STATE OF WYOMING

2000

ANNUAL REPORT

OF THE

STATE ENGINEER

STATE BOARD OF CONTROL

BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS

July 1, 1999 through June 30, 2000

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Introduction
by
Richard G. Stockdale
Acting State Engineer

During FY 2000 several significant events took place in the State Engineer's organization, not the least of which was the resignation of State Engineer Jeff Fassett. Jeff resigned on June 15, 2000 after 13 years of distinguished and valuable service to the people of the State of Wyoming and the State Engineer's Office. I want to take this opportunity to personally thank Jeff for his unswerving dedication in representing Wyoming's water interests locally, statewide and nationally. His insight and knowledge of water resource issues will be sorely missed.

On June 15, 2000 Governor Geringer appointed me as the Acting State Engineer for an indefinite period of time. Assuming the duties and responsibilities as Acting State Engineer was not a particularly easy task. However, with the assistance of the Cheyenne staff and the field staff, I proceeded.

Major demands were placed on agency resources in several areas during FY 2000. These areas were: North Platte River litigation/settlement; coalbed methane activities; proposed legislation; water planning activities and the initial stages of drought conditions.

Trial in the North Platte River litigation was set for May 10, 2000 before Special Master Olpin in Pasadena, California. Earlier in FY 2000 Governor Geringer and Governor Johanns of Nebraska agreed to re-institute settlement discussions to see if litigation of the North Platte River lawsuit could be resolved. The two Governors agreed that each state would have a 2-person settlement team comprised of "technical" members and not attorneys, so that parallel courses of settlement and litigation preparation could occur. On May 10, 2000, a "courthouse step" accord was reached by the two states, which culminated in the preparation and approval of a document entitled "Principles of Settlement." This document was designed to be a skeletal framework from which a detailed "settlement agreement" would be derived. Based upon the agreement by the States, Special Master Olpin stayed the court action until December 1, 2000 to allow the parties an opportunity to work out the details of the settlement agreement.

During FY 2000, Mr. Fassett was responsible for organizing a group of water resource attorneys, water resource managers, and interested individuals from the public to discuss and consider the need and desirability of water legislation to address changing demands on Wyoming's water resources. Several meetings of this group were held during FY 2000. The results of those meetings culminated in the identification of several water management issues which were

brought before the Joint Agriculture and Public Lands Committee of the Wyoming Legislature in early June, 2000. Of the four areas discussed, the Committee directed their staff attorney to prepare draft legislation on two topics: a) the definition of salvage water, and b) temporary change of use. Hearings on these two pieces of proposed legislation will be held during FY 2001.

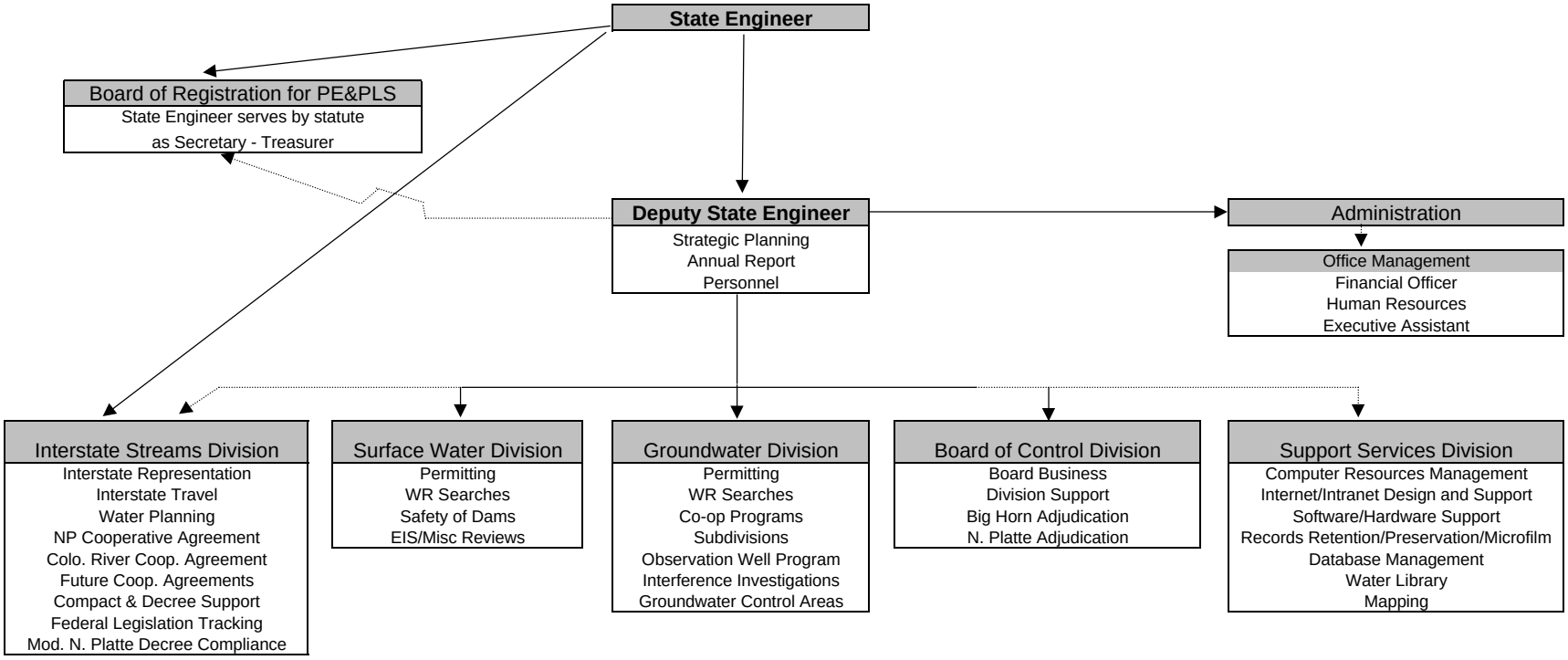
Coalbed methane development in the Powder River Basin and associated water issues continued to place extremely large time demands on the State Engineer organization. Permitting activity, field inspections, both surface water and ground water facilities, educational activities, water right searches and policy meetings were the major areas of involvement. Based upon information generated by industry representatives it appears that coalbed methane development in the Powder River Basin will accelerate and that coalbed methane development in other areas of the state can be anticipated in the future. Additional demands on staff time will become more problematic as the development increases.

The newly initiated water planning process is underway in the Bear River and Green River Basins. Basin Advisory Groups (BAG's) have been formed in each of the Basins and monthly meetings have been conducted. Staff of the State Engineer's Office who are involved in the water planning process attend and assist with the BAG meetings in addition to attending and assisting with technical meetings held with the technical consultants involved in the process. These meetings provide policy direction to the consultants to ensure coordination and standardization in the planning process. It is anticipated that northeastern Wyoming will be the next area to be considered in the water planning process.

Other "day-to-day" activities associated with the market analysis for employee salaries, the dry climatic conditions experienced during the winter and spring of 2000, the wrap up of several Bighorn Adjudication issues, field mapping programs, etc., kept the staff very busy. The changing demographics of the state will no doubt place additional demands on the staff as the state's population grows, attitudes change and the competition between water uses accelerates.

Wyoming State Engineer's Office

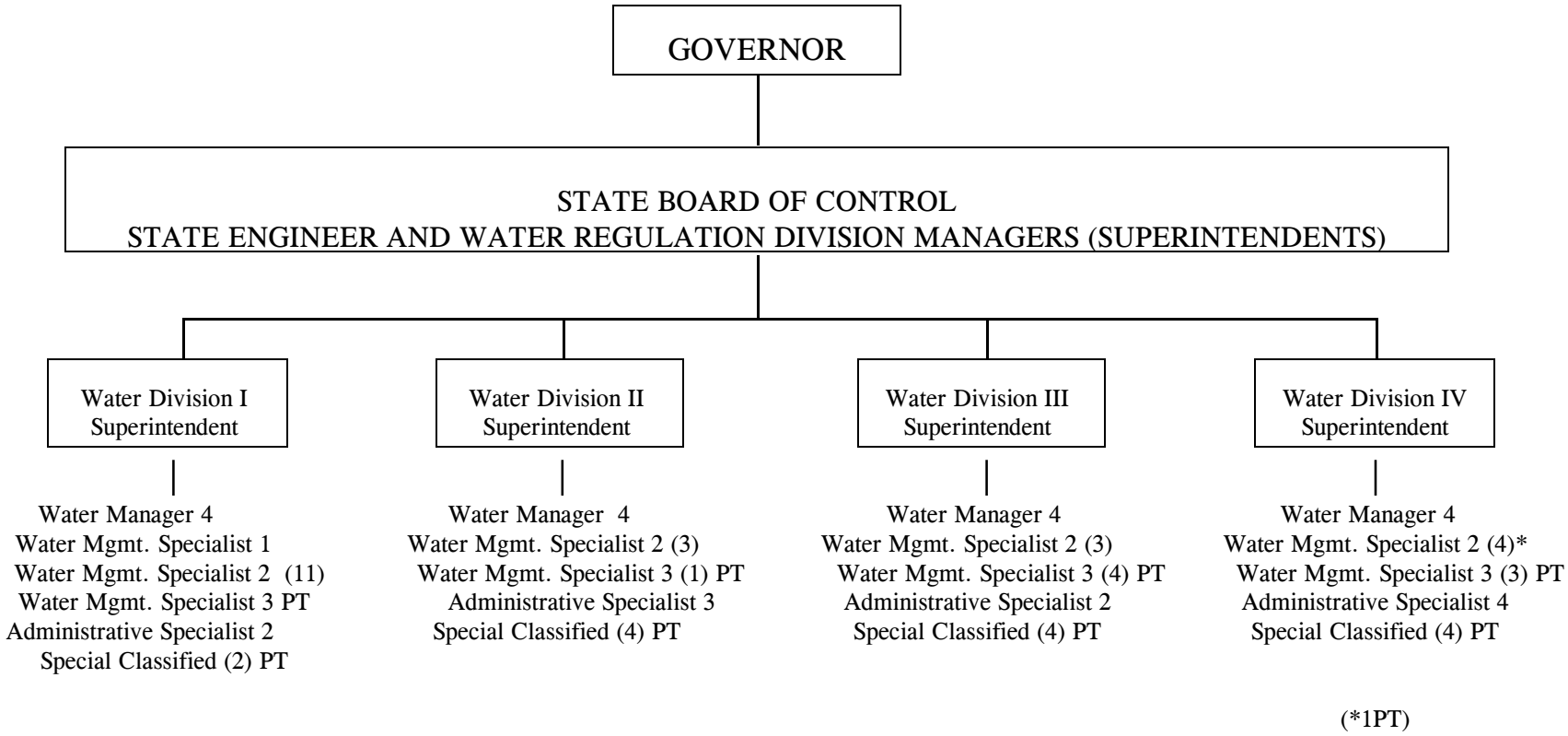
2002 Programmatic Organizational Chart



Primary Reporting Relationship (performance evaluations, workload determination, leave slips, etc.)

Secondary Reporting Relationship (general agency information dissemination, personnel grievances, etc. - Deputy must be kept informed of important issues routinely, especially in the absence of the State Engineer)

ORGANIZATIONAL CHART-STATE BOARD OF CONTROL



ORGANIZATIONAL CHART-STATE BOARD OF REGISTRATION

FOR
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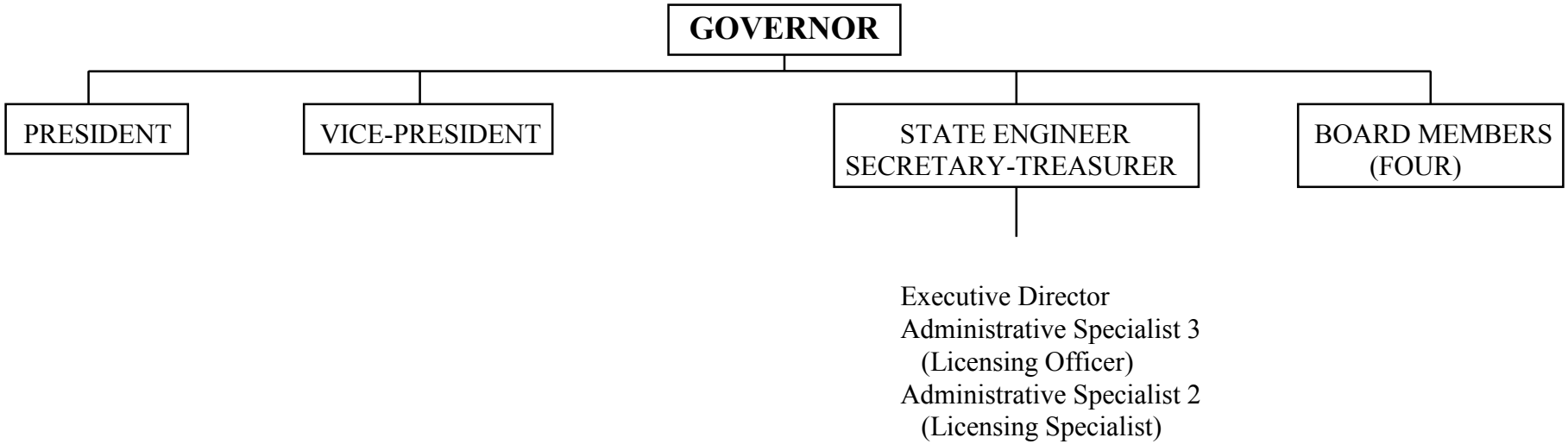
PROFESSIONAL LAND SURVEYORS



ADMINISTRATION & INTERSTATE ACTIVITIES DIVISION

Sue Lowry
Director of Policy and Administration

The Administration Division of the agency consists of the personnel, fiscal, and state engineer support staff as well as the interstate streams activities, water planning and water conservation sections.

Fiscal and Personnel Issues

The Administration section conducts the general administrative duties of the agency, such as budgeting, fiscal payments, receipting of r funds, payroll, and benefits management, and executive secretarial duties for the State Engineer. The large number of coalbed methane well applications that are being received by the groundwater and surface water division has had an impact on the workload for the fiscal staff as the payment accompanying the water right applications must be receipted for in a timely manner.

Salary adjustments were awarded by the agency in August, 2000. The goal was to bring all our employees to at least 80% of market. Many of our employees are still between 80% and 100% and our goal is to get our employees at a salary level competitive with the private sector. As there are few water resources jobs similar to those performed by our employees, obtaining meaningful market data is difficult. In addition to the market adjustments, a $25 per month increase was made in the state contribution to medical insurance, and an additional $10 per month longevity payment will be made for every 5 years of state service. Agency training was held in May, 2000 for our Cheyenne staff on “Negativity in the Workplace” training.

Office and storage space continues to be a concern as the number of records continues to expand. The records preservation work that has been done to stabilize old paper and mylar records expands the amount of space needed for storage as filing envelopes and acid free liners are added to the drawers and books.

The resignation by Jeff Fassett as of June 15, 2000 will have an impact this division, as they work closely with the State Engineer on the day-to-day operations of the agency.

Coordination on Water Resource Issues

Coordination activities with the other Natural Resource agencies also continued through the reporting period. The agency heads for the State Engineer's Office, Department of Agriculture, Environmental Quality, State Lands, Game and Fish, Water Development Commission, and Department of Commerce meet every other week to discuss common issues as the Natural Resources Sub-Cabinet. The State Engineer's Office holds quarterly meetings with the Game and Fish and the Department of Environmental Quality (DEQ) to discuss issues that may impact our agencies. The Total Maximum Daily Load (TMDL) issue is quite complex and a TMDL Task Force has been established by DEQ to get increased involvement from the citizens of the state. The State Engineer's Office sits on that Task Force in an advisory capacity. The close relationship between water quality and water quantity cannot be ignored and will likely be a topic, which receives increased attention in the future. Discussions between the DEQ and our agency have been held to discuss the potential impacts of more closely tying water quality and quantity factors and the best approach for maintaining state control over the issue. The Western Governor's Association obtained funding from the Environmental Protection Agency (EPA) to hold workshops among the western states to share their experiences in getting TMDL's written, approved and implemented. One of these workshops was held in Park City, Utah in August, 1999 to discuss the relationship between water quality issues and state primacy over water allocation.

The Natural Resources Conservation Service has expanded the role of its State Technical Committee. The State Engineer's Office has maintained an active role in this committee, and on the sub group examining an equitable way to distribute the funds in the Environmental Quality Incentives Program (EQIP).

The State Engineer also serves as the Chairman of the Wyoming State Water Forum. The Water Forum meets monthly and provides state and federal agency personnel a regular opportunity to share information and insight on the water activities that are ongoing in their respective agencies. Each month a special program is presented, providing a more in-depth review of a particular water related issue or topic. The Forum continues to provide an important information exchange mechanism in an informal setting.

Since the Wyoming Water Center's closure in June, 1998, we have been concerned with the lack of practical, Wyoming specific water research being done at the University of Wyoming, as well as the University's ability to train water resource students to the point they were prepared to come work for our agency or other natural resource agencies in Wyoming. Discussions are underway for utilizing the USGS states grant-in-aid program so that Wyoming may still participate even without the Water Resources Center being in place.

As Wyoming is the headwaters of each of the major western river basins, our participation in regional water organizations is critical to stay abreast of issues of importance to Wyoming. The Western States Water Council (WSWC) continues to be a valuable organization in following water policy issues that impact all of the western states. Jeff Fassett completed his term as the Chair of the WSWC during this reporting period. Sue Lowry continues to serve on the Board of Directors for the Interstate Council on Water Policy.

The state planning coordinator documents that are circulated to state agencies are tracked by the administration division. During this reporting period, 158 documents were received and reviewed.

INTERSTATE STREAMS SECTION

by

John W. Shields
Interstate Streams Engineer

Sue Lowry
Director of Policy and Administration

Objectives

The State Engineer is charged with administering and overseeing all matters involving Wyoming's interstate and intrastate streams and rivers. A primary objective of the State Engineer's administration of Wyoming's water supplies is to safeguard the State's current and future water supplies - by preserving Wyoming's ability to use and develop our water allocations under our interstate compacts and court decrees. The functions of the Interstate Streams Section are directed towards accomplishing that objective. Wyoming is party to seven interstate river compacts, and court decrees have been entered in several river basins. The Interstate Streams Section (ISS) provides technical and policy support for water allocation and administration issues associated with these governing compacts and decrees. The functions of the ISS are further described by the following:

1) The majority of the management and administrative workload completed by the various interstate river basins is accomplished through technical staff-level committees that meet throughout the year. Wyoming's participation and technical support on those committees is provided by the ISS.

2) In addition to the State Engineer's representation on the interstate compact and decree organizations and committees associated with the specific river basins, other regional and national organizations provide additional interstate forums to address and cooperatively resolve various water management issues on both a

regional, West-wide or national level. The ISS assists and supports the State Engineer with his involvement or directly provides Wyoming's participation in certain of these water organizations.

3) The two Interstate Streams Engineers provide technical assistance and staff support to the State Engineer on diverse water legislative, policy, information and topical issues.

Interstate Streams Activities

The following summarizes notable activities of the Interstate Stream Section by river basin or issue:

Missouri River Basin

Wyoming continues to participate in the Missouri River Basin Association (MRBA) with the other states of the Missouri River (Montana, North and South Dakota, Nebraska, Iowa, Kansas and Missouri) and the Indian Tribes of the basin represented by the Mni Sose Coalition. In September, 1999, the MRBA issued a set of basin recommendations for the Corps of Engineers to consider in developing their preferred alternative for the draft Environmental Impact Statement covering the operations of the Missouri mainstem reservoir facilities. The recommendations centered on the following topics:

- Flow Management Recommendations
  - Water Supply
  - Navigation Support Guidelines
    - Season Length Checks
    - Drought year Service Levels
    - Navigation Preclude
  - Evacuation of Flood Control Zone
  - Water Depletions
- Environmental Recommendations
  - Recovery Committee for ESA listings
  - River Flows
    - Unbalancing of the Upper Basin Reservoirs
    - Lower River Habitat Improvements and Recreation Flows
    - Fort Peck Enhancement Flows
    - Gavins Point Releases
  - Habitat Acquisition and Enhancement
  - Monitoring and Research
- Tribal Recommendations

The recommendations were supported by 7 of the 8 states, with only Missouri dissenting. The movement toward larger conservation amounts earlier in a drought was a big concession for Kansas, Iowa and Nebraska, and these states should be commended for their recognition of the contemporary needs and desires of the residents of the Missouri River basin. As the Corps was preparing to release the draft EIS, they had entered into formal Section 7 consultation with the Fish and Wildlife Service as provided for in the Endangered Species Act (ESA). The three listed species are the least tern, piping plover and pallid sturgeon. Although the consultations were conducted on the existing operations of the Missouri River rather than the preferred alternative under the dEIS, the Corps still felt that the results of the Biological Opinion would provide the guidance they needed for developing a preferred alternative that would result in a "no jeopardy" finding under the ESA. The completion of the Biological Opinion is expected to take about 8 months, further delaying the issuance of the drat EIS covering potential changes to the Master Manual. The draft Biological Opinion was released for public review in June, 2000, with the final Biological Opinion scheduled for November, 2000. FWS Director Jamie Clark and Assistant Secretary Westphal attended the June, 2000 meeting of the MRBA board of Directors to describe the findings in the Biological Opinion and how the Corps expected to react to the requirements outlined in the Biological Opinion.

The states remain interested in participating in the ESA recovery and continue to explore with the Corp and the FWS the potential for a recovery program in the Missouri River basin. The FWS recognizes the value and importance of adaptive management in their draft Biological Opinion and the need for the states and stakeholder groups to participate in order to implement the needed changes for species recovery.

Wyoming served as the Treasurer to the MRBA until June, 2000 when Sue Lowry was named the Vice-President of the MRBA and Nebraska assumed the Treasurer duties.

North Platte River Basin

Water Year 1999 was one of "squeaking by" with dry conditions during the greatest part of the water year supplemented by timely storms and late season rains. Fortunately, carry-over reservoir storage was very favorable (well above average) coming into the year.

The annual Natural Flow and Ownership meeting was held in Scottsbluff, Nebraska, on April 6th. A number of minor changes were made to the Storage Ownership and Natural Flow Accounting Procedures for Water Year 2000 and were adopted by the States of Nebraska and Wyoming and the USBR as the

basis for river and ownership administration during the upcoming irrigation season. These procedures included revised conveyance loss computation provisions that have been under development and consideration for during the past several years.

The Interstate Streams Section, the Administrator of Technical Services and certain staff members of the Cheyenne Office and Division One field staff assisted Wyoming's legal counsel during this reporting year with ongoing discovery, trial preparation and litigation-related activities in the Nebraska v. Wyoming and Colorado litigation before the United States Supreme Court. A settlement in principle was reached on May 10th on the very day that the trial in the lawsuit was to begin in Pasadena, California.

Additional information on the Platte River Cooperative Program addressing Endangered Species Recovery in the Platte can be found in the Technical Services section of this Annual Report.

Yellowstone River Basin

The Yellowstone Compact Commission consists of a representative from Wyoming and Montana and the federal Chairman. Both the Federal Chairman and the Montana representative are fairly new in their positions and felt that a tour of the basin would enhance their knowledge of the issues. A tour was held on July 20-22, 1999. Stops were made at Twin Lakes Reservoir near Sheridan, Tie Hack Reservoir near Buffalo, and the group saw active construction taking place at the Greybull Valley reservoir site. The tour concluded at the enlargement of Tongue River Reservoir in Montana.

The annual meeting of the Yellowstone River Compact Commission was held in Billings on November 30, 1999. The report for water year 1999 showed above average water supplies in each of the 4 major Yellowstone tributaries, ranging from 109% in the Clarks Fork, to 143% in the Big Horn River basin. The National Water Quality Assessment (NAWQA) program being conducted by the USGS in the Yellowstone River basin was in its intensive sampling phase during this reporting period. The NAWQA program is a nationwide program in which standard water quality parameters are sampled to compare river basin quality in different geographic areas. The Coalbed Methane development occurring in the Powder River basin of Wyoming is of great interest to Montana and they are requesting to be kept better informed of the ramifications of this development on water supplies and water quality of the water flowing downstream to Montana from coalbed methane dischargers in Wyoming.

Belle Fourche River Basin

The Rapid City Bureau of Reclamation office is responsible for the operations of the Bureau facilities on the Belle Fourche River in both Wyoming and South Dakota, including Keyhole Reservoir. The Bureau sponsored an informational meeting in Sundance in July, 1999 to meet with area water holders and other interested members of the public about Keyhole operations. After the low storage levels of the early 1990's the Bureau has been quite sensitive about keeping the reservoir as high as possible for recreational uses. Crook County Irrigation District (CCID) raised the issue of an adequate amount of flood control space in case a large precipitation and flow event was received in the area. CCID sent a letter to the Bureau after the Sundance meeting requesting the evacuation of 25,000 acre feet of space each fall. The Bureau responded that they felt the 25,000 acre feet amount was too high, but that they would agree to a 15,000 acre foot space. The Bureau continues to watch the coalbed methane development in the Belle Fourche basin in Wyoming in order to assess if their inflow models need to be updated to account for additional supplies that may be coming into Keyhole due to coalbed methane discharges.

Colorado River Basin

Water Year 2000 observed dry hydrologic conditions in the basin. The distribution of precipitation and snowpack accumulation through the water year, however, was quite varied. Very dry weather in late October, November, and December 1999 resulted in snowpack levels being very low by January 1, 2000. The final January inflow forecast issued by the National Weather Service called for only 52 percent of average April through July unregulated inflow into Lake Powell. January, February, and March, however, were months with moderately above average precipitation and the hydrologic picture improved by April 1, 2000; with the final April inflow forecast for 85 percent of average April through July unregulated inflow into Lake Powell. Hydrologic conditions reversed again, however. April was very warm and dry, with many snow gaging sites showing record loss of snow during the month. The National Weather Service dropped the April through July inflow forecast by 1.3 million MAF from April to May with the May forecast calling for only 69 percent of average. Unregulated inflow into Lake Powell was 9,020 MCM (7.32 MAF) in Water Year 2000, approximately 62 percent of average. This below average inflow resulted in a decrease of approximately 2.06 MAF of storage in Lake Powell, with total Colorado River system storage decreasing by 5.09 MAF during Water Year 2000.

It is anticipated that late fall releases from Glen Canyon Dam will be increased as one strategy to prevent the Colorado River Storage Project (CRSP) Basin Fund from becoming deficit. Several factors have contributed to the depletion of the CRSP Basin Fund. Below average hydrologic conditions in the Colorado River Basin in Water Year 2000 resulted in reduced generation at CRSP units.

Additionally, "on peak" generation at Glen Canyon Dam was further reduced by the Low Steady Summer Flow (LSSF) test carried out in compliance with the requirements of the Glen Canyon Dam Biological Opinion. During the LSSF test, "load following" (patterning of releases within the day to correspond to energy demand) did not take place. Compounding the effects of reduced generation, was the unprecedented high purchase power costs seen in the summer of 2000. Much higher than expected costs were required to replace lost Glen Canyon power to meet Western's contractual obligations.

An important interstate matter continues to be the seven Basin States effort to resolve Colorado River management and operation issues associated with California's long-term use of Colorado River water in excess of its basic apportionment of 4.4 million acre-feet (MAF). Since 1991, the other six states have been pressing the State of California to develop and implement a detailed and specific plan to reduce its annual uses of the Colorado River to its basic apportionment of 4.4 MAF in "normal" water supply years. This dialogue has been necessitated as the annual use of the three Lower Division states approached, and now is at and over 7.5 MAF per year. This 7.5 MAF amount is the maximum annual use amount that is allowable in years of normal water supply.

The Secretary of the Interior must set forth his determination that a surplus water supply condition exists in the annual operating plan in order for annual uses in excess of 7.5 MAF to be made. Accordingly, the Lower Division States must limit their use of the Colorado River to the entitlements set forth in the Colorado River Compact in the absence of a surplus declaration. During this reporting period, a number of necessary and important activities were accomplished toward the objective of bringing California's annual dependence on Colorado River water back to its basic apportionment level. These are briefly detailed in the following paragraphs.

In early August, the U.S. Dept. of Interior, Imperial Irrigation District, Coachella Valley Water District and the Metropolitan Water District of Southern California jointly announced agreement had been reached on a framework containing the necessary elements for quantifying and administering the California agencies' rights to Colorado River water. In a press release entitle "California's Colorado River Water Talks Successful", Sec. Babbitt stated: "Because of this agreement, the goal of bringing California's take of Colorado River water under control is more clearly in sight." Subsequently, each of the agencies' boards approved the framework agreement, and thereafter a "key terms agreement" was finalized during negotiations over the three days of October 13-15, 1999.

The proposed settlement quantifies the amount of Colorado River water used by IID and CVWD within agriculture's 3.85 MAF entitlement, allows the state to "maximize its water resources through the San Diego - IID water transfer and provides for a number of other inter-agency transfers. The settlement terms also

address the state's position on a proposed Interior Department regulation on the reoperation of the Colorado River."

In mid-November, 1999, a Seven Basin State meeting was held in Ontario, California in order to provide an in-depth briefing for the other States on the Key Terms for Quantification Settlement. In addition, considerable discussion occurred on the Department of the Interior's Interim Surplus Operating Criteria National Environmental Policy Act (NEPA) development process. A number of concerns were expressed about the quantification agreement's terms as they related to, or prejudged, the interim surplus operating criteria.

In early December, the other six Colorado River Basin States transmitted a letter to the California Department of Natural Resources Director and to the Colorado River Board of California's Executive Director. The letter noted the other states' concerns regarding the "conditions precedent" portion of the Quantification Agreement. The other States noted to the California officials that they must be able to explain the benefits and justify the risks of adopting more liberal operating criteria to "our legislators, congressional members, water users and the general citizenry." It concludes with: "The California water agencies have made great progress in completion of the Quantification Agreement and are to be congratulated. California can build on what has been started by working with us to develop reasonable interim operating criteria that will be acceptable to our constituencies. We remain hopeful these historic accomplishments will be realized." A Seven Basin States Meeting held in Las Vegas, Nevada followed this correspondence. California stated that they needed additional time to put down the revisions to their previous draft of the Plan on paper.

