Colorado Water

Newsletter of the Colorado Water Resources Research Institute. Fort Collins, Colorado 80523

WATER ITEMS AND ISSUES . . . ***December 1995***

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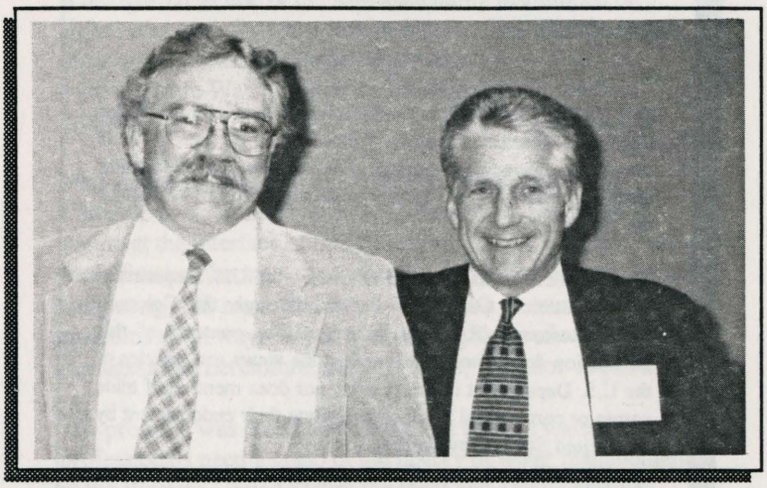

Luncheon Speaker "Chips" Barry, Manager, Denver Water; and David Harrison, Attorney, and Chair, Colorado Water Conservation Board

Special Issue

ENDANGERED SPECIES MANAGEMENT: PLANNING OUR FUTURE

The 6th Annual South Platte Conference
October 25-26, 1995

A dialogue on developments in the Platte River Basin including the Colorado/Wyoming/Nebraska negotiations to develop a habitat and water management program

Colorado State University

ENLIGHTENED DEBATE

Editorial by Robert C. Ward

In this day of brinkmanship with budgets, renewed sagebrush rebellions, water "fights," and "taking" of water rights, the attendees at the 1995 edition of the South Platte Forum were provided a rare treat -- an honest, frank, civil discussion of the issues surrounding the 3-state Memorandum of Agreement on endangered species in the Platte River. The discussion was recorded, transcribed, and is included in this issue of *Colorado Water* for your enlightenment (see page 10).

Why can't we have more honest, frank and civil discussions of other critical water issues in Colorado? Chips Barry shared his view of the subject at the South Platte Forum. His remarks are also included in this issue of *Colorado Water* (see page 5).

As Director of CWRRI, I have encountered many water issues that need good, honest and frank discussions so that people can better understand the numerous dimensions and subtleties of the issues. Water issues in Colorado are complex. They demand considerable effort to be understood. Much too often, however, the discussions needed to enlighten are not conducted.

Again, why is this the case? I do not pretend to have the answer, but I can recognize a great discussion of a complex water issue and attempt to share it with as many people as possible. We attempt to do this as often as space will permit in the pages of *Colorado Water*.

CWRRI has over the years attempted, in a similar manner, to provide opportunities for investigation, study, dialogue and enlightenment on complex and controversial water issues. Some of these efforts have been deemed more "successful" than others. "Success" is a relative concept when a particular water issue has so many competing dimensions to it. What is enlightenment to one side of the issue can be a threat to another side and vice versa. But in every case, the general understanding of a particular water issue has improved.

As long as CWRRI has the wherewithal (and this is highly in doubt - see the following article) to fund such efforts, we will continue to provide opportunities for investigation, study, dialogue and enlightenment regarding the evolving complexities and subtleties of Colorado water management. As faculty undertake CWRRI projects, they work directly with Colorado water users and managers in ways that permit considerable blending of the theoretical and practical. This blending, I am sure, will lead to new understanding on the part of both faculty and water users/managers; an understanding that, hopefully, encourages and supports the type of open, honest, frank and civil discussion of difficult water issues that we saw in Greeley on Oct. 25-26.

CWRRI FUNDING UPDATE

As this issue of *Colorado Water* goes to print, there is still considerable uncertainty about CWRRI's ability to fund water research for 1996/97. In fact nothing has changed over the past two months.

Given the continuing uncertainty, CWRRI will not call for preproposals from faculty at this time. However, we do request faculty who have an interest in one of the priority research topics, established by CWRRI's Research Planning and Advisory Committee (RPAC), to contact CWRRI (phone 970/491-6308; fax 970/491-2293; or e-mail rward@vines.colostate.edu) and let us know of their interest. If CWRRI does receive funds for a 1996/97 water research program, we may have to move quickly to organize the research projects. Having a list of interested faculty will greatly facilitate a quick response to new developments in CWRRI's funding situation. The RPAC top water research priorities for 1996/97 are given on page 3.

COLORADO WATER

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Robert C. Ward, Director

RPAC Priorities

- Predicting future water demand by all segments of Colorado's economy and environment.
- Are we collecting the right data to manage Colorado's water in the 21st century?
- With what, and by how much, do septic tanks pollute groundwater in Colorado's mountains?
- How much water do endangered species need?
- Colorado vs. Kansas: What are the water management ramifications to Colorado citizens?

The following two items were tied in the ranking:

- Identifying indicator variables for reporting on the status and trends of Colorado's watersheds.
- Managing Colorado's water data: new computer technology -- new access?

The following two items were tied in the ranking:

- Conjunctive use of surface and groundwater: An old issue with new imperatives!
- Groundwater recharge: What are the concerns?

Thank you for your patience and understanding.

WATER EDUCATION

UNDERGRADUATE WATER RESOURCES INTERDISCIPLINARY STUDIES PROGRAM CREATED AT COLORADO STATE UNIVERSITY

by David Williams

Colorado State University has created an interdisciplinary studies program in water resources for undergraduates. The university, with over 100 faculty that apply their disciplines to water and over 150 water oriented courses offered each year, is recognized as one of the world's leading institutions of higher education for water professionals. This abundance of academic expertise is brought together in the birth of the undergraduate Water Resources Interdisciplinary Studies Program.

Management of water in the Western United States and Colorado is not guided by any one discipline, but rather it occurs at the interface of many disciplines. For example, new uses of water (for meeting ecological and recreation needs) are competing with more traditional uses (such as municipal and agricultural) in ways that are demanding skills of water managers that heretofore, in many cases, were not required.

The program was created realizing that today's water professionals need a grasp of the history of water management in the Western United States: the legal and administrative structure established to allocate and control the distribution of water; the economics of water development and protection; relationships of water to ecological conditions; and land use impacts on water quality and water use. Students interested in careers in water management need to have not only an area of specialization (a university major) but also a head start in understanding these complex aspects of modern western water management.

The purpose of Colorado State University's Water Resources Interdisciplinary Studies Program (WRISP) is to offer undergraduate students the opportunity to utilize, in a coherent manner, the water expertise available on campus to better prepare themselves for careers in water management or graduate study on a water-related topic.

The faculty associated with the program include experts from many different departments. Areas represented include: Biology, Earth Resources, Agricultural and Resource Economics, Forestry Sciences, History, Civil Engineering, Chemical and Bioresource Engineering, Fishery and Wildlife Biology, Soil and Crop Sciences, and Sociology.

Students in the WRISP complete its requirements in addition to those necessary to earn their degree. The program requires that students complete 21 semester credit hours in core and elective courses. Required courses focus on aspects of water management, ecology, and economics, and elective courses offer a wide range of options from hydrology to sociology and from geography to atmospheric science.

The WRISP is coordinated by the Colorado Water Resources Research Institute, 410 N University Services Center, 601 S. Howes Street, Fort Collins, Colorado, 80523. (Phone 970/491-6308). For more information, contact this office.

MEETINGS IN REVIEW

A Summary of the 1995 South Platte Forum

ENDANGERED SPECIES MANAGEMENT: PLANNING OUR FUTURE
October 25 - 26, 1995 -- Greeley, Colorado

by David Graf

Initiated in 1989, the South Platte Forum has provided an avenue for a multidisciplinary exchange of information and ideas important to natural resource management in the South Platte Basin. Its stated mandates are "to enhance the effective management of natural resources in the South Platte River Basin by promoting coordination between state, federal, and local resource managers and private enterprise" and to "promote the interchange of ideas between disciplines to increase awareness and understanding of South Platte River Basin issues and public values."

True to its mandate, nearly 150 participants representing a wide range of public and private organizations and interests convened for the annual two-day Forum to discuss declining, threatened and endangered species management in the South Platte Basin. The 1995 Forum provided participants a glimpse of the underlying framework -- scientific, political, legal, economic -- that should provide the basis for species management in the basin.

The following talks and discussions present a portion of the collective dialogue held during the Forum (some complete papers and a complete set of abstracts are published in the 1995 South Platte Forum Conference Proceedings, available from CWRRI). Chips Barry asked for constructive dialogue; Don Barry described ESA development in Washington, D.C.; Dan Luecke offered suggestions for improved management of the Platte River system. The 3-state MOA panel presentations and discussions summarized the positions of the negotiators and the status of the negotiations.

The complexity of species management in growth-dependent economies was made clear by the speakers at the Forum, and the two-day format only allowed for a quick cross-section of some of the numerous issues. It is clear that species are imperiled, whether they are the "charismatic mega-fauna" of the Central Platte (the whooping crane, for example) or, as is the case in the South Platte River Basin, minnows, toads and rare plants.

