

Sustainable Water Resources Roundtable

Top of the Town N. 14th St. Arlington, VA 22209 June 26 & 27, 2008

Meeting Notes

Day 1 (Thursday June 26)

The meeting opened with welcoming remarks from Rick Swanson of the US Forest Service and SWRR Co-chair. David Berry outlined that the goals of the meeting were to hear from major initiatives on water in federal agencies and explore how SWRR could support those programs and assist them in collaborating. This meeting was designed to take a close look at SWRR's objectives and priorities and explore how the group could expand its contribution.

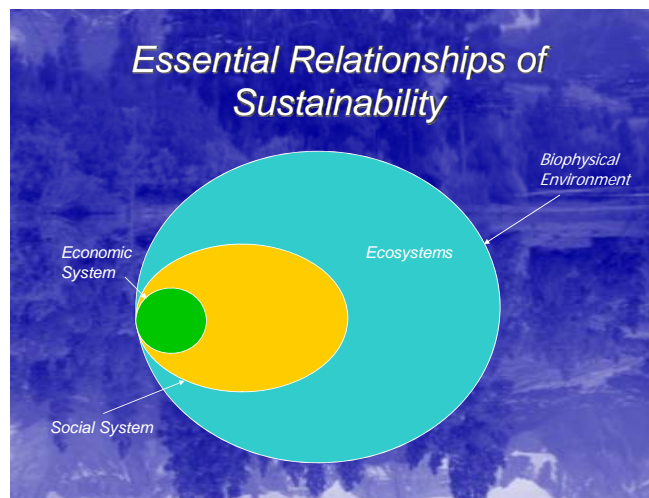
(The PowerPoints for the following presentations are posted at www.acwi.gov/swrr)

SWRR Background – Summary of SWRR for new participants, Rhonda Kranz, Kranz Consulting

Rhonda, a long time SWRR steering committee member described the SWRR as a national collaboration of federal, state, local, corporate, non-profit, and academic interests. She reminded participants of SWRR's mission, to promote sustainability of our nation's resources through ...

- Evaluation of information
- Development & use of indicators
- Targeting of research
- Engagement of people & partners

Rhonda presented a discussion of sustainability displaying the relationship between ecosystems, which include all living things and their physical environment, society, which represents all the human elements of the biosphere and is nested in the ecosystem, and the economic system which is a sub set of society.



Rhonda then reviewed the Principles of Water Sustainability that had been discussed and summarized at previous SWRR meetings:

1. The value & limits of water
2. Shared responsibility
3. Equitable access
4. Stewardship

The roundtable proposes a five-part framework for organizing water sustainability indicators that represents the inherent interdependency of our nation's water resources:

- A. Water availability
- B. Water quality
- C. Human uses and health
- D. Environmental health
- E. Infrastructure and institutions

Within this framework, indicators represent a way to measure progress. They can provide a metric for understanding the extent to which water resources are managed to meet the long term needs of our social, economic

and environmental systems and help us understand whether or not the nation is on a sustainable course in its management of water and related resources.

Ideas for direction of SWRR and Opportunities for SWRR to Contribute, Paul Freedman, President of Limnotech

Paul gave the participants more history of the SWRR. It was a subgroup of the Advisory Committee on Water Information and it is one of four resource roundtables that provide information on the sustainability of natural resources to a variety of stakeholders. SWRR is a forum to share information & perspectives among government, industry, professionals, academics, and advocates promoting better decision making related to sustainable use of water resources.

Paul said SWRR has done an excellent job at outreach, conducting workshops every several months. These have been very effective in raising the awareness of the issues, exchanging technical information, and providing a forum for discussion of sustainability. SWRR has engaged hundreds of professionals on this topic and continues to engage more people in the discussions as the workshops travel to different locations. It has played a valuable role in encouraging/supporting publications and presentations on sustainable water issues. There have also been valuable discussions on research needs and the results have been published.

And, Paul said, we have done outstanding work in advancing the thinking and developing a framework for sustainable indicators, albeit a work in progress.