In his speech at the Colorado River Water Users Association annual meeting in Las Vegas the day after the Seven Basin States meeting, Secretary of the Interior Babbitt stated that California had moved a huge distance toward acknowledging the dramatic changes it needs to make in its demands on the river, and the other basin states need to recognize and support the need for surplus guidelines that strike a "fair accommodation between providing California a reasonable opportunity to effect a transition to their entitlement and the concerns of the other states for a high degree of security based on maintaining adequate water supplies in storage." He called for a "burst of creative energy" that would bring about consensus on solutions that adequately satisfy the needs of each basin state.

During the remainder of the winter and spring the seven States continued to work on these matters. In mid-April, an extensive dialogue began on developing interim surplus operating criteria for declaring Lower Basin surpluses and how those surpluses would be allocated among the three Lower Division States. California had prepared a draft of their revised framework plan and advised they would be taking it to the Colorado River Board of California's April 19th meeting. The involved parties were separately developing the enforcement documents. In late

May, agreement was reached on the major elements of Interim Surplus Operating Criteria and additional meetings to deal with quantification agreements, overrun accounting, etc. were set and responsibility for developing same were delegated to various parties and state entities and representatives.

A six-State “Proposal for Interim Lake Mead Reservoir Operation Criteria Related to Surplus, Normal and Shortage Year Declarations” document was provided to California in mid-June, but at a late-June meeting California’s officials objected to the format of the document, and efforts were underway at the end of this reporting period to put the document in final form and to present it to the Secretary of the Interior. Late in the last reporting period, the Bureau of Reclamation held several public scoping meetings regarding the development of interim operating criteria that will govern the declaration of surplus water supply in the annual operating plan for the Colorado River Reservoirs during a fifteen-year interim period while the California Colorado River Water Use Plan is being implemented. The Department of the Interior had decided, despite the advice of the seven States being contrary, to initiate a National Environmental Policy Act (NEPA) process as the modus operandi for the interim surplus operating criteria development and adoption process.

The State Engineer is a member of both the Colorado River Basin Salinity Control Forum (Forum) and the Colorado River Basin Salinity Control Advisory Council. The Forum’s Work Group is comprised of at least one representative from each of the Basin States. The Work Group provides technical review and analysis for the Forum, who is the policy-making group. John Shields represents the State Engineer's Office on the Forum’s Work Group. At its October, 1999, meeting in San Francisco, California, the Forum approved its “1999 Review of the Water Quality Standards for Salinity in the Colorado River Basin." Section 303 of the Clean Water Act requires that water quality standards be reviewed from time to time, but at least once during each three-year period. The subject report documents the seven-state Forum review of the existing state-adopted and Environmental Protection Agency (EPA)-approved water quality standards for salinity consisting of numeric criteria and a plan of implementation for salinity control for the Colorado River System. The Forum recommended no change in the numeric salinity criteria at the three stations located on the lower mainstem of the Colorado River. The numeric criteria at these stations are:

Station	Salinity in mg/L1
Below Hoover Dam	723
Below Parker Dam	747
Imperial Dam	879

1 Flow-weighted average annual salinity.

On June 10th, Senator Bennett of Utah introduced the Colorado River Basin Salinity Control Reauthorization Act of 1999, which became S. 1211. Representative Chris Cannon of Utah introduced a companion measure, H.R. 2619, in the U.S. House of Representatives on July 26, 1999. Wyoming's Congressional Delegation members have joined as cosponsors supporting the passage of this legislation. These bills would increase the funding authorization for the Bureau of Reclamation's competitive bid-process, basin-wide Colorado River Basin Salinity Control Program, first authorized in 1995, from $75 million to $175 million. This legislation was introduced at the request of the seven-state Forum. A hearing was held on H.R. 2619 on October 21, 1999, during which the Administration's witness, Commissioner of Reclamation Commissioner Eluid Martinez, and the Forum's Executive Director expressed support for the legislation. The Senate Subcommittee hearing on S. 1211 was scheduled to be held after the end of this reporting period.

The seven-state Forum continued to direct much attention to the Department of Agriculture's salinity control program, which is carried out and funded through the Environmental Quality Incentives Program (EQIP), during this reporting year. When the Federal Agriculture Improvement and Reform Act (FAIRA) was signed into law on April 4, 1996, it combined the functions of the Colorado River Basin Salinity Control Program and three other USDA programs into the EQIP. FAIRA amended the Colorado River Basin Salinity Control Act to allow the Basin States to up-front cost-share on salinity control measures, rather than just repaying the Federal Treasury for the reimbursable portion of the Federal costs of salinity control measures as they are implemented. This up-front cost-sharing authorization provides a means to leverage the EQIP funding allocated to salinity control and to accomplish more salinity reduction than the funds appropriated to the USBR and the lending authority from the Commodity Credit Corporation for the EQIP allow.

This reporting year was the third year during which governmental entities within the States of Colorado, Utah and Wyoming administered this newly-created "parallel" salinity control program. In September, 1998, the Wyoming State Engineer and the Bureau of Reclamation entered into a cooperative agreement that transferred Colorado River Basin Development Fund moneys, authorized to be expended by virtue of EQIP expenditures for salinity control at the Big Sandy Salinity Control Project, to the State Engineer's Office. The Cooperative Agreement for this Basin States Cost Sharing Salinity Control Program is allowing the State Engineer's Office to provide funds from the Upper Colorado River Basin Development Fund, transferred to our office by the USBR, in addition to the NRCS's EQIP payments to farmers; thus there are three-way contracts on the Big Sandy Unit. The local producer, the NRCS and the State Engineer's Office are entering into contracts that are resulting in salinity control measures being put in place on lands within the Big Sandy Salinity Control Project area. As noted in prior reports, the Big Sandy

River Unit is the single USDA CRSCP salinity control project currently being implemented within the State of Wyoming. The Big Sandy continues to be the most cost-effective (in terms of dollars spent per ton of salt reduction) of the USDA CRSCP units.

The Colorado River Operations Management Group, comprised of technical personnel from each of the seven Colorado River Basin States, involved Federal agencies and other interested parties, developed the draft Annual Operating Plan (AOP) for the Colorado River Reservoir System for Water Year 2000. This AOP provided for a surplus water supply declaration by the Secretary of the Interior, which authorized more than 7,500,000 acre-feet of beneficial consumptive use to take place in the Lower Division States during calendar year 2000. As described above, the willingness of the other states to go along with this determination was tied to our assessment of the efforts being made by California to develop its "Colorado River Water Use Plan." This work group has developed the draft AOP each year since its formation in May 1986.

As a result of the October 1996 Record of Decision (ROD) for the Glen Canyon Dam Final Environmental Impact Statement (FEIS), a Glen Canyon Adaptive Management Work Group (GCAMWG) was formed as a Federal Advisory Committee Act (FACA) committee. The State Engineer is a member of this Work Group. The GCAMWG formed a technical work group that has been meeting on approximately a once-monthly basis since its formation at the October 1997 GCAMWG meeting. The GCAMWG and its Technical Work Group provide forums for the federal agencies, Colorado River Basin States, environmental and recreation groups and contractors for power generated at Glen Canyon Dam to collectively make recommendations to the Secretary of the Interior as to how he can protect downstream resources and strike a wise balance on river operations within the constraints of the Law of the River.

Wyoming's participation in the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin continues to be an important commitment for the State Engineer's Office. The Recovery Program is a Federal/State/private entities cooperative and collaborative program to recover four fish species native to the Colorado River Basin (resulting in removal of the species from the federal Endangered Species Act endangered species listing) while allowing water development to proceed in compliance with the Endangered Species Act. The Recovery Program was established in January 1988 to provide an administrative means to deal with the conflict between further development of water allocated by compact to the Upper Division States of the Colorado River Basin and the provisions of the Federal Endangered Species Act. The Program's participants are the States of Colorado, Wyoming and Utah, the U.S. Bureau of Reclamation, USFWS, Western Area Power Administration, representatives of the environmental community, electrical power retailers and water users associations in the three States.

The State Engineer is the State of Wyoming's representative on the Recovery Implementation Committee, which meets twice per year. John Shields has continued to actively participate in the activities of the Program's Management Committee and is currently serving as the Committee's Chairman. Paul Dey of the Wyoming Game and Fish Department continues to represent Wyoming on the Biology Committee and will be serving as that Committee's Chairman next year.

As reported in last year's annual report, the Program participants' long-standing, ongoing efforts to develop and implement a long-term funding mechanism for the construction of Recovery Implementation Program capital project facilities moved beyond discussion during the last reporting year with the introduction of legislation in the U.S. Congress, but the legislation did not advance to hearings. The legislation was re-introduced in the 106th Congress on June 24,1999 when Rep. James Hansen of Utah introduced H.R. 2348. The bill has seven co-sponsors including Wyoming's Representative Barbara Cubin. The House Resources Water and Power Subcommittee held a hearing on the bill on October 21, 1999. The bill was marked and amended by the House Subcommittee on June 15th and amended and reported out of the full Resources Committee on June 20, 2000. Senator Allard of Colorado introduced the companion measure, identified as S. 2239, in the U.S. Senate on March 9, 2000. A hearing was held before the Senate Energy and Natural Resources' Water and Power Subcommittee on April 25, 2000. The Governor, the Wyoming State Engineer, the Wyoming Water Development Commission Director and the Wyoming Water Association submitted testimony in support of this necessary legislation and sent correspondence urging the Subcommittee and committee chairmen to move the bill through the legislative process.

The bill authorizes appropriations for the Upper Colorado River Recovery Program at $82 million through the year 2005 and the San Juan River Basin Endangered Fish Recovery Program (a sister program initiated several years after the UCRIP in 1992 and which is intended to recover razorback sucker and Colorado pikeminnow while allowing continuing use and development of water resources in the San Juan River Basin) at $18 million through the year 2007. The bill establishes cost sharing mechanisms for construction of the capital construction portions of the two recovery programs. The appropriations authorized by this legislation will fund capital construction projects which include fish hatchery and refugia facilities for the genetic conservation and propagation of the four endangered species; for the restoration and enhancement of floodplain habitat and fish passage; for regulation and/or supply of instream flows; for preventing fish entrapment in canals; and for the removal or translocation of non-native fishes.

As reported herein in last year's annual report, the State of Wyoming did not wait for passage of the legislation to appropriate the State's cost-share funding to be

contributed upon passage of the federal legislation. Following up on their action during the 1998 Legislative Session, the 1999 Wyoming Legislature appropriated the second one-half ($850,000) of Wyoming cost sharing for the capital construction portion of the Recovery Implementation Program. Wyoming's share of the $17 million that the four states have agreed to provide for capital construction for the Recovery Program was negotiated to be a total of $1,700,000.

On December 20, 1999, the Mountain/Prairie Regional Director of the U.S. Fish and Wildlife Service signed the programmatic Section 7 biological opinion for the 15-Mile Reach of the Colorado River. The opinion addresses federal and other water projects as well as recovery actions by the Upper Colorado River Endangered Fish Recovery Program. The opinion allows water development for human uses to occur while recovering and protecting the Colorado pikeminnow, razorback sucker, humpback chub and bonytail. The opinion streamlines Endangered Species Act consultation for water users by providing compliance for all current depletions (averaging about one million acre-feet per year) in the Colorado River above the confluence of the Colorado and Gunnison Rivers near Grand Junction, Colorado. It also provides ESA compliance for up to 120,000 acre-feet per year of new depletions. It further addresses fish recovery actions that affect the Colorado River, including the 15-Mile Reach from Palisade, Colorado, to the confluence with the Gunnison River. Specific checkpoints are included to ensure that endangered fish populations are improving.

Recovery actions include increasing the amount of water released into the river during certain times of the year, improving river habitat, constructing fish passages to provide access to areas where fish lived historically, stocking and monitoring the status of the endangered fish and reducing the impacts of nonnative fish.

One example is the Grand Valley Water Management Project. Included in this project is improving efficiency of the Government Highline Canal system. These improvements will help reduce the diversions of the canal system by approximately 28,400 acre-feet of water in August through October each year. When this savings is combined with other water management activities in the opinion, up to 100,000 acre-feet of water could be made available to assist in meeting flows needed by endangered fish during the late summer and early fall.

Formal consultation on Wyoming's High Savery Dam and Reservoir Project, which will deplete the flows of the Little Snake River by an average of 7,724 acre-feet per year, have been completed with the U.S. Fish and Wildlife Service. A draft biological opinion was issued by the USFWS on December 31, 1998. The predecessor project to the High Savery Project, then known as the Sandstone Project, was a central reason why Wyoming chose to participate in the Recovery Program.

The development of the 15-Mile Reach Programmatic Biological Opinion (PBO) has led to the desire to develop a PBO for the Yampa River Basin, including both the Colorado and Wyoming portions of the Basin (Wyoming's portion principally includes the Little Snake River Basin). The Interstate Streams Section has actively participated in the deliberations of the Yampa River PBO Working Group. The intent of this effort is to develop a PBO by shortly after the end of the calendar year. The consultant preparing the Green River Basin Water Plan was tasked with developing current water use and reasonably foreseeable water demand figures for Wyoming's portion of the Yampa River Basin which will be incorporated into the PBO.

During this reporting year, the Green River Basin Advisory Group met on nearly a once-a-month basis in various locations around Wyoming's portion of the Colorado River Basin. The Basin Advisory Group is assisting the State water planning team by preparing a Green River Basin issues identification document (November 1999), reviewing planning products and providing recommendations and input on the water planning process and the Green River Water Plan document.

Bear River Basin

The Bear River Commission consists of 3 members from each of the 3 states of Wyoming, Idaho and Utah and a Presidentally appointed Federal chairman. The Commission helped sponsor a Bear Lake Symposium in September, 1999 in Garden City, Utah. Much of the symposium focused on the work of the National Science Foundation in examining the geologic record of Bear Lake.

The lower Division procedures (the river basin below Bear Lake) which describe how the Commission will react if a petition for lower division regulation is received are still awaiting an estimate of ground water use from Idaho. The Idaho Dept. of water Rights did receive a grant to hire a consultant to conduct field studies during the summer of 1999 in the central and lower division areas of Idaho. The DWR has additional work to do with the consultant's results before they are prepared to give an estimate to the Commission. Idaho has also raised concern over Utah's methodology for doing their groundwater estimate. Utah has been prepared to give the Commission an estimate of the groundwater depletions in Utah for several years.

Scottish Power has acquired PacifiCorp, but before the merger could be complete, the Public Service Commission in each state in which PacifiCorp did business needed to approve the merger. PacifiCorp does business in each of the Bear River basin states. When the Idaho PSC was completing their review of the merger, they attempted to add language that would have made all of PacifiCorp's Idaho water rights subordinate to other water rights on the Bear River. Wyoming

interpreted that the language would apply to the Bear Lake storage right, which could result in Bear Lake being below the compact stated elevation of 5911' more often. We contacted the Wyoming PSC and asked that they not take any action on the merger issue until we were able to work out an agreement with Idaho on the water rights language. The 3 states met several times during the summer of 1999, resulting in an Agreement signed by the 3 states, PacifiCorp and Scottish Power stating that the historic operations of the Bear River system would not change due to the merger and that an operations agreement would be negotiated. The draft operations agreement was completed in January, 2000 and a public hearing held in March, 2000. The final agreement was signed by the 3 states and Scottish Power at the April, 2000 Bear River Commission meeting.

PacifiCorp completed the re-negotiation of the storage delivery contracts for the West Cache Canal Company and the Last Chance Canal Company. These contract changes were made in order to reflect the accounting difference that will be reflected by the interstate accounting model, as opposed to the Idaho only model.

A petition has been submitted to the US Fish and Wildlife Service requesting the Bonneville Cutthroat trout be listed under the Endangered Species Act. The Fish and Wildlife Service has not yet rendered their opinion as the whether the petition has merit or not.

Columbia River Basin

The long awaited draft Environmental Impact Statement on the Salmon Recovery in the Pacific Northwest was released in December, 1999. The State Engineer's Office submitted comments in March, 2000 on the draft EIS. Our comments focused upon the million acre feet study that the Corps of Engineers

Snake River Basin

The Bureau of Reclamation in Burley, Idaho operates the facilities on the Snake River, including Jackson Lake and Palisades Reservoir on the Wyoming-Idaho border. Wyoming and the Bureau have held agency coordination meetings in the spring and the fall for several years. This past year, the meetings were held on October 4, 1999 and May 18, 2000. Many of the same issues were discussed, including the Fremont-Madison Irrigation District transfer, the statues of the Teton Wells, and the Biological Opinion on Snake River operations.

Planning Activities

The State Engineer's Office has been very supportive of the initiative to update the old water planning efforts of the early 1970's. The legislature did appropriate funds to complete a pilot study for water planning that was completed this past year. On July 1, 1999 the water planning program received full funding and the SEO was allocated one new position for working on water planning efforts. Chace Tavelli was hired into this position in July, 1999 and has been the SEO's contact person on water planning. Basin Advisory Groups (BAG) were established in the Bear and the Green River basin, which were the first two basins selected for completing a water plan. The Bear BAG met every other month while the Green River BAG met monthly. Issues identification was the first task of the BAGs and they were completed with this effort by November, 1999 in each basin. The two basin plans are scheduled to be completed in October, 2000 for the Bear and December, 2000 for the Green.

Water Conservation Program

Water conservation is not a new idea. It has been practiced as a tool for managing scarce water resources from the initial beneficial use that water was put to in Wyoming's arid environment. Conserving water has transcended from a time when water use was a survival issue to a time when economic considerations predominate. It has evolved from a time when efficient water use was a necessity of living to a time when water allocation is an ethical and political consideration.

Water in Wyoming was initially used for development of the extensive natural resources available to early settlers. Putting ample reserves of water to work raising crops, mining ore and moving materials was the foundation of early water allocation. More recently, as this resource has become more fully allocated, water conservation is being looked to for meeting rising demands. Population growth, community change, environmental mitigations and other state and regional issues are influencing water conservation efforts.

With these issues in mind, the Wyoming State Engineer's Office, in participation with the U.S. Bureau of Reclamation, is developing strategies and options for a water management and conservation program for the State of Wyoming. The intent of this effort, initiated August, 1998 is to research, document, discuss and organize water management and conservation information which will ultimately be available to water users and the public for use in making decisions relating to voluntary water conservation implementation.

The objectives of the water management and conservation program are as follows:

- address water conservation practices for agriculture, municipalities, industry and fish and wildlife,
- investigate water conservation strategies most beneficial to irrigation districts, land owners, municipalities, industry and fish and wildlife,
- evaluate methods and types of water conservation measures,
- analyze ramifications of implementation of water conservation measures,
- evaluate impacts to surface and ground water by water conservation measures,
- identify sources of assistance for implementing water conservation practices,
- research water law and regulations in Wyoming and other western states for options providing incentives that encourage wise use.

Ron Vore has been in this contract position since July, 1998. The position has been funded 50-50 with the Bureau of Reclamation since its inception. Our approach has been to develop a water conservation program that fits with the water needs and circumstances in Wyoming. The program is strictly voluntary. The following outlines the major program components to date:

PUBLIC OUTREACH

Ron has held numerous meetings with water right holders, stakeholder groups, water planning BAG members, agency personnel, county extension agents, etc. to explore the needs for water conservation in Wyoming.

Water Conservation Symposium hosted by Wyoming in conjunction with Western States Water Council in Casper, July, 2000. 11 states attended.

With closure of the Water Center and loss of University water related personnel, Ron is the main person making contact in the state on water and irrigation efficiencies.

TECHNICAL REVIEW AND COMPILATION

Ron has pulled together sample or estimated water savings related to various types of conservation practices, such as change from flood irrigation to sprinkler, low head sprinkler systems, lining of ditches, gated pipe, etc.

WATER PLANNING

Each of the basin water plans will include a general chapter on water conservation. As appropriate, additional water conservation information will be included if available for the basin. In the Bear River, criteria were developed for ranking conveyance systems in known areas of water shortage.

FUNDING MECHANISMS FOR CONSERVATION PRACTICES

A directory of all the various agencies and non-profits that have some type of land management or water related funding program was pulled together into one bound document. This directory is available on our web site and is being updated to include more email addresses and web information.

COALBED METHANE ACTIVITIES

When the Coordinated Resource Management (CRM) groups were being formed in the "horses" area in the Powder River basin, Ron worked with Dennis Sun and some of the landowners discussing what their water management options might be for produced coalbed methane water.

BUREAU OF RECLAMATION PROJECTS CONSERVATION PLANS

Water Conservation plans must be developed for all of the Bureau of Reclamation irrigation projects in the state. As these become available, Ron is reviewing these plans.

DROUGHT PLANNING/RISK ASSESSMENT

The Governor named a drought task force this past summer during the extremely dry conditions in Wyoming. A subcommittee of the task force is now examining what climatological or meteorological information exists in Wyoming. As many water conservation practices are also helpful in drought planning, Ron is working with the subcommittee exploring the potential similarities between our conservation program and a drought response plan for Wyoming.

LEGAL REVIEW

While the basic tenets of Wyoming water law have served us well over the years, there are instances where the law may not provide as much incentive as may be possible for direct flow water right holders to install water conservation measures. The review of our law led the State Engineer to discuss with the Legislature's Joint Agricultural Committee in October, 1999 and June, 2000 potential language for salvage water that could be "saved" from water conservation activities and legislation to make more clear when the temporary water right statute can be utilized.

Interstate Policy Issues

Various Federal legislative actions, including bills to reauthorize the Clean Water Act, the Safe Drinking Water Act and the Endangered Species Act have been monitored and input given to our Congressional delegation and various interstate organizations regarding potential impacts to Wyoming water rights, law and allocations. The water quality-quantity discussions that have been occurring between our agency and the Department of Environmental Quality were summarized in the Administration section.

Organizations

In addition to the several compact commissions and organizations briefly reported on above, the State Engineer's Office participates actively on the Western States Water Council, the Interstate Conference on Water Policy, the Colorado River Water Users Association, the Upper Missouri Water Association, the National Water Resources Association, the Committee of Fourteen, the Association of Western State Engineers and the Four States Irrigation Council. These organizations provide an avenue for the western states and water user interests at the local, statewide and Federal levels to present unified positions with regard to Federal regulations, legislation and policy matters and a forum for policy development. The educational programs of these organizations serve to increase public awareness of and involvement in vitally important, broad-spectrum water resource issues.

Summary Analysis and Problem Areas

Protection of Wyoming's water resources for future use of the citizens of our State is a continual and important responsibility of the Wyoming State Engineer. Our agency's broad powers and responsibilities in the interstate arena, as compared to other Western States' water resource agencies, allow the State Engineer's Office to function in a straightforward and direct manner in carrying out our prime objective of protecting Wyoming's rights and interests to the waters of our interstate rivers. We can be certain that Wyoming's interests will only be well represented when the Wyoming State Engineer and his interstate streams staff participate in the groups and discussions discussed in this report.

Interstate tasks and negotiations are critical activities that present time- and labor-intensive challenges. Population and development growth in neighboring downstream states and the ensuing greater demand for water continue to mandate an increasing level of State Engineer involvement in interstate river basin activities. Endangered species conservation/recovery program and river/riparian habitat concerns have significantly added to the workload of the Interstate Streams

Section as compared to a decade ago.

Our neighboring states are finding it necessary to deal with reallocating among water uses due to full use of their apportionments. The pace of these activities elsewhere continues to accelerate and intensify. While that situation will likely not present itself to any great extent in Wyoming in the foreseeable future, it is important that Wyoming monitor those activities in order to assure that our undeveloped compact-apportioned waters continue to be available to meet our future beneficial use needs in the future.

Western water policy continues to evolve due to changing values, pressures and competition. These forces are apparent in the nature of the ongoing activities that the ISS is involved with and monitoring: the ongoing review and EIS of the Missouri River Mainstem Operations Master Manual; the Columbia River System Operations Review; and the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. The significant amount of Federal development and construction of water project facilities across the West virtually ensures that it will be necessary for the Wyoming State Engineer's Office to be involved in Endangered Species Act, National Environmental Protection Act and other federal statute-driven activities in Wyoming and our neighboring States.

The Wyoming State Engineer's proactive involvement in interstate river basin activities is unarguably in the State's interests. Each activity presents new challenges, water management questions and administrative issues that must be addressed during their solution development and implementation phases. The Wyoming State Engineer's ISS staff is participating in these matters and fully coordinating with State, Federal and local officials and publics in order to properly advise and assist the State Engineer.

Research on quantifying water uses and other administrative information needed to actually accomplish compact administration for several of Wyoming's compacts are not being accomplished due to higher and more immediate priorities associated with the "normal" workload.

Recommendations and Conclusion

With a two-person section, it is necessary to have a reasonable working knowledge of issues being addressed by one another so that questions can be answered when the primary person is unavailable. In the case of endangered species activities, the underlying issues seemingly are the same irrespective of the species or the basin. Timely communication between the ISS and the State Engineer is critical and continuously ongoing on the many activities and projects that are being addressed. The development of an integrated filing system and computerization of the listing of our records held by Archives would be quite valuable to efforts to research compact materials pertaining to ongoing issues.

The Interstate Streams Section is appreciative of the generous support and cooperation of the Cheyenne Office and statewide State Engineer and the Board of Control staff. The water resources personnel in the employ of the State of Wyoming are dedicated, tireless and professional and deserve our commendations. We would like to take this opportunity to express our deep appreciation and gratitude to Jeff Fassett for his many years of leadership on interstate issues during his tenure as state engineer. His personal interest and vision in Wyoming's role on these many interstate groups built Wyoming's reputation as knowledgeable in facilitating workable solutions for the basins. It was a delight to work along side Jeff on our interstate issues and a pleasure to watch him as he worked his communications magic in sometimes tense and difficult situations. We will miss you greatly!

TECHNICAL SERVICES DIVISION

Comprised of three permanent and three contract positions, the Technical Services Division staff was stable throughout the year of July 1, 1999 through June 30, 2000. While the three contract staff was busy with data entry and proofing, the two full time information technology professionals we fully occupied with network issues and programming projects (reports by Donna Crock and Steve Rea occur later in this chapter). The Technical Services Administrator, Rebecca Mathisen, divided her time between Platte River Basin issues, Wind River studies, and Information Technology projects.

DATA ENTRY AND PROOFING – by Rebecca Mathisen

As the biennium comes to a close, the Technical Services Division wants to take this opportunity to acknowledge the contract and temporary employees who have worked on the water rights database for the past two years. We also want to thank Jeff Fassett for making data entry and checking a high priority and the legislature for funding our contract positions for the past two years.

The current contract staff in the Technical Services Division consists of Amy Seekins, Kim McMasters and Steve Vossler. These individuals and others have waded through every page of the 141 Ditch permit books, 32 Enlargement permit books, 53 Reservoir permit books, 2 Combination books and 80 Stock Reservoir permit books to enter “summary data”. These new data are found in the AppropSW Table, currently consisting of 166,302 records. One purpose of the AppropSW Table is to enable the user to find the current status information (CAN, ADJ, ABA, EXP, ELI and UNA) for any given permit. The users are able to find the appropriated quantities by use (IRR, STO, DOM, COM, FIS, etc.), if identified on the permit, and by status and supply type. In the process of entering these data, many discrepancies have been identified and have either been corrected or will be corrected.

Another rather new table is the AppropAJ table, containing 54,535 records. That table will eventually contain all Adjudication information including Petition, original adjudication and Interlocutory Decree information. There have been 7 Interlocutory Decree books, 48 Order Record books and 81 Certificate Record books entered into this table by Technical Services and Board of Control staff.

The new GLOCards Table is a list of all the GLO cards and shows what surveying has been done and whether it is an Original, Independent or Dependent resurvey, and whether or not there are supplemental plats. The Index to Segregated Tracks (IST)Table and ISTTotal Table are also brand new, thanks to the contract staff.

The Streams and PtSrc (aka Point Source) tables are two other tables that are rather new and are due to the work of our contract and temporary staff, with

assistance from SEO permanent staff. The Streams Table contains every stream tributary sequence in the stream cards of the Surface Water Division, and assigns a unique identifier to each sequence called the StrKey field, made up of 28 characters. There are 23,851 stream sequences in the Streams Table. The PtSrc Table assigns a unique identifier (the SrcID field) to each headgate location and lists other important data such as headgate location, ditch name and, someday, the section ties. Currently the PtSrc Table contains 115,343 records of which 7,746 still need to be correllated to the Streams table by assigning the correct StrKey. This research includes pulling the permit, map, quadrangle, stream cards, township cards and in some cases the adjudication information. As discrepancies are identified in stream tributary sequences in the various records, the Surface Water Division and Board of Control are notified.

We want to thank the Surface Water and Board of Control Divisions for their patience in training us to read and interpret their records. We look forward to beginning a similar data entry and checking project for the Ground Water records in the next biennium. When complete, the Approp* tables (AppropGW, AppropSW, and AppropAJ) will include identical fields for describing appropriated amounts; including appropriation types, appropriation amount, unit of amount, acres, uses, supply type, and how other permits are related. Once again, THANK YOU to the contract and temporary employees for entering and checking this important information!

OFFICE AUTOMATION – by Rebecca Mathisen

As the staff of the State Engineer's Office becomes more aware of the benefits of automating certain office functions, the information technology staff in the Technical Services Division is increasingly busy. While automating is a progressive and positive trend, it has a cost in the form of stretching the agency's two full time IT staff. The list of IT assignments continues to grow, leaving many projects undone for the foreseeable future.

In October, 1999, the State Engineer asked the SEO Computer Committee to identify ways to automate and become more efficient. Since then, Technical Services Division has collaborated with the Ground Water and Board of Control Divisions to accomplish the following:

- Entering of GW application information upon receipt of applications, allowing quicker access to info on recent applications, prior to permit issuance. The GW entry record books will now be generated from the water rights database instead of being hand written.
- Consolidation of adjudication information into one database (the Water Rights Database) instead of two, eliminating dual entry. The obsolete Clipper version of Tabbook became stagnant in Oct. 99.
- Consolidation of information about companies involved in coal bed methane into the Water Rights Database, eliminating dual entry into two databases.

OTHER (IT) Information Technology ACCOMPLISHMENTS – by Rebecca Mathisen

- We improved the documentation of the network administration and user instructions.
- We prepared an IT budget for 2001-2002 biennium. Unfortunately, major projects such as implementing an inhouse web site, were not funded.
- The Technical Services Division stayed involved in forming IT policy affecting the Executive Branch by participating in the Information Technology Coordinating Committee, the Information Technology Review Committee, the IT reclassification review committee, NASIC, ARMA, and WOW etc.

