

**Interagency Hydrology Committee of Alaska (IHCA)  
Draft Meeting Minutes (last revised March 16, 2003)  
Fairbanks, Alaska  
October 16-17, 2002**

Fall '02 - Fall '03 Officers  
Chair - Joe Klein, Alaska Department of Fish & Game  
Vice Chair - John Trawicki, U.S. Fish & Wildlife Service  
Secretary - Jon Zufelt, Cold Regions Research and Engineering Laboratory

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**October 16, 2002**

**1. OPEN MEETING 9:00 AM**

Agency Representative Identification and Introductions

**Sign-in/Address List distributed - (\* = Voting Representative):**

*Amy Ash-AK DEC	*Christy Miller-AK DCED
*Nancy Deschu-US NPS	Ed Plumb-US NWS
*Larry Hinzman-UAF	*Ann Puffer-USDA-Forest Service
*Mark Inghram-AK DNR	*Larry Rundquist-US NWS
*Joe Klein-AK F&G	Brian Taras-AK F&G
*Jon Kostohrys-US BLM	*Jon Zufelt-US CRREL
*Rick McClure-USDA/NRCS	
*David Meyer-USGS	<u>Guests</u>
*Mark Miles-AK DOT&PF	None

**2. SECRETARY'S REPORT**

**Review & Approval of Spring 2002 Minutes** - Unanimous approval was given to accept minutes with amendments to spellings, attendance list, and other minor corrections.

**Recent External IHCA Communications** – None

**Status of IHCA Member Database** – Work continues on getting the database updated. Secretary will do a mailing to all people on the current list and ask if they wish to remain and to update their personal information. No response will result in them being taken off the list. Larry currently has three lists: Primary members (those who usually come to the meeting and are the voting representatives), Associates (other people from member agencies but not the

voting representative, and Guests.

After considerable discussion, it was decided that the mailing list should be used for:

- IHCA business
- Announcements of water related meetings in Alaska from agency members
- Conference announcements from a member for a member's conference
- Non-member's requests should go through a member

It was decided to try using the Blind cc: when emailing which will prevent others from seeing the email addresses of people on the list. Of course this requires that all emails would go through a central person (Secretary).

**Status of IHCA Website** - <http://ak.water.usgs.gov/ihca>

The USGS (Dave Meyer) will continue to host the website. Routine updates and minor changes are ok (simple cut-and-paste of a few paragraphs) but major revisions will require some other arrangement. Dave also keeps an archive of the older material that has been replaced. For this time, Larry will provide the html document that was reviewed and modified at the meeting. The following decisions were made concerning the IHCA website:

- We will only post our most recent, approved minutes
- The agency membership list should contain a link to that agency (these all need to be updated)
- Officer's email addresses should be linked
- Secretary will update changes after each meeting
- We could put a draft agenda of the next meeting on the website
- We should have a bulleted list of past accomplishments
- We should have a list of past officers

### 3. ON-GOING PROJECTS AND COMMITTEE REPORTS

**Federal Legislation/Regulation Update** A handout of 50 bills from the 107<sup>th</sup> Congress was passed out. Searches were based on "Clean Water Act" and "Alaska Water". We need to put this website in the minutes..... (from John Trawicki??)

**State Legislation/Regulation Update** John Inghram handed out a list of bills and their status. Senate Bill 140 proposes to take the Federal jurisdiction, permitting, and licensing of waterpower development projects away from FERC and give it the State. House Bill 185 relates to fees for certain uses of state water and the accounting and appropriation of those fees. Copies of a Memorandum of Understanding between AK DNR and AK F&G dated June 2002 and updated October 2002 were handed out. This MOU addresses Instream Flow application processing, personnel, and funding between the two agencies.

**AWRA Activities** Not much was reported on at this time other than the projected date of the Annual Spring meeting to be in Wasilla on April 7-9, 2003. This may be in conflict with another conference being held in Anchorage at the same time (Emergency Managers Conference). Larry will contact Bill Rice (Chair of Alaska AWRA) to get more information.

The AWRA Northern section has started brown-bag seminars in Fairbanks and are looking for a coordinator for the Anchorage area. Southeast has no local chair at this time.

