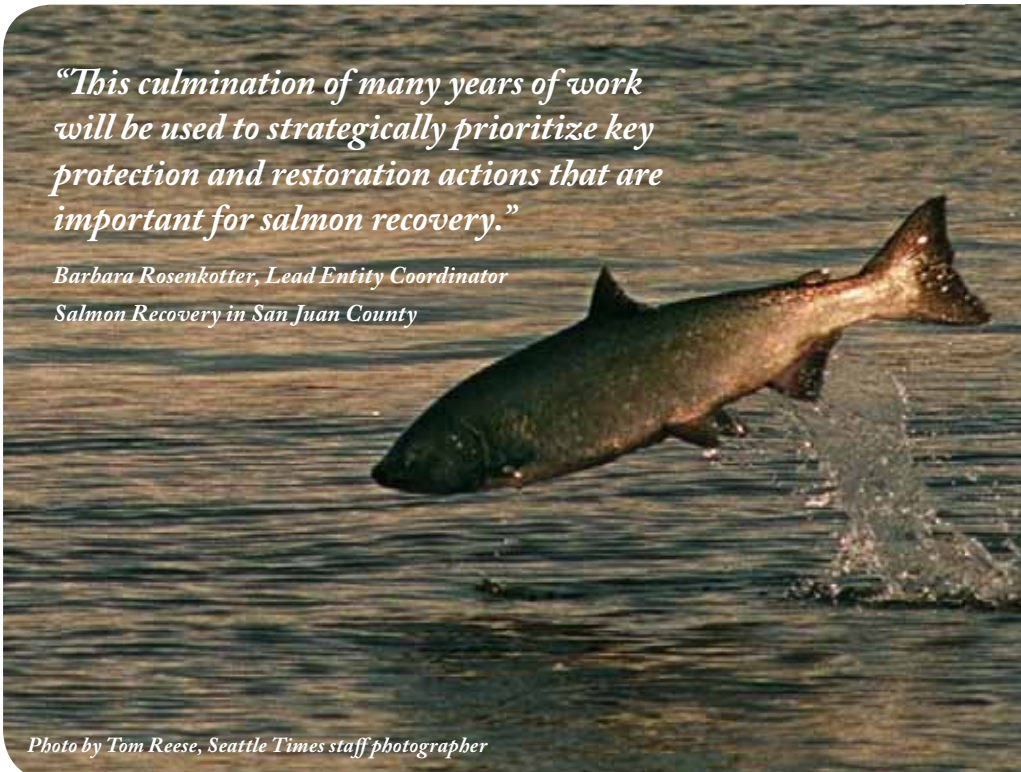
FRIENDS and project partners, Anchor QEA and Coastal Geologic Services, are spearheading an integration of science (on coastal species, habitats and processes) with locally produced field research to identify the most important salmon recovery actions in San Juan County. A technical team of over 25 local, regional and tribal salmon recovery and nearshore marine habitat experts are helping to guide this strategic planning process.

To help fill remaining data gaps, two new county-wide assessments were completed, including an inventory of riparian (shoreline and streamside) vegetation and updated pocket beach maps. Current sound-wide shoretype maps miss many pocket beaches, a known priority habitat for juvenile salmon and forage fish. This project added over 200 pocket beaches to the countywide shoretype maps.

“It has been like putting together a very complicated puzzle” says Tina Whitman, FRIENDS’ Science Director and project manager. The first puzzle pieces the team analyzed and combined were the habitats where juvenile salmon and juvenile forage fish have been documented, and the location of forage fish spawning beaches. These primary elements provided a broad scale geographic priority for salmon recovery actions in San Juan County, highlighting the importance of over 80 miles of marine shoreline for salmon and forage fish health.

potential salmon recovery projects, a climate change screening tool is being developed to identify areas most at risk or most resilient to the likely impacts of increased storminess and sea level rise.

Results to date inform us about the most important places to take salmon recovery actions, as well as the type of action most appropriate for that section of shoreline- restoration or protection. Next steps include identification and ranking of specific project actions within the identified priority salmon recovery areas.



*“This culmination of many years of work will be used to strategically prioritize key protection and restoration actions that are important for salmon recovery.”*

*Barbara Rosenkotter, Lead Entity Coordinator  
Salmon Recovery in San Juan County*

*Photo by Tom Reese, Seattle Times staff photographer*

The team next analyzed the distribution of shoreline threats, or stressors, such as armoring, docks, tidal barriers and impervious surfaces. Knowing how intact or how degraded the shoreline is provides direction on where to focus conservation or restoration efforts. To help evaluate the long term likelihood of success of

Project results will be applied to an update of the local Chapter of the Puget Sound Chinook Salmon Recovery Plan and will support more efficient and effective restoration and protection efforts by both government and private organizations. The project was funded by the WA State Salmon Recovery Funding Board.