Another emerging truth is that when a species is listed by U.S. Fish and Wildlife as "endangered," the subsequent procedures mandated by the Endangered Species Act to save species from extinction are expensive, often adversarial, and usually too late to do much good for the listed species. The "trauma center" approach to species preservation, though deemed necessary by most participants, does not address the primary issue: How do we keep species from being listed?

A panel involving the negotiators for the 3-state MOA discussions presented an excellent example of what could happen when species are listed (see 3-state MOA panel discussion, this issue). The frustrations in negotiating deals involving money and water for habitat protection were evident. Our public and private institutional structure may not be equipped to administer large-scale conservation plans in all cases, but if the public demands preservation of endangered species, what is our alternative? Apparently, the answer lies in developing pre-listing agreements between public and private entities at multiple jurisdictional levels, and in targeting threatened ecosystems for protection rather than individual species that may only be red-flagging more widespread degradation.

The terms "voluntary partnerships," "adaptive management" and "basin-wide planning" were frequently used, and may become the cornerstones of a new era of species and resource management being ushered in by public demand. As David Harrison (chairman, Colorado Water Conservation Board) alluded to in his woodcutters' parable, it's best we sharpen our ax now, and begin to craft and hone the necessary agreements before we discover the 'pile of wood' we need to cut isn't getting any smaller, and our ax is too dull to do much good.

♦ ♦ ♦

THE ENDANGERED SPECIES ACT -- REVITALIZING THE PROCESS OF PUBLIC DEBATE

by "Chips" Barry, Manager
Denver Water
Luncheon Speaker, October 25

Today, I am not going to talk about endangered fish or how the Water Department has some capability (although limited) to alter operating criteria so that it benefits endangered species. These remarks are long on passion but short on hard research and scientific knowledge. Instead, I want to talk about something of grave personal interest and concern to me. The topic is the disintegration of reasoned and civil debate about the Endangered Species Act and perhaps about environmental controls generally.

I would like to examine the so-called conventional wisdom about the Endangered Species Act as propounded by major advocates on both sides of that issue. For the last couple of years, the prospect of reauthorization of the ESA has loomed large with anybody in western or even eastern natural resources or the wildlife business. The background noise on this issue has been deafening for some time, and it is only going to get worse. Let me give you some examples of the so-called conventional wisdom from both sides. The advocates of the Endangered Species Act as it now stands generally say things like:

- *"Although there may not be a lot of money available to implement programs to save all the species, we don't have to adjust the program or set any priorities. There is not much money, but forget about setting the priorities -- we don't need to do that."*
- *"The Endangered Species Act does not require any kind of balancing of social or economic values against the value of the species at issue."*
- *"The Endangered Species Act should not be modified."*
- *"Stopping projects saves species."*
- *"Certainty is a concept that has no application to the way the Endangered Species Act works. No decision or action should ever be final, and everything should be subject to being reopened and reexamined, especially if new species are found or new policies are propounded."*
- *"State and local governments are not competent and generally lack the proper policy perspective to adequately deal with Endangered Species Act issues."*
- *"Developers are even worse. Their only interest is money. How can we ever depend upon a developer to do the right thing for endangered species unless they collect money out of it?"*
- *Public policy issues embedded in the Endangered Species Act should not be addressed by scientists or administrators. The lawyers will answer all such questions.*
- *"Every effort to change the Endangered Species Act should be characterized automatically as an effort to gut the act."*

I may have indulged in some slight exaggeration, but everyone in this room has heard statements like these. Look at the press releases issued every day and you realize the rhetoric is heating up. In 1995, letters from a number of environmental groups to the Western Governors Association, a bipartisan group of presumably responsible people, criticized the W.G.A. proposal on ESA as eviscerating the act.

The extreme tone is matched on the other side. In a recent article called "Salamander the Great" from the magazine *Policy Review* the following statements are made:

> *"The Endangered Species Act contains at least five critical areas that must be addressed. One, it has never recovered a single endangered species. Two, it depends on bogus science. Three, it is applied to other unreliable biological distinctions within species. Four, it is promoted through bait-and-switch tactics. Five, it has an ever-mounting toll on individual society and the economy."*

There are many more examples from that side of the spectrum. For example, people believe that the Endangered Species Act has cost the United States thousands of jobs and billions of dollars. They believe that the bureaucrats running the Endangered Species Act program think that insects and reptiles are more important than people. They believe that the motive of every environmental group that uses the Endangered Species Act to oppose a project is suspect at best and reprehensible at worst - that the most common use of the Endangered Species Act is to stop projects, not to recover species. And finally, they think anyone who believes the Endangered Species Act is a success and works is completely uninformed, unbelievably stupid, or reads only the press releases of the environmental groups headquartered in Washington, D.C.

The point about all these statements is that they are all wrong. Every one of those statements is infected with emotional language, misstatements of fact and half-truths. There may be some element of truth in some of those statements, but half

truths, misstatements and emotional rhetoric do not engender real discussion, and what we need is real discussion.

What has happened to reasonable, civil debate about important public policy questions in this country? This is deeply disturbing and it is very hard for any of us to do anything about the overall trend. But perhaps we can moderate the tone and raise the level of discussion when it comes to the Endangered Species Act. Everyone attending this conference has an interest and considerable knowledge on this subject. Is it possible to keep the Endangered Species Act discussion from becoming a shouting match with major positions portrayed only on T-shirts, bumper stickers and ball caps?

This issue must be subject to hard discussion, and we simply can't lump extreme positions from both sides together and call it a compromise. That is not a compromise. We must have intelligent discussion about these important issues. A big debate will take place in Congress, and if it happens only at the rhetorical level, we won't get anywhere. I staked my entire career at the Denver Water Department on making peace with people who formerly opposed Denver Water on issues such as water development, water rates, water rate structures, extension of service, environmental protection, etc. It is a difficult and trying process to make peace. In contrast, self-righteous indignation is a wonderful emotion -- in all honesty, there is nothing better than feeling self-righteous, indignant, and moving forward knowing that you are right. It feels good, but it doesn't produce a lasting result and it is publicly irresponsible.

Finally, let me say that I think we are very lucky in Colorado. While we see the heated rhetoric about endangered species in the northwest and elsewhere in the country, we generally have been able to deal with these issues pretty well. There has been tension, of course, but there also has been a lot of cooperation, a lot of joint studies, and agreement on the mutual objective of restoring species to healthy, self-sustaining populations. The discussions of the Platte and about fish in the Upper Colorado generally have been civil and rational.

As the ESA debate on reauthorization intensifies, we need to resist the pull to join one end or the other of the spectrum. The public believes, and sometimes for good reason, that the speaker on any given issue purposely overstates his case. Does anyone believe that public statements on important issues are motivated by concern about the issues themselves?

We need to bring that kind of concern to this profession. You all have some influence on this issue. I think it is important to keep the endangered species topic on the list of things that can be intelligently discussed, and I urge each one of you to make a personal effort to dampen the rhetoric and limit the hyperbole. We need to get away from guerilla tactics, press releases and Trojan horses and have a genuine debate. To do that, we need to change our attitudes about how we have public discussion.

♦ ♦ ♦

A VIEW OF ESA FROM THE CONGRESSIONAL HILL

Don Barry, Counselor to the Assistant Secretary for Fish, Wildlife and Parks
Luncheon Speaker October 26, 1995

I think this conference is an absolutely first-rate effort for people who are directly affected by a lot of these resource issues to take matters into their own hands as they try to figure out the best solutions at the regional and local levels. Secretary Bruce Babbitt is personally very much aware of your efforts and strongly supports them.

A friend of mine once mentioned that there seems to be a strange correlation between people's views on the benefits of democracy and their lack of experience in actually watching Congressional committees in action. Congress always tries to scurry before going home in the fall and the result is chaos. Members are expected to vote on bills when they don't have a clue as to what is in them, and that is one of the reasons why things work the way they do.

At least one Federal Judge in 1979 indicated his displeasure with the normal way that Congress operates:

> *"...The message is as clear as it is repugnant; under our so-called Federal System, the Congress is constitutionally empowered to launch programs, the scope, impact, consequences, and workability of which are largely unknown, at least to the Congress, at the time of enactment; the Federal Bureaucracy is legally permitted to execute the Congressional mandate with a high degree of befuddlement, as long as it acts no more befuddled than the Congress must reasonably have anticipated . . . "*
>
> J. Kelleher
> U.S. District Court Judge
>
> American Petroleum Institute vs. Knecht
> 456 F. Supp. 889, 931 (C.D. Calif. 1978)

I would like to now get out what I call my befuddlement barometer and see how it is registering these days with regard to the ESA reauthorization effort. Let me give you a quick overview of what is going on.

Three major bills have been introduced in the House: one by Congressmen Don Young of Alaska and Richard Pombo of California; one by Congressman Jim Saxton, a moderate Republican from New Jersey; and one by Congressman Wayne Gilchrest, another moderate Republican from Maryland. In the Senate, a bill was introduced early on by Senator Slade Gorton (R-WA), another was introduced by Senator Dirk Kempthorne (R-ID), and there will soon be a bill introduced by Senator Harry Reid of Nevada.

Among those bills, I think the Kempthorne and Gorton bills will be fairly similar in many respects, bringing sweeping and extreme changes to the ESA. I think the bill that will be coming in from Senator Harry Reid is likely to be the smallest, thinnest and most centrist, and probably the closest to what the Governors Association has sought. It is likely to be the most pragmatic, middle-of-the-road proposal that you will find, at least in the Senate.

