

**Meeting Notes: Northwest Environmental Data-network Steering Committee and PNAMP
Data Management Work Group**

February 2nd 2006, 9:00 to 4:30

Location: Large Conference Room, Northwest Power and Conservation Council 851 S.W. Sixth Avenue, Suite 1100 Portland, Oregon 97204

Present: Bruce Schmidt (StreamNet), Tom Pansky (BPA), Denise Kelsey (CRITFC) Peter Paquet (NPCC), Tom O’Neil (NWHI), Michael Beaty (USBoR), Denise Kelsey (CRITFC), Stewart Toshach (NED), John Piccinini (BPA), Jill Leary (Lower Columbia River Estuary Partnership), Paul Cedfeldt (USACE)

On phone: David Tetta (EPA), Russell Scranton (NOAAF-NWRO), Joy Paulus (IAC), Paul Ocker (USACE), Nancy Tubbs (USGS)

Apologies: Phil Roger (CRITFC)

A. NED AGENDA ITEMS

1) Progress Reports from NED Work Groups:

RIPARIAN, UPLAND AND AQUATIC HABITAT WORK GROUP (TOM O’NEIL)

Overview of Work Group Plan

We are in the process of compiling a dataset of habitat classification systems that are currently being used by agencies and organizations in the Pacific Northwest for aquatic, riparian, and upland habitats. Included in these classification systems are terms used to describe “habitat”. This varies depending on the method, and includes vegetation types, structural conditions, and habitat features. Information about these systems, both the terms in use and definitions of those terms are being entered into a spreadsheet that includes citations of source for each system, and agency/organization using the system. Ultimately, this information will be incorporated into a database with cross-walks between a consistent system and other systems in use. The effort is intended to improve communication between groups using different classification systems, as well as highlight the need for consistency in data collection.

Next Steps

The next step, for the short-term, is to revisit other sources and contacts to expand the current list of classification systems. Given other projects on which we’ve been working,

we are aware that all systems are not included, to date, in the compiled dataset. Specifically, additional aquatic classification systems must be pursued.

An additional step will be to develop a database with cross-walks between one consistent system for habitat classification and the other systems compiled in the completed dataset.

Planned Deliverables/Deliverable Dates

We will cease contacting sources for other classification systems (unless it is felt that “all” systems have been discovered at an earlier time) by: March 1, 2006. The database with cross-walks will be completed by: May 1, 2006

Work Group Membership

The lead on this project is Tom O’Neil, of the Northwest Habitat Institute (NHI). Candace Russo, also of NHI, is contacting the agencies and organizations, gathering the information and compiling the spreadsheets. Once the cross-walking step begins, additional help will be provided by Loren Mueller, to transfer information into a database and establish the crosswalks.

Current Challenges and Solutions

Current challenges have include tracking down the correct information, and compiling the information in a manner that is organized, given the great differences in the type of information being collected. At times, semantics must be worked through from the beginning—when asking for this type of information, some people don’t always understand what “habitat classification system” actually means. This is especially true for the aquatic habitats. In solving this issue, examples have and will continue to be provided. For instance, the question for aquatic habitat classification systems is now approached as, “What habitat attributes do you use to classify, or define differences in, stream reaches? Examples could include riffles, pool types, woody debris, in-stream cover...” Additionally, definitions for each of these attributes are requested.

Another challenge has been organizing the data so that different systems can be compared, as well as teasing out which systems are actually one and the same. Often great differences exist in the amount of information one group may use compared to another, or even the type of information used. One example is that some systems use highly specific, detailed vegetation types, and others incorporate broader vegetation types with vegetation structure. Another example is the Forest Service’s vegetation types that were sent in a format that included more than just the Pacific Northwest. Currently the goal is to enter all the information into the spread sheet.

When the data is compiled into a database format, this challenge will need to be addressed for cross-walking purposes. The approach we will take to resolve this is to establish connections between a consistent habitat classification system and each of the systems included in the spreadsheet. The most comprehensive, consistent system that

currently exists is the IBIS (Interactive Habitat and Biodiversity Information System) classification system, which includes structural conditions, key environmental correlates, and key ecological functions. This extensive system should be able to cover most of the information gathered to enable cross-walks to be established. To accomplish this, each entry of information gathered during this project will be matched with one of the hierarchical habitat classification elements of the IBIS system.