**Caribou-Poker Creek Research Watershed** We will have a special session on this topic tomorrow, look under item 6.

**TP-47 Project** TP-47 is the original precipitation frequency study that was done by the National Weather Bureau back in 1962. Nationally, these are now being redone on the basis of which regions have the money available to complete them. Larry reported that Ohio, Hawaii, Puerto Rico, Virgin Islands, and the semi-arid southwest US are currently being done. The only way to get Alaska done would be to have agencies kick in some additional funding. Since the NWS doesn't see any money on the table right now, the effort will have to wait. Mark Miles reported that the PA DOT is putting in funding to the Pennsylvania update at about \$70K/yr for three years.

#### 4. OLD BUSINESS

##### **Review of the Action Items from the Spring 2002 Meeting**

- Regarding letter to Governor – see below and carried forward.
- Regarding Interagency Flood Data Sheets – see below and new Action item.
- Regarding Bylaw changes – see report in Section 7 New Business.
- Regarding Floodplain Mapping – see below.
- Regarding Groundwater Data Collection Standards – no new progress, carried forward.
- Regarding email list updates and membership database – see above under Section 2 Secretary's Report.
- Regarding brief Agency Reports for minutes – some progress, carry forward.
- Regarding Statewide water data collection map – need more cooperation among sharing data, NGO's and agencies need to work together to identify where data is located.
- Regarding dates of Fall Meeting in Fairbanks – done.

**IHCA Letter of Governor Regarding FERC Gaging Requirements** This letter to Governor Knowles recommended that FERC require stream gauging prior to licensing a project. The original letter was sent to the Governor on Feb. 1, 2001 signed by Jeff Hock, IHCA Chair. Since there is questions of whether this will be moot or not (potential change of governor), we decided to table until the Spring Meeting

**Interagency Flood Data Sheets** Following recommendations at the last meeting, the Interagency Flood Data forms have been modified and distributed. AK DOT may further modify the form and get it out to their maintenance crews. Agencies should add a link from their web pages to this form (<http://aprfc.arh.noaa.gov/forms/formmenu.html>). A timely and

periodic reminder should be sent to those most likely to witness flood events. The form should be available and discussed at the ADES Emergency Conference.

**IHCA Membership/Participation by Non-Governmental Organizations** This item was discussed as part of the modifications to the Bylaws and is detailed in Section 7, New Business.

**Floodplain Mapping by State Agencies & FEMA Map Modernization Money** Christy Miller reported on the State Implementation Plan to coordinate and update Flood Insurance Study (FIS) Mapping. The goal is to reduce the average age from 12 to 6 years nationwide (Alaska's average age is 18 years). FEMA would like to produce digital products and map 50% of the unmapped communities. Alaska has 134 unmapped communities and would look first at communities that have experienced flooding in the last couple of years. For FY03, this would take \$3.9Million and we now await Congressional approval. DCED is looking for partners that could help to provide flood-mapping updates. Communities that have flooded will either be able to join the FIS Program or forego any future Federal disaster relief.

**Groundwater Data Collection Standards** Gary Prokosch and Mark Miles have discussed this topic but have nothing new to report. Several issues are still being discussed in how to standardize methods of data collection and reporting.

**Other Old Business** Slides were collected several years ago for a project to distribute images of "water" for use by agencies. These were returned along with a CD of the slides. Consider this as Volume 1 since many topics are still missing in terms of "water issues". All the images are TIF format and are 1.5 – 3 Megabytes each. An RFP for pass through money from EPA for 319 waters is available for both non-profit and for-profit grants. DEC is testing this process (and the decision tree method) with the 303(D) list. Federal Agencies have not been invited yet.

## 5. AGENCY REPORTS

### FEDERAL

#### **US Army Cold Regions Research and Engineering Laboratory** (Zufelt)

- Working with the Corps Hydrologic Engineering Center (HEC) to include snowmelt into the current version of HEC-HMS (Hydrologic Modeling System, the replacement of HEC-1). The first efforts will concentrate on using a degree-day model similar to that used in SSARR to model snowmelt. The snowmelt will be calculated by either sub-basins or elevation zones. This should be completed by the end of FY03. Future work will allow calculation of snowmelt on a gridded network and modification of infiltration rates due to ground freezing.
- Ice forces on pedestrian bridges over the Red River of the North in Grand Forks, ND which are being designed to withstand inundation.
- Study to investigate evaporation rates from large reservoirs in both summer and winter (large Missouri River Reservoirs) and comparison to evaporation pan data. Success based on how well the surface water temperature is known.

