ALASKA DIVISION OF WATER

INTERAGENCY WATER DATA ISSUES GROUP
WORK SESSION REPORT

ALASKA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER

Administrative Report 92-1

INTERAGENCY WATER DATA ISSUES GROUP: WORK SESSION REPORT

By

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June 1992

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TABLE OF CONTENTS

	Page
Introduction	1
Acknowledgements	1
Objectives	1
Results	2
Data coordination working subgroup	4
Data collection working subgroup	5
Data management working subgroup	6
Data analysis and evaluation working subgroup	7
Data finance working subgroup	8

APPENDICES

Appendix A	ADNR Memorandum proposing Data Issues work session	9
Appendix B	Participant's and non-participant's water data issues	13

ACRONYMS

AASWCD	Alaska Association of Soil and Water Conservation Districts
ADCED	Alaska Department of Commerce and Economic Development
ADEC	Alaska Department of Environmental Conservation
	EQ - Environmental Quality
	WQ - Water Quality
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
	DOW - Division of Water
	AHS - Alaska Hydrologic Survey
ADOTPF	Alaska Department of Transportation and Public Facilities
AEA	Alaska Energy Authority
ADMVA	Department of Military and Veterans Affairs
	DES - Division of Emergency Services
NOAA	National Oceanographic and Atmospheric Administration
NWS	National Weather Service
OMB	Office of Management and Budget
	DGC - Division of Governmental Coordination
UAF	University of Alaska Fairbanks
USBLM	U.S. Bureau of Land Management
USDOD	U.S. Department of Defense
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
USSCS	U.S. Soil Conservation Service

INTRODUCTION

Water as a statewide issue was the theme of an interagency Water Summit sponsored by the Alaska Department of Natural Resources (ADNR) and Alaska Department of Environmental Conservation (ADEC) and held in Juneau, Alaska on January 30, 1992. The objectives of the Water Summit were to identify major water issues facing the State of Alaska.

From minutes of the meeting prepared by Doug Redburn of ADEC (written commun., 1992) six action items were enumerated by ADEC Commissioner John Sandor that appeared to have broad support of participants at the Water Summit:

1. Establish a Water Management Council consisting of the Directors of the Divisions of Water (DNR), Environmental Quality (DEC), and Habitat (ADF&G). The Council would be charged with developing work programs and convening a series of work groups to address priority issues. The Council would involve DGC and other agencies in a support role and should inform the public and private sector of policy directions.

2. Implement a coordinated water data information and collection/monitoring system.

3. Improve permit coordination.

4. Update the DEC/DNR/ADF&G cooperative agreement first drafted in the 1970's. Review existing efforts to avoid "reinventing the wheel".

5. Press for a sound state wetlands program.

6. Prepare a report at the end of FY92 on the progress on points 1 through 5 above and any others addressed by the Council.

The Water Management Council, co-chaired by representatives from the ADNR, ADEC, and the Alaska Department of Fish and Game (ADF&G), was established at the Water Summit. The Water Management Council created the **Interagency Water Data Issues Group** (hereafter referred to as "the Group") and provided its mission. The Group convened for an all day work session on March 19, 1992. The ADNR Division of Water (which has broad authority for collecting, managing, and distributing water data and allocating and managing water) organized and chaired the work session (Appendix A). Invited group participants were asked to bring a list of what they perceive to be Alaska's most urgent or strategic water data issues (Appendix B). This report summarizes the objectives and findings of the **Water Data Issues Group** at the work session, and minor revisions suggested by group members based on an early draft of this report.

ACKNOWLEDGMENTS

The author thanks Jilann Brunett, who volunteered to act as group recorder and greatly aided the preparation of this report by taking clear and effective notes, and Mary Maurer, who contributed substantially to the preparation of the report.

OBJECTIVES

The objectives of the Group were to:

1. formulate and prioritize major issues facing Alaska regarding collection, management and dissemination of water resources data;

2. recommend Working Subgroups to address these issues;

3. formulate tasks for the Working Subgroups to accomplish;

4. recommend target dates for the Working Subgroups to use to accomplish their tasks.

The Group consisted of:

Jim Munter (Chair)	ADNR, Div. of Water, Alaska Hydrologic Survey
Mary Maurer	ADNR, Div. of Water, Alaska Hydrologic Survey
Christopher Estes	ADF&G, Div. of Sport Fish, Research & Technical Services
Jean Bodeau	ADEC, Div. of Environmental Quality
Brad Hahn	ADEC, Div. of Spill Prevention and Response
Lance Trasky	ADF&G, Habitat Division
Ken Thompson	U.S. Geological Survey, Water Resources Division
Jilann Brunett	U.S. Geological Survey, Water Resources Division
Wendy Woolf	ADNR, Div of Management
Skip Barber	DOT&PF, Design and Construction, Materials Lab (partial day only)

RESULTS

The Group achieved its objectives. Each participant's list (Appendix B) was discussed and numerous variations were considered prior to reaching consensus on the findings presented herein. Minor additions to the Group's findings suggested by the Water Management Council are included and noted. These findings are ready for adoption and implementation by the Water Management Council.

