INTERAGENCY HYDROLOGY COMMITTEE FOR ALASKA
Spring 2012 Meeting Agenda
March 8th, 2012
AKDOT&PF 3132 Channel Drive, Juneau
1-888-285-4585 (code: 962828)

Thursday (March 8th) 1:00 p.m. – 5:00 p.m.

Opening of Meeting

Agency Representative Identification & Introductions
Additions/Changes to Meeting Agenda

Secretaries Report

Fall 2011 Meeting Minutes

On-going Project/Committee Reports

Legislative Updates (Trawicki/Prokosch)

Old Business

New Business

- AWRA Identified Hydrologic Data Gaps and NHD discussion (Estes/Johnson)

Announcements

- 2012 Western Snow Conference in Anchorage May 21-24
- Fall 2012 Meeting Schedule

Agency Reports

Meeting Adjournment

Agency Reports (~ 5-10 minutes per agency.) Highlight important issues and projects in your agency; prepare a summary prior to meeting and bring a minimum of 20 copies for distribution. Send an electronic copy to the Secretary before the meeting.

FEDERAL

U.S. Army Cold Regions Research and Engineering Laboratory (John Zufelt)
U.S. Army Corps of Engineers (Crane Johnson)
U.S.D.A. Forest Service (John Lane)
U.S.D.A. Natural Resources Conservation Service (Rick McClure)
U.S.D.C. National Weather Service (Scott Lindsey)
U.S.D.C. National Marine Fisheries Service (Eric Rothwell)
U.S.D.I. Bureau of Indian Affairs (Keith Kahklen)
U.S.D.I. Bureau of Land Management
U.S.D.I. Fish & Wildlife Service (John Trawicki)
U.S.D.I. Geological Survey (Steve Frenzel)
U.S.D.I. National Park Service (Paul Burger)
U.S. Environmental Protection Agency

STATE

Department of Commerce, Community & Economic Development (Taunnie Boothby)
Department of Environmental Conservation (Charley Palmer)
Department of Fish & Game (Joe Klein)
Department of Military and Veterans Affairs – Division of Homeland Security and Emergency Management or Alaska Army National Guard
Department of Natural Resources (Gary Prokosh)
Department of Transportation & Public Facilities (Mike Knapp)

UNIVERSITY

UAA/ENRI (John Zufelt)
UAF (Jessica Cherry)

INTERAGENCY HYDROLOGY COMMITTEE FOR ALASKA
Spring 2012 Meeting Minutes
March 8th, 2012
AKDOT&PF 3132 Channel Drive, Juneau

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Meeting Minutes:

- Ted Deats provided updates on current State Legislation bills related to Water Resources, these included:

  HJR 23 - HYDROELECTRIC POWER; RENEWABLE ENERGY

  HJR 20 - ROADLESS RULE & CHUGACH AND TONGASS HYDRO

  SB 42 - POWER PROJECT; ALASKA ENERGY AUTHORITY

  Read the full bills here: http://w3.legis.state.ak.us/search/search.php

- No Federal Legislative update

- General Discussion on the AWRA meeting and data gaps identified during the March 5th – 7th meeting. During AWRA 'consistent messaging' was identified as important for both AWRA and IHCA on hydrology related issues within the State. Christopher Estes suggested that the current participants in IHCA should review older actions and letters written.

- Task: Bill Rice offered to work with John Trawicki on the scanning of historical IHCA documents at the Alaska Resources Library & Information System. Anna (President of AWRA) offered to support the scanning effort by possibly funding a graduate student to scan IHCA documents. Terry Schwarz agreed to follow up with Gary Prokosh on the history of the Alaska Resources Council and Water Research Board.
- Erik Johnson provided an overview of NHD stewardship in Southeast Alaska. There was a general discussion about the advantages of the system established in Southeast Alaska and the coordination with the Alaska Anadromous Waters Catalogue. Erik mentioned that the USGS is currently requesting feedback on the new topographic maps for Alaska. The link for the maps and comment form is listed below:

  http://nationalmap.gov/ustopo/alaska

- The Fall 2012 IHCA meeting will be held in Anchorage at the USGS conference room, dates TBD.

- Announcements of Other Upcoming Water Resource Meetings in Alaska:

  May 21-24, 2012 - Western Snow Conference 80th Annual Meeting in Anchorage, Alaska

  25–29 June 2012 - International Symposium on Glaciers and Ice Sheets in a Warming Climate - Fairbanks

  October 22-26th 2012 American Fisheries Society Alaska Chapter – Kodiak

  October 29- November 1, 2012 - Alaska Rural Water Association annual conference – Anchorage

  Spring 2013 Alaska Water Resources Association

- Agency Reports (see attached)

USGS Alaska Science Center
Water Resources Office
2012 Spring Report

Streamgages

One source of USGS funding for streamgages has remained stable, but matching funds are decreasing. The gage at Porcupine River 9.5 mi above mouth near Fort Yukon, AK (15389100) will be dropped this year. We are still seeking funds for two gages on Beaver Creek in the Yukon Flats. New gages have been added for the Susitna-Watana hydropower study.