- Statistical analysis of peak accumulated freezing degree days (AFDD) for all 1<sup>st</sup> order stations in US (no coop stations). For colder stations, the distribution is nearly normal and adequately described by the mean and standard deviation. Warmer stations do not act as well.
- Study to estimate runoff into large Missouri River Reservoirs from snow depth and snow area maps. Past data shows that snow density follows good relationship with depth allowing use of satellite images for areal coverage and 1<sup>st</sup> order station data for depth.
- Study of microbial and photosynthetic activity under ice conditions (partial cover, smooth cover, jam , and breakup). Frazil may provide physical support for some communities.
- RADARSAT images to determine ice conditions on rivers (not impeded by clouds or darkness). Large rivers ok, smaller rivers less useful. 10-m resolution and 24 hour turn around for data.
- Study to look at effects of bioengineering on velocity profiles (roughness effects) and how these profiles change with the addition of an ice cover.
- Conducted a study to simulate the ice conditions on the Buckland River for designing a new bridge (pier spacings, elevations) and continue with design of water intake on one of the bridge piers.
- Continue to identify groundwater pollution sources on Fort Richardson, Fort Wainwright, and Fort Greely. Eagle River Flats cleanup has 1 or 2 more years.
- New effort: Ship Creek water quality on Fort Richardson and the effects of increased training activities. Includes the installation of two new gages. Hopefully to include hydrologic and hydraulic models.

**US Army Corps of Engineers – Alaska District** (from Mierzejewski)

List of gages that the Corps funds:

- Kuskokwim River at Crooked Creek, Lisky's Crossing, and Aniak
- Spruce Creek at Seward
- Kenai River at Soldotna
- Yukon River at Steven's Village
- Tanana River at Fairbanks and Nenana
- Gulkana River at Sourdough
- Chena River at Fairbanks, Moose Creek Dam, and at Two Rivers
- Little Chena River at Fairbanks

**US Forest Service** (Puffer)

*CHUGACH NF*

- Cooper Creek FERC instream flow modeling study
- Resurrection Creek – Hope: Evaluation study for channel rebuilding in a mining area.

*TONGASS NF*

- Yakutat – Hubbard Glacier Study to determine where the lake will outflow if it gets high enough. LIDAR of the moraine, floodplain cross sections to update the 1988 report, and a landscape assessment to look at foreland dynamics, geomorphology, hydrology, etc.
- Klawock Watershed condition report was completed and next will be the Management Plan

*REGIONAL*

- NEPA – integrated ecological perspective
- Budget – 2003 is down 8% on continuing resolution
- Personnel – 6 hydrologists, 2 soil scientists, and 2 ecologists
- Kake – NRCS Watershed condition assessment

**National Resources Conservation Service** (McClure)

*WATERSHED PROJECTS*

- Delta Clearwater River Watershed Project
- Dillingham Emergency Watershed Protection
- Rika's Roadhouse
- City of Seward
- City of McCarthy

*WATERSHED PLANNING ACTIVITIES*

- Nightmute Floodplain Study
- Harding Lake
- Shishmareff
- Klukwan

*SNOW SURVEY ACTIVITIES*

- Three new SNOTEL sites installed this past field season
- Thirteen upgraded to include Solar Radiation
- New Snow Courses installed - 5
- New SCAN(Soil, Climate Analysis) site installed in Aniak

**National Weather Service** (Rundquist)

*Operations/Flooding*

- Breakup flooding occurred in Lime Village, McGrath, Red Devil, Sleetmute, Aniak, and Kwethluk in the Kuskokwim basin and at Fairbanks, Chena Hot Springs Road, Steese Highway, near Salcha, and near Harding Lake in the Tanana basin.
- In July, the collapse of a lateral moraine caused record flooding on West Creek and Taiya River near Skagway.

- August flooding in the Kuparuk, Sagavanirktok, Chatanika, Chena, Goodpaster, and Salcha River basins.
- The Hubbard Glacier pinched off the outlet of Russell Fjord this summer. Water levels in the lake behind the glacier dam rose about 61 feet before eroding through moraine deposits and releasing a huge volume of water in a day.

