



EXECUTIVE SUMMIT FOCUS

SHARING INFORMATION FOR IMPROVED DECISIONS

PREPARED FOR THE EXECUTIVE SUMMIT

October 2, 2007

by the Northwest Environmental Data Network, the Pacific
Northwest Aquatic Monitoring Partnership, and the Pacific Northwest
Regional Geographic Information Council

1.0 Executive Summary

In October 2007 regional executives are coming together to discuss the sharing of regional¹ information resources with a goal of identifying executive actions that could be taken to expedite and improve information management leading to more effective data sharing.

Suggested summit outcomes, identified by the project sponsors are:

Develop a regional executive level commitment, through an MOU or similar instrument, to:

- Identify priority information sharing needs;
- Improve information sharing and complete a regional ecosystem and information framework;
- Develop indicators, information collection standards, and protocols and information sharing arrangements;
- Develop an executive leadership group to steer this effort and other necessary organizational and administrative arrangements including consideration of roles for NED, PNAMP and PNW-RGIC;
- Identify resources for these tasks; and,
- Set overall timelines and review progress.

This focus document provides further information on the summit sponsors, identifies common ecosystem information sharing challenges, describes an ecosystem and information framework and development steps. A companion document, *Sharing Information to Improve Decisions- Examples of Benefits and Cost Avoidance* has been prepared to provide a business case for needed executive actions.

2.0 Why the Summit is Necessary

Currently ecosystem information is collected across multiple programs and efforts, using many different methods and is maintained in many different technical systems. The result is that it is difficult, and in some cases practically impossible to assemble the data into ecosystem level

¹Pacific Northwest Geographic scope involving: Federal, State, Provincial, Tribal, Local and NGO interests associated with the Columbia Basin, Puget Sound and the Coastal Pacific North west.

views that cross geographic and administrative boundaries.

To make many difficult regional level decisions; to report progress to congress, governors, legislators, and constituents; to demonstrate that public agencies are using public funds in a coordinated and cost effective manner; and for many other reasons, managers will most probably need:

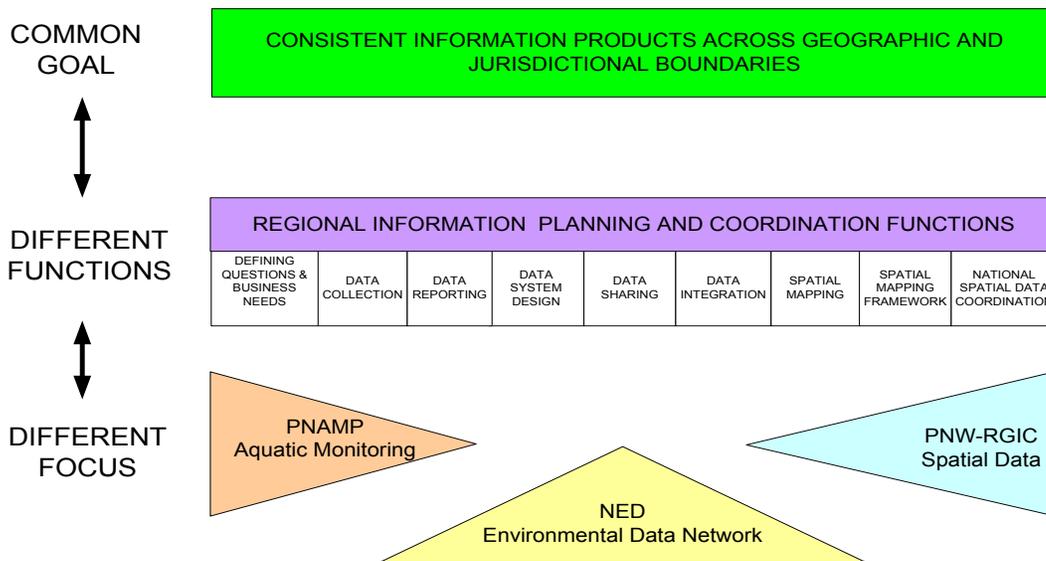
- Access to significantly more high quality information than they have now, including cross boundary and organizational information;
- readily available information about the projects they manage and the projects managed by others;
- Ability to compare information and reports developed by multiple agencies for consistency and accuracy;
- To correlate the actions of multiple agencies with regional spatial information; and,
- Flexibility to adapt as needs change and more is known and understood.

3.0 Summit Sponsors

The Northwest Environmental Data Network (NED), the Pacific Northwest Aquatic Monitoring Partnership (PNAMP), and the Pacific Northwest Regional Geographic Information Council (PNW-RGIC) have collaborated to organize this summit. PNAMP is an effort to understand why, how, and where aquatic data are collected, NED is about regional scale solutions for sharing and integration of multiple environmental data sets and PNW-RGIC is about developing regional spatial framework layers and national coordination. PNAMP is an example of a content focused group in the region, there are other groups.