The Group agreed that the three highest priority water data issues facing Alaska are:

1. The availability, accessibility, and reliability of water data for making management decisions. In other words, we are short of data, what data exist are hard to find and use, and what data can be found and used are sometimes of questionable validity. This is an issue because of the:

    a. lack of resources (money, staff, equipment) that result from the low priority of water data collection and management;

    b. lack of effective coordination of agency needs and data collection;

    c. lack of data management within and between agencies;

    d. lack of continuity between administrations;

    e. lack of a comprehensive catalog or index of reports, data, and databases;

    f. lack of adopted standard methods for collecting, analyzing, storing, and disseminating data.

2. The lack of understanding of the statutes, regulations, and administration policies and the ramifications of not implementing them.

3. The lack of training for people involved in water data.

Other issues discussed by the Group are of lesser priority and are described under relevant Working Subgroup explanations. The issues described above are best addressed by five Working Subgroups:

1. Data Coordination Working Subgroup
2. Data Collection Working Subgroup
3. Data Management Working Subgroup
4. Data Analysis and Evaluation Working Subgroup
5. Data Finance Working Subgroup

Details of composition, chair, mission, tasks and target dates for the five Working Subgroups are described on separate pages. Although the Working Subgroups are separate, considerable interaction among 1) Working Subgroups, 2) other Issues Groups, and 3) other Issues Groups' Working Subgroups will be necessary for them to function properly because of the interrelationships of many aspects of water data issues. In addition, Working Subgroups will need to interact with independent water coordination organizations such as the Interagency Hydrology Committee for Alaska (IHCA) and the American Water Resources Association's Data Committee, and database management groups such as the Council on Northern Resources Information Management (CONRIM), to avoid repetition of efforts.

The Working Subgroup membership recommendations were made on the basis of selecting a core group of people for the tasks. Additional assignments on each Working Subgroups will be made, depending on the responses from agencies and organizations invited to participate on the Data Coordination Working Subgroup. The letters of invitation should specifically invite nominations for the Working Subgroups, to provide greater representation and expertise. All people who have been recommended have not been notified of their selection.

A final conclusion of the Group is that the further activities of the Working Subgroups are not specifically included in agency budgets and are at risk of failure or disfunction as a result of funding shortages. Declining agency budgets indicate that this may be an acute problem meriting resolution by agency managers and Working Subgroup participants through action by the Water Management Council.

The following sections of this report list the respective mission, tasks, chairman, and invited composition of the five proposed Working Subgroups. By means of this report, the **Interagency Water Data Issues Group** has fulfilled its mission and has terminated its existence. Continuing efforts to coordinate water data issues will be conducted by the Data Coordination Working Subgroup.

DATA COORDINATION WORKING SUBGROUP

Mission:

1. Identify interested agencies and data needs
2. Identify duplicative or conflicting authorities between state or federal agencies
3. Define agency coordination and ensure that coordination happens
4. Define agency needs for data type, retrieval, public requests, management
5. Determine current computer capabilities
6. Determine future computer needs (coordinate with Data Management Working Subgroup)
7. Search out past or present interagency agreements and update as needed
8. Investigate and pursue any needed statutory or regulatory changes
9. Initiate a process for prioritizing data collection similar to the federal/state "A16" process for topographic maps
10. Coordinate with other Working Subgroups, Issues Groups and their Working Subgroups
11. Coordinate with existing water-related groups

Tasks:	Target Completion Dates:
1. Send letters of invitation	May 1, 1992
2. Meet and identify data needs	June 1, 1992
3. Prepare Coordination Action Plan	October 15, 1992

Chairman: Ric Davidge, Director, ADNR-Division of Water

Invited Composition:
ADEC
ADF&G
ADNR
ADOT&PF
Alaska Energy Authority
State Library
NOAA, NWS/River Forecast Center
USGS
US Dept. of Defense
National Park Service
USEPA
Univ. of Alaska Institutes & Departments (main and regional campuses)
DMVA/Div. of Emergency Services
USBLM
US Forest Service
National Marine Fisheries Service
US Fish and Wildlife Service
US Soil Conservation Service
Cooperative Extension Service
Assoc. of Soil and Water Conservation Districts
Local Governments
OMB/Div. of Governmental Coordination
Alaska Department of Law
US Army Corps of Engineers

DATA COLLECTION WORKING SUBGROUP

Mission:

1. Determine standards for collecting ground-water, stream flow, quality of water, wetland, coastal, lacustrine, water use, and precipitation data.

