COMMUNITY CONVERSATIONS ABOUT

growing local economies, ecologies, and connections

2017

Friends of the San Juans
Most people can agree on at least one thing: we want the people and places we love to thrive. And maybe this:
to get something important done, we shouldn’t wait for someone else to do it. Last November’s election strengthened people’s commitment to both of these tenets. Since then, over 20 varieties of citizen activist groups have emerged in San Juan County alone: Huddle, Our Revolution, Salish Sea Stands, and Orcas Women’s Coalition, to name a few. These citizen groups aren’t waiting for someone else to help our community thrive. They are revitalizing citizen activism, and it’s impacting everything from food, water, culture, and climate security to housing, culture, and sanctuary.

This newsletter focuses on growing and being part of a resilient, healthy community— one that honors our past and boosts the sustainable growth of our children and elders.

With the County’s local Comprehensive Land Use planning process under way, the timing is perfect to put innovation into action. quite literally when you consider the impact on neighborhoods, the environment, transportation, energy, and the rural character of this place.

As we move toward the harvest, please consider what you want to preserve and how your participation can help build a sustainable, secure future in the islands, where both people and nature thrive. We look forward to hearing from you about your ideas and experiences.

**Envisioning a sustainable, secure future where both people and nature thrive**

**We aren’t waiting for someone else to help our community; we are doing it ourselves. Together.**

With the County’s local Comprehensive Land Use planning process underway, the timing is perfect to put innovation into action. A Comprehensive Plan is a community’s statement about what kind of a place it wants to be, and how it plans to get there. A Comprehensive Plan is an expression of community values.

It’s important to get it right because the Comprehensive Plan ends up shaping the community—sometimes
Is new better? What to know about the latest Comprehensive Plan update

Get involved in the upcoming Comprehensive Plan update

Our county’s last Comprehensive Plan update occurred in 1998. It caused a bit of a stir when inconsistencies arose between proposals for denser rural development and a desire by many local residents to preserve the county’s rural fabric and natural bounty by having denser villages and larger lot sizes in rural lands.

The current update will review the Comprehensive Plan’s blueprint for sustainable local growth, including its long-range vision, goals, policies, and zoning maps. These goals and policies address land use, shorelines, water resources, housing, transportation, capital facilities, utilities, historic and archaeological preservation, and economic development. These are big issues, and each update provides a significant opportunity for residents to determine what they value in their region.

Counties in Washington state are scheduled to update their comprehensive plans every eight years. The County currently contemplates the release of a preliminary draft of the update in Spring 2018, public hearings in summer 2018, and adoption in August 2018.

Much has changed in the past 19 years. Salmon and orcas are now listed under the Endangered Species Act, housing costs have increased, and climate and renewable energy have become staple issues. While we believe the current Comprehensive Plan update sets many positive goals and policies, there is also room for improvement: it can still better address issues that have arisen since the last update like climate change, energy, and sea level rise.

The Comprehensive Plan can help generate the best long-term outcomes for our entire community—our businesses, schools, services, recreation, ecosystems, and individuals. To do so, it should plan for the future by addressing climate change, social needs, economic trends, and habitat loss.

Kyle Loring
Staff Attorney
Kyle joined Friends in 2007. Kyle earned his law degree, magna cum laude, from Boston College Law School in 2003, where he served as an executive editor on the BC Law Review. An avid cyclist and active community member, he is on the board of Families and Neighbors Support Island Rec.

FOOD PRODUCTION SALES

vs. POPULATION GROWTH: 1997-2012

Farm sales in San Juan County currently constitute about 2-3% of the total food consumed. Sales of farm products increased 12% between 1997 and 2012 while the population increased 23% over the same period. A Food Hub* in San Juan County will expand market opportunities for island farmers, providing jobs, growing the local economy and increasing food security.

*A Food Hub is a business or organization that facilitates the aggregation, distribution and marketing of food products to local and regional markets. Learn more at sjagguild.com/san-juan-county-food-hub/

Submitted by the San Juan County Food Hub Working Group.
Growing a movement around soil, naturally

How reconsidering the relationship with land creates healthier, more sustainable results

At Good Earth Centre on San Juan Island, the farmers wanted to grow more than produce and flowers: they wanted to grow a movement.

