

Summary of Citizens Environmental Monitoring Program Meeting held December 4, 2000 at the Campbell Creek Science Center in Anchorage Alaska

INTRODUCTION

- Kent Patrick-Riley with ADEC discussed the need for the monitoring groups to work together with state and federal agencies and other organizations in their region that are collecting important watershed information and share data and information and discuss how to utilize the information being collected.

PRESENTATION

- Steve Frenzel gave a quick presentation on the National Water Quality Assessment Program. He discussed funding ending for the program in Alaska and also how USGS would look to work Cook Inlet Keeper on monitoring on the southern Kenai Peninsula.

CEMP PROGRAM REVIEW

A quick summary of each group was presented discussing how program was operating, what was being monitored, number of active sites and monitors.

- UAA-Environment and Natural Resources Institute
 - In 2000, ENRI continued technical-level biological monitoring on the Kenai Peninsula.
 - Developed educational-level methods based on the technical and volunteer level approaches.
 - Led a series of 3 workshops for the Native American Fish and Wildlife Society (NAFWS) to train 50 Alaskans from rural communities to conduct basic aquatic monitoring.
 - Led a teacher training for Anchorage School District teachers in May 2000.
 - Worked with ADFG to conduct baseline monitoring on Chester Creek in Anchorage.
 - Monitored surface water quality for the Municipality of Anchorage at 25 sites.
 - In 2001, ENRI is working to:
 - Develop an interactive citizen and educational website to input and view data.
 - Begin development of a statewide information clearinghouse to help support watershed-based efforts.
 - Continue and expand the workshops for the NAFWS.
 - Compile the 4 years of information from the Cook Inlet Ecoregion into a summary report and re-calibrate the index.

- Anchorage Waterways Council (Need Summary)
 - Monitoring 14 sites
 - Approximately 25 volunteer monitors

- Wasilla Soil and Water Conservation District
 - There are presently 10 active monitors monitoring 7 sites in the Little Susitna and Cottonwood Creek watersheds.
 - Monitors collect samples and monitor for all parameters listed in the January, 2000 edition of Wasilla SWCD's QAPP (based on Cook Inlet Keeper's QAPP, August 1998), although some monitors may not do bacteria.
 - The volunteer monitors are currently doing no biological monitoring. Some macroinvertebrate data has been collected by ENRI on selected sites in Mat-Su Borough over the past 3 years. District staff and volunteers provided assistance to ENRI. The Wasilla SWCD is coordinating a teacher training session with ENRI for Educator Level Bioassessment training for spring 2001.
 - Wasilla trains volunteer monitors during a fall and a spring training session.
 - Wasilla SWCD will be working with the Palmer SWCD and the Upper Susitna SWCD for coordinating training volunteers and collecting/managing data in other areas within the Mat-Su Borough.

- Kenai Watershed Forum (Need Summary)

- Mat-Su Borough Planning Department (Need Summary)

- Homer Soil and Water Conservation District/ Cook Inlet Keeper summary of Citizens Monitoring in Kachemak Bay.
 - There are presently 41 active monitors monitoring 44 sites in the Kachemak bay area.
 - Monitors collect samples and monitor for all parameters listed in the August, 1998 edition of Cook Inlet Keeper's QAPP, although some monitors may not do bacteria and nutrients.
 - The volunteer monitors are currently doing no biological monitoring. Some macro invertebrate data has been collected by ENRI on selected sites on the Lower Kenai Peninsula over the past 3 years. Keeper staff and volunteers provided assistance to ENRI.
 - Tom Wallace was recently trained to oversee the volunteer monitoring program in Kachemak Bay.
 - Cook Inlet Keeper trains monitors on a quarterly basis.

Kent Patrick-Riley of ADEC asked the partner groups if they were benefiting from the support services that Cook Inlet Keeper has been providing. The general feeling of the groups was that the training, technical support and Quality Assurance Documents were providing were valuable assets to their program and that having the Keeper providing the hubs services helped relieve necessary burdens from the smaller groups.

QUALITY MANAGEMENT PLAN

Reviewed current draft of QMP. Discussed purpose, roles and responsibilities, and timeline to finalize by the spring of 2001. Not everyone received all the drafts of the QMP and SOPs that were sent via email prior to meeting. Joel will send out documents again and a confirmation that all documents were received will be sent back.

QAPP REVIEW

It was discussed that the CEMP would have a list from which the partners could choose parameters to use in their monitoring program, and that any given parameter may have a list of methods based on the equipment.