2. Define the quality of collected data

3. Relate data collection activities to needs (indexing, baseflow measurements, availability, allocation, water quality standards, fish, drinking water, etc.)

4. Evaluate existing data collection "network"

5. Determine elements or parameters that should be collected

6. Formulate mechanism to enhance cooperation of data collection and field trips to maximize efficiency

7. Establish appropriate quality assurance and quality control

Tasks:	Target Completion Dates:
1. Assemble all current standard methods for data collection	Oct. 15, 1992
2. Prepare draft Data Collection Standards Action Plan	Oct. 15, 1992

Co-chairs: Stan Carrick, AHS
Jeff Hock, ADEC

Recommended Composition:

Christopher Estes, ADF&G
Ken Thompson, USGS
Skip Barber, ADOT&PF
Eric Marchegiani, AEA (Dana Schmidt, ADF&G, as an alternate)
Ed Brown, UAF

DATA MANAGEMENT WORKING SUBGROUP

Mission:

1. Establish input and retrieval procedures
2. Determine the repository(s) for data and location(s) of repository
3. Define agency needs for data type, retrieval, public requests, management
4. Determine current computer capabilities and future computer needs
5. Develop indexing and tracking mechanisms
6. Evaluate and prioritize historical data
7. Establish data management guidelines
8. Establish a lead agency (with Coordination Working Subgroup)
9. Develop standards for database structure
10. Develop systematic methods for incorporating data into management decisions such as water allocations
11. Establish a library
12. Develop quality assurance and quality control techniques
13. Mesh databases with geographic information systems and other ID systems when appropriate
14. Include private sector data in data management system where appropriate
15. Review existing and past attempts at coordinating and exchanging data among agencies (Level 8, CONRIM, SuBasin SCS/DNR study, etc.)
16. Facilitate dissemination of data through annual publications or other appropriate means[1]

Tasks:	Target Completion Dates:
1. Identify universe of water data, current location and state of automation	Nov. 1, 1992
2. Prepare draft Data Management Action Plan	March 1, 1993

Co-chairs: Jean Bodeau, ADEC
Jim Munter, AHS

Recommended Composition:

Celia Rosen, ADF&G	Eric Marchegiani, AEA
Gary Prokosch, ADOW	Skip Barber, ADOT&PF
Dianne Lyles, ADNR	Ed Brown, UAF
Bob Sutherland, ADEC	Roy Ireland, AHS
Jilann Brunett, USGS	Ward Lane, ADEC
Ken Thompson, USGS	Conrad Christianson, ADEC
Scott Ray, AHS	Rich Cormack, ADEC
Susan Elliott, State Library	Al Ewing, USEPA[1]

[1] Suggested by Water Management Council

DATA ANALYSIS AND EVALUATION WORKING SUBGROUP

Mission:

1. Determine methods to statistically represent data

2. Determine statistical soundness of data

3. Establish methods to generate "synthetic" data

4. Establish quality assurance and quality control techniques (with other Working Subgroups)

5. Develop standards for data input and retrieval (with data collection and data management Working Subgroups)

6. Establish methods to mesh data with geographic information systems (with other Working Subgroups)

Tasks:	Target Completion Date
1. Assemble all existing standards or methods for analyzing or evaluating data	Nov. 1, 1992
2. Prepare draft Data Analysis and Evaluation Action Plan	March 1, 1993

Chairman: Christopher Estes, ADF&G

Recommended Composition:

Skip Barber, ADOT&PF
Mark Inghram, AHS
Stan Jones, USGS
Allen Bingham, ADF&G
Earl Hubbard, ADEC
Mary Maurer, AHS

DATA FINANCE WORKING SUBGROUP

Mission:

1. Determine current funding sources

2. Analyze expenditures of funds

3. Identify tasks that can be implemented at little or no cost

4. Perform cost/benefit analyses on selected tasks

5. Determine potential for liability resulting from not collecting, analyzing and managing data adequately or properly to meet statutory and regulatory requirements and objectives.

