

Dungeness River Management Team Meeting

March 12th, 2008 - Notes prepared by Melissa Coughlin

Team Members/Alternates in Attendance:

Steve Tharinger, Clallam County
Cathy Lear, Clallam County
Shawn Hines, Jamestown S'Klallam Tribe
Scott Chitwood, Jamestown S'Klallam Tribe
Cynthia Nelson, Department of Ecology
Pete Schroeder, Riverside Property Owners
Mike Jeldness, Water Users Association
Bob Caldwell, Water Users Association
Walt Blendermann, Sports Fisheries
Don Hatler, Sports Fisheries

John Cambalik, Puget Sound Partnership
Allison Lutz, North Olympic Land Trust
Virginia Clark, Dungeness/Quilcene Planning
Judy Larson, Protect the Peninsula's Future
Tyler Ahlgren, Protect the Peninsula's Future
Joe Holtrop, Clallam Conservation District
Robert Brown, Dungeness Beach Association
Scott Hagerty, US Fish and Wildlife
Pam Sanguinetti, USFW-Dungeness Wildlife Refuge
Laura Dubois, Mayor of Sequim

Others in Attendance:

Gary Dougherty, Clallam Conservation District
Ann Seiter, Clallam resident
Jon Brock, Washington State University
Dwight Barry, Peninsula College
Robin Berry, Graysmarsh
Virginia Erwin, Local resident
Jeff Ward, Pacific Northwest Laboratory
Elizabeth Van Sickle, Local property owner

Victoria Ormand, Future local resident
Larwence Ormand, Future local resident
Steve Rankin, Streamkeepers
Dan Golner, Ducks Unlimited
Butch Lauritzen, Clallam resident
Welden Clark, Dungeness River Audubon Center
Bob Boekelheide, Dungeness River Audubon Center
Melissa Coughlin, Indep. Contractor/Note-taker

2:05 P.M. Meeting called to order.

I. Introductions /Review Agenda / Approval of 2/13/07 Meeting Notes

- Chairperson Steve Tharinger called the meeting to order. Introductions all around. Welcome back Shawn Hines!
- Reviewed agenda, added: Jon Brock to speak on conflict resolution and Salmon Recovery.
- 2/13/08 DRMT notes were reviewed. Virginia Clark moved to approve notes as submitted; Robert Brown seconded the motion, which then passed unanimously.

Public Comment:

- None at this time.

II. NASA Update – Jeff Ward (*Battelle Marine Sciences Laboratory*) and Dwight Barry (*Peninsula College*)

- Steve Tharinger introduced topic as effort to link satellite capabilities to on-the-ground needs for watershed management. Battelle is one of the local partners along with Peninsula College.
- Prior to his presentation, Dwight Barry recommended visiting the website for specifics: <http://www.pc.ctc.edu/coe/research.htm>
- Jeff Ward began by explaining that the project is a hybrid model that attempts to take NASA tools and link to hydrological models for short-range and long-range forecasting. Demonstrates NASA imagery and satellite tools working to improve decision-making in watersheds.

Hybrid Model progress:

- Completed model setup in Dungeness – Spatial data and meteorological data. Completed model calibration – retrospective analyses of water year and comparison to NRCS-NWCC predictions. Completed model ensemble forecasts by re-sampling historical data – short-range (with MODIS data assimilation); seasonal (without MODIS data assimilation); volumetric (without MODIS data assimilation).

Yet to accomplish:

- Refining MODIS/SNODAS data assimilation – Limit MODIS assimilation during cloud cover. MODIS/SNDAS/Model decision tree. Developing short-range forecasts with NDFD forecasts – Automate data download. Take satellite snow pack data and correct to Dungeness SNOTEL. Evaluate resulting meteorological and streamflow forecasts. Ongoing field measurements and evaluation.

Hybrid Model predictions and linkages:

- Predictions improve existing DST from NRCS-NWCC; models are predictive tools and should be used with caution; Forecasts will provide probabilities of flows, like NRCS; Feedback to USGS Dungeness flow gauge at fish hatchery provides model feedback for prediction improvement;

Investigation of linkages will occur this spring. The current NRCS-NWCC model predicts flow at the fish hatchery from 1-3 days in advance. Model improvements are expected over time, along with longer prediction times.

Transition of Model to PC (phase one)

- Transition document development: Provide overall design plan; Formally develop methods for integration of components; Software design of overall code-wrapper and interface; Process will require discussion and input including PC and stakeholder requirements.