# FRIENDS News

## New Board President – George Lawson

George Lawson's experience in the islands began in the early 1940s when he and his family were able to jump on the mail/freight vessel "Osage" out of Bellingham to enjoy the day sightseeing or even trout fishing at Cascade Lake. His 11 years as a commercial salmon fisherman in the San Juan's during the 1950s and 1960s confirmed his feelings for the islands. Besides being a fisherman, George's diverse life-experiences also include being an ordained pastor and financial advisor/consultant. George has owned property on Lopez Island since 1969. While he has lived all over the U.S. and traveled across the globe, the San Juans have always called to him as the most rapturous, precious, fragile and fecund place on earth. George is serious about protecting the natural environment and is active in preserving clean water, forests, streams, wetlands and shoreline spawning areas. "Preserving these qualities has their own special merit but very importantly they maintain property values and strengthen our local economy. It is essential that we care for our critical areas, including those on my property," stated George.

## Cumulative Impacts Workshop



FRIENDS hosted a 2-day workshop last fall to better understand how cumulative impacts analyses and policies help protect shoreline ecosystems. Attendees included thirty-five shoreline planners and scientists from the private sector, public sector, and federally recognized tribes. In sharing information on existing methods for evaluating cumulative impacts, the group identified knowledge gaps and outlined new approaches for improving our understanding of long-term human effects on shoreline habitats. The workshop also fostered new partnerships to improve collaboration among interested parties. Please contact FRIENDS at 360-378-2319 if you would like a copy of the workshop proceedings.

## 2011 Summer Legal Interns



**Nick Sciretta** is from Massachusetts, and will begin his second year of law school this fall at George Washington University in Washington, DC. Nick first travelled to Washington State in 2008 while hiking the Pacific Crest Trail, and enjoyed spending this May-July getting to know and helping to protect the beauty of the San Juans.

**Jamie Grifo** is a third year law student slated to graduate this December from the University of Oregon, Knight School of Law. Jamie worked as an organic vegetable grower in New England before deciding to attend law school. He hopes to use the law to protect and enhance natural ecosystems. Jamie and his wife, Christina were so captivated by the Islands that they got married here on June 16. Jamie, Christina, and their 10-month-old son, Oliver, hope to return to the San Juans this December to sow some seeds and set roots in this magnificent part of the country.

## Orca Sing

On June 18, FRIENDS co-hosted the 12th Annual Orca Sing at Lime Kiln State Park to celebrate the Southern Resident Orca. The event takes place at Lime Kiln because it boasts the best land-based viewing of orcas. FRIENDS co-petitioned to list our local orca as endangered species in 2001, and they gained that dubious honor in 2005. You can help by following new vessel regulations, and supporting salmon recovery and water quality protection efforts.

## Support needed for NCA Designation

A community-driven effort has emerged to protect approximately 1,000 acres of Bureau of Land Management (BLM) lands in the San Juan Islands through a National Conservation Area (NCA) designation. An NCA designation gives BLM lands permanent protection and ensures that community goals drive the management

# FRIENDS News

of the lands. BLM lands include areas at Cattle Point, Kellet Bluff, Turn Point Lighthouse, Chadwick Hill, Point Colville, Watmough Bay, and Patos Island. A group of islanders are organizing this effort. FRIENDS supports the designation of the BLM lands here as a National Conservation Area and we encourage you to tell US Representative Rick Larson and US Senators Maria Cantwell and Patty Murray that you do too! Additional information is available at [sanjuanislandsnca.org](http://sanjuanislandsnca.org).

## Thank you Canoe Journey Volunteers



*Canoe Journey,  
photo by Mark Gardner*

Thank you to all of the dedicated volunteers who helped FRIENDS host Canoe families on Waldron, San Juan and Lopez as they crossed from Vancouver Island to their final destination, the Swinomish Indian Tribe in La Conner. The Inter-Tribal Canoe Journey is a cultural rejuvenation for the Coast Salish peoples. Each summer, tribal canoes depart from their homeland to a common destination. This journey embraces the rich cultural heritage of the Coast Salish people.