Discussion of Current Methods

A discussion took place on each test currently being used in the CEMP. It was suggested to make a tips page discussing tips people have learned about making the Hanna meter work better as well as other tips for other tests. A tips page for each test will be drafted by compiling all tips for each test from each monitoring group. Below is a review of each method.

Temperature

- Thermometer is ok.
- The deployment of Hobo temperature data loggers was a method that was suggested to be come part of the CEMP.

pH

- Hanna Meter appears to be the most cost effective meter.
- Noted that expensive meters have just as many problems and are sent in regularly for repair.
- pH colorimetric method is reliable, but not as sensitive as meter. Provides a good check for Hanna meter.

ORP

- Test is not applicable for streams.
- It was decided that this test would remain among the list of parameters for the CEMP.

- Those programs currently collecting this data will continue to do so because:
 - They don't want to cause confusion with the monitors since the Hanna meter measures this parameter.
 - Some scientist may analyze and use data.

Conductivity

- For streams need to calibrate sample with calibration standard of expected range (50 -250 $\mu\text{S}/\text{cm}$).
- Hanna meter appears to be the most cost effective meter.
- Noted that expensive meters have just as many problems and need to be sent in for repair, as does the Hanna meter.

Dissolved Oxygen

- Winkler titration is a good and reliable test.
- It was pointed out by Steve Frenzel and others that calculating % saturation using a temperature and DO reading was inaccurate. A barometer reading at the time of sampling was also needed.

Salinity

- There were no problems found with is test.

Turbidity

JTU method

- This test is ok
- Need to emphasize tip of shaking reagent before each addition.

Secchi disk

- This test is ok.

Color

- This test is ok.

Nitrate-Nitrogen

- This test was determined be adequate as a screening test.
- Considered looking into Ion Specific Hand Held Meter
<http://www.hannainst.com/products/ion/93728.htm>

Orthophosphate

- This test was determined to be adequate for a screening test.
- LaMotte Kit is not user friendly
- Hach Kit more user friendly
- Considered looking into Ion Specific Hand Held Meter Hand Held Spec
<http://www.hannainst.com/products/ion/93713.htm#Spec>:

Coliscan

- Comment that test should be done by agencies
- Test should remain on CEMP list
- Tests can be monitors choice, since some monitors are adamant on doing the test.
- Consider changing frequency to more than once a month.
- Consider sites chosen for the test.

New Tests

- Flow...Film canister measured over distance. (Elaine Major)
- Staff gage using pin in stream. (Steve Frenzel)
- Semi-permeable membrane test for PAHs. Kenai Watershed Forum and USGS are testing this method and get back to the group once they learn the effectiveness of the test.
- Photo documentation SOP, left and right bank and up and down stream (Bob Ourso).
- Site Markers

Other Instruments/kits Used

- Quanta by Hydrolab (Need a written SOP)
- Chemetrics <http://www.chemetrics.com/vvr.html>
- Hand Held Spectrophotometers for Nitrate and Phosphorus (see above)

DATABASE

It was decided that a data base committee formed with the following members:

CEMP Database Committee	
Name	Organization
Harry Banks	Mat-Su Borough Planning Department
Dan Bogan	Anchorage Waterways Council
Joel Cooper	Cook Inlet Keeper
Laura Eldred	Wasilla Soil and water Conservation District

Mike Gracz	Cook Inlet Keeper
Jeff Hock	Alaska Department of Environmental Conservation
Russel Kunibe	Alaska Department of Environmental Conservation
Elaine Major	UAA-Environment and Natural Resources Institute
Bob Ourso	U. S. Geological Survey
Kent Patrick-Riley	Alaska Department of Environmental Conservation
Kelley Zeiner	CIIMMS

The following rough issues were identified during discussion:

- HDR consultant built CIK an ACCESS database. At time, incomplete. More capability desired for broader application.
- CIK database doesn't handle lakes or macroinvertebrates (water bugs). Specialized for existing CIK Quality Assurance Project Plan needs.
- Expanded stream chemistry with selective flexibility desired.
- CIK partners possess stand-alone copy of CIK database. Process for uploads to STORET for 319 grant compliance without making CIK responsible for managing/administering partners data. Making data web-accessible in user-friendly way. (Alternatives for data summarization.) Data entry over the web is less of a priority.

December 4, 2000 CEMP Meeting Contacts List

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Monday, December 18, 2000

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