On-going projects

Monitoring streambed scour at Alaska bridges: In cooperation with the Alaska Department of Transportation and Public Facilities (ADOT&PF), the USGS monitors streambed scour in real time at 19 bridges in Alaska. This program with ADOT&PF was recently renewed for 5 years. Additional work is being done to evaluate the bridge 339 (Copper River Highway) replacement.

Understanding groundwater availability and movement in the Matanuska-Susitna Valley: Final work on the groundwater flow model and report is ongoing. Some monitoring will continue this summer. Three workshops on modeling will be presented this year.

Glaciers and climate in Alaska: The USGS Benchmark Glacier Monitoring Program continued collection of mass balance data at Gulkana and Wolverine Glaciers in 2011. Work at these glaciers allows additional research to be conducted with academic colleagues. Work also is being done at Columbia and Eklutna Glaciers and these studies are resulting in journal articles.

StreamStats: StreamStats (http://water.usgs.gov/osw/streamstats/) is a web-based application that provides users with streamflow statistics and basin characteristics through a GIS. The application uses existing regression equations for determining streamflow statistics at ungaged sites. Our project, in conjunction with the Alaska Department of Natural Resources, is a pilot effort on the Cook Inlet Basin, rather than a statewide effort. Additional funding has recently become available and will be used to match the WBD to USGS gaging station watershed delineations for the entire state.

Synthesizing hydrographs and streamflow statistics for the Susitna River: The Alaska Energy Authority is pursuing a hydroelectric project on the Susitna River and has expressed the need to understand historical flow conditions in the vicinity of the proposed project. To address this concern the USGS will estimate missing daily values and long-term summary streamflow statistics for streamgages in the Susitna River Basin with incomplete record over the period 1949 to 2010. Regression equations derived from overlapping streamflow records with index streamgages will be used to estimate daily hydrographs and summary statistics for continuous-record streamgages in the Susitna River Basin over this period. This project will be completed early in 2012.

Cooperative Water Program

The Cooperative Water Program (http://water.usgs.gov/coop/) is the largest single program within the USGS. Nationally, cooperators provide about 2.5 dollars for every dollar of Cooperative Water Program money. Beginning in federal fiscal year 2013 the program's funding model will be changed significantly. The current model distributes nearly all the funds to water science centers for matching with cooperators. After an agreement has been signed, the program takes back what is called the administrative matching funds or about 27 percent of the USGS funding to support the technical offices at headquarters. The new funding model will keep the administrative

matching funds at headquarters rather than initially distributing them to the centers. As a consequence, there will be fewer (~$350,000) USGS dollars available for matching with cooperators in Alaska. The President's budget request for FY2013 is for a programmatic decrease as well.

The Cooperative Water Program is beginning a series of webinars geared to transfer USGS science, tools, and other innovation for decision making. The first webinar is on groundwater/surface water relations - "*Managing Water Above and Below*" - scheduled for **March 21st from 1-3 ET.** This Webinar will feature scientific findings and innovative modeling (including GSFLOW modeling) in Sonoma County, California and in the Yakima River Basin, Washington. Applications of the USGS science for decision making will be highlighted by Cooperators in Sonoma County, the Washington Department of Ecology, and Yakama Nation. **Reserve your Webinar seat now at: https://www3.gotomeeting.com/register/507285990**
After registering you will receive a confirmation email, information about joining the Webinar, and teleconferencing details.

USDA Forest Service
Alaska Region
Agency Report to IHCA
Spring Meeting March 8, 2012

John R. Lane, Watershed and Air Program Leader, Regional Office, Juneau, AK, 907-586-8978, jrlane@fs.fed.us

Steve Paustian, Tongass National Forest Hydrologist, Sitka, AK, 907-747-4240, spaustian@fs.fed.us