This was a good time, Paul thought, to reassess SWRR's objectives and priorities. Are we really accomplishing all that we can and are we making a difference and what could we do that would make a difference? In fact, it was one of the main purposes of this meeting. Paul posed some questions. Should SWRR:

- Continue its current focus as forum?
- Reassess its objectives for indicator activities?
- Strengthen its role in advancing knowledge?
- Play a bigger role in promoting research?
- Expand its role in public awareness?
- Be a more active advisor to government agencies and support their collaboration?
- Have a more topical focus? (e.g. climate change, LID, policy...)
- Pursue grants to fund its operations?

Paul then gave a summary of a number of ideas that had been submitted by several members of the steering committee prior to the meeting. The discussions that began with Rhonda and Paul's introductory sessions and were enhanced by the presentations that followed, led to the draft action items at the end of these meeting notes.

Highlights of WEF/EPA Sustainability 2008 Conference, Matt Ries, Managing Director, Technical and Educational Services, Water Environment Federation

The SWRR June meeting immediately followed the Sustainability 2008 Conference and Matt Ries was able to give the SWRR participants an excellent summary WEF Sustainability activities and what happened at the Sustainability 2008 conference.

Matt outlined WEF's leadership role in the National Summits for a Sustainable America, participation in the Effective Utility Management Project, the WEF Lo-Carb(on) Diet and 2007 Sustainability Task Force.

The Sustainability 2008 meeting called for abstracts of papers on three main topics: Stormwater & Green Infrastructure, Sustainable Watershed Management, and Energy Conservation & Climate Change. Over 300 abstracts and 15 workshop ideas were submitted of which 75 presentations and three pre-conference workshops were selected. After the opening general session with EPA Administrator Stephen Johnson giving the keynote there was an expert panel from a variety of sectors. The conference then moved into technical sessions on several subjects: National & International Watershed Issues, Climate Change Mitigation at Waste Water Treatment Plants, Performance of Green Infrastructure, LID for the Watershed, Renewables: Developing an Energy Source, Incorporation of Green Infrastructure into CSOs, and Wet Weather Management: Looking to the Future.

Coming out of the discussions at the conference, WEF is looking at work on sustainability in a number of communities of practice and collaboration with SWRR would be welcomed in any of these areas.

1. Sustainable Utilities: Best practices for utilities and Coordination with Effective Utility Management Program
2. Sustainable Watersheds: Governance structures and Certification of sustainable watersheds
3. Industrial /Corporate Approaches: Link to DOD’s AFRICOM and corporate social responsibility programs
4. Stormwater & Green Infrastructure: Contribute to WERF/ASCE International BMP database, O&M for green infrastructure, TBL analysis of green infrastructure
5. Energy Conservation & Climate Change: Linking water utilities to city/county GHG reduction plans, protocols for GHG emission inventories, support initiatives on carbon trading for Publicly Owned Treatment Works
6. Sustainability Metrics Initiative
7. Sustainability initiatives Inventory

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The next session, held on the afternoon of June 26, was moderated by **Bob Wilkinson** Bren School of Environmental Science & Management, UC Santa Barbara.

National Water Program Strategy: Response to Climate Change, Jeff Peterson, EPA
http://www.epa.gov/water/climatechange/docs/3-27-08_ccdraftstrategy_final.pdf

Jeff Peterson invited comment and collaboration on EPA’s draft strategy for a response to climate change which developed from the results of a workgroup created in March 200 to review climate change information, evaluate potential impacts on water programs, identify potential response actions, and develop a climate change *strategy* for the national water program.

The work involving many EPA offices found many impacts from climate change:

- Increases in Water Pollution Problems
- More Extreme Water-Related Events
- Changes in Availability of Drinking Water Supplies
- Water body Movement and Displacement
- Changing Aquatic System Biology
- Collective Impacts on Coastal Areas

Jeff outlined the key steps in the process:

- Stakeholder “Listening Sessions” – May/August
- Agency Climate Meeting in Seattle - June
- National “Fly-in” for Water Directors - July 20
- Workgroup Draft *Strategy* – September
- OMB Review - January
- Public Review - Spring
- National Webcast May 8th
- Final Strategy - Summer

In its current draft the National Water Program Strategy declares five major water program goals:

- Goal 1: **Mitigation** of Greenhouse Gases
- Goal 2: **Adaptation** to Climate Change
- Goal 3: Climate Change **Research** Related to Water
- Goal 4: **Education** on Climate Change
- Goal 5: **Management** of Climate Change

Jeff concluded by calling for a higher level of collaboration among government agencies working on water topics.