IT RECOMMENDATIONS:

- The SEO needs more IT staff. With only two permanent IT professionals, we are not able to progress as fast as the SEO Divisions would like. Also, we are very exposed to the impacts of attrition.
- We should move the SEO web site to the SEO.
- We should implement an Intranet site for SEO staff to become comfortable with viewing the water rights database on line.
- New servers will be needed in the 2003-2004 biennium.
- We should implement more office automation, such as automating the entry of Surface Water application information, automating the Ground Water Log Books, moving the printing of certificates of appropriation to within the water rights database and out of Clipper, and automating the Surface Water expiration letters.
- We should consolidate more databases as users become comfortable with the concept of one central water rights database within the SEO.
- We should move certain data tables out of Access and into SQL Server to benefit from its granular security.

WIND RIVER ISSUES, by Rebecca Mathisen

I provide assistance to the WWDC on its three pending Wind River planning studies in the form of reviewing consultant proposals, interviewing consultants, and providing WIRSOS modeling assistance. The three studies are the Riverton East Future Project, Storage in the Upper Wind River Basin, and Exporting Water to Other Basins.

PLATTE RIVER COOPERATIVE AGREEMENT, by Rebecca Mathisen

The Cooperative Agreement for Platte River Research and Other Efforts Relating to Endangered Species Habitats along the Central Platte River, Nebraska just completed its third year and has been extended until the end of 2000. Another

extension is expected to be approved that carries the Cooperative Agreement well into 2002. The extensions are the result of slipping schedules, legislative calendars, and new topics such as sediment.

The sediment topic first came to light in the spring of 2000 when the Bureau of Reclamation team working on the EIS announced that it had a draft model that predicts adverse changes to sediment and vegetation as flows are changed in the Central Platte River of Nebraska, where three threatened or endangered fish species spend at least some of their time. During the summer of 2000, the EIS team gradually moved away from the sed-veg model, but still expressed concern that the habitat for the species will not be improved by the Proposed Program or any of the other alternatives that the EIS team is analyzing. Adding sediment to the water and land components of the Program will require additional negotiations.

Also during the report year, the first releases of Environmental Account (EA) water from McConaughy Reservoir were made to benefit the habitat for the endangered species of the Central Platte. Of the 130,000 AF accumulated in the EA, the EA Manager released about 100,000 AF resulting in a carryover of 30,000 AF for water year 2001.

A ten-member Governance Committee of the Cooperative Agreement (consisting of representatives of the states of Nebraska, Colorado and Wyoming, the U.S. Fish and Wildlife Service, the Bureau of Reclamation, three water user representatives and two environmental group representatives) continues to meet approximately monthly. Meetings are open to the public, and participation is generally more broad than the Governance Committee membership and alternates.

The Governance Committee's subcommittees for land, water, technical issues, public outreach and finance continue to meet regularly. Meetings are open and membership is broad to assure stakeholder interests are heard and their views are taken back to the Governance Committee. Public attendance and participation is particularly high at the land committee meeting. Each of the committees reports its progress toward the Cooperative Agreement's Milestones in the monthly Governance Committee meetings.

During the report year, the Water Management and Water Action Plan Committees completed most of their tasks under the Cooperative Agreement. Perhaps the greatest accomplishment was the reconnaissance level Water Action Plan which lists water supply projects that each of the three states could implement, and a means of changing the mix of projects. The Water Action Plan will be analyzed for NEPA and ESA compliance by the EIS team and its cooperating agencies.

The contractor that was hired by the three states, and managed by the Water Management Committee, has completed a reconnaissance study of water conservation and water supply opportunities in the basin. A new Water Action Plan Committee was established of Governance Committee and water committee members to move from the reconnaissance study's list of potential conservation and water supply opportunities to an action plan for the proposed Program. The water committee has also made substantial additional progress on water tracking and accounting.

The land committee is chaired by two local landowners, and uses a number of subcommittees. Considerable debate has taken place concerning the type of land interests that should be acquired, the type of entity which should hold interests in land, how decisions will be made about what land to acquire, and who should manage Program lands when they have been acquired. Policy decisions made this year have led to the development of a working outline of a Habitat Protection Plan that, when complete, will incorporate prior work on criteria to use in ranking land parcels and priorities for types of interest in land to be acquired. There is considerable interest in Nebraska in particular on the impacts of the land component of the Program on the community. A position statement on the payment of taxes or equivalent was approved and a third party impacts study contracted in 1999 is complete. Under the auspices of the Land Entity Subcommittee, a facilitated workshop of land committee and Governance Committee members was held to formulate recommendations on how to structure policy-setting, day-to-day management, planning and ownership of the land component of the proposed Program. These are complex issues given that four separate government procurement processes are involved, that there is a strong local desire for public involvement, and that the Program is not a legal entity and cannot hold interests in land. Issues related to crediting the states for land contributions in the event of Program failure have been reassigned from the land committee to a special task force under the finance committee which has been meeting approximately monthly to consider both land and water crediting issues.

The Technical Committee consists of academic, private and government scientists of different disciplines. It is generally responsible for developing the monitoring and peer review components of the Program. A peer review plan will be activated when the research component of the proposed Program is fully identified. A draft research and monitoring plan has been presented to the Governance Committee. In parallel, significant progress has been made drafting protocols for use in carrying out portions of the research and monitoring plan.

The Outreach Committee has been active in offering information on the Cooperative Agreement and proposed Program to the public. Outreach activities include speaking at community events, guest appearances on television and radio shows, booths at the Nebraska state fair and other agricultural and

environmental events, press events, interviews with local reporters, a newspaper insert used throughout central Nebraska, and distribution of brochures.

Each of the Cooperative Agreement's signatories is assigned Milestones related to activities those entities must take individually, such as refining plans to mitigate future depletions and achieving legal protections for Program water.

The Department of the Interior is continuing to work on preparing a Programmatic Environmental Impact Statement (PEIS). The PEIS Office reports regularly to the Governance Committee.

Significant progress has been made toward completing the Milestones for the Cooperative Agreement, though significant areas for further refinement and development remain.

COMPUTER SYSTEMS

By Donna Crock, Information Technology Specialist II

OBJECTIVES

The objective of the agency's computer staff is to provide the necessary tools and training to effectively and efficiently communicate ideas and information between the Wyoming State Engineer's Office (SEO) employees, other state, local, and federal agencies, our Wyoming constituents, and the public at large, through the implementation of technology.

ACCOMPLISHMENTS

Following is a list of accomplishments during the report year of July 1, 1999 through June 30, 2000.

July, 1999 - The 2001-2002 Biennium Exception Budget items regarding information technology were ranked by the Administrators and Superintendents. The results were as follows:

Rank	Points	Project Name
1	17	Repair and Enhance Database
2	28.5	Field Communications and Backup
3	29.5	Streamflow Data Reduction Systems
4	30.5	Printer Replacements
5	40.5	Standardization (Hardware and Software)
6	57.5	Novell Fees
7	60	Web Site
8	60.5	Fax Server

The Wyoming State Records Committee approved the retention schedule for backup tapes on July 12, 1999. The backup tape retention schedule requires that the SEO retain daily and end-of-week tapes for one week, monthly tapes for three months, then recycle and destroy. Backup tapes are used for disaster recovery or retrieval of inadvertently deleted data, not for off-line storage.

August, 1999 – The Technical Services Division conducted two days of Water Rights database classes on August 12th and 13th at Laramie County Community College. Steve Rea instructed the class with the help of Becky Mathisen and Donna Crock. The agenda included the following topics: Table descriptions, What is a Query? What is a Join? One to Many Relationships, What is an Index? How Many Records? How are Joins Processed? Make Table Queries, Update Queries, Append Queries, Union Queries, and Functions that are Available.

October, 1999 - The 2001-2002 Information Technology Exception budget requests were prioritized by the State Engineer, Jeff Fassett, as follows:
Priority 1: Update and Enhance Water Rights DataBase – includes salary for three contract employees, later reduced to two by the legislature.
Priority 2: Standardize hardware and software
Priority 10: Mapping Project
Priority 15: Streamflow Reduction Systems
Priority 17: Web Site for Water Rights Information including a Graphical Interface
Priority 18: Field Communications (Internet) and Backup Systems

The legislature did not fund any priority below Priority 10.

The upgrade of Novell GroupWise, e-mail software, to version 5.5 took place on October 26, 1999. The conversion of Tabbook from the Clipper version to Microsoft Access started in October, 1999.

The State Engineer, Jeff Fassett, addressed the SEO Computer Committee on October 22, 1999 and encouraged everyone to use technology to help do their jobs. He stated we need to automate our processes. The challenge is to make our processes more efficient and productive and start thinking about automation. He encouraged that ideas for improved efficiencies will need to come from both the computer committee and management. Our website is currently housed in Laramie with the Water Resources Data System. Mr. Fassett stated that our ultimate goal is to bring our website to Cheyenne and manage it at the SEO.

November, 1999 – The first office efficiency project involved Technical Services along with the Ground Water Division in establishing a form and report to enter the entry record book information directly into the Water Rights Database. The form contains approximately 17 fields, which will be filled in when an application arrives. The main report will be entry record pages on 11 x 17-bond paper that are pre-punched. This system saves the time spent entering records by hand, and accelerates the fee tracking process.

Donna Crock completed the testing of computers and servers for Year 2000. Patches and updates were done accordingly.

December, 1999 – A Lasico digitizing arm was delivered to the Riverton office. It was reported that Western Hydrologic Systems is about 95% complete with the Windows based version of the streamflow records reduction program. They also mentioned that they have compatible drivers for the Lasico digitizers.

An HP LaserJet 4050TN printer was purchased and installed for the SEO Accounting receipting system in Administration. Janice Rath and Donna Crock worked on changing the forms and reports in Microsoft Access . Four computers were also ordered from the replacement budget to replace 486 processor computers.

January and February, 2000 – Technical Services checked servers, computers and software on January 1, 2000 for Year 2000 compliance. We checked the Microsoft Office suite, the SEO Accounting receipting system, the Microsoft SQL database, and any other packages that needed to be tested. No Year 2000 issues were found.

Classes were held at Laramie County Community College on January 24th through January 28th. The following are the classes that were offered:

Intro to the Water Rights Database - two classes
What's New WaterRights DataBase - two classes
Microsoft Word - one class
Microsoft Access Forms, Reports, OfficeLinks - two classes
Resurvey - two classes
Legal Land Descriptions - two classes

A laptop computer for Casper and a desktop computer for Sheridan were ordered for the field offices, which replaced 486 computers.

March, 2000 – A special training class on the functions of the AppropAJ table in the Water Rights Database was held with the Board of Control dividsion.

April, 2000 - Technical Services started testing Microsoft Office Professional 2000. Testing will continue until the upgrade can be purchased for all computers in the next biennium.

A New General Retention Schedule regarding E-Mail records was issued:

E-MAIL MESSAGESError! Not a valid filename.
00-061 Non-Record E-Mail Messages
Non-record E-Mail is judged not a record for the same reasons that other forms of communication are not. It can be non-record because, even though the subject matter relates to an official business function, some other office has the primary responsibility, or the message content does not relate to official business. Non-record e-mail messages communicate information, which does not set policy, establish guidelines or procedures certify a transaction, become a receipt, or has no business value. These types of messages are normally informal. They can consist of, but not limited to, personal messages, duplicate documents, telephone call notices, meeting reminders, or other temporary information. These types of messages usually have little or no impact on the business function and should be deleted as soon as its purpose has been served.

Delete as soon as purpose is served. NOTE: This schedule does not apply to the University of Wyoming and the Community Colleges.

00-062 Permanent Record E-Mail Messages

Permanent Record E-Mail Messages are those whose content have a legal, administrative or historical value which must be retained indefinitely. These records must be preserved in a medium that will be accessible to future generations. Since there are no national standards for permanency of the digital medium on which e-mail is maintained, and since that medium is not considered permanent, these digital records must be converted to paper or microfilm as directed by an appropriate retention schedule. And since departments may have policy to automatically purge e-mail created or received after a specified number of days, the conversion must be accomplished within that period. Internal procedures and system design must protect records from alteration, identify other records related to the same subject and provide for regular transfer to a permanent storage medium.

Permanent. Convert to paper or microfilm as directed by the appropriate record series retention schedule. **NOTE**: This schedule does not apply to the University of Wyoming and the Community Colleges.

00-063 Time-Limited Record E-Mail Messages

Time-Limited Record E-Mail Messages are those whose content have a legal or administrative value that is less than permanent. They are judged to be time-limited records for the same reasons that records created in other mediums are, and unless a specific schedule has been established for the e-mail messages, they must be maintained in a usable format for the same retention period as the counterpart hard copy records. However, that does not mean that the hard copy and the electronic e-mail file should duplicate each other. When a hard copy is made for the file, the e-mail should normally be deleted. Digitally stored e-mail records must be migrated to new software or storage media as updates and complete program switches occur. Departments may automatically purge e-mail created and received after a specified number of days. In order to avoid loss of record e-mail, it must be moved to an electronic file system of commercial or agency design.

When the electronic file is kept as the record copy, retain for same period of time as counterpart hard copy records. If there has been a specific schedule established for the time-limited record e-mail message, then retain according to that authority. NOTE: This schedule does not apply to the University of Wyoming and the Community Colleges.

May, 1999 - Computer items ordered were: two computers for Board of Control, one computer and monitor for Surface Water, a printer for Special Projects, an All-In-One printer for Division I, a laptop for Division I, Premium Edition of Microsoft Office 2000 for Technical Services, and a computer for Technical Services. An expansion for the existing network patch panel and hubs were

ordered for the Cheyenne network to accommodate additional network connections.

June, 1999 - A fax machine capable of sending and receiving faxes over the network for the Cheyenne office was ordered.

During the report year, the SEO Computer Committee met almost monthly to discuss purchase requests and exchange information. The staff of the Technical Services Division also participates in the Information Technology Coordinating Committee, the Information Technology Review Committee, the Network Administrators Special Interest Group, Wyoming on the Web, the Training Special Interest Group, and ARMA (Association of Information Records Managers and Administrators).

Internet e-mail continues to be available to all Cheyenne permanent staff. E-mail continues to reduce the number of phone calls. The Superintendents continue to access the Internet through an Internet Service Provider (ISP) which allows them to communicate through e-mail without placing a long distance call. Several other field personnel have been given Internet access as well.

GOALS and RECOMMENDATIONS

We should continue to use technology to do things that were impossible a few years ago. All employees need continued computer training to improve their work skills and should use the training budget that has been provided to the agency. While the in-house training sessions that are offered one week each January are sufficient for some of the basic training, some staff must travel to Colorado to obtain high level training or seminars required to operate and maintain the network and complex databases.

Another goal is to upgrade and maintain software and hardware to current levels of proven technology. Someday we may consider installing Local Area Networks in field offices to increase speed and ease of communication, better sharing of resources, and decreased duplication of data and effort. It is recommended that each field office have Internet capabilities.

Two contract positions have been budgeted to the Technical Services division for this fiscal year to enhance the water rights database and should continue in future years.

The SEO is continuing the process of converting most of the SEO databases to a modern DBMS: Microsoft SQL Server with Microsoft Access as a front-end, running on a Windows NT Server platform. This provides user-friendly and quick access to the information for Wyoming's water rights. The water rights database is an essential tool in meeting the public's informational requests, in processing water rights applications, and in administering water rights for the people of

Wyoming. The database should also serve as the front end for future water rights records projects including imaging and GIS. Future plans should include a graphical front end, a web site, and other enhancements. A Web Server should be housed in-house and provide access to the public with electronic forms that can be downloaded and give the public certain access to certain fields of the database. The Internet should be used to allow us to share information with the public.

The SEO's Information Technology (IT) staff is increasingly consulted on all aspects of office management and efficiency needs, and has to delay projects to take care of emergency or urgent requests. An additional IT position is needed to help with these requests.

Database Development between July 1, 1999 and June 30, 2000
by
Steve Rea

There have been several enhancements to the database during the past year. Briefly, these are:

- Work has started on the AppropAJ table.
- The AppropSW table is near completion.
- The PtSrc table continued to be improved and is nearly ready for final implementation.
- The Endorse tables have been fully updated with the data remaining from AREV tables and all new data entry is being done in the final table format.
- GLO card and status tables including Index to segregated tracts are complete.
- Various data entry form enhancements including Groundwater's temporary filing book entry and report generation; combined Streams table and PtSrc table data.

Approp* Tables
One goal was to define all water rights' appropriated amounts using an identical set of fields:

AprTy - **Appropriation Type**. Includes codes such as APPROP, MAXRATE, MAXVOL, etc.
AprAmt - **Appropriated Amount.** Numerical amount or -0.0001 if unspecified.
AprUnit - **Appropriation Units.** Includes codes such as CFS, ACFT/yr, GPM, etc.
Use - **Use codes**. Includes codes such as DOM, STO, IRR, etc.
SupTy - **Supply Type**. Includes codes such as ADL, ORI, RES, SEC, SUP, etc.

SupTyFor - **Supply Type For**. Identifies the permit associated with ADL, RES, SEC and SUP supply types.

RelPer - **Related Permits**. Other related permits.

RelBy - **Related By**. Identifies the supply types of the related permits.

SrcID - **Source ID**. Identifies the headgate, reservoir, well, etc. which is the source of supply for the appropriation in question. Obtained from the PtSrc table.

WRSta - **Water Right Status**. Includes codes such as ABA, ADJ, CAN, ELI, UNA, etc.

After having gone through numerous records it can be reported that the system works perfectly in terms of describing virtually any appropriation of water in a manner that exactly matches the paper records and is totally searchable by normal database querying techniques.

AppropAJ Table

The Board of Control has started proofing the AppropAJ table. This table currently contains all of the information for adjudicated water rights in their unamended form. Also, Sue West and one contract person will begin the correction/proofing of the petitions to the Board of Control which is currently contained within the OrderDetails table. Eventually, these two tables will be combined into just one AppropAJ table. This table is the basis for the new Tabbook and when finished will provide complete histories of all adjudicated water rights from the time they are originally adjudicated up to the current day status.

AppropSW Table

The AppropSW table contains the same field entries as the AppropAJ table, and completely defines the unadjudicated portion of a water right using the following record entries:

- Amount and acreage as permitted.
- Remaining unadjudicated acreage.
- Eliminated acreage.

AppropGW Table

Has not yet been started but can, for the most part, be constructed from information contained within RightsGW.

GLO Tables

- GLO card index table describing the information contained on each card.
- GLO status table listing the survey status of each Township or partial township (ORI, DEP, IND).
- GLO index to segregated tracts.
- GLO total tracts table listing the by tract designation the total amounts spanning townships.

PtSrc Table

The PtSrc table is nearly completed and ready to be compressed to one record per headgate. The PtSrc table contains the locations of all headgates and reservoir outlets. Each point location will include the stream sequence identifier (StrKey) linking it to the Streams table along with a PLSS description. Also, fields have been added to allow for the entry of PLSS corner tie information.

Tabbook

Tabbook has been dumped from Clipper into MS Access and portions will be re-used in the new Tabbook process. Tabbook will be a report generated primarily from the AppropAJ table. To date, the tbTribs table from Clipper has been assigned Trib sequences matching those within the Streams table. The tbTribs table will provide the print order for the new Tabbook until the Streams table has been enhanced to include river mile locations for each confluence.

SURFACE WATER AND ENGINEERING DIVISION

The Surface Water and Engineering Division report includes surface water permit activities, weather modification permits, and dam safety activities. Three separate reports for the Division follow:

SURFACE WATER RIGHTS SECTION

by

JOHN R. BARNES
ADMINISTRATOR, SURFACE WATER AND ENGINEERING DIVISION

OBJECTIVES

The objectives of the Surface Water Rights Section are mandated by the requirements of State water law and the State Engineer's Rules and Regulations as well as the goal to be of service to the public. The Section objectives are:

1. To promptly review and process surface water applications and petitions and submit them to the State Engineer for his review and approval.

2. To maintain and update the statuses of all unadjudicated water rights records to accurately reflect the current statuses of these permits. The updated records are entered into the water rights database and microfilmed to keep all records current.

3. To provide a service to the public by promptly filling requests for data on the statuses of water rights and for copies of records.

4. To provide technical advice and instruction to engineers, surveyors, and the public on the proper procedures for filing applications for permits and water use agreements and for permit status updating.

5. To provide technical assistance to the State Engineer, office staff, and water administration field personnel in matters requiring interpretation of surface water rights.

ACCOMPLISHMENTS

The 1999-2000 winter brought a below normal snow pack over the state. Most of the reservoirs in the state were above average storage capacity at the end of the 1999 irrigation season. Below normal runoff occurred and the Governor asked that the Drought Task Force be formed to deal with the situation. Twenty-two counties were declared drought areas by the end of the summer. There continues to be a large number of inquiries regarding water rights, water law, and related matters.

Categorized work submitted to the Surface Water Division during FY 2000 included: a) applications for permits - 910; b) petitions - 19; c) temporary water agreements - 105; d) water rights information searches - 647. In addition, the Dam Safety Section conducted and reviewed 203 field safety inspections of dams and performed other activities as reported in a separate section of this Division report.

APPLICATION REVIEWING AND PROCESSING

A total of 910 surface water applications were received in FY 2000. The following table gives a comparison of applications and petitions filed with the State Engineer for the past years, beginning with FY 1994 and continuing through FY 2000. The EOY backlog has decreased to 845 applications as overtime was approved to process the BLM stock reservoir application for the Division III General Adjudication lawsuit. The number of CBM reservoir applications began to increase.

FY	APPLICATIONS			PETITIONS		
	No. Recd	Approv/ Reject	EOY BackLog	No. Filed	Approv/ Dismiss	EOY BackLog
94	623	587	1204	11	14	53
95	1002	506	1700	18	10	55
96	534	642	1592	19	18	59
97	572	818	1346	11	12	58
98	415	482	1279	14	16	56
99	522	460	1341	11	8	59
00	910	1406	845	19	10	68

Applications fall into several categories. The more complex categories include ditches/pipelines, enlargements, and reservoirs. The less complex applications and those that can easily be reviewed and approved include applications for stock reservoirs and temporary water uses. Applications for permits for instream flows, the first of which was received in FY 1987, include a requirement by law that the State Engineer hold a hearing before granting or rejecting instream flow applications. Only the State of Wyoming, through the Wyoming Water Development Commission, can file instream flow applications. Six instream applications were received in FY 2000 but no hearings were held regarding instream flow segments.

COMPARISONS OF TYPES OF APPLICATIONS RECEIVED				
Category	FY 1997	FY 1998	FY 1999	FY 2000
Ditches/Pipe-lines	56	51	53	64
Enlargements	38	26	49	34
Reservoirs	182	139	162	237
Stock Reservoirs	147	83	144	410
Temporary Use	149	110	114	159
Instream Flow	0	6	0	6
Totals	572	415	522	910

PETITION PROCESSING

The first table printed above included data on petitions submitted to the State Engineer to correct or to amend permits. During FY 2000, the number of petitions approved/dismissed (10) brought the backlog to 68 on hand.

TEMPORARY WATER AGREEMENTS

Where water is not available under a new permit for construction purposes and other temporary uses, the temporary water users can enter into agreements with holders of valid, senior-priority water rights to obtain water for their temporary use. Water agreements must be reviewed and approved by the State Engineer's Office and an Order entered to allow the temporary use. To meet the needs of the construction industries, water agreements are quickly reviewed, and approval orders are normally issued within a few days of receipt of the agreement. In FY 2000, a total of 105 water agreements were received and approved. A comparison with previous years follows:

FY	Water Agreements
1995	120
1996	110
1997	151
1998	120
1999	112
2000	105

PERMIT ENDORSEMENTS

Once a permit is issued, it is recorded in the computer information system and a permanent microfilm record is made. The records must be updated every time a notice for completion of construction or beneficial use is filed with the State Engineer for a given permit. If approved, requests for extensions of time must be endorsed on the permit and the update recorded in the computer and microfilm systems. Elimination of points of use from a permit, reinstatements of permits, cancellation of permits, assignments, or any other changes by petition to the State Engineer require endorsements to permits and updates of the computer and microfilm records.

INFORMATION SEARCHES

Landowners, surveyors, engineers, attorneys, realtors, and others routinely request copies of permits, certificates of appropriation, maps, and other information pertaining to water rights records. During FY 2000, a total of 647 requests were answered requiring records searches. The following table indicates the history in the numbers of requests received.

FY	SEARCH REQUESTS
1993	484
1994	545
1995	590
1996	550
1997	506
1998	530
1999	568
2000	647

Some of the information requests are related to the preparation of applications and maps by engineers and surveyors for permits or petitions. Again in FY 2000, the bulk of the requests appeared to be from realtors and bankers who desired water rights information in real estate sales transactions or for use in real estate loans.

FIELD ACTIVITIES

Site visits were made to areas where controversies were occurring. Site visits were also made by the Safety of Dams staff to observe reservoir construction, to inspect reservoirs as part of the dam safety program, and to investigate alleged illegal activities.

OTHER ACTIVITIES

The Surface Water Division continues to participate in reviewing the activities of the U.S. Board of Geographic Names (USBGN). This review provides for

coordination of names used on maps, particularly those of streams, since every year many streams are given names by issuance of water rights permits.

The Surface Water Division maintains a complete file and inventory of all USGS maps in Wyoming for use by the State Engineer's office and field personnel.

PROBLEM AREAS

COAL BED METHANE RESERVOIR IMPACTS

The number of applications filed has increased tremendously. Most of this increase is due to reservoir filings by the coal bed methane (CBM) industry in the Powder River Basin. This increase has prompted a need for additional personnel. One extra water rights technician and an additional clerical staff member is necessary to keep up with the number of applications arriving in the office.

EMPLOYEE COMPENSATION

The Surface Water Division continues to experience a number of personnel changes as employees look for employment both within and outside of state government which will bring them better monetary rewards and retirement benefits. The job turnover adds an additional workload to the employees who are left and places an additional time demand on them for training new employees. These turnovers and the additional demands keep the morale of the employees who have had no raises at a low level.

Efforts must continue to increase the pay scales so that state employee pay scales match those found in the market place.

RECORDS REHABILITATION

The past Annual Reports detailed the needs to upgrade the condition of the permanent records in the Surface Water Division. Work continues on the encapsulation of maps that were found to be in poor condition. Map records that need to be updated and maintained include the paper plats, USGS maps, county maps, and permit maps-all of which are in daily use for supporting the water rights records and in providing information to the public.

UPGRADED TECHNOLOGY

The computer system is now in use by the Division for some technical work including the use of databases and word processing. We now have the ability to search the water rights database to aid in answering information requests. Data processing problems which have occurred are being addressed. New report

formats are being developed. Additional access is being developed to help in application reviews and processing. The water rights database is in the process of being converted for use in a new database software that should provide easier access and programming.

Many Surface Water man-hours have been spent on computer assistance to the other divisions resulting in increased office efficiency while reducing the ability to process surface water applications. We continue to update our current computers with new, higher speed computers to be able to use them with the graphic information systems and the possible use of an imaging system. We need to continue to update our computers, as funds are available.

STATE ENGINEER'S INSTRUCTIONS AND REGULATIONS

Work has continued on the State Engineer's Office rules and regulations. It has been reviewed by several members of the State Engineer's and Board of Control staff and was reviewed by the Assistant Attorney General. We continue to look for time to prepare the final draft and complete the promulgation process.

WEATHER MODIFICATION PERMITTING ACTIVITIES

OBJECTIVES

The primary objective of the Weather Modification Program is to procure, compile and evaluate information resulting from weather modification experiments, research and related activities conducted in the State of Wyoming. Weather Modification Permits are issued by the State Engineer for each modification program, experiment or activity.

ACCOMPLISHMENTS

One permit was issued for weather modification purposes during this reporting period. Permit Number 80 was issued to Eden Valley Irrigation and Drainage District in Farson, Wyoming, with the objective of their continuing weather modification program to increase the water supply in the Big Sandy River drainage. This is a wintertime operation, which operates during proper weather conditions from November 15th through April 15th. The mobile, ground-based, cloud seeding generators are strategically placed along Highway 191 and are operated in accordance with daily weather conditions.

The Eden Valley District wintertime project is in its twenty-ninth year of cloud seeding activities in cooperation with the University of Wyoming, Department of Atmospheric Sciences.

SAFETY OF DAMS SECTION

By

David S. Benner
SAFETY OF DAMS ENGINEER

INTRODUCTION

In 1977, the State Legislature, recognizing the potential hazards to the public safety due to waters impounded by dams throughout the state, and the economic benefits of well maintained and safely operated dams, authorized the Wyoming Safety of Dams Program, with passage of the Safety of Dams Law (Wyoming Statutes 41-3-307 through 41-3-318). The law was amended in 1992 to clarify inspection requirements, duties of the State Engineer and lien procedures; provided for penalties; and granted rule-making authority.

While a permit from the State Engineer is required for all dams, the Safety of Dams Law mainly pertains to dams, which are greater than 20 feet high or impound 50 acre-feet or more and diversion systems with a capacity of 50 cubic foot per second or greater. However, the State Engineer may enforce any sections of the law on any size facility, when necessary, to insure the public safety or the protection of property.

OBJECTIVES

The objective of the Wyoming Safety of Dams (SOD) Program is to protect the public safety by reducing the potential for flooding and loss of life as a result of failure of a dam or diversion system. This objective is accomplished in two ways, as stipulated by the Safety of Dams Law:

1. By reviewing plans and specifications for proposed work and by reviewing inspection and progress reports outlining current construction activities.

2. By conducting periodic safety inspections of existing facilities.

ACCOMPLISHMENTS

During the past year, thirteen construction, rehabilitation, and/or enlargement projects of jurisdictional sized dams and one diversion system project were completed and one unpermitted existing jurisdictional size dam was permitted. Initially, this section was involved with design review and plan approval of all these projects. During construction, we were involved in monitoring the construction

activity, reviewing weekly progress reports, and visits to the sites to observe the work.

Work was started on one other dam project. The rehabilitation work or construction of twelve other reservoirs and one diversion system project is on hold. One dam at a mine was removed. A permit for one other dam was issued, but construction has not yet started.