While many groups participate in information management in the region only a few have a coordination role crossing multiple programs and geographies. NED, PNAMP, and PNW-RGIC have different and complementary coordination roles as shown in the Regional Information Coordination diagram on the next page.

REGIONAL INFORMATION COORDINATION: GOALS, FUNCTIONS & FOCUS FOR NED, PNAMP and PNW-RGIC



NOTES: Triangles show main focus of each group: PNAMP is about why, how and where aquatic data is collected; NED is about regional solutions for sharing and integration of multiple environmental sets; and PNW-RGIC it about developing spatial framework layers and national coordination.
 PNAMP is an example of a content focused group in the region - there are many others.

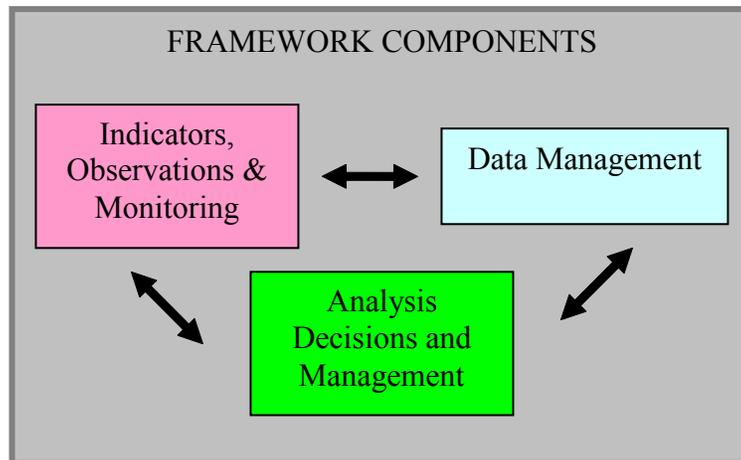
4.0 Why is a Framework Necessary?

Ecosystem science and management, information management and other disciplines can all contribute, but we also need a framework to help “connect the dots” between the many efforts – to allow contributions to a coordinated “whole” that is bigger than each individual program, agency or groups’ own interest.

It is important to understand that an ecosystem and information framework does not presume any particular technical outcome such as “a single database for all data”. Instead, it is an operational prescription for an information management environment that provides for efficient collection of more high quality information, open-sharing and access, sound analysis and use across multiple providers and users.

5.0 What's an Ecosystem and Information Framework?

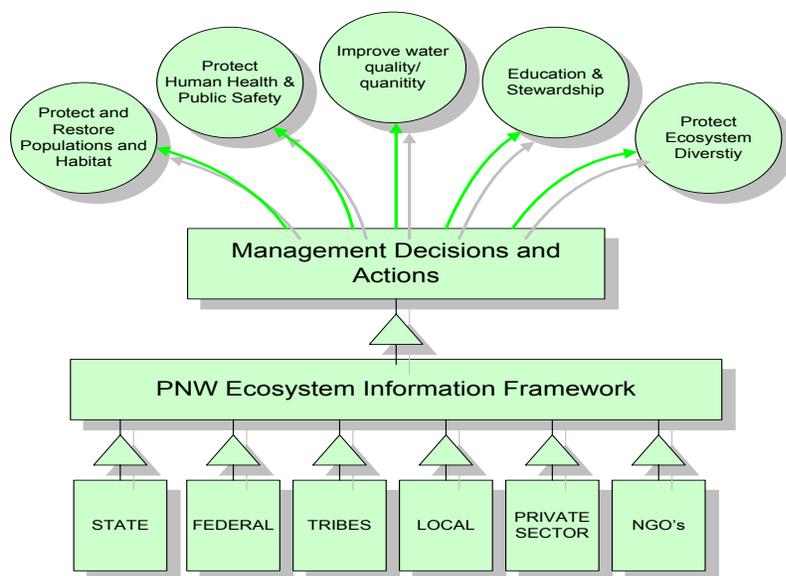
An ecosystem and information framework is a description of the needed components of an information system – together with a description of how they would work together. It describes the functions of a full information management cycle (from information collection design, indicators/protocols, to data collection, to technical data management, to analysis, to decisions and feedback). In a regional context, because of existing ecosystem and information management efforts, it is also about how these efforts can make existing “legacy” data more useful, consistent and accessible.



Framework components to meet these needs are likely to include:

- details about the critical questions that must be answered;
- indicators and benchmarks;
- a shared understanding of needed information collection, handling and sharing
- defined roles and responsibilities of the participating entities
- a common language and consistent tools for information exchange;
- some common analytical tools; and,
- an ecosystem and information framework to pull it all of this together to “connect the dots”.

EXECUTIVE SUMMIT FOCUS



A thoughtfully designed ecosystem and information framework would be able to serve multiple groups, goals and content areas.

