December 2, 2009

Dear San Juan County Council,

We are honored to convey to you our final recommendations from the San Juan Initiative. Thank you for your sustaining interest, leadership and commitment to this project. The actions you take now and in the future are critical to the protection of the ecosystem and to the citizens of the San Juans. We encourage you to continue to foster a collaborative relationship with property owners, scientists, and nonprofit organizations and other state/federal and tribal governments.

This letter summarizes the findings, recommendations and additional actions needed for successful protection of the San Juan ecosystem. There are also four appendices:

1. 2009 Accomplishments
2. Lesson's Learned: Applicable lessons about working within this community
3. Actions for Implementation: Work necessary to implement the SJ Initiative recommendations.
4. August 24, 2009 Recommendations for Setbacks, Buffers and Protection of Natural Erosion and Sedimentation Processes.

1. Background

The San Juan Initiative was a pilot effort to improve ecosystem protection in a manner that supports community values, respects property owner rights, and builds local capacity for ecosystem protection. The heart of the San Juan Initiative was a 22-member Policy Group comprised of 11 Council-appointed local citizens as well as federal and state agency representatives and tribes with resource management responsibility in the Islands.

Together with the community, the Initiative set out to accomplish two key goals: (1) Assess the effectiveness of programs aimed at protecting the shoreline; and (2) Recommend specific ways to improve protection in a manner that supports other community interests and respects the rights of property owners. We held over 25 public workshops to engage land owners, real estate and construction industry professionals, and the general public.

In summary, we found the following regarding the shoreline ecosystem:

1. Management programs and the community have made some positive improvements over the last 30 years of environmental management.
2. Some of the most sensitive parts of the marine shoreline are being altered and there is a high risk of further alteration, resulting in diminished ecosystem function.
3. There is a lack of accountability to ensure that people and governments successfully carry out their responsibilities in a way that results in ecosystem protection.
4. Current regulatory protection programs are turning people off, and education and incentive programs are not addressing the needs of the ecosystem or shoreline property owners.
5. Through scientific advancements and the ethic of stewardship within the San Juan community, there is tremendous opportunity to improve protection of the ecosystem.

To address these findings and ensure effective protection for two specific ecosystem components- shoreline vegetation and sedimentation processes- we developed the following overarching recommendations which were unanimously endorsed by the County Council on Dec. 9th, 2008 and supported by the participating federal and state agencies:

a. Tailor land protection efforts to match the level of ecological function and sensitivity. For instance, focus incentives and education efforts on beaches and bluffs.
b. Increase consistency in permitting requirements and certainty that the regulations will be interpreted consistently throughout the permit process. Property owners and builders need predictable outcomes from the permitting process that they can count on when calculating building costs and timelines.
c. Provide information to decision-makers, whether county planners or property owners, in an accessible, relevant and timely manner. This recommendation builds on the need for predictability in the permitting process. It also focuses on ensuring that the information needed by property owners, planners and elected officials is available and accurate.
d. Foster a collaborative approach between the public and private sectors in order to increase communication and effectiveness. Continued forums are necessary for local builders, real estate professionals and contractors to discuss issues and develop common solutions with county and state decision-makers.
e. Reward actions that protect ecosystems and discourage actions that are damaging or not in compliance. Implement programs that recognize people for good stewardship and provide financial incentives for private conservation actions like soft shore beach restoration projects.

2. Continuing the Work

The County and other parties have made substantive progress implementing the Initiative's recommendations of December 2008. Yet there remains considerable work to be done to improve the effectiveness of shoreline protection. In addition to actions by specific organizations, it is critical that the efforts are coordinated and communicated to the public. The following work is necessary to implement the recommendations of the Initiative. Additional details can be found in Appendix 3.

a. There continues to be insufficient technical assistance for shoreline property owners from either the County or any other institution. There is also a lack of ongoing technical support for county planners as they write permits or review citizen's questions. This need for technical assistance and support was identified by virtually all property owners, builders and county planners.

   We request that the County Planning Department take the steps necessary to have adequate technical expertise to review permits and answer questions from the public.

b. Lack of key enforcement mechanisms, such as penalties and inspections, limit our protection efforts by encouraging non-compliant actions and perpetuating the perception that the County's enforcement program is arbitrary and weak. Please refer to the April 10, 2009 letter that was sent to the Planning Commission from the Co-Chairs of the San Juan Initiative for specific recommendations.

   We request that the County Council, County Administrator and Prosecuting Attorney finish the proposed code enforcement ordinance by early in 2010, ensure adequate training for compliance inspectors to work on shoreline permits, and establish a realistic process to conduct enforcement actions in a timely and thorough manner.

c. San Juan County is in need of a coordinated system for tracking and monitoring shoreline development within the County Planning Department and between the County Planning Department and WA Department of Fish and Wildlife's Hydraulic Permit Approval Process.

   We request the WA Department of Fish and Wildlife and County design a system to coordinate permit tracking between County permits and HPA permits by the end of 2010, and that the County discuss a collaborative partnership with WA Department of Fish and Wildlife and Department of Natural Resources to improve enforcement.

   d. New regulatory language that results in the following: a tailored approach to setbacks; a point based system, similar to the one used in the State of Maine, for protecting vegetation and maintaining views and shoreline access; and placement of shoreline armoring on beaches and bluffs allowed only when

home, accessory dwelling unit, road, driveway or septic is threatened by erosion. (details on this recommendation can be found in Appendix 4: Aug 24th, 2009, San Juan Initiative Recommendations):

We request that the County Council include these recommendations in the scope of work for the Shoreline Master Program Update.

e. A culture shift in the relationship between the County government and building and real estate professionals is needed to foster efficiency and maintain the economy of the Islands. The Initiative convened a number of large public meetings with building professionals to identify common issues and brought these issues to a smaller working group of private professionals and the county staff.

We recommend continuing to engage the building community in a formalized fashion that builds on the work of the Initiative. We suggest two members of the Council chair a group with Public Works, Planning Directors, and several builders, realtors, excavators and landscapers to discuss planning and land use challenges.

f. Advance protection of the terrestrial ecosystem:
Improving protection of the terrestrial ecosystem will take a multi-pronged approach. We recommend the following actions to improve the overall system of protection for the terrestrial ecosystem.