In addition, several projects are in the planning, permitting and design stages. Studies are underway to determine the feasibility or design of new construction, rehabilitation, and/or enlargement of other facilities in the state. We have been actively involved with many of these projects through meetings with the owners, sponsors, and engineers and by review and comments on reports outlining the proposed work.

Studies and/or design continue on the High Savery Reservoir (Little Snake Supplemental Irrigation Water Project) and one other reservoir. The U.S. Bureau of Reclamation's Corrective Action Study of the spillway deficiencies on the Bureau's dams on the North Platte River, the Salt River Power Project and seven other projects are on hold. Studies, permitting, and/or design is underway on ten new projects or reservoir enlargements.

In addition to the work involved with design review and/or construction monitoring activities, a considerable amount of time is spent on the other aspect of the Safety of Dams Program, the Periodic Inspection Program. Wyoming Statute 41-3-311 states: "Any dam, subject to the terms of this act shall be inspected at least once every ten years or as often as deemed necessary based on the hazards of the dam to insure the continued protection of public safety and property." Only very low hazard dams located in remote areas of the state are inspected less frequently than every five years.

Currently, 1,358 dams meet the criteria of the Safety of Dams Law (more than 20 feet high and/or impounding 50 acre-feet or more of water). To date, reports for 189 dams inspected in FY00 have been received from the field personnel with approximately 20 more expected. Two hundred twenty-four (224) dams are due for inspection in calendar year 2001. We have been attempting to spread the inspections out more evenly so that no more than approximately 300 inspections are due in any one year.

The quality of the safety inspections is steadily improving. This is due to the increased experience and training level of the state water administration personnel in dam inspections and the greater opportunity for the two Safety of Dams Engineers in Cheyenne to conduct routine periodic inspections of larger, high and significant hazard facilities. In addition, we also continue to coordinate safety inspections with federal agencies such as the Natural Resources Conservation Service, Bureau of Land Management, Bureau of Reclamation, Federal Energy

Regulatory Commission and Forest Service to draw on the resources and experience of those agencies. Efforts to coordinate with the Mine Safety and Health Administration have been unsuccessful due to apparent lack of interest on Mine Safety and Health Administration's part.

The public hearings on new Safety of Dams proposed rules and regulations planned for FY00 were not held. The hearings are now scheduled for early FY01 when new rules and regulations for the entire agency are to be proposed.

PROBLEM AREAS

One of the problem areas with the Safety of Dams Program is the lack of information about many of the existing dams in the state. Many reservoir permits were obtained more than 50 years ago from the State Engineer with very limited information and/or construction details about the dams. In many cases, the ownership of the reservoir has changed and unauthorized modifications to the original structure have taken place. Quite often we have difficulty determining the current owner of a facility or discover that the existing facility does not conform to the terms of the permit map or drawings on file.

Another problem area concerns dams located on the Wind River Indian Reservation. Because of disputes over jurisdiction, we continue to have problems obtaining timely information on the present conditions of dams (Washakie Dam in particular, a high hazard structure) on the reservation. Repairs to Washakie Dam were finally completed to address a serious foundation piping problem, but abnormal seepage was discovered during first filling and additional work to correct this condition is underway.

Coal Bed Methane development is creating a significant increase in workload due to construction of new dams but is also affecting many existing structures. Large quantities of groundwater are being pumped and released into draws and streams that have historically seen only intermittent flows. New dams are being constructed to capture some of this water and many existing dams have to be modified because the continuous flow of water is eroding earth spillways.

In areas where groundwater quality is poor, much larger dams will probably have to be constructed, than is now common, to hold the large quantities of water being generated so that it can be treated or processed for release. Many of these may be large enough to present a high or significant hazard to downstream development.

The final problem area concerns turnover and the lack of an adequate support staff for the Safety of Dams Program. Four of the last seven fiscal years, the program has been shorthanded for periods of two to six months due to turnover in the inspection position. Also, a significant amount of both of the Safety of Dams Engineers' time is spent performing technician or clerical level duties for the

section. The addition of an engineering technician position to the Safety of Dams staff would significantly improve the efficiency and effectiveness of the professional staff and the Program. Such a person would conduct office work and assist with periodic inspections of smaller dams in the state. This activity will become more important as water administration becomes increasingly complex and the local Water Commissioners become less able to contribute their time to complete periodic inspections. In addition to the inspection activities, the technician would work extensively in the dam inventory update and construction monitoring. Additional help may also be needed to monitor construction activities in Coal Bed Methane development areas.

OTHER ACTIVITIES

Work is continuing on the National Inventory of Dams Project. We have been compiling information for each of the 1,358 dams in the Safety of Dams Program and preparing a computer inventory containing this information. In the past, part of the funding for this project has been provided by the Association of State Dam Safety Officials through a "pass-a-long" grant from the Federal Emergency Management Agency(FEMA) and the U.S. Army Corps of Engineers. Data from the state dam safety organizations is compiled by the Corps and published in CD-ROM format periodically. The Corps provided a small grant to the state two years ago to update this information and also add additional data fields but we were again unable to find and hire someone qualified to do this. Much of the information requested by the Corps is not readily available and considerable effort will be involved in gathering this essential data to complete our state database and keep it updated.

A workshop on Seismic design considerations for engineers and regulators was held in West Yellowstone. The Wyoming and Idaho SOD programs assisted Montana, the primary program sponsor, in putting on this workshop. Expenses for the workshop were paid for with grant funds received from FEMA through the National Dam Safety Program Act. We are in the first year of a three year work plan for which we received the grant for FEMA under this Act. Two hydrographers were sent to advanced training in dam inspection with these same funds and a GPS surveying system is planned to be purchased. A field engineer attended a seminar on gate inspection funded by another FEMA program.

FEMA's Flood Insurance Administration implemented a Community Rating System in 1991 which gives flood insurance policyholders, in qualifying cities and counties, a discount on their premiums. Communities can get a further discount if the state has a qualifying Safety of Dams Program. We first applied for this credit in 1991 and received 54 of a possible 75 points. We were recertified this year, so participating communities will continue to get the discount.

The Safety of Dams section remains actively involved in the Emergency Management Agency's test of the State Event Management Plan. Staff members have participated in several training sessions and exercises on both the away team and at the command center.

GROUND WATER DIVISION

The Ground Water Division report is comprised of two sections: the Ground Water Section and the Cooperative Programs Section. The Cooperative Programs Section manages the Surface and Ground Water Data Collection Program, the Snow Survey and Stream-flow Forecast Program and the Subdivision Water Right Program.

GROUND WATER SECTION

By

RICHARD G. STOCKDALE, ADMINISTRATOR

GROUND WATER DIVISION

OBJECTIVES

1. To issue, record, maintain, and prepare permits for adjudication which grant the right to appropriate ground water within the State of Wyoming and maintain a database of approved permits, etc.
2. To resolve conflicts between ground water users.
3. To conduct Control Area Advisory Board meetings.
4. To coordinate ground water investigations involving the State Engineer's Office and other agencies.
5. To investigate water well construction and enforce the "Water Well Minimum Construction Standards."
6. To protect the State's ground water resources.
7. To investigate the occurrence of ground water resources.
8. To monitor ground water levels across the state.

ACCOMPLISHMENTS

APPLICATIONS PROCESSING AND RECORDING

During the reporting period of July 1, 1999 through June 30, 2000, the Ground Water Division of the State Engineer's Office received, processed, and recorded 9,785 applications for permits to appropriate ground water. This represents an increase of 3,596 applications from the previous year. The Ground Water Division is receiving and processing more applications and associated paper work than it has since the mid-1980's. This increase can mainly be attributed to

the coal bed methane activity occurring in the Powder River Basin. During FY 2000, 10,018 applications were approved to permit status and 35 applications were rejected. In addition to applications for new appropriations of ground water, 58 requests for relocations of existing wells were also received, processed and approved. This is a decrease of 19 requests from the last reporting period.

CANCELLATION PROGRAM

During FY 2000, 302 permits to appropriate ground water were cancelled because the permittee either failed to submit the required notices (completion and beneficial use) within the statutory limits or the permittee requested cancellation of the permit. The number of cancellations is 400 fewer than in FY 99. Part of the reason for the fewer cancellations in FY 99 is that with the increase in the number of applications to appropriate ground water received in this office and all of the associated paper work, staff has not been able to devote as much time to this task.

Abandoned wells for which the attendant water rights were cancelled amounted to 298. The figure for abandoned/cancelled permits is separate from the count for cancelled permits where the required notices were not filed. These wells were in use and were subsequently abandoned, generally for physical failure. The number of abandoned/cancelled permits was 36 more than in FY 99.

Four thousand and forty-one (4,141) certified expiration letters were prepared and mailed to notify appropriators that their well permits were about to expire because the statement of completion of construction and the notice of completion of beneficial use of water had not been properly submitted to the State Engineer. This number is 1,340 more than in FY 99. There were also seven hundred and fifty eight (758) expiration letters mailed to the agents listed on the permits.

PERMIT MAINTENANCE PROGRAM

The ownership of 881 permits to appropriate groundwater was assigned to different owners during FY 2000. This is 560 more than in FY99 Requests for 993 extensions of time to complete construction or put ground water to beneficial use were received, processed and approved. The number of extension requests processed was 341 more than last year. Twenty-three (23) requests for additional points of use were received, processed and approved. Four thousand, five hundred and three (4,503) permits were updated with statements of completion or beneficial use forms. This number is 1,651 more than in FY99. There were 536 miscellaneous updates received and processed.

WATER RIGHT SEARCH REQUESTS

Major ground water right searches numbering 543 were conducted for realtors, water resource consultants and various other interested parties during FY 2000. This number is 114 searches more than FY 99. Other smaller ground water right searches called in by telephone or requested in person were estimated to be approximately 2,500. This number is 500 more than FY 99.

TWO-YEAR REVIEW LETTERS

During FY 2000, no "Two-year Review Letters" were sent to permit holders. These letters are the results of conditions placed on observation and monitor well permits which require a two-year review to determine if the well still exists or if it has been "mined out", plugged and abandoned, etc. Due to other demands on staff time, this task was assigned a low priority and was not completed.

BOARD OF CONTROL ADJUDICATIONS

During FY 2000, a total of 86 ground water rights, which had been inspected by the Ground Water Division staff, were adjudicated by the Board of Control; 27 at the November 1999 meeting and 59 at the May 2000 meeting.

The 1999 Legislature passed a bill, which was designed to bring uniformity to all statutes dealing with costs for advertising proofs. As a result of this legislation, beginning July 1, 1999, the cost of advertising ground water proofs will be paid by the counties rather than by the individual appropriators as had been the case previously.

There were 70 Maps to Accompany Proof of Appropriation and Beneficial Use of Ground Water received during FY 2000. Many maps depict more than one well or enlargements of permits; the 70 maps represent a total of 122 water rights to be inspected for adjudication.

CONTROL AREA SUMMARIES

LARAMIE COUNTY CONTROL AREA

Election was held on July 13, 2000. Elected to their second terms were:

District 1 -- Greg Gross

District 2 -- Audie Hoke

District 3 -- Clarence Steege

District 4 -- remains vacant

The Control Area Advisory Board recommended that the State Engineer approve three (3) new permits to appropriate ground water within the Control Area based upon the site-specific situations of each case. The Advisory Board recommended that three (3) other applications for permits to appropriate ground water be held unapproved. The general ground water conditions within the Control Area continued to be about the same as the previous reporting period.

PLATTE COUNTY CONTROL AREA

Election was held on July 18, 2000. Elected for their second terms were:

District 1 -- Doug Frederick

District 2 -- Joe Johnson

District 3 -- Gale Kittell

There have been a number of applications filed and advertised for irrigation wells, for a municipal well for the Town of Wheatland, and for Miscellaneous use -- enlargements for expanded areas for land application of effluent from sewage lagoons associated with confined swine facilities. The Advisory Board will provide recommendations to the State Engineer early in FY 2001 concerning these applications. The confined swine facilities continue to be a very contentious issue in Platte County due primarily to air quality concerns, ground water supplies during FY 2000 were adequate.

PRAIRIE CENTER CONTROL AREA

No election was necessary as no Board member's terms expired There was no water right activity in this control area during FY 2000.

LEGISLATIVE UPDATE

No specific ground water legislation was considered during FY 2000. Legislation for licensing water well drillers and pump contractors may be introduced in FY 2001.

SUBDIVISION WATER SUPPLY ADEQUACY LEGISLATION

During the FY200 Legislative Session, legislation was passed that substantially changed the subdivision water supply adequacy review process. The legislation also provided rule-making authority to DEQ, WQD so that rules regarding the water supply adequacy process could be promulgated. It is envisioned that rules will be promulgated during FY 2001.

SPECIAL GROUND WATER PROJECTS UPDATE

WEST BANK SNAKE RIVER PROJECT

Previous Annual Reports detail the chronology of events leading to the West Bank Snake River study located in Teton County, Wyoming, as well as activities leading to the development of the monitor well program now in place. Ground Water and surface water data collection continues as part of this study.

This network of monitoring wells continues to be maintained by staff of the Ground Water Division because of continued interest in the relationships of surface water and ground water in the West Bank of the Snake River area. This monitor well network continues to provide valuable information, which is being incorporated into the Jackson Hole Environmental Restoration Study.

During FY 2000, funding was procured from the monitoring well network operations and maintenance budget previously established to repair and reinstall two water level recording devices that had developed a malfunction. The internal batteries within the recording devices, which have a lifespan of approximately two years, were also replaced in all of the recorders. The reliability of the water level recording devices installed in the monitoring wells continues to be outstanding, with only an approximate 4 percent failure rate per year.

COAL BED METHANE PROJECTS

Previous Annual Reports describe the chronology of events leading to the development of Coal Bed Methane (CBM) in all of the major basins of the state including the Powder River Basin in Campbell County, Wyoming.

With natural gas prices at near historic highs, interest in CBM remained strong in FY 2000, with industry targeting locations not only in Campbell County, but also in Johnson and Sheridan Counties within the Powder River Basin. In FY 99, the State Engineer's Office received 2,532 coal bed methane applications from 51 companies. In FY 2000, the number of CBM applications received by the State Engineer's Office rose to 5,811, an increase of 229%. The number of companies submitting application rose to 86. The pace of CBM drilling in FY 2000 was somewhat frantic, with over 100 drilling rigs operating in the Powder River Basin. Also in FY 2000, a pilot CBM project contemplating 96 wells was initiated in Carbon County, Wyoming near the Town of Baggs, and a smaller five well project was initiated in Uinta County.

The Record of Decision for the Wyodak Environmental Impact Statement was released in November of FY 2000. This Environmental Impact Statement (EIS) allowed for the construction of 5,000 new CBM wells to be drilled within the area considered under the EIS, which was nearly all of Campbell County, Wyoming. Due to the rapid pace of development, nearly all of the CBM wells authorized under this EIS were drilled during FY 2000. When the 5,000 well limit is reached, the BLM will cease to issue Applications for Permit to Drill (APDs). The CBM industry now estimates that there may be 30,000 new wells drilled within the Powder River Basin by the year 2015, which led the Bureau of Land Management to begin work in FY 2000 on the Powder River Basin Oil and Gas EIS, which uses 30,000 new CBM wells as the Reasonable Foreseeable Development scenario. This EIS encompasses all of Campbell, Johnson, and Sheridan Counties and the northern portion of Converse County. The final EIS is scheduled for release in October FY 2002, with a Record of Decision released in November FY 2002. The State of Wyoming has been given Formal Cooperating Agency status and will receive copies of the Draft and Final EIS documents for comment.

An additional set of paired CBM monitor wells were installed and equipped with continuous water level recorders during FY 2000. A well completed within the coal seam at the top of the Fort Union Formation and an adjacent well completed in the overlying Wasatch Formation were drilled by Barrett Resources, a CBM production company, and donated to the State Engineer's Office for monitoring purposes. These wells are the farthest west CBM monitoring wells and should provide valuable information as the CBM development moves west into the Powder River Basin.

As the CBM development continues to move west and north away from the immediate vicinity of Gillette, Wyoming and the topography of the land changes, issues relating to the management of the produced CBM water have become more of a concern. In order to address these concerns, Coordinated Resource

Management (CRM) groups have been formed for four drainage basins within the Powder River Basin. CRM groups have been formed for the Dead Horse Creek, Wild Horse Creek, Spotted Horse Creek, and Caballo Creek basins. These CRM groups bring representatives of the CBM industry, private landowners, Conservation Districts, and various governmental regulatory agencies together to seek solutions to the questions and concerns related to the production, management, and use of the CBM water produced within or released into the drainage basins. One of the major issues being considered by the CRM groups concerns the release of produced CBM water into normally dry creek channels and the potential loss of productive land due to excessive erosion of the creek channel. During FY 2000, funding was obtained from the Wyoming Water Development Commission for a study conducted by the University of Wyoming on the effects of the release of water into these ephemeral streambeds and the resultant stream channel morphology. When available, the results of the study will be provided to the CRM groups to incorporate into their water management plans.

The management and use of the water produced during the CBM process continues to be a concern. As CBM development has progressed, a vast array of water use options has been formulated. These options include storing the water for stock watering and wildlife use in existing or newly constructed stock watering reservoirs, irrigation of lands either by flood irrigation or sprinkler application, water supply for stock watering pipelines, etc. During FY 2000, pilot projects were initiated by several CBM companies to test the feasibility of reinjecting the produced CBM water into sand zones within the Fort Union Formation and the underlying Lance/Fox Hills Formation. The reinjected water would then be available to a well penetrating these sand zones in the future. The reinjection process being used in this case is not the traditional oilfield injection process with high-pressure pumps and associated compression equipment. The CBM reinjection process consists of treating the produced with a small amount of chlorine so that the water does not produce iron reducing bacteria on the injection well perforations and allowing the water to utilize gravity pressure head to infiltrate the formations.

There continues to be concern expressed by the residents of the area being developed for CBM that the production of water from the coal beds within the Fort Union Formation will have severe water supply implications for their water wells completed in the overlying Wasatch Formation. Nearly every ground water supply problem reported by appropriators in the area of CBM development and investigated by the Ground Water Division in FY 2000 was alleged by the appropriator to be related to a depletion of the ground water supply by CBM development. During FY 2000, water supply problems were investigated in 13 separate wells at the behest of 9 different ground water appropriators. In the vast majority of the cases investigated, the source of the problem was not related to the amount of ground water available to the appropriator in the well, but was

attributable to pump failures, leaking plumbing fixtures, and biological fouling and\or plugging of well casing perforations. Anecdotal accounts exist about water well failures attributable to CBM activities, however the CBM operators have mitigated those problems without involving the State Engineer's Office.

When a CBM well is drilled on federally owned minerals, the Bureau of Land Management requires the CBM production company to develop a water management plan for the produced CBM water. One of the requirements of the water management plan is the identification of water wells within a specified radius of the CBM development, which could be adversely effected. This requirement has led to a sharp increase in the number of demands for water well information from CBM production companies and the consultants working for them.

The continued expansion of the CBM development has consumed countless hours of Ground Water staff time attending public meetings, making presentations, coordinating with other regulatory agencies, reviewing and providing comments on EIS documents, reviewing water management and usage proposals, investigating ground water supply problems, installing and maintaining new monitoring wells, and fulfilling information requests. The expansion of this important mineral development threatens to siphon even more staff time from other projects. At the writing of this document, the Wyoming State Geologist has revised the estimate of the recoverable reserves of methane gas contained in the coal seams within the Powder River Basin. It is anticipated that it will require perhaps 60,000 additional wells to recover this reserve, which is double the amount anticipated by the Powder River Basin Oil and Gas EIS. Should this development scenario come to pass, it will increase the workload of the Ground Water division geometrically, and increase the need for additional monitoring wells to be placed in front of the CBM development to ascertain ground water resource impacts.

OBSERVATION WELLS PROGRAM

Detailed descriptions of the observation well program can be found in previous annual reports.

At the present time, the Ground Water Division of the State Engineer's Office (SEO) maintains and collects data on a total of approximately 274 wells. Of this total, 164 have automated recording equipment…that being mechanical or solid-state data loggers, and a total of 110 manually measured observation wells. The manual measurements are accomplished with a surveyor's chain, electric well probes with calibrated cables, or some wells with air-line systems. The majority of air-line systems were installed on deep formation wells by pump contractors so that they could measure water levels when doing well maintenance.

The SEO also has an ongoing cooperative program with the U.S. Geological Survey (U.S.G.S.) for ground water levels throughout the State of Wyoming. Of 62 wells in the U.S.G.S. Coop program, approximately 50 are recorder wells, and 12 are hand-measured wells. Data from the coop wells serve many functions for the U.S.G.S. and SEO. The data from the coop wells are published in a water annual by the U.S.G.S. so that this information is available to the general public, various professionals, and other government agencies. Personnel from the U.S.G.S. maintain eight of the coop well sites, with the remainder being operated by personnel form the SEO ground water division. All the field record or data from the coop wells is processed by the U.S.G.S. office in Cheyenne, WY.

The Ground Water Division of the SEO also has the capabilities to process and evaluate field data from the statewide observation well network, utilizing a computer software program called "Welldata." Welldata is used to process paper tapes from mechanical water levels recorders, solid-state data loggers and the data from hand measured observation wells. The SEO has shared water level information with the U.S.G.S. on cooperative programs throughout the state.

SARATOGA FISH HATCHERY

Previous Annual Reports describe the chronology of events leading to the development of this ongoing interference investigation.

An increased and diversified data collection effort was implemented by the State Engineer's Office during FY 2000. An existing unpermitted well drilled near the middle of the irrigation development of Overland Trail Ranch and Cattle Co. was located and identified as a potential data source. This well was slug tested to verify communication with the water bearing formation utilized by the majority of water users in the area and subsequently equipped with a continuous water level recorder. With the permission of Mr. Mylert Armstrong, the owner of the inactive Dot #2 and Ravenscroft #2 irrigation wells, continuous water level recorders were installed on these wells to provide more precise water level information upgradient from irrigation and hatchery development than was available from periodic hand measurements. Water levels were collected from the Overland Trail Ranch and Cattle Co. irrigation wells during May FY 2000. The United States Fish and Wildlife Service installed a continuous water level recorder to measure the outflow of Lake Creek Lake.

Water samples were collected from Lake Creek Lake, several of the fish hatchery water supply wells, and two of the irrigation wells located on the Overland Trail Ranch and Cattle Co. property in an attempt to identify the

chemical signature of the water produced from each water source. These water samples were analyzed by the Wyoming Department of Agriculture Analytical Laboratory in Laramie, Wyoming during June of FY 2000 and the results are forthcoming.

Water production meters were installed by the appropriator on all of the irrigation wells located on the Overland Trail Ranch and Cattle Co. property during FY 2000. Staff of the Ground Water Division verified the accuracy of the flow meters during May FY 2000 utilizing an ultrasonic flow meter. A meeting was held with representatives of Overland Trail to discuss investigation developments, additional data collection sites, and to provide preliminary sets of the data being collected.

Precipitation supplied to the study area during FY 2000 was below normal. Although no historic record exists, the Protestant indicated that the supply of water provided by Lake Creek Lake was at, or below record levels, and that the survival of the game fish in the hatchery raceways was in doubt. The Protestant in the case suggested that priority regulation was in order due to the depleted water supply available to Lake Creek Lake, the senior water right associated with the investigation. A meeting was held with both parties involved in the investigation outlining the regulation process and ramifications, and it was mutually agreed that no regulation should occur at this time, as it could upset the geohydrologic balance of the area now under investigation. The survival of the hatchery fish was assured by routine translocation and stocking of area waters with the fish from the hatchery. By June of FY 2000, the population of brood stock present at the site had been reduced to a minimum number required for operation of the hatchery. Water resource data collection continues in an effort to determine the source of this water supply problem.

RULES AND REGULATIONS

Serious work must be done to proceed with and complete the revision of the State Engineer, Ground Water Rules and Regulations. There have been so many changes in the types of uses of water and in the manner in which water may be used for the production of other resources. There are so many advances in the manner in which business is conducted through internet technology; surveys are performed through global positioning techniques; maps are created through computer aided drafting; money is transferred through internet transactions--- All of these issues must be addressed in specific terms in the revision of the Rules and Regulations.

And through this process, the intent of the laws that protect the priority system ***MUST BE MAINTAINED***. The "first in time, first in right" concept must be defined when the possibility exists that applications may be submitted in different formats; either through e-mail or hard copies through the US postal service.

In the past, the Rules and Regulations were hard and fast principles with little to no room for exceptions. Now, programs are obsolete almost before they can become implemented, there is need to provide for flexibility; how and when, and to what extent can exceptions be made. There is a need to understand and document the reasons for specific regulations so that the State Engineer's Office requirements relate directly to that element of statutory responsibility. Employees need to be empowered to logical and intelligent decisions regarding water right issues by having a comprehensive document of "what to do, why to do it and how to do it...."

GROUND WATER FAIRS, OUTREACH PROGRAMS AND CONFERENCES

During FY2000, ground water staff attended coalbed methane fairs and conducted outreach programs to provide assistance to the public. This assistance was in the form of giving speeches, setting up and managing information booths, helping the public determine if their wells were registered and answering general questions regarding ground water filing procedures and agency policy. Staff assisted in the public in filing for water rights on existing wells.

The development of coal bed methane has created some concerns in the Powder River Basin. In order to address these concerns, staff of the Ground Water Division participated in two (2) Coal Bed Methane Fairs during FY2000. Those fairs were held November 19-20, 1999 in Sheridan, Wyoming and June 1-2, 2000 in Gillette, Wyoming.

Ground Water staff and other division staff represented the State Engineer's Office at the 2000 Wyoming State Children's Water Festival held in Casper, Wyoming on May 18, 2000. There were approximately 1,800 students and teachers in attendance. This festival allows fourth and fifth graders a chance to learn about lakes, streams, ground water, soils and how they all interact with them in their environment.

In addition, staff has also attended conferences for the Wyoming Association of Rural Water Systems, the Wyoming Water Well Association, the Wyoming Bar Association and the Wyoming Association of Municipalities.

Computerization of Entry Record Book

It is the State Engineer's duty to make a record of receipt of the applications to appropriate ground water in a suitable book. The Entry Record Book is where all Applications for Permits to Appropriate Ground Water are recorded in the order

in which they were received; thus, establishing a temporary filing number for tracking purposes. This process is extremely important because the date the application is received establishes the priority date of the water right. With the past process, each application had to be handwritten or typed using a typewriter on the appropriate entry on each page in the entry record book. The application was not entered into the database until it was approved, which, in most cases, was several months after the date of receipt. In the recent past, the number of Applications for Permit to Appropriate Ground Water received has increased considerably. The increase in applications made entry into the entry record book and assigning temporary filing numbers a very time consuming and tedious task.

In late 1999, the Ground Water Division decided that an automated process for entering the applications into the database when they were received and automatically printing the entry record book pages would be a valuable means in which to increase efficiency within the application recording process. With the assistance of staff from Technical Services, a "form" was created in Microsoft Access that allows each ground water application to be entered into the database using the temporary filing number as the "permit" number. After data entry, the Entry Record Book pages are then printed and placed in the entry record book.

The advantages of this new process are:

1. The pages no longer need to be typed or hand written.
2. When searching the database by legal description, if new applications have been filed in the area being searched, they will show.
3. Time savings for the individual assigning temporary filing numbers.
4. It also helps the individual responsible for the data entry of the approved permits, as some fields are already entered before approval.
5. A second process involving approved ground water permits was also automated. Another form was created in Access to allow the individual processing the newly approved ground water permits to use this newly inputted information for "Approval Letters," instead of retyping the same information.
6. This new process also allows the information that is entered into the database to be "proofed" several times by different individuals. These checks help the Ground Water Division ensure the quality of the data being entered.

Understanding and utilizing technology to assist in the "paperwork" processing has led to time savings and greater staff efficiency. It has also enabled to staff to be more responsive to public ground water right inquiries.

WATER SUPPLY AND WATER YIELD ANALYSIS

The State Engineer is required under Section 35-12-108, Wyoming Statutes 1987, to prepare a "Water Supply and Water Yield Analyses" for projects under the jurisdiction of the Industrial Siting Administration which would use 800 acre-feet of water per year or more. The analysis is done to evaluate the adequacy if the proposed water supply for the project and the State Engineer is required to certify the adequacy of this water supply. The procedure requires investigation and review of the proposal and the issuance of a "Final Opinion" by the State Engineer concerning the water supply. The 1987 Legislature amended the Industrial Siting statute to allow a company, under certain circumstances, to request waiver of some requirements to the Industrial Siting statute. This created a streamlined procedure (fast track procedure) for issuing an Industrial Siting Permit. During FY2000 there were no proposals requiring Water Supply and Yield Analysis from the State Engineer's Office. There were no new water supply and yield analysis submitted to the State Engineer in FY2000.

THERMOPOLIS AREA PROBLEMS

In January 1999, the Hot Springs County Commissioners wrote to the State Engineer expressing concern in an apparent decline in the flow of the Big Horn Hot Springs System, especially over the last 40-50 years. The Commissioners felt that the hot springs resource was the "lifeblood of their community" and that this resource could be threatened by residential development. With that in mind, they had two (2) requests:

1) Designate a ground water control area around the Thermopolis Hot Springs system.

OR

2) Impose a moratorium on approving new permits for geothermal wells in the general area of the Hot Springs State Park, until a ground water control area could be established.

In March, 1999, Jeff Fassett, State Engineer, Dick Stockdale, Administrator of the Ground Water Division and Craig Cooper, Superintendent of Water Division III met in Thermopolis with the Hot Springs County Board of Commissioners, the Superintendent of Hot Springs State Park, the Mayor of Thermopolis, the Hot Springs County Planner and a few members of the public. At this meeting, the State Engineer representatives indicated that they did not feel that the

establishment of a control area would achieve the goals the County, Town and State Park had in mind due to the depths and types of wells being drilled. It was suggested that perhaps local zoning or land use restrictions be implemented to achieve the goals desired.

At this meeting, it was decided that the State Engineer's Office would allow County, Town and State Park personnel an opportunity to review water well applications for Hot Springs County submitted to this office. This would provide local input in the water well permitting process.

Approving water well applications in a timely manner with this type of application review process has been a concern for the Ground Water Division; however, in FY 2000, 18 well applications for Hot Spring County were received and approved with this review process. The applications that were approved were generally shallow stock and domestic well applications. Further monitoring of the spring situation may require modifications to this process.