Gary Miller and Amy Plant’s farming methods replicate what happens in a natural ecosystem. The results are impressive—both for the farm stand produce and for the culture it’s contributing to. When they began eight years ago, the soil at Good Earth was marginally productive and crops suffered from a host of diseases and pests. They didn’t want to use traditional methods (compost, manure, and amendments) to improve the soil. And they didn’t want to till, so they went to an organic no-till strategy coupled with seasonal cover crops.

Whereas some tillage practices can damage soil structure, weaken biological health, and increase erosion, organic no-till improves the biological activity of soil and increases organic matter faster. Organic no-till soil structure reduces erosion, runoff, and the leaching of harmful nutrients into the environment. It also lowers CO₂ levels and encourages year-round wildlife.

While no-till isn’t new, it often goes hand in hand with herbicide use. It has taken a while to gain traction in the organic movement. But Good Earth’s results are helping the practice gain attention. And by developing no-till techniques that can be more easily adopted by small scale organic commercial farmers, they are helping to strengthen community around the practice, and around the deeper philosophy of being stewards of the earth. This is just one way that sharing a single practice can help grow a movement to deepen a relationship with the earth.

Many organic no-till proponents will say the process offers a map to the holy grail of organic farming. They recognize that soil conservation is as serious an issue as climate change and that a shift in this direction has to happen for the future of our lands and our food. And they’ll also tell you that it’s not just about the practice itself of no-till, just as farming is not solely about production. It’s also about the relationship to the earth and what grows around it, naturally.

Amy Plant and Gary Miller
Good Earth Centre
goodearthcentre.org

No-till is about the relationship to the earth and what grows around it, naturally.

Preparing healthy fields for a new generation of islanders.

What do you do that helps to grow a movement around sustainability?
Tell Friends about your great ideas. We’d love to hear from you!
Supporting multiple forms of transportation improves our community for everyone

*Envisioning Complete Streets to improve health, our economy, and quality of life*

A cyclist, a pedestrian, and a car meet on a street...

This setup is no joke if the street isn’t part of a “Complete Streets” solution—which provides all modes of transportation, including walking and biking, with safe and convenient options for getting around.

Historically, San Juan County’s roads have been designed primarily for motor vehicles. This means that cyclists, pedestrians, and drivers all must do their best to share the winding, narrow-shouldered roads, often with limited sightlines and high speed limits. This creates an unsafe mix for all involved.

This sense of danger (both perceived and real) reduces people’s motivation to leave the car at home for errands, commuting, and recreating. The lack of safe places to walk and bike can negatively impact our health, environment, economy, and even a sense of connection within neighborhoods.

While some improvements have been made over the years, they have come slowly and irregularly. We hope to change that!

With community members, Friends of the San Juans has been working on a “Complete Streets” ordinance to pitch to the Town and County. Complete Streets ordinances typically direct local governments to consider and implement bicycle, pedestrian, and transit-friendly infrastructure whenever they develop new roads or substantial reconstruction of existing roads.

In San Juan County, these options could look like separated paths, wider shoulders, lower speed limits, or road striping and painting that helps highlight areas of potential traffic conflict. Since 2011, when Washington passed the Complete Streets Act, 86 towns and counties have adopted a Complete Streets policy. In 2012, Ocean Shores, WA was...
named one of the 10 best Complete Streets communities in the nation. There’s no reason we can’t do it here, too!

Why are so many places adopting Complete Streets ordinances? One practical answer is because it unlocks state funding to help defray infrastructure costs. And, once a town gains a reputation for welcoming cycling and walking, it can see a significant economic boost (see below). Plus, Complete Streets decreases the carbon footprint, offers less expensive and healthier transportation options, and provides greater safety for all.

Want to join our efforts? Contact Kyle, at kyle@sanjuans.org or 360-298-7615.

**Kyle Loring**
Staff Attorney

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**Bicycles are economic drivers**

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**Above:** An option on a rural road in the Netherlands.

**Right:** Kyle Loring, exploring bicycle systems on a recent cycling trek through Europe. Let’s make cyclists feel just as welcome here!
People who move to the islands often ask how long it takes to be from here. It’s a tricky question. What does it mean to be from a place? Some say that to be from a place, you also have to be for it—to understand what it is at its heart, and to help it grow. To do that, the real question is: How can we deepen our sense of place by embracing what we have here rather than trying to make it “better” by replacing it with another? It begins by understanding what it means to be rural, here, in this specific location (San Juan County is, officially, a rural county)—and to grow this particular sense of rurality.