An effective ecosystem and information framework would be technology neutral – creating a place – in the framework for all regional providers who are willing to participate and enabling access to the information for all users who want to use it.

6.0 A Model Process

A multidisciplinary process is essential because people working on parts of an ecosystem and information framework (including scientists and resource managers, information collectors, data managers, analysts, and GIS specialists, and decision makers) are usually from different disciplines and backgrounds.

A successful outcome will depend on active participation from all these groups – and this involves executive level commitments to joint activity and products.

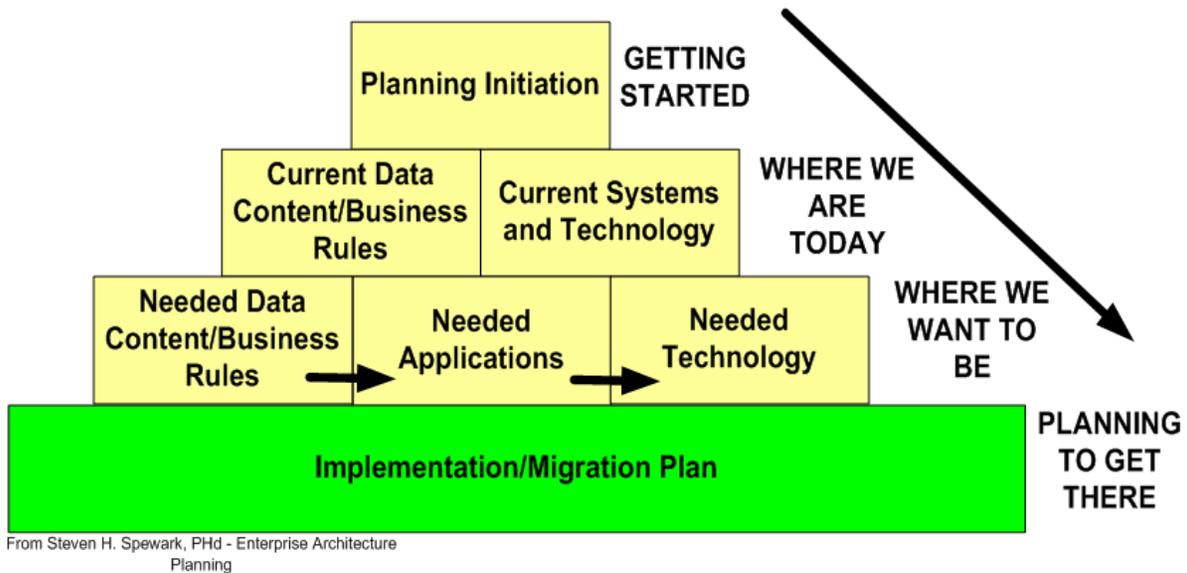
Because ecosystem science monitoring and information management involves multiple partners, entities, interests, needs and technologies, **a model process** can help to work through this complexity.

The “Wedding Cake” model² (see diagram below) is a step-by-step way to systematically identify, design and deploy a framework. The model provides for development of end-to-end understanding of the information management needs from monitoring and observations through

²From Steven H. Spewark – Enterprise Architecture Planning.

data management to decision tools to decisions and a systematic way to address those needs. It is understood that different groups are working on ecosystem information system improvements at different levels. It is essential to understand these differences and account for them in a regional model and in any implementation steps or migration plans that are developed. It is also important that information system improvements are based on a sound and consistent planning foundation.

The model has four levels (see Figure below).



At Level one “**Getting Started**”, there is a necessary commitment by project sponsors to systematically address the information, data management and decision making needs with a framework approach.

Level two describes “**Where we are today**”. What data is currently collected and what business rules apply to that collection? What information system applications (software) and technologies (hardware) are currently used?

Level three describes “**Where do we want to be**”. This includes future needed data content, business rules, applications and technology. It defines future needs in relation to future decisions that must be made. The differences between level two and level three are commonly called gaps.

EXECUTIVE SUMMIT FOCUS

Level four describes how to get from “**where we are today**” to “**where we want to be**”. This task includes defining necessary content, business rule, application and technology needs. Level four is a plan that describes who will do what, when and where and with what resources, agreements and technology.

7.0 Possible Summit Outcomes

Steering Committee members and coordinators of NED, PNAMP and PNW-RGIC have met together and separately to discuss desirable outcomes for the summit and have identified the following:

Develop a regional executive level commitment, through an MOU or similar instrument, to:

- Identify priority information sharing needs;
- Improve information sharing and complete a regional ecosystem and information framework;
- Develop indicators, information collection standards, and protocols and information sharing arrangements;
- Develop an executive leadership group to steer this effort and other necessary organizational and administrative arrangements including consideration of roles for NED, PNAMP and PNW-RGIC;
- Identify resources for these tasks; and,
- Set overall timelines and review progress.