Most of the action has occurred to date in the House. Two weeks ago the House Resources Committee held a marathon mark-up session. I sat through at least eight hours of the mark up, and have to tell you that it was probably the most uninformed and depressing debate that I have witnessed on the ESA in 22 years. There was a good reason for that. For one thing, Congressmen Pombo and Young changed their bill the night before the mark up and circulated to the committee an amended version of the bill which had expanded from 155 pages to 171 pages, ensuring that not a single member of that committee had a clue as to what was in the bill when they were expected to debate it and vote on it the very next day.

There are some other reasons why I am skeptical about the benefits of the Pombo/Young bill. This is a copy of the current Endangered Species Act. It has been amended a number of times by Congress, but it is still very thin and short. This is a copy of the D.C. phone book and this is a copy of the Young/Pombo bill. You will note it is the same size as the D.C. phone book. Now, if you were a member of the Resources Committee and you had been given this D.C. phone book-sized bill the night before with all the changes and you were expected to form a decision and vote the next day, you probably would have been just as well off reading the D.C. phone book. If nothing else, the D.C. phone book is better organized. I don't think the Young/Pombo bill will address and solve the real problems that exist in the current act. The Administration acknowledges and admits that there are real problems in the current act, but we are concerned that the D.C. phone book approach is the wrong way to go.

I recognize that there are likely to be some in the audience today who may have been, or are, supporters of the Endangered Species Reform Coalition, the primary group seeking sweeping changes to the ESA. Probably at least one or two of you found it good news to hear that the Young/Pombo bill had been marked up and reported out of the committee, because it included virtually the entire Endangered Species Reform Coalition agenda. I have to tell you that this falls into the "good news/bad news category" for a member of the coalition. The good news for the coalition is that it got virtually everything it wanted in an anti-ESA bill. The bad news for the coalition is that it got virtually everything it wanted in an anti-ESA reform bill. This is why the Young/Pombo bill, I think, will never pass the House of Representatives and will sink like a rock.

The problem with all coalition efforts like this is that you all have to run in the same direction or nobody runs at all. You may go into it with concerns about the Platte River, but all of a sudden you are sitting next to a person representing an oil company who is worried about the effect of seismic drilling off the coast of California on whales, or a shrimper who is concerned about shrimp trawling and sea turtles. The range of issues keeps growing and pretty soon, in order to deal with the coalition's package agenda, you end up with a huge string of special-interest concerns that can overwhelm and dwarf a particular political concern that you had when you went into the coalition in the first place. That is exactly what has happened with the Young/Pombo bill.

Unfortunately, the net result is that your particular concern about the Platte River, and water use out west, will be overwhelmed by high-visibility fights on the floor of the House and, if similar issues pop up there, in the Senate. So where does that leave us in the House at this point? I think you will find consideration of ESA no earlier than January or February of next year. I mentioned earlier that Congressmen Saxton and Gilchrest had authored their own proposals. What is going on right now, and which will continue to go on between now and January and February, is that Congressmen Saxton and Gilchrest are working together to develop a new, centrist proposal -- not exactly like the Saxton bill and not exactly like the Gilchrest bill, but something new. It will be a moderate Republican proposal put on the table as an alternative to the Young/Pombo bill. It is an interesting development that none of us predicted eight or nine months ago; thus, the leadership on the whole endangered species debate will shift over, I think, to Congressman Saxton.

In the Senate, Senator Gorton's bill was the first one out of the starting block and staked out the ESA Reform Coalition's efforts on the right flank. A lot of people assumed the Gorton bill would be the one to have the traction and move through the Senate. That is not likely to happen at this point. It also is about the size of the D.C. phone book, but it will not go the distance. I think it served its purpose by throwing out a number of ideas which then got picked up in the Young/Pombo bill, and a number of those ideas are also reflected in the bill that Senator Kempthorne introduced.

Kempthorne is a very important player because he was subcommittee chairman in the Senate with jurisdiction over the Endangered Species Act. He wanted to come up with his own proposal and spent a lot of time on it. There are a number of features in his bill that were taken from the Gorton bill and also some provisions that were taken out of the Young/Pombo bill, but it does have a number of new ideas. Whether you like them or not, I give credit to Senator Kempthorne for trying to back up and approach some of these issues from different directions.

We in the Administration have significant problems with a number of provisions in this bill and we are very concerned about it, but I at least give them credit for trying to break the mold. The bill would set up a new Endangered Species Commission which would make recommendations on management options for the Secretary. It would redefine endangered species and threatened species by requiring that a species would have to become extinct in 40 years to be endangered, and 100 years to be threatened. Those are the new, inflexible yardsticks in the Kempthorne bill. It also would delist all populations pretty much. Senator Kempthorne also included, from the Young/Pombo bill, a compensation section for private property rights and private property owners. I think Kempthorne is a very interesting legislator for people to keep their eyes on. His past record has shown that he is quite capable of negotiating with people to figure out how to get a committee majority to move something along that has a likelihood of relative success on the floor of the Senate.

The last player is Senator Harry Reid of Nevada. He has been actively engaged in the debate on the ESA, and I think that was a surprise to some of us. Nobody really expected him to stake this out as an issue that he wanted to get deeply involved with. I

majority to move something along that has a likelihood of relative success on the floor of the Senate.

The last player is Senator Harry Reid of Nevada. He has been actively engaged in the debate on the ESA, and I think that was a surprise to some of us. Nobody really expected him to stake this out as an issue that he wanted to get deeply involved with. I think the bill will be a rather centrist one, and it should be interesting to watch the dynamics between Reid, Kempthorne, and ultimately Senator John Chaffee, the chairman of the committee, who has very strong environmental views and was a strong past supporter of the ESA.

Where does this leave people like yourselves who are concerned about the ESA and its effects on the Platte River? And where does it leave the Administration, for that matter? First, let me again restate the fact that the Administration does believe that there are a number of problems in the ESA that should be addressed. We have been trying to do this with administrative and legislative recommendations on changes. We intend to continue our reform efforts administratively as outlined in a paper we issued last March, our so-called ESA 10-point plan.

As to your own efforts and what your long-term approach should be, you clearly have a couple of options at this point. You have to decide whether to walk away from the table and abandon ship on finalizing a long-term agreement, based on hints or hopes that you may be given tremendous latitude or complete freedom of movement in the Young/Pombo bill or Kempthorne bill; or, you have to continue grinding out compromises and solutions on a comprehensive basis regardless of what Congress is doing or not doing with ESA.

My gratuitous, busybody "nose-in-your-business" advice is quite simple. I think you all ought to stay the course. I think you should continue to try and work out your problems together at the regional and local levels, and don't count on Congress to give you some quick, cheap fix that will make your lives simpler or more predictable than you are capable of doing yourselves. Personally, and I feel this very deeply, your best solution will be your own solution.

I should compliment the State of Colorado in particular in this regard. Colorado has been very aggressive in deciding that it does not want to wait for the enactment of a particular ESA bill. In Colorado, the Department of the Interior has been negotiating a MOA on the ESA that sets out a much more proactive process that tries to involve the State of Colorado more deeply in a lot of these management decisions.

In closing, I will leave with you a quotation from Mo Udall, the former chairman of the old Interior Committee. Mo had a superb sense of humor and at a committee mark up I once heard him say that when you go to bed with the federal government, you usually get more than a good night's sleep. There are people out there right now, offering you the legislative equivalent of Nyquil to give you a good night's sleep with the federal government under the Endangered Species Act. I would urge you to forego those promises. I think your own agreement can offer you the best chance of getting a good night's sleep with the federal government under the Endangered Species Act.

♦ ♦ ♦

THE FUTURE OF ENDANGERED SPECIES MANAGEMENT IN THE SOUTH PLATTE BASIN

Dan Luecke
Environmental Defense Fund

Two years ago at a meeting in Denver, the citizens of Colorado convinced the Secretary of the Interior Bruce Babbitt to initiate a basin wide approach to endangered species protection and recovery in the Platte River Basin. We environmentalists were among a parade of people at that meeting that made the argument for such an approach. One of the reasons that we supported the basin wide concept was that we see the Platte River as two very different kinds of river. While everyone knows there is substantially less water in the South Platte than in the North Platte, there are other features to these rivers as well that I think are important when contemplating how to solve the problem of habitat restoration and endangered species protection in the Big Bend reach of Nebraska.

The South Platte has 25 percent of the water of the North Platte and to the extent that the former has any substantial storage, it is upstream. The North Platte, with 75 percent of the flow, has the major storage reservoirs, one of which sits immediately upstream of the habitat to be restored. What the Fish and Wildlife Service is hoping for, in seeking recovery of that habitat, is both to fill in some holes in the hydrograph during low flows and to shape it during high flow periods.

These two functions, in our view, could be performed by these two rivers, but only if they were operated conjunctively -- the South Platte filling in the holes and the North Platte shaping the hydrograph.

There are other reasons why a basin-wide or watershed approach makes sense. Collectively, the states could work together, instead of working in opposition, for exactly the kinds of reasons that the previous speaker, Tom Pitts, described -- both Supreme Court decrees and compacts. If the federal agencies worked along with the states it might move the process a little further along. By working together, Washington might take notice, and perhaps occasionally fly over with a helicopter and throw a couple of bales of money out the door.

The original meeting two years ago eventually led to the three-

state Memorandum of Agreement (MOA), and the Environmental Defense Fund, with some reservations, supported it. In particular, we were concerned about governance and the fact that environmentalists were not made a party to the process. When little progress was made under this MOA, the Fish and Wildlife Service came back to the states last spring with a memorandum that it referred to as the "Sideboards" agreement. The objective of this memorandum was to take the Fish and Wildlife Service's long-term objectives for water and land and reduce them to manageable components over shorter periods of time. For example, achievement of the long-term stream flow targets that translated into water requirements between 260,000 acre-feet and 420,000 acre-feet was to occur in phases with the first phase to supply between 130,000 and 150,000 acre-feet.