Implement real-time operation of hybrid model as specified in the transition document

- Model will operate internally to PNNL and push results out to web (PNNL or Peninsula College hosted web); (PNNL is able to update model internally more effectively while evaluation of model results progresses.) Develop draft User Manual. Goal is to have Beta operational in April.

Transition of model to PC (phase two)

- Peninsula College evaluation: Provide model for in-house use (teaching and training); Evaluate hardware/software needs; Requirement of ArcGIS (Arcinfo licenses level) and Spatial Analyst; 1-2 Tb of available disk space; Evaluate remote-access options; Evaluate /determine PC web requirements.
- Move and setup mode environment to PC: Model will operate independently at Peninsula College; Provide necessary training and documentation; Finalize User Manual. Goal is to be operational this summer. PNNL and PC models will operate independently, but simultaneously for a period of time to ensure the reliability of the system.
- Dwight Barry showed a video presentation, "The Future of Water", that gave some background on the meteorological field collection project. The hybrid model is a new tool for managing over-allocated water resources. The water budget model (using the NASA tools and satellite links) will track and quantify all the water in a drainage basin then a model will be used to forecast future water availability (including precipitation, snow pack, ground water and streamflows). The effort is a partnership between Pacific Northwest Laboratory, Idaho National Laboratory and Peninsula College. Satellite data will be compared with data collected on the ground by a field team. This helps refine the model's input, making it more accurate and useful. 10 snow courses have been set up in the Dungeness watershed area, most located in Olympic National Forest. Snow samples are collected using sampling tubes and data is recorded. There are weather stations at 6 of the 10 sites (each station weighs about 60lbs and has to be packed in). Data from these sites is collected manually, on a weekly or bi-weekly basis. For more information visit: <http://www.pcnasa.ctc.edu>
- The purpose of the field study: Understand spatial relationships of SWE (snow water equivalent) data to NRCS SNOTEL and Snow Course sites; Establish an improved precipitation and temperature lapse rate for the basin; Use as validation data to Hybrid Model calculated SWE, SNODAS calculated SWE, and MODIS presence/absence of snow; Provide real-world training experiences for students.
- Steve Tharinger asked if there was an additional role for the DRMT (Had met early on in project and provided input). Jeff Ward replied that DRMT members could help with feedback once online – would like feedback on whether project is meeting needs, and ideas on what you would like to see it do. There are two Solutions Networks sponsored by NASA – this one in Dungeness and one in Maryland (WaterNet). It is a NASA experiment. They would like to expand across county building more solution networks. There will be an on-line survey about issues and decision making. They would like a few members of the DRMT to review that prior to going national. (Clea Rome to notify when ready). Currently this project is funded for a period of three years. Further usefulness of model results is needed to justify additional research and continued funding. If members have ideas on website – notify Dwight Barry.

Comments / Questions:

- Cynthia Nelson asked how someone could utilize model when it resides at the college. Jeff answered that anyone with Internet connection can access streamflow predictions, but wouldn't be able to run model.
- Cynthia Nelson asked if there were a similar effort going on for the Elwha. Jeff Ward answered that there was no budget for Elwha now; there is talk about writing a proposal to develop a parallel effort for Elwha, encouraged by NASA. Cynthia Nelson offered a letter of support for this.
- Robert Brown asked if there were any further correlation with other gauges in the Dungeness or if it is part of the plan at some point. Jeff Ward answered it wasn't in the plan. Jeff said that below the fish hatchery there was unknown groundwater exfiltration as well as unknown use of flow for

irrigation. This contains too many unknowns for a reliable predictor model. Mike Jeldness offered that the watershed is well covered with upper and lower Dungeness gauges and SnoTel sites. Jeff Ward commented that they still would need to get permits, write the environmental impact, etc.

- John Cambalik asked 1) if it was possible or useful to tie in with the groundwater hydrological model and 2) once the model is installed at the College will the team and others be able to ask questions. Jeff Ward said the first item was already on a list to do next, the second question – model would be able to use a variety of parameters - Dwight Barry thought it was possible.
- Steve Tharinger expressed excitement over the on-going value and practicality of a project like this, especially with the level of science and research going on with the satellite data linkage. Welden Clark asked if this topic had a spot on the Western Snow Conference next month –answer was yes.
- Robert Brown commented that this model could possibly be used as a flood prediction for the Dungeness Flood Management Plan which is currently being updated.