We request U.S Fish and Wildlife Service or other local groups create a Terrestrial Work Group and direct that group to explore funding to improve protection of the terrestrial ecosystem.

We request that the Land Bank convene a working group that includes all relevant partners and seek additional funding for conservation of oak woodlands and coastal prairies and key species such as Golden Paintbrush and Island Marble Butterfly.

We request that San Juan County and the Department of Ecology jointly develop and implement a scope of work for a wetland inventory and restoration strategy.

3. Measuring Success

We believe the true test of our work lies in the measuring of outcomes over time. To ensure future efforts deliver the desired outcomes, we established detailed measures of success that are posted on our website. Below is a summary of these measures:

1. The current percentage of native vegetation, trees and ground cover along the shoreline is retained.

2. The number of bulkheads/armoring along feeder bluffs and beaches is reduced.
3. Builders, realtors, community leaders, county officials and the public are engaged in a strong working relationship in which each party is respected for their role in protecting the environment.
4. Property owners and county planners have convenient access to technical assistance for maintaining views, creating access to the shoreline, and protecting the shoreline. Property owners of beaches and bluffs and other important shoreline features have financial incentives to protect their stretch of shoreline.
5. There is an effective and efficient way to track permits and ensure compliance.

We recommend the Marine Resources Committee and the Puget Sound Partnership convene the implementing agencies and the Policy Group in 2010 and 2012 to review the results and determine if the objectives listed above are being achieved and, if not, take corrective action.

4. Conclusion

Implementing the recommendations of the San Juan Initiative will require ongoing commitment and funding. The funding needs are not large, but county and state agencies have limited capacity for expanded efforts as they currently struggle to fund basic services. The recommendations of the San Juan Initiative are specifically mentioned in the Action Agenda as a high priority for the health of Puget Sound. Funding requests should be coordinated among the various likely partners and perhaps be centralized by the Local Integrating Organization. Support from private foundations should also be sought to assist in the funding needs of the nonprofit organizations that play a vital role in implementing these recommendations.

The work of the San Juan Initiative is now formally concluded, but the work to protect the San Juan ecosystem may be never-ending. We believe our work has affirmed the importance of landowners, governments, businesses and nonprofit organizations working together to achieve a healthy environment and a supportive community. In fact, our work has confirmed that environmental health cannot be achieved without the foundation of community collaboration and good will. Collectively, all levels of government must continue to find ways to be accountable and demonstrate to the local community their support for effective and inclusive governance. No one tool or group can assure protection of our environment. It has to be a collaboration where all parties are respected for their role and mutually held accountable to successfully contribute their part.

Thank you to the San Juan County Council for their leadership in creating the San Juan Initiative and being open to the evaluation of their programs.

Thank you to the state agencies for their willingness to join us in our community effort.

Thank you to the many citizens and organizations who contributed their time and their hearts to participating in this process and helping us make a difference.

Thank you to the National Fish and Wildlife Foundation, Bullitt Foundation, US Fish and Wildlife Service and the Puget Sound Partnership for funding the work and believing in its importance.

Sincerely,

Lovel Pratt
County Council Member
Co-Chair San Juan Initiative

Jonathan White
Co-Chair San Juan Initiative

Policy Group

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Partners

Department of Ecology
Department of Natural Resources
Department of Fish and Wildlife
National Park Service
NOAA Fisheries
Puget Sound Partnership
San Juan County
Surfrider Foundation
The Nature Conservancy
Trust for Public Lands
Tulalip Tribes
US Fish and Wildlife
US Army Corps of Engineers

Appendix 1: 2009 San Juan Initiative Accomplishments

Throughout 2009, the San Juan Initiative instigated and supported actions by the County and other parties to implement the above recommendations. To date, the following has been accomplished:

1. Tailored protection:
    a. Ongoing community dialogue established with shoreline property owners, realtors, builders and the general public to explore creation of a tailored approach to house setbacks and maintenance of shoreline trees and vegetation within buffers.
    b. A recommendation for new regulatory language was drafted to reflect a tailored approach for setbacks and protecting shoreline trees and ground cover. These issues will be addressed through the Shoreline Master Program update. A recommendation for new regulatory language was drafted for protecting natural shoreline erosion processes.
2. Increased consistency in building, buying and permitting:
    a. Staff served on the Citizen's Committee for the update of the Critical Areas Ordinance which was intended to clarify regulations and increase consistency in interpretation.
3. Fostered a collaborative approach:
    a. Staff organized a series of field trips and public workshops with the County on the update of the Critical Areas Ordinance which was outside of the Policy Group oversight.
    b. Continued to develop a tailored approach with the help of builders, realtors, landscapers and others in the development industry.
    c. The Trade Group Work Team is a small group of informed individuals that have coalesced around some key issues that need to be addressed at the County. This group could be called upon by other organizations or by the County to begin a deeper discussion about how to resolve some long standing permit issues at the County.
4. Provided relevant information
    a. Developed new San Juan County web-based information for property owners on shoreline protection (www.sanjuanco.com/shoreline). Encouraged and assisted in the revision of technical assistance provided by the Conservation District to include shoreline concerns.
    b. Created a map showing various shoreline types using PSNRP data products.
    c. Mapped feeder bluffs in San Juan County along with various partners: Puget Sound Partnership, NW Straits Commission, Marine Resources Committee and Friends of the San Juans.
5. Rewarded actions that protect and discourage actions that are not in compliance
    a. The County Council increased permit fees to fund post construction inspections.
    b. Submitted a letter of support to County Council and Planning Commission to improve enforcement of shoreline permits.

6. Established a method to measure progress toward increasing marine shoreline protections in the San Juans.
7. Improved protection of terrestrial ecosystem
    a. Developed a preliminary proposal for how to assess and improve protection of terrestrial ecosystems in San Juan County.
    b. Assessed protection effectiveness for two coastal prairie species of local and regional importance: island marble butterfly and golden paintbrush with recommendations for improved protection that builds on existing education and support of local landowners.

Appendix 2: Applicable Lessons Learned by San Juan Initiative

The San Juan Initiative provided a valuable assessment on whether the combined efforts and environmental protections are working to maintain the health of the shoreline in a way that works for the community. In our opinion it was a good and productive step in the on-going need to ensure accountability, an essential ingredient for the recovery of Puget Sound. The overall process is documented in "Key Steps," available at www.sanjuaninitiative.org. Below are a few of the important lessons to be considered for similar efforts in the future.