Since 2003, FRIENDS has hosted five Tribal Canoe Journey stop-overs through the islands. FRIENDS coordinates businesses, service groups, and volunteers to assist with meal preparation and clean up; boaters to escort canoes; and funding for meals, lodging, travel, and gifts to tribal members. FRIENDS wishes to extend a sincere thank you to the Lopez Community Land Trust, Waldron Community, Roche Harbor, San Juan County Fair, Soroptimists, San Juan Islands Scenic Byway, Tif & Gif Creative, Port of Friday Harbor, San Juan County Parks, San Juan Unitarian Universalist Fellowship, Rising Tide Graphics, San Juan Transit, Arctic Raven, Griffin Bay Bookstore, San Juan Coffee Roasting Company, Spring Street International School, San Juan Prevention Coalition, San Juan Islands Visitors Bureau, Otak, Outdoor Odysseys, Blossom Grocery,

Columbia Sportswear, Washington State Ferries, Spike Africa, Lion's Club, Town of Friday Harbor and San Juan County.

## New Rain Garden in Friday Harbor

On rainy days you may have seen oil in the gutters flowing into our town's storm drains. These drains flow directly into our fragile nearshore environment, carrying surfactants and other contaminants that harm marine life. To help reduce impacts from storm water, the Town of Friday Harbor has just installed their first Rain Garden. This landscape feature is designed to filter contaminated storm water as it washes into the harbor. The San Juan County Marine Resources Committee managed the project, with grant funding from the state Department of Ecology. Congratulations and thanks to all those involved.

FRIENDS would also like to thank Mike Kaill, local marine biologist, FRIENDS' board member and caretaker of the Spring Street Aquarium. Mike has been a champion for local storm water pollution management since 2007 when many of the animals in the aquarium died from contaminated run off. For more information on toxics in our marine waters visit [sanjuans.org/newsletters.htm](http://sanjuans.org/newsletters.htm) and read our Spring 2008 and Fall 2009 newsletters.

## Bluffs & Beaches Workshops



*Residents learn about  
feeder bluffs from expert  
Jim Johannessen.*

This summer, FRIENDS partnered with the San Juan Islands Conservation District to host "Beaches and Bluffs," Technical Assistance Workshops for residents around the County. Coastal geologist Jim Johannessen of Coastal Geologic Services provided an introduction to coastal processes and details on erosion control options and opportunities to protect property and wildlife habitat. Over 80 residents from Decatur, Blakely, Lopez, Orcas and San Juan Island enjoyed these interactive beach talks.

# FRIENDS Legal Briefs

## Laws Are Only As Good As Our Ability to Enforce Them

Enforcement of San Juan County's land use laws can be inconsistent, inequitable, and ineffective. One underlying factor is the County's current enforcement ordinance, which requires the Community Development and Planning Department (CDPD) code enforcement officer to involve the Prosecuting Attorney (PA) and court system before it can levy a fine. This cumbersome process imposes a formidable barrier to effective enforcement. Other Puget Sound Counties authorize enforcement officers to issue a citation with an appealable fine. This past spring, CDPD proposed to address this inefficiency with a new enforcement ordinance that it drafted over the past few years in collaboration with the PA's office.

The proposed ordinance needs your help to ensure its adoption. Notwithstanding the significant time that CDPD and the PA put into thoughtfully crafting a sensible ordinance it has become mired in Planning Commission

review. The Planning Commission has already spent three months reviewing the ordinance and will have at least one more hearing before it goes to the County Council for adoption. Please contact your Council Member, Planning Commissioner, or Lynda Guernsey, the Planning Commission clerk (360-370-7579), and urge them to recommend adoption of CDPD's reasonable enforcement ordinance as soon as possible.

## Supplying Public Needs Without Undermining Natural Protections

In 2010, FRIENDS successfully challenged a County ordinance that would have exempted the construction or expansion of Essential Public Facilities (EPFs), such as trash transfer stations or barge landings, from protections for critical areas, farmlands, and forests. In adopting the ordinance, the County Council had rejected FRIENDS' request that EPF construction avoid impacts to those areas where possible and minimize and mitigate impacts to those areas where avoidance was not possible. FRIENDS had also recommended that the County rethink its

proposal to allow public facilities in geologically unstable or frequently flooded areas, noting that it would be financially imprudent to spend public resources to place EPFs where they could be subject to landslides or flooding and that it could unnecessarily risk public health or injury.

The Growth Management Hearings Board (Board) upheld FRIENDS' challenge, concluding that EPF construction under the ordinance did not meet the Growth Management Act (GMA) requirements for critical areas, farmland, and forestland protections. In its revisions to the EPF ordinance in 2011, the County resolved several of FRIENDS' concerns, but would continue to allow avoidable impacts to critical areas, farmland, and forestland. Although the EPF ordinance ultimately requires compensation for impacts to those areas, it still allows impacts to occur instead of directing the county to site EPF's outside of critical areas, farms and forests as a first step. It also employs the heavy handed approach of converting lands for farming and forestry into EPF lands. This summer, the Board is scheduled to decide whether those revisions pass GMA muster—stay tuned.