Water for America Initiative, Eric Evenson, USGS <http://water.usgs.gov/wsi/>

Eric quoted the National Science and Technology Council, *“The United States has a strong need for an ongoing census of water that describes the status of our Nation’s water resource and identifies trends over time.”*

USGS began a pilot project on Great Lakes, including the re-establishment of a number of discontinued stream gages. The existing water use program has gotten good marks from evaluators, but it has limitations:

1. It’s just a basic accounting procedure
2. It lacks sufficient scientific, statistically sound data
3. It needs to have a better tie between water use and water availability

So, in the next decade, the Nation will have a new appraisal for water availability. In the FY 2009 Budget, the President has requested funds for an initiative to:

- Conduct a nationwide assessment of water availability through regional-scale and focused areas studies.
- Improve our understanding and analysis of water use information.
- Cooperate with States geological surveys to map the geologic framework of aquifers.
- Modernize the Nation's 7,000 stream gages.

Eric outlined the proposed initiatives at USGS including program changes to the National Streamflow Information Program, the Ground-Water Resources Program, and the National Cooperative Geologic Mapping Program. The Bureau of Reclamation also has several initiatives:

- Planning for Our Nation's Water Future; River basin supply & demand studies with partners
- Increasing Water Supplies through Improved Efficiency; Challenge Grants Program
- Securing Water Supplies by Accelerating Species Recovery

The nationwide studies will be organized around the 21 Water Resource Regions established in Circular 1223:



Eric concluded with a request for comment and input to the Water for America Initiative in the following areas:

- What considerations should be taken in making the greatest use of existing water availability and use studies and information, which have been conducted at a regional or finer scale, to further the Water for America objectives? Are there ongoing water availability and use efforts that the USGS should collaborate with in conducting this Initiative?
- States and regional organizations collect and maintain significant amounts of hydrologic data, particularly for ground water and water use. How should this information be incorporated into the regional and focused area assessments?
- What specific variables or indicators would be most useful to inform national and regional water availability and use decisions?
- At what scale of watershed does your organization assess the cumulative affects of various water supply stresses?
- What products and information will be most useful to you from these assessments?

Integrated Water Resource Services, Jawed Hameedi, NOAA

Jawed said Integrated Water Resource Services is a NOAA initiative to focus its considerable expertise, resources and capabilities in the broader context of water resources for:

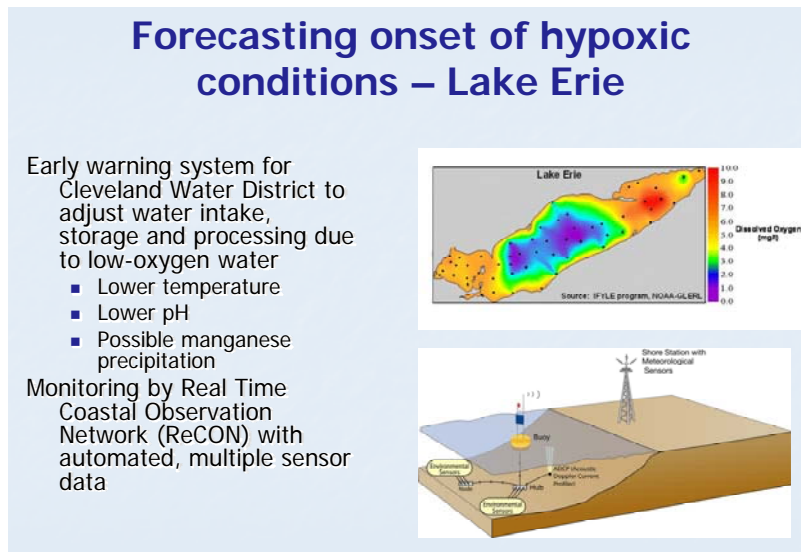
- a. Linking its weather, water and ecological research, assessment and monitoring activities
- b. Delivering essential products and services through regional collaborative projects
- c. Increasing outreach and education, and enhancing socio-economic benefits

It is a precursor for NOAA's Water Theme – under development aiming to integrate water science and services. NOAA Executive Council (NEC) decided (2006) to emphasize programmatic integration across NOAA and improve the value and efficiency of NOAA's products and services by a collaborative approach at a regional scale.