Population numbers or geographic location can suggest whether a community is rural, but for many, “rural living” is more a characterization than a definition. It is synonymous with natural views of forests, treelines, and grasslands, farming, forests, large open spaces, clean water, fresh air, self-reliance, and neighbors who know each other but have a little breathing room between them. Having wetlands that trill with birdsong and frogs, meadows, hay fields, and homestead orchards are necessary if we are to “grow our rural”—that is, grow the heart of the islands.

As subjective as this description of rural life is, does it fit what we have in San Juan County? In many places, yes. For now. But can we ensure it will fit in the future? Not necessarily. To keep the region’s character undeniably San Juans, each person can make sure that farm and forest lands aren’t converted to other development, preserve a tax system that encourages open space, promote density at a rural scale, support local conservation organizations, buy groceries first at the farmers market, or just leave large portions of our properties undeveloped.

Just liking the San Juan Islands won’t be enough to save them. In the face of today’s current environmental degradation, climate change, and suburban sprawl, protecting our ecosystems and sustainable economies are more important than ever.

So develop those deep roots: grow where you’re planted! Celebrate the specific wonders, quirks, and features of this place that allow generations of locals and visitors alike to appreciate it for what draws them here. And then share all the ways you know you’re from here—and for here—with the next person who wants to know how long it will take until they can claim it too.

Rural views and lifestyle are at the heart of what defines San Juan County, making it a place cherished by locals and guests alike.

Thoughts on growing our deepest roots

Protecting our ecosystems and sustainable economies are more important than ever.

Jana Marks
Finance Manager and Program Assistant
Jana joined Friends in 2002 and provides support in all program areas. An islander for nearly 40 years, Jana raised her daughters while living self-sufficiently on Stuart Island, and currently resides on San Juan.
Get ready to brag about how the Northwest is the best—and not just for our gorgeous views, clean waters, and can-do spirit in any weather. We also have some of the cleanest, low-cost energy around.

Global climate change makes investing in new forms of energy more essential than ever. So OPALCO, our member-owned electric Co-op, is accelerating its integration of locally distributed power, including solar, with its modern grid. OPALCO is planning an energy future to support a vision of ideal island communities where efficiency, local renewable power, and low carbon impact are a model for the rest of the world.

What’s eating your energy?
If you’re like most islanders, 79% of your energy budget is taken up by just two things: driving and home heating. A typical EV, driven 10,000 miles, costs about $200 in OPALCO electricity versus $1,200 in gasoline, and emits 40 times less carbon. An electric ductless heat pump can cut your heating bill by over 50%. Next time your vehicle or heating is up for evaluation, contact OPALCO to talk about rebates that can help reduce the cost of EVs and heat pumps (see www.opalco.com/rebates).

How do we grow our local energy resources?
Most of our county’s electricity comes from Bonneville Power Administration (BPA). It is low-cost, clean, and reliable. But relying on a single provider overlooks other sources and strategies which would allow for greater flexibility and independence. While BPA will continue to be the foundation of our fuel mix for firm power, local intermittent renewables such as solar, wind, and tidal are ramping up, in tandem with continued efficiency and conservation gains.
Global climate change makes investing in new forms of energy more essential than ever.

Currently, BPA energy is cleaner and lower cost than solar, wind, and tidal. However, the cost of BPA energy is slowly increasing, and the cost of implementing local energy is slowly decreasing. At some point in the next few years, costs will hit “grid parity” and things like solar and tidal will cost less to scale up. As OPALCO moves towards full electrification of heating and transportation, it is preparing for significantly more intermittent local renewables.

The Thoron-Thomsen family of Orcas Island switched to an EV. With all the driving to their kids’ activities, they’re loving both the savings and the knowledge that they are not putting out tailpipe emissions.

achieving balance in our energy strategy

Energy parity occurs when the cost of electricity from renewable sources is less than or equal to the price of purchasing power from the grid. The process of achieving parity involves strategically investing in a variety of forms of energy that overlap to create sustainable, long term solutions—a challenging process since each form of energy has unique advantages and disadvantages.

energy efficiency /conservation

With energy, the less you use, the more you have. Conservation isn’t just about immediate savings to individual electric bills; it also reduces the need for additional generation resources. It costs less to conserve than to generate energy.