- National Collaborative/Integrated Aquatic Stewardship Award - The Tongass National Forest's Craig Ranger District and The Nature Conservancy are recognized for the Harris River Restoration Program on The Prince of Wales Island to recover aquatic and terrestrial ecosystems altered by an extensive management legacy. The Nature Conservancy (TNC) identified the Harris River for its biodiversity and salmon production potential and prioritized the river for restoration under a Conservation Action Plan for Prince of Wales in 2007. TNC also helped raise extensive funding to implement a range of restoration efforts. An integrated, watershed approach was critical to restoring river processes, salmon spawning, and rearing habitat on 20 miles of mainstem river and tributary habitat, and improving wildlife habitat on 500 acres of upland and riparian habitat. The collaborative effort provided over $2.3 million in local contracts for restoration work and benefits commercial, recreational and subsistence fishing in the region.
- The Forest Service has released the first national Watershed Condition Framework and the accompanying Watershed Condition Classification Technical Guide. The Watershed Condition Framework is a comprehensive approach for: 1) evaluating the condition of watersheds 2) strategically implementing integrated restoration and 3) tracking and monitoring outcome based program accomplishments. It improves the way the FS approaches watershed restoration by targeting the implementation of integrated suites of activities in focus watersheds. The Watershed Condition Framework establishes a new consistent, comparable, and credible process for improving the health of watersheds on national forests and grasslands. The technical guide will ensure consistent application of the framework. Initial results can be found here: http://www.fs.fed.us/publications/watershed/. Information on this site includes watershed condition classification, priority watershed, and Watershed Restoration Action Plan.
- USFS Stream Gauges – Due to USFS budget reductions and rising operating costs, we are struggling to maintain funding for the current number of USGS stream gauges.
- Bill MacFarlane, Chugach National Forest Zone Hydrologist, recently relocated to the Salmon-Challis National Forest in Idaho, as Forest Hydrologist. The Chugach anticipates filling this position.
- The Tongass National Forest annual monitoring plan can be found here: http://www.fs.fed.us/r10/tongass/projects/tlmp/monitoring/monitoring.shtml

NOAA NWS Agency Report

Presented by
Scott Lindsey
Service Coordination Hydrologist

National Weather Service
Alaska-Pacific River Forecast Center (APRFC)
http://aprfc.arh.noaa.gov
March 2012

Management and Staff

Current staffing and contacts are as follows:

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Juneau - Mike Mitchell and Aaron Jacobs, Hydro Focal Points, 790-6824

Operations/Flooding

Late fall and early winter have been very quiet hydrologically. The Snow glacier dammed lake released on the Kenai River near the end of October, but river levels were low and no flooding occurred. Last winter, a tremendous amount of aufeis accumulated on the Gakona River at Gakona Junction, but thus far, no reports have been received indicating a similar situation this winter. A significant snowpack has built up in Southcentral and most of interior Alaska was near or above normal at the beginning of February. Climatological predictions for the spring indicate a reasonable chance that the March/April/May time frame may be cooler than normal. Ice thicknesses are near normal to significantly below normal which is likely a result of the heavy snow in some areas of the state.

The RFC will gain one staff member this spring. Jeff Perry has been selected to fill the IT position, a new position created by repurposing other FTEs within the Alaska Region. This selection leaves the Senior HAS position vacant. This meteorologist position (GS-13) will be advertised soon and filled in the next few months. The Senior Service Hydrologist position which has been similarly created at the Juneau Weather Forecast Office will be selected within the first few weeks of March.

River/Rain Gauge Network

Equipment for an automated water level gage for Jordan Creek in Juneau was purchased by the Juneau Watershed Council and sent to Juneau in the fall. That gage should be installed before the spring runoff begins. The deployment of the new automated gage on Jordan Creek is in collaboration with the Juneau Watershed Council where they purchased the equipment and the NWS will install and maintain the equipment as well as process and post the data.

The USGS has installed automated gages in the Susitna River Basin (Susitna River near Chulitna and Susitna River at Sunshine as well as the Kashwitna River near Willow) which we will try to incorporate in our hydrologic model. The National Park Service is planning to telemeter and continue the Nabesna river gage that had been installed and operated by US Fish and Wildlife over the past few years.

The NWS continues to enjoy close cooperation with the Yukon River Intertribal Watershed Council (YRITWC). They are going to try to help recruit observers in villages where we currently have slope gages and no observer (Arctic, Beaver, Chalkyitsik, Holy Cross, Northway). They have local staff in the villages collecting water samples that would be great candidates for the NWS observer program. They are also starting to take winter water samples which include ice thickness data. YRITWC staff plan to expand this program in the future.

Climate Reference Network

The Alaska CRN currently has sites in Barrow, Fairbanks, Port Alsworth, Sand Point, Sitka, St. Paul, Red Dog Mine and Kenai. Installation of a new CRN site 70 miles SE of Tok occurred last summer on the Tetlin Wildlife Refuge. Preparations for a station near Gustavus on the Gustavus Forelands Reserve proceeded, but weather prevented installation this year. A list of all USCRN stations can be found at: http://www.ncdc.noaa.gov/isis/stationlist?networkid=1.