A good local example of this is the work to enhance the Potomac River basin stream gauge network and integrate NOAA and USGS data:

- Determine water flow and contaminant flux from the Potomac River Basin into Chesapeake Bay [essentially fill spatial sampling gaps] that meet key partner and customer needs
 - Review of existing network and capabilities
 - Delivery of stream-flow, water-level and water quality data through data portals and web visualization tools.
 - Support design elements of the National Water Quality Monitoring Network
 - Fill gaps

Another example:



Open discussion on how SWRR can best collaborate with these and other water initiatives.

The afternoon closed with a discussion of how SWRR can support increased collaboration in water programs. Jawed Hameedi said there is a need to link earth observations/IOOS, climate change science, nitrogen and carbon overload impacts, and what might be happening in the Arctic. He wondered whether recent agency documents on new vision and strategic direction really integrate with each other.

We discussed what preparations SWRR might make to contribute ideas to a new Administration in January 2009. SWRR was described as well positioned to provide interagency cooperation through its variety of members. Its members may have knowledge of the environmental policy people in the current campaigns providing an opportunity to inform both campaigns. We could provide briefings to whoever the future policy makers will be. It was mentioned that during the transition period between November and February is an excellent time to contact and brief the incoming leaders.

Day 2 Friday June 27, 2008

Update on White . House and interagency indicator efforts and connection to water, Rich Guldin, Director of Science, Policy, Planning, Inventory and Information, US Forest Service

Rich gave a good history of the various efforts to create a national set of environmental indicators over the last fifteen years. He said it became apparent over the past 15 years that the task of defining indicators—though difficult—could be mastered. Describing a suitable framework within which the indicators could be nested also proved difficult but doable. Most difficult was orchestrating institutional collaboration among federal agencies responsible for inventory and monitoring programs

At CEQ, SINE morphed into Collaboration on Indicators of the Nation’s Environment (CINE) to emphasize the collaborative focus of a system of indicators. To get more support and advice, the Dept of the Interior requested the National Academy of Public Administration in 2006 to review the situation, with special focus on the institutional collaboration challenges. The resulting NAPA report is *A Green Compass: Institutional Options for Developing a National System of Environmental Indicators* (Nov 2007).

Nuggets from the NAPA report include:

- “It is clear America needs a comprehensive nationwide system of environmental indicators.”
- “While a host of federal and state agencies collect a vast amount of environmental and natural resource data, our ability to produce actionable information is limited by the fact that the data currently collected are inconsistent, incomplete and, often, simply not adequate for decision-making.”
- “Undertake an intensive pilot to develop crosscutting indicators for an environmental issue that is nationally significant, high profile, multi agency in scope, and of immediate interest to state and local governments and the private sector. The Panel suggests water quantity as a candidate issue.”
- **“Think big, start small and ramp up fast.”**

A CEQ,OSTP, OMB Policy Memo declares how this project will proceed:

The pilot project is designed to test the vision for the NEST Indicators. It will demonstrate the collaborative interagency processes that will be used to select and implement indicators and will improve the consistency and interoperability of data. In addition, a national forum will be convened to identify the topics and questions that should be addressed by the indicators of water availability.

- Four departments/agencies are involved
 - Dept of Agriculture (FS & NRCS)
 - Dept of Commerce (NOAA)
 - Dept of the Interior
 - EPA

Characteristics of NEST Indicators

NEST Indicators are envisioned to be a set of high quality, science-based statistical measures of selected conditions of our environment and natural resources. They address topics that are sufficiently important and cross-cutting to warrant the acquisition of data using measurement methods and statistical designs that are consistent across the entire country and repeated regularly over time.