Pros: Reduces waste, lowest cost resource available, and works year-round, year after year.
Cons: Up-front costs, e.g. higher efficiency appliances, light bulbs, and weather proofing.

solar

Pros: Works well in the summer. As climate change reduces snowpack and thus summer hydro, solar can help fill the gap.
Cons: Still expensive, intermittent, doesn’t work in shaded areas, at night, and in gray winter months.

hydro

Pros: Provides clean, renewable energy for low-cost and with a low-carbon impact. Firms power to balance intermittent renewables year-round.
Cons: Dams impact fish and wildlife.

tidal energy

This form of energy is to the Northwest what solar is to places like Arizona.

Pros: Takes advantage of enormous power density (energy potential) in our waters, year round. Firmer and more predictable than intermittent solar.
Cons: As an emerging technology, it is currently expensive and requires environmental sensitivity.

energy storage

Pros: Helps maintain grid reliability by smoothing intermittent resources like solar, and peaks in energy demand (e.g., cold snaps in winter). Helps to power critical county services during outages.
Cons: Adds cost to local renewables.
Friends engages in beach cleanup and education about marine debris. And don’t forget that you make a difference every time you reduce plastics consumption and use (grab those reusable bags)!

Friends’ Safe Shipping program seeks to safeguard our Salish Sea against spills—for the good of everyone who depends on these waters.

A major oil spill would have a significant impact on Washington State’s maritime economy which is worth $30 billion and supports 148,000 jobs.

By 2050 there will be more plastic than fish in the ocean by weight.

Friends’ wetland restoration supports critical migration, feeding, and nesting habitats. Supporting the huge number of birds who rely on these often overlooked areas for their survival is critical to our mission.

1/2 of North American birds nest and feed in wetlands.

1 Orca Behavior Institute, Orca Network sightings reports, The Whale Museum’s Orca master data set, and Center for Whale Research

photo: Chris Teren | TerenPhotography.com
With the spring Chinook numbers crashing on the Fraser River over the last 13 years, Southern Resident visits to inland waters are becoming more and more infrequent in the spring and early summer. Young Fraser River salmon eat, rest, and grow in the San Juan Islands on their way to the Pacific Ocean. Friends’ work to preserve and restore natural beaches helps nurture these important fish.¹

Friends supports Complete Streets solutions for our communities so we can enjoy more options, a small carbon footprint, better health, and a vibrant economy.

Average days Southern Resident orcas were in Salish Sea inland waters from April-June

<table>
<thead>
<tr>
<th>1990-2016</th>
<th>2017</th>
</tr>
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<tbody>
<tr>
<td>60 DAYS</td>
<td>24 DAYS</td>
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For properties adjacent to trails and greenways (www.americantrails.org).

5-32% increase in value

of San Juan County roads are threatened by increased flooding or erosion from rising sea levels by 2050; 20 miles are vulnerable by 2100.

Friends of the San Juans helps landowners and land use professionals understand shoreline management options that consider sea level rise. Through site-specific technical assistance with public and private landowners, Friends helps community members protect their property and maintain important ecological services such as water quality and wildlife habitat.
IF ALL PROPOSED PROJECTS GO THROUGH THERE WILL BE A 37% INCREASE IN VESSEL TRAFFIC CROSSING THROUGH THE SALISH SEA.

EVERY VESSEL USES AND CARRIES OIL. ANY SPILL WILL HAVE A MAJOR IMPACT ON THE REGION.

$3+BILLION shoreline property value in San Juan County (San Juan County Assessor, 2016)

2,140 tourism jobs in San Juan County

$1.4 MILLION San Juan County collected in lodging tax in 2016

$21.2 MILLION local and state taxes generated by visitors to San Juan County (Dean Runyan Associates 2016 Travel Impacts Report)

$211 MILLION tourism tax dollars to San Juan County by visitors (Dean Runyan Associates 2016 Travel Impacts Report)
OPALCO

Continued from page 9

OPALCO is also watching developments in emerging energy resources, including fuel cells, which can be used to store energy, and biochar, which can generate energy while absorbing carbon from the atmosphere.