6. Identify funding alternatives

Tasks:	Target Completion Date:
1. Identify all current sources of funding for all water data activities	Oct. 15, 1992
2. Identify funding alternatives	Jan. 15, 1993
3. Identify alternatives to increased funding such as: a. Low cost options b. What to not do c. Consequences of inaction	March 1, 1993

Chairman: Ric Davidge, Director, ADNR-Division of Water

Recommended Composition:

Dan Robison, USEPA
Lance Trasky, ADF&G
Jean Bodeau, ADEC
Doug Redburn, ADEC
Rep. Kay Brown, Alaska Legislature
Jim Munter, AHS

APPENDIX A

ADNR Memorandum proposing Data Issues work session

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER

PO BOX 772116
EAGLE RIVER AK 99577

TO: Work Session Participants

DATE: 3/11/92

FILE NO:

THRU:

TELEPHONE NO: (907) 696-0070

FROM: Jim Munter JM
Hydrogeologist

SUBJECT: Data issues initiative

Ric Davidge, on behalf of the Water Management Council, has asked me to convene an interagency group to identify and prioritize major water data issues in Alaska. I appreciate your willingness to participate in a single work session to accomplish these tasks. We will meet on March 19, 1992, in room 880 (Division of Mining conference room) of the Frontier Building (3601 C Street) in Anchorage, beginning at 8:30 A.M. Enclosed is a draft agenda. Please contact me if you have any suggestions for improving the agenda or our mission. We may be able to conclude the work session by noon, but I am asking all attendees to reserve the entire day so that we can be sure of finishing our work. I will be reporting our results to the Water Management Council on March 27, 1992.

The purposes of the interagency group are to:

1. formulate and prioritize major issues facing Alaska regarding collection, management and dissemination of water resources data;

2. recommend working groups to address these issues;

3. formulate tasks for the working groups to accomplish;

4. recommend target dates for the working groups to use to accomplish their tasks.

I am requesting that each of you come to the meeting prepared with 11 copies of a list of major issues based on your perception of Alaska's most urgent or strategic needs. I assume you will take into consideration input from others in your group or agency with interests in water data.

I am sure all of you are aware that we are operating in a capital-limited environment. The purpose of this initiative is not necessarily to solve our problems with quick infusions of money. Rather, we need to maintain a long-term perspective and attempt to visualize what type of structure or goals would be best to have today to best meet our needs 10, 20 or 30 years hence. This process will be successful if we can conclude that we are currently maximizing the long-term value of every dollar spent, or if we can find ways to

improve. At the same time, opportunities to do new projects can best be conceived, pursued, and conducted if we know our long term goals.

Finally, this is a "concept" meeting. I would like you to consider the Alaska "system" of data collection, management and dissemination of water data, and think of ways that it can be improved from a "systems management" or strategic perspective. I have purposefully decided not to include a background information with this transmittal about the details of databases or Alaska's specific data-related problems. Problem details are to be worked out by the working groups. I urge you to use creativity in formulating your list of issues.

Work Session Participants

Jim Munter	DNR, Div. of Water, Hydrologic Survey
Mary Maurer	DNR, Div. of Water, Hydrologic Survey
Scott Ray	DNR, Div of Water, Hydrologic Survey
Jean Bodeau	DEC, Div. of Environmental Quality
Brad Hahn	DEC, Div. of Spill Prevention and Response
Lance Trasky	DF&G, Habitat Division
Ken Thompson	U.S. Geological Survey, Water Resources Division
Dianne Lyles	DNR, Div of Management
Skip Barber	DOT&PF, Design and Construction, Materials Lab

cc: Ric Davidge
Bill Long

Interagency Water Data Issues Group
Work Session

DRAFT AGENDA

Room 880, 3601 C Street
(Frontier Building)
Anchorage, Alaska

March 19, 1992

Chairman: Jim Munter
Alaska Hydrologic Survey

Call to Order 8:30 a.m.

1. Opening comments
2. Introductions
3. Review of agenda
4. Sharing of issues lists
5. Formulation of issues groups and assignment of issues to groups
6. Discussion and reformulation of issues (combining and clarifying)
7. Sorting of primary and secondary issues or issue prioritizing
8. Recommended working group compositions and chairs
9. Formulation of working group task lists
10. Formulation of target dates for working groups
11. Work session evaluation: questions and discussion
12. Adjournment (no later than 5 pm)

Breaks will be as needed, and from noon to 1 pm.

APPENDIX B

Participant's and non-participant's water data issues

List of major data issues

J. Munter

1. Absence of a system for managing water quality data.

2. Absence of a system for managing streamflow data.

3. Shortage of financial resources to collect and manage water data relative to the expense of the tasks.

4. Lack of coordination among agencies and coordinating groups (IHC, WMC, AWRA, Water Board, GW program, AWARE).

5. Water data collection and management is a low priority compared to data analyses, interpretation, and reporting.

6. Water data collection, management and dissemination is a low priority in most State programs that involve water.

7. A very large amount of valuable historic data exists in manual files.

8. No comprehensive bibliography of water data reports exists.

9. The State has no guidelines for standard water data collection, management, or reporting procedures, or mechanism for encouraging adherence to guidelines.