1. To understand what is working in regard to environmental protection requires an assessment of whether ecosystem functions, processes and services are improving or diminishing. Unfortunately, there is little quantitative baseline information available. This limited our ability to make an accurate assessment. Consequently, we were forced to measure actions and activities that have been shown to impact the ecosystem. For instance, we documented presence of bulkheads as an indication of near-shore health but we did not measure the change in beach substrate and biological communities post bulkhead. Without baseline information and trend information on the ecosystem, it is difficult for people to believe their personal choices make a difference.

2. To determine what was working and what wasn't, we involved the scientific community, landowners, land development professionals and government managers/permit staff in individual meetings. Once we had the assessments from each group individually, we integrated the results to help us refine the overall picture. This provided significant insights about the success of environmental protection and created helpful relationships for identifying solutions.

3. It takes a holistic look to understand what is working and what isn't. Assessing the effectiveness of protection required a look at all three types of tools: regulation, incentives and education. It also required looking at three scales--- countywide, shoreline reach and individual parcel--- to know what was intended, and what was achieved, by the various programs. We also looked at what effect these programs had on property owners, the most important sector in determining success. If the programs did not make sense, significantly inhibited the basic interests of landowners, or were confusing, then the ecosystem outcomes were diminished.

4. A smaller scope of work that could be advanced and implemented was preferred over a broader scope of work. At each stage of the Initiative, the Policy Group focused on key elements to advance to the next stage. This constant pruning was difficult yet yielded tangible results. It was at times difficult for the Policy Group to stay focused on initial stages without jumping ahead. However, the careful exercise

of figuring out what's working and what's not allowed a deeper understanding of the problems and therefore a more holistic approach to the solutions.

5. The audit function of the pilot program was successful because the Policy Group, while comprised largely of citizens from the community, also included representatives of most of the implementing organizations whose programs were being evaluated. The Policy Group was not aligned with any one organization. This structure gave the Policy Group the credibility for success by having the authority of the organizations and the objectiveness of citizens' independence. It was helpful to have the participation of many different layers of decision-makers: elected officials, state and federal agency officials. The Initiative suffered towards the end when the agency participation dropped off. The lack of agency director engagement led to a stalling of assistance from agency staff and their ability to work with SJI to implement the recommendations.

6. The diversity of perspectives, responsibilities and experiences of the Policy Group was key to its success. As with many stakeholder groups, the Policy Group consisted of people from the environmental, development and business communities. Often these groups are not successful because each person feels responsible to represent only the hardened position of their interest. Policy Group members brought their interests to the table, but not their hardened positions, and consequently were often able to reach agreement quickly. The Policy Group, as a whole, was focused on co-creating solutions. There was also strong facilitation and a deep commitment to consensus by staff and Co-Chairs

Appendix 3: Complete List of Actions Necessary to Implement San Juan Initiative Recommendations

The County and other parties have made substantive progress in implementing the Initiative's recommendations of December 2008. Yet there remains considerable work to be done to improve the effectiveness of shoreline protection. In addition to actions by specific organizations, it is critical that the efforts are coordinated and communicated to the public. The coordination of funding to the highest priorities is of particular importance. The following section describes the key next steps, the implementing organization, and the likely cost of conducting the work. The following work is necessary to meet the 2010 and 2012 outcomes described below.

a. There continues to be insufficient technical assistance for shoreline property owners from either the County or any other institution. There is also a lack of ongoing technical support for county planners. This need was identified by virtually all property owners, builders and county planners. Improved technical assistance and support would improve the ability to protect our marine shoreline areas prior to the building process. This technical assistance includes site visits to help identify existing ecologically valuable components prior to the building/buying process and would also include information about how to develop/landscape in a way that protects intact habitat and processes and suggests Best Management Practices. The site visit would also identify additional resources available and permitting agencies that may need to be involved.
    - Organize and implement technical assistance to land owners: Conservation District
      Estimated cost: approximately $70,000- $125,000/yr
    - Implement organization to improve technical assistance for county planners: County Planning Department
      Estimated cost: Unknown. Needs to be decided if this would be funded through grants or through an increase in permit fees.

    We request that the County Planning Department take the steps necessary to have adequate technical expertise to review permits and answer questions from the public.

    The Policy Group requests that the San Juan Islands Conservation District obtain the funds necessary to implement a technical assistance program by June 2010. We suggest the state and other funding communities see this as a high priority to protecting the marine shorelines of San Juan County.

b. Lack of key enforcement mechanisms, such as penalties and inspections, limit our protection efforts by encouraging non-compliant actions and the perception that the County's enforcement program is arbitrary and weak. Fees were increased in 2009

to allow for the post construction inspections. Though work is needed on the new permit tracking system to be sure that structures are inspected, conversations with planning staff show that recently approved permits for bulkheads were conditioned to require inspections after building. Unfortunately, a new draft ordinance instituting penalties for non-compliance has not yet been adopted. Please refer to the April 10, 2009 letter that was sent to the Planning Commission from the Co-Chairs of the San Juan Initiative for specific recommendations.

- Implementing organization: County Planning Department with support from the County Council.
- May require training of building inspectors and additional staff time to address violations and some refinements to the EDEN permit tracking system.
- Estimated cost: additional training for inspectors, $5,000/yr.
- Unknown costs: implementing the new enforcement ordinance will likely require additional time from the Prosecuting Attorney's office and additional time from inspectors.

We request that the County Council, County Administrator and Prosecuting Attorney finish the proposed code enforcement ordinance by early in 2010, ensure adequate training for compliance inspectors to work on shoreline permits, and establish a realistic process to conduct enforcement actions in a timely and thorough manner.

c. San Juan County is in need of a coordinated system for tracking and monitoring shoreline development within the County Planning Department and between the County Planning Department and WA Department of Fish and Wildlife's Hydraulic Permit Approval Process. There is potential to create a State/County process to coordinate enforcement and monitors beaches and bluffs for new activity and notifies the County of any changes. This would allow the County to check on shoreline activity and be sure that activity in these sensitive areas is permitted and is complying with permit conditions.