PROBLEM AREAS AND RECOMMENDATIONS

Coal bed methane activities have increased tremendously in the past year. Because of this, applications processing and processing of other notices for coal bed methane wells have consumed large amounts of staff time. Because of the amount of staff time required for timely response to coal bed methane applications other activities has been "back burnered" to the extent that back logs are reaching unacceptable levels. To correct this situation additional staff will be required.

The promulgation of new rules and regulations because of other time demands placed on the agency, it has been difficult at best to get new rules and regulations promulgated. It is envisioned that completion of this task will have to be assigned a higher priority however; to do so will relegate some other activity to a lower priority.

COOPERATIVE PROGRAMS SECTION

By
MICHAEL R. EBSEN
COOPERATIVE PROGRAMS COORDINATOR

The Cooperative Programs Section coordinates three ongoing programs and provides technical support in other areas as assigned. Primary objectives by program are as follows:

OBJECTIVES

1. The objective of the ***Surface and Ground Water Data Program*** is to provide the State Engineer, other state, local and federal agencies, and all other water users with quality, legally acceptable, hydrologic information for use in crop and other water use planning. This includes regulation, compact administration and the technical analyses required in water related litigation. The program also aids in flood plain planning and flood warning, water quality monitoring and various other types of studies. Continued involvement in this investigation and surveillance activity allows the State Engineer to more effectively address current state priorities as well as gather baseline information as issues evolve.

2. The objective of the ***Snow Survey and Stream Flow Forecast Program*** is to provide information for the State Engineer and all water users, managers, and planners on seasonal snowpack and projected snowmelt stream flow runoff. This in turn helps insure that maximum utility can be realized from this limited water resource.

3. The objective of the ***Subdivision Water Right Program*** is to insure that water rights appurtenant to lands proposed for subdivision are addressed in compliance with statutory provisions prior to land development.

Expanded commitments resulting from recent legislation associated with the adequacy of proposed subdivision water supplies are being addressed. This new involvement is currently being handled in conjunction with the *Subdivision Water Right Program*. Therefore, activities associated with ***Subdivision Water Supply Adequacy Review*** commitments will be discussed in that portion of this report.

SURFACE AND GROUND WATER DATA PROGRAM
FY 1999 & 2000

ACCOMPLISHMENTS

A significant portion of the funding for the Program is provided through cost share agreements between the State Engineer and other entities, including the United States Geological Survey (USGS) and the United States Bureau of Reclamation (USBR). The State's contributions have been provided in part, in the form of direct assistance by State Engineer personnel in activities such as gaging streams, and in part through direct funding.

COOPERATIVE STREAM GAGING ACTIVITIES:

Accomplishments involving State Engineer personnel involved in the surface water data area include the day-to-day operation, maintenance and/or monitoring of the 55 surface water gaging stations currently being operated in the USGS cooperative network, as well as a myriad of other stations and sites. Activities include regular measurements at the various sites, and communicating essential information to the appropriate parties as each season progresses. Detailed records of stream flows and reservoir stages are gathered, analyzed, and computed. Reconnaissance, safety inspections, and other work is provided. Water use data is collected, assembled and transmitted for inclusion in the records. Worn equipment or instrumentation components are repaired or replaced. Maintenance around the state ranges from repairs resulting from the acts of vandals, to the acts of Mother Nature and father time. Shelters are painted and patched, walkways and cableways are tested and repaired, and riprap is placed around gage houses, stream banks and damaged artificial controls. Activities such as these have made up the direct assistance or *in-kind service* referenced above.

MONITOR WELL MEASUREMENT ACTIVITIES:

Accomplishments involving State Engineer personnel in the ground water data area include the day-to-day operation, maintenance and/or monitoring of the 60 observation wells in the USGS cooperative network, as well as numerous other sites throughout the state. Activities include repairing or replacing worn equipment or instrumentation components. Most of these wells are equipped with float driven digital water-level recorders. However, some wells, including several artesian wells, are equipped with pressure-sensing transducers and electronic data recorders. The remaining wells are measured periodically by hand using a steel drop tape or air line systems.

YELLOWSTONE RIVER COMPACT GAGE ACTIVITIES:

The State Engineer continues to participate in the surveillance of the water resources of the Yellowstone River basin in the states of Montana and Wyoming as provided for in the Yellowstone River Compact. The state of Montana also participates at the same funding level as Wyoming for their portion of this activity, which is handled through the Montana District Office of the USGS. Compact activities other than those related to surface water data collection being contracted through cooperative agreements with the USGS are covered elsewhere in this report.

BELLE FOURCHE RIVER COMPACT GAGE ACTIVITIES:

The State Engineer continues to participate in the surveillance of the water resources of the Belle Fourche River basin as provided for in the Belle Fourche River Compact. The state of South Dakota also participates at the same funding level as Wyoming for their portion of this activity, which is handled through the South Dakota District Office of the USGS. Compact activities other than those related to surface water data collection being contracted through cooperative agreements with the USGS are covered elsewhere in this report.

BEAR RIVER COMPACT GAGE ACTIVITIES:

The State Engineer continues to participate in the surveillance of the water resources of the Bear River basin in the states of Utah, Idaho, and Wyoming through the Bear River Commission as provided for in the Bear River Compact. The states of Utah and Idaho also participate at the same funding level as Wyoming for their portion of this activity, which is handled through the Utah District Office of the USGS. Compact activities other than those related to surface water data collection being contracted through cooperative agreements with the USGS are covered elsewhere in this report.

STATEWIDE STREAMGAGE UPGRADE ACTIVITIES:

The State Engineer's Office and the Bureau of Reclamation continue to participate in the replacement, repair or rehabilitation of select stream gaging stations throughout the state. These activities include the installation of new stream gaging sites, the construction of new or the rehabilitation of existing cableways, the addition of artificial control structures, and the upgrading of some sites with new and improved instrumentation. Some of the new instrumentation involves automating sites with electronic data loggers with remote data telemetry

capabilities. By cooperating with the Bureau of Reclamation at sites of mutual interest the State Engineer has effectively doubled the resources available to upgrade these sites.

During the initial planning phase the most critical sites were prioritized, and were addressed in the first round of work. September 30, 1998 was the effective close out date for work on the initial list of projects. Additional objectives were prioritized in the spring of 1999 and contain some work not perfected, due to various delays, from the initial list of projects. These new objectives also prioritize the replacement of environmentally sensitive instrumentation as part of the work to be accomplished on the current, expanded list of projects.

During the current fiscal year some of the necessary gage instrumentation from the expanded list of projects was purchased and used in conducting training seminars for employees directly involved in these gage rehabilitation activities, prior to actually being installed at the various field sites. The first training session was held in Cheyenne, in late April and a follow-up was conducted in Riverton, in early June. These seminars are conducted, free of charge to the State Engineer, by Sutron Corporation as part of their effort to provide continuing support to users. The seminars provide much needed hands-on experience and help develop the programming and set-up skills necessary to install, operate, and maintain this new generation of instrumentation.

Due to the extremely dry conditions that prevailed through the fall of 1999 and into the spring and summer of 2000 administrative demands on field personnel were also extreme. Therefore the amount of work accomplished in this activity was down from last year. However, this activity has and will continue to conserve water, more efficiently distribute the available supply, shorten response times, and provide safer working conditions for State Engineer field personnel.

OTHER DATA ACTIVITIES:

State Engineer personnel also conduct other surveillance and investigation activities beyond the scope of the Federal/State cooperative activities outlined above. These efforts also provide compiled data on stream flow, reservoir storage and river diversions. One example of these compilations is the Hydrographers' Annual Report series. There is also a cooperative effort involving the University of Wyoming's Water Resources Data System (WRDS) and the Wyoming State Engineer's Office to produce a database to house and more efficiently analyze these data.

In addition, there are a substantial number of observation well sites, outside the Federal/State cooperative well level network outlined above, that are operated by State Engineer personnel. Well Data, a computer database for well information has also been purchased and continues to be perfected and populated.

PROBLEM AREAS AND RECOMMENDATIONS

Information to support informed water resource planning decisions requires many years of records. Changes in the uses of water, as well as changes in water usage patterns along with the resulting conflicts, have and will continue to occur. Those involved in resolving these complex issues request increasingly sophisticated information, often on a "real time" basis. As statewide water planning efforts proceed, the need for surface and ground water data continues to increase, as does the demand for water and its proper administration.

The information age has brought with it cutbacks in government spending at all levels. In this age of instant communication the need to provide data in a more timely manner coupled with the aging condition of the mostly un-automated data collection sites in the various data networks poses data availability concerns as well as personnel safety concerns. One need only examine past reports to realize that programs are being downsized and activities are being restricted, often indiscriminately.

In order to maintain, upgrade and automate essential components in the existing data networks an ongoing commitment of resources (a comprehensive statewide program) will be required. This program should include provisions to critically review the need for each existing site as well as provisions to implement new sites in areas where data needs exist or are anticipated. It should also provide for additional personnel training in areas such as remote sensing, radio and satellite telemetry, and safety. It is hoped that the stream gage upgrade activity outlined above will evolve into such a program.

Operational costs associated with continuing to provide current levels of data availability through State Engineer involvement in the USGS, Federal/State Cooperative Data Program continue in an upward spiral as well, and complicate the State Engineer's maintenance, upgrade and automation efforts just discussed. Although these increased USGS costs contain inflationary increases, they primarily reflect decreases in credit received for direct program services provided by State Engineer personnel (*in kind services),* that have formerly been recognized as State program contributions, in lieu of cash. These losses are in addition to recent losses in USGS federal matching funds for such necessities as data site maintenance.

In order for the State Engineer to continue to participate in the USGS Cooperative Data Program, either program products needed to be further cut, or additional funding is needed. In the spring of 2000 the legislature appropriated additional funding to offset Federal cost increases. Given the trend toward increasing costs and decreasing benefits, the State may soon reach a break-even point where all or

part of the current cooperative data program could be operated cost effectively by the State. However, this will bring up a new series of issues difficult to evaluate and assess, including Federal/State relations, and data site ownership and liability concerns.

SNOW SURVEY AND STREAMFLOW FORECAST PROGRAM
FY 2000

ACCOMPLISHMENTS

Snow surveys are conducted four (4) times each year, beginning February 1st and continuing until May 1st, at 65 manually measured snow courses, and daily at the 80 automated SNOTEL sites throughout Wyoming. The Natural Resources Conservation Service (NRCS), State Engineer personnel, and others participate in this Program. Snow survey personnel manually measure snow depth and density, as well as provide maintenance at these sites. Repairing SNOTEL sites and measuring snow often requires snow survey personnel to travel to remote locations under potentially adverse conditions. For these reasons participants are required to complete special training in snow survey and snow survival techniques, maintain current first aid and CPR certifications, and undergo annual physical exams.

SNOTEL sites are automated; radiotelemetered, snowpack data collection sites, and are generally located in remote, yet hydrologically significant areas throughout Wyoming. These sites provide equivalent water depth of the snowpack (SWE), as well as precipitation, air temperature, and in some cases soil moisture and temperature. The stations electronically relay data, at regular intervals, to a central collection point in Portland, Oregon. Data is then available to users via the INTERNET or telephone modem connection. A direct link to this data has also been provided from the State Engineer's INTERNET home page. Data can be collected at almost any interval, but is generally collected at four to six hour intervals. Data collected once each day is normally adequate for water supply forecasting, however avalanche forecasting and other recreational users may require data on a more frequent basis. Each site has the capability of handling up to 64 sensors. Labor intensive manual snow survey measurements will be significantly reduced as more SNOTEL sites are added, and the confidence level of data collected with SNOTEL sites improves.

Streamflow forecasts are an end result of snow data collection efforts and provide a valuable tool for those involved in water management and planning. Streamflow forecasts are currently available at 65 locations in Wyoming. Flows at these sites are forecast six times per year beginning the first of January and ending on the first of June. Virtually all of these streamflow prediction sites have been selected as

the direct result of input from local water users. The sites require the presence of an active stream gage at the forecast site to calibrate and refine the prediction models. Complex planning issues involving all areas of the public and private sectors often require information in advance of the runoff season to be properly addressed. Decisions in areas including agriculture, industry and municipal water supply are simplified through the availability of these forecasts. The State Engineer's Office contributed $2,000 to this program and provided approximately 50 work days of effort in the collection of snow survey data this past year.

PROBLEM AREAS AND RECOMMENDATIONS

Snow surveying and streamflow forecasting remain inherently inexact sciences due to innate fluctuations in snowpack measurements, and the effects of weather patterns prior to and during the measurement and runoff periods. Even so, network and equipment refinements continue to evolve. Replacing manual snow courses with SNOTEL stations and adding additional equipment such as snow depth, soil moisture and evaporation loss sensors, as they become available, would provide improved and almost continuous forecasting capabilities. Snow depth sensors have recently become available and will be added to the system as funds become available.

State Engineer personnel and others recognize and are focusing on how recent reductions in funding, personnel, and activities (i.e. stream gage discountenances) within other water data programs have and will continue to adversely impact related activities (such as streamflow predictions) in this and other programs. The State Engineer therefore carefully weighs potential impacts, including impacts on related programs, in the resource allocation process.

Certain instrumentation components at several SNOTEL sites continue to exhibit some degree of unreliability and may require additional site visits to verify that these sites are operating optimally. Additionally, State Engineer personnel reassignments and/or retirements can pose a concern. Therefore, pre-season planning meetings are held every fall in an attempt to recognize and address these types of concerns prior to the onset of the snow season. Typically a nearby trained snow surveyor will 'stand by' and assist in areas where they normally may have no involvement, while a new snow surveyor obtains the required training and certifications.

SUBDIVISION WATER RIGHT PROGRAM
FY 1999-2000

ACCOMPLISHMENTS

Wyoming Statute 18-5-306 (a) (xi) provides for the disposition of any water rights appurtenant to the lands involved in a proposed subdivision development prior to

its approval by county zoning officials. Three basic options are available to the subdivider:

1. The subdivider may elect to discontinue the use of all or part of the water right(s) within the subdivision, in which case the use(s) of the water, as well as the records of the State Engineer, need to be altered to reflect this change.

2. The subdivider may elect to continue to use all or part of the right(s) outside of the subdivision, in which case the use(s) of the water, as well as the records of the State Engineer, need to be altered to reflect this change.

3. All or part of the right(s) may continue to be used within the subdivision, provided no conflicts are introduced or perpetuated in the records of the State Engineer under the proposed new usage pattern. A plan is required to specify which subdivision lots will retain any remaining right(s), or portions thereof, not addressed under 1 and 2 above, including how continued beneficial use without adverse effect is proposed to be accomplished after development.

If there are no subject water rights appurtenant to the subdivision lands, the developer should obtain a statement confirming this fact from the office of the State Engineer for submission to the county zoning officials.

During FY 1999, water rights on 74 parcels of land proposed to be subdivided were received and the appropriate recommendations, follow-ups, and approvals were provided. Of this number, 12 required no water right action, 5 required further action and had since been approved, and 57 were pending further action.

During FY 2000, water rights on 47 parcels of land proposed to be subdivided were received and the appropriate recommendations, follow-ups, and approvals were provided. Of this number, 22 required no water right action, 3 required further action and have since been approved, and 22 are pending further action.

Since the enactment of this legislation in 1980, an average of 22 reviews per year were provided during the decade of the 80's, and an average of 42 reviews per year have been provided during the decade of the 90's, once the 74 reviews provided during the 1999 calendar year are factored in. This represents a 91% increase in reviews this decade, over last.

It should be noted that the State Engineer's Office has been, and continues to be, involved to an extent in the process of land division, including the subdivision process. Long-term involvement under Title 18 Statutes, as discussed thus far, has been limited to water rights (property rights) that are appurtenant (legally attached) to lands at the time these lands are proposed to be subdivided. These

existing water rights do need to continue to be recognized in the County planning process, and were the extent of the State Engineer's involvement, historically.

Recently, NEW SUBDIVISION LEGISLATION requiring expanded State Engineer involvement in the area of proposed subdivision water supply adequacy has been enacted. An earlier version of this legislation became effective July 1, 1997. During the 1998 Legislative Session this earlier version was further amended, and subsequently repealed by the Legislature; however the repeal was ultimately vetoed by the Governor. Once again, during the 1999 Legislative Session, this legislation was amended, and this version is to become effective on July 1 2000. This new State Engineer involvement is outlined under Wyoming Statute 18-5-306 (a) (xi).

This new legislation requires broadened State level involvement in the County subdivision processes and has empowered and directed the Department of Environmental Quality to become involved in the review of waste water and water supply systems proposed for new subdivision developments, as they relate to system adequacy and dependability. This directive will require a necessary and unavoidable interface in agency missions to consider issues relating to both water quality and water quantification. Thus, the statute specifically references the potential for expanded State Engineer involvement, to be provided at the request of the Department of Environmental Quality. The Department has requested assistance with such issues as the physical and legal availability of water for the subdivision water supplies as proposed by developers.

The new legislation also requires existing water rights on lands surrounding the lands proposed to be subdivided to be considered, as well as interrelationships including potential conflicts produced as the result of changes in current water use patterns and/or new water supply concerns resulting from the subdivision of the land. An integral part of this new planning process will be the filing of the necessary water right permit application, which recognizes the proposed subdivision water supply.

Since the original enactment of the earlier version of this new legislation on July 1, 1997, the State Engineer has provided the Department of Environmental Quality with review comments and follow-up reviews as requested. The Department requested assistance on 4 subdivisions during FY 1998, 22 during FY 1999, and 33 during FY 2000. These reviews were in addition to staff time committed to participating in numerous meetings, teleconferences, and associated activities.

PROBLEM AREAS AND RECOMMENDATIONS

The mission and objective of this Agency, and program, include the directive to advance the fact that a water right is a property right, and therefore warrants recognition and protection under the Constitution and State Statute. The State

Engineer's Office is currently in the process of revising and updating its Rules and Regulations documents, and revisions have not as yet been completed. To the extent possible, input received relevant to long term and expanded involvement in the subdivision process will also be included in this effort.

With the advent of coal bed methane development issues in the Powder River Basin the staff position provided with the passage of the new subdivision legislation, originally intended to help address this new workload, has been preempted. The full extent of the cumulative effect of this new legislation on the Cooperative Programs Section is unclear, however it is clear that more demands have been placed on already overburdened staff time.

The Subdivision Water Right Program has historically addresses only existing water rights, and the number of these subdivision review requests continues to rise. This, coupled with the increasing workload associated with the new water supply adequacy responsibilities, and increased time commitments in other programs, contributes to the review backlogs, lengthens State Engineer response time, and has compromised program integrity. Records indicate program compliance has been and remains poor. With the advent of new subdivision legislation, compliance may ultimately improve, however subdivisions continue to be approved by County Planners and Commissioners before the water rights issues have been reviewed and resolved by the State Engineer's Office. A program review, which includes the option to allocate additional office and field resources, is overdue.

BOARD OF CONTROL DIVISION

MAJOR ACCOMPLISHMENTS

BOARD OF CONTROL SECTION

by

ALLAN CUNNINGHAM, ADJUDICATION OFFICER
BOARD OF CONTROL DIVISION

OBJECTIVES

1. To promptly process petitions to amend adjudicated water rights and to present these petitions for review and consideration by the Board of Control.

2. To maintain and update the status of all adjudicated water right records to accurately reflect their current status.

3. To continuously evaluate the productivity of staff efforts in addressing the current workload.

4. To respond to inquiries by the public, as well as State and Federal agencies, regarding the current status of adjudicated water rights, and to give instructions and assist appropriators on the methods, procedures and format for filing a petition with the Board of Control.

5. To provide technical and administrative support to the Board of Control members in matters concerning the evaluation of both surface and ground water rights and water administration.

6. To prepare and forward proofs of appropriation for surface and ground water uses to the Division Superintendents for field processing and recommendation.

7. To comply with statutory requirements and publish a tabulation of adjudicated water rights for the four (4) Water Divisions.

ACCOMPLISHMENTS

During this reporting period the Board received 155 petitions from throughout the State in addition to those already on the agenda. These new petitions are listed by division as follows:

	SURFACE	GROUND	TOTAL
DIVISION NO. 1	24	21	45
DIVISION NO. 2	35	5	18
DIVISION NO. 3	15	8	23
DIVISION NO. 4	46	1	47
TOTAL	120	35	155

Final action was taken on a total of 136 petitions, which were either granted, denied or dismissed. Some of the petitions were carried over from the previous reporting period to allow for the resolution of technical, engineering and legal problems, and in some cases for public hearings. The petitions dealt with by the Board of Control ranged from those with simple issues such as a change of point of diversion to those of a more complex nature such as change of use and declaration of abandonment.

A total of two hundred five (205) proofs of appropriation were considered by the Board of Control during this reporting period. Eighty six (86) of these proofs were for ground water rights (wells), and one hundred nineteen (119) were for surface water rights. In addition to these two hundred five (205) proofs, seventy (70) stock reservoirs were inspected and found to be constructed within the terms of the permit. Under existing Board of Control policy, these permits will be finalized, and a notation made in the water rights tabulation books, but no certificate of construction issued.

This reporting period also saw the continuation of a major petition undertaking on Smith's Fork Creek and its tributaries. This effort will entail the amending of some 70 water rights to agree with the actual situation on the ground ranging from changes of point of diversion to complex changes of place of use.

Due to Y2K concerns, tabulations of adjudicated water rights for all four (4) water divisions of the State were published during this reporting period. Also, the Tabulation of Adjudicated Water Rights Database that was stored in the Clipper Program was dumped into an Access Database. This new Access Database will allow the Board of Control more flexibility and ease in publishing future tabulations. The next tabulations of adjudicated water rights for all four (4) water divisions of the State are not due to be published until October of 2004 except for Water Division No. III, which is due in April 2002 (see problem areas).

PROBLEM AREAS

Lack of legislative funding and drastic budget belt tightening have prohibited the Division from satisfactorily reaching its statutory requirements. Wyoming Statute 41-4-208, 1977, requires that the Board of Control compile and edit revised tabulations of adjudicated water rights for all four (4) water divisions of the State.

There is a constant demand for these tabulations from engineers, land surveyors, government agencies, and the public, however, inadequate funding has prevented the Board of Control from adequately publishing these tabulations for distribution.

Due to Judge Hartman's pending retirement in April 2003, the Tabulation of Adjudicated Water Rights for Division No. III must be published by April 2002. This April 2002 deadline will place additional work and additional time constraints on all State Board of Control staff within the Cheyenne Division. A committee of all interested divisions within the State Engineer's staff has been created and a schedule devised with the goal of a new Division III Tabulation of Adjudicated Water Rights to Judge Hartman by April 2002.

The technical staff continues to strive for a complete comprehensive review that each petition deserves. Computer technology has been a great asset in assisting the Board's staff in developing ways of doing more with less. Applications such as word processing and report keeping have made positive strides toward greater effectiveness and production due in large part to the utilization of the computer to its capacity. Although better and faster computers are making some procedures more efficient, ultimately the computer cannot replace the analysis and research capabilities performed by the technical staff.

SPECIAL PROJECTS DIVISION

by
NANCY D. MCCANN
ADMINISTRATOR

This Special Projects report is comprised of four main programs: the Big Horn General Adjudication lawsuit within Water Division No. 3; the Microfilm Department; the Wyoming Water Library and the GIS (Geographic Information Systems) Projects Team.

Big Horn General Adjudication

W.S. 1-37-106, General Adjudication Statute, gave authorization to initiate the process through a judicial determination of the rights to use water of all persons on any river system. Subsequently in 1977, the State filed suit for the determination of water rights in the Big Horn River system and all other sources.

> "It is anticipated that this adjudication will be finally concluded, excepting appeals to appellate courts, by or before December 31, 1988. The parties should make every effort to meet this goal."
>
> --Judge Alan B. Johnson, District Judge, Fifth Judicial District, 1985

It is not an affront to his intelligence that the Judge could not foresee the tremendous complexity and consumption of human effort required by this case. By 1992, it became painfully evident that all parties had grossly underestimated the demands of the adjudication. And now more than 10 years after Judge Johnson's predicted conclusion, although completion is within sight, we are still far away.

Judge Hartman has expressed more than once his desire to see the adjudication wrapped up by April 2003. Remaining legal issues and their attendant factual matters include appurtenancy of fee land reserved rights and final decision on Walton right claims as decided by the District Court. There are also numerous technical or administrative tasks that must be accomplished as each decision is handed down. Some of these are ordered by the court (e.g., cancellation of underlying state rights where reserved rights were awarded) while others are necessary functions to maintain proper records at the State Engineers Office (e.g., incorporating decreed rights in the Division 3 tabulation book). Lastly, there is a desire to have a document that wraps up all phases of the adjudication — a final

decree. In preparation of the next biennium and in keeping with the 2003 goal of the district court, the staff developed a comprehensive plan for the Big Horn General Adjudication. **Implementation of the plan began September 1999. Details of the plan are available and results are shown here in this report.**

General History, Past Accomplishments and Present Condition

The official birth date of the adjudication is January 24, 1977, when Wyoming filed its complaint in the District Court of the Fifth Judicial District. The case was filed two days after enactment of Wyoming's adjudication statute in an attempt to provide the state with further security and jurisdiction over potential federal claims for water. By far the most impressive claims and complex issues concerned the Wind River Tribes, who submitted federal reserved right claims for 739,000 acre-feet of water for numerous uses. The largest claim was for irrigation of 147,111 acres of historically irrigated and future projects lands, equaling a total diversion requirement of 708,058 acre-feet.

Trial for Tribal reserved rights (Phase I) was completed in December 1981, with the subsequent district court decisions ending in 1985. The Wyoming Supreme Court entered its first judgment and decree (*Big Horn I*) in 1988, awarding the Tribes nearly 500,000 acre-feet of water for irrigation uses only: 290,490 acre-feet for 54,216 acres of historically irrigated land and 209,372 acre-feet for 53,760 acres of future irrigation project lands. The United States Supreme Court affirmed the decision in 1989. A pending Consent Decree will establish appurtenancy to 28,137 acres and 157,668 acre-feet of 1868 rights, about 63 percent of the current in-use reserved right award.

In late 1988, the State Engineer's Office (SEO) began the court-ordered task of canceling all state rights that overlapped awarded federal reserved rights in Phase I. This effort required the dissection of the decree into 1,351 individual tracts of land, and development of databases. It also included the detailed analysis of over 800 adjudicated and unadjudicated water rights. Tabulation and mapping of each of these components was necessary to ensure accurate analysis and documentation of the reserved rights. This analysis ultimately required countless SEO staff hours to revise all affected state records, and notify hundreds of landowners whose water rights have changed. In conjunction with review by other parties and hearings before the court, this endeavor took seven years; there are still adjustments to be made due to interactions and conflicts with Phase III.

In the meantime, non-Tribal federal reserved rights (Phase II) were settled rather quickly, with a Partial Interlocutory Decree entered in early 1983. This document contains a potpourri of tables listing innumerable claims for stock ponds, instream flows, seeps, springs, wells and domestic uses that were never verified before entering the decree. The State and all other parties to the case were aware of this at settlement, and that substantiation of those claims was necessary before a final decree could be completed. Proof of those claims has trickled in since 1994 and

the Surface Water Division, in addition to their daily responsibilities, has processed some 700 claims. The previous backlog was caught up using existing staff resources working overtime. The staff still awaits more claims (approximately 800) from the Forest Service.

Phase III involves the fate of existing state rights. Field inspections to determine whether state permitted lands should be adjudicated or eliminated were initiated in the late 1980s and is nearing completion. Of the nearly 4,000 permits examined, less than 30 remain to be investigated in the field. The Division 3 staff has reviewed and reported to the Court some 3,200 permits. Recent amendment to Phase III procedures has allowed the SEO to more efficiently handle review of large irrigation projects, but the process still requires on-the-ground verification. Aged reports—those that have a 5-year gap between fieldwork and reporting—are often sent back by the Court for reinvestigation due to ownership changes.

The portion of the adjudication concerning the so-called Walton rights (successor rights to Indian allottee federal reserved rights) includes claims dating back to 1982. Walton rights are actually a part of Phase I. As the "technical arm of the court," the SEO was required to investigate 423 claims. An affirmative decision on a Motion for Summary Judgment concerning claims that did not stem from an allotment, as well as withdrawal by several claimants, reduced the caseload to 256 claims. These remaining claims required field inspections and records research, providing the Court with a factual account on each claim. Since the Tribes contested every claim, the State was obliged to participate in settlement of claims and review all analyses performed by the Tribes' technical experts. The State also took the lead role in contesting Tribal Walton claims for additional 1868 water and administrative issues contradictory to the law of the case that threatened the State Engineer's current role as administrator of all water in Wyoming. The District Court's decision on the final group of claimants and administrative issues did not arrive until August 2000.

Quantification of ground water uses by the Tribes and off-reservation is nearing completion, too. A list of Tribal wells and ground water uses is expected to be submitted to the court August 3, 1999. Non-Indian ground water use is part of Phase III and was completed in 1996. Over 7,730 stock and domestic wells and 742 larger wells for irrigation, municipal and other uses were reported to the court. This effort required 543 field inspections, resulting in the issuance of over 500 Certificates of Record.

The judicial decisions have set off, and will continue to necessitate, an extraordinary amount of administrative and technical activities that the court required the state to undertake <u>at its own expense</u>.

<u>What lies before us</u>

Each phase of the adjudication is in a different stage of completion. An action plan has been used to assist in securing necessary budget and personnel, and to

facilitate logistics. There are numerous activities already underway that need finalization, and new tasks that we anticipate beginning this year.

CURRENT ACCOMPLISHMENTS

PHASE I - Walton Claims

From the 423 original Walton claims that were filed in 1992, 149 were disposed of by the Wyoming Supreme Court in Big Horn V, leaving 274 claims that were "Purist" claims derived from allotments. This year's efforts continued with settlement of the remaining Walton claims which included review and analysis of proposed prehearing memorandums, findings of fact and conclusions of law and the Special Master's Reports and Recommendations. In addition to settlement of the facts, extensive work was completed on mapping the location of the proposed settled award for each Walton claim.

Legal briefing on the global legal issues was completed in late 1998. These legal issues are: a) whether federal or state law control the perfected Walton right; b) ownership of the water if the Walton right is abandoned; c) the water duty of the perfected Walton right; d) whether the perfected Walton right is appurtenant to the land; and e) administration of a perfected Walton right. After the Court decision on Walton right claims (anticipated in late 1999), cancellation of underlying state rights needs to be performed. Final workable databases and maps for SEO records and use need to be developed.