MAJOR ISSUES

1. Define the term "database"

2. List existing databases

3. Prioritize databases

4. Manual files - extent and worth

5. Major database gaps

6. Database management - what, who, how?

7. Getting the data to the user

8. Database data applications

STATE OF ALASKA **MEMORANDUM**

TO: Jim Munter
Hydrogeologist
Division of Water
Alaska Hydrologic Survey
Department of Natural Resources

DATE: April 7, 1992

FILE NO:

TELEPHONE NO: 267-2342

SUBJECT: Water Data Needs

FROM: Lance L. Trasky
Regional Supervisor
Region II
Habitat Division
Department of Fish and Game

Following is the preliminary Alaska Department of Fish and Game (ADF&G) response to your request for water data and related needs. To fully accomplish this objective, we believe the participants in this committee must be expanded to include: the U.S. Fish and Wildlife Service, Soil Conservation Service, Environmental Protection Agency (EPA), Corps of Engineers, Alaska Energy Authority, Bureau of Land Management, River Forecast Center, National Marine Fisheries Service, U.S. Forest Service, National Park Service, and the University of Alaska. Additionally, we suggest that each participant review their files for previous interagency recommendations on water data management needs pertaining to the state/federal interagency Level B program of the late 70's and early 80's. Many water data needs were addressed in those documents and the use of this previous work could save time and improve the quality of your report.

1. Current water allocation data (summaries of temporary permits, permits and certificates) are needed for all stream reaches that contain the point(s) of take from anadromous and resident fish streams and lakes. These information needs include the quantity of water approved (in cfs), the uses, date of priority, relevant gage data, the mean annual flow, and depending upon data availability, the mean monthly flows and a monthly duration analysis We recognize the timeliness of portions of assembling this information will depend in part upon the funding that would be provided by HB 353. This information should be housed in a system that is accessible to this agency.

2. A summary of pH, turbidity, dissolved oxygen, water temperature, specific conductance, suspended sediment, priority pollutants, or other water quality data is needed for the above, particularly for water appropriations that lead to a water discharge into fish bearing waters (e.g., placer mines, industrial effluent, etc.).

3. Future water rights applications submitted to the ADF&G for review should be automatically accompanied by a summary of the historical flow data and the following analyses: the long term mean annual flow, long term mean monthly flows, and long term monthly duration analyses. If insufficient data are available for these analyses, an estimate of the mean annual flow should be provided at a minimum. A listing of other appropriations (including priority date, use and quantity) must be included if the state is going to meet its constitutional mandate to reserve water instream for fish and wildlife.

4. Ungaged analyses for all stream reaches within the areas specified by the Recreational Rivers legislation should be completed.

5. Water quality data, similar to number 2, should accompany water rights applications submitted to the ADF&G when available.

6. The following analyses should be performed for all gage sites in Alaska where historical flow is sufficient and updated annually: the long term mean annual flow, long term mean monthly flows, and long term monthly duration analyses. If insufficient data are available for these analyses, an estimate of the mean annual flow should be provided at a minimum.

7. A better process to establish long range gage site plans is needed for both water quantity and quality needs. Included should be an annual review of whether to continue or discontinue individual gage sites when funding shortages occur or are projected. Communication regarding the decisions to continue or discontinue a site has not been consistent in the past. The first steps should include evaluations of the existing stream gage network and the data needs for improving the precision and accuracy of regional hydrologic models. These types of analyses are proposed by House Bill 354.

8. Better coordination of water quantity and quality data collection and analyses (supplemental to item 7 above) that are contracted to or by the Alaska Department of Natural Resources (ADNR), U.S. Geological Survey (USGS), Alaska Energy Authority, Alaska Department of Transportation, Alaska Department of Environmental Conservation (ADEC), ADF&G, and other agencies is required. This can probably be accomplished by updating and adhering to existing agreements.

9. A data base that cross references the various identification numbers for water bodies in the state (i.e., ADNR Land Administrative System, USGS Gage number and Hydrologic Accounting Units, ADF&G Anadromous Catalog identification numbers, Sport Fish Survey Stream identification numbers, EPA's STORET identification numbers, etc.) is needed and should be in a system that is user friendly and easily accessible to all users.

10. An index of non USGS water quantity and quality surface water data bases housed by other agencies and the private sector is needed and should be updated every 5 years to supplement the USGS water quantity and quality index for surface waters. Lake limnology and bathymetry data bases should also be included.