- Implementing organization: County Planning Department
- Expected cost: Planning Department is currently updating its permit system. State /County partnership for periodic monitoring: start-up cost $5,000; ongoing monitoring $10,000- 20,000 per year.

We request the WA Department of Fish and Wildlife and County design a system to coordinate permit tracking between County permits and HPA permits by the end of 2010, and that the County discuss a collaborative partnership with WA Department of Fish and Wildlife and Department of Natural Resources to improve enforcement.

d. Shoreline protection lacks effective incentives. Property owners sometimes need positive recognition and incentives to act on behalf of the ecosystem. The San Juan Preservation Trust, The Land Bank and the Assessor's office have readily available tools to provide stronger incentives, but the current system is targeted for large parcels (greater than 10 acres). Tax incentive tools need to be modified and a pilot incentive project developed for smaller parcels with valuable habitat needs. Public works department and the Planning Department would also need to be consulted. In addition, a recognition program that encourages individual stewardship action by property owners would benefit not just the ecosystem but support a shift in shoreline developing norms.
    - New Incentives: Implementing organization: San Juan Preservation Trust/Land Bank/Assessor in partnership
    - Costs: To create program: $35,000
        i. Ongoing implementation: depending on the number of properties involved, tax rolls would be reduced by some amount. More information needs to be gathered to understand the impact of this program on county revenue.
    - Recognition Program like "Green Shores": Implementing organization: Conservation District
    - Costs: To create program: $125,000
        i. Ongoing implementation costs need to be developed.

    We request that the San Juan Preservation Trust, Land Bank and County Assessor's office provide conservation incentives to owners of small (less than 10 acres) shoreline parcels that have valuable habitat features. These incentives should be presented to the County Council.

    We request that the Conservation District, in partnership with the Marine Resources Committee, seek funding for a "Green Shores" program to target information and recognition of good stewardship by shoreline property owners by the end of 2010.

e. New regulatory language that results in the following (details on this recommendation can be found in the Aug 24th, 2009, San Juan Initiative Recommendations):
    - Tailored approach to setbacks.
    - Better approach to protecting vegetation and maintaining views and shoreline access.
    - Placement of shoreline armoring on beaches and bluffs should be allowed only when home, accessory dwelling unit, road, driveway or septic is threatened by erosion.

Details on this recommendation can be found in the Aug 24, 2009 San Juan Initiative Recommendations, available at: www.sanjuaninitiative.org

We request that the County Council include these recommendations in the scope of work for the Shoreline Master Program Update.

f. A culture shift in the relationship between the County government and building and real estate professionals is needed in order to foster efficiency and maintain the economy of the Islands. Through the Initiative we convened a number of large public meetings with building professionals to identify common issues and then brought these issues to a smaller working group of private professionals and the county staff.

We recommend continuing to engage the building community in a formalized fashion that builds on the work of the Initiative. We suggest two members of the Council chair a group with Public Works, Planning Directors, and several builders, realtors, excavators and landscapers to discuss planning and land use challenges.

g. Measuring success of the Initiative: Reconvene Initiative Policy Group in 2010 and 2012 to review the measures of success developed by the Initiative. The result of our work needs to be monitored to determine its success. Details of this request are outlined in the following section.
    - Implementing organization: MRC and the Local Integrating Organization (Puget Sound Partnership)
    - Costs: $5,000 in 2010 and $5,000 in 2012. This funding would cover staff time to provide a meaningful analysis of work accomplished to date and the outcomes achieved.

We request that the Puget Sound Partnership, through the Local Integrating Organization, work with the Marine Resources Committee to measure the success of the Initiative and reconvene the Policy Group to report the findings to the Council, state and federal agencies and tribes.

h. Advance protection of the terrestrial ecosystem through a three-pronged approach
    - Terrestrial Ecosystem Working Group: Initiated to identify ecosystem wide issues and ensure periodic review of actions. An outcome of this group could be similar to the Marine Stewardship Areas Plan that resulted in identified targets, strategies and key threats for the marine environment. The working group would be charged with gauging the effectiveness of actions and determining responsibilities for specific conservation actions, communicate with land owners and the public in a way that is consistent and supportive. The group should be structured on the San Juan Initiative model and include but not be limited to the Land Bank, Preservation Trust, San Juan Islands Conservation District, The Nature Conservancy, Department of Natural Resources, WA Department

of Fish and Wildlife, the US Fish and Wildlife Service, the National Park Service and relevant State and County Parks

- Oak Woodland and Coastal Prairie Conservation: There is a strong effort by several organizations to protect the small areas of remaining intact oak woodlands and coastal prairies, but the magnitude of funding is not sufficient to achieve the conservation needs. Additional funding should be sought to increase the immediate conservation of these areas. In addition, "rapid assessment" should be conducted to acquire a better sense of what we have and its current level of function in order to confirm and establish priorities.

- Wetland Inventory and Restoration Potential: There are many acres of wetlands across the San Juan Islands. The current inventory provides limited information about specific locations and existing wetland functions. A robust inventory would benefit the overall protection of wetlands and would clarify protection and restoration priorities for both the County and property owners. The inventory should also identify historical changes to wetlands and potential for future positive and negative changes to the ecosystem function of these important landscape features.

Terrestrial Ecosystem Working Group:

- Implementing Organization: Federal/State/County agencies jointly convene a working group focused on terrestrial protection. The scope of work of this group would need to be developed based on existing resources.
- Estimated Cost: $30,000-$100,000 annually depending on the scope of work.

Oak Woodland and Coastal Prairie Conservation:

- Implementing Organization: Land Bank and Preservation Trust with the help of Department of Natural Resources and the National Park Service convene a working group to ensure protection of coastal prairies and oak woodlands.
- Costs: Convening of a working group: $5,000 annually. Costs of increased conservation needs to be determined.

Wetland Inventory and Restoration Potential:

- Implementing Organization: San Juan County and the Department of Ecology develop a wetland inventory.
- Costs: Wetland Inventory and protection and restoration prioritization: $100,000.

We request U.S Fish and Wildlife Service or other local groups create a Terrestrial Work Group and direct that group to explore funding to improve protection of the terrestrial ecosystem.