*River/Rain Gaging network*

- There was no expansion of our river observer gage network this summer.
- A DCP with satellite telemetry was purchased for installation on the existing Yukon River stream gage at Dawson.
- We expanded the rain gage network by adding tipping bucket rain gages at one NWS site, 14 USGS sites, and 10 new DOTPF Phase II RWIS sites.

*Projects*

- The airborne gamma snow water equivalent data collection program for Alaska collected background radiation and associated soil moisture data on 107 flight lines. The status of funding for airborne gamma snow water equivalent data collection next spring is currently uncertain.

**National Marine Fisheries Service**

No report.

**Bureau of Indian Affairs** (Kahklen)

No report.

**US Bureau of Land Management** (Kostohrys)

- Travel budget cut by 10% but field operations take priority.
- Approval process for Science Cost Share (CCS) has changed resulting in limited new starts and problems for our non-federal cooperators.
- Continuing Resolution funding means that funds should be available for Unalakleet stream gage, Anvik River instream flow study, and White Mountains water resources study.
- The NPRA Research and monitoring Team has approved 16 projects for study on the North Slope.
- Gaging sites for FY02-03 include the Unalakleet River, Anvik River, Gulkana River, Delta River/Tangle Lakes, Clear Creek/Hog River, Hoosier Creek, Fish/Judy/Ublutuoch Creeks, Ikpikuk River, Coleville River, Nome/Beaver Creeks, Fortymile River, Jim River, and Kanuti River.
- The Alaska Watershed and Stream Hydrography Enhanced Data Sets (AWSHED) project continues with all 133 Alaska CUS in one of the five stages of NHD development. See the website at <http://agdc.usgs.gov/hydro>

### **US Fish and Wildlife Service** (Trawicki)

Water resources investigations currently have 30 stream gages in operation.

- Innoko Refuge – 9 gages being pulled after 5+ years of operation.
- Becharof Refuge – Egegik River gage will continue.
- Togiak Refuge – gaging at 20 sites initiated in October, 1998.
- Kodiak Refuge – 9 gages installed in October 2000 but are temporarily discontinued due to insufficient funding.

The Water Resources Web Page is up and running at <http://www.r7.fws.gov> contact Alan Peck to add links at [alan\\_peck@fws.gov](mailto:alan_peck@fws.gov)

Starting a baseline water quality monitoring program with samples taken at stream gaging stations during normal site visits.

Instream water rights applications are being filed for 10 river segments on the Yukon Flats Refuge.

### **US Geological Survey** (Meyer)

#### *Budget*

- FY2003 – Continuing resolutions limit funding and activities to levels in the 2002 budget.
- FY2004 – The administration has allowed the bureau to begin negotiations for the 2004 budget at the 2002 enacted level.

#### *Significant Accomplishments*

- Yukon River NASQAN – Data were collected systematically at 5 sites in the Yukon River Basin and at numerous sites during two down river “cruises” in June and August.
- National Water Quality Assessment Program of Cook Inlet Basin – Five publications
- Hubbard Glacier – Monitored closure and outbreak of Russell Lake and are preparing a journal article and Fact Sheet related to those findings.
- USGS/NPS Clean Water Action Program – Currently studies are underway at Cape Krusenstern, Indian River (Sitka), John River (Gates of the Arctic), WRIR was published on the Tlikakila River (Lake Clark), and a report on Camp and Costello Creeks (Denali) is in review.
- Flood-frequency and high- and low-flow duration studies have been completed, and the reports are in review. Flood frequency is an update of Jones and Fahl (1994). High- and low-flow duration studies will provide equations to predict various duration flows from 2 percent exceedance to 98 percent exceedance and selected n-day low flows. High- and low-flow equations are needed for determining fish passage.
- Noyes Slough – Work continued with funding directed to USGS by Senator Stevens. Detailed aquatic habitat mapping was done in 2002.
- Bridge Scour – Hydraulic modeling and scour analysis has been done at about 60 sites and real-time monitoring instrumentation is in operation at 5 sites.