Agenda Addition: Puget Sound Salmon Recovery Process as Conflict Resolution – Jon Brock (University of Washington)

- Jon Brock is on the faculty of University of Washington and has been working with faculty from Washington State the last five years exploring conflict resolution at policy and academic levels.
- Salmon Recovery has gotten their attention and one year ago NOAA requested resources from both universities to study the process of how all the resources pulled together in Puget Sound.
- Trying to work to understand planning process to come up with description of what it would take to build something similar somewhere else.
- People at the Center were attracted by the leadership approach of salmon recovery process in Puget Sound – where they wanted to list salmon themselves, instead of leaving to NOAA.
- 3 months away from putting out study.
- Need input. Interviewing people at leadership level in the different watersheds.
- Would like input from anyone involved in salmon recovery process. Visiting different watersheds, need constructive and positive information on the infrastructure of relationships. Want accounts of local level commitment, how Tribes, businesses, landowners all come together.
- Sent around signup sheet for interested people.
- E-mail address for Jon Brock: jbrock@u.washington.edu
- Steve Tharinger commented that he had been in Washington, DC the last few days and there is an awareness of our salmon recovery efforts and Puget Sound Partnership is looking at it as a model for other areas.

III. Partnering on NAWCA Grant – Dan Golner (Ducks Unlimited)

- Primary focus on the ground for Ducks Unlimited is restoration projects. Currently 4 projects in Sequim area. Funding has come from grant writing efforts: State, Salmon Recovery Board funding, and Federal Grants. (adds up to about \$350,000)
- Offering partner opportunity: looking for partners that need funding for projects (mainly for wetlands restoration) the more partners, more diversity, better the score for receiving funds. \$1Million is the cap. Opportunity to request additional 2 to 1 match.
- Work with Department of Fish and Wildlife, Tribes and private landowners - Opportunity to add additional partners. It will take a while to pull together and Ducks Unlimited would like to take the lead. Application due in August, funds would be available in the fall of 2009.
- Would like to find out who from this group (individuals or group) could partner on the grant and set up a coordination meeting next month. Prioritize projects and come together for this one large grant. Are able to go back 2 years for matching funding for grant. Focus of grant can be defined by requestor – boundaries should be defined in the application.
- Dan Golner talked a little about the local projects: Meadowbrook Creek (property owner, WDFW, Tribe); Freshwater enhancement (private landowner); Canary reed grass infestation (Conservation District) – Mike Jeldness recommended contacting Cathy Lucero. Discussion on canary reed grass ensued. Dan Golner directed team to visit: www.ducks.org and go to conservation & WA State to get details on some of the projects (not all are on the website).
- Bob Boekelheide asked if monitoring of projects were included in proposals. Dan Golner said it usually isn't in budgets. Know it is an important part to measure project success.
- Steve Tharinger asked who in group was interested in partnering, and passed around Ducks Unlimited project sign up. Also offered letter of support for projects from DRMT when needed.

- Cynthia Nelson reminded that if project include diverting water from a stream, you must first ask the Department of Ecology about water rights.

