



Marine Resources

Committee

October 19, 2005

Minutes

4:00 – 5:50 pm

Trinity Lutheran Church, Freeland

www.islandcountymrc.org

PRESENT: Chair Phyllis Kind, Hi Bronson, Joe Burcar (permanent alternate for Tate), Sayed El-Sayed, Joe Hillers, Don Meehan, Rolf Seitle, Dick Toft, Ken Urstad, Executive Director Gary Wood, Admin. Ass't. Dan Pedersen. **ALTERNATES:** Kim Bredensteiner for Weber. **ABSENT:** Tom Campbell, Ian Jefferds, Jeff Tate, Benye Weber.

VISITORS: Jim Johannessen (speaker), Coastal Geologic Services, Bellingham; Karen Anderson, Clinton; Roger A. Lufburrow, Langley; Bob Roseberry, Clinton; Carol Ryan, Langley; Art Peterson, Greenbank, HBVWA; Jay Ryan, Langley; Jim Fox, Langley; Harrison Goodall, Langley; Lee Chavez, Langley; Scott Pascoe, Maxwellton Salmon Adventure, Langley; Terri Arnold, Bayview, Island County Parks; Nancy Waddell, Bayview, Maxwellton Salmon Adventure; Rex Porter, Island County Public Works; Kim Bredensteiner, Island County Public Works.

CALL TO ORDER: 4:00 pm. **QUORUM:** Declared. **AGENDA:** Adopted with several additions.

MINUTES of 10-05-2005: Adopted. Motion by Bronson, second by Urstad, no objections.

CORRESPONDENCE: None.

Summary of Decisions

Posters for NWSC Conference. The following posters are either complete or in production for the Northwest Straits Commission conference in Bow, Nov. 4-5. We will set up these posters Friday afternoon for the poster session, which runs 5 – 6:30 pm.

Pigeon Guillemot study. Wall poster. Complete.

Forage fish – Table top. Complete.

Shore Stewards – Table top. Complete.

Crescent Harbor – Table top, 3-panel. Nearly complete – in Stacey's hands.

Pocket estuary monitoring. Table top. New name for seining poster.

General MRC poster. Table top. Complete.

Feeder bluffs and accretion shoreforms. Wall. Wood is preparing.

Bronson to head nominating committee. Bronson will appoint and chair a nominating committee for 2006 MRC officers.

SPEAKER

Island County Feeder Bluff and Accretion Shoreform Mapping

Jim Johannessen, Coastal Geologic Services, Bellingham

Wood introduced Jim Johannessen, a licensed engineer and geologist who specializes in evaluating, designing and restoring coastlines. The MRC project on which he is reporting tonight was funded by grants from the Northwest Straits Commission and Salmon Recovery Funding Board. Wood said we asked Johannessen to look comprehensively at Island County's shoreline to determine how it works – where material is contributed into the water and where it ends up. Studies done in the past were fragmentary and sometimes contradictory. Over the years, techniques have been improved. In the

process of carrying out our study Johannessen did a great deal of new on-the-ground research and developed new protocols, which have since been used in ongoing studies in other Puget Sound counties.

Johannessen began by saying this study was primarily field-based, involving on-the-ground work as opposed to some studies that take place primarily in the office, sitting at a computer and evaluating existing data and other studies. This was a study of coastal systems – interconnected elements. Among these elements are bluffs and beaches, rivers and streams, beaches, subtidal areas, spits, lagoons and saltmarshes, and people. To illustrate the interconnection, Johannessen pointed out that spits and marshes would not exist without the bluffs behind them. Most of the material on our beaches is comes from eroding bluffs. Wave energy moves this sediment. Bulkheads typically function in part to reduce sediment input to the beach. Island County's streams are very limited and are not moving a great deal of sediment.