#### *Hydrologic Data Bases*

National Water Information System (NWIS) – NWIS Web is now accessible and provides real time and historical streamflow, water level, and water quality data over the internet.

### *Stream Gages*

- Several long-term stream gages were reactivated in 2002: Yukon River at Pilot Station, Nuyakuk River near Dillingham, and Susitna River at Gold Creek. Many of the gages operated by NAWQA were dropped: South Fork Campbell Creek, Chester Creek, and Deshka River. Colville River at Umiat was install last summer. Colville, Nuyakuk, and Susitna are funded by the National Streamflow Information Program <http://water.usgs.gov/nsip/index.html> Yukon is funded by NASQAN: <http://water.usgs.gov/nasqan/>
- FY2002 123 Daily, including seasonal; 52 crest-stage; 7 miscellaneous gages. 71 gages have some form of telemetry, most of which is available on the web <http://ak.waterdata.usgs.gov/nwis/current?type=flow>

### *Facilities*

The Fairbanks office has moved once again. New facilities at 3400 Shell Street house Data and Project personnel as well as shop facilities.

### *Personnel*

- Gordon Nelson retired July 1.
- Steve Frenzel became Alaska Science Center, Water Resources Office Chief, effective October 6.
- Bob Burrows accepted a position as Surface Water Specialist with the Nevada District and moved in September.
- Matt Schellekens is acting Fairbanks Field Office Chief.

### **National Park Service** (Deschu)

The Park Vital Signs Monitoring Program is a new effort in the NPS. Many parks (including those in Alaska) have never been properly surveyed. Alaska will have four networks: air quality, animals (excluding invertebrates), soil mapping, and water quality (which is separately funded). Historic databases will be documented and then monitoring sites will be selected. Each region (Denali, Yukon-Charley, and Wrangell-St. Elias) makes their own decision on what is important. Currently, one person is being contracted from UA to do the animal inventories. The water issues will come later.

### **US EPA**

A copy of the electronic Watershed Forum newsletter was handed out. To get your news into the newsletter, send an email to the listserve moderator at [Forum.Watershed@EPA.gov](mailto:Forum.Watershed@EPA.gov) To subscribe to the listserve send an email to [listserv@unixmail.rtpnc.epa.gov](mailto:listserv@unixmail.rtpnc.epa.gov) and in the body of the message put: WATERSHEDFORUM FirstName LastName with only one space between each word.

## STATE AGENCIES

### **AK Department of Community and Economic Development** (Miller)

#### *Community Profile Mapping*

- New Community Profile Mapping projects for Interior Rivers communities (Aniak, Anvik, Chuathbaluk, Crooked Creek, Georgetown, Grayling, Holy Cross, Lime Village, Lower Kalskag, Napamiute, Red Devil, Russian Mission, Shageluk, Sleetmute, Stony River and Upper Kalskag) are in final draft form.
- Lake and Peninsula Borough and Aleutians East Borough community profile mapping projects are underway.
- DCED is entering partnership with Denali Commission and DOT/PF to begin production of additional Community Profile Maps with the 25 communities in the lower Kuskokwim Delta (REAA 31) targeted for next year. Denali Commission calling this Initiative for Accelerated Infrastructure Development (IAID) which is partnering for community mapping. Hope to update all community maps within 5 years. Checkout more detailed description at:  
<http://www.dced.state.ak.us/cbd/grt/iaid/iaidhome.htm>

#### *National Flood Insurance Program*

Prepared a State Implementation Plan for updating all of Alaska's flood hazard maps and set priorities for mapping the highest priority communities for FEMA.

#### *Flood Mitigation Assistance Program*

FMA provides funding to assist the State and communities in implementing measures to reduce or eliminate the long-term risk of flood (or erosion) damage to buildings insurable under the National Flood Insurance Program.

- Fairbanks North Star Borough and City of Nome Flood Mitigation Plans completed 9/30/2002.
- FEMA pass through grants currently underway include.
- Fairbanks North Star Borough. One home that is a 'Repetitive Loss' structure near the Chena River (Steamboat Landing area) targeted for elevation; two homes in the groundwater protection zoned area below the Moose Creek Dam.
- Shishmaref. Hope to fund relocation and elevation of one home.

