



**Northwest Environmental Data Network (NED) Executive Meeting
December 7th 2005**

Executive Decision Table

The following table summarizes the priority outcomes of the SAIC study, the May 2005 Data Workshop Meeting, the status of current efforts to address those outcomes, and needed Executive decisions to support ongoing action.

The first two columns (copper colored) are the Scientific Applications International Corporation (SAIC) recommendations as ranked by the NED Steering Committee. The next two columns (straw colored) represent priority recommendations from the Workshop. The next to last column (no color) shows the status of actions for each of the recommendations while the last column (green) identifies recommendations where Executive decisions are needed.

The NED strategy has been to work towards improving regional data management at minimal cost, by relying on coordinated activities and for the most part, in kind support. That can only go so far. Regional data management organization, planning and administration cannot succeed, or succeed very quickly without some increased support.

The situation requires a modest increase in resources: in particular from increases in in-kind contributions; for a Portal Administrator for the Portal; and for a cost

share arrangement for the ongoing coordination costs. Increased participation is also needed.

The NED tactical approach has been to initially to work on an MOU to provide an ad-hoc mechanism for cooperative and other needed efforts. Then, to focus on standards and protocols and tools, including a portal for sharing and discovering data, and finally, to introduce Distributed Database Management System (DDBMS) tools. DDBMS systems allow an information user to make a single query that returns data from multiple data sources. The data is retained by the owner/data collector who is responsible for the data integrity but is posted to the internet for access by multiple users. DDBMS approaches will supplement existing warehouse approaches and potentially link existing warehouse data sources.

In the workshops and follow up efforts it is clear that this tactical approach is supported. The workshop provided a fine tuning of the basic approach identified by SAIC and an opportunity for many to learn about NED and other regional coordination efforts, especially the Pacific Northwest Aquatic Monitoring Partnership (PNAMP), the PNW-RGIC Pacific Northwest regional Geographic Information Council and the Northwest Habitat Institute who collaborated on the workshop.

To succeed in the short term the resource that is most needed is more in-kind support, or alternatively contract funding. Timing is important too – for example the Fish and Wildlife program is now entering into a new phase of contracting. If those contracts are be conditioned to comply with data management standards the standards first need to be completed. In the Executive decision table below the standards development tasks are the “Data Content” tasks. Increased participation, in-kind contributions or a contract budget is necessary to meet the F&W program timetable.

Other efforts, for example regional Monitoring and Evaluation efforts would also benefit from the use of more standardized approaches to data management. From the perspective of the data management community, burdened with the next- to-impossible task of integrating disparate data, Executive action to increase consistency in data reporting is welcome.

In practical terms, a commitment of at least 0.5 of an FTE over a one year period from each of the major agencies and some FTE support from all entities would go most if not all the way to developing needed regional content and other related standards/protocols. This would be an intensive but very worthwhile short term effort. The alternatives are to let this opportunity pass or provide substantial contract funding.

NORTHWEST ENVIRONMENTAL DATA NETWORK EXECUTIVE DECISION TABLE					
SAIC RECOMMENDATION	SC RANK	WORKSHOP RECOMMENDATIONS	WORKSHOP RANK	CURRENT STATUS OF TASK	NEEDED EXECUTIVE ACTION
GOVERNANCE					
Establish a high-level agreement (MOU or stronger document) endorsing a regional data network and pledging signatory support.	I			A high level MOU is complete and has been signed by some entities. Outreach to other participants is ongoing. There is consistent support in principle. In practice some agencies are dealing with internal data issues and are not ready or willing to contribute to a regional network. A common refrain is "what's in it for them"	Decision needed about whether to move further ahead on projects without participation from some entities.
		Convene principals of major resource databases to formalize consensus supporting the value of data network (expand NED signatories)	Short term Priority	Some database entities are supportive while others are more circumspect and may see NED as a competing data management system rather than a needed regional network system.	See above
		Identify essential additional partners and champions to support participation	Short Term Priority	This task is ongoing, see above.	See above
Formalize an accountable regional data network administrative framework.	I			An administrative framework for an accountable regional network has been developed for Executive consideration. The ISRP and SAIC pointed to the need for more formal arrangements – an entity that is "responsible" for regional data management	A decision is needed on proceeding with a more formal administrative model.
Identify a regional data network Coordinator and Project Manager.	I			The data coordinator role is in place. NED projects are currently being managed through in-kind contributions and the coordinator	More in-kind support is needed to complete needed tasks – see details below.
Write a long-term regional information system development plan.	III			NED is currently dealing with shorter-term start-up issues.	No action is needed on a long-term plan until a decision is made on adequacy of participation (above)
Develop a process for evaluating	III			As a starting point proposed projects	Executives need to decide whether to