We request that the Land Bank and the Preservation Trust jointly convene the working group that includes all relevant partners and seek additional funding for conservation of oak woodlands and coastal prairies and key species such as Golden Paintbrush and Island Marble Butterfly.

We request that San Juan County and the Department of Ecology jointly develop a scope of work for a wetland inventory and restoration strategy.

i. Funding: Although the total funding needed to implement the recommendations for on-going action is not large, county and state agencies have limited to no capacity for expanded efforts as they currently struggle to fund basic services. Additional funding is needed on an on-going basis if the recommendations are to become a reality. The recommendations of the San Juan Initiative are specifically mentioned in the Action Agenda as a high priority for the health of Puget Sound. Funding requests should be coordinated among the various likely partners and perhaps be centralized by the Local Integrating Organization. Support from private foundations should also be sought to assist in the funding needs of the nonprofit organizations that play a vital role in implementation of these recommendations.

We request that the Puget Sound Partnership, WA Department of Ecology and the Environmental Protection Agency consider funding these recommendations and commit to measuring the success of the Initiative as part of their joint responsibility for protection and restoration of Puget Sound.

We also encourage local nonprofit organizations to seek funding from private foundations to support their role in tracking and implementing the actions we recommend.

Appendix 4:

San Juan Initiative

Policy Group Recommendations from

July 24th Meeting

Marine Buffers, Vegetation Management and Protection of Threatened Structures

Final Draft August 20, 2009
Reformatted 10.23.09

Introduction

This paper provides background and a summary of San Juan Initiative Policy Group recommendations on three issues: marine buffer widths, vegetation management in buffers, and protection of threatened structures along the marine shoreline. All but one member of the Policy Group endorsed the following recommendations at the July 24, 2009 meeting in Friday Harbor. The recommendations include an approach for buffers along marine shorelines, limitations on shoreline armoring and a list of issues to be addressed through the County's deliberations and final decisions on the Critical Areas Ordinance (CAO) and Shoreline Master Program (SMP) updates. Additional information is available at www.sanjuaninitiative.org. The federal and state agency partners abstained from taking a position on the Policy Group recommendations.

The San Juan Initiative is a public and private effort to assess the effectiveness of public and private efforts to protect the ecosystem of the San Juans with a particular focus on the marine shoreline. The Initiative has hosted 25 public workshops over the last three years to gather community input into what is working and what is not with current protection programs and to develop solutions. We have also conducted a shoreline characterization documenting presence of shoreline impacts and habitats. In addition to working with the public and a science team, we have also conducted a policy analysis and a review of permits to determine the effectiveness of our current regulatory programs. From this research, we have developed the following recommendations that we believe balance the needs of managers, property owners and the ecosystem.

Policy Group members hope these recommendations are helpful in framing the community dialogue in the CAO and SMP update process. After several years of working with scientists, state agency staff, and the community, the Policy Group understands the complexity of these issues and the need to achieve ecological protection in a manner that respects and supports private property owners in the stewardship and enjoyment of their land. The Policy Group acknowledges that there is a lack of clear direction from science with regard to precise buffer and setback widths. In the face of this uncertainty, the Policy Group has attempted to find a middle ground, using current

science, community concerns, and their own judgment in putting forward these recommendations. This paper contains a summary of the Policy Group consensus, concerns and detailed recommendations for buffer widths, vegetation management and the process and definition of threatened structures.

Summary of San Juan Initiative Consensus, Provided that the Issues Listed Are Addressed:

1. Endorsement of a tailored approach for setbacks based on the shoreline type, presence of vegetation and slope, provided the following issues are addressed:
    a. The National Oceanographic and Atmospheric Agency (NOAA) has issued an opinion under their authority in the Endangered Species Act that 200 foot buffers are necessary to protect Chinook salmon. NOAA has provided unofficial comments that they would consider alternative approaches like the one recommended by the Policy Group if it achieves the same level of ecological protection. Additional work is needed with NOAA to confirm their support for alternative approaches.
    b. Continued work with County staff is required to ensure the Policy Group recommendations will meet the state requirements for CAO and SMP, and that the recommendations are consistent with other parts of the proposed regulations.
    c. The Policy Group is concerned that there is little public support for the recommended buffer widths. They believe a robust public process is necessary to ensure the community is effectively and respectfully engaged in the issues.
    d. There should be additional research and analysis on how different slopes and soils affect shoreline water quality. Also analysis is needed to know if the stormwater model used here applies to the Pacific Northwest and San Juan County.
    e. Buffer widths are measured from the "top of bank" which needs to be clearly defined so that arbitrary interpretations are avoided.
    f. It should be clear how many properties will be affected by the recommendations, and the number of properties which may not conform to the new regulations. For properties that may become non-conforming with the new regulations, there must be clear rules for how property owners can maintain or expand their use without undue burdens.
2. Vegetation within the buffer area should be managed through a point system that provides property owners with views and access to the shoreline while maintaining natural vegetation.
    a. The recommendation on maintaining vegetation recommends "Limited pruning" this term must be defined. And, limbing along the bottom 1/3 of trees may not achieve the shading necessary on forage fish beaches.
    b. Revegetation and removal of non native vegetation should be allowed without submitting a plan.
    c. Allow for natural tree falls and ensure that property owners aren't "punished" for clearings that occur naturally

d. It should be clear if large trees can be removed and replace it with small trees to retain points?
e. It should be clear when a property has to submit a vegetation management plan to the County for approval.

3. Shoreline armoring like bulkheads and rock walls should only be allowed when a dwelling structure, an accessory dwelling structure, road, driveway or septic system is threatened by erosion as determined by a technical expert and there is no other feasible alternative.
    a. The proposal suggests homes need to be threatened within three years by bank erosion or instability. This three year timeframe for threatened may be too short because the process to get a permit may take too long and threatened structures could be damaged before approval is granted.
    b. The suggested County process for hiring a third party expert will determine if the structure is threatened. This process needs to be timely for the property owner.
    c. Other counties maintain a list of approved experts that the property owner can hire, San Juan County should further explore the creation of a County-approved list of experts.