The USCRN Program continues to work on permit issues for sites at Yakutat Airport and Summit Airstrip. Site surveys occurred at Annette Island, Cordova, various locations in the upper Copper River basin, Deadhorse and southwest Alaska SW of King Salmon (Becharof NWR?). Annette will likely be installed this summer with the other installation pending based on permit issues and funding.

Projects

The development season over the past 2 years has been dominated by the installation and configuration of our new operating environment called Community Hydrologic Prediction System (CHPS). The migration of our old forecast system into CHPS is complete and the RFC officially became operational on CHPS in early August, 2011. The new operating environment allows us to access other hydrologic models and to add new models easily. The other major change in our operational hydrologic forecast process is that in the past we derived mean areal precipitation and temperature forcings from point observations. Now our forecast process begins with producing gridded observed and forecast temperature and precipitation that we then average into basin and subbasin inputs to the hydrologic model.

We have continued a collaborative effort with UAF to ingest MODIS data into CHPS as a proxy for areal extent of snow cover observations. CHPS/FEWS is running on UAF's computer system enabling a PhD candidate there to test the ingest and utilization of satellite data into the CHPS system.

NOHRSC Activities for Alaska

No flightlines for SWE measurement will be flown for 2012 as a result of budget cuts.

A land surface modeling system is currently in operation at NOHRSC for Alaska. It is NASA's Land Information System version 6.1, driven by Global Data Assimilation System (GDAS) forcing data at 35 km resolution. The NASA project under which this work is funded also calls for the future implementation of Land Information System (LIS) satellite data assimilation methods. The River Forecast Center is ingesting modeled snow water equivalent grids in Grib2 format into CHPS for comparison with the snow modeling from calibrated NWS models.

Precipitation Frequency Project For Alaska

This project is complete and results can be found at: http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html

National Water Center

The National Water Center (NWC) continues to move forward. Construction began on February 21, and completion is estimated for the Spring of 2013. While the one key purpose of the center will be to provide national guidance and to support the transition of our River Forecast Centers into Water Resource Centers, it will also be the first-ever U.S. center to house water forecast operations, research, and development activities across the university community and several federal agencies. The new collaborative water program carried out in the building will enable the National Weather Service, in partnership with other federal agencies, to provide emergency managers and the public with detailed maps that explicitly show forecasted locations and effects of flooding for faster and more effective evacuations. It will also support the development of new forecasts for water supply and availability, thereby helping communities become more resilient to floods. The center will deliver a new generation of information and services to mitigate water-related disasters, inform routine decision-making about water, and address competing demands for increasingly limited water availability.

Flood Safety Awareness Week

APRFC will be shifting the dates again this spring from March to late April. The Alaska Flood Safety Awareness Week will be April 23-27, 2012. The National Flood Safety Awareness Week webpage can be found at http://www.weather.gov/floodsafety/

NATURAL RESOURCES CONSERVATION SERVICE AGENCY UPDATE
IHCA –March 8, 2012 Juneau, Alaska

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Emergency Watershed Protection

- City of McGrath – This is a levee repair and riprap armoring project. Phase 2 is another 1900 feet of levee repair and riprap bank armor similar to what was done in Phase 1 in 2009/2010. The design is complete and NRCS has received funding. Once the City of McGrath has land rights, permits, and local 10% cost share in place the project will go out for bid. We anticipate construction to take place in 2013.

- Gwichyaa Zhee Gwich'in Tribal Government and Crowley are sponsoring an EWP project in Fort Yukon. Construction is in progress and work is scheduled to be completed by end of June 2012. The project is to relocate the 650,000 gallon fuel tank farm away from the eroding bank of the Yukon River to prevent a catastrophic spill during a large erosion event.

- Delta Clearwater Remediation—This project is to restore the partially completed construction site of the original Delta Clearwater Watershed Project. The original watershed project was only 20% complete back in 2001 when it became obvious the design concept was not going to address the original resource concerns. Extensive reconsideration of the design and planning process didn't reveal any acceptable design alternatives that were within the realm of funding reality. Therefore, the decision was made to restore the site to original conditions to minimize the existing negative environmental effects from the partially completed project which is eroding in its current state. A small portion of this work was completed in fall 2011 as part of Phase 1. Phase 2 is still a need but currently NRCS has no funds for this project and we have no idea if and/or when we may receive the necessary funding.

SNOW SURVEY ACTIVITES

NRCS Snow Survey appreciates the In-Kind Services provided annually to the Snow Survey Program from each of the agencies and private companies. The In-Kind contributions for personal, equipment and air charter are in excess of $250,000 annually with an additional $88,000 plus in reimbursable funds.