WATER QUALITY – (DAVID TETTA)

Overview of Work Group Plan

- 1) Facilitate and promote the adoption of the PNWWQDX formats and protocols and technologies within the region.
- 2) Catalogue nationally developed protocols and systems for water quality data management.
- 3) Evaluate the viability of conducting training for these guidance documents.
- 4) Identify participating agency programs (i.e. NW State agency and EPA 305 (b) and 303 (d) 4) programs) that would benefit from either NED work products, or other national protocols, such as the Revised Guide for Water Quality Data Elements. List any key activities in those programs for 2005 as part of the identification task.
- 5) Identify individuals with expertise in this area, and include them in the NED web site.

Next Steps

The workgroup reviewed project accomplishments in 2005, and asked NED participants for feedback on priority areas the workgroup should focus on in 2006. The following areas were noted for emphasis:

Coordinate with PNAMP and provide input on use and development of Protocol Builder

Provide additional context to spreadsheet of NED related web sites and data sources - shop this work to PNAMP and get their thoughts.

Develop request to NEIEN grant program to integrate water quality, fisheries and habitat data

Include in spreadsheet a tab listing existing web map services, and which information sources we would like to have published as web services.

Develop template to help data generators get information into the PNWWQDE site.

Planned Deliverables/Deliverable Dates

The next steps are planned for completion during FFY 2006.

Work Group Membership

David Tetta (EPA), John Piccininni (BPA), Paul Ocker (USACE)

Current Challenges and Solutions

Expand the work group. Add research assistant support for some tasks. The group will identify what tasks the research assistant is needed for, so that the NED Steering Committee can request assistance.

SUBBASIN DATA (PHIL ROGER AND PETER PAQUET)

Overview of the Work Group Plan

The Subbasin Planning Data Work Group is working on the following: Facilitation and deployment of an action plan for compiling current Sub-Basin information for areas throughout the Columbia River Basin to ensure that it is archived & accessible; and, facilitation and deployment of the development of draft standards and protocols for ongoing reporting of Sub-Basin planning for projects, status and trends and effectiveness monitoring. The group will also develop a set of standard data reporting protocols for future Subbasin planning data collection. The group is actively engaged in the process of working with Subbasin planners to collect and archive non-EDT/QHA data used in the development of Subbasin plans.

Next Steps

The group is contributing a workplan that is focused on capturing and managing regional data sets developed under the Columbia River Basin Fish and Wildlife Program. The workplan will provide a generic framework for organizing and managing regional datasets developed under the NPCC Fish and Wildlife Program or by other significant inter-agency efforts (e.g. PNAMP, ESA, etc.). The plan calls for the development and testing of data management principles and efficient sharing procedures (This objective is general in nature and only needs to be done once. It should be reviewed and updated periodically.) Following this will be the development of a specific plan to support regional efforts and incorporate information sets into the Northwest Environmental Data Network for long-term accessibility and use.

Planned Deliverables/Deliverable Dates

The first phase of this work (data collection and archiving) should be completed by the end of the second quarter in 2006.

Work Group Membership

Current membership includes: Peter Paquet (NPPC), Phil Roger (CRITFC), Tom O'Neil (NHI), Bruce Schmidt (StreamNet) and Tom Pansky and John Piccininni (BPA).

Current Challenges and Solutions

The major challenge for the group is finding the appropriate contacts within the various subbasins and working with them to identify the available the available data sets. Additionally, we are working to maintain access to EDT/QHA data sets currently housed on systems maintained by contractors. We are working with BPA to develop contracts, which will alleviate these problems.