11. A similar data summary for ground water data is needed.

12. A similar data summary for precipitation and snow survey data is needed.

13. Topographic map series 1:63,360 should be digitized for the state and should include topographic and water body information.

14. All grandfather water rights certificates should be reviewed to determine if original water availability estimates were accurate and current uses justify the amount granted. A summary of information similar to that requested in item 1 above should be provided.

cc: C. Estes
K. Sundberg
M. Mills
J. Koenings
N. Netsch
D. Lloyd
F. Rue
D. Kellyhouse
R. Bosworth

Brad Hahn
Jean Badeau

WATER DATA ISSUES & TASKS FOR DISCUSSION
MARCH 19, 1992 INTERAGENCY DATA ISSUES MEETING
DEC PERSPECTIVE

ISSUES

Program commitment - state, agency, program

Define goals and limits of database(s) - e.g. technical data, application to GIS systems, vulnerability mapping

Scale of database(s) - e.g. wide area network vs. centralized system

Identify major database subdivisions - e.g. groundwater, surface water, drinking water

Elements to be included in the (groundwater) database (to address at a later date: format, data quality, units, other specifications)
- GWSI fields
- EPA Minimum set of data elements for groundwater
- water quality data
- facilities (PWS, RCRA, SW, CERCLA, UIC, LUST, UST, NPDES...)

Delineation of agencies' responsibilities
- who will develop the database?
- who will maintain it?
- who manages input and access?
- what is the precise flow of data?

Hardware/software to be used in database(s), considering:
- utility for intended purposes
- universal compatibility of databases (DEC, DNR, USGS, EPA, and others)

Historical data - need to devise strategy for including data collected to date (monitoring wells, private wells)

Data quality (grades of data quality?) and format required for submittal

TASKS

Identify existing databases and data throughout the state
(DEC: Drinking water; contam. sites/HRS; solid waste; FC&O:/ DNR/DF&G/EPA/USGS/Municipalities/Boroughs/...)

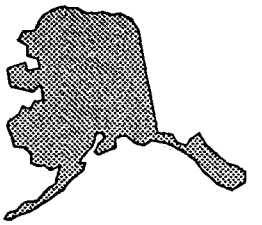
Inventory existing resources (personnel, equipment, budget)

Ken Thompson
Jill Brunett

Interagency Work Group

Work Session: Alaska Water Data Issues

March 19, 1992



Issues

- Limited financial resources in Alaska suggest a coordinated effort among the various water agencies would provide better information for each dollar spent.
- Access to this data is key. Data that have been collected historically, are located within various agencies or groups in many different formats such as electronic storage, paper files, published reports etc. There is no centralized place or format to place this data for all to use.
- To enhance access, data could be stored in a centralized location(s) or a detailed index describing what data are available and where it is should be maintained. A good component of such a system would be a Graphic Information System (GIS) to display data collection points on a map. The GIS system could also be used to display numerous attributes of interest.
- Because of lack of knowledge of previous efforts, redundant data collection sometimes occurs. Communication among the data collection groups should be improved.
- Compared to data collection in the "lower 48", Alaska has very little water data available. Users often try to stretch data further than it statistically sound.
- Data collection has occurred predominantly near large urban areas, major rivers or along the road system. Most of the areas in the remote parts of the state have little data available to potential users.
- Some smaller areas are data rich. Collecting additional data in these areas may not be as beneficial as directing efforts toward data lean areas.
- Various techniques, within individual agencies and between different agencies, are being used to collect data. Some data collection activities are reconnaissance in nature which allows data with larger errors compared to a research effort that requires data with small errors. Many times the allowable errors associated with these types of data are not stored with the data. Interpretation of the data then becomes more difficult.
- Historical data collection used a variety of field and laboratory techniques all of which have associated errors. Little is available that describes the quality of historical data, complicating the interpretative process.

Subject: FNSB Ground Water Task Force Data Issues

Comments from Fairbanks Field Office

The following comments are supplied to summarize the identified requirements of the FNSB Ground Water Task Force at the Data Issues Initiative meeting to held March 19, 1992. The comments are made concerning a letter dated March 11, 1992, from Jim Munter. The main focus of the comments is towards ground-water issues.

General Comments:

The ADEC ground water strategy should be used as a platform for addressing ground water issues. A great deal of effort went into this plan and the issues are still the same. Any working groups that are created, should be given specific goals and deadlines. Concerning ground water issues, the two major task force groups in the state have already expended much effort to deal with problems and come up with possible solutions. These efforts should allow identification of issues and solutions to come from one or two meetings at the most.