Section 1: Buffer Width, Vegetation Management

Overview Buffer Width and Vegetation Management

There are many benefits to buffers of undisturbed native vegetation along marine shorelines. They include creating shade and temperature control for spawning forage fish, hosting terrestrial insects which are a key source of food for fish, providing habitat for birds and other animals, and maintaining slope stability and good water quality. The type of functions vary depending on shore type, vegetation, habitat features and species needs. For example, trees adjacent to a forage fish spawning beach provide shading which maintains the correct temperature for fish eggs. A tree on a plunging rocky shoreline provides a different function. The size of the buffer and how vegetation is managed in this buffer work together to provide ecosystem and community benefits.

The buffer and vegetation management approach recommended by the Policy Group would alter the past objective of the County's regulations from an aesthetic goal to one that maintains shoreline ecological function. The Policy Group, in endorsing this approach, also stated the importance of maintaining the property owner's ability to create and maintain views as well as access the shoreline. The Policy Group supported the development of both a prescriptive standard and a process for reviewing unique situations where prescriptive standards are not appropriate.

The issues of buffer size and vegetation management are described separately below. A buffer is the area set aside to protect ecological function and covers the area from top of bank to the development. Top of bank was selected as a reference point because it has been used historically in San Juan County, and generally it is more protective of shoreline

ecosystem than other reference options, such as Ordinary High Water (OHW). Part of the reason for a setback along a beach or bluff is to reduce the chances that the property owner will need a hard shore stabilization structure over the life of the home. Measuring from the top of bank rather than OHW will more effectively identify the place where erosion is a concern. For instance, on a feeder bluff, OHW could be at the base of a long gently sloping sandy face. Measuring from OHW would put the home much closer to the edge than if the home were setback from the top of bank. Vegetation management describes how the trees and ground cover will be protected within the buffer area. The vegetation management proposal also includes the area between top of bank down to the Ordinary High Water mark. With this proposal property owners will be able to achieve a view, have access to the shoreline, prune and limb shoreline trees and shrubs.

1. Buffer Width: Recommendation

The buffer distances are measured horizontally from top of bank to the developed area. The developed area includes "any man made change" (proposed CAO language). The size of the recommended buffer is based on three factors: slope, vegetation and type of shoreline[1].

On rocky shores, the buffer area's predominate purpose is to protect water quality, wildlife corridors and food provided for aquatic species. Buffer width on rocky shores is adjusted as the slope increases due to the decreased capacity of thin or absent soils and limited vegetation to adequately clean water. Along beaches and bluffs, the buffer area provides the services mentioned above as well as protecting nearshore processes, including moderation of shoreline temperatures and protection of natural sediment and available nutrients[2]. Buffer widths on beaches and bluffs vary based on vegetation and the presence of feeder bluffs. Slope was not considered on beaches and bluffs because, after a cursory review of shorelines, there were no instances found where a beach or bluff had greater than 10% slope landward of top of bank. The buffer option for feeder bluffs presented by staff ensures an adequate setback to allow for erosion over time.

In determining the setback on rocky shorelines, staff assumed a few characteristics about run-off and existing water quality protection measures already in place. Runoff enters the buffer as overland and sheet flow. As water flows through the buffer, the type of vegetation affects the manner in which that water is absorbed or cleaned. A model from Rutgers University was reviewed to develop buffer widths options on rocky shorelines. After reviewing 650 different studies, Rutgers University[3] developed an equation that can be used to size water quality buffers for streams and drinking water supplies based on the slope and type of vegetation. In their analysis, they found that a travel time of approximately 200 seconds through vegetative filter strips is necessary to allow sediment and associated pollutants to be removed from overland flow. This model was not designed for Puget Sound marine shorelines, but does show a correlation between the ability of different vegetation types to filter water at various slopes.

Stormwater quality is also addressed through Stormwater Best Management Practices (BMP's). BMP's are currently implemented in conjunction with upland development with the aim of preventing residential and business water pollutants from entering Puget

Sound and other water bodies. Proposed CAO regulations prevent the use of pesticides, fertilizers, or building materials containing zinc or copper within 200 feet of the shoreline.

One of the challenges of determining appropriate buffers for the marine shoreline is that much of the science is based on freshwater systems. There are Puget Sound marine shoreline studies that document the importance of shade for forage fish, the importance of vegetation for bank stability, and the importance of food sources dropped from shoreline vegetation for salmon and other aquatic species. Although existing science does not provide precise information on what buffer size is adequate to protect these functions, we do know that a vegetated buffer is critical to the ecological health of marine shorelines. The size of the buffer is both a science and policy question.

The Policy Group recommends allowing the width of buffers to be reduced on parcels with less than 200 feet of shoreline frontage. On these parcels, if the existing homes on adjoining waterfront lots are closer than 50 feet on each side, then a buffer width equal to the average setback would be allowed.

The table below contains the buffer widths recommended by the Policy Group for the County's consideration based on the information presented above. The buffer size varies due to the presence or absence of a "well distributed forest of trees and undisturbed soil/duff layer." This term is defined in the next section of this paper under vegetation management. This option also proposes that feeder bluff buffers be adequate to ensure that the structure is not threatened by erosion after 75 years at current erosion rates. If erosion rates are not known, 150 feet of buffer is recommended[4].

Buffer Recommendations:
Buffer Width for Areas with Rocky Shoreforms, Non-erodible Substrate[5]

Average Slope Across Buffer (from top of bank)	Well distributed forest with trees of all age classes and undisturbed soil/duff layer	Non Forested
0-5%	75 feet	150 feet
6-10%	110 feet	
10% or greater	150 feet	

Buffer Width for Beach Shoreforms and Pocket Beaches: Soft, Erodible Shores [5]

Shoreline Type	Well distributed forest with trees of all age classes and undisturbed soil/duff layer	Non Forested
Beach[1]	100 feet	150 feet
Feeder Bluff	150 feet	

2. Issues that need to be addressed

a. The National Oceanographic and Atmospheric Agency (NOAA) has issued an opinion under their authority in the Endangered Species Act that 200 foot buffers are necessary to protect Chinook salmon. NOAA has provided unofficial comments that they would consider alternative approaches like the one recommended by the Policy Group if it achieves the same level of ecological protection. Additional work is needed with NOAA to confirm their support for alternative approaches.
b. Continued work with County staff is required to ensure the Policy Group recommendations will meet the state requirements for CAO and SMP and that the recommendations are consistent with other parts of the proposed regulations.
c. The Policy Group is concerned that there is little public support for the recommended buffer widths. They believe a robust public process is necessary to ensure the community is effectively and respectfully engaged in the issues.
d. There should be additional research and analysis on how different slopes and soils affect shoreline water quality. Also analysis is needed to know if the Rutgers model applies to the Pacific Northwest and San Juan County.
e. Buffer widths are measured from the "top of bank" which needs to be clearly defined so that arbitrary interpretations are avoided.
f. It should be clear how many properties will be affected by the recommendations and the number of properties which may not conform to the new regulations. For properties that may become non-conforming with the new regulations, there must be clear rules for how property owners can maintain or expand their use without undue burdens.