NEST Timeline

- Finish the pilot test by Oct/Nov 2009
- Report to CEQ, OSTP, and OMB on
 - Framework for comprehensive set of high-level indicators. Not selection of all the indicators for all sectors
 - Selected water indicators (5 to 7), results of an initial test of data interoperability and the ability to report on them, plus recommended changes to existing programs at the participating agencies to improve reporting
 - “After Action Review” of institutional collaboration and any recommended changes
 - Proposed next steps
- “Keep the pedal to the metal throughout transition”

Rich announced that NEST will host a National Forum on the indicators:

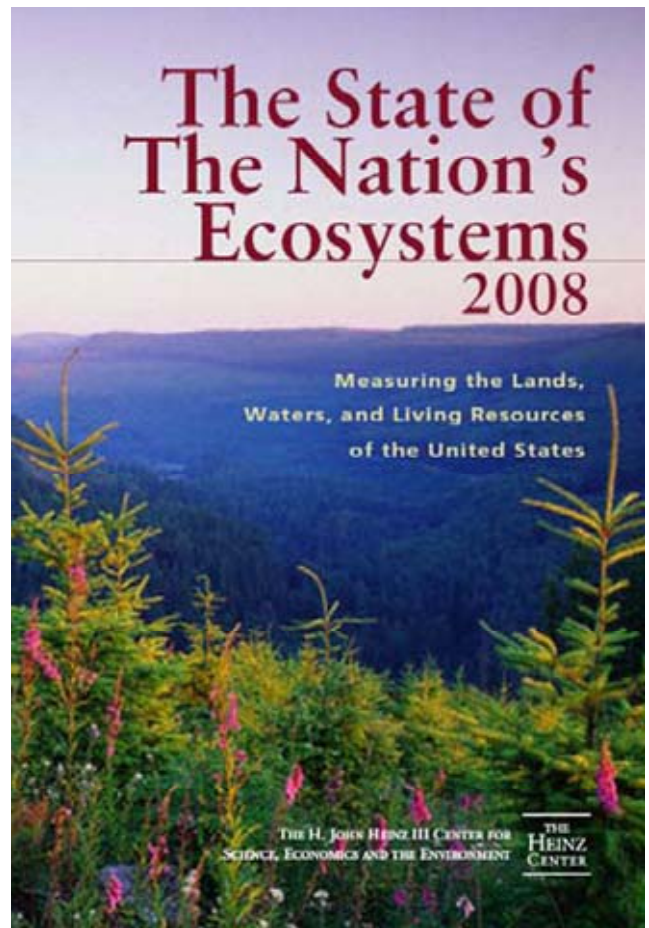
- To hear the views of stakeholders
 - What are the most important questions where information is needed to make better policy?
 - Focus on water quantity and quality
 - Welcome information on other resources
- To identify potential non-Fed contributions
 - To the policy dialogues at multiple geo-spatial scales
 - To the data and data management needed for better dialogue
 - To the estimation and reporting processes for the indicators needed to better inform policy dialogue

Report on the State of the Nation's Ecosystems: 2008, Anne Marsh, The H. John Heinz III Center for Science, Economics and the Environment

Anne Marsh updated the group on the release of *State of the Nation's Ecosystems 2008*. The report was released by The Heinz Center on June 13th and describes 108 indicators of the condition and use of U.S. ecosystems. It is the second *State of the Nation's Ecosystems* report and like the first was developed through multi-stakeholder collaboration. The 2008 report has more data and many refined indicators. Forty-two indicators have data related to water resources. Four of the new indicators in the report relate to water: Change in Stream Flows (a core national indicator), Freshwater Acidity (a fresh water indicator), In-stream Connectivity (a fresh water indicator), and Coastal Pattern (a coasts and oceans indicator). Many of the water indicators in the report have also been refined (e.g. At-risk Native Freshwater Species, Stream Habitat Quality, Established Non-Native Species, and Areas with Depleted Oxygen).

Anne went on to discuss some of the problems with the current "system" of providing information and describe the content of the policy document – *Environmental Information: Roadmap to the Future*—released along with the 2008 report. In the *Roadmap* report The Heinz Center urges Congress to establish a national environmental indicator initiative, guided by the federal government, states, the private sector, environmental organizations, universities and others. This effort would link national indicators with information used by local state, corporate, and other decision makers, and drive an agenda for improving data collection and reporting. The report also recommends that the executive branch take

immediate steps to begin design and implementation of a system of national indicators. The NEST pilot project is a first step in this direction, and The Center hopes that adequate resources are made available to fully meet the goals of the pilot project.