#### *Community Flooding &/or Erosion Problems and Multi-Agency Coordination Upcoming Meetings*

- McGrath City Council adopted ordinance to enter National Flood Insurance Program 10/15/02.
- Shishmaref Erosion and Relocation Committee 10/23/02.
- Unalakleet erosion and flooding meeting 10/28.
- Participated on the State's Preliminary Damage Assessment team surveying the Fairbanks Flooding damage in late May and provided assistance to ADES and FEMA throughout the recovery efforts primarily with information on flood insurance purchase requirements as they relate to disaster assistance.
- Participated in the development of the State Hazard Mitigation Plan. Plan is available on Division of Emergency Services website: <http://www.ak-prepared.com/plans/mitigation/mitigationplan.htm>

- DCED Floodplain Management Program website:  
<http://www.dced.state.ak.us/cbd/nfip/nfip.htm>

**AK Department of Environmental Conservation** (Ash)

Handouts were provided that described specific recent and ongoing projects under the Alaska Hydrologic Survey, a list of ACWA Category 5 rankings for a number of waterbodies, and an agency report with these highlights:

- A survey of state and interstate water quality monitoring strategies can be found at:  
<http://www.state.ak.us/dec/dawq/datamonitor/documents/wqmonitoringstrategies.htm>
- A US EPA project to integrate DEC's water quality STORET system into the Pacific Northwest Water Quality Central Data Exchange (CDX). A preliminary website is found at [http://www.ecy.wa.gov/pnwdx/pnwdx\\_main.htm](http://www.ecy.wa.gov/pnwdx/pnwdx_main.htm)
- The Alaska Clean Water Actions (ACWA) process that identifies the highest waterbody priorities and directs resources toward them. The decision tree process is currently being tested.
- The finalization of the Alaska Draft 2002 Integrated Water Quality Monitoring and Assessment Report.
- Proposed revisions to the Water Quality Standards can be found at:  
<http://www.state.ak.us/dec/dawq/wqs/index.htm>
- A list of ACWA Non-point Source Grants (\$1 million worth)

**AK Department of Fish & Game** (Klien)

- Budget slightly reduced for FY03 and unclear future with possible shifts in priorities and programs. Effort to pursue making technical series pay scales commensurate with other positions in state government failed and was abandoned.
- ADF&G and DNR signed 2 MOU's to address adjudication of backlogged and future reservations of instream flow. Partially funding of an interdepartmental position to assist in clearing backlog.
- Current hydrologic projects include water rights review, habitat restoration, water development review, instream flow data analyses, and cooperative projects with other agencies.
- 30 hydroelectric projects are under review for fish and wildlife impacts.
- SB 140 enables the state to follow through and assume jurisdiction over hydroelectric projects of 5 MW and smaller.
- FERC is seeking public and agency comments on proposed Hydroelectric License Regulation changes to allow FERC staff to begin NEPA scoping at the earliest stages of the licensing process.
- Cooperative stream gaging programs with the USGS on Peterson Creek and Situk River.
- Participated in the Fish Passage Workshop in summer 2002 sponsored by FWS.
- Governor Knowles signed ACWA Administrative Order No. 200, a policy to strengthen state natural resource agency efforts to protect, assess, and restore Alaska's waters and aquatic habitat.

**AK Department of Military and Veterans Affairs – Division of Emergency Services**

No report. They will put on a spring conference and this year's focus is flooding. The Breakup Outlook is usually provided at the conclusion of the spring conference.

**AK Department of Natural Resources** (Inghram)

Two handouts included a list of current projects and an example of the Well Log Tracking System (WELTS). WELTS is a program to be used by water well drillers and currently contains 26,000 data points some of which go back into the 60's. WELTS online was funded through a 319 grant and contains information on the drillers, locations. Dates, and often scans of the drilling logs.

Also involved in water recharge studies on the North Slope as an interested observer. This study looks at the removal of water from ponds from building ice roads.