IV. WRIA 18 Rulemaking Update – Cynthia Nelson (WA Department of Ecology)

- Cynthia Nelson showed a PowerPoint presentation to provide this update. The following notes are based on the presentation:
- History of instream flow program: 18 instream flow rules were adopted in 1970's and 1980's; Increasing recognition of connection between groundwater and surface water; New water rights are difficult to obtain; Political opposition led to legislative moratorium.
- Pete Schroeder asked for a definition of instream. Cynthia Nelson replied that according to Washington water code, if it's flowing on surface we (Department of Ecology) manage it. Groundwater is the same thing, there is a groundwater code. Because of pressure on resources rule was needed to protect instream resources before new water rights can be issued. Watershed planning is consequence of that.
- Statewide effort to adopt instream flow water management rules: Driven by: Watershed plan recommendations; 16 fish critical basins; Legislative funding; Fully appropriated basins.
- Current instream flow program: Policy objectives – water for people, farms and fish; Listings of threatened and endangered salmon; Pressure of growth on finite resources; Watersheds without instream flow rules; Passage of watershed planning legislation.
- Ecology is authorized under state law to establish state water-management rules that protect and preserve: aesthetics, livestock watering, recreation, wildlife, navigation, fish and water quality.
- What is an instream flow and water management rule? Ecology has chosen also to focus protection on existing water rights.
- Robert Brown asked how flow was measured. Cynthia Nelson replied through gauges, satellite gauges, staff gauges, etc. Robert Brown asked how one knows when the flow gets too low. Cynthia Nelson said it is on the website. In Chehalis they are enforcing this; they send letter explaining responsibility to watch gauges through website. <http://waterdata.usgs.gov/usa/nwis/>
- Purpose of an instream flow and water management rule: Protect existing water rights; protect instream resources; set up a framework for future water management decisions.
- Definitions – Streamflow: The amount of water flowing down a stream. Instream flow: The level of flow protected by rule from junior surface and groundwater users. Steve Tharinger noted that "junior" is not synonymous with "future" Cynthia Nelson cleared it up by saying, "junior to the instream rule".
- An instream flow rule: does NOT affect existing or "senior" water rights, including existing small "exempt" wells; does NOT require people to put water into streams; does NOT guarantee that water will be in a stream.
- Discussion ensued on exempt wells. Cynthia Nelson explained that it was not exempt from any rules that apply or from harming neighbors. Studies in Dungeness note apparent connection between wells and groundwater; a rule closing surface water closes groundwater.
- Developing instream flow recommendations: One main goal is to protect remaining flows for fish rearing and spawning; In the Dungeness, we started by studying the relationship between streamflows and fish and their habitat.
- Endangered Species Act (ESA) listed species in the Dungeness: Chinook Salmon, Chum Salmon, Steelhead and Bull Trout.
- Current rulemaking in the Dungeness Basin: Watershed Plan adopted in 2005, including recommendations for instream flow levels; Two groups created to advise Ecology on instream flow and water management rule – the Dungeness River Executive Committee and the Dungeness Water Working Group; Consultation with Tribes and Dungeness River Management Team (DRMT); Public involvement.
- Dungeness River Executive Committee (DREC): Made up of elected officials, irrigators, state, county, city, tribal, and Dungeness-Quilcene representatives; Evaluates options for in-stream and out-of-stream water supplies and discusses state and county roles in implementation.
- Dungeness Water Working Group (DWWG): Made up of interested stakeholder groups, including the irrigators, realtors, well drillers, conservation groups, and more; Provides input on water supply issues and rule content; Helps integrate stakeholder and citizen views and broaden outreach; The public is encouraged to attend DWWG meetings (meet every 4th Friday at the River Center 10:00 – 2:30).
- Public involvement: Series of workshops introducing concepts and soliciting public comments: Workshop I on 11/29/07 introduced water supply issues; Workshop II - 3/26/08 to introduce water

supply options; Future workshop(s) to introduce draft rule language. Judy Larson suggested posting comments from the workshop on the website.