Upon perfection and award of the Walton rights, the determinations of overlap between Walton rights and State rights will be completed pursuant to orders from the Court. The overlap process of updating all State Engineer Office records for Walton Rights will begin in the next reporting period.

Phase I — Tribal reserved rights

Complementing the legal aspects of Walton is another legal effort driven by several appropriators seeking appurtenance of the tribal reserved rights. Tribal reserved rights have already been determined. The pending Consent Decree regarding appurtenancy of 1868 rights for allotted and fee lands is the only current outstanding issue affecting closure of Phase I. The results of this decree will require correction of state records, recording the "permanent rights" at county offices, and database modifications. Current data quality needs to be reviewed to assure products for office and field use are accurate and available. Final workable databases and maps for SEO records and use need to be developed. The final decision from the court is expected during the next reporting period.

Phase I - Tribe's Groundwater Quantification

On October 16, 1992, the District Court ordered the Tribes to identify and quantify their 1985 ground water uses awarded by the Supreme Court. The Tribes were required to submit a list to the Court by April 1994, but were granted several extensions. In February 1999, the District Court ordered the Tribes to submit to the State documentation and information necessary for the State to make their recommendations on the wells consistent with the 1992 Order. The tribes submitted their final identification of groundwater wells in August 1999 and the State filed its recommendation in September 1999. In January 2000, the Tribes, the State and the United States executed a Settlement Stipulation relating globally to all the affected groundwater rights. It is expected that personal notice and public notice will be given before the end of 2000. It is anticipated that a final report will be submitted to the court by March 2001.

PHASE II - Federal (non-Indian) Reserved Water Rights

Requests from the federal agencies to delete specific water rights from the decree continue to filter into the staff. As a result, a determination has been made by the parties to the Big Horn lawsuit, as well as the Court, that a complete revision of the Phase II Interlocutory Decree will be necessary. The staff responsibility will continue to increase during the analysis of the decree in order to provide the revised decree to the Court. Due to past turnover at the Forest Service and the lack of funding (federal) for staff resources, the submission of 800 recordation permits will be delayed. We are hopeful that these permits will be submitted during the next biennium. This submission will impact the Surface and Ground Water Sections, and the Big Horn Adjudication staff.

PHASE III - Surface Water

Using the May 19, 1997 amended Court procedures, the staff persists at a consistent pace with the comprehensive review of all unadjudicated State water rights in Water Division III.

The field staff and the Tribes continue to jointly inspect the State permits located within the exterior boundaries of the WRIR. This includes all unadjudicated permits located either on Tribal or non-Indian lands. The joint inspections are proceeding in a timely fashion. The field personnel obtained ownership information, then scheduled on the ground inspections with individual appropriators, then conducted and prepared a detailed inspection report for 36 permits.

The District Court increased the responsibility of the staff on July 26, 1993, due to the resignation of the Special Master. The staff continues its reporting to the court and is responsible for all uncontested cases in place of the Special Master in order to alleviate the burden on the Court. In addition, the staff participated in pre-hearing conferences to provide clarification and assistance in resolving disputes.

These efforts, put forth by the staff, resolved the issues of concern and avoided the necessity for any hearings before the Court during this biennium. 113 surface water permits were reported to the District Court. Certificates of Appropriation issued from Court Orders totaled 103.

PHASE III - Ground Water

During this period, the efforts of the staff continued by reporting 3 ground water permits to the District Court. The staff also prepared a total of 13 Certificates of Appropriation of Ground Water to be recorded in the county clerk's office.

PROBLEM AREAS

Continuous efforts are being made after the Court orders are issued to integrate the decreed rights into the State Engineer records. This integration process involves a lengthy, detailed update of the actual permit records, stream cards, township cards, certificates being issued, amended and canceled, updates of the computer water rights database, microfilm all records involved, and so on. This process has impacted the flow of work throughout the State Engineer's office.

RECOMMENDATIONS

The staff will continue their dedication, hard work and patience while dealing with the appropriators and all parties involved in this complex water case.

MICROFILM DEPARTMENT

OBJECTIVES

The objective of this department is to provide high quality, up-to-date microfilm services to the entire agency and to the general public upon request. The types of information stored on the State Engineer Office's microfilm include water use permits, certificates of appropriation, maps, correspondence, order records, petitions, stream index cards, and entry records books.

ACCOMPLISHMENTS

The staff continued to keep up the current/update workload generated by each of the sections of the State Engineer's Office. There has been a significant increase in coal bed methane permits (1,000 per month) filed in the State Engineer's Office, resulting in the same increase occurring in the microfilming of the CBM permits.

The average production by the existing staff completed 143,360 film shots on 23,639 permits and 1,118 certificates. A fiche duplicate was made for every permit that received microfilming.

The process of upgrading the deteriorating and poor quality film/fiche began in the spring of 1996 with the existing staff. When funding was received for the upgrade, contract staff was hired to focus on the ditches, enlargements, reservoirs and stock reservoirs - all of which are complete. Ground Water upgrade will begin in July 2000, the next reporting period.

Funding became available two bienniums ago to research preservation techniques and conduct a pilot project for State Engineer's Office and Board of Control's original records and maps. Additional funding for this biennium was appropriated by the legislature to continue preservation efforts. The preservation committee will continue to research and deal with the issues of records preservation. Over 1,167 high priority water right maps were encapsulated for a total of 1,732 maps to date. Records and preservation management is being looked at as a solution to the State Engineer's Office space issues.

PROBLEM AREAS

A disaster could eliminate the original records, microfilm and the fiche copies. The State Engineer's Office has no approved and final disaster recovery plan. In the event of a disaster, many years would be required to reconstruct the records using microfilm from thousands of rolls of film that are currently stored by Archives. The State Engineer's Office is quickly outgrowing its existing space due to the inflow of new permits and their associated maps. Additional space will need to be addressed in the coming biennium.

WYOMING WATER LIBRARY

Wyoming Statute 41-1-102 authorized the establishment of a library of water resources to be housed in the office of the State Engineer. There is no specific funding source for the library. One time seed money for equipment was allocated to the State Engineer's Office from a Water Development Commission grant in accordance with the terms of the consortium memorandum of understanding. The State Engineer's Office is currently evaluating the rate of usage of the library and the amount of duplicate materials housed in the library. The mission of the Wyoming Water Library is to provide ready access to water-related materials and governmental planning documents related to natural resource management for government agencies and the general public. The Wyoming Water Library is a collection of materials related to water and environmental analysis housed in the Wyoming State Engineer's Office in the Herschler Building. It consists of materials from the State Engineer's Office, Water Development Commission, the defunct state government offices of the Economic Development and Stabilization Board and Governor's Planning Office and special collections. Clienteles to be served include 1) members of the Wyoming Water Library Consortium and their institutions; 2) Wyoming governments and organizations: 3) Wyoming residents: and 4) all other individuals interested in water-related materials. All activity and responsibilities are carried out and specified under a memorandum of

understanding signed by consortium members. The staff's activity during this past year comprised of a limited amount of time spent on identifying keywords and geographic location for data entry into the Wyoming Water Bibliography, assigning citation numbers and typing catalog cards and finally in the identification of duplicate materials in the library. The staff also completed the organizing of the backlog of new library materials.

GIS (GEOGRAPHIC INFORMATION SYSTEMS) PROJECTS

The use of GIS technology has been utilized for the identification of overlapping water rights or conflicts in water rights. In addition, GIS has been used on interstate river compact issues, primarily to aid in determining land use and the numbers of irrigated acres.

BURNT FORK PROJECT

Under Article XII Section (a) of the Upper Colorado River Basin Compact, it is stated "Waters diverted from Henry's Fork, Beaver Creek, Burnt Fork, Birch and their tributaries shall be administered without regard to the state line on the basis of an interstate priority schedule to be prepared by the states affected and approved by the Commission in conformity with the actual priority of right of use, the water requirements of land irrigated, and the acreage irrigated in connection therewith".

Over a period of the last five years, but most intensively during this last reporting period, the staff has been working with the Utah State Engineer's Office to develop a joint identification of the water rights within a basin, which will lead to the development of a water priority schedule.

During this process, it was determined that all lands and water rights involved should be mapped through the use of GIS. All Utah and Wyoming water rights have been mapped including the acreages, sources, ditches, and conflicts identified. Pending another field season and an annual meeting with the appropriators, a delivery (priority) schedule prepared and delivered to the Colorado River Commission for approval and use by both States' water administration officials.

WIND RIVER PROJECT

The staff continues to refine and upgrade this project in order to integrate "Walton claims". The Walton mapping project overlays the Wind River GIS project. The staff completed draft Walton award maps and began the process for overlap maps identifying the conflicts with the Tribes' Reserved Right and State Permitted Rights for Walton.

WYOMING GEOGRAPHIC ADVISORY INFORMATION COUNCIL (WGIAC)

The staff continues to participate as a voting member of the WGIAC and also participates on many subcommittees of WGIAC. The staff participated in the annual GIS demo for the legislature and the public.

The staff coordinated the State's first GIS Day - WGIAC 1999 in conjunction with the Wyoming Heritage Foundation.

The staff also assisted the Governor on statewide GIS policy and provided the Governor's Office with technical support on GIS.

WILLOW CREEK PROJECT

This project is located in Water Division Four and encompasses Willow Creek and its tributaries. This project was requested by the field staff to assist them in the determination of overlapping/conflicting water rights. The scope of the project (project boundary) has changed since the inception of the project resulting in the addition of 300 surface water rights. It is expected that this project will extend into the next biennium.

MISCELLANEOUS MAPPING PROJECTS

The staff assisted other state agencies - Department of Environmental Quality, Water Development Commission, Wyoming Highway Patrol and the Attorney General - analyze GIS information, gave technical support and data and/or prepare GIS maps for litigation.

Over the past year, the staff was also involved in obtaining GIS information from a variety of sources and providing SEO GIS data to several entities.

The staff prepared an office-wide (including the field offices) mapping survey in order to determine past, current and future uses of mapping. This survey included the assessment of needs for hardware, software and mapping standards. The survey of mapping needs was used to develop an office-wide mapping plan. The survey results also provided for the identification of existing hardware/software and the need for standardization of the hardware/software needed to fill mapping needs. One complete mapping set-up has been made available for each of the four field offices. Training in the use of mapping software was given to Cheyenne office and field staff. In the next biennium, it is expected that mapping training will be made part of the annual technology training in the SEO.

LEGAL ACTIVITIES
By the Attorney General's Office

NORTH PLATTE LITIGATION

A Brief overview of history of litigation:

Nebraska filed suit against Wyoming in 1986 seeking to enjoin the construction of Deer Creek Dam. Nebraska also complained of the operation of Grayrocks Reservoir on the Laramie River, and asserted that Wyoming was attempting to prevent the Bureau of Reclamation from diverting North Platte River waters for storage in the Inland Lakes in Nebraska.

Wyoming filed a counterclaim alleging that Nebraska was demanding natural flow water in excess of beneficial use requirements. Wyoming also asserted that Nebraska was violating the Decree by demanding natural flow and storage water from sources above Tri-State Dam and bypassing such flows for uses below Tri-State Dam. Wyoming's final counterclaim related to Nebraska's use of Glendo Reservoir water outside of the North Platte Basin and for other than irrigation purposes.

Wyoming, Nebraska, Colorado and the United States all filed motions for summary judgment in 1991. The United States Supreme Court ruled upon those motions in 1993. (*Nebraska v. Wyoming*, 507 U.S. 584). *Nebraska v. Wyoming*, 507 U.S. 584 (1993) and *Nebraska v. Wyoming*, 515 U.S. 1 (1995).

Before ruling upon the parties' motions for summary judgment, the Court defined the issue before it as whether these proceedings involve an application for *enforcement* of rights already recognized in the decree, or whether Nebraska seeks a *modification* of the decree. *Nebraska v. Wyoming, 507 U.S.* at 590 (emphasis in original).

The Court analyzed the parties' claims within the foregoing defined context and concluded that, because Nebraska had no pre-existing right recognized by the Decree with regard to the Laramie River and those tributaries below Pathfinder Reservoir (i.e., Deer Creek), Nebraska would be required to pursue a modification of the Decree to prevail. The Court then defined the burden of proof, and explained that the Decree would not be modified unless Nebraska could establish by clear and convincing evidence that she will suffer substantial injury as a result of Wyoming's Laramie River and tributary use.

The Court also concluded that, commensurate with the North Platte Project, the Inland Lakes enjoy a 1904 priority. Therefore, the Bureau may continue to rely

upon the 1904 priority to release certain flows for Inland Lakes storage during the non-irrigation season.

Finally, the Court held that the parties' claims with regard to the below-Tri-State issues were too theoretical and insufficiently developed to be susceptible of summary resolution. The Court did conclude that the Decree does not impose absolute ceilings on diversions by those canals that divert between Whalen Dam and Tri-State Dam, and granted Nebraska partial summary judgment on that issue.

Both Wyoming and Nebraska sought to amend their pleadings in 1994. The Court ruled upon those motions in *Nebraska v. Wyoming*, 515 U.S. 1 (1995). The Court accepted Nebraska's claims related to the Laramie River, Wyoming's development on the tributaries that enter the mainstem below Pathfinder Reservoir, Wyoming's groundwater development and Wyoming's use of Horse Creek. The Court concluded that Nebraska could seek to modify the Decree to add injunctions against Wyoming related to those matters, but that she must meet the higher burden of proving substantial injury by clear and convincing evidence. The Court also held that there would be a full weighing of the equities before the Decree would be modified. The Court rejected Nebraska's call for a year-round apportionment.

The Court also accepted Wyoming's counterclaims and cross-claims as they related to the by-pass of flows below Tri-State Dam in circumvention of the Decree, conveyance loss calculations, Glendo Reservoir use, Warren Act compliance, and apportionment of flows during allocation years. The Court refused to accept Wyoming's request that a beneficial use limitation be imposed against Nebraska.

Because Nebraska's affirmative case disclosure indicated a departure from their modification case, in October 1998, Wyoming filed motions to dismiss and for summary judgment (essentially in the alternative), supported by Colorado and the United States, requesting the Special Master to confirm that Nebraska's remaining claims are for modification, not enforcement, of the Decree and dismissing Nebraska's purported enforcement claims. Wyoming's position was that the court defined Nebraska's claims and related burden of proof in the 1993 and 1995 opinions. Nebraska responded that her amended petition seeks an order modifying the Decree to impose new injunctions designed to carry out the predicate of the apportionment or in aid of the apportionment, and that the Court did not determine the appropriate burden of proof for such a claim in either its 1993 or 1995 opinions.

On May 7, 1999, the Master issued the Eighteenth Memorandum denying Wyoming's motion on the technical ground that the enforcement claims that Wyoming sought to have dismissed were not pled in Nebraska's amended

petition over which the Court accepted jurisdiction in the 1995 opinion, but rather constituted Nebraska's anticipated legal theory. However, the Master read Wyoming's motion to dismiss as, in part, a cry for help. He responded by stating that, with the possible exception of Wyoming's groundwater pumping that would take water directly from the apportioned reach of the river, Nebraska's case will be tried as one for modification of the Decree. The Master characterized Nebraska's distinction between a claim to modify the Decree to impose new injunctions to carry out the predicate of the apportionment and a claim for modification of the apportionment itself as a distinction without a difference. In either event, the Master held that because Nebraska sought the imposition of new injunctions, there must be a showing of substantial injury upon a weighing of the equities.

Affirmative Case Disclosures:

Nebraska initially filed her Affirmative Case Disclosure on May 30, 1997. That Disclosure included a list of the expert and lay witnesses Nebraska intends to call during trial, as well as 20 expert reports prepared to support Nebraska's claims against Wyoming. Nebraska's expert witnesses hail from such fields as agricultural engineering, economics, hydrology, history, and environmental matters.

After Wyoming had conducted numerous depositions of the Nebraska experts during the fall of 1997, Nebraska sought to amend most of her expert witness reports. Special Master Olpin allowed such amendments. The Master also allowed Nebraska to submit her reports in a tiered fashion, beginning the first week in January. Nebraska submitted such amended reports through the first week of March.

Wyoming also submitted an Affirmative Case Disclosure related to her counterclaims and cross-claims. That Disclosure was submitted on May 30, 1997 and included a list of those lay and expert witnesses Wyoming intends to call during trial. Wyoming identified five expert witnesses to support her affirmative case and submitted various reports related to their specific fields of expertise, including hydrology, computer modeling, economics, and agriculture engineering. Wyoming's affirmative case is much narrower in scope than that of Nebraska.

Affirmative Discovery:

Wyoming began depositions of Nebraska's expert and lay witnesses in August, 1997. The Wyoming attorneys took these depositions on basically a weekly basis until mid-December. Discovery was delayed for a period of time to allow Nebraska's experts to amend their reports. Wyoming completed her discovery of Nebraska's expert witnesses in April, 1998.

Nebraska's discovery of Wyoming's affirmative case proceeded concurrently with Wyoming's discovery of Nebraska's claims. Nebraska completed the depositions of Wyoming's witnesses in April, 1998.

Defensive Case Disclosures:

1. Wyoming's Filing (July 24, 1998)

Wyoming submitted her Defensive Case Disclosure on July 24, 1998. The purpose of that Disclosure was to provide a rebuttal to Nebraska's affirmative claims. Wyoming identified 23 expert witnesses, submitted 26 expert reports and identified those lay witnesses that she intends to call at trial.

Although some of these reports provide a direct rebuttal to Nebraska's expert witness reports and claims, they also include general information that will be used to counter Nebraska's conclusions and theories of liability. Wyoming also adopted by reference those reports that were submitted as part of her Affirmative Case Disclosure.

2. Nebraska's Filing (July 24, 1998 and August 31, 1998)

On June 29, 1998, Nebraska filed a motion to strike several of Wyoming's affirmative case expert reports on the grounds that they did not support Wyoming's counterclaims as accepted by the Supreme Court. The Master subsequently denied Nebraska's motion, but allowed her until August 31, 1998 to submit her defensive disclosure in response to the reports she sought to strike. Consequently, Nebraska filed her Defensive Case Disclosure in two phases. She provided four expert witness reports on July 24, 1998, and four on August 31, 1998. She identified a total of eight expert witnesses to oppose Wyoming's counterclaims.

Nebraska's defensive case reports are, in general, an attempt to critique the work of Wyoming's expert witnesses. Nebraska's experts simply analyzed the work completed by the Wyoming experts and provided criticisms where they thought appropriate.

Nebraska's Defensive Discovery

According to the Fourth Pretrial Order, the time period for discovery of the parties' Defensive Case Disclosures began on July 24, 1998. Discovery was to be completed by January 12, 1999. However, on November 23, 1998, Nebraska filed a motion for extension of time in which to complete her discovery of Wyoming's defensive case. By Order of January 6, 1999, the Special Master extended the defensive discovery period to June 11, 1999.

On January 13, 1999, Nebraska served 30 Requests for Production of Documents on Wyoming's expert witnesses. Starting February 17, 1999, Wyoming produced over 200 boxes of documents to Nebraska in five weeks at five locations. Nebraska took the first deposition of Wyoming's expert witnesses on April 8, 1999. Depositions were scheduled for every week until the deadline of June 30, 1999 (The Master extended the deadline sua sponte by two weeks due to the briefing schedules of various motions.) However, on May 27, 1999, Nebraska filed a Motion for Extension of Time within which to complete discovery, to consider technical agreements on basic data, and to facilitate discussion of a final negotiated settlement. In their motion, Nebraska requested to depose an additional 33 potential lay witnesses. Wyoming did not oppose a reasonable extension to complete the discovery of Wyoming's expert witnesses, but opposed Nebraska's request to depose the additional lay witnesses. The Special Master granted Nebraska's motion on June 3, 1999.

Among the additional depositions that Nebraska wanted to take were irrigators in the Hanna, Saratoga, and Lander areas. Nebraska also took the deposition of irrigation district managers in Wheatland and Goshen county. In addition, Nebraska deposed the University of Wyoming extension service agents from Albany, Carbon, and Platte counties.

Wyoming's Defensive Discovery

Wyoming deposed irrigators in Western Nebraska on Feb. 2nd - 3rd, 16th - 18th, and 22nd. Wyoming requested the production of certain documents related to Nebraska's expert witnesses. A document production was held in Santa Fe, New Mexico on April 13, 1999. Wyoming also took the deposition of one of Nebraska's expert witnesses, Mr. Gene Franzoy, on April 29th and 30th in Tempe, Arizona.

Negotiations and settlement:

1. Stipulations

The parties filed four settlement stipulations with the Special Master in September, 1997. Briefly described, they are as follows:

a. Reservoir Storage Above Pathfinder: The parties have settled the issues related to Wyoming's accounting of water stored in the reservoirs above Pathfinder Reservoir (pursuant to Paragraph II(b) of the Decree). Recognizing the expense associated with installing continuous recording devices to measure storage in all of the reservoirs, the parties agreed that Wyoming will be required to install measuring devices on only the eight (8) largest reservoirs. Wyoming will continue to estimate the storage in those reservoirs that have a capacity in excess of 25 acre feet, but which are not one of the eight (8) largest.

b. Glendo Reservoir Uses: The parties agreed to lift the geographic restrictions that were included in Paragraph XVII of the 1945 Decree, as Amended in 1953. They also agreed that Glendo Reservoir water may be used for fish and wildlife purposes.

c. Pathfinder Modification: This stipulation relates to the Pathfinder Modification Project, which will increase the capacity of the existing reservoir by approximately 54,000 acre feet to recapture storage space lost to sediment. Approximately 34,000 acre feet of the proposed 54,000 acre-feet modification would be accounted for in an environmental account and operated for the benefit of endangered and threatened species and their habitat in Central Nebraska. Wyoming will have the right to use the remaining 20,000 acre-feet of the modification capacity to provide municipal water to North Platte communities.

d. River Carriage Loss Calculations: The parties also settled the issues related to historical accounting of river carriage losses. The parties agreed to different values for the carriage losses to be used in the daily accounting.

After negotiations between the parties ended in the spring of 1997, Wyoming and the United States continued to discuss possible settlement of Wyoming's cross-claims. Through that process, they agreed to settle Wyoming's claims related to the Bureau of Reclamation's allocation-year procedures. They also entered into an agreement related to Wyoming's groundwater development and use. As a result, Wyoming agreed to dismiss her cross-claims against the Bureau.

The allocation and groundwater stipulations were provided to the other parties at the end of March, 1998. Colorado has taken no position on either stipulation, as they do not impact her apportionment. Nebraska agreed to join the allocation stipulation. Nebraska refused to become a signatory to the groundwater agreement. The Stipulation Among the State of Wyoming, the State of Nebraska, and the United States Relating to the Allocation of Water During Periods of Shortage was filed with the Special Master on December 23, 1998.

e. Allocation Stipulation: The parties have agreed to a manner of allocation during water-short years that is based upon a fixed percentage of water being apportioned to both Wyoming and Nebraska. Under this stipulation, the parties have identified what sources of the water that will be divided and agreed to combine natural flow and storage water in allocation years for purposes of dividing the water. The percentage division grants Wyoming 18.5% of the calculated flows, and grants 81.5% to Nebraska. This stipulation also allows for creation of limited carry-over accounts in an effort to encourage conservation.

f. Groundwater Stipulation: This stipulation confirms the United State's position that the Decree does not address Wyoming's groundwater development and that any relief can only be granted pursuant to a modification of the Decree. The stipulation relates to irrigation wells with priority dates after February 18, 1994 (which was when Nebraska first requested the Court to enjoin Wyoming's groundwater use). The wells that are included within this stipulation are those located in the area between 1000 feet north of the Interstate Canal and 300 feet south of the Ft. Laramie Canal. The wells are only regulated after the first release of storage from Guernsey or Glendo Reservoirs during the May 1 through September 30 irrigation season. Depletions to the North Platte River are assumed to equal 50% of the water pumped and the depletions are assumed to occur simultaneously with the pumpage. Wyoming is required to replace the calculated 50% depletion value.

Motion practice:

There have been numerous motions filed since this litigation was instituted in 1986. Following is a description of the most recent filings.

On July 1, 1998, the United States filed a Motion to Dismiss Nebraska's Claims Relative to Tributary Development on the Basis of Ripeness. That motion relates to Nebraska's claims concerning the proposed Deer Creek Reservoir and the Corn Creek Project on the Laramie River. The United States argued that, because there is extensive federal review that must be undertaken for each Project before they could be built, the issue of how those projects may affect Nebraska is not ripe for review. The Special Master denied the United States' motion by Order dated March 26, 1999.

On August 13, 1998, Basin Electric Power Cooperative filed a Petition to Intervene. The Special Master granted Basin's petition by Order of March 26, 1999. Basin was admitted to these proceedings as a full party for the purpose of protecting its rights in the waters of the Laramie River.

Nebraska filed a Motion to Exclude Deponents on May 10, 1999. Many of Wyoming's expert reports were authored by more than one expert. Nebraska sought through this motion to exclude the presence of co-authors at each other's depositions. The Special Master denied Nebraska's motion on May 18, 1999.

Basin Electric filed a Motion for Summary Judgment Against Nebraska on All Laramie River Issues on June 4, 1999. Supporting responses were filed by Wyoming and the United States. Nebraska opposed the motion. Oral argument was held on October 1, 1999, in Pasadena. The Special Master denied the motion from the bench, and later issued his Twentieth Memorandum to support his decision.

Nebraska filed a Motion to Dismiss Alleged Paragraph IV Violations and a Motion to Dismiss Wyoming's Allegations With Respect to Storage Water Contracts for Failure to State a Claim Upon Which Relief Can be Granted Against the State of Nebraska and For Failure to Join an Indispensable Party on June 7, 1999. The United States supported Nebraska's position with respect to Wyoming's Paragraph IV claims. Oral argument was held on September 30, 1999 in Pasadena. The Special Master granted Nebraska's motion from the bench, but the parties have not yet received his memorandum supporting that decision.

Schedule for trial:

A Final Pre-Trial Order was issued by the Special Master with the Nineteenth Memorandum on November 1, 1999. Trial is scheduled to begin on May 10, 2000 at the Ninth Circuit Court of Appeals in Pasadena, California.

BIG HORN RIVER GENERAL STREAM ADJUDICATION

Walton Right Litigation:

On March 1, 2000, the District Court entered its Judgment and Decree ruling on Walton water rights. The Court granted Walton rights with an 1868 priority date to approximately 200 parcels of land. In the March 1, 2000 Order, the District Court ordered the Adjudication Staff to prepare a tabulation of the Walton water rights to be entered as part of the Court's order.

The United States filed a motion to alter or amend the March 1, 2000 Judgment and Decree, citing several issues that it contended should be revised prior to the Judgment and Decree becoming final. In response, the Court entered an Order Amending the Judgment and Decree on March 30, 2000, which deleted the Court's certification that the March 1, 2000 Judgment and Decree was "final" until such time as the tabulation of Walton rights was completed. Since the Court's removal of its final certification, the Adjudication Staff has been preparing a tabulation of all Walton rights and has circulated it to the Tribes and the United States for review prior to submitting it to the Court.

The March 1, 2000 Judgment and Decree ruled on several "global" legal issues, including three issues which were vigorously contested by the parties: (1) administration of Walton rights; (2) appurtenancy of Walton rights; and (3) overlapping of Walton rights with previously-decreed federal reserved water rights.

The Judgment and Decree reaffirmed the Wyoming Supreme Court's prior holdings that the State Engineer is the administrator of the river, possessing the authority to distribute water from the mainstem of the river to all of the various

ditches. It also ruled that the State Engineer administers all Walton rights of non-Indians. The Court ruled that the Tribes may regulate Tribal Walton rights, but only at "the point of a tribal headgate", which the Court defined as a headgate serving only tribally owned land.

The Court also held that Walton water rights are appurtenant to the irrigated lands on which the Walton rights are awarded. For Walton claims on lands that were previously awarded a federal reserved water right under *Big Horn I,* the Court held that the prior reserved water right should be treated in all respects as a Walton right.

It is not anticipated that the Court's rulings on these global issues will be affected by the United States' motion to alter or amend the Judgment and Decree, because the issues raised by the United States do not appear to attack these rulings. At such time as the Court finally disposes of the United States' motion, any party may file an appeal to the Wyoming Supreme Court within 30 days of the Court's final ruling.

Petition for Declaration of Appurtenancy of 1868 Reserved Water Rights:

On June 15, 1998, twelve tribal members who own lands irrigated by reserved water right filed a petition for declaratory relief requesting the Court to hold that their reserved water rights are appurtenant to their lands. All parties engaged in discovery and filed numerous pre-trial motions. In June of 1999, less than a week before trial, the parties were able to reach a stipulated settlement agreement to resolve the appurtenancy issue. The stipulation is intended to apply to all individually owned tracts of land that were awarded reserved water rights. As a result, in the several months following the stipulation, the parties worked to identify all of the tracts of land that would be potentially affected by their stipulation. On February 16, 2000, the Parties requested that the Court issue a consent decree adopting their stipulation and declaring that all tribal members whose lands formed the basis for the quantification of reserved water rights have a permanent right to use the reserved water right awarded to those lands and that the reserved water rights pass to their successors in interest upon transfer of the property.

In total, approximately 28,400 acres of land are covered by the proposed Consent Decree. This acreage includes all of the historically irrigated individually-owned lands that were awarded reserved water rights, whether they are owned in fee or in trust status. In early May, 2000, all owners of affected lands were provided with notice and an opportunity to object to the proposed Consent Decree. Many of the tracts of allotted land identified in the tabulation are owned by multiple heirs, sometimes as many as 100 for a single tract of land. As a result, over 6000 letters were sent to provide notice to all of the potentially affected landowners.

By June of 2000, 49 objections to the proposed decree were filed, with one objection signed by over 400 objectors. The Court is expected to set a hearing to resolve outstanding objections sometime in the fall of 2000.