The following is brief summary for the Alaska Snow Survey/Water Supply Forecasting Program (SS/WSFP) for the coming fiscal year 2012.

- The McNeil River Camp site installation is scheduled to be installed the 1st week of June 2012.
- The Meteor burst Communications master station was turned off December 31st, 2012 having been operational since 1977.

  The Alaska Snow Survey Program data records are on the National Water and Climate Center web site http://www.wcc.nrcs.usda.gov/. Many products are now available to use at this National web site.

The Alaska staff currently consists of a Hydrologist, Hydro-tech and Data Collection Officer (DCO). The staff oversees and QC's the collection of the data from 62 SNOTEL sites. The climate data being

transmitted from the SNOTEL sites vary, but may include the following sensors: snow water content, precipitation (rain and snow), snow depth, air temperature (current, maximum, minimum and average), solar radiation, relative humidity, wind speed and direction, soil moisture/soil temperature at 3 depths (2”-5cm, 8”-20cm, 20”-50cm), and barometric pressure.
There are 24 SNOTEL sites reporting the soil moisture/soil temperature data.

From this data, we generate 129 volume stream flow forecasts and snowmelt runoff indices.

Interagency Hydrology Committee for Alaska
Spring 2012 National Park Service update

The Alaska Regional Office

Will host a meeting in early November with resource professionals throughout the region to identify issues, develop priorities and brainstorm solutions to address issues they face in the field and important knowledge gaps.

Regional and park staff have been providing information, professional reviews, and other support to EPA for their assessment of the Bristol Bay watershed.

Southwest Alaska Network

Approximately two hundred fish from both anadromous and non-anadromous lakes in LACL and KATM were collected in 2011 for contaminants analysis of total mercury, methyl mercury, trace metals, and persistent organic pollutants. Contaminants analysis will be conducted at the Alaska DEC and Oregon State University laboratories.

Statistical review is underway to analyze water quality data collected from vertical profile sampling in large lake systems. This analysis will allow us to refine our sampling SOPs to ensure that the sampling design will enable us to detect trends identified in the Freshwater protocol.

Revisions to and testing of the freshwater database are underway. NPS-WRD is managing the Aquarius Server software, which will serve as a portal for entering data into the national SQL database hosted in Fort Collins. SWAN staff is developing a web-based metadata system, which will link important metadata features with datasets, and performing QC and data grading assessments on datasets to prepare them for entry into the national database. Beta testing will begin this spring.

The freshwater temperature arrays deployed at several locations within the Lake Clark and Naknek Lake systems are now part of a broader Landscape Conservation Cooperative project, which will look at changes in surface lake temperatures across western Alaska. SWAN has led the way with testing a moored array design that has been adopted throughout western Alaska for long-term lake temperature monitoring.

Southeast Alaska Network

The official SEAN Freshwater Water Quality Monitoring protocol, including monitoring design, data management, and reporting details, has been published:
http://science.nature.nps.gov/im/units/sean/FQ_Main.aspx

The 2010 SEAN water quality annual report has been published. The 2011 report is right around the corner. Both can be found here:
http://science.nature.nps.gov/im/units/sean/FQ_G_Menu.aspx

Starting May 1, SEAN will begin its third year of hourly water quality measurements in the Salmon River at Glacier Bay National Park and Preserve, Indian River at Sitka National Historical Park, and Taiya River

at Klondike Gold Rush National Historical Park. All available data from past years can be downloaded here:
http://science.nature.nps.gov/im/units/sean/FQ_F_browse.aspx

The Journal of Applied Ecology is currently reviewing an opinion essay submitted by SEAN offering practical advice for implementing long-term monitoring programs.

Shallow Lake Monitoring Program- Central Alaska Network

In 2011, the network sampled 97 lakes in Wrangell-St. Elias National Park and Preserve and maintained 6 continuous data logger arrays during the open water season. Data logger arrays consist of thermistor chains, water level loggers and YSI 6920 logging DO, pH, specific conductance and temperature in the epilimnion.

We also deployed two sound monitors, one in Denali National Park and Preserve and a second in Wrangell-St. Elias National Park and Preserve that are used to monitor wood frogs. The monitors are installed to determine the time of first and last wood frog call as well as peak calling date.

In 2012, the network will be sampling 70 lakes in Yukon-Charley Rivers National Preserve. Data logger arrays will be deployed again in 2012. As will sound monitors.

Shallow Lake Monitoring Program- Arctic Network

In 2011, the network sampled 70 lakes in Kobuk Valley National Park and maintained two continuous data logger arrays here as well (described above). We also conducted an historical analysis of lake change between 1980 AHAP and 2007 IKONOS imagery to track changes in lake surface area. Results should be available in December 2012.