TECHNOLOGY FOR DATA DISCOVERY AND SHARING (TOM PANSKY)

Overview of Work Group Plan

- 1 Develop or identify protocols and rules for sharing data using open standards protocols such as established XML Schema and "web mapping services".
- 2 Identify existing sites and link with ISO Web Map Service standard or other agreed on standards.
- 3 Evaluate the adaptation of the EPA Data Exchange Network model for sharing tabular data sets beyond water quality data.
- 4 Develop the use of a pilot regional metadata server. The starting point for the design of this effort is the SAIC proposal for a regional metadata server.
- 5 Convene a workgroup to identify, define and document needed regional open standards protocols.

Next Steps

The major effort is element 4 above, development of the Northwest Environmental Data-Network Portal. Work on elements 1, 2, and 3 are partly completed.

Planned Deliverables/Deliverable Dates

Complete Portal deployment within 3 months.

Complete Data Partnership Agreements and populate the portal with critical regional data sets within 12 months.

Work Group Membership

The following have been contributing to this effort:

Cole Harper, BPA, GIS Analyst
Nathan Kline, BPA, Web application development
Eric Lowrance, BPA, GIS Analyst
Tom Pansky, BPA, NED Technology for Data Discovery and Sharing Team Lead
Steve Sherer, BPA, GIS Manager
Peter Paquet, NW Power and Conservation Council, NED Co-Chair
Stewart Toshach, NOAA Fisheries, NED Co-Chair
Rob Smith for Nathan Bentley, State GIS Coordinator, Idaho

Current Challenges and Solutions

Complete Portal Toolbox customization to meet regional needs

Secure needed web development services within BPA

Develop partnership agreements (Use May workshop)

Work with regional librarians to refine the data directory

Complete ESRI statement of work for continuing technical assistance on Portal customization

Acquire PTK source code, establish Portal development and test environment, and write contract with ESRI.

ESRI to convene an “Advanced Design Workshop” for Portal customization effort. Target early March.

Complete Portal ‘look and feel’ customization work by April.

PROJECT DESCRIPTION & PERFORMANCE/TEMPORAL & SPATIAL (JOY PAULUS)

Overview of Work Group Plan

1. Work with key regional technical leaders to develop a draft set of regional standards for spatial definitions. Work collaboratively with existing regional spatial data groups to develop common data definitions for spatial attributes used in reporting project or site locations.
2. Create a work group to develop geographically based language and data attributes guidance for reporting on project features or site location. Create guidance on minimum standards and common language. Explore model language (e.g. EPA E-Map) that can be used as a starting point.

Next Steps

Planned Deliverables/Deliverable Dates

The group has completed task 1 by developing ***Best Practices for Reporting Location and Time Related Data***. The document was distributed twice to PNWRGIC, PNAMP and NED mailing lists for comments and all comments received had been carefully considered and changes made. The next step is to have a non-technical edit completed. Then it will be forwarded to Regional Executive with recommendations for use. Some follow on outreach activities are expected.

Work on task 2 will depend on available in-kind support which needs to be assessed.

Work Group Membership

Contributors have included Michael Beaty (US Bureau of Reclamation), Greg Robillard (State of the Salmon Consortium), Brendan Sylvander and Jeff Cowen (National Oceanographic and Atmospheric Administration - Fisheries), Bobbi Riggers and Doug Terra (Oregon Watershed Enhancement Board), Joy Paulus and Stewart Toshach (National Oceanographic and Atmospheric Administration - Fisheries).

Current Challenges and Solutions

The current challenge has been to keep the guidance at the bare-bones amount of information necessary to report spatial and temporal elements with one common reporting method. While many entities have other favored spatial or temporal data elements that they use the goal of this effort was to develop single-common data elements that can be used for spatial and temporal reporting and can be translated into other formats. There is nothing to stop entities from reporting other data alongside the minimum needed elements.

The group has decisions to be made about its next steps. Work remains to develop a minimum set of reporting elements for project description and performance and developing data descriptions for features. For example: for fences, for spawning gravel

or culvert replacement. Paul Cedfeldt referred to material in the *Spatial Data Standard for Facilities, Infrastructure, and Environment* (SDSFIE) data standard Information is at <https://tsc.wes.army.mil/products/TSSDS-TSFMS/tssds/html/>

Paul suggested downloading Release 2.5 by clicking "Download Standards" in the left frame. The "Presentations" link might also be helpful. Examples of Fences and Culvert screen grabs provided by Paul are attached. You can make your own queries on the site.