Pre-May 15, 1985 Groundwater Uses:

In its May 15, 1985 Amended Judgment and Decree, the District Court ruled the Tribes do not have a reserved right in groundwater, but held existing tribal groundwater uses on the Reservation would be allowed to continue. In an effort to identify those pre-May 15, 1985 groundwater uses, the Court ordered the Tribes on October 16, 1992 to compile a list of all such uses and file it with the Court. After several extensions, the Tribes submitted a final list to the Court on August 31, 1999. The State subsequently filed a recommendation as to which wells should receive an adjudicated water right. In January, 2000, the State, Tribes and United States executed a stipulation resolving all outstanding issues relating to pre may-15, 1985 Tribal groundwater uses, which attached a tabulation of all wells to be included in the adjudication. The Stipulation requested the Court to enter a Consent Decree disposing of all outstanding issues and incorporating the stipulated tabulation of wells. The Court then issued an order requiring that all of the owners of lands identified in the tabulation be notified of the stipulation and proposed Consent Decree and be provided an opportunity to object. The Adjudication Staff is currently moving forward to identify the owners of the affected lands so they can be notified pursuant to the Court's order.

Phase III Litigation:

Phase III of the Big Horn Adjudication involves the adjudication of all state-permitted and decreed water rights. Under the Court's Amended Phase III Procedures, all state-permitted water rights within Water Division No. III will be adjudicated. The General Adjudication Staff issues reports to the Special Master recommending either adjudication of permits, cancellation of permits, or elimination of a portion of the water right under a permit. The Staff then sends notice to all permittees advising them of their right to object to the Board of Control's report and recommendation and publishes notice of the report in local newspapers. If anyone objects to the Staff's report, the matter is set for trial and the Attorney General's Office defends the Staff's recommendation.

The majority of state-permitted water rights in Division III off the reservation have already been adjudicated under the Court-ordered procedures. However, there are approximately 30 "large project" files remaining to be adjudicated, consisting of permits issued for irrigation districts, canal companies, and Bureau of Reclamation irrigation projects. The Court amended the adjudication procedures for large projects in 1997 to streamline the adjudication process in cases where

there are many landowners served under the same permit. The new procedures should hasten the adjudication of lands under large permits and the Adjudication Staff is proceeding with inspections and adjudications of lands under the remaining permits.

Settlement Negotiations:

No settlement discussions relating to the case overall have occurred since 1998. However, during 2000, the Tribes and the State were been able to work cooperatively to resolve many of the remaining contested issues in the case through various stipulations. Two examples where litigation was avoided are the Consent Decree proposed for the appurtenancy proceedings and the Consent Decree proposed for pre-1985 Tribal groundwater uses.

THE BOARD OF CONTROL

Sam J. and Mona R. Scott v. John McTiernan and Donna Dubrow and the Board of Control of the State of Wyoming:

The Board of Control made additional findings of fact and conclusions and issued its order on August 30, 1999, in the declaration of abandonment action that was partially remanded to the Board by the Wyoming Supreme Court in *Sam J. and Mona R. Scott v. John McTiernan and Donna Dubrow and the Board of Control of the State of Wyoming*, 974 P.2d 966 (1999). The Board found that Scott had abandoned all but 14 acres of the disputed Shallcross lands and ordered Scott to identify the irrigated lands under the territorial appropriation from Smith Creek in Sheridan County. On September 27, 1999, Scott filed a petition for review of the Board's order to the District Court of the Fourth Judicial District in Sheridan County, Wyoming, Docket No. 99-9-43, which was briefed and argued before the Court by Scott, McTiernan and the Board. On June 22, 2000, the district court issued its order agreeing with the Board that Scott must identify the irrigated lands under the appropriation. The district court reversed the Board's finding that all but 14 acres of the Shallcross lands had been abandoned and made its own finding based on the evidence in the record that all but 19.6 acres of the lands had been abandoned.

Adah Hayes Smith Wyoming Trust and Sutherland Dows Wyoming Trust v. Cross H Ranch, Inc., Wayne Nelson, and Janice Nelson:

This matter originally came before the Board of Control in 1996 when the Smith and Dow Trusts (Trusts) filed a Petition for Detachment and Voluntary Relinquishment and Abandonment of the Northern Wyoming Land Company Appropriation. In 1997, the Board of Control dismissed the petition without prejudice. While the Trusts' petition was still pending before the Board, the Trusts filed a Complaint in Quiet Title and for Declaratory and Injunctive Relief,

Adah Hayes Smith Wyoming Trust and Sutherland Dows Wyoming Trust v. Cross H Ranch, Inc., Wayne Nelson, and Janice Nelson, Civil Action No. Ci-97-0016, in the District Court of the Fourth Judicial District in Johnson County, Wyoming. Cross H Ranch and Nelsons (Nelsons), filed a counterclaim. Both parties sought to have the ownership of a secondary water right permit and the right to use water stored in Cloud Peak Reservoir determined by the district court.

In 1998, the district court remanded the matter to the Board and directed the Board to Apursuant to the doctrine of primary jurisdiction to hold an evidentiary hearing to determine all factual issues in dispute between the parties and enter comprehensive findings of fact and conclusions of law of the Board of Control and determine any other issues necessary to fully dispose of the action. In 1999, upon stipulation of the parties, Rock Creek and Piney Reservoir and Ditch Company were joined as an additional party defendant in the matter before the Board. Following briefing and arguments on summary judgment motions filed by both parties, the Board voted to grant Nelsons' motion for summary judgment.

The Board submitted its findings of fact, conclusions of law and a recommended order to the district court on December 22, 1999. The Board found that Permit No. 21703 was a valid secondary water right that attached to lands owned by Nelsons that could not be detached from the lands without the consent of the landowner in a proper proceeding before the Board. On June 22, 2000, the district court issued its order granting Nelsons' motion for summary judgement which adopted and incorporated the Board's order.

Buford Foundation, Inc. v. Raymond P. Hunold, et al. And K.M. Reeb v. Raymond P. Hunold et al.:

In 1998, the Board of Control granted a petition for abandonment filed by Raymond P. Hunold and others against an appropriation owned by the Buford Foundation, Inc. Buford and K. M. Reeb filed petitions for review of the Board's action, *Buford Foundation, Inc. v. Raymond P. Hunold, et al. and K. M. Reeb v. Raymond P. Hunold, et al.,* Civil Nos. 10,182 and 10,183, in the District Court of the Third Judicial District in Lincoln County, Wyoming. In 1999, Reeb and Buford filed applications for leave to present evidence which were opposed by Hunold and the Board. Following briefing and arguments, the court issued its order denying the applications on November 29, 1999.

In response to a May 16, 2000 letter from the court asking the parties whether there was any objection to dismissal of the petitions for review of agency action, Buford requested that its petition not be dismissed and concurrently filed a motion to set a briefing schedule. The court entered its order setting a briefing schedule on May 22, 2000, and an order revising the schedule on June 19, 2000.

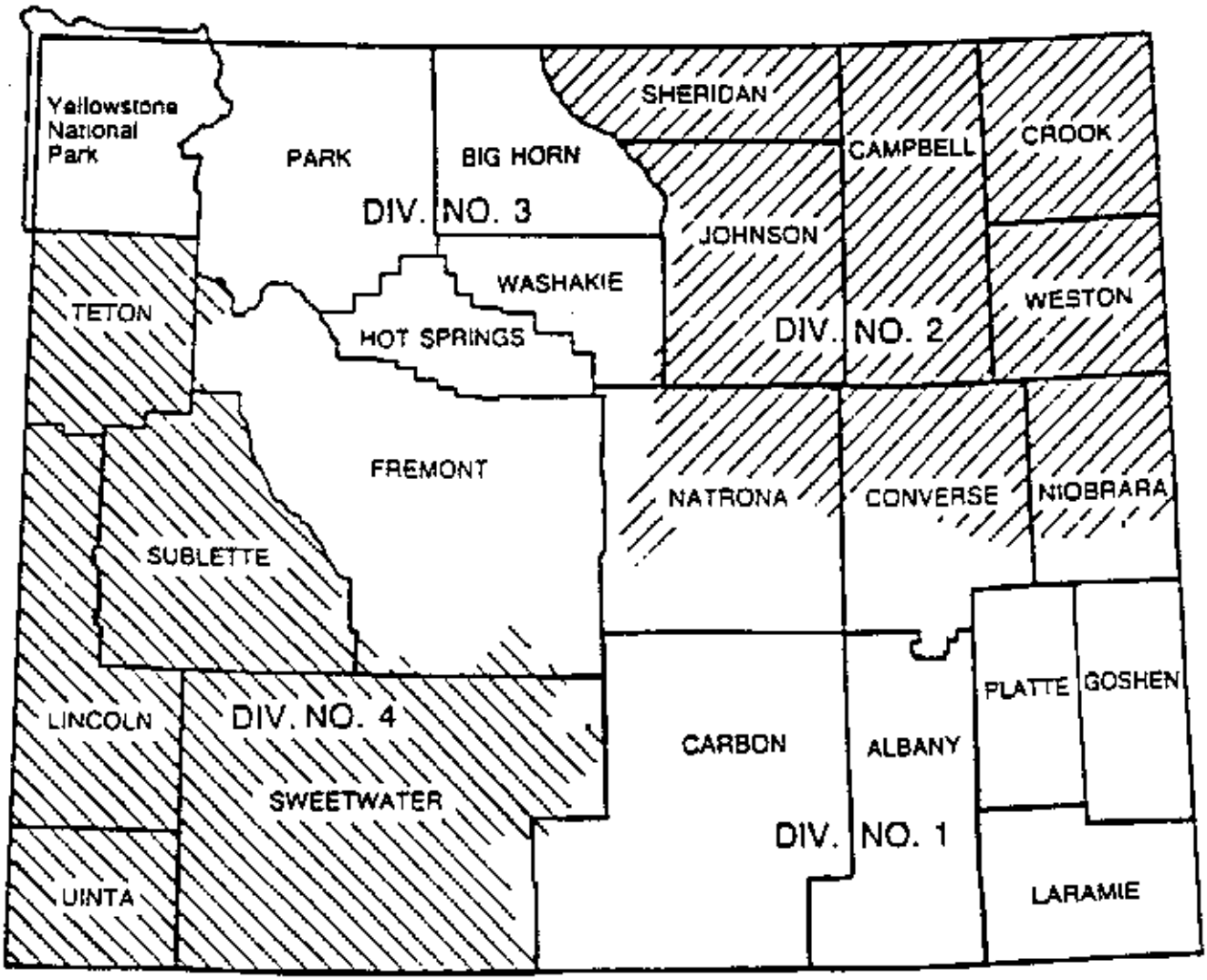
F I E L D R E P O R T S

O F

W A T E R D I V I S I O N S U P E R I N T E N D E N T S

2000 W A T E R Y E A R

October 1, 1999 through September 30, 2000



Wyoming Water Divisions

REPORT OF THE SUPERINTENDENT

WATER DIVISION NO. I

By

RANDY TULLIS

The following is a summary of water related activities and trends within Water Division No. I for the period October 1, 1999, to September 30, 2000. Water Division I is composed of the North Platte, South Platte, Niobrara, and Little Snake River drainages of south and eastern Wyoming.

- General and Climatic Conditions -

The 2000 Water Year could only be described as one of the driest of record for natural precipitation and runoff conditions in southeast Wyoming. Following what was an above average precipitation and runoff Water Year 1999, combined with above average reservoir carryover storage, natural conditions turned 180 degrees this water year and truly tested the will and stamina of irrigators and administrators alike.

Carryover storage from WY 1999 was well above average, varying from 164% in the North Platte Project to 117% in the Kendrick ownership. Natural precipitation and snow accumulation was practically non-existent in October and November, along with unseasonably warm temperatures, but the snowpack eventually built to a slightly below normal level in the spring of 2000. Early season warming periods allowed the low and mid elevation snowpack runoff to infiltrate and replenish the extremely low soil moisture profile and therefore very little accrual was gained by basin-wide storage reservoirs or tributary flows.

Spring runoff was characterized by what appeared to be near normal rising of river flows and substantial precipitation near the middle and end of May resulting in 2-4” of precipitation throughout the basin combined with wet snows in the higher elevations. At this point I think most administrators and water users were relieved that the growing season would have near average and adequate supplies.

Precipitation and stream flow records will show that July through September proved to be one of the worst drought periods experienced by natural flow water users throughout much of the state. Streamflows varied through the summer but were generally 50 to 75 percent below normal due to poor runoff and lack of

natural precipitation. Priority administration was enforced in many drainages and other basins had water users voluntarily limiting their diversions. Many mid-season stream flows were disastrously low such that many diversions for irrigation were not active, and the attempt to satisfy in-channel stock flow was often not successful for the entire stream reach.

An example of how quickly streamflows crashed would be the North Platte River inflow to Seminoe Reservoir. Following the late May precipitation event the river peaked at 5600 cfs on May 30 and had receded to just over 1000 cfs 3 weeks later. By September 17 the 60 year lowest daily flow of 70 cfs was challenged when the daily average flow of 95 cfs was recorded.

Due to above average carryover from the previous water year, all North Platte River mainstem ownerships filled again this year; Pathfinder ownership on April 5, Guernsey ownership on March 30, and Kendrick ownership on April 23, Glendo Unit on April 25, and Inland Lakes ownership on April 24. The first day of storage release for contractors at or below Whalen Dam was July 8 and is about normal for this annual occurrence. Mainstem carryover into Water Year 2001 was slightly below normal for the North Platte Project (93%) and slightly above normal for Kendrick (114%) and the Glendo Unit (105%).

Priority administration was enforced to an 1881 priority on Sand Creek and to 1876 on the Little Laramie River, both tributaries of the Laramie River. Fortunate for Wyoming Laramie River mainstem users, the transbasin Cache Laramie Poudre Tunnel was inoperable after Memorial Day due to a cave in and allowed flows normally diverted to the Colorado eastslope communities to remain in the Laramie River basin.

For the first time in over 30 years, Upper Colorado River Basin Compact priority administration occurred in the Little Snake River drainage. An excellent working relationship with our Colorado neighbors and administrators allowed equitable regulation to occur between the states in conformance with Article XI of the 1948 Upper Colorado River Basin Compact. It was also discovered that a joint priority list of rights between the two states was presented but never ratified by the Upper Colorado River Compact Commission back in 1952 and 1962. I plan on resubmitting an amended common priority list so that administrators will have an approved ranking of ditches for equitable mainstem administration.

For all the disputes and conflicts this drought year brought there were also a few lighter-side events. It was the first time a Hydrographer had to deal with a motion sensor camera mounted near a North Platte River headgate. What was first believed to be disgruntled appropriators wanting to catch mysteriously changing headgate openings turned out to be the Wyoming Game & Fish Department conducting a census of river floaters. Another event was a bit of rappelling required for communications repair. Dependable operation of our two-way radio repeater antennae system is very important for day-to-day

administration and safety. The privately owned Laramie Peak site has been notorious for down time varying from ice storm damage to fried transformers. While assisting the contractor repairing the site this spring, it was necessary for a Hydrographer to rappel down a cliff to access damaged equipment. It was described as unexpected and exciting.

-Accomplishments-

In addition to the standard duties and responsibilities of supervising staff collecting flow and storage data, priority administration enforcement, proof of appropriation or construction inspections, public assistance and other assigned tasks, the following details were this year's highlights and accomplishments.

Implementation of new software code for the North Platte River Accounting System related to determination and application of conveyance losses on the Guernsey Reservoir to Stateline reach was successful. Although very similar to the previous accounting system (layman's term - "not much difference in real water . . . . .") the new method made equitably distribution of proportionate losses to natural flow and storage, depending on their quantities in the reach. This new accounting system was the result of the crest control and conveyance loss subcommittee's hard work to make three different agency's programs end with the same numbers.

The annual Natural Flow and Ownership Meeting between Wyoming, Nebraska, and the United States Bureau of Reclamation ran relatively smooth this year, largely due to above average storage ownership in the system. Lower reach precipitation spikes were again investigated and considered by the three parties. Of these events two were considered large enough to amend the daily records for equitable apportionment.

As detailed elsewhere in this annual report, Nebraska vs. Wyoming litigation and settlement activities were predominate within the Division. Following the May 10, 2000 two states and USBR approval of the Principles of Settlement document, defining the details of the principles has involved constant attention from staff and water users. Additionally, the Platte River Research Cooperative Agreement has continued to move forward, despite several set backs along the way. A two year extension has been requested for further detail study prior to possible program implementation. Attendance to bi-annual meetings of the Environmental Account (EA) Committee and the Reservoir (McConaughy) Coordinating Committee allowed Wyoming's suggestions of careful "saving" of EA water to be considered. Central Nebraska did not escape the drought experienced by much of the mountain west and approximately 100,000 AF of EA water was released during the summer to maintain target flows for endangered species nesting, forage food and habitat.

Staff recruitment was complimented with the mid-March hiring of Ty Nelson as the Little Laramie River Hydrographer, previously with the Wheatland Irrigation District, and Sharon Hackett as the Torrington Administrative Assistant, formerly with the Goshen Irrigation District. Both new hires bring water administrative experience to the Division and it served them well during this drought year. The existing staff has previously been through dry years and should be complimented. It is a testament to the dedication and statesmanship of this field staff that was truly tested by long hours, short tempers, and physically demanding daily routes during intense priority administration. I received many good comments from appreciative water users for the Hydrographer's extra effort, these of course in-between those comments that were not so agreeable.

A two-day Division I Hydrographer's school was held in Torrington allowing continued training and consistency comparisons of water administration and data collection within the North Platte River basin. These bi-annual schools are extremely valuable to allow the newer ranks to learn from those with years of experience. Laptop computers continue to be slowly upgraded to field offices and serves dual purposes; desktop applications and records compilations, and data collection with faster instrumentation setup and downloading. Sutron data collection platform training was again offered and continues to be valuable knowledge as more instrumentation is installed at field sites.

Three petition hearings were conducted due to objections by other affected appropriators. All three involved changes in point(s) of diversion and/or changes in place of use to reflect historical practices. Following consideration of evidence and testimony, the Board of Control granted each of the petitions. Other petitions were field inspected, presented at Board meetings, and final determination agreed by majority vote or carried over. Division I currently has no petitions on appeal.

Cheyenne and field staff development of a diversion records database is progressing slowly but surely. It is anticipated that Water Year 2001 Hydrographer Reports will be prepared from this database as well as allow specific queries for commonly requested information. Training will be required for all field staff and may likely take place at the next Hydrographer's school.

- Problem Areas -

Poor water years will always accentuate problem areas where just about any discrepancy may explode. Surprisingly, and partly due to the very rapid recession of normal streamflows, cooperation with most water users was higher than expected. Hydrographers have developed professional and trusting relationships with water users that was easily observed this tough water year.

Cooperation aside, measuring devices with dependable operable headgates remain absolutely necessary for time sensitive and equitable priority

administration. Many measuring device and headgate installation orders were delivered this year and will continue through the upcoming winter. I only hope that those water users receiving these notices realize that by installing good headgates or measuring devices helps protect their appropriation entitlement.

Another area that was disturbing, and the occurrence will probably multiply in the future is related to recently acquired water flow measuring equipment by staff of local conservation districts. Our agency is trained and adheres to standards developed by the United States Geologic Survey. We are also the State agency charged with the duty of equitable priority administration. I do not oppose assistance to water users and check measurements by other entities, as long as they adhere to acceptable standards. I will not allow for "second guessing" by other parties, often with non-objective relationships or intentions, where standards of equipment and methodologies are not paramount. Individual conservation districts need to be notified that they may assist with water conservation and best management practices, but they are not to be involved with priority administration in any form.

The Orin gage near Douglas continues to experience what appears to be a pressure drawdown affect; probably due to increased water velocities near the control crest and low flow v-notch. A pressure transducer was utilized this water year for accounting purposes and performed adequately. The USGS, in collaboration with their equipment contractor Hydrologic Instrumentation Foundation, will possibly use the Orin gage site as a testing location for state-of-the-art laser level instrumentation. Regardless of how, this important accounting site needs accurate equipment that will provide reliable daily records.

-Summary-

A water year that appeared to be normal to slightly below normal resulted in a disaster for tributary natural flow users and near adequate for mainstem storage users. Lack of adequate natural precipitation combined with a deficit soil moisture profile since last fall made flood irrigation often an experience in futility. Production reports varied widely but many tributary water users growing grass or alfalfa hay reported 30-50% of normal production quantities. Corn growers with storage supplies reported the best year in recent history.

Hydrographers attempted to keep pace with receding streamflows, often gaining respect from local users and sometimes not! Just simple in channel stock water was often difficult to maintain by late summer, increasing producer's nervousness for upcoming winter pasture conditions. Hopefully, adequate moisture will return for WY2001 for water users and administrators alike.

I would like to sincerely thank all Division I staff for their tireless efforts this tough year. Cheyenne staff should also be complimented for understanding the time sensitive information requests from the field staff. This was a year that saw the

retirement of LaDonna Hume after 23 years of incomparable service in the Torrington office, the retirement of Jim Pugh in Laramie after 36 years of State service, and the resignation of State Engineer, Jeff Fassett to explore consulting business options. I wish Donna, Jim, and Jeff years of enjoyment.

REPORT OF THE SUPERINTENDENT
WATER DIVISION II

OCTOBER 1, 1999 THROUGH SEPTEMBER 30, 2000
By

MICHAEL B. WHITAKER

The following annual report submitted for Water Division II is a summary of the individual water administrators within the division.

GENERAL CONDITIONS

The 2000 water year began with approximately 45 percent carry-over storage in the Tongue River and Powder River drainages. Keyhole was sufficiently down that no release was necessary to create storage space for winter inflows.

Again this year the winter was very mild with very little snow on the plains. As of May 1, the snowpack for the Powder and Tongue River basins was 66 percent of normal with the Black Hills at 16 percent of normal.

Spring brought some rain, which resulted in our peak stream flows occurring in mid-May, approximately three weeks ahead of normal. Peak flows as expected were much lower than normal, however, all reservoirs managed to fill.

The summer in Division II like the rest of the state was hot and extremely dry, it was the first time that I recall that there were reports of some stock reservoirs getting low and turning to alkali to the point some cattle died. Regulation was requested on all drainages, and stored water used extensively. Carry-over storage for 2001 is 25 percent in the Powder-Tongue River basin.

In reading the 1999 report I was reminded how similar that year was in comparison with this year only it was even hotter and drier. With the soil moisture so low, we really need a normal winter for a change.

There is nothing new to report on stream gage rehabilitation this year as we are still waiting on equipment.

This year we had two people resign, Mr. Porter Dassenko in Gillette moved to Montana, his position is being advertised and Mr. Bob Stanker, water commissioner on Crazy Woman Creek. Mr. Dave Pelloux has filled this position and is working full-time now.

ACCOMPLISHMENTS

The primary function of water administration officials as described by statute, is to “divide and regulate and control the use of water in all streams, springs, lakes and other sources”, again this year, this was very easily accomplished.

Stream gaging and data collection continues to be a large part of our program. We currently operate and publish records on 26 stream gage recorders and 24 ditch recorders as well as instantaneous readings of ditch diversions and 19 reservoir release accountings.

The Safety of Dams program involves the inspection, every five years of reservoirs, which exceed twenty-five feet in fill height or fifty acre-feet in capacity. Currently there are approximately 650 dams in Division II which require inspection, 138 of which were done this year.

This past year 37 “Final Proof of Appropriations” were taken and submitted to the State Board of Control for adjudication of the water rights. In addition, 55 stock reservoir inspections were made and submitted for inclusion in the Tabulation of Adjudicated Water Rights. Also this year 35 petitions reflecting various changes of water rights were acted on in Water Division II. Both the petitions and proofs require on-site inspections as well as additional research and documentation.

In addition to the four weeks spent at the statutory State Board of Control meetings, personnel are required to attend numerous other meetings and hearings. Other activities include assisting in snow survey data collection, requests for information on water rights, assistance in filing applications to the State Engineer, and provide general information to the public concerning records, laws, regulations and instructions.

SUMMARY

This year is rated as fair to poor; the hay crop was less than normal, pasture grass depleted and a general shortage of stock water.

Coal bed methane production continues to be the biggest problem in this area. People are concerned about de-watering of ground water, the number of stock reservoirs associated with the wells stopping the natural runoff and the quality of the produced water.

Basin advisory groups have been formed for the Powder-Tongue drainages and Northeast Wyoming which includes the Belle Fourche, Little Missouri, South Fork Cheyenne and Niobrara River drainages.

REPORT OF THE SUPERINTENDENT
WATER DIVISION III
WATER YEAR 2000

By

CRAIG COOPER

When future water administrators are one-upping each other about “the driest years of record,” they will recall the millennium water year 2000 as the year they used empty .22 shells for rain gages. “That was the year,” they will say, “that the water in our streams was only 45 percent moisture.” Some will remember that 2000 was the year on Meeteetse Creek where it was so dry the trees were chasing the dogs, and others will talk about the rancher on Badwater Creek who fainted dead away when a random raindrop fell from the sky and his wife had to throw a bucket of dust on him to revive him.

Nonetheless, it can be said that wholesale drought disaster was avoided by the use of reservoir storage on the major rivers, and well thought-out drought management early in the season among water users on those drainages without storage. That is not to say that the hot dry season did not cause injury. Alfalfa yields are down in many areas.

If one can use total basin outflow numbers as a comparative general index of the amount of water generated in, used in, and discharged from a drainage basin, water year 2000 would appear to have been about a 59% of normal year in the Wind River basin, a 65% of normal in the Big Horn basin and a 73% of normal year on the Shoshone River. The completion this year of the new Greybull Valley Dam and the rehabilitation of the Washakie Dam create additional needed capability for storage in this Water Division, but as has been pointed out in these reports since the early 1900s, permanent security in future water supply will always depend on additional storage of peak runoff flows allocated to the state by compact provisions.

It is well documented that range fires in this Water Division had, and continue to have, a serious effect on livestock operations this year. By destroying summer feed, those fires (and absence of rain in other areas) forced grazers to have to remove livestock from historic ranges early and find places to keep them on the irrigated pastures usually reserved for winter-feed. That early use of irrigated fall and winter forage causes livestock owners to have to use their haystack stores earlier than usual, or, if such supplemental feed is in low supply, to reduce herd sizes by selling. While the prospect of fewer livestock grazing in Wyoming makes

some residents ecstatic, time will show those cause and effect relationships instigated by drought will have negative effects on the state for years.
Without exception, everyone in this Water Division who depends on snowpack and rainfall for their water supplies, and who is even moderately cognizant of the hydrologic forces around them, will tell you “We squeaked through this year, but if the coming winter is too mild to recoup this year’s exhaustion of water reserves, this state is in trouble.” Optimistically, one can point to previous devastatingly dry years and find that records show such a year is often followed by one with moisture conditions on the opposite, wet end of the spectrum. It can be hoped that history will repeat itself in that regard.

ACCOMPLISHMENTS

As always, State Engineer/Board of Control personnel in this Water Division provided hours of time and dozens of resources in helping residents of the state understand water rights generally and providing records of their individually owned water rights specifically. Additionally, advising water right holders upon request as to procedures for changing water rights, and assisting them in accomplishing such changes, continues to be substantial contributions to the public needs from this agency.

The network of state data collecting stations which is used to provide water flow and diversion information to the Wyoming public continued to be maintained and upgraded by Division III water administration personnel this water year. Data critical to proper allocation of limited water supplies in this extremely hot, dry year were collected and kept constantly available to the public and other interested agencies through this network. That monitoring, accounting and regulation accomplished, once again, the Constitutional duty of our water administrators to “have supervision of the waters of the state.”

It appears that perhaps somewhat of a breakthrough in state/tribal relations with the Wind River Reservation over administration of the shared water supplies in the Wind River basin may have taken place in water year 2000, following the most recent decree of the district court. Instead of taking competing positions for the limited water available and litigating those differences, water administrators from both state and tribal entities successfully communicated to keep something of a lid on potentially volatile situations. A meeting or two early in the season got everyone pretty much on the same page, and periodic contact at critical decision-times of the hydrograph allowed all parties to adequately protect their interests and still get along. Unfortunately, personnel turnover in the BIA continues to prevent long-term continuity in water administration.

Much of the month of July was spent making inspections for final proof of appropriation. This is a detailed and time-consuming process that has been carried out by all Superintendents since the 1890s and continues today to prove its value to the citizens of the state in maintaining an orderly water allocation

system. Approximately 50 surface water proofs were adjudicated or otherwise disposed. Additionally, approximately 25 petitions for changes in water rights in Division III were dealt with during the course of the four quarterly meetings of the Board of Control in this report period. Considerable time was spent on the general adjudication of the permits held by McDonald ditch and Shell Canal companies as well.

A handout brochure explaining irrigation for a "Living On Small Acreages" seminar was prepared, and numerous other presentations, task groups, court hearings, Board of Control hearings, irrigation district meetings, etc. were prepared for and attended.

The accomplishments of individual water administrators in this Water Division will be found in the annual hydrographer's report for water year 2000.

PROBLEM AREAS

This office continues to struggle, more so each year, with the public's inability (and that of those advising them) to discern and comprehend the difference between water matters that are the duty of SEO field personnel, and those matters of a water-related nature that are not able to be dealt with by our administrators. Besides the dozens of problems we **did** handle, there were a number of situations that came to our office this year, and several continuations from years past, in which the complaining parties claimed they were being injured by the actions of a neighbor, their own irrigation district, or some other entity, and their insistence was that the SEO should take their case against these aggressors.

In virtually all of the cases, their confrontations contain elements of civil or criminal law that are outside the authority of water administrators, but when the complainants were so advised, they became bitter and accusatory that our staff were shirking their "public servant" duties. In some situations, our refusal to take on civil property damage cases have caused the complainants to switch most of their anger from the entity causing their problem to our agency and personnel. Such results are not good for the image of the agency or state, and attention should be given to an all-agency understanding of how these matters must be handled.

Other problems had to do with questioning by some canal personnel as to our interpretation of water available to them on a given day, and distribution of reservoir releases, but such problems were directly related to the drought conditions and were worked out in stride. The failure within certain irrigation districts to educate themselves to the attributes of their own water rights as related to their assessment roll, land class (where pertinent), and the petition process available to make needed corrections, also continues to be a problem for state field personnel, as patrons of those districts come to us with their

questions and problems because the district personnel can't or won't answer questions about their own water rights.