In 2012, the network will be sampling 100 lakes in Bering Land Bridge National Preserve.

Central Alaska Network stream monitoring program

In 2012 we will be sampling 40-45 streams in Wrangell-St. Elias, Denali and Yukon-Charley Rivers for invertebrates, diatoms, water chemistry, instantaneous discharge and channel geometry. This is the second year in which the program has been fully implemented in all 3 network parks.

This spring we will be installing time-lapse cameras on bridges (and maybe riparian trees) throughout the network to monitor freeze-up and break-up. Cameras will remain in place year-round. This will also provide a qualitative record of flow. As funding allows, we also plan to deploy ultrasonic (or radar) water level sensors at these same sites to monitor stage more quantitatively.

In collaboration with USFWS we will be installing a GOES satellite transmitter this March on the Nabesna River gage in Tetlin NWR. We hope to be able to maintain the gage “permanently”, but are still looking for reliable funding over the long term.

Starting a project in collaboration with the USGS to detect the presence of fish in lakes and rivers using environmental DNA extracted from water samples. If successful, this approach will allow for low-cost unbiased fisheries surveys at a landscape scale.

In collaboration with Denali, we will be collecting fish from several lakes in the park to assess the presence of airborne contaminants, principally methylmercury. This is a followup to the nationwide WACAP airborne contaminant study.

Wrangell-St. Elias National Park/Preserve

In 2011 WRST continued long term (7-8 years) monitoring of DO, pH, specific conductance and temperature along the water column in 2 lakes within the park logging the data once a month throughout the ice-free months. Data loggers are also deployed in 2 creeks within the park as part of the USFWS's long term water quality monitoring: these data loggers record year round temperature arrays.

In 2012 approximately three hundred fish will be collected from ten to fifteen lakes used by subsistence and sport fishermen. The fish will be analyzed for HUPs, CUPs and mercury. WRST will also be part of the Mercury Bioaccumulation Across Western U.S. & Alaskan National Parks study. The above listed water quality monitoring will continue in 2012.

Denali National Park and Preserve

In recent years, the Toklat River in Denali National Park has significantly eroded and flooded park infrastructure numerous times. This spring, the NPS, USGS, and private contractors will complete a multi-year project to evaluate the geomorphic impact of various park infrastructure and gravel harvesting on the Toklat River. Park managers and planners will use the study to create short- and long-term strategies that strike an appropriate balance between returning the river to its natural flow and protecting infrastructure with an integrated approach.

The Kantishna area of Denali National Park has a long history of mining. Since acquiring these lands with the enactment of ANILCA, the park has reclaimed and cleaned up the worst sites. The park, in collaboration with the USGS, is monitoring the recovery of these sites and the streams that flow from them. Caribou Creek was removed from the state's Impaired Waters list for turbidity as a result of the reclamation and monitoring efforts. The monitoring will continue if funding allows and solutions are being sought to address the worst remaining issues such as Slate Creek, which continues to be listed as impaired.

CHENA RIVER LAKES FLOOD CONTROL PROJECT

- Moose Creek Dam Groundwater study 2012-2013

STUDIES & PROJECTS

- **New Navigation Projects (Section 107)**
  - Saxmon
  - Ketchican
  - Illiamna Bay

- **New Flood Control Feasibility Projects (Section 205)**
  - Whittier Creek
  - Seward area (2 or 3 projects)

- **Silver Jackets**
  - Working with state to possibly pre-stage PL 84-99 technical assistance

- **Yakutat**
  - Preparing final cost share agreement with the City of Yakutat
  - Study will include:
    - Economic diversification
    - 3 years of funding for Hubbard Glacier terminus monitoring station
    - Refine/Ground truth (QC) hydraulic model topography

- **General Hydropower Investigation.** Continue updates and maintenance of a GIS based database of Alaska Energy projects. http://akenergyinventory.org/.

- **Cook Inlet:**

  - Additional sedimentation modeling for the Port of Anchorage (2011-2012)
  - Managing consultant prepared Port of Anchorage suitability study.

- **Lowell Creek Tunnel (Seward)**
  - Completed 2-D hydraulic modeling and downstream consequence scenario modeling.

- **Black Lake Ecosystem Restoration**
  - Draft report May 2012

- **Shaktoolik**: Coastal flood hazard determination, work based on the previous storm surge and wave hindcasts for western Alaska. The final technical report and maps are completed.

- **Unalakleet**
  Rock revetment continuation funded to protect the spit at the river mouth. Construction expected in 2012-3.