- Robert Brown thought posting findings on the rule prior to filing was a good idea. Cynthia Nelson said that could be done, but once the rule goes to draft it is hoped everyone's comments have been heard.
- Ongoing public involvement: Publish a series of articles in the Sequim Gazette aimed at informing and involving the public; Display workshop posters at Peninsula College and elsewhere; meet with interest groups; Provide information on Department of Ecology's website: www.ecy.wa.gov/ecyhome.html; e-mail updates to Ecology-Dungeness listserve.
- Next steps in rulemaking: Develop preliminary draft rule and bring to public, DREC, DWWG, DRMT, and Tribes; Refine rule based on comments; File draft rule in the state register (late summer).
- The formal rulemaking process: Public comment period – Ecology plans to hold a workshop and at least one public hearing; Comments may be submitted through testimony at the hearing or in writing within a specified time; oral and written comments will all be considered. Ecology will review comments and revise the rule as necessary (Ecology follows the State Administrative Procedure Act: Chapters 34.05 RCW and 1-21 WAC); Ecology has up to 180 days to adopt a final rule. If there is a significant change the rule must be pulled and the process started all over again.
- Formal rulemaking: Within 180 days the final rule will be filed with the Code Revisers Office; 31 days later it will be adopted into law; the adopted rule is appealable to Thurston County Superior Court.
- Managing a limited resource: Can more water be taken without impairing existing water rights, habitat for ESA-listed and other species, other in-stream values?
- If not then the rule may include closures: Closures may be year-round or seasonal; If a surface water source is closed, then the connected ground water source must also be closed.
- Closures: Seasonal closures mean that water will be available for new uses part of the year; Water can be obtained in closed sub-basins with approved mitigation; Dungeness Rule will include a number of closures.
- Don Hatler asked if ground water and surface water are connected (and we know they are) and more water is allocated than what is available, then the closure affects a well. How does that work? Cynthia Nelson explained there will be different paths to getting water. Rule specifically sets up a way for people to get existing water. No credit for water not used in 5,000 gallon maximum, water must be used in beneficial, efficient manner. Judy Larson asked if City of Sequim had water right – Cynthia Nelson explained it is a municipality and won't relinquish.
- Options when supplies are limited: Augment supply: Large storage projects; Small scale on-site storage (cisterns); Reclaimed water; Desalinization. Manage demand: Conservation & efficiency; Other management measures. Establish mechanisms for mitigation: Water exchange/bank; Individual project specific mitigation plan. Potential sources of mitigation water: Aquifer recharge/infiltration – reclaimed water, high flow diversions, stormwater. Transfer of existing water rights; Transfer of saved water.
- Concepts for water management: Indoor use only? Outdoor use? Mitigated? Intensively managed? (Watering schedules? Highly efficient irrigation technology? Late season curtailment?) Limited size of irrigated area? On-site small scale storage? Limited number of gallons per day?; Other approaches to managing water use/demand: Encourage planned unit developments and clustering? Transfer of development rights? Report water use? Parcel or zoning-related conditions?
- Water exchange/bank: Run by governmental entity; Funding: Local fees with building permits; Other uses?; Potential state or federal grants?
- Rule may allow for some augmentation that wasn't allowed previously (rain barrels). Grant is underway now for Sequim to use reclaimed water for aquifer recharge and other ways of augmentation.
- Assumptions: Surface and ground water are hydraulically connected; Septic return for in-house use is assumed to be 90%; Water used outdoors is assumed to return 10% to the aquifer.
- Municipal water hook-up: New permit-exempt withdrawals are not allowed in areas where municipal water is available in a timely and reasonable manner. (Elwha-Dungeness Watershed Plan)
- Contact information – Sarah Ferguson, WA Department of Ecology/Water Resources Program sfer461@ecy.wa.gov 360.407-6780. Cynthia Nelson, WA Department of Ecology/Shorelines and Environmental Assessment cyne461@ecy.wa.gov 360.407-0276.

V. Other Business –

- **DRMT Logo** – Scott Chitwood reported that the Tribe has offered to fund ½ the proposed budget for award / gift card (decided to use the charge card-gift card for a \$ amount instead of gift certificate at specific store). Susan Stark has followed through with the 3 schools, 5-Acre School and Helen Haller have agreed to participate and Grey Wolf has not responded. There are about 50 submissions from 4th and 5th grade students. Elizabeth Van Sickle volunteered to judge. Shawn Hines was volunteered for a subcommittee. At next month's Executive Committee meeting (12:30 on April 9th) the Executive Committee will choose 4-5 finalist art submissions and will discuss which graphic artist to approach to refine final design. Ceremony for students may be in May.
- **Puget Sound Partnership** – John Cambalik updated group. Successful meeting where inventories of major programs and projects were discussed. Last Friday workshop focused on status/threat assessments- good attendance except in evening. Next steps: Topic Forum – one of each of the six partnership goals – will be in April. Next set of Action Agenda Workshops will be in May – will be on action and additional ways to prioritize. Steve Tharinger thought it generated a lot of energy. Think there may be some real opportunities. Think we should be “bold”.

Public Comment

- Butch Lauritzen wanted everyone to know that he got the funding to repair flood damaged bank on his property. He received a small business administration loan, FEMA indorsed. Work should start July or August after he meets with Byron Rot and others.
- Tyler Ahlgren reported on Victoria: Workshops for public awareness on the new septic treatment plant. There will be six satellite and one membrane treatment system plant. Good to go.
- Robert Brown asked about an update on the Tribe's Dungeness River Watershed Plan. Scott Chitwood said we could put the EPA certification for Integrated Watershed Plan (under the Clean Water Act) on next month's agenda.
- Robert Brown asked for update on River's End, he had heard no work was being done except in the Department of Fish and Wildlife area. Scott Chitwood said we could have an updates on that next month.

Meeting Adjourned at 5:00 P.M.

Handouts:

- “Elements of an Instream Flow and Water Management Rule” PowerPoint presentation hardcopy from Cynthia Nelson, DOE