proposed project relevance to data management goals as part of the grant and contract process.			could be assessed based on whether or not they are consistent with regional data network needs: Is metadata FGDC compliant, will data be posted to portal/s, is spatial and temporal data consistent?	apply data management performance criteria to funded projects	
Develop a strong operations and maintenance plan.	III		This task is important, however, until the network is up and running there is no need for O&M	No action needed at this time	
		Conduct annual executive-level review for regional data sharing signatories	Long term Priority	An annual executive meeting is desirable –with the idea that it be used to overview progress and develop consensus on the needed action.	This meeting meets the workshop need.
		Present regional workshop findings to regional executives	Short Term Priority	Self explanatory	This meeting meets the workshop need

OUTREACH

<p>Expand outreach efforts to seek buy-in from other key decision-makers and stakeholders in the region. Develop targeted outreach and education materials for key regional data network participants and supporters that clearly outline the need for a regional data network and describe the benefits and costs for such an endeavor. Ensure this outreach approach addresses the need for long-term support for a regional data network to succeed.</p>	<p>I</p>	<p>Develop relationships with various data exchange groups</p>	<p>Short term priority</p>	<p>There has been considerable outreach to key groups who are regional stakeholders in data management. Most groups have committed in principle. Some are yet to sign the MOU or contribute substantially to the effort.</p>	<p>Executive decision on whether to invest further time in outreach or switch priorities towards developing products.</p>
<p>Develop communication and coordination hub of regional data network.</p>	<p>I</p>	<p>Establish information portal that links existing resources (with Columbia Basin as focal point)</p>	<p>Short term priority</p>	<p>NED is establishing a pilot portal that will have this capability</p>	<p>See below in "Data Technical Architecture"</p>

DATA CONTENT					
Research and post inventory(ies) of existing standards and protocols in the region.	II	Maintain and update regional data exchange and sharing protocols in a regional data dictionary accessible via the www. Focus on establishing minimum data exchange and sharing protocols for future data collection and management efforts	Short term Priority	NED efforts have identified and promoted the need for a regional data dictionary. Since then the BRec has been working to develop a pilot data dictionary. Once complete, an evaluation of the utility of the dictionary is needed. If a decision is made to deploy, a deployment and operational plan would also be needed.	An Executive decision is needed on whether to help to evaluate and deploy a common regional data dictionary.
Develop and post regional data network standards for reporting geographic data: locations and projections	II			NED has prepared draft guidance for spatial and temporal reporting.	When standards are final, regional Executives need to review them and support usage.
Incorporate regional data network requirements into future grants and contracts.	II			As a practical starting point, require entities and agencies to consistently: complete metadata, post data to portal sites and describe data quality, all as a condition of work performance.e	Executive action is needed to require the use of standards within their agencies.
Develop and post Regional Quality Assurance and Quality Control procedures and protocols.	II			QA/QC needs to be first developed for data collection. This involves intervention in existing programs, a territorial issue for the data collection community. In kind or consultant effort is needed to establish best management practices with user communities.	Executive support is needed to find in kind contributions or contract dollars to support this effort.
Complete the preliminary inventory of information resources in the region.	II			The NED SC considers that static inventories have limited value. An alternative is to post data to the web e.g. through a portal. In this way the Portal would be dynamically updated.	Executive support is needed to fund a Portal Administrator for the portal site. See below.
Develop and post a regional data network manual that documents everything needed to become a regional data network participant.	II			At best the manual would constitute a regional data sharing agreement, setting out agreements, understandings and best practices for regional data sharing.	In-kind support is needed for this effort