Johannessen explained his study focused on **net shore drift cells**. This is the long-term movement of sediment in any one area, as opposed to longshore drift (the movement of sediment at any given moment). One of the better examples on South Whidbey is at Double Bluff, where the high bluffs feed drift cells that diverge and feed sediment both to the north and south. Scatchet Head also has impressive drift cells going both directions. Most of the cells in Island County feed material to the north because prevailing winds are from the south. In locales such as Holmes Harbor, which is sheltered from the south wind, cells may feed to the south.

For the MRC, Johannessen's task was to **definitively map the coastal drift sediment sources, accretion shoreforms and transport zones on both islands and recommend specific sites for restoration.**

Johannessen pointed out that in reviewing past depositional studies of the shoreline he found considerable discrepancy – lack of agreement on the level of 50 to 70 percent. Studies had been performed to varying scales, which further complicated matters. This reaffirmed the need to perform new field studies with a global positioning system (GPS) and develop consistent protocols.

Johannessen shared the following key terms describing geomorphic features for which he was looking.

Feeder bluff exceptional (e.g. Double Bluff on South Whidbey): Provides high-volume sediment influence. Rapidly-eroding bluff. Active landslide scarps. Erosion at the toe by waves. General absence of erosion. Colluvium or slide debris. Boulder or large cobble on beach indicating retreating bluff. Fallen trees.

Feeder bluff. Slower-rate erosion. Periodic sediment input. Historic slide scarps. Lack of mature vegetation. Downed trees over the beach.

Accretion shoreform. Typically found at the end of a drift cell but can be found at the middle. A wider beach from the backshore. Drift logs. Sometimes a spit or lagoon. Often a finer-grained beach. Sometimes very old logs on the backshore.

Modified. Areas of the shoreline that have been bulkheaded or hardened by human activity.

Transport zone. Typically found between a feeder bluff and an accretion shoreform. Often this is a bluff that is not eroding – sometimes a low bank.

Johannessen pointed out that in the process of making field observations many opportunities were noticed for restoration projects. Typical examples are the removal of creosoted pilings that are no longer in service, or of groins on the beach, or failed bulkheads. He said these are simply suggestions – he did not investigate who owns the land, whether the owners would be interested, nor who would pay for the work. In a few cases he found pocket estuaries in relatively good condition that would be excellent candidates for conservation.

Johannessen said the final task in the project was to develop protocols – a point system -- for ranking feeder bluffs. The reasoning is that, assuming it is not possible to protect everything, what are the most important places to protect? So he developed a scoring system. One consideration is the height of a bluff – higher bluffs being capable of contributing more material. Another is evidence of recent landslides and bluff-toe erosion. Johannessen shared a copy of his findings on Whidbey and Camano islands.

Questions:

River-system sediment. Bronson commented that over time Utsalady Bay seems to be filling with sediment from the Skagit River and Port Susan is filling with sediment from the Stillaguamish. He asked whether Johannessen’s study takes into account these influences. “Not directly,” Johannessen said. This is certainly happening but his study focuses on processes upward of the low-water line – the beaches and bluffs.

What if the entire shoreline were bulkheaded? Meehan said it is his understanding that feeder bluffs are good and bulkheads are bad. So what would the shoreline look like if the entire island were bulkheaded? “Your beaches would look like the greater Seattle area,” Johannessen said. “At high tide the beach would not be there. At lower tide you’d have a cobble beach. All the sand would be taken away over time. You’d lose plant habitat, surf-smelt spawning habitat, sand lance habitat, and over time you’d start to lose eelgrass beds. Sediment is moving, no matter whether it is being replaced or not. If you take away the source, then it strips itself out.”

Strategies to protect homes. Meehan asked Johannessen to discuss some alternatives for protecting shoreline homes. Johannessen said one strategy is a **soft-shore protection project** that might involve building a higher berm with coarser gravel up above the high-tide line, staying away from forage fish spawning area. Where possible, sand is used. Back-shore plantings can be used to help provide protection. High bluffs are very hard to deal with because they do want to erode. Johannessen commented that in many parts of the country, high-bluff homes are being moved away from the face. The term for this is **managed retreat**.