How can SWRR serve the public and policy makers including the national environmental indicator efforts

The morning concluded with a wide ranging discussion of how SWRR could support and contribute to the various initiatives we have heard about.

A participant asked about formalized mechanisms to assure development of NEST indicators for water availability, which is stated to include both quantity and quality. Are such mechanisms needed among all interested parties, or just the “main ones”, those being the lead federal agencies involved? What might be the framework or glue to keep the parties together will that be at OSTP and CEQ?

Rich Guldin was asked to what extent the exiting reports on water will play in the NEST process. He responded that dozens of representatives will feed into the process and that will include work already done. In the next 60 days NEST needs to get all the information it can.

There was a comment that the Department of Defense is under a tight time frame to come up with nationwide water availability data and so DOD could be a possible partner.

“Since existing monitoring tools have repeatedly been found to be incompatible”, a participant asked, “How can we develop monitoring methods and protocols? Rich suggested we begin with existing sets of data and where it is wanting, propose to make more compatible. This problem offers a way to provide leadership for change. We can evaluate what is the minimal number of earth observation sites needed to get adequate, comparable data. OSTP doesn’t want to give unlimited money to monitoring things that might be duplicative. We need to demonstrate that what we already have can’t be fixed then we might be able to implement change.

The group talked about how integration is hard to do for water, since so many federal and state agencies are involved with diverse responsibilities and interests. Rich thinks water may have been chosen to force testing among agencies and that we will need to confront some core issues identified in the 1970s.

National indicators have issues of scale. A participant asked Rich what he foresaw to get vision beyond the normal short term current program view of state and other agencies. Rich said we need to think through what an indicator is and what it does. We are not looking for a single number like the consumer price index. A meaningful indicator will need geospatial discretion, like Eric Evenson told us about finding indicator budgets at USGS for levels for hydrology. In forest context everyone wants to know national, regional, local nature of indicators as it moves through scale.

There was a comment that in Minnesota there has been a state water appropriation program for over 30 years. Recently there have been interagency conversations on ethanol production and water demand. The state pollution control agency is responsible for review and the state DNR is involved. The citizen board is unhappy because decisions are made in isolation without regard to the whole context. They are nervous as more ethanol plants will be developed in the future and they asked the interagency board to put it in context.

Participants discussed how the many stakeholders that participate in ACWI and its subgroups including SWRR might help. There are many people from difference agencies and organizations that know each other well and work together in these forums.

Rich Guldin made some summary comments on the NEST process:

- We are building in to the calendar briefings with folks in other agencies.
- We are trying to arrange a meeting for the second week in July to name and convene the Executive Management Team. Intent is to bring names to meeting.
- Early on had PINE = principle indicators of nations environment. NEST = is closer to CEQ’s language
- There are two opportunities for outside input. Not just feds. Transparent so will be available. Even though test case is on water availability we will quickly get to land cover, climate change impacts, etc.
- Near term task is to develop terms of reference.

After lunch on the second day of the meeting, the final session focused on action items emerging from our discussions over the course of the meeting. Participating in the action items meeting session were:

John Wells, Minnesota Environmental Quality Board;
Corrie Mauldin, Ecological Society America;
Sasha Gritsinin, Nature Conservancy,
Rhonda Kranz, Kranz Consulting;
Jawed Hameedi, NOAA; Dave Clark, RCAP;

Ben Perchik, National Wildlife Federation, Reston;
Jim Renthall, BLM;
Tim Smith, SWRR;
David Berry, SWRR;

The result of that summary is the following draft of SWRR Action Items

Draft of SWRR Action Items

Outreach

1. Develop a core SWRR message based on the existing mission and goals.
 - Identify the added value that SWRR brings to the water sustainability issue
 - Short and sweet
 - Consider what do we have to offer to the next administration
 - Clarify core message and defined purpose on the SWRR web site. Tim Smith will coordinate comments in the SWRR home page (<http://acwi.gov/swrr/>) suggestions from Rhonda Kranz, Harry Zhang, and David Berry. (Comments from others are welcome.)
2. Continue to support outreach about SWRR at other meetings.
 - * Dave Clark will talk about SWRR at the upcoming Rural Community Assistance Partnership meeting
3. Encourage the sharing of SWRR member expertise.
 - Continue the facilitation of presentations and papers
4. Continue and expand outreach to federal agencies and other user and potential partners.
5. Ben Perchik will send out a summary to the SWRR network about the Reston, VA, community water restoration project he is involved with, and ask interested members for advice and ideas so that the outcomes help to inform SWRR's purpose and activities. SWRR will not be directly involved in the project.