- **Other Current Studies:** Elim (Small Boat Harbor), Golovin (Storm Damage Reduction), Savoonga (Navigation), Diomede (navigation)

- **Denali Commission –** Continue work in support of Statewide water resource transportation projects.

- **Potential Upcoming Projects:** Kivalina Relocation

FY12 FUNDED STREAM GAGES (14 Total)

Chena River Lakes Project (Moose Creek Dam):

- Chena River MP40
- Chena River near Hunts Creek
- Chena River Below Moose Creek Dam
- Chena River Downtown Fairbanks
- Little Chena River
- Tanana River at Fairbanks
- Tanana River at the Floodway Control Sill (stage only)
- Tanana River at Big Delta (w/NWS)

USACE Cooperative Stream Gaging Program (Sites cost shared with USGS):

- Kenai River, near Soldotna
- Kuskokwim River, near Crooked Creek
- Yukon River, near Stevens Village
- Tanana River, near Nenana
- Kuskokwim River at Liskeys Crossing

Project Gages:

- Black Lake Stage (Funded through WY2012)

Alaska Department of Environmental Conservation

Agency Briefing

DEC REPRESENTATIVES CONTACT INFORMATION:

Charley Palmer, *Hydrologist III* Alaska DEC/Division of Environmental Health Drinking Water Program Public Drinking Water Protection 555 Cordova St. Anchorage, AK 99501 p: 907-269-0292 e: charley.palmer@alaska.gov web site: http://dec.alaska.gov/eh/dw/dwp/source_water.html "State of Alaska- Public Drinking Water Protection Areas and Regulated Contaminated Sites" web map: http://bit.ly/dt7p2d	Cindy Gilder, *Environmental Program Manager I* Alaska DEC/Division of Water Water Quality Standards, Assessment & Restoration Nonpoint Source Water Pollution Control 555 Cordova St. Anchorage, AK 99501 p: 907-269-3066 e: cindy.gilder@alaska.gov web site: http://dec.alaska.gov/water/wnpspc/index.htm "State of Alaska Impaired Waters" web map: http://www.arcgis.com/home/item.html?id=8a94a657ea4a41159973ff08c6de40cc

GIS Update

Web Maps and Services

DEC web maps and services are useful tools that other agencies can use to complete spatial reviews as they pertain to permit applications and projects. We encourage their use in order to identify areas that may need further investigation. Available public maps and services can be viewed by visiting http://dec.alaska.gov/ and clicking on the "DEC Maps" thumbnail image. Services are published links to data that can be connected to from directly within a local ArcGIS mapping application in order to layer DEC data with local data. Below is a list of current web maps followed by those under development:

- Division of Spill Prevention and Response (SPAR)
    - Contaminated Sites (*also available as a service*)
    - Nome Winter Fuel Delivery (*also available as a service*)

    - Princess Kathleen Spill Response
- Division of Environmental Health (EH)
    - Fish Tissue Monitoring (*also available as a service*)
    - Public Drinking Water Protection Areas (*also available as a service*)
- Division of Water
    - Impaired Waters (*also available as a service*)
- Division of Air
    - Air Quality Advisories
    - "Real Time" Air Quality Monitoring Data

Other web maps are in the process of being developed.

- Division of Environmental Health (EH)
    - Solid Waste Permitted Facilities
- Division of Water
    - Wastewater Permitted Facilities
        - Seafood Processing (Unit #2) closest to coming on line

Alaska Clean Water Actions (ACWA) Grant Summary (Div. of Water)

SFY13 grant requests with sampling (decision announced likely in April).

BEACH program – Kenai & Kasilof Rivers; Haines beaches, Juneau beaches.

Other possible: Kenai River (continued project); Mat-Su Stormwater (continued project); Campbell Lake Tributary; Cook Inlet Stream Temperature; Auke Lake; Pederson Hill; Mosquito Lake; Crooked Creek; and Whiskey Creek (Cordova).

SFY12 Grants with sampling (until June 30, 2012):

- Goldstream Creek (UAF).
- Kenai River Water Quality Monitoring (Kenai Watershed Forum).
- Mat-Su Stormwater Assessment (ARRI) – second year of project.
- Stream Temperature Monitoring Network – fourth year of data collection: Cook Inlet Keeper.
- Water sampling in three water bodies (Chena River, Chena Slough, Noyes Slough) (Tanana Valley Watershed Association).

  Full project descriptions are found at:
  http://dec.alaska.gov/water/acwa/pdfs/fy11_ACWA_Grants_Awarded.pdf

Outreach "Fuel out Fish on" campaign continues.

Integrated Water Quality Monitoring and Assessment Report (Div. of Water)

Due to EPA April 1st, 2012 (will be late).

Public Notice currently anticipated April – May.