EDF commented favorably on the Service's efforts. We supported the phased approach and the notion of adaptive management and the provisions for peer review. But we again expressed our concern about governance -- where was a place for the environmental community? We also expressed some concern about the length of time allocated to each phase.

However, since the release of the "Sideboards" document, little has happened. There are still very serious and very deep divisions among the states, the service, and the environmentalists and, in our opinion, there is a fundamental question as to whether or not the MOA at this stage can serve as a reasonable and prudent alternative, given that little is happening in either the process arena or the substantive, programmatic arena.

Each entity wants something different out of the process. The states want to maximize regulatory certainty while constraining costs. The federal agencies want to maximize the probability of recovery of the species subject to a set of cost restraints and also to a set of legal constraints to protect it from attacks that might come from any number of quarters. The environmentalists operate without any constraints. We want to maximize the probability of recovery.

If one were a participant in this kind of process with this kind of model in mind, what would one's strategy be? I would assert that the strategy, particularly for the states that are concerned about controlling costs while at the same time trying to maximize regulatory certainty, would be to offer the absolute minimum that ensures that the next meeting occurs, and then play for time. Looking at what has occurred in the last year and a half that is what one sees.

Why can the states get away with this? They can get away with it because the federal agency supposedly pushing this issue really has very limited leverage over any of the states. They cannot inflict much pain. They cannot affect the cost that the states face very much at all. Furthermore, given the political environment in which the federal participants operate, they are unsure of themselves. While at the same time they are working within the MOA process, they are trying to protect the Endangered Species Act from all-out attack, so they are even less willing to try to assert leverage.

In addition, there is no way of assuring compliance, even if a program were in place. There is no accounting system, i.e. a useable, hydrologic model, that everyone agrees is reliable, neutral, and relates particular habitat restoration and recovery measures to outcomes. This is especially important, given that the costs for protection and recovery will be very high. For example, the Fish and Wildlife Service's estimate of water needed in the first phase (130,000 to 150,000 acre-feet), must be obtained through a combination of re-regulation, conservation and purchase. Suppose that the program had to purchase 50,000 acre-feet -- not just the acre-feet, but the right to use that water in perpetuity. Assuming a very conservative estimate of what that water might cost on the market -- $3,000 per acre-foot --the cost to the program would be about $150 million.

Something can be learned, I think, by comparing the endangered species program in the Platte with a similar, but more mature program in the Colorado River. To make a comparison, I would like to take four elements of the program in the Colorado and compare them with the Platte.

Leverage: There is leverage in Section 7 in the Colorado because of the need for consultation with other federal agencies for almost every project that I do not see in the Platte Basin.

Compliance: For the Colorado Basin, there is a very important instream flow compliance point downstream of the endangered species habitat. This compliance point is Lee Ferry, where the Upper Basin makes a delivery to the Lower Basin. A certain amount of water must go from the Upper Basin to the Lower Basin. While one of the fundamental assumptions in the Colorado recovery program is that the states of Colorado, Wyoming and Utah will be able to develop their compact shares at the same time the fish are recovered, there is still a great deal of water available because of the existence of compliance point downstream of that habitat. That is not the case in the Platte. The compliance point on the South Platte is upstream. The Supreme Court decreed that deals with the North Platte require compliance upstream of the important habitat, Big Bend reach.

Cost: I mentioned above the potential cost of water in the Platte program. With the Colorado, a lot of the water that is available for use must be delivered downstream, so that water can continue to move. This water, one of the major program elements, is "free" so to speak, though there may be costs associated with shaping the hydrograph.

Funding: Another important feature of the Colorado program is a source of funding in the Colorado that is not present in the Platte. The Colorado River Storage Project (the federal project that built Glen Canyon, Flaming Gorge, Blue Mesa, and Navajo dams) generates hydropower revenues, which can be used in a variety of ways. It may not be quite like flying over the region in black helicopters throwing dollars out the window, but sometimes it seems that way. The Platte program has no comparable source of funds.

What can be done in the Platte given that it does not share important characteristics with the Colorado?

Leverage: There is no obvious way of solving the leverage problem unless and until the Endangered Species Act debate is resolved and the Fish and Wildlife Service has not only an act that gives it a fair amount of leverage, but also the resources to carry out the requirements of the act. The states have an opportunity to turn the leverage in a different direction by developing a cooperative program that they formulate, where each of them gives something substantial and with such a cooperative proposal apply leverage to the federal government rather than the other way around.

Compliance: Wyoming and Colorado, the upstream states and the source of most of the water, are very concerned that Nebraska has no means of regulating wells in the alluvium of the Platte. These states do not want to give anything to Nebraska that may not end up where it should. I would think, in the context of the states working together, that Nebraska can be invited to come up with some mechanism whereby it guarantees to monitor the delivery of that water and is held responsible for it. If there is not compliance then the program itself comes apart, or the State of Nebraska pays a penalty for noncompliance with these provisions.

Cost and Financing: Without a ready source of outside funds with the prospect of substantial costs, we must begin to think about creative financing. We should look first at other federal programs. One of the more successful ventures has been the Conservation Reserve Program, targeted primarily at reducing soil erosion and improving water quality. There can be programs as well that would deal with an expanded definition of what qualified in this arena. We can expand our notion of a conservation easement on a intergenerational basis so that estate taxes could be forgiven, or at least forgiven in part, for land that comes at least from time to time into a program for habitat conservation. If we look at water as a property right, we can think about tax relief in association with donation of that wa ter, even on a temporary basis. These mechanisms do not exist right now, but I think that unless we begin to look at these kinds of incentives and options we will not see much movement in the MOA process. We certainly will not see much movement in the recovery of the habitat and the species in the Big Bend reach.

Finally, I think we need a basin wide model of the Platte. We need a hydrologic model, at least as far down as the Big Bend reach. Without that, I am not sure we will ever feel comfortable with the various mechanisms that may be considered for restoration of habitat and protection of species.

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THE 3-STATE MEMORANDUM OF AGREEMENT

Panel Discussion at the 1995 South Platte Forum
October 25, Greeley, Colorado

by David Graf

On Wednesday, October 25, attendees at the 6th Annual South Platte Forum were treated to a rare, frank discussion about the 3-state MOA negotiating process, now (or soon to be) completed. The MOA refers to an agreement signed by the governors of Nebraska, Wyoming and Colorado and the U.S. Department of the Interior in June 1994 which commits the signatories to year-long negotiations aimed at developing a habitat and water management program for the central Platte River Basin. This reach of the mainstem Platte was designated critical habitat for the endangered whooping crane.

The debate over Platte River water has been ongoing since 1983, when a jeopardy opinion under section 7 of the Endangered Species Act was rendered by the U.S. Fish and Wildlife Service for construction and operation of the Narrows Dam near Fort Morgan. Earlier efforts at reaching a joint agreement (Platte River Management Joint Study) were hindered by lawsuits between the states, the state of scientific certainty, continuation of federal funding for the study, and ultimately, by an inability of the management team to forge the necessary funding arrangements and institutional responsibilities.

The 3-state MOA panel discussion elucidated participants' concerns over the three central issues: water, land and money. Expertly moderated by Betsy Rieke, former Interior Department negotiator for the MOA process (now Director of the Natural Resources Law Center at the University of Colorado), the panelists highlighted what they saw as the barriers prohibiting the generation of an agreeable water and habitat management plan for the central Platte. The following transcript should inspire critical thinking on the appropriate institutional structures that are needed to effectively manage water and land, on large scales such as the Platte River Basin, for both conservation needs and economic vitality. As Robert Ward's editorial points out, continued honest, earnest discussion is needed to stay apprised of evolving state concerns, federal regulatory structures and scientific discovery. The public debate over the central Platte issue gave Forum attendees a healthy dose of the connectivity of the Platte River system and should invigorate the debate on declining species conservation here in Colorado.

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AN UPDATE ON THE PLATTE RIVER MOA -- OR -- COMPREHENSIVE PLANS AIN'T EASY!

Ralph Morgenweck, Director
Region VI, U.S. Fish and Wildlife Service

We have spent the last sixteen months or so in discussions on the Platte River, but what you may not know is that prior to that there were ten years of studies and discussions to try and come to some resolution of issues on the Platte, without success. During the last sixteen months, since the Governors of Colorado, Wyoming and Nebraska and the Secretary of the Interior signed a memorandum of agreement (MOA) to work on this program, a lot of productive discussion has occurred.

I want to discuss the genuine progress that I believe has been achieved in the MOA negotiations under the very capable leadership of first Betsy Rieke, and more recently Patty Beneke, who has replaced Betsy in the position of Assistant Secretary for Water and Science in the Interior Department.

First, the water users and wildlife conservationists have pulled together with their state governments in each of the Platte River states to participate in wide-ranging and productive discussions aimed at identifying longstanding conflicts within the basin.

Second, water and wildlife interests appear to have agreed also that a basin wide solution or program, based on some equitable distribution of cost, ultimately will be beneficial to each state. This is a refreshing contrast to some traditional approaches in which a state might attempt to resolve its Platte River obligations within its own individual/political/legal system.