Communications through Data/ Dissemination

1. Form a communications subcommittee to explore options for web based forums for data and information sharing on water and water sustainability. The committee would review and distill information and proposals on different options and share their findings and recommendations with the steering committee and other SWRR members. Tim Smith volunteered to be part of the committee but not chair the committee. Suggested other members include Rick Swanson.
 - * Wiki: ask Brand Niemann to send a proposal; ask Donna Meyers, who offered to explore the potential of wiki, to send something
 - * SharePoint: ask Matt Ries at WEF to send a proposal; Sasha Gritsinin uses it at TNC and will send information.
2. Work with the Water Environment Federation to develop a clearinghouse for information on water sustainability activities (e.g. references and literature, which is doing what, meetings, perhaps on line help desk, etc.) WEF would provide the technology and staff. SWRR would provide intellectual input, resources from its broad network.
 - Ask Matt Ries and Paul Freedman to write a proposal
3. Paul and Tim discussed the possibility of putting SWRR meeting notes on the WEF site. Tim and Paul will write a short proposal.

Case Study/ Pilot Study(s)

1. Form a subcommittee to explore ideas for case studies or pilot studies. There were several suggestions for case/pilot studies from the small discussion groups at the meeting. The committee will request that those who

had proposed studies to provide some detail on their idea or type of case study they are thinking of (these include Sara Lehmann from EPA). The committee will collect these and share them with the steering committee and other SWRR members. Volunteers to work on this committee were Rhonda Kranz, Corrie Mauldin, and Sasha Gritsinin. Suggested potential members include John Dawes and Susan Holdsworth. Types of case studies or pilot studies include the following.

- Review and evaluate already existing case studies for lessons learned.
 - One possibility is to look at the process used by Baltimore County to incorporate the Forest Roundtable indicator framework. (Contact is Don Outen, Baltimore County, MD. Dept. of Environmental Protection & Resource Management)
 - A mapping exercise: Sasha Gritsinin will elaborate more on this idea and how it connects to other actions.
- Apply the SWRR framework over the top of an existing program
- Conduct an independent pilot study to test SWRR framework/ indicators
 - Corrie Mauldin offered to explore working with the Anacostia Watershed Society if wanted

SWRR Role in Other Activities

1. NEST Forum. The question was asked if we want to have a role in NEST activities, and if so, what. Several ideas were proposed. These ideas should be evaluated and communicated to SWRR network for discussion.

- Use SWRR indicators to collaborate with NEST process.
- Involvement with the national NEST forum.
 - John Wells suggested SWRR could co-sponsor the forums. Tim Smith proposed that ACWI might be the better group to be involved with the NEST forum and that SWRR could be involved as a subgroup. Tim said he would write up a paragraph proposing this and he has since sent a memo advocating that ACWI be the convener of the NEST forums.
 - * Jawed Hameedi (NOAA) and Jim Renthal will check with their respective organizations to see how they can support SWRR's and ACWI's involvement. Jawed suggests that SWRR take the lead among ACWI subgroups.
 - There is a consensus that the ACWI FACA status will be useful to the NEST effort and that ACWI and all its subgroup would be welcome to participate if they so choose.
- Heinz Center Report on the Nation's Ecosystems: continue participation and idea sharing
- EPA, NOAA, USFS: David Berry will continue networking with agencies
- * David Berry will resend to the SWRR network the request for input from Eric Evenson from USGS

Other Ideas for further Discussion

1. Continue to work on indicators to support water sustainability through use and management.
 - Explore how they fit in with NEST
 - Connect to the USGS program Water for America
 - Find ways to make the indicators relevant to states.
 - Explore the role of indicators in the overall SWRR mission. Are indicators one of the actions/products, or do they have an overarching role?