EDUCATING SHORELINE LANDOWNERS: EXAMPLES FROM KING, WHATCOM, KITSAP, JEFFERSON, MASON AND PIERCE COUNTIES
A Perspective on Approaches and Effectiveness in eliciting on-the-ground change.

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I Introduction

Marine shorelines are the cornerstone of the Puget Sound ecosystem, providing critical habitat for the vast majority of the thousands of species that call the Sound home. Development impacts—both commercial and residential—have significantly impacted the health of over 800 miles, or 1/3rd, of the Sound's shorelines (Thom and Shreffler 1994, from State of the Sound 2004) and have been linked to the decline of salmon, forage fish, migrating birds and orca whale populations. Protecting the Sound's remaining intact shorelines and restoring impacted shorelines is a high priority for state and federal agencies, as well as citizen's groups, environmental groups and local governments. Since approximately 90% of Puget Sound's shorelines have single-family residences or are available for residential development (Broadhurst 1998), protecting and restoring these areas can only occur with the support and participation of marine shoreline landowners.

From 2001 to the present date, the Puget Sound Action Team (PSAT), a state entity charged with protecting and preserving the Sound, partnered with a large number of public and private entities, citizen's groups and universities to coordinate a series of educational workshops targeted at marine shoreline landowners in Jefferson, King, Kitsap, Pierce, Mason and Whatcom counties. The purpose of these workshops was to help shoreline landowners better understand their living shoreline and provide them with the tools and resources necessary to make more environmentally friendly choices in managing their properties. Since studies have shown the most popular shoreline activity for Washington residents is observing nature (Canning 2003), we inferred that there would be a receptive audience for this information.

Nine workshops have occurred so far in these five counties and more are planned for Discovery Bay, Hood Canal's eastern shoreline and Snohomish County, bringing the total number of counties in which workshops will occur to seven. PSAT funds for the workshops came from EPA; partners contributed funds from a variety of sources. These counties were targeted for a variety of reasons, including some or all of the following 1) they contain relatively pristine shoreline habitats that are threatened by development (Jefferson, Pierce and Whatcom counties), 2) they are undergoing Shoreline Master Program updates (Kitsap and Whatcom counties), 3) shorelines were identified as important in local salmon recovery planning processes (all counties) and 4) shorelines were part of a waterbody that is seriously threatened by poor water quality conditions (Hood Canal's northern and eastern shorelines—Mason and Jefferson counties). The target audience was, primarily, marine shoreline landowners, although watershed residents and/or stream/lakeside landowners were also invited to the Whatcom County and Kitsap County workshops.

While each workshop was individually designed to reflect local needs and circumstances, all nine were organized around a similar principle: that education alone is not sufficient to effect on-the-ground change. People also need to be given the tools, resources and incentives to do so. Therefore, all of the workshops included educational presentations on relevant topics as well as hands-on tools and resources to increase the likelihood that on-the-ground changes would result. This two-pronged approach is well supported in the social science literature on sustainable behavior, which has been compiled and summarized by Doug McKenzie-Mohr at St. Thomas University in New Brunswick. McKenzie-Mohr finds in his extensive literature reviews that enhancing knowledge and altering attitudes is not enough to induce behavior change. He cites numerous studies documenting that education alone often has little or no effect on sustainable behavior. A variety of barriers deter people from engaging in sustainable behavior, not just lack of knowledge. The cornerstone of sustainability is delivering programs that are effective in changing people's behavior. He therefore encourages a "community-based social marketing" approach which involves four components: 1) identifying barriers to change, 2) designating a strategy that uses behavior change tools, 3) piloting within a small segment of the community, and 4) evaluating the impacts before broadening the base. (McKenzie-Mohr 1999)

Each of these four components outlined by McKenzie-Mohr were incorporated in nearly all of the marine shoreline landowner workshops. Our findings thus far indicate that the workshops not only improved landowners' knowledge of shoreline ecology and geology, but also resulted in positive on-the-ground changes. Therefore, we hope to replicate these workshops elsewhere in Puget Sound, incorporating a number of valuable lessons that we have learned. Given the region's growing population and the continuing declines of shoreline-dependent marine species, it is imperative that we do so.