Third, the federal agencies and the Departments of Interior and Agriculture have defined a set of sideboards that are believed to be defensible and reasonable as biological and resource management objectives. These sideboards include a short-term objective of reducing annual instream flow shortages in the Platte River equivalent to about 130,000-150,000 acre-feet per year, and a long-term goal of approximately 29,000 acres of habitat and buffer areas distributed across ten segments of the central Platte valley plus a certain amount of water that would recover the Platte River system. Importantly, implementation of these sideboards as part of a first 7-10 year increment of a Platte River recovery program would be sufficient to accomplish regulatory certainty for water users and begin the recovery of Platte River target species and their habitat. Regulatory certainty is very important for those people who must have a biological opinion rendered on their projects.

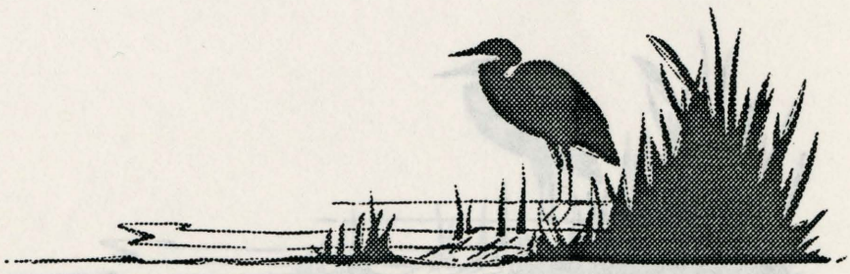
Fourth, in these sideboards, federal agencies have encouraged comprehensive participation by the principal parties of the Platte River Program through the implementation of adaptive management. Adaptive management requires that all principal parties participate in the program's decision-making process and that program decisions, including a review of program goals, objectives and sufficient progress, be based on objective information derived from ongoing research, monitoring and peer review.

Since we were unable to agree on an ultimate amount of water that needs to be in the Platte River system, one way of dealing with that is to have a phased program that includes a research and monitoring program and recovery measures that may include: conversion of habitat; acquisition of terrestrial habitat and conversion of it to the right habitat type; adding water to the river at certain times of the year; and then measuring the result. Let the critters' habitat and the critters themselves tell us what the responses are to those improved conditions.

The last example of progress in the MOA negotiations is related to who will make the decisions for the program. The principal parties have decided that operational and policy decisions will be made by a management committee comprising representatives appointed by each of the three governors, federal representatives, representatives from the environmental community, and representatives from the water-user community. In the event that the management committee could not resolve a crucial issue, it would be elevated to the oversight committee comprising the three governors and the Secretary of the Interior.

Two remaining critical issues that must be resolved are water and money. To date, the MOA water community, comprising water users from the three states and the state representatives, has put together three proposals including the Nebraska plan for relicensing the Kingsley Dam, the so-called Three Brick proposal for raising Pathfinder Dam, and the Tamarack Water Recharge Project in the South Platte River Valley. However, this suggests to us that about half of the targeted 130,000 acre-feet of reduced-flow shortages can be accomplished by redistributing flows from lower priority periods in the fall and winter to higher-priority periods in spring and summer.

Here we run into a conflict because there is a difference of opinion on how to score the contribution of each project, so at issue is not only what the first increment of water added to the system should be, but also how does one measure that? What accounting system do we use? That is an issue yet to be resolved. Another critical issue to be resolved is how to provide the remainder of that water if, in fact, the accounting system that



is chosen says that we are only halfway or three-quarters of the way there.

The remaining issue is the monetary cost of implementing and administering the program. How much will it cost, and more important, who will pay for it? No one can know precisely at the outset what the cost will be over the life of the program, but we do have to make some estimates. I estimate that the annual cost for the land-based habitat reclamation activities would be about $2 million per year for a 20-25 year program, assuming that existing high-quality habitat is part of the 29,000-acre habitat goal. If the habitat goal of 29,000 acres has to be reached as new habitat acquisitions, then the average annual habitat reclamation cost will be about $3 million per year.

In addition to habitat reclamation costs, I estimate that the average annual cost of the rest of the program including personnel to do research and monitoring, peer review, public information, education and other administrative costs would range in the area of $700,000 to $1 million per year depending upon the extent of program activities in any given increment of the program.

These are certainly substantial but not necessarily insurmountable costs. However, recently the nonfederal participants clarified their expectations that the federal agencies would pay 75 percent of land and administration costs plus 75 percent of water-related costs. Although I haven't seen an estimate of a water-related cost, these expectations may be unrealistic for two reasons. First, the current federal budget climate will likely limit the federal contribution to habitat reclamation and program administration to about a 50-percent share rather than a 75-percent share. Second, because the beneficiaries of regulatory certainty derived from this program are nonfederal, it is unlikely that the federal agencies would be able to convince Congress to provide the money to buy water -- not to say it can't happen; just to say that it would be difficult. I can't speculate on the likelihood that the federal government would help pay for implementation of actions that would increase the availability of water, perhaps, such as water conservation and reductions in irrigation deliveries during dry years. There may be some other avenues in which the federal government may make some contributions.

I am hopeful that the parties can resolve the remaining water and money issues so we can begin implementing the first increment of the Platte River Program in early 1996. I have one side comment that I would like to make also. The Endangered Species Act has taken a royal beating here in the last few years, and much of the criticism is based on anecdotes. Certainly some legitimate changes have to be made in the ESA so it can function better and be more effective. But, like it or not, the ESA has become a great tool for convening discussions of topics that probably otherwise would not have been discussed. Without it, there would not necessarily be a reason to have a Platte River Program, even though it might make good sense to protect all the resources on the river. The same thing could be said of the Colorado. As a convener it has probably served us quite well. Unfortunately, it was not designed to be a great convener, and therein lay some of the problems.

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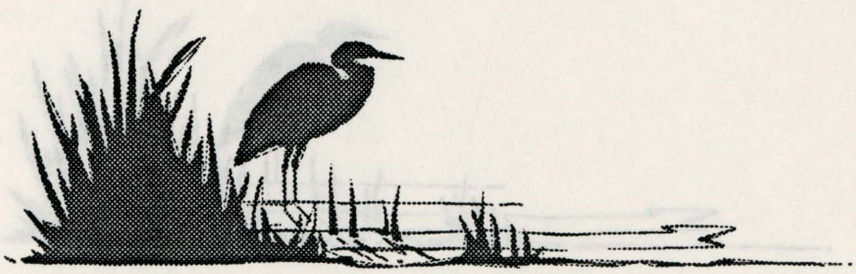
ENDANGERED SPECIES MANAGEMENT IN THE CENTRAL PLATTE RIVER BASIN

Gordon W. "Jeff" Fassett
Wyoming State Engineer

The Platte River system is one of the most varied and important river basins in the intermountain West and Great Plains. The Platte, South Platte and North Platte Rivers and their tributaries are important in diverse and often conflicting ways.

The South Platte River supplies the water that Denver drinks. Without the South Platte, neither Denver nor its Front Range neighbors could survive. As it flows down from the Rocky Mountains, it also provides some of Colorado's best recreation and fishing opportunities.



The North Platte River is equally as important to Wyoming. It and its tributaries supply water for municipalities, arid land irrigation, and the five federal reservoirs provide much of the hydroelectric power production, along with the privately owned Dave Johnston Power Plant and Laramie River Station which have cooling water supplied by the river system for Wyoming and Nebraska as well as other Plains States. Until the "energy bust," the North Platte River was to be a cornerstone of the planned mining and alternative industry in Wyoming.

In Nebraska, the Central Platte has often been called the state's lifeline, providing most of the water for all beneficial uses. Nebraska dams on the Platte provide hydropower throughout that state.

It has been said that Wyoming's greatest asset is its people. I believe that our people's greatest assets are our natural resources. Over half of the land area of Wyoming is owned by the government (47 percent federal and 10 percent state). In view of the people's ownership of the

water and wildlife resources of the State (per the State Constitution) and the large amount of public land in Wyoming, it is clear that the state cannot avoid playing a central role in arriving at decisions about society's wise use and conservation of natural resources in Wyoming. I am mindful of former Chief Solicitor and the Department of the Interior Tom Sansonetti's statement that Wyoming is more affected by Interior actions than any other state. I believe this statement and I wish to connect that point with our longstanding recognition that many natural resource decisions and issues transcend state boundaries.

Because of Wyoming's physiography as a headwaters state, most downstream water management issues can, and do, instantly "ricochet" upstream and affect resource management and use in this state. This is very clearly the case with the four Upper Colorado River Basin endangered fish species whose migration, sometimes hundreds of miles over the course of their life cycles, is done irrespective of state-lines and other political boundaries.

As in the Colorado River Basin, our experience has certainly been that downstream water management issues ricochet upstream in the Platte River Basin as well. While unarguably there are many differences between the Platte and Colorado River Basins, one factor looms very large between the two basins in the context of competing water needs. In the case of the Colorado there are undeveloped Compact-apportioned water supplies remaining available -- present day "surplus" -- and in the Platte Basin there are none. All agree that the Platte River system is water-short in all but the periodic and sporadic "wet" years like 1995.

This is a key and fundamental difference that complicates, tremendously, the approach to resolving the conflict between continuing water development and endangered species conservation and management. It is also important to know that the species of concern - both the four endangered fish species in the Upper Colorado River Basin - as well as the piping plover, least tern, whooping crane and bald eagle in the Central Platte - are in the downstream neighboring states and not in Wyoming.