The coordination of these efforts should utilize and communicate with the two state-wide organizations, AWRA and AGWA, the two ground water task force groups and the state water board. Implementation will be more likely if all of these groups adopt the same platform for solving the state's water management problems.

The long-term value of current funds being used is not being maximized across agencies. This should be judged not only by the funds set aside for data management, but also be the time spent in trying to find data, not using data that exists, or requiring the collection of duplicate data for project work. The time spent by the users of the information has a more significant impact on evaluating data costs. This is also true for the general public, as they must often pay for extra data collection or have results that do not represent all available data collection.

The major issue for the ground-water community for the future is with ground-water quality and remediation. The amount of contamination identified will continue to increase based on the fact that most sites are identified only when they are reported. There has been little effort in performing sampling that gives a true indication of ground-water quality at the scales that are needed to address both area-wide and local problems. This may never be accomplished due to the costs involved with sampling all of the areas in the state that are lacking in information. This makes the capture and use of all information that is collected more critical. The accumulation of this data in a relational database, following as many common standards as possible, will help address many ground water investigations across various scales of interest.

The adoption of data collection standards is needed to make the data more economical to manage and enhance the use of multiple data standards. These standards should be set in such a way as to allow for changing data needs and methods. An example is the implementation of the metric system. Also the use of new analytical techniques will involve constant changes to database structures and uses. The adoption of the USGS databases may help the state address these problems by giving access to a system that is supported nationwide and will undergo future implementations.

The collection of ground water information should include information collected when a site is established and any future information collected from a site. The collection of this information should reduce excess duplication of reporting requirement if possible. An example would be that any information required by a regulatory agency such ADEC should be turned over to ADEC and then sent by ADEC to DOW. If individuals are required to turn in copies to various agencies, it may result in more conflict from the public sector. All local, state and federal agencies that collect information should provide for the automatic transfer of data to the proper coordinating agencies.

The funding of the data management should be shared and structured in such a way that long-term support is achieved. Dru Keenan, EPA region 10, has said that with the increased demands for federal assistance groups that are matching with the most support will fare better in the funding wars.

The state statutes that regulate the collection of ground water information need to be changed to address current and future information needs. A method of enforcement also needs to be addressed.

Interagency Hydrology Group represented by Skip Barber, ADOT & PF

HYDROMETEOROLOGIC INFORMATION FOR ALASKA

Prepared by

Resource and Policy Coordination Subcommittee
Interagency Hyrdology Committee for Alaska

INTRODUCTION

The objective of the Interagency Hydrology Committee for Alaska (IHCA) is to assure the ready availability of hydrometeorologic data and information of sufficient quantity and quality required for sound management, and regulation of the use of the water resources of the State of Alaska and the Nation. Members of the IHCA include State, Federal, and Local Governmental Agencies involved in the collection, analysis, and use of water resources and meteorologic data and information and the University of Alaska.

The IHCA is concerned that there is insufficient hydrometeorologic data and information available for Alaska. Increasing rapid development of the State's resources and infrastructure has created a pressing need for reliable hydromeorologic data and information in excess of that readily available. Data is required for the sound planning, design, construction and environmental assessment of ongoing and future development. The IHCA beieves that many decisions related to current development are being made in the absence of adequate hydromeorologic data and information. For instance, reliable long-term streamflow information is available for drainage basins of 600 square miles in the lower 48; similar information is available for drainage basins of 4,000 square miles in Alaska. Because Alaska is a "new State, much of the available data and information has been collected and analysed for a relative short term.

The IHCA recognizes that a large volume of hydrometeorologic data and information exists in computer and paper files of many Federal, State, and Local Agencies, Universities, and private concers. It also recognizes, however, that the accuracy of much of this data and information is unknown and/or in question and that much of it may not be readibly available. In addition, a large volume of data and information probably exists outside of computer and paper files in unorganized "stacks".

Hydrologic data and information has, traditionally, been collected by the various Agencies or private concers for their own specific uses commensurate with funds available to them. Because funding is not available for collecting the optimum data and information required by each Agency or concern, and because of the accuracy and availability issues discussed above, the Resources and Policy Coordination Subcommittee of the IHCA has developed a set of goals that will have to be adopted and actively supported by all member Agencies and concerns for achievement of the overall objective of the Committee.

GOALS

Hydrometeorologic data programs and investigations conducted by IHCA members will be coordinated. Project goals and objectives will be shared with member

Agencies in an effort to eliminate all overlap. Where possible and commensurate with Agency missions, goals and objectives will be consolidated. (For instance, meteorologic stations may be installed and operated at hydrologic stations).

Activities of IHCA members will be coordinated where cost effective.

The Division of Water, Department of Naturtal Resources, will be designated the lead Agency responsible for coordinating State hydrometeorologic data and information activities.