OPALCO Community Solar

While many co-op members are interested in solar energy, only about 27% of residential rooftops are suitable for hosting a solar array (National Renewable Energy Laboratory, 2008). Even if the sun is good, many people rent, don’t want the solar to affect the home aesthetic, or can’t afford the upfront costs.

But there is a way to make solar accessible to everyone. OPALCO is developing a large community solar array that members can subscribe to later this year on a first-come, first-served basis. It allows members to simply buy a share in a community array at a level that fits a variety of budgets. The larger the share, the larger the monthly solar production credit to your electric bill.

OPALCO’s 2018 Community Solar project is the first of what could be many large solar arrays in San Juan County to increase local generation and energy storage. The more members show interest in this pilot project, the faster OPALCO can grow and will site and build additional Community Solar arrays.

Meet our new board members and interns

new board members

Ken Carrasco is a retired biologist living on Orcas. With degrees in zoology and ecology, Ken has worked for the Alaska Department of Fish and Game, the National Marine Fisheries Service, as a researcher on the Exxon Valdez disaster, and served in the US Coast Guard stationed aboard a polar icebreaker. Ken, an avid boater, is a proponent of electric transportation technology, both for cars and boats.

Shireene Hale, a resident of San Juan Island since 2005, worked as an environmental health professional, land use planner, Deputy Director of the San Juan County Community Development Department, and staff lead on the most recent critical areas ordinance update. Now retired, she and her husband enjoy sailing and visiting remote areas of British Columbia and Alaska.

Toby Cooper joined the board after helping craft Friends of the San Juans' green and sustainable investment plan for endowment and operational funds. His dedication to environmental advocacy includes years on staff at Defenders of Wildlife and at National Parks Conservation Association. He currently serves as Chairman of the Mountain Lion Foundation, Sacramento, CA. Toby and his wife live on Orcas and are Eastsound business owners.

summer interns

David Heberling grew up outside of Pittsburgh, PA, often hiking among the mountains and rivers of Western Pennsylvania and West Virginia. After witnessing the environmental devastation that can result from short-sighted energy policy and industry, he moved west to pursue a clean energy future. After receiving his BA in Political Science, David worked at SolarCity in San Francisco. There he was inspired by industry-leading board member, Elon Musk, to pursue his legal career in energy and environmental law at University of Oregon. David is excited to help protect the islands’ natural beauty.

Perham Black lives on San Juan island and will be a senior at Spring Street International School in the fall. Before starting his internship with Friends, he spent the year sailing and attending school in Spain. He has a special interest in filmmaking, and co-produced the short film, Minimal Impact about Leave No Trace.
How did you discover your passion for environmental protection?
The marine world gripped me when I was young. I was always interested in environmental protection, but when I was 12, I watched a documentary about the Southern Resident Killer Whales and went from being interested to being hooked. The similarities between their lives and humans’ lives blew my mind: their family ties, intelligence, and life history. I became a certified SCUBA diver within the year. I quickly learned about food webs and the interdependence of the marine world—from the little fish to the big whales. And I wanted to protect the creatures and places I found so amazing.

I was born in Seattle, but my family moved to the south when I was one. Eventually my connection to the sea brought me back west to Western Washington University where I received my M.Ed. in Natural Science/Science Education in 2004. Now I’m honored to call the Salish Sea region my home, raise my two young sons here, and play an active role in protecting it. Some people say I’m like a salmon because of how I found my way back to the Pacific Northwest. Twelve year-old Katie would be very excited about where I am in life!

Why is community building important to you and the work you do at Friends?
It takes a lot of work to address all of the issues in front of us. One person, one organization can’t do it all alone. Community is incredibly important to our work at Friends. Members and supporters of Friends are key when it’s time to comment on projects and policy that impact the Salish Sea. We also depend on individuals to be responsible stewards of their property so our collective impact is a positive one. Every voice and every action really does make a difference when you add it all up.

My position is to help gather community around important environmental issues, and to provide education that opens people up to how incredible this place is. I want knowledge to inspire people to pay it forward to the next seven generations who will inherit our legacy of place.