In order to set the stage for briefly discussing the Platte River MOA Process - the purpose of which is to develop a mutually acceptable Platte River Endangered Species Recovery Implementation Program -- it seems appropriate to note that attempts to address Section 7 consultations for water projects in the Basin have been long-ongoing, substantial and quite frustrating processes. Following the Narrows Project's Section 7 biological opinion in 1983, which found that the proposed USBR project was likely to "jeopardize the continued existence of the endangered species and adversely modify or destroy critical habitat," the Bureau of Reclamation and the Fish and Wildlife Service formed the Platte River Management Joint Study (PRMJS).

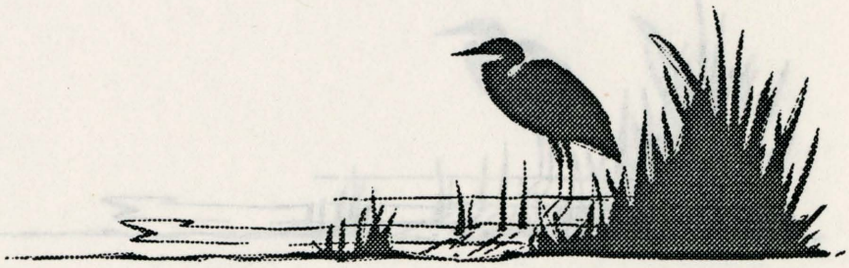
In March 1985, the two federal agencies asked the States of Colorado, Nebraska, and Wyoming and representatives of the water user and environmental conservation communities in the three states to participate in the Study effort. The Joint Study participants attempted to identify habitat and flow needs of threatened and endangered species using the Platte River in central Nebraska, and come to terms on whom and what would be involved in meeting those habitat and flow needs. A habitat plan was developed that included 29,000 acres in 10 different areas along an 89-mile reach of the Platte in central Nebraska.

Although the Interior agencies involved stated their commitment to the PRMJS process, its funding and the staff commitment to the effort was on an as-available basis. From 1985 into the 1990's many meetings were held, but unfortunately the process did not forge ahead. In 1992 and early 1993, attempts were made by the participants to develop a draft framework agreement and program document that included 29,000 acres of habitat, funding arrangements, institutional responsibilities and commitments to work on meeting unspecified water needs of the species. By mid-1993, no agreement had been reached on the framework approach and the negotiations collapsed.

In part this collapse occurred due to a lack of leadership and perhaps commitment on the part of the involved Interior agencies; the states had opposing, or at least dissimilar interests and expectations (and the State of Nebraska chose not to participate in the Joint Study for a considerable period of time); the Nebraska v. Wyoming lawsuit certainly impacted the tenor if not the substance of the Study's conduct; and further there were differing expectations with regard to the certainty that the federal agencies were willing to provide to water users with regard to Section 7 consultations for new water development and existing water projects.

Finally, at that time, some participants were willing to start an undefined Program and work out the final arrangement and details later -- while others, like the State of Wyoming, leery from our ongoing experiences, were not willing to initiate a program until there was a clear understanding of the extent of the commitments being sought and what our water users would receive in exchange for Wyoming's participation in a basin-wide program in the Platte River Basin.

It is interesting to note that while the PRMJS process was ongoing, the USFWS was pursuing a separate course of dealing with Section 7 consultations in the South Platte Basin. In 1991, the Water Supply and Storage Company, Public Service Company of Colorado and the communities of Boulder, Fort Collins, Loveland and Greeley found it necessary to begin renewing special use permits for their water projects located within the Arapahoe and Roosevelt National Forests. The Forest Service and the Fish and Wildlife Service determined that the renewal of the permits for these long-existing water projects (for



which no changes in operation were being proposed) "would affect" endangered species and critical habitat in the central and lower Platte River, over 450 river miles downstream.

Two "reasonable and prudent alternatives" were offered to avoid this jeopardy finding: the first being to replace the water depleted in both amount (AF for AF) and timing at the Julesburg gaging station on the South Platte River; or to fund habitat restoration and maintenance for whooping cranes, terns and plovers, and wet meadow habitat; fund research on the pallid sturgeon for a total of $75,000 over three years; and support the initiation of participation in a Platte River habitat recovery program. If the Program was not implemented by the fifth year then the depletions would be replaced in amount and timing by the permittees.

The facility owners rejected the "reasonable and prudent alternatives" (RPA), objected to the scientific and legal bases for the draft biological opinions, and argued that even if the depletions were replaced the water would be diverted by other downstream appropriators in the intervening 450 miles before it reached the Central Platte critical habitat. Ultimately, these entities spent many months negotiating with the two Services to develop temporary reasonable and prudent alternatives. The temporary RPA that they accepted is an annual fee of approximately $3.00 per acre-foot of depletion by the existing projects and will continue until a program is implemented, so long as that occurs within four years. If a program has not been put into place by 1997, the USFWS will reinitiate consultation on these existing municipal water supply projects.

The pressure that has been generated by these developments has certainly been intense in Colorado, and led to a recognition that even though the PRMJS had faded away, the problem certainly has not. Governor Romer and Colorado officials encouraged Nebraska and Wyoming to participate in the MOA process to take another crack at developing a basin-wide solution to resolve these endangered species versus water use and development conflicts.

In addition to the upcoming need to renew Forest Service special use permits in Wyoming, there are other ESA Section 7 consultation activities that give Wyoming motivation to participate in the current MOA Process. About four years ago, the Bureau of Reclamation began its "Evaluation of Existing Operation of the North Platte Reservoirs." This evaluation is informal Section 7 consultation on the operation of the North Platte Reservoirs. As you know, the Endangered Species Act's Section 7 (a) (1) has been interpreted as imposing a continuing obligation on federal agencies to ensure that their activities do not cause jeopardy to the continued existence of listed species or cause adverse modification to or destruction of critical habitat. While the Bureau's evaluation of operations Section 7 consultation is not very far along at this point in time, we feel that it, like the McConaughy FERC relicensing and Colorado USFS special use permit renewals, indicates the direction the Department of Interior is headed.

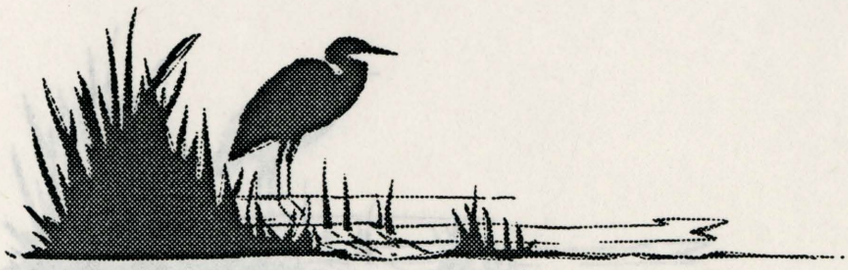
Each of these activities has certainly led Wyoming, and I think it is fair to say Colorado and Nebraska also, to infer that the Department of the Interior is seeking water for endangered species through re-operation, taking some of the yield, of existing projects. It is no longer just a matter of getting new water development projects to provide some portion of their proposed yield for endangered species and habitat maintenance/enhancement purposes, but also that existing projects are going to be asked, or rather required, to cough up some of the existing yield. The Unites States is saying, in essence, that the status quo is not good enough, and that additional water is needed to atone for the "sins of the past."

As an aside, I feel compelled to point out that these "jeopardy" opinions on any depletion, regardless of its size, need to be considered in the context of other statements we hear. In a written statement presented on June 15, 1994 by Secretary Babbitt to the Senate Committee on Environment and Public Works at an Oversight Hearing on the Endangered Species Act, Mr. Babbitt told the Committee:

> *"The Endangered Species Act has been responsible for improving population of declining species throughout the United States and has been the focus of international conservation efforts ... The bald eagle, peregrine falcon, grizzly bear, eastern timber wolf, whooping crane, black-footed ferret, Columbian white-tailed deer, and greenback cutthroat trout have been recovered from the brink of extinction and are approaching full recovery and delisting."*

So, in the face of this statement, one really has to wonder about the plight of the whooping crane. On the other hand, there is the potential that the proposed recovery program would not have to do a lot for the whooping crane if that species is approaching full recovery and delisting. Let me just add that over the course of the ten years we were participating in the PRMJS, and during the course of the MOA process so far, there have continued to be huge questions about the "science" and biological validity of the species needs that the USFWS claims there are.

The Nebraska Game and Parks Commission has documented 23 confirmed whooping crane sightings on the Platte River from 1942 through 1993. These 23 sightings amounted to 97 nights spent on the river by this species of birds. One individual whooping crane accounts for 64 of these nights. Given the Secretary of the Interior's statements last year to the Senate Environment and Public Works Committee and these sorts of statistics about the whooping crane's use of the Platte River, we often



find ourselves asking the fundamental question of whether this is all about endangered species or about power and the exercise of the unbridled authority of the current ESA statute.

Nonetheless, it is fairly apparent that the federal government is seeking both money and water from the states. Wyoming's initial question has been, and is, "How does our economy, state laws and water needs fit into the formula?" It is easily documented that many of our irrigators in Wyoming who rely on federal storage have existing water supply shortages.

So the notion that Wyoming users, who don't presently have an adequate water supply, are going to have to get by with less in the future, is a difficult starting point from which to move discussions forward. In addition, Wyoming has additional needs for municipal water supplies in the North Platte River Basin. So we in Wyoming are certainly interested in how these two facts can be factored into the proposed recovery program that the three states and the federal government are attempting to negotiate at this time.

The federal government's representatives in these negotiations have not been clear about what it, the federal government, is bringing to the table in terms of money and federal permitting process clearances and assurances for future and pending contract renewals, special use permit renewals and many other potential federal actions. Way too often, it seems that when the federal government starts talking about "partnership" that term can be translated to mean you, the states, bring state water and state money to the party, and we (the federal government) will bring our federal rules.