FINANCE AND BUSINESS CASE

Develop the regional data network as a base-funding category, not to be recompleted for on an annual basis.	I		Coordination funding is currently supported by BPA and NOAA. A more equitable arrangement is needed to include additional partners.	Executives need to decide whether their agencies are able to contribute funding to the existing NED coordination effort.
Develop a long-term resource plan (staff and dollars) for the regional data network.	III		Focused short term funding is currently the most important. Many tasks are time critical in the sense that delays in introducing standards makes the task ever more difficult.	No action needed at this point
		Explore other network options to leverage (e.g., Exchange Network)	Short term Priority	A funding request can be made to the EPA Exchange Network, however it requires a state sponsor and states and tribes often have their own requests. Requires support from grant writing professional.
		Leverage grant opportunities and partnerships	Short term Priority	Requires support from grant writing professional.
		Organize executive funding symposium	Short term Priority	A pre-requisite of this task is to develop a funding package and a long term data network plan.
		Identify current lines of authority and/or obligations – use business case to encourage participation	Short term Priority	This is a time intensive task. While most data management efforts do not develop substantive business cases, developing a business case for regional data sharing is considered worthwhile

DATA TECHNICAL ARCHITECTURE					
Develop regional data network monitoring protocols and data standards addressing data collection, storage and analysis.	II			NED is adopting open standards from the International Standards Organization consistent with the National Spatial Data Infrastructure and with FGDC compliant metadata.	Executives are asked to endorse this approach.
Develop and implement region-specific metadata tools.	II			While the NED Portal design is designed to be FGDC metadata compliant it may also be necessary to develop some metadata short- forms that would relieve the burden of metadata reporting.	No action needed at this time
Develop regional data network technical assistance.	II			This activity could help to support the portal – some entities will need assistance using the Portal even when guidance is fully developed.	Portal administrator can develop guidance and provide some assistance. No additional action needed at this time.
Establish guidelines for becoming a regional data network node.	III			A node implies participation in a Distributed Data Base Management System (or DDBMS). Currently there is a pilot DDBMS in the region – the EPA Exchange Network. NED plans to apply for 07 Challenge Grant Funding to pilot the use of the EPA exchange network for fishery and habitat data sets -	Executive support will be needed for application to the EPA challenge Grant (approximately 750K). This may also require in-kind or cash partnership contributions from the region.
Develop a regional data network using a distributed system architecture based on an enterprise approach.	III			See comment immediately above. The hard and cost intensive work here is in developing a detailed understanding of the data that will be shared and building exchange formats to allow the exchange of data between participants and nodes.	No action needed at this time. See comment immediately above.
		Develop and publish reference architecture for the system	Short term Priority	The architecture in the EPA Data exchange model should be reviewed with a view to adoption as reference architecture. In-kind expertise is needed for this task.	In kind support is needed.
		Deploy registry/repository that conforms to OGC extensions to ebRIM and provide access via simple web portal	Short term Priority	The NED portal is a subset of needed portal tools. NED will evaluate the utility of a broader tool set, for example those used in "Websphere" or "Plum Tree".	No action needed at present
		Develop test site to show power of	Short term	The DDBMS goal is to develop a test site	No further action needed at present

		data linkages	Priority	based on the EPA exchange model.	
Develop tools that will enable searching, accessing, acquiring, sharing, and contributing information resources about regional resource management efforts.	III	Select small number of representative datasets and WMS services and register them in the catalog	Short term Priority	NED, with support from the BPA is developing a pilot portal to meets these needs. The Portal needs to be completed and guidance prepared. A portal content manager is needed to provide a necessary check on data compliance prior to publication	Executive action is needed to support populating the portal. This could involve requiring the registration of data work products with the Portal. A Portal Administrator is a critical resource to meet this need. Current funding is likely to be sufficient to support a Portal Administrator through FFY 2006.

LEGEND					
Rankings of NED Steering Committee					
Priority in White Papers					
Executive decision or support needed					