II Program Partners; Funding

All nine workshops involved a collaboration of some combination of public and private entities, citizens groups and universities. The average number of partnering entities was 6.6, with the Hood Canal workshop having the most (11) and the Jefferson County workshop the fewest (3). (see Table 1) Workshop financing varied widely. PSAT funds originated from the Environmental Protection Agency (EPA) and were used in all 9 workshops. Per capita expenditures for workshops averaged $102/person, with Pierce County representing the low end of this scale ($7.50/person) and Hood Canal the high end ($171/person) (see Table 1). These costs do not include staff time from PSAT or any of its partner organizations. The wide range in per capita costs is due primarily to the fact that each workshop involved a very different approach, with the more expensive workshops involving far more extensive follow-up activities to work one-on-one with landowners.

TABLE 1
Workshop partners, costs, etc.

Workshop	PSAT	County	City	Ecology	WDFW	Parks	USFWS	Conservation Dist	WA Seagrant	WSU Ext	NGOs	Private companies	Property owner grp	Watershed grp	Home Builders Assn	Citizens grp	Salmony rec. grps	# of participants	COST*	Per person cost	Day of week	Field trip?
Pierce Co.	X	X							X			X	X	X				100	$750	$7.50	Wkdy Eve/ Sat.	Y
King Co.-Des Moines	X	X	X					X					X	X				50	$5500	$110	Sat.	Y
Whatcom Co.-BB	X	X		X	X				X	X	X					X		54	$2500	$46	Sat.	N
Whatcom Co.--CB	X	X	X	X	X				X	X	X					X		27	$2500	$92	Sat.	Y
Jeff Co. 1	X	X														X		35	$6000	$171	Wkdy Eve.	N
Jeff Co. 2	X	X														X		35	$6000	$171	Sat.	Y
Kitsap Co.	X	X		X					X		X				X	X		150	$3665	$24	Sat.	Y
Bainbr. Island	X		X						X		X							60	$7990	$133	Sat.	Y
Hood Canal North Shore	X	X		X	X	X	X		X		X	X	X	X		X	X	165 **	$26,955	$163	Sat.	Y
AVG																		75	$6948	$102		
TOTAL																		676	$62,536			7

*Costs do not reflect staff time or other in-kind contributions.

**40 workshop participants plus 125 beach walk participants.

III Approaches

a. ***Advisory Committees***. Eight of nine workshops involved the formation of advisory committees comprised of representatives from partnering entities. Advisory committees met in person and had frequent collaborations by phone and e-mail. In some instances, PSAT staff took the lead in forming and chairing the advisory committees. In others, local partners took the lead. Advisory committees were involved in formulating workshop agendas, suggesting and scheduling speakers, brainstorming workshop approaches, developing and implementing field trips, and setting up/breaking down workshops. In Jefferson County, a consultant was hired to fulfill many of these tasks. In many instances, the target audiences, shoreline landowners within a specific geographic area, were reached using parcel ownership information available from the county assessor's offices. Differences in workshops between counties were largely a reflection of the diverse personalities and local knowledge of members of the advisory committees. For example, the Kitsap County Advisory Committee, expecting large numbers participants, decided to break participants into four smaller groups following the larger overview presentations to facilitate better discussion on specific topics. This approach was not taken elsewhere. The Whatcom County Advisory Committee strongly recommended against having a 'catch-all' workshop for all Whatcom County marine shoreline landowners, an approach that was common elsewhere. Rather, the committee suggested targeting specific shoreline reaches with significant resources that were threatened by development. They felt that people connected with particular embayments more closely than they connected with the entire marine shoreline of Whatcom County and were therefore more likely to attend. The Hood Canal North Shore Advisory Committee took the same approach for their workshop in Mason County. Those being organized in Discovery Bay and Hood Canal's eastern shoreline will follow a similar approach.