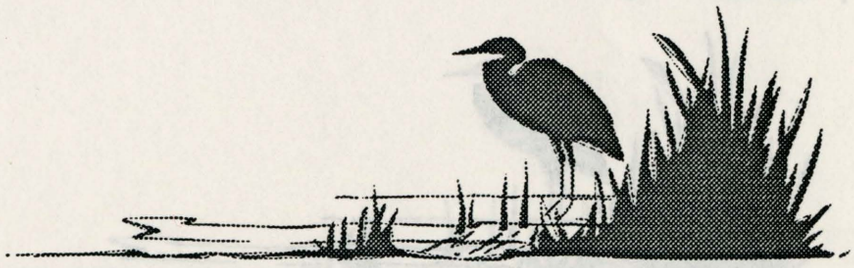
Some progress was made during the initial year-long efforts that were provided for in the initial Platte River Memorandum of Agreement. The MOA was recently extended until December 1st by agreement of Governors Romer, Nelson and Geringer and Secretary Babbitt. We are continuing to press on with the efforts to develop a program that will provide certainty to our water users who will be facing future Section 7 consultation. Two subcommittees have been formed: one is working on developing a single, integrated proposal as to what water management and re-operation actions can be done in the three states; a second is addressing how the recovery program should be organized, how it should function and what the options are for funding such an effort.

At the same time, we are working with our Congressional delegation and other entities to obtain some very necessary reforms to the Federal Endangered Species Act.
Many significant issues remain unresolved and are being addressed in our MOA discussions, including:

- What success or failure of the MOA process to initiate a basin-wide recovery program will mean to the upcoming Section 7 consultation on the existing operation of the USBR's North Platte Project reservoirs on the North Platte River in Wyoming.
- What success or failure of the MOA process to initiate a basin-wide recovery program will mean to the ongoing Section 7 consultation for the Federal Energy Regulatory Commission's relicensing of the Central Nebraska Public Power and Irrigation District and Nebraska Public Power Districts' power generation facilities, including the Lake McConaughy/Kingsley Dam Power Plant.
- What amount of water, funding and other resources will become the responsibility of the involved participants, including the three states, in order for a recovery program to be implemented.
- The current lack of legal authority and inability of Nebraska to regulate groundwater pumping depletions along the North Platte and Platte River systems.

If the federal government truly wishes the states to participate in watershed management plans and basin-wide endangered species recovery programs, the Endangered Species Act must be modified to allow truly effective state and federal partnerships. Without some authorities and shared decision-making in the recovery process, the states are, essentially, being asked to open their wallets and to turn over their water resources to the U.S. Fish and Wildlife Service. Wyoming is certainly not willing to allow itself to be put into that predicament. In many ways, the question becomes: Just how badly does the Department of the Interior want to recover these federally listed and nationally important species and have a program to make that happen? We clearly believe that the current ESA cannot, of and by itself, cause any endangered species recoveries to occur. The Act is entirely geared to maintaining the status quo with regard to endangered species and their habitats. The Upper Colorado River Endangered Fish Program and the proposed Platte River Program, on the other hand, provide a means to actually recover species as they go far, far beyond offsetting specific project impacts.

Successful implementation of cooperative federal/state recovery/management programs must provide certainty to the respective states and their water users that they will receive favorable (either non-jeopardy or jeopardy with reasonable and prudent alternative) Section 7 consultation biological opinions so long as the ongoing recovery/management programs are contributing toward species protection and recovery.



THREE-STATE MEMORANDUM OF AGREEMENT

J. Michael Jess, Director
Nebraska Department of Water Resources

At the heart of the three-state MOA effort is a commitment to develop an endangered species recovery plan. Precisely what the plan will be, what its components will include or when it will be fully implemented is yet to be determined. Water, land and money, however, are acknowledged, key elements. Who is or should be empowered to make decisions is also important.

Water

Of the four, implications relating to water have created the most discussion. Recognition that the Platte is overcommitted in all three states prompts Nebraskans to insist upon fairness in sharing the burdens of providing water to endangered species. New water use drawing upon native supplies is expected to increase competition among users and to diminish flow needed to preserve habitat which is labeled inadequate and diminishing.

Our view evolved from FERC relicensing efforts of two existing projects where additional consumption is not planned and from participation on Corps of Engineers' permitting activities where additional consumptive uses are intended. Integral to each are endangered species consultations with the Fish and Wildlife Service. When the final outcomes of the consultations are laid side by side, glaring inconsistencies are evident.

Within the FERC proceedings for example, the Service effectively instructed the licensees to make large-scale releases for Lake McConaughy as a means of assuring specified flows at downstream locations. Purchase and conversion of the sandbars and riparian properties to acceptable habitat was also required. The two districts were also required to support data collection and research activities intended to verify the success of their efforts.

For Denver or the State of Wyoming to secure a Section 404 permit from the Corps, however, the Service devised a much different arrangement. It's based upon what we termed a "land for water swap." Neither Denver nor Wyoming was instructed to take aim at downstream flow targets with release of water from their upstream Two Forks or Deer Creek projects. Instead the Service Agreed to additional consumption (and proportionate habitat reduction) if either entity agreed to purchase property adjacent to the river in Nebraska. No upper limits were specified. Purchase of particular tracts would follow Service approval. Clearing unwanted vegetation by the new owner would be required also. As for the loss of river flow, the Environmental Impact Statement for the Two Forks Project says offsetting volumes would be obtained from "local sources."

After deciphering that bit of cryptography, many began opposing Denver's project. At the same time they reflected upon the two schemes employed by the Service. The need for all three states to share in developing and participating in a comprehensive recovery plan became apparent.

How Much Water?

The water requirements for the Endangered Species established by the U.S. Fish and Wildlife Service are also questioned. Many challenge the science on which the requirements are based. Many feel the requirements are not practically attainable.

Land and Money

Among the three states, concerns relating to land are probably greatest in Nebraska. Because most all endangered species habitat in the Platte watershed is in Nebraska, local worries seem logical. County and school board officials, upon learning that some 29,000 acres might be set aside for wildlife habitat, are left to wonder about their agribusiness economies and whether to expect a decline in property tax revenues. Others question whether new zoning restrictions will be required. They ask whether construction of utilities, homes and commercial structures will be allowed. It is hoped a recovery plan will address these issues in an equitable manner.

Who's in Charge?

Across the western states frustration with the federal Endangered Species Act (ESA) is well documented. Even where recovery programs have been employed, it's said the possibility of a federal veto has discouraged meaningful input. On those occasions when the Service has exercised its veto power, feelings relate to wasted efforts and bitter memories. Polarity sets in as sides harden.

Through our involvement in the MOA effort, we've sought greater input and responsibilities for the states. We urged change in the ESA which would result in the states and the Service having equal status.

COLORADO'S PARTICIPATION IN EFFORTS TO DEVELOP A PROGRAM TO RESTORE HABITAT FOR ENDANGERED SPECIES IN THE CENTRAL PLATTE RIVER BASIN

Doug Robotham on behalf of
the Colorado Department of Natural Resources

Colorado has been involved in efforts to address species and habitat needs in the central Platte River Basin for over a decade.[1] Beginning in 1983, when the Fish and Wildlife Service determined that construction and operation of the Narrows Dam near Fort Morgan would jeopardize endangered species downstream, the State of Colorado and Colorado water users have actively sought practical solutions to endangered species issues on the Platte consistent with the state's obligations under the South Platte River Compact.

Colorado's effort to find solutions received renewed emphasis eighteen months ago when Governor Romer sought to engage Secretary Babbitt and Governors Nelson (NE) and Sullivan (WY) in a reinvigorated dialogue to develop a habitat and water management program for the central Platte River Basin. Initially, the signatories produced a Memorandum of Agreement (MOA) in June 1994 committing themselves to a year-long negotiation to develop such a program. As described in the MOA, the purposes of this program would be to:

- address the needs of species listed under the Endangered Species Act (ESA);
- prevent the need for listing additional species under the ESA; and
- provide regulatory certainty for both existing and new water facilities in the Platte River Basin required to comply with section 7 of the ESA;

Despite months of good faith bargaining, the signatories could not agree on a program within the year covered by the MOA. Still, substantial progress has been made.

Representatives of the Secretary of the Interior, in a March 1995 document, clearly articulated both short and long-term land and water management goals for the species and habitat in the central Platte. This "sideboards" document, as it has come to be known, specifically validated a previously identified goal for the protection and management of 29,000 acres of land in various configurations over the long-term. A short-term goal of 10,000 acres was also identified. The document also called for the provision of 130,000 to 150,000 acre-feet of additional flows undertaken on behalf of the central Platte River habitat, such as land protection and management.

Habitat Management

How can land and habitat be protected and managed expeditiously so as to avoid continued degradation and encroachment by development and other land conversion activities? What is the most appropriate sequencing of land and habitat protection and management relative to water management activities? How can land be protected at the least cost?

Regulatory Certainty

How can the program function as the reasonable and prudent alternative that avoids jeopardy for water facilities undergoing section 7 compliance under the ESA? Who or what determines whether the program is in fact functioning so as to provide this RPA? How can regulatory certainty be afforded to new facilities as well as existing ones? What is the length of the period during which water development interests can count on the program providing certainty? How can the important goal of certainty be meshed with the need to adjust possibly the program's elements as a result of ongoing monitoring and evaluation afforded by adaptive management?