Stewart referred to materials on the British Columbia SHIM site <http://www.shim.bc.ca/>. The *SHIM Sensitive Habitat Inventory and Mapping Methods* include lists and details of many types of fish and fish habitat features, the measurements required for each feature including spatial requirements.

Undoubtedly there are other materials that could be used in the region – the core question for the group is to decide what their next priority is.

SALMONID DATA (STEWART TOSHACH).

Overview of the Work Group Plan

- 1) PNAMP Monitoring groups. Provide advice on data coordination to the PNAMP Effectiveness, Watershed Status and Trend, and Fish Population and other monitoring groups.
- 2) Subbasin Pilots – Track Status and Trend Monitoring pilot data management efforts. Continue to facilitate the use of consistent approaches to data management in these and subsequent pilots.
- 3) Phase II of PSCRF Project Monitoring. Help to coordinate and facilitate the adoption of consistent project description and performance protocols.
- 4) Develop a project to identify data management protocols/definitions used for Salmonid data sets and ‘map’ the process through which data is collected, synthesized and managed. The deliverable date for this effort is early in FFY 2007.
- 5) Work collaboratively with StreamNet, the EPA and other entities on a Pacific North West component of the EPA Challenge Grant to improve Salmonid data sharing and exchange in the Pacific Northwest.

The next steps

The current priority is to hold scoping meetings for task 4 (which has been funded) with data users at NMFS NWFSC and NWRO, and others, eg the StreamNet State data coordinators.

Work is ongoing with the other tasks, with deliverable dates being externally driven. A comparison of data dictionary elements and definitions in the BPA Pisces and the NOAAF PCSRF projects has now been completed.

Current Challenge

The immediate challenge is to expand membership. Current participation is from Phil Roger (CRITFC), Kathy Kellon (State of the Salmon) and Stewart Toshach.

2) Regional Data Management Workshop Planning for May 24th and 25th.

An ad-hoc planning group of entity leads: Jennifer Bayer (PNAMP), Cy Smith (PNW-RGIC), Cathy Kellon (State of the Salmon Consortium), David Tetta (EPA) and Tom O'Neil (Northwest Habitat Institute) has met to discuss ideas and plans for the 2006 Workshop. Following this meeting Stewart drafted a Workshop Invitation covering broad workshop goals and participants.

There was broad support from the NED SC to support the workshop as outlined in the flyer. Tom O'Neil suggested making minor changes to the flyer to make it clear that the focus was about data management for monitoring and not high level monitoring project information. Stewart asked for suggestions on presentations and speakers. A revised flyer will be distributed to NED, PNAMP, PNW-RGIC, State of the Salmon and Northwest Habitat participant lists as well as to participants of the 2005 Regional Data Workshop.

3) Mike Beaty gave an update on the Bureau of Reclamation's Protocol Manager development effort. The current effort, being completed by the contract developer, Spatial Dynamics, is to add additional needed features, complete full documentation, training and user acceptance testing. Completion is currently scheduled for April, 2006.

B) PNAMP DATA MANAGEMENT AGENDA ITEMS

1) PNAMP Data Management Plan for 06. Stewart indicated that there is a need for more input from PNAMP participants to complete some of the tasks detailed in the PNAMP data management plan.

2) PNAMP Inventory Task. Bruce Schmidt gave a brief update. The list of needed data elements is currently being finalized and will be circulated. It had taken more time than expected as the inventory task had expanded somewhat beyond the original who, what when goal. Comments will be needed directly to Jennifer Bayer by March 1st.

C) AFTERNOON MEETING 1:00 through 4:00

Data Partnership Agreements:

Denise Kelsey, John Piccinnini, Tom Pansky, Peter Paquet, Bruce Schmidt, David Tetta, Jill Leary and Nancy Tubbs joined this discussion.