Where is the community engagement momentum going next?
This has been a fantastic year of community engagement, but for reasons that make people very uncertain. The recent change in the federal administration introduced new uncertainties for the environment and the nonprofits that serve it. Local and state
efforts will now lead on environmental protection. And we are seeing the people-powered momentum grow in response!

Opposing increased fossil fuel export through the Salish Sea continues to draw amazing support. People are showing up in large numbers to protests and rallies. 400 people attended “Salish Sea Stands Against Kinder Morgan” protests in the islands in January, 200 people joined us in Olympia to meet with legislators about oil transportation safety and rally for the Salish Sea on the Capitol Steps, and in April, 300 people marched for climate action, jobs and justice at Friday Harbor’s People’s Climate March. We can see that it makes a difference to gather and speak with one voice. So it will just keep getting bigger.

The volunteers, partner organizations, and citizens who gather together make the voice of the San Juans and Salish Sea loud and clear. This voice helps to protect our islands and future from dangerous fossil shipping and infrastructure, the resulting pollution, risk of an oil spill, and climate change.

We’re learning how to use this to build community and influence change while making our home a better place—together.

Growing our island youth

**Education in science through exploration, protection, preservation**

Cultivating passion for the natural world means getting people to experience it. For Sharon Massey of Spring Street International School in Friday Harbor, experiential teaching means planning right down to the rain gear, rubber boots, and lots of hours in the field with students. One student shares, “Sharon is an amazing teacher because she lets us go out and explore the natural world while teaching to protect and preserve it.”

The Stewardship Network of the San Juans awarded Sharon the Finee Award for her work. Recipients must demonstrate in their daily lives a long-term commitment to preserving the land and sea of the San Juan Islands. A big community thanks to Sharon for sharing her knowledge of the natural world and her positive impact on our islands every day, while creating a new generation of future stewards.

**what her students say**

“Sharon is an amazing person because she has a passion for nature and being outside and she teaches kids about that by taking them out and showing them the beautiful world we all live in.”

“Sharon inspires me to take action about the things that matter to me, and has helped my love of birds grow and strengthen!”

“Sharon shows kids a new side of nature. She takes kids out to have fun but at the same time, they learn so much they never even realize they are learning.”
When it comes to saving the world, our community shows up

Friends is building climate action momentum here. Here’s how you can help:

Join us to promote:
• Local renewable energy sources. See pages 8-9 for more info.
• Support for local growers and innovations to increase food security. Visit your local farmers market!
• Inclusion of climate resiliency strategies in the San Juan County Comprehensive Plan. Join our Comprehensive Plan Update Action List. Contact Katie to receive alerts when there are commenting opportunities (katie@sanjuans.org or 360.378.2319).

• Biking and walking in our community. Friends is working on policy to make our streets safer for cyclists and walkers. Contact Kyle to help out (kyle@sanjuans.org or 360.378.2319).

Thank you for helping to protect what you love so that we, our children, and our grandchildren all have a future full of promise!
Take action to create a more fossil fuel free future!
• Talk with elected officials about removing the cap on solar production incentives, and ask them to support renewable energy and EV tax incentives.
• Talk with County Council members about the Comprehensive Plan to make sure it supports increased energy efficient building standards.
• Walk, bike or drive an EV.
• Replace fossil fuel heating sources with a super-efficient electric ductless heat pump. Less energy, more savings!
• Participate in energy change workshops, community meetings and surveys.
• Invest in Community Solar.

HELP PLAN A FUTURE FOR THE ISLANDS AND THE SALISH SEA

When you name Friends of the San Juans as a beneficiary of your retirement plan, life insurance policy, or other financial account, you leave a lasting gift that protects the waters, wildlife, and islands you love. Contact us today to talk about how your planned giving can be a gift to the future of this place. 360.378.2319 or stephanie@sanjuans.org

CREATING A MORE LOCAL RESILIENT ENERGY FUTURE

When you name Friends of the San Juans as a beneficiary of your retirement plan, life insurance policy, or other financial account, you leave a lasting gift that protects the waters, wildlife, and islands you love. Contact us today to talk about how your planned giving can be a gift to the future of this place. 360.378.2319 or stephanie@sanjuans.org
Natural shorelines can adjust to rising seas

*Strategies for making local shorelines more resilient to climate change*

No one can see the future, but we can all plan for one. In the islands, this planning should consider how our shoreline properties, infrastructure, and habitats might best adapt to rising sea levels. While this may sound daunting, we all have practice with planning, so we’ve got this!