In conclusion, the Policy Group supports the recommendations for buffer widths, as long as the concerns listed above are addressed through a County process. The Policy Group acknowledges the shortage of applicable science in these matters and encourages the creation of local science that tests the above approach for ecological and community results.

3. Vegetation Management in Marine Buffers: Recommendations

The Policy Group previously discussed a number of options to find an approach to vegetation management that would meet the goals of protecting the environment while providing property owners flexibility and County planners administrative ease. The purpose of the vegetation management recommendations are to ensure the protection of ecological function and support property owners in creating views and shoreline access.

Policy Group recommendations are based on comments from property owners at three public meetings, discussions with members of the construction trades industry, staff

research and on-the-ground testing and consultation with scientists. The recommendations are based on an approach used in the State of Maine over the last 19 years to protect marine and lake shorelines. The Maine vegetation management approach was created initially to protect water quality and maintain rural aesthetic around ponds and lakes while still allowing views. After the development and application of the approach for almost ten years, the approach was then expanded to apply to shorelines in 2000. The approach in Maine is well liked by local governments because as one Maine planner said, "It provides them clarity, especially for the code officers." The approach has never been challenged in court. The Maine approach was chosen for several reasons by staff. First, the purpose they are trying to achieve is very similar to the purpose we are trying to achieve in San Juan County. Although there are substantive differences in ecology between Maine and Washington, they both have rocky shorelines interspersed with beaches lined by a conifer forest. The approach provides certainty and flexibility and results in both a well distributed stand of trees and views for property owners. Based on interviews with Maine shoreline planners, it is implementable for local governments.

The recommendations were field tested by staff and a few Policy Group members and a local arborist on four properties: three rocky shorelines and one feeder bluff. Based on our cursory assessment, it is not an onerous process for property owners and would result in both views and maintenance of a diverse stand of vegetation.

a. Vegetation Standards

This approach is designed to maintain a well-distributed stand of native vegetation and provide guidance for how to maintain views and access while protecting ecological function. A well-distributed stand of trees ensures a diversity of species, age, and other vegetation and is defined by a "point system." This system, which assigns values to trees down to two (2) inches in diameter, requires that a certain total value of trees be maintained in the 25-foot by 25-foot squares (625 square feet).

The tree values are based on tree diameters and are as follows:

<u>Diameter of Tree at 4-1/2 feet above Ground Level (inches)</u>

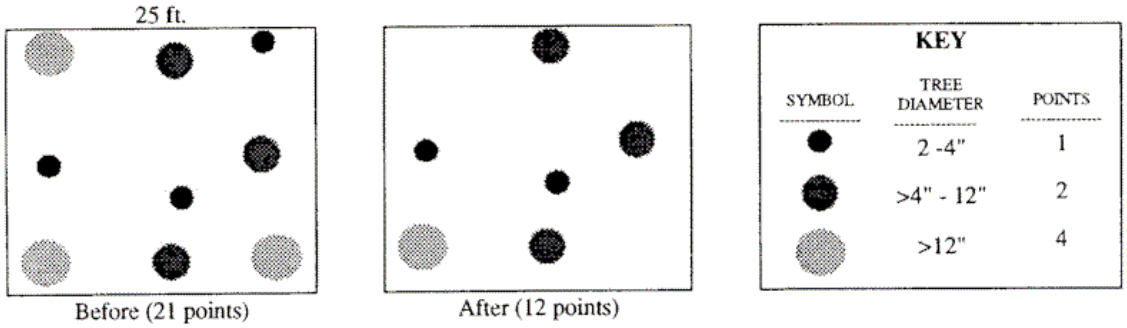
2-4 inches = 1 point
4-12 inches = 2 points
More than 12 inches = 4 points

Adjacent to rocky, beach and bluff shorelines, it is recommended that a rating score of 12 or more points be maintained for each 25-foot by 25-foot square and that no cleared opening is created in the canopy greater than 250 square feet.

As an example of the above rating system, if a 25-foot by 25-foot plot adjacent to a shoreline contains three (3) trees between 2 and 4 inches in diameter, three (3) trees between 4 and 12 inches in diameter, and three (3) trees over 12 inches in diameter, the rating score is:

(3x1) + (3x2) + (3x4) = 21 points

Thus, the 25-foot by 25-foot plot contains trees totaling 21 points. Given that a total score of 12 must be maintained, trees totaling 9 points (21-12 = 9) may be removed from the plot provided that no cleared opening is created in the canopy greater than 250 square feet. The figure below is just one example of allowable cutting under the point system.



Limited pruning of tree branches on the bottom third of the tree is permitted. Dead branches are permitted to be pruned without restriction. Understory and shrubs less than two inches in diameter may be hand pruned, shaped or thinned but shall not be removed. Shrubs may be trimmed to a height not less than five feet. Removal of trees shall be accomplished with minimal disturbance of soil, and stumps should remain in the ground. Removal of hazardous trees is allowed.

b. Administration of the Standard:

The Policy Group recommends that for new developments, property owners prepare a site plan with the assistance of the San Juan Islands Conservation District (a non-regulatory agency), a private professional, or on their own. The plan would be recorded with the County and would be inspected and enforced by the County. For existing development, the Policy Group recommends that no plan is required, but that property owners are expected to meet the standards of the vegetation requirements.

c. Standard for Access to Shoreline:

It is important to prevent runoff from funneling directly along a pathway to the water. For this reason, a footpath, not to exceed (5) feet in width as measured between tree trunks, is allowed provided that a cleared line of sight to the water through the buffer strip is not created. It is important that the footpath meander so that the runoff is trapped by vegetation and natural depressions within the buffer strip.

d. Exception Process to Prescriptive Standard:

Due to site conditions, the property owner may feel that an alternative solution would be more protective of native forest and undergrowth than that allowed under the prescriptive standard. In these cases, the property owner may elect to submit a Critical Area Site Plan (CASP) for approval. CASP is described in the new CAO regulations. The CASP is a site-specific process that allows greater flexibility as long as the ecological functions are achieved.