*Enforcement? The County allowed this unpermitted bulkhead without evaluating its impacts on the feeder bluff behind it, contrary to Shoreline Master Program requirements.*

# Congratulations for 10 Years of Service to the Islands

Please join us in congratulating Stephanie Buffum Field for 10 years of service as FRIENDS of the San Juans' Executive Director! In her 10 years with FRIENDS, she has developed long-term relationships and innovative partnerships with local and regional scientists, managers, tribes and community members. Stephanie has proactively sought to ensure that development decisions incorporate current science. Under Stephanie's steady guidance, FRIENDS has achieved many accomplishments, including: orca protection, salmon recovery research and shoreline restoration, ecosystem protection through informed planning and permit review, science-based education programs for students, realtors, and contractors, and the hosting of five Native American Canoe Journeys... and Stephanie coordinates all of this with a smile on her face and a kind word to all.



*Stephanie lives on Shaw with her husband and son. Thanks to Cyrus and Max for supporting Stephanie's many long days and weekend events.*

"Stephanie came to FRIENDS with an established track record of success in bringing an environmental non-profit to maturity and stability. In her ten years, she has built a more focused and effective force for conserving what we love about the islands: their natural wonders, healthy ecosystems, and dedicated communities. Under Stephanie's leadership, we have had a decade of solid growth and amazing accomplishments. I am eager to see what happens next with Stephanie at the helm."

Lynn Bahrych  
former President of FRIENDS

Stephanie's keen vision extended into the organization as well; she has steadily increased FRIENDS' capacity by hiring and inspiring dedicated, community-oriented staff members. In 2002, she hired Tina Whitman as our Science Director and Jana Marks as our Office Manager. In 2003, Stephanie hired Shannon Davis to serve as Development Director. In 2005, Stephanie identified a need for in-house counsel to respond to legal and policy challenges facing the islands' environment, and in 2007 she hired Kyle Loring as our second Staff Attorney. These staff members all remain at FRIENDS, joining Stephanie in providing the consistency that is essential for effective ecological stewardship. Stephanie also doubled FRIENDS' membership support and established the Marilyn Ellis Endowment and San Juan Islands Legacy Circle (for those supporting FRIENDS in their estate plans).

While the County has seen eight different Planning Directors, four code enforcement officers and multiple County Commissioners and Councilors over the past decade, FRIENDS' staff and commitment to the community they serve has remained intact. FRIENDS provides these islands with an incredible amount of local science, community awareness and institutional memory. Under Stephanie's leadership, FRIENDS has grown to serve our islands as a stable, credible and robust community resource.

## Consider Donating Your IRA Distribution to FRIENDS

IRS rules mandate that individuals age 70 1/2 and older take a required distribution from their IRA each year, regardless of whether the income is needed. These annual withdrawals are subject to ordinary income taxes. By making a charitable contribution from your IRA, you can satisfy your required deduction amount. By donating your deduction to FRIENDS of the San Juans, you can enjoy the satisfaction of knowing that you are contributing to a worthy cause.



*Enjoying some free time at Doe Bay Resort & Retreat, Orcas Island. Photo by Sawaya Photography*

## San Juan County's Critical Areas Ordinance

The Critical Areas Ordinance (CAO) is being updated to identify and protect dangerous geological areas and sensitive natural areas throughout our islands. These changes will provide thoughtful guidance to future development to ensure the survival of our rich

and complex ecosystem and protect people and our property from harm, for us and our children. Existing houses and other structures will not be removed or eliminated by the proposed updates to the CAO.

## Join Us on Shaw!

**FRIENDS Annual Meeting & Picnic**  
Saturday, August 27th, Shaw Island  
County Park 11:00 am to 3:30 pm

### “The Taste of Restoration”

Join us in celebration of the magnificent bounty of the San Juans. Savor locally grown food on one of the County's finest beaches.

The event will include a forage fish egg hunt and an interpretive beach walk to one of the County's most spectacular and intact feederbluffs.

Ride a bike, kayak, walk or take our shuttle to the park!

Tickets to this event are \$25 and include lunch and beverages (free for kids under 12).

To RSVP, call 360-378-2319



P.O. Box 1344, Friday Harbor, WA 98250  
360.378.2319 • [www.sanjuans.org](http://www.sanjuans.org)

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