Meehan commented that in case anyone in the audience were worried that the Marine Resources Committee is thinking about taking away their bulkheads, this is not true. “We are very interested in protecting habitat but we are also interested in protecting our way of life here and we’re not going to make people remove their bulkheads.” Historically, he said, some bulkheads in Island County were installed out of fear and not in response to an understanding of shoreline processes in a particular location. “They misunderstood the problem,” he said, “which aggravated the situation. There probably are some bulkheads that ought to come out and would improve the situation, but we are not going to make anybody take their bulkhead out.” Johannessen commented that the bulkheads he pointed out in his study as restoration opportunities are broken-down structures.

UNFINISHED BUSINESS

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Nominating committee. Kind said Bronson has agreed to chair and appoint a nominating committee for next year’s MRC officers: chair, vice-chair and Northwest Straits Commission representative. Bronson said he will be recruiting committee members by e-mail.

LEADERSHIP REPORTS

Executive Director – Wood.

Wood commented that Jim Johannessen's work has really given us a guide to future restoration projects, and this will help him plan future grant applications. Wood said he would like to meet with the Science Committee to discuss priorities.

Multi-group restoration campaign. Meehan commented that Karen Lennon of Whidbey Conservation District is a member of the Salmon Technical Advisory Group (TAG). She would like to put together a directed restoration campaign focusing on salmon recovery and the nearshore. This would be organized around a slogan, with a number of groups partnering and perhaps with the Marine Resources Committee as lead. Bredensteiner said the campaign would be an umbrella for many groups such as Whidbey Conservation District, Maxwellton Salmon Adventure, the MRC and others.

County Lead – Meehan.

Pedersen contract. Meehan said the executive committee met a week ago and talked about amending Pedersen's contract to run till mid-year 2006 and including some additional tasks arising from our new grant. He said he's also looking at Sarah Schmidt's contract for the Water's Edge book and thinking about extending it till mid-2006 as well. Meehan said the executive committee agreed in the future to funnel all contractors' bills through the chair as well as himself.

Salish Sea Consortium for Citizens' Monitoring. Meehan met recently at the Seattle Aquarium with a new group called the Salish Sea Consortium. The meeting focused on citizen monitoring. Among those attending were the Washington Department of Fish and Wildlife and Canadian representatives. He said what really struck him was that the WSU Beach Watchers in Island County are using protocols and collecting data far ahead of what others are doing, and it is all volunteer!

Health Department protocols. Meehan said the recent City of Oak Harbor sewage spill underlined a major failure in notification protocols. The city was supposed to call the state department of health which would then notify shellfish growers, such as Penn Cove Shellfish. They didn't do that. A day or two later they notified the county, which assumed the state had been called. As a result, Penn Cove Shellfish wasn't notified until after the fact, and had to recall some deliveries of its product. Meehan said after reviewing what happened it looks like the county health department is going to implement new protocols to notify shellfish growers and not rely on the other notification system.

NEW BUSINESS – none.

ADJOURNMENT

There being no further business, Kind declared the meeting adjourned at 5:50 pm.

Coming Events

Dec. 7, Wednesday, 4-6 pm, MRC meets at Heller Road Firehall, Oak Harbor. **Speaker, Jim Ramaglia, Skagit MRC, on the creatures that inhabit the dive park at Keystone Jetty.**

Dec. 21, Canceled, Wednesday, 4-6 pm, MRC meets at Trinity Lutheran Church, Freeland.

Jan. 4, Wednesday, 4-6 pm, MRC meets at Heller Road Firehall, Oak Harbor. **Speaker Rex Porter, Whidbey Watershed Project Manager: Water quality issues and progress in 2005.**

Jan. 18, Wednesday, 4-6 pm, MRC meets at Trinity Lutheran Church, Freeland.

Feb. 1, Wednesday, 4-6 pm, MRC meets at Heller Road Firehall, Oak Harbor.

Feb. 15, Wednesday, 4-6 pm, MRC meets at Trinity Lutheran Church, Freeland.