For additional information see: http://dec.alaska.gov/water/wqsar/waterbody/integratedreport.htm

Alaska Monitoring and Assessment Program (AKMAP) (Div. of Water)

Douglas Dasher and Terri Lomax continue to work with the University of Alaska and other partners to design and implement a 5 year aquatic resource survey within the National Petroleum Reserve- Alaska. This survey will provide an overall assessment of water quality in 4 aquatic resource types — wetlands, lakes, rivers and estuaries.

SFY11 & 12 the following marine and freshwater field surveys were done:

- Chukchi Sea Costal Impact Assistance Program (CIAP)
  - August 2010 Pt Hope to Pt Lay stations sampled.
  - September 2011 Pt Lay to Barrow stations sampled.
- EPA National Aquatic Resource wetland survey
  - Field survey completed in National Petroleum Reserve-Alaska Summer 2011.

Additional information can be found at:
http://www.dec.state.ak.us/water/wqsar/monitoring/AKMAP.htm

Updated Manuals (related to hydrology)

MANUAL: Monitoring Well Guidance (Div. of Spill Prevention and Response)

Updated November 2011, and recommended for use in monitoring well design, installation and decommissioning. http://dec.alaska.gov/spar/csp/guidance/Monitoring%20Well%20Guidance.pdf .

MANUAL: User's Manual: Best Management Practices for Gravel Pits (in process)

The DEC/EH Drinking Water Program has just begun a contract with Shannon & Wilson to update the DEC *User's Manual: Best Management Practices for Gravel Pits and the Protection of Surface Water Quality of Alaska* (June 2006). The purpose of the update is to incorporate additional BMPs that address groundwater quality and public water systems, and to update NPDES requirements since Alaska (DEC) now has primacy.

The original manual was created by assembling a technical workgroup consisting of various stakeholders, but this contract is an "update" to the original and we are working under a much more limited time frame and budget. We are in the process of assembling an interagency review team to look at the new BMPs compiled from the contractor's research to ensure that regulatory overlap is minimized, with a fairly quick turnaround.

Are you interested in participating as one of the reviewers? Also, do you know of another contact that may be interested in participating?

Current Interagency team:

DEC (project support)

- Laura Eldred, Division of Water > Water Quality Standards, Assessment & Restoration > Nonpoint Source Water Pollution Control
- Shane Serrano, Division of Water > Water Quality Standards, Assessment & Restoration > Nonpoint Source Water Pollution Control
- Chris Miller, Division of Environmental Health (EH) > Drinking Water > Drinking Water Protection
- Lua Faverty, Division of Environmental Health (EH) > Drinking Water > Drinking Water Protection

DNR (reviewers)

- Roy Ireland, Division of Mining, Land, and Water > Water Resources > Hydrologic Survey Unit
- Christina Bohner, Division of Mining, Land, and Water > Land > Southcentral Regional Office

DOT (reviewers)

- Undecided

Alaska Department of Transportation & Public Facilities

AGENCY REPORT

Internal policy/practice:

- In December 2011, DOT&PF published new Storm Water Pollution Prevention Plan (SWPPP) specifications and forms.
  See: http://dot.alaska.gov/stwddes/dcspubs/directives.shtml)

Research endeavors:

- Foothills West/Access to Umiat. The University of Alaska (UAF) is conducting hydrologic research on the rivers below. See the UAF's IHCA report for more info.

Statewide Hydraulics Programs

STIP ID# 12579 – Scour Monitoring and Retrofit Program

- Closed Bridge No. 339 Copper River. Proceeding with a bridge replacement.
- Current focus is on bridges for which our foundation information is limited.

STIP ID# 6450 – USGS Flood Frequency and Analysis.

- We will be dropping multiple to keep the USGS Small Streams Program within budget. The DOT&PF's Fall IHCA report provided a list of sites being considered.
- Some funds may be used to update basin characteristics within the USGS stream flow analysis "Region 4" to progress regression equation updates for that region and to compliment the USGS's Cook Inlet StreamStats program.

STIP ID# 6455 – Small USGS Hydrologic Investigations

- No news to report.

ADOT&PF-provided Training Opportunities

Training schedule available on the internet: http://dot.alaska.ecatts.com/lmsTrainingCalendar

GIS contacts within ADOT&PF

- Angela Parsons, Technical Engineer I (Statewide Research), (907) 269-6208, angela.parsons@alaska.gov
- Nicholas R Mastrodicasa, Digital Mapping Project Manager (Statewide Aviation), (907)266-2776, nick.mastrodicasa@alaska.gov
- Kerry S Kirkpatrick, Planner III (Statewide Program Development), (907)465-8957, kerry.kirkpatrick@alaska.gov

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