**AK Department of Transportation & Public Facilities** (Miles)

- Culvert Assessment Protocol – Fieldwork complete, office analysis pending.
- Stream Gaging Program (coop with USGS) – 50 crest gages and 15 continuous gages, new peak flow regression analysis in final review, low flow statistics in final review.
- Bridge Scour investigations (coop with USGS) on Salcha River, North Fork Chena River, Knik River at Old Glenn Highway, Chistochina River, Tanana River at Nenana, and Nenana River at Windy.
- Bridge Scour Monitoring Program – Installed in FY 01-02: Eagle River (Juneau), Kenai River (Soldotna), Kasilof River, Tok River, Slana River, Slana Slough, and Mabel Creek. Planned for FY03: Nenana River at Rex, Tanana River at Tok, Nenana River at Park Boundary, Chatanika River at Elliot Highway, and Lowe River at Lower Crossing.
- Channel Roughness for Steep Alaskan Streams – recommended continuing funding for 2 additional years.
- Culvert and Fish Behavior Pooled Fund Study – pending with States of Washington, Idaho, Montana, Oregon, California, others.
- Ice Forces on Riprap (UAF Study) – Final report done.
- Evaluation of Bioengineered Streambank Protection in Alaska (Hydraulic Mapping and Modeling) – data collected, analysis underway.
- Inlet Loss Coefficients for Buried Invert Culverts – Turner Fairbanks Hydraulics Laboratory.
- Bed Material Stability in Buried Invert Culverts - Turner Fairbanks Hydraulics Laboratory.
- Recent Hydrology and Hydraulic Studies – 20 rivers and creeks for frequency and bridge designs. Bridge designs use HEC-RAS upstream and downstream a ways with log-Pearson III or regression equation for discharge.

**AK Division of Governmental Coordination**

No report.

**UAA/ENRI**

No Report.

**UAF** (Hinzman)

- Two larger projects are winding down. Hydrologic monitoring of several creeks (on the trail and road system) on the Seward Peninsula. The hydrology monitoring equipment pulled but the met stations may stay. All are telemetry based and data is available on the web. Kuparuk River study (since 1984) at 19 stations with 3 different sized basins will end in June.
- Climate modeling study on the MacKenzie Basin. Long transects with glacier and aufeis sampling. Study part of comparison of 17 pan-arctic research watersheds. 45-50 met stations are now used, some GOES, Seward Peninsula ones are on radio network, Sag River on satellite band with all data going to IP address at community college.
- Monitoring groundwater levels on Fort Wainwright with met station data as well since 1992. All data available on the web.
- New Project looking at impacts of pumping water from ponds for ice road construction. Partners are DNR, BP, and Phillips (Conoco-Phillips). Instrumentation placed in the ponds in December looking at turbidity, DO, pressure transducer for depth, conductivity, and effects on bottom sediments. Samples are taken before and after pumping for chemical analysis. There are 6 ponds, 3 control ponds and 3 pumping ponds. This is a three year project funded by the DOE.

**6. SPECIAL SESSION – Caribou-Poker Creek Research Watershed**

**Historical Background** – Larry Hinzman handed out a short document that summarized information on the Caribou-Poker Creek Research Watershed (CPCRW). The CPCRW is a unique facility about 35 miles north of Fairbanks, Alaska, established in 1969 when State and Federal Agencies decided they needed a basic understanding of Alaskan hydrology following the 1967 flood in Fairbanks. Data-collection programs have been in place for more than 30 years, and many multi-disciplinary research programs have added to the overall understanding of watershed-scale processes in discontinuous permafrost. CPCRW is the only watershed in interior Alaska that is relatively pristine, totally accessible through a series of well-maintained trails adjoining the highway system and zoned for research by the State of Alaska Land Use Plan.

**Discussion of Linkage between CPCRW and IHCA** – The CPCRW was originally used to investigate the effects of disturbances on hydrology. The Management Plan says that if a disturbance (of a certain magnitude) is planned, then it must be presented to the IHCA board for approval. The Management of the CPCRW is by a committee of 5 people: Charles Collins of CRREL, Mike Lilly, Marilyn Walker of the USFS, Terry Chapin of UAF and Larry Hinzman of UAF. Larry does day-to-day activities and management while other decisions go to the committee. UAF has a 50-year lease on some of the land from DNR and the rest of the land is State-owned and currently zoned for research (total area of about 40 square miles). At present, Article VII, Section 2b states:

b. Caribou-Poker Creek Research Watershed (CPCRW) Subcommittee is composed of three people appointed by the IHCA Chair and announced at the annual fall meeting. At least one appointee must be an employee of the University of Alaska Fairbanks (UAF) and be actively involved in research activities in CPCRW. At least one appointee must be an employee of an IHCA member agency other than UAF. The Subcommittee will meet as needed to review and comment on activities and plans for CPCRW.