The drought-caused lack of water in small streams near range and forest fires this summer brought up a legal question as to whether or not the "right" to take water for fire suppression overrides the rights of appropriators to call for the same water to satisfy their legal water right to irrigate their thirsty crops. As a short-term answer, the acting state engineer allowed all fire-suppression diversions to take precedent over the right to irrigate, with the requirement that the irrigator must after-the-fact be compensated for his documented lost crop and any other losses created by his inability to get water. On behalf of the water commissioners, the Board of Control has asked for legal research on this matter to lead to development of a permanent policy guidance for field administrators.

The market adjustment compensation plan certainly created a number of questions and problems among certain field personnel in Water Division III. It may be that there exists no system that can fairly treat all employees when they assess their own perceived personal value and worth to the state by comparing themselves and their work to their perception of the work of other employees in similar positions.

CONCLUSIONS

With the exception of the problems discussed above, Water Division III survived the hot, dry water year of 2000 better than originally expected, due to professional water management and administration by all agencies and individuals with a hand in it. There are looming issues that suggest a changing face on the demands against our agency, and the ability of agency personnel to respond in the best interests of the overall good of the state will be a function of how well they keep themselves educated and in touch with the people they are hired to serve.

Although this Water Division has been fortunate to have minimal personnel turnover among water administration officials through the past several years, a long-time worker for us has retired this year. Mr. Oliver Peterson, hydrographer on the lower Greybull River system, has chosen a less stressful lifestyle. I would like to thank him for his past dedication and wish him all the best in his retirement.

Finally, Mr. Gordon "Jeff" Fassett stepped down as Wyoming State Engineer this water year. The difficulty the state is experiencing in replacing him is a testament to the size of shoes that need to be filled. Jeff worked tirelessly to protect, defend and promote the water rights system put in place in Wyoming over 100 years ago, and the number and size of issues he dealt with every day are little understood outside this agency. His energy, knowledge, and conviction to the

principles of western water law will be difficult to duplicate, and my best wishes go along with him for the good friend and supportive co-worker he has been.

REPORT OF THE SUPERINTENDENT
WATER DIVISION IV

By

JADE HENDERSON

GENERAL CONDITIONS

Y2K arrived without the anticipated millennium computer glitch, but also forgot the snow & rain. This was clearly the driest water year in my 8 seasons over the Green, Snake, and Bear drainages. Winter began with low soil moisture throughout, and snowpack averages continued declining through spring. For those with reservoir storage space, the saving grace was generally good carryover from last year (except Bridger Valley's Stateline Reservoir on East Smith's Fork Creek only filled to 69% capacity). Continual frost kept irrigator's crops from growing until the gradual & mediocre runoff was gone. When things finally warmed up, "no rain" just finished drying things out. So with forest & range fires spotting the map, we spent the whole season struggling with desperate irrigators. After years of escaping streamflow regulation in most areas, both us and the water users were thrust into the throws of renewing the practice of prior appropriation. The deepest regulation we saw this year cut into 1872 (number 2 priority of 200) on Smith's Fork Creek. Shrink on reservoir deliveries in some places reached 35%! No one now on staff ever regulated LaBarge Creek, until this year. Surprisingly, other streams suddenly slowed their constant decline and stabilized at levels that kept them from deep regulation. Now we're breathing again, since late September storms have begun to wet the dust of mostly-depleted reservoirs.

PROBLEMS

Vulnerable water rights: There still remain and we continue to discover water rights whose Points of Diversion have been changed on the ground but without the benefit of being protected by a recorded change or exchange. Education is the first tool we use to try and get appropriators to come forward to secure their valuable water rights; denial of water is our last resort.

Interstate intimidation: After being ignored by the Bear River Commission office, and our suggestions turned-down by the state of Idaho, I refused to further cut Wyoming users in the Central Division while the water we were already sending under interstate regulation this summer was not being fully accounted for and the demand was improperly coming from the Lower Division in Idaho. In exchange for talks, Wyoming submitted itself to compliance with the Commission's loose

numbers; but after talks we were outnumbered by Idaho and Utah against improving any of our accountability concerns to date. With brow-beating and insults from the lower basin states, I learned that this Compact is written for them, and they are not about to share control.

Restrained technology: After stripping-out old equipment for the Streamgage Rehabilitation Project, a fumbled federal program left us without new instrumentation, scrambling to reinstall gaging critical to impending streamflow regulation. We also continue without software or fall training for streamflow Records Computation. We have had to put off again the dangerously-feuding Willow Creek & Reservoir appropriators for yet another summer without producing water right answers promised from GIS mapping.

Increasing workload: Especially on a drought year, we find the Division IV staff spread too thin, putting in too many hours to meet demands. In spite of growing public expectations in an area of burgeoning subdivision impacts, the legislature cut our phone & travel funds in an already tight budget. Work is prioritized for urgency, many things postponed, some things unattended or by necessity forgotten. The water planning reports are not getting adequate review by those perhaps most qualified in the respective basins: water right administrators in the field. To reduce time-consuming flow measurements by staff on each ditch, it appears increasingly necessary to impose in more areas the statutory requirement that the water appropriator provide expensive Parshall flumes.

Staff morale: Morale is mixed amongst the staff from the latest legislative under-funding of market pay. While it was welcome news that pay for regular water right regulators would increase fairly significantly to begin approaching the market, once again it was very exclusionary. Overlooked again are the critically important Lead Hydrographers, as well as the special-classified Water Commissioners, my secretary, and my X-scale self. It is unconscionable that our employer ignores the long-term high cost to the State when years of vital water expertise and efficiency is lost from public service when experienced staff leave for greener pastures.

ACCOMPLISHMENTS

To finish the incomplete GIS attribution of Utah water rights in the jointly administered Henry's Fork basin, I have devoted individual attention and extensive unpaid personal time to sorting-out the complexities of getting this mapping project to where overlapping water rights can be reduced to comply with the Upper Colorado River Basin Compact.

We have 2 new Water Commissioners, trained in the refiner's fire of drought, who served admirably this year. This is the second year for 2 more who have now done doubly well. Even in the heat of stream regulation complicated by a supervisor's family medical absence, they have given stellar performance. I can

only hope that the responsibility & pressure of their jobs will be rewarded enough to convince them to stay with us.

At long last, a repeater was installed at Sage for our 2-way radio system. This opens up most of the Bear River basin, and allowed us to establish a base station at the Division office in Cokeville where a crisis can be radioed-in from staff in some areas. The upper Bear basin, and the upper Green, are the remaining "black holes" for remote radio contact.

Small successes one-by-one: We have successfully documented, for interstate Compact exemption, a digitally-telemetered continuous record of transbasin imports into Broadbent's system in the Bear River drainage from a Green River tributary. At the end of summer, Woodruff Narrows Reservoir got Utah to lift interstate regulation against upstream Wyoming so Chapman Canal could take the Bear River flows while Woodruff repaired their outlet gates, in trade for Chapman (Neponset Reservoir) later bypassing flows for Woodruff's recapture. A Supplemental Supply is being filed for taking an available non-Compact tributary instead of Bear River diversion, which was subject to interstate regulation. Complaints of injury on Temple Bench Ditch in Afton have forced our enforcement of water law as the parties begin the long process of organization, consent, Forest Service easements, permitting, and water right corrections. Education & mediation, even with civil issues on the Kirkbride Ditch in Freedom or with managing water in the White Ditch near Teton National Park, have been successful helping internal organization & communication. The same effort kept some streams out of forced regulation, even from the Wyoming Range, as users learn to rotate or voluntarily defer to those entitled. Others, however, refuse to be educated, like owners in China Lake Reservoir who insist on more delivery than their storage facility holds. For some, simply providing information can hold the key to resolving disputes over dividing water, as arming the lower New Fork Irrigation District users with a streamgage record may convince the District to consider the equity of their internal distribution. We have finally gotten the major Fremont Lake Reservoir users interested in re-establishing official association ownership & operation. Construction of a diversion-dam pump-sump by Little America is keeping their temporary use of the number 1 right on Ham's Fork satisfied with less flow. My refusal to approve proof for re-activating an 85-year-old undelivered permit was finally upheld by the State Engineer, strengthening the protection of historical use from attempts to insert unused senior reinstatements on regulated streams.

CONCLUSION

I have missed State Engineer Jeff Fassett, especially in my work with him on the State Board of Control. Coincidental with his leaving and this drought, we did not have time to inspect & advertise a single proof for August's Board meeting; but we're now starting to catch up. And although I often feel the local demands keep me from doing justice to the statewide Board issues, we in that body wrestled

extensively and landed unanimously this year (not once but twice) in applying the controversial statutory prohibition against private instream flow protection. It's been an exhausting water year. I hope there's not another like it for a while.

STATE OF WYOMING

2000

ANNUAL REPORT

OF THE

STATE BOARD OF REGISTRATION

FOR PROFESSIONAL ENGINEERS

AND

PROFESSIONAL LAND SURVEYORS

July 1, 1999 through June 30, 2000

BOARD OF REGISTRATION FOR

PROFESSIONAL ENGINEERS AND

PROFESSIONAL LAND SURVEYORS

By

CHRISTINE TURK
EXECUTIVE DIRECTOR

OBJECTIVES

The primary responsibility of the Board is self-regulation of the engineering and land surveying professions for protection of the public in Wyoming. Careful processing of applications from individuals, corporations and partnerships registered in other states, and administration of examinations for new applicants in Wyoming occupy most of the Board's efforts. In addition, the Board investigates complaints against engineers, land surveyors, corporations and partnerships. The Board takes appropriate action against registrants who are found guilty of practice or ethical violations.

MAJOR ACCOMPLISHMENTS

The Board continues to be efficient in processing applications, being attentive to its registrants and keeping the public educated to the need of professional registration for protection of the public.

LAW ENFORCEMENT ACTIVITY

The Board has vigorously pursued the requirement that persons offering professional engineering and land surveying services in Wyoming become licensed. Correspondence from the Board Office or the Attorney General's Office has usually been effective in obtaining compliance with the statute.

The Board has also investigated every complaint concerning the practice of our registrants. In most cases, a resolution has been accomplished without a formal hearing. Finally, the Board has provided exceptional leadership at the national level with several of its members serving as officers, committee chairs or committee members of the National Council of Examiners for Engineering and Surveying (NCEES).

PROBLEMS AND RECOMMENDATIONS

Timeliness of complaint investigations and action by the board continues to be a major concern. The Board continues to explore the alternatives for providing a swifter means of completing investigations and ultimately, resolution of complaints.

SUMMARY OF REGISTRANTS AS OF AUGUST 10, 2000				
		RESIDENT	NON-RESIDENT	TOTAL
PROFESSIONAL ENGINEER	INDIVIDUAL	849	2,745	3,594
	CORPORATION	67	171	238
	TOTAL	916	2,916	3,832
PROFESSIONAL LAND SURVEYOR	INDIVIDUAL	130	176	306
	CORPORATION	9	6	15
	TOTAL	139	182	321
PROFESSIONAL ENGINEER & LAND SURVEYOR	INDIVIDUAL	96	65	161
	CORPORATION	38	17	55
	TOTAL	134	82	216
ENGINEER-IN-TRAINING		752	270	1022
LAND SURVEYOR-IN-TRAINING		33	8	41
GRAND TOTAL		1,974	3,458	5,432

The purpose of the NCEES is to provide an organization through which state Boards may act and counsel together to better discharge their responsibilities of regulating the practice of engineering and land surveying as it relates to the welfare of the public in safeguarding life, health and property. Serving the NCEES at a national level has been very beneficial to the operations of the Board. While all Member Boards attempt to have uniformity in their requirements, without the involvement and exchange of information from state to state, achieving that uniformity would be essentially impossible.

PERSONNEL LISTS
STATE ENGINEER'S OFFICE

Stockdale, Richard G..... Acting State Engineer

ADMINISTRATION

NAME	TITLE
Lowry, Sue	**Director of Policy & Admin.**
Watson, Laura L	Executive Assistant
Williams Danna	Human Resources Spec. 3
Rath, Janice	Financial/Statistical Spec. 2
Connell, Ellen	Financial/Statistical Tech. 2
Shields, John W	Interstate Streams Engineer
Tavelli, Chace	Water Planning Engineer

SURFACE WATER

NAME	TITLE
Barnes, John	**Administrator, Surface Water**
Benner, David	Safety of Dams Engineer
Bratton, Leah	Water Manager Spec. 1
Couch, Chris	Natural Resources Tech 2
Geyer, Jeffrey	Water Management Spec. 2
Hopkins, Jodee	Water Management Spec. 1
Miller, Linda	Water Management Spec. 3
Nelson, Marlies	Water Management Spec. 2
Parkin, Darrin	Water Management Spec. 3
Richmond, Rita	Administrative Specialist 4
Scheer, Mary	Natural Resources Tech 1
Shiers, Linda	Administrative Specialist 4
Stockdale, Larry	Safety of Dams Engineer
Velez, Phillip A	Water Manager 3

TECHNICAL SERVICES

NAME	TITLE
Mathisen, Rebecca	**Administrator, Technical Services**
Crock, Donna	Info. Technology Spec. II
Rea, Steve	Info. Technology Spec. II

GROUND WATER

NAME	TITLE
Stockdale, Richard G.	**Administrator, Ground Water Division**
Adkison, Kelli	Administrative Spec. 4
Culver, Sheri	Natural Resources Tech 1
Ebsen, Mike	Cooperative Programs Coordinator
Elrod, Jenna	Natural Resources Tech 2
Harju, John	Water Management Spec. 1
Lacy, M. Carol	Water Management Spec. 1
Vacant	Water Manager Spec. 2
Vacant	Water Manager 3
Manley, Jeremy	Water Manager Spec. 1
Penz, Michael C	Water Management Spec. 1
Pierce, Dixie	Natural Resources Tech 2
Porter, Larry G	Water Manager Spec. 2
Reel, Tammy	Administrative Specialist 4
Verplancke Cheryl	Water Management Spec. 2

STATE BOARD OF CONTROL

NAME	TITLE
Cunningham, Allan D.	**Administrator, Board of Control**
O'Dell, Michael	Water Manager 4
Rando, Cynthia	Water Management Spec. 2
Hutchinson, Anna	Administrative Spec. 2
Engbretson, Arlene	Water Management Spec. 3
West, Susan	Natural Resources Tech 2
Jones, Monica	Administrative Specialist 4
Reid, Christine	Administrative Specialist 4
VanScoy, Eunice	Administrative Specialist 3
Tullis, Randy	**Superintendent**
Water Division No. I	Torrington
Whitaker, Michael B.	**Superintendent**
Water Division No. II	Sheridan
Cooper, Craig O.	**Superintendent**
Water Division No. III	Riverton
Henderson, Jade	**Superintendent**
Water Division No. IV	Cokeville

SPECIAL PROJECTS

NAME	TITLE
McCann, Nancy	**Administrator, General Adjudication**
Hallberg, Debbie	Water Management Spec. 1
Sitterle, William	Water Management Spec. 1
Cameron, Kathryn	Water Management Spec. 3
Bennett-Sutton, Kimberly	Water Management Spec. 3
Skoetsch, Connie	Administrative Specialist 3
Vacant	Water Management Spec. 3
Mumper, Karen	Water Management Spec. 3
Irwin, Kay	Administrative Specialist 4
Henning, Virginia	Administrative Specialist 5

WATER ADMINISTRATIVE PERSONNEL

As of September 30, 2000

Key to Title Abbreviations: AS = Assistant Superintendent
HC = Hydrographer-Commissioner
GR = Gage Reader

DIVISION I: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Randy Tullis	510 West 27th Torrington, Wyoming 82240
Assistant Superintendent	Al Prado	PO Box 1368 Douglas, Wyoming 82633
Field Investigator	Jeff Hansen	510 West 27th Torrington, Wyoming 82240
Administrative Spec. 2	Sharon L. Hackett	510 West 27th Torrington, Wyoming 82240

DIVISION I: WATER ADMINISTRATIVE PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
1	HC	Doug Elgin	1109 Milt Rose Drive Burns, Wyoming 82053
1,2	HC	Gary Mehling	510 West 27th Torrington, Wyoming 82240
3,4	HC	Douglas Oliver	302 B 16th Street Wheatland, Wyoming 82201
4	HC	James Pugh	Laramie Community Civic Center Room 240 710 Garfield Laramie, Wyoming 82070
4	HC	Daniel Sprangers	Laramie Community Civic Center Room 240 710 Garfield Laramie, Wyoming 82070
6,7,8,16, 17,18	HC	Jack Gibson	PO Box 710 Saratoga, Wyoming 82331
6,7,8,16,17, 18,City of Cheyenne	HC	David Worthington	PO Box 710 Saratoga, Wyoming 82331

DIVISION I: WATER ADMINISTRATIVE PERSONNEL (cont'd)

DISTRICT	TITLE	NAME	ADDRESS
9,13	HC	Rod Oliver	277 Dutton Creek Road Laramie, Wyoming 82070
9,13, 15-5,20	HC	David Andrews	117 S. 2nd St., Rm. 3 Douglas, Wyoming 82633
10,11, 12,14	HC	C. Kirk Faught	2020 Fairgrounds Road, Suite 103 Casper, Wyoming 82601
14	HC	Brian Pugsley	510 West 27th Torrington, Wyoming 82240
17	HC	Ted Vyvey	PO Box 653 Encampment, Wyoming 82325
19	AS	Al Prado	PO Box 1368 Douglas, Wyoming 82633
Lower N. Platte River	GR	Tracy Brown	PO Box 414 Lingle, Wyoming 82223

DIVISION II: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Mike Whitaker	PO Box 6103 Sheridan, Wyoming 82801
Assistant Superintendent	Carmine LoGuidice	PO Box 6103 Sheridan, Wyoming 82801
Administrative Spec. 3	Kathleen Nance	PO Box 6103 Sheridan, Wyoming 82801

DIVISION II: WATER ADMINISTRATIVE PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
1,7,10	HC	Porter Dassenko	1901 Energy Court, Suite 130 Gillette, Wyoming 82716
2,3,8, 9,11	AS	Carmine LoGuidice	PO Box 6103 Sheridan, Wyoming 82801
2,3	HC	David Pelloux	289 ½ North Carrington Bffalo, Wyoming 82834
4,5,6	HC	William Knapp	PO Box 6103 Sheridan, Wyoming 82801
8	HC	Sandy Dixon	PO Box 133 Kaycee, Wyoming 82639
11	HC	Warren Gilbert	PO Box 219 Story, Wyoming 82842
2	HC	Robert Stanker	502 Fullerton Place Buffalo, Wyoming 82834
5,6	HC	Pat Boyd	PO Box 340 Dayton, Wyoming 82836
1,8	HC	Roger Ralph	2020 Fairgrounds Road Ste 103 Casper, Wyoming 82601

DIVISION III: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Craig Cooper	715 East Roosevelt Riverton, Wyoming 82501
Assistant Superintendent	Donald Englert	138 Nevada Avenue Lovell, Wyoming 82431
Administrative Spec. 2	Marie Johnson	715 East Roosevelt Riverton, Wyoming 82501

DIVISION III: WATER ADMINISTRATIVE PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
1,11	HC	Kyle Johnson	715 East Roosevelt Riverton, Wyoming 82501
At Large (15)	AS	Donald Englert	138 Nevada Avenue Lovell, Wyoming 82431
1,3	HC	David Deutz	715 East Roosevelt Riverton, Wyoming 82501
1,3,5, 11,13,14	HC	Vacant	
5	HC	Bob Dockery	Box 811 655 Upper East River Road Thermopolis, Wyoming 82443
6,12	HC	Rod Delker	P. O. Box 263 Greybull, Wyoming 82426
7	HC	Gary Anders	1788 Highway 14 E Shell, Wyoming 82441
8,16	HC	Oliver Peterson	Box 340 Burlington, Wyoming 82411
9,10,15	HC	Landis Webber	138 Nevada Avenue Lovell, Wyoming 82431
13,14	HC	Dennis Ray	407 South 20th Worland, Wyoming 82401
16	HC	Charles Raper	Box 411 Meeteetse, Wyoming 82433

WATER DIVISION III - GENERAL ADJUDICATION

RIVERTON OFFICE

NAME	TITLE
Maxwell, Randall	Water Management Spec. 2
Heatley, William	Water Management Spec. 3
O'Connor, James	Water Management Spec. 3

DIVISION IV: PERSONNEL AT LARGE

TITLE	NAME	ADDRESS
Superintendent	Jade Henderson	PO Box 277 Cokeville, Wyoming 83114
Assistant Superintendent	Loren Smith	Box 7 Big Piney, Wyoming 83113
Administrative Spec. 4	Linda Ferguson	PO Box 277 Cokeville, Wyoming 83114

DIVISION IV: WATER ADMINISTRATIVE PERSONNEL

DISTRICT	TITLE	NAME	ADDRESS
3,9,14,15	LHC	John Yarbrough	PO Box 1208 Lyman, Wyoming 82937
2,4, 8,12	LHC	Kevin Wilde	Box 277 Cokeville, Wyoming 83114
3	HC	Diana K. Velazquez	P. O. Box 374 Lyman, WY 82937
4	HC	Don Shoemaker	343 Ninth Street Evanston, Wyoming 82930
1,5,6,7, 1011,13, 16	AS	Loren Smith	Box 7 Big Piney, Wyoming 83113
7,11	HC	John Dahlke	PO Box 689 Pinedale, Wyoming 82941
2	HC	Kevin Payne	Box 277 Cokeville, Wyoming 83114
8,12	HC	Ed Bruce	142 Allred Rd., Route 1 Afton, Wyoming 83110
9	HC	Dave Hunzie	1120 6th West Kemmerer, Wyoming 83101
5,6,10	HC	Ed Boe	Box 7 Big Piney, Wyoming 83113
13	HC	Jim Wilson	275 Yellow Rose Dr. Alta, Wyoming 83422
14	HC	Farren Johnson	PO Box 429 Mt. View, WY 82939
15	HC	Allen Jaggi	Box 326 Lyman, Wyoming 82937
16	AHC	Conan Beesley	Box 1727 Jackson, Wyoming 83001
16	HC	Don Barney	Box 1727 Jackson, Wyoming 83001

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

AND

PROFESSIONAL LAND SURVEYORS

Pedersen, Martin A.	President
Steadman, John W.	Vice President
Vacant	Secretary-Treasurer
Edwards, William J.	Public Member
Hutchison, Peter J.	Member
Abell, Stanton J., Jr.	Member
Schultz, Deb	Member

Long, Kaye A.	Occupational Licensing Officer
Siler. Ruth	Occupational Licensing Specialist
Turk, Christine	Executive Director

GROUND WATER ADVISORY COMMITTEES				
WATER DIVISION	NAME	ADDRESS	TERM EXPIRES	PHONE NO.
DIV. I	Arthur Damrow	292 Camino Del Rey Torrington, WY 82240	9/30/04	532-5470
	Alan L. Dugan	PO Box 688 Glenrock, WY 82637	9/30/06	436-5645
	J. Kenneth Kennedy	PO Box 688 Wheatland, WY 82201	9/30/02	322-9789
	William L. Barlow	Barlow Route Gillette, WY 82716	9/30/04	632-0337
DIV. II	Timothy G. Barritt	P. O. Box 664 Upton, WY 82730	9/30/06	468-2415
	Robert E. Twing	12 Canal Road Buffalo, WY 82834	9/30/02	684-2314
DIV. III	Lee Ballinger, Jr.	Fair Acres Cody, WY 82414	9/30/06	587-2178
	Jim Mayer	PO Box 175 Ten Sleep, WY 82442	9/30/04	366-2386
	Doyle Ward	PO Box 1841 Riverton, WY 82501	9/30/02	
DIV. IV	Robert T. Ablondi	Jorgensen Engineering PO Box 1142 Jackson, WY 83001	9/30/04	733-5150
	Marvin Bollschweiler	200 Cedar Evanston, WY 82930	9/30/02	789-3116
	Paul N. Scherbel	PO Box 96 Big Piney, WY 83113	9/30/06	276-3347

GROUND WATER CONTROL AREA ADVISORY BOARD MEMBERS				
CONTROL AREA	NAME	ADDRESS	TERM EXPIRE	DISTRICT NO.
LARAMIE COUNTY ESTAB. 9/2/81	Leonard Anderson	Box 665 Pine Bluffs, WY 82082	2003	DIST.5
	Greg Gross	407 Main Pine Bluffs, WY 82082	2004	DIST.1
	Audie Hoke	392 County Road 145 Carpenter, WY 82054	2004	DIST.2
	Vacant			DIST. 4
	Clarence Steege	1581 County Road 149 Burns, WY 82053	2004	DIST.3
PLATTE COUNTY ESTAB. 10/7/81	Lawrence Bacon	449 Bordeaux Road Wheatland, WY 82201	2003	DIST.5
	Doug Frederick	PO Box 35 Guernsey, WY 82214	2004	DIST.1
	Joe Johnson	29 West Johnson Road Wheatland, WY 82201	2004	DIST.2
	Gale Kittell	178 Kittell Road Wheatland, WY 82201	2004	DIST.3
	Keith Ockinga	604 Ayer Road Wheatland, WY 82201	2003	DIST.4
PRAIRIE CENTER ESTAB. 12/2/77	Blake Ochsner	HC 74, Torrington, WY 82240	2002	
	John Harris	HC 74, Box 260 Torrington, WY 82240	2002	
	Elden Baldwin	North Star Route Torrington, WY 82240	2002	
	Vacant			
	Chuck Berry	HC 74 Torrington, WY 82240	2003	

WYOMING MEMBERS OF INTERSTATE COMPACT COMMISSIONS AND REGIONAL AND INTERSTATE COMMITTEES RELATING TO WATER RESOURCES

BEAR RIVER COMMISSION
(Idaho, Utah and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Commissioner
James Crompton, Citizen	Commissioner
John A. Teichert, Citizen	Commissioner
Gordon Thornock, Citizen	Alternate Commissioner
Jade Henderson, Superintendent Water Division IV	Alternate Commissioner, Technical Advisory Committee Member
Sue Lowry, Director of Policy	Alternate Commissioner, Technical Advisory Committee Member

UPPER COLORADO RIVER COMMISSION
(Colorado, New Mexico, Utah and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Commissioner
Dan S. Budd, Interstate Stream Commissioner	Alternate Commissioner
Aaron H. McGinnis, Citizen	Alternate Commissioner
John W. Shields, Interstate Stream Engineer	Engineering Committee Chairman

COLORADO RIVER MANAGEMENT WORK GROUP

NAME, TITLE	POSITION
John W. Shields, Interstate Streams Engineer	Member

COLORADO RIVER COMMITTEE OF FOURTEEN

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
John W. Shields, Interstate Streams Engineer	Member

COLORADO RIVER BASIN SALINITY CONTROL ADVISORY COUNCIL

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
Dan S. Budd, Interstate Stream Commissioner	Member
Gary Beach, Administrator Water Quality Division, Department of Environmental Quality	Member

COLORADO RIVER BASIN SALINITY CONTROL FORUM

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
Dan S. Budd, Interstate Stream Commissioner	Member
Gary Beach, Administrator Water Quality Division, Department of Environmental Quality	Member
John W. Shields, Interstate Streams Engineer	Work Group Member
Bill DiRienzo, Water Quality Div., Department of Environmental Quality	Work Group Member

GLEN CANYON ADAPTIVE MANAGEMENT PROGRAM

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Adaptive Management Work Group Member
John W. Shields, Interstate Streams Engineer	Technical Work Group Member

RECOVERY IMPLEMENTATION PROGRAM FOR ENDANGERED FISH SPECIES IN THE UPPER COLORADO RIVER BASIN

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Recovery Implementation Committee Member
John W. Shields, Interstate Streams Engineer	Management Committee Member and Chairman
Paul Dey, Wyoming Game and Fish Department	Biology Committee Member

COLORADO RIVER WATER USERS ASSOCIATION

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Board Member
John A. Zebre, Citizen	Immediate Past President, Board Member
Alan W. Harris, Citizen	Board Member
Benjamin C. Bracken, Citizen	Public Affairs Committee Member
Merl Rissler, Citizen	Nominations Committee Member
Ann Strand, Citizen	Exhibits Committee Member
John W. Shields, Interstate Streams Engineer	Resolutions Committee Member and Membership Committee

MISSOURI RIVER BASIN ASSOCIATION

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Director
Sue Lowry, Director of Policy	Alternate

YELLOWSTONE RIVER COMPACT COMMISSION
(Montana, North Dakota and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Commissioner
Sue Lowry, Director of Policy	Advisor

BELLE FOURCHE RIVER COMPACT
(South Dakota and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
Sue Lowry, Director of Policy	Advisor

UPPER NIOBRARA RIVER COMPACT
(Nebraska and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
Sue Lowry, Director of Policy	Advisor
John W. Shields, Interstate Streams Engineer	Advisor

PLATTE RIVER COOPERATIVE AGREEMENT

NAME, TITLE	POSITION
Lawrence M. Besson, Administrator, Water Development Commission	Governance Committee Member
Gordon W. Fassett, State Engineer	Governance Committee Alternate
Norm DeMott, Goshen Irrigation District	Governance Committee Member
Rebecca L. Mathisen, Administrator, Technical Services Division	Water Management Committee Member, Outreach Committee Member
Dave Zelenka, Water Development Commission	Land Management Committee Member
Dave Zelenka, Water Development Commission	Technical Committee Member

NORTH PLATTE RIVER OWNERSHIP AND NATURAL FLOW COMMITTEE

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
John W. Shields, Interstate Streams Engineer	Advisor
Randy Tullis, Superintendent Water Division I	Advisor

COLUMBIA RIVER WATER MANAGEMENT GROUP

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member

SNAKE RIVER COMPACT
(Idaho and Wyoming)

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Member
Sue Lowry, Director of Policy	Advisor

SNAKE RIVER COMMITTEE OF NINE

NAME, TITLE	POSITION
Gordon W. Fassett, State Engineer	Advisory Member

WESTERN STATES WATER COUNCIL

NAME, TITLE	POSITION
Jim Geringer, Governor	Governor Member
Gordon W. Fassett, State Engineer	Member
Myron Goodson, Citizen	Member
Thomas J. Davidson, Deputy Attorney General, Attorney General's Office	Member
Dennis Hemmer, Administrator, Department of Environmental Quality	Alternate

ASSOCIATION OF STATE DAM SAFETY OFFICIALS

NAME, TITLE	POSITION
David S. Benner, Safety of Dams Engineer	State Representative

INTERSTATE COUNCIL ON WATER POLICY

NAME, TITLE	POSITION
Sue Lowry, Director of Policy	Board Member