b. ***Timing***. Eight of the nine workshops were held in whole or in part on Saturdays. The first Jefferson County workshop was held on a weekday evening and several workshops, including the Pierce County workshop series, had multiple parts that involved both weekday evenings and Saturdays. Opinions varied widely as to whether a weeknight or weekend day would solicit the greatest participation. In the end, time of week did not appear to impact participation rates. For example, two workshops were held in Jefferson County, one on a weeknight and one on a Saturday. Each drew 35 participants. The Birch Bay workshop was held on a sunny Saturday in August and had 54 participants.

c. ***Format and agendas***. All nine workshops involved an indoor component that consisted of some combination of presentations, video-watching and small group discussions. Seven of nine workshops also involved a field component. All workshops started with 'big picture' presentations that included overviews of the ecological importance of shorelines to the Puget Sound ecosystem; shoreline geology and habitat-forming processes and human impacts to these processes; and status and use of marine life in marine shorelines. In all workshops, a realistic picture was given of the extent to which human alterations have impacted wildlife, coupled with specific messages and available tools and resources for landowners to make positive on-the-ground changes. This approach is consistent with McKenzie-Mohr's findings regarding message framing.

> Most organizations gravitate towards presenting positive rather than negative motivations to engage in a new activity. But should they? Apparently no. Messages which emphasize losses which occur as a result of inaction are consistently more persuasive than messages that emphasize savings as a result of taking action….to be productive, threatening messages must be coupled with messages that are empowering. Messages that describe actions to be taken in clear, straightforward steps are more likely to be understood and followed. (McKenzie-Mohr 1999)

Workshops also included some combination of presentations on: water quality, including septic repair and maintenance; shoreline vegetation and landscape practices; stormwater drainage and management; stewardship tools and resources, including conservation tax incentives; shoreline processes video; regulatory and permitting issues (done primarily in counties undergoing Shoreline Master Program (SMP) Updates); and case studies of restoration projects. Presenters varied widely but included shoreline geologists, marine biologists, shoreline planners, consultants, resource agencies and organizations. The key messages at all workshops were:

1. Puget Sound and its web of life are in trouble.
2. Human impacts to marine shorelines are a major contributing factor for this.
3. Shorelines are largely in private hands and it will take the collective efforts of shoreline landowners to bring about positive change.
4. There are simple and practical (and potentially cost-saving and property-value retaining) actions that landowners can do to improve conditions for the Sound's complex web of life.

The Hood Canal north shore workshop was by far the most involved. It included the nearshore processes video, 'big-picture' presentations, and breakout sessions designed to recruit "Shoreline Ambassadors" to help organize and host follow-up meetings on specific topics and/or beach walks. The workshop ended with a field trip. Five beach walks resulted from this as well as 15 individual site visits from shoreline professionals.

d. ***Tools and Resources*** All nine workshops included similar tools and resources designed to help convey information as well as to provide landowners with specific information needed to make on-the-ground changes. All workshops had aerial maps and photos on display that helped participants get a birds-eye view of the landscape and locate their property. Some workshops had drift cell and shoreline property maps displayed. Information packets were distributed at each workshop as well. Although the content differed somewhat, they generally included PSAT's "Shoreline Management Guidebook", Puget Sound Health 2002, Ecology publications on shoreline stabilization and vegetation and drainage, native landscaping pamphlets, native plant lists, and salmon-friendly gardening guides. Other localized information was also included. Many workshops included speaker contact lists and other contact information for particular subject areas. In some cases (Kitsap County and Bainbridge Island), handout materials are or will be made available on city/county websites.

IV Outcomes and Results

A total of 676 participants attended the nine workshops and/or beach walks associated with the workshops. In all cases, participation exceeded expectations. Eight of nine workshops included pre and/or post-workshop evaluations to determine workshop effectiveness in improving people's knowledge of shoreline geology and ecology as well as expressed willingness to effect on-the-ground changes. Verbal feedback substituted for written feedback at the Hood Canal north shore workshop. Turn-in rates for written evaluations ranged from 33% in Kitsap County to 61% in Whatcom County – Birch Bay, with an average turn-in rate of 46%.

Written evaluations differed from workshop to workshop. However, several common questions were asked at numerous workshops, which help provide insight into their overall effectiveness. Common questions included:

1. Rate workshop as excellent, good, average or poor.
2. Will you share information learned with neighbors, friends and/or family?
3. Will you take action as a result of the workshop?
4. Would you recommend this workshop to neighbors, friends and/or family?