**By-Law Revisions re CPCRW** – After discussion concerning the need for the above mentioned by-law, a Motion was made by Ann Puffer and second by Larry Rundquist that the Standing Committee on CPCRW as in Article VII, Section 2b be struck from the By-Laws as long as any needs can be addressed by someone from the CPCRW Committee coming to the Executive Committee. The Motion passed. IHCA will maintain some form of oversight as required by CPCRW. The Management Plan of the CPCRW should delete the reference to the Standing Committee. Larry Hinzman was urged to continue to attend and make presentations at the IHCA meetings.

**Current CPCRW Activities** – Two new projects, funded by the National Science Foundation, will include CPCRW as part of the study area. “Detection and attribution of changes in the hydrologic regimes of the MacKenzie, Kuparuk, and Lena River Basins” is a five-year designed to compare linkages and feedbacks among hydrologic and atmospheric regimes in watersheds in Canada, Alaska, and Siberia (Hinzman is the PI). CPCRW will be the southern end of the Alaskan transect. Doug Kane is leading a project to conduct a water balance inter-comparison among research watersheds operated throughout the circumpolar north. The number of watersheds where snowpack, snowmelt, runoff, rainfall, and soil moisture dynamics are actually measured is very few.

A list of publications for the CPCRW is available through:

<http://www.lter.uaf.edu/Publications.htm>

**Mining Pressures** – We discussed the current mining pressures on the land surrounding the CPCRW. Fort Knox and True North Mines are within 10 miles. It was felt that it would be a good idea to try and get the State land portion closed to mineral entry. A letter from IHCA should state the importance of the research watershed and its unique qualities as a reference watershed. Larry Hinzman said that he would let IHCA know when the letter would be appropriate, possibly one to DNR and another to the miners.

## 7. NEW BUSINESS

**Vote on By-Law Revisions** – The By-Law revisions as presented in the Spring 2002 Minutes from our Soldotna Meeting were discussed. Jon Zufelt motioned and Mark Miles second to approve the By-Law revisions as read. Motion passed. The newly revised By-Laws will be posted on the IHCA website.

**National Environmental Methods Index** (Hock) – Amy Ash presented the National Environmental Methods Index (NEMI) for Jeff Hock. NEMI is a project of the National

Methods and Data Comparability Board, a partnership of water-quality experts from Federal and State agencies, Tribes, municipalities, industry, and private organizations. Information on the Board can be found at <http://wi.water.usgs.gov/pmethods>  
NEMI is a clearinghouse of environmental monitoring methods. The NEMI database contains method summaries of lab and field protocols for regulatory and non-regulatory water quality analyses. It is found at <http://www.nemi.gov>  
Everyone should look over the website and be prepared to discuss this at the Spring 2003 IHCA meeting.

**Wildland Hydrology Course June 16-20, 2003** (Puffer) – Ann discussed the planned Wildland Hydrology Course (Rosgen Method) to be held in Anchorage at the above dates. There will be a maximum of 40 participants so she would like agencies to provide her with names of people who want to go but to prioritize the lists that are sent to her. She will compile the entire lists and send to Wildland Hydrology. Prior to the course, she will need some suggestions for different channel types to visit and bankfull data for several places/streams that might be visited (from USGS).

**Date and Location of Spring 2003 Meeting** – It was decided to follow the AWRA Spring meeting which is being held in Wasilla on April 14-16, 2003. After discussions with AWRA (Bill Rice) and IHCA members, it was decided to hold the Spring meeting on April 17-18 at the ARLIS in Anchorage.

**Other New Business** – Since it was officially Juneau's turn to host a meeting in Spring 2003, we decided to defer to Juneau (right of first refusal) for the Fall 2003 IHCA meeting.

**8. GUEST REPORTS** – No Guest reports.

**9. ANNOUNCEMENTS** – No Announcements.

**10. MEETING ADJOURNMENT** – The meeting was adjourned and we went on a field trip to the CRREL Permafrost Research Tunnel and the Caribou-Poker Creek Research Watershed.