The U. S. Geological Survey will be designated the lead Agency responsible for coordinating Federal hydrometeorologic data and information activities.

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
LAND & RESOURCES SECTION

State of Alaska
DIVISION OF LAND
762-2425

TO: Jim Munter, Div. of Water

FROM: Marty Welbourn, Div. of Land MW

DATE: March 18, 1992

SUBJECT: Water data meeting

I just heard about the water data issues meeting on March 19th. I am sorry that we did not recieve notice sooner, as it may be appropriate to have Division of Land participation. The Division of Land and the Division of Water have common interest and related responsibilities on many water issues, and we would like to stay abreast of water issues. I would also appreciate a copy of the results of this meeting, and ask that you directly notify the Division of Land of future meetings.

Water data issues of interest to the Division of Land include

- hydrologic factors affecting gravel recharge, particularly in the Kuskokwim River,
- availability and use of water data in ANWR, and
- water data relating to navigability determinations.

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 1
To Jim Munter	From Marty Welbourn
Co. DW	Co. DWO
Dept.	Phone # 762-2425
Fax # 696-0078	Fax # 561-5807

MEMORANDUM State of Alaska
Division of Water
Hydrologic Survey

To Jim Munter,
Hydrologist

DATE: 4 March 1992

FILE NO:

THRU:

TELEPHONE NO:465-2533

SUBJECT: Data Issues

FROM: Rick Noll,
Hydrologist

I have not had any big problems in southeast with data issues between DOW and other agencies. I may not address some of the issues others are more concerned with. The time I worked with DEC on the Gold Creek project, DEC had problems with the data handling. Maybe some standardization for data collection and handling should be first before we try to decide what to do with the data.

Along another route, water managers in southeast are interested in using synthetic data. One program has been thrown around southeast (R10FLOWMOD) by the Forest Service, but the USGS did not like it. A survey of methods would be helpful, some idea of the data quality, and a list of best methods for certain areas of the state.

We need to evaluate data collection methods with respect to data needs. Some data can be generated by synthetic methods, other data needs will require 10 years of USGS records. This ranking of data quality on a cost to benefit ratio should be done.

United States Department of the Interior
GEOLOGICAL SURVEY
Water Resources Division
800 Yukon Drive, Fairbanks, AK 99775

TAKE PRIDE IN AMERICA

3-10-92

Jim Munter
Alaska Department of Natural Resources,
Division of Water
P.O. Box 772116
Eagle River, Alaska 99577-2116
Tel: (907) 696-0070
FAX: (907) 696-0078

Jim,

In response to your request for comments on ground-water database management issues being discussed by the Fairbanks North Star Borough Ground Water Task Force, I have enclosed the following comments.

- GWSI can store most parameters for a site that involve ownership, location, well construction, pump tests, field measurements of water quality and individual measurements of depth to water.

- A separate database is used for continuous measurements of water levels that is managed by a database system that we refer to as ADAPS. The ADAPS and GWSI database systems are tied together by similar component name such as site ID.

- Water quality information, for both surface water and ground water, is stored in the QWDATA database. The same connections exist between QWDATA and GWSI in that a query of GWSI can then lead to a retrieval of information from QWDATA.

- A program is under way now to develop the next generation of these databases on a national basis. The connection between the databases will become more relational and they will incorporate more types of new information.

- The information from the existing databases will be transferred into the new systems.

- Some of the advantages these systems offer the state is that the databases are up and running and have information in them that may be used by state personnel. GWSI currently has over 18,000 sites in the database.

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- There are already agreements in place between DNR/DOW for inputting information into GWSI.

- QWDATA is not currently being used for state information, but a side-by-side database could be set up for state water-quality information.

- The adoption of these databases would also provide the link to national efforts for maintaining and upgrading the database systems.

The adoption of these databases may help the state manage its ground-water resources. The management problems may be worked out in meetings that may include representatives of the information users and the database managers. The regulations which you mentioned do need changing to address current and future conditions of who is collecting information, the uses of the information, and how to regulate the reporting of information. I would suggest a request for input from the Fairbanks North Star Borough Ground Water Task Force, the Kenai Ground Water Task Force and the state chapters of the AWRA and the American Ground Water Association. The two task forces are already setup and could provide valuable feedback for the state. If you have further questions don't hesitate to call Bob Burrows or myself in Fairbanks, 479-5645, or the District Chief, Phil Carpenter in the Anchorage office, 786-7100.

Sincerely,

Michael Lilly

cc: w/o enclosures
District Chief, WRD, Anchorage, Alaska
Chief, FFH, WRD, Fairbanks, Alaska