The most likely impacts of rising seas in the San Juan Islands are: (1) higher water levels/high tides and (2) increased frequency and size of coastal flooding and erosion events. How we plan for and adapt to these changes will determine how well our shorelines work to help protect us and generations to come.

Our economy, wildlife, and island way of life are tied to natural shorelines. For example, our salmon, seabirds, and marine mammals depend on forage fish. Forage fish are critical to our marine food web. They depend on healthy upper beach habitats to spawn their eggs, which means they are particularly vulnerable to practices that cause the narrowing and loss of beaches.

Research conducted by Friends of the San Juans with Salish Sea Biological and the WA Dept. of Fish and Wildlife found that forage fish spawning beaches in the San Juans that are already armored by bulkheads or roads are likely to be among the earliest and hardest hit by the impacts of rising sea levels. Average habitat losses of 10%, 20%, and 80% are expected in these areas by 2030, 2050, and 2100, respectively. To ensure that the fish, wildlife, and beaches that define us are here for our grandchildren, solutions other than armoring are necessary.

In addition to the significant habitat impacts, rising sea levels will also cause increased coastal flooding and erosion impacts to developed areas. This puts at risk public and private buildings, infrastructure (e.g., low lying roads and shoreline parks), and facilities.

Hundreds of innovative, nature-based solutions have been implemented from New York to Newport, reducing risk to property and infrastructure and providing additional benefits such as public access and habitat retention, while costing less in the long term.

“Coastal squeeze” happens when armoring prevents the beach from naturally adjusting landward in response to rising seas. This causes the beach to be underwater even at lower tides, removing critical beach habitat where forage fish spawn.
friends, beaches, and bluffs to provide open space and act as barriers against extreme flood and erosion events.

Next, we need to incorporate locally-applicable science and approaches into plans and policies such as the San Juan County Comprehensive Plan update that is underway right now. Contact your County Councilors and let them know you want to include climate mitigation and adaptation actions into the plan update!

Everyone can help to proactively address climate change and coastal hazards. Setting policy is hard work, but it's just planning on a larger level—we can do this!

Making shorelines more resilient to sea level rise protects forage fish. These are small fish with a big role in the food web. Southern Resident orcas eat salmon. And salmon eat forage fish. Lots of our work centers on protecting these important fish—they are tied to so much of what we all love about the San Juans. For more information, visit: sanjuans.org/nearshorestudies-htm/

**Right:** Astrid Van Ginneken, Center for Whale Research.
GET INVOLVED!

The San Juan Islands...Worth Protecting

Support us!
We love our ever-growing community of members, and we want you in it! Become a Friends member. Membership donations are tax-deductible and help our island environment. See enclosed form or visit sanjuans.org/donate-now.

Want to support your local economy?
Ride your bike! Find out how cycling infuses major capital into communities with bike-friendly streets. See page 5 for more info!

Save the date for our annual meeting luncheon!
September 16, Lopez Center for Community and the Arts, RSVP required - 360.378.2319.

Eclipse Viewing Party
Join Friends, the National Park Service and our other partners at the Solar Eclipse Viewing Party, August 21, 8:30 a.m. - 12 p.m., South Beach on San Juan Island.

We can’t do it without the bees.
Five ways to help:
1. Plant a bee-friendly flower garden or border.
2. Support local honeybee producers and farmers.
3. Welcome the clover and dandelions—some of bees’ most important food.
4. Lose the pesticides, especially neo-nicotinoids, which are tied to colony collapse disorder.
5. Read up! Here’s a great place to start: Where Honeybees Thrive, Stories from the Field, by Heather Swan.

HELP US SPREAD OUR MESSAGE BY WEARING A NEW FRIENDS T-SHIRT OR HOODIE!
Email katie@sanjuans.org for ordering information.

SUPPORT FRIENDS OF THE SAN JUANS
sanjuans.org/donate-now
COMMUNITY CONVERSATIONS ABOUT
growing local economies, 
ecologies, and connections

2017 Friends of the
San Juans