Ninety-three percent of respondents at the Birch Bay, Chuckanut Bay, Kitsap County and Bainbridge Island workshops rated them as "excellent" or "good". Eighty-two percent of participants at these same four workshops said that they would share the information they learned with neighbors, friends and family. Ninety percent of participants at the Des Moines, Birch Bay and Chuckanut Bay workshops said that they would recommend the workshop to neighbors. Fifty percent of participants at Des Moines, Birch Bay, Chuckanut Bay, Kitsap and Bainbridge Island workshops said they would take on-the-ground action as a result of what they had learned.

Measuring on-the-ground results is far more challenging than evaluating pre and post-workshop attitudes and knowledge change. PSAT is currently conducting a telephone survey of participants to determine whether on-the-ground changes resulted from the workshops. This information should be compiled by mid-summer 2005. Anecdotal and other evidence suggests, however, that the workshops have already had positive on-the-ground results. For example, a participant at the Chuckanut Bay workshop asked the local city planner (a workshop speaker) to come to his shoreline property to help determine whether he actually needed a large bulkhead for which he had already submitted a permit application. As a result of both the workshop and the follow-up visit by the planner, the landowner pulled his bulkhead permit and hired a local consultant specializing in bio-engineering and native landscaping. Also, nearly a dozen shoreline landowners in Bainbridge Island have received direct assistance on

alternatives to bulkheads, bulkhead removal and shoreline restoration from the city's Shoreline Stewardship Program. This program was established as a result of the Bainbridge Island workshop. One of these shoreline landowners is now working with a local firm to design a natural shoreline restoration rather than the rock bulkhead they were initially considering.

The Hood Canal north shore workshop, which initiated the Hood Canal Coordinating Council's Community Nearshore Restoration Program (HCCNRP), has had the most obvious on-the-ground results thus far. To date, five suites of projects located on public and private lands have been developed and are at various levels of funding and implementation. One example is the "Union River Estuary" project. Two landowners who own the last remaining undeveloped salt marsh and wetlands along the western shore of the estuary expressed interest in conserving these irreplaceable habitats. Working with the Washington Department of Fish and Wildlife (WDFW), they have applied for three grants to begin a formal appraisal and negotiation process to transfer property ownership through fee-simple purchase to WDFW. Grants should be awarded in the summer of 2005.

V Lessons learned/next steps/discussion

A number of valuable lessons were learned during this process. First and foremost, it is critical to garner strong initial partnerships both to strengthen and improve the quality of the program, and to encourage other potential partners to participate and contribute. For example, Kitsap Bank was very interested in providing additional funding after seeing the preliminary program for the workshop series and noting the number and reputation of contributing partners and speakers. Other lessons learned (gleaned from evaluations as well as observations) include:

1. Direct mailings to shoreline landowners works.
2. Don't schedule too many speakers. Keep it simple and focused on topics most important to landowners. Work with speakers ahead of time to ensure consistency.
3. Require registration, even if the workshop is free.
4. Include plenty of time for questions.
5. Make sure that sound systems are used and are working.
6. 70 participants should be the maximum.
7. Don't invite kids. Don't allow cell phones. Provide surfaces for notetaking.
8. Frame workshop as a chance to learn more about land management than as a rules and regulations workshop.
9. Recruit landowners to participate in planning and implementing the workshop and field trips/beach walks.
10. Organize and offer follow-up activities.
11. Consider organizing the workshop as a means to initiate long-term stewardship programs within local governments or communities.

While the results of the phone surveys are not currently available, information to date indicates that getting on-the-ground results requires additional expenditures of money as well as considerable staff time. It is also clear that workshops should be organized differently in different communities. Personalizing the workshop for particular communities and including specific information about their particular shorelines and/or aquatic resources is very important for increasing participation and interest. Next steps for PSAT include piecing together a "shoreline toolkit" that will provide the basic resources needed to conduct a shoreline landowner workshop and offering funding and staff support for future workshops.

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