4. Issues that need to be addressed

a. "Limited pruning" must be defined. And, limbing along the bottom 1/3 of trees may not achieve the shading necessary on forage fish beaches.
b. Allow revegetation and removal of non native vegetation without submitting a plan.
c. Allow for natural tree falls and ensure that property owners aren't "punished" for clearings that occur naturally.
d. Can you remove a large tree and replace it with small trees to retain points?
e. The trigger for requiring a plan must be explicit and clearly written**.**

Section 2: Process and Definition of Threatened Structures

Threatened Structures Background:
The San Juan Initiative is recommending a new standard for placement of hard shore armoring along beaches and bluffs. The new standard would only allow the placement or replacement of hard shore protection if the main structure, accessory dwelling structures, roads, septic systems and driveways are shown to be threatened by erosion in a three year time frame and no other alternative to protect the structure exists. This new standard has been vetted by the public and is supported by the community. The Policy Group directed staff to provide a robust definition of "threatened" based on science and develop a process for determination that could be implemented by County staff.

The San Juan Initiative received a grant from the Puget Sound Partnership to help develop an issue paper with a technical addendum outlining the important issues to consider in defining a structure as threatened. A workshop of regional planners, engineers and policy makers was convened to inform that process. The Initiative hired Jim Johannessen of Coastal Geologic Services to develop the technical addendum. The issue paper and the technical addendum can be viewed on the Initiative website at www.sanjuaninitiative.org.

1. Threatened Structures: Recommendations
The Policy Group recommends the following approach for the County to determine if a property is threatened.

a. Structures to be Protected:
"Structures considered for shoreline protection include: primary parcel structure (includes commercial, industrial or residential), accessory dwelling units, septic system, public road, public infrastructure like pipes or utilities, and private

driveways/roads where relocation is not feasible. Structures not protected are: stairs, tram, trail to the beach, bathhouse, detached deck/patio, fence, sheds, trees, and landscaping."

b. Determination of "Threatened"

The Policy Group accepts the recommendation of Coastal Geological Services that the most appropriate technical approach is to use "documented erosion rates over a long enough timeframe to dampen the effect of short-term changes." The recommended time frame is 30--40 years. Coastal Geologic Services also recommends using an additional hazard assessment process to ensure that the structure is not exposed to landslide hazards potentially not captured in the erosion rate methodology. If the erosion rate and additional hazard assessment suggest that harm will likely occur to the structure within a three-year timeframe then the property is deemed "threatened".

c. Process for Conducting Report

Specific and rigorous reporting standards are needed to guide the quality and consistency of site evaluations for determining erosion rates and threats to structures. The type and level of expertise is also critical. As noted in the technical addendum, "A geology or geotechnical study for a coastal property needs to account for a variety of factors that affect coastal erosion and slope stability. The study/report should include:

- Quantification of causes of erosion
- Past erosion rates over a minimum of 30 years
- Projection of future rates over the next several decades
- Detailed topography from the structure to the lower beach
- Analysis of slope stability and mechanism for slope failure in the vicinity
- Estimate of when the structure would be undermined (including an allowance for bank recession equal to the largest documented landslide in the vicinity)
- Summary of exact factors causing threat to structure.
- Detailed analysis of relocating the structure and soft shore protection alternatives if property is found to be threatened within the three-year timeframe.

d. Process Once a Property is Determined to be Threatened

Alternatives to protect the threatened structure should be evaluated by a technical expert to determine which option is least invasive to the function of the near--shore environment while still preventing damage or loss of property. The alternatives should include:

1. Structure relocation should be considered a viable option, especially as rising sea levels and on-going maintenance and repair are issues.
2. All anthropogenic factors should be addressed, such as drainage, landscaping, and so forth.
3. Soft solutions that could reduce risk, such as dewatering, re-vegetating the slope, and placement of beach nourishment and/or large woody debris, should be evaluated and integrated into a solution.

4. If the above solutions are not adequate or feasible, then the minimal bulkheading could be considered to protect only the threatened structure, not the entire property.
5. Mitigate impacts from alterations to functions and processes as they relate to the site and to the landscape (drift cell).

e. Administration of the approach

To reduce the problem of "dueling experts," it is recommended that the County amend the Critical Areas Ordinance/Shoreline Master Program to provide two options for property owners in the review process:

1. Allow shoreline property owners to pay the County to hire a third party expert to determine if a structure is threatened. The report work would be conducted in a manner removed from both the County and the applicant. The qualifications of the pool of consultants would be transparent and consistent.
2. Shoreline property owners are assessed an additional review fee when submitting their site report to the County. This fee is then used to pay for an outside expert to review the report for the County.

2. Issues that need to be addressed

1. The three year timeframe for threatened may be too short because the process to get a permit may take too long and threatened structures could be damaged before approval is granted.
2. The process for hiring a third party expert needs to be timely.
3. Further explore the creation of a County-approved list of experts.

References:

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[2] Protecting Nearshore Habitat and Functions in Puget Sound, An Interim Guide, Oct. 2007. Envirovision, Herrera and AHG.

[3] Nieswand, G.H., Hordon, R.M., Shelton, T. B., Chavooshian, B.B., Blarr, S. 1990. Buffer Strips to Protect Water Supply Reservoirs and Surface Water Intakes: A Model and Recommendations. Water Resources Bulletin 26 (6) 959-965

[4] Johannessen, J. and A. MacLennan. 2007. Beaches and Bluffs of Puget Sound. Puget Sound Nearshore Partnership Report No. 2007-04. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington.

[5] Shipman, H. 2008 A Geomorphic Classification of Puget Sound Nearshore Landforms. Puget Sound Nearshore Partnership Report NO 2008-01. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, WA.