Background:

One of the tasks for NED in 2006 involves the development of a template or templates that would function as longer-term Data Partnership Agreements. The agreements would be for signature by various consortia of federal, state and tribal entities with a need to share data in other than ad-hoc ways.

Sub-components of interest to NED are agreements that would support consistent arrangements for: Project Level Information, Data Collection, Data Sharing, Data Reporting, Data Quality Assurance/Control, Metadata Reporting, Document Deliverables, Locational (Spatial) Data, Map-Coordinate Projection, Names/naming conventions (e.g. sampling stations) and Calendar/Date/time (temporal) data.

Some of these materials will best developed by other entities with particular content expertise. For example, protocols for data collection for aquatic are being developed by PNAMP. Other pieces have already been developed e.g. *Best Practices for Reporting Location and Time Related Data*.

Regardless of the origination of sub-components of a partnership agreement there is an overarching need to organize and present these various agreements in ways that can reduce the organizational and administrative burden of deployment. Wrapping the sub-components of a data partnership agreement into a single package has merit. Why have separate agreements for each component when all are needed for a coherent end-to-end data network?

A reasonable way to begin the task of developing needed agreements is to first locate materials for use as a starting point.

Cy Smith provided two references: It is understood that while neither document covered exactly what is needed, they were good starting points for discussion.

1) A template (attached) from the web site <http://www.opendataconsortium.org/>

and,

2) A Framework Data License Agmt v1.1.doc that was developed for sharing of framework data between governmental entities in Oregon.

David Tetta provided reference material: Trading Partner Agreements Analysis and Best Practices Final Report May 14, 2004. This material is viewable at

http://www.exchangenetwork.net/exchanges/TPA_Final_Report_Best_Practices.pdf

Elaine Dawson provided reference material: A British Columbia Data Exchange Agreement for A PDF of this file may be found at URL site: <http://srmwww.gov.bc.ca/bmgs/dataexchange/> [<http://srmwww.gov.bc.ca/bmgs/dataexchange/>](http://srmwww.gov.bc.ca/bmgs/dataexchange/) and by selecting Data Exchange Agreements The Data Exchange Agreement Model (pdf) file provides details on the terms and conditions on data use (restrictions, copyright, ownership, warranty and transfer).

(GOS also has examples of agreements between USGS and the State relating to National Mapping – Stewart will contact Vicki Lucas)

Conclusions:

While these documents were not discussed in detail at the meeting, participants came to the following conclusions:

These, and probably other agreements, provide a good starting point for development of model partnership agreements for the Pacific Northwest Region. No need to reinvent the wheel if materials already exist.

The modular approach is supported.

Different levels of agreement will need to be accommodated, eg agreements to publish data or to join an exchange or node, collect data, integrate data and etc.

A goal in developing template agreements is to provide a service to users who are not data specialists but nevertheless have a need to share data. When they need to share data they should not have the burden of developing agreements and should be easily able to access model templates.

A practical deadline for developing draft material for regional presentation and discussion would be for the upcoming Regional Data Workshop (May 2006). The workshop could also be used to get feedback on draft materials.

There may be more information at the “Lake Tahoe Area Clearing House” which has some model material.

The US National Spatial Geographic Information Council is having a meeting in Mid-March. This meeting would provide an opportunity to share information about this effort to a relevant

national audience and, potentially get input about other efforts. Nancy Tubbs is attending and will follow up.

Time needs to be scheduled at the next NED meeting for this topic by the NED Steering Committee.

NEXT NED MEETING MARCH 1st from 9:00 to 4:30 at

The office of the Columbia River Inter-Tribal Fisheries Commission, 729 NE Oregon St, Ste 200, Portland Oregon. Ph: 503-238-0667. Participants need to sign-in with the receptionist on the 2nd Floor who will direct you to the meeting room.

Some parking is available (on both sides of the CRITFC building) in parking spaces marked CRITFC, however you will need to obtain a parking-card from the receptionist and display it in your vehicle.

Thanks

Stewart Toshach

NED Coordinator &
PNAMP Data Management Co-Lead