Program Governance

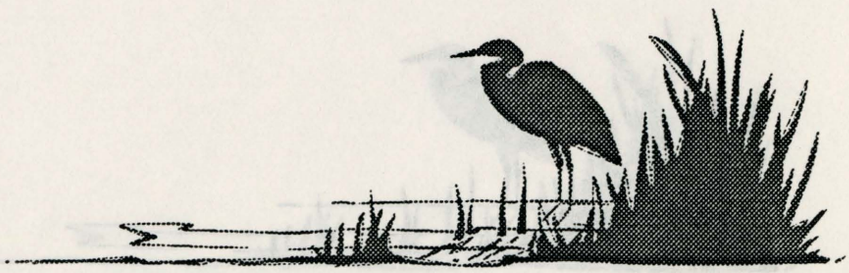
What is the most appropriate structure to make decisions, set policies, allocate funds, etc.? Who should participate in these decisions and at what level?

Fair Share

How should program beneficiaries support the program (cash, in-kind, specific changes in existing activities, or initiation of new activities)? How should this responsibility be divided among program beneficiaries? What is the common "currency" that allows program beneficiaries to understand their obligations with respect to those others may want or have to undertake?

These are only some of the difficult questions being confronted as the MOA signatory parties, water users, and conservationists continue their discussions. As these discussions move forward, Colorado participants will continue to seek the following:

- The program must provide a defensible, realistically attainable reasonable and prudent alternative that avoids the likelihood of jeopardy to listed species resulting from the issuance of federal permits to existing and new water facilities;



- The program should seek to maximize efficiencies by taking advantage of the different capabilities and resources which can be brought to bear on the solution by the MOA signatories and various stakeholders. These differences arise from the varied physical, hydrological, socioeconomic, legal and political geography of the Platte River Basin.
- The program must respect the obligations and rights of various parties to existing interstate compacts and decrees.

These discussions are scheduled to conclude on December 1.

[1] The central Platte River Basin is roughly defined as the reach of the mainstem of the Platte below the confluence of the North and South Platte Rivers and above the confluence with the Loup River. Within this basin, the reach extending from Lexington to Grand Island, NE, has received the most attention, since it roughly conforms to designated critical habitat for the whooping crane.

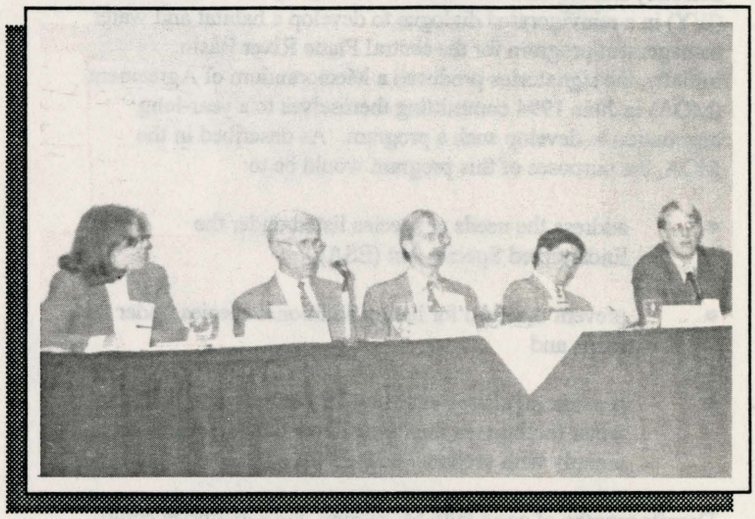
♦ ♦ ♦

PANEL DISCUSSION
ENDANGERED SPECIES MANAGEMENT ON THE MAINSTEM PLATTE: AN UPDATE ON THE 3-STATE MEMORANDUM OF UNDERSTANDING

Q: **Betsy Rieke** -- *This question is about the governance issue. When we get part way through an ESA program that is in place and some participant fails to make a required contribution the legal issue is, have we made sufficient progress that this program still can serve as the reasonable and prudent alternative? That is the ultimate issue. If the program can't serve as the reasonable and prudent alternative, you have to go back to that myriad of Section 7 consultations. When that decision is made, are you asking that the states and the federal government jointly participate in that decision as opposed to the current situation where the ultimate decision on whether sufficient progress has been made is a federal decision in the hands of the Fish and Wildlife Service?*

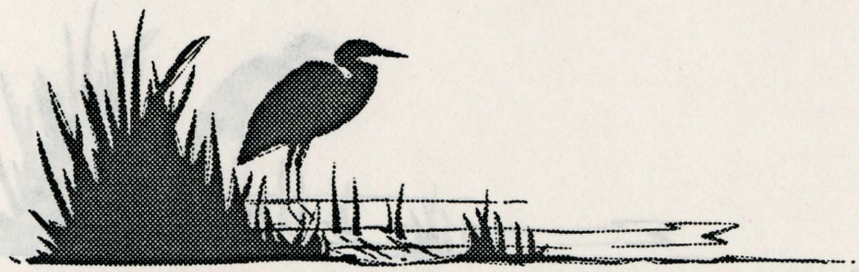
A: **Mike Jess** -- For me, Nebraska would like the opportunity to share with the others in deciding or judging whether sufficient progress is made. The frustration that we have oftentimes had is that it is reserved solely as a federal function, and we would want to share in that.

A: **Doug Robotham** -- I think we would like that shared responsibility, but I think we understand today that shared decision making is not possible under current law. The best the MOA group can do is to work under the law as it is today. If the law changes, that will force the program to readjust. What has been proposed to date is that the Governors and Secretary at least have a dialogue about whether sufficient progress is being made. Ultimately the program will begin with the determination of sufficient progress vesting where the law says it does, and that is with the Secretary of the Interior.



From left: Betsy Rieke, Michael Jess, Ralph Morganweck, Gordon W. "Jeff" Fassett, Doug Robotham

A: **Ralph Morgenweck** -- This has been an issue where Colorado, from a legal perspective, sided with the Department of the Interior in the negotiations. Our belief is that we should construct this recovery effort or habitat restoration program consistent with existing law, which is very clear about where authority resides to make sufficient progress-type determination. Also, I think federal participants have been fairly creative in finding ways to improve the flexibility in the existing law. As a practical matter, it seems to me



that the sufficient progress determination will be made by the group as a whole, even if it is the Fish and Wildlife Service that finds itself in the position of bringing insufficient progress notions to the group. What we envision is that if the Wildlife Service does make an insufficient progress determination, the first line of defense is to come back to the recovery governance structure, talk about it, negotiate, and discuss how we can adapt the program so that the Fish and Wildlife Service can find sufficient progress. It is my belief that this is essentially the way it is working in the Upper Colorado Program. I believe that this approach will avoid any real confrontation with the legalities of this question.

Q: **Betsy Rieke** -- *I think one area where we might find a middle ground is how to give other sovereign entities a greater role in decisions under the Endangered Species Act.*

Ralph, you have indicated that the federal government might be able to pay 50 percent of this program. Costs would be split 50/50 with the states. We have heard very large numbers thrown about regarding the program's total costs for land and water acquisition and operation. Isn't 50/50 just a huge, unfunded federal mandate on the backs of the states?

A: **Ralph Morgenweck** -- That is a really tough question to answer. I don't know to what degree any state feels that it has responsibility for conserving endangered species. Clearly, the act is aimed at the federal government, because it instructs the federal agencies not to jeopardize listed species or adversely affect their critical habitat. The responsibility that a state or private entity has is simply to avoid the take -- harm, harass, kill, trap, pursue, etc. -- of endangered species. On the other hand, look at some of the resource benefits associated with conserving endangered species and the habitats in which they reside. There are more benefits than just the endangered species themselves. The endangered species habitats encompass many other species as well, and there is a certain quality-of-life element: contributions to water quality, to healthy riparian systems, to healthy grassland systems or what have you. So, I think that there are benefits that accrue to the states where these species are located.

Since there is some state benefit I also think there is some state responsibility, although the ESA does not clearly lay out what that is as it does for the federal government. In terms of trying to deal with the system-wide issues, a sharing of costs is appropriate. The argument really is, what's the share? If you look at the Upper Colorado programs, the share is probably 90-95/10, with the federal government picking up the vast majority of the cost. There are others where the federal share is potentially less than 50 percent. It all depends on the interests of the other parties that are involved. Clearly, the federal government has a major role to play in this and a major responsibility. Now, should I say it's 50-50 or 75-25? I don't know, and to me that is a matter for negotiation. I believe that is where this situation lies right now.

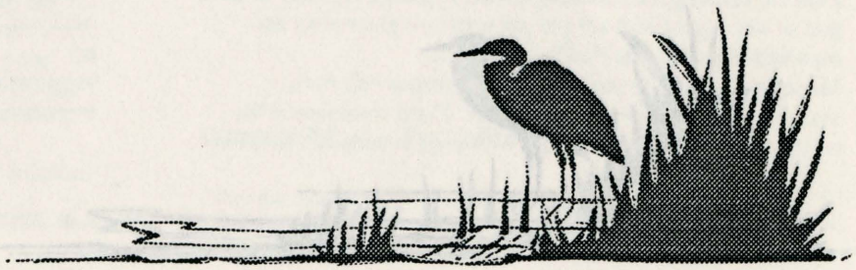
Q: **Betsy Rieke** -- *When you talk about governance, money and water, water has always been the issue that has broken the back in these multi-decade discussions on the Platte River. First, a question for Mike Jess: Both Wyoming and Colorado are proposing to make water contributions to improve the Central Platte habitat, and both indicate they will be able to get the water to the state line. Assuming they get their water contributions to the state line, can you protect that water to and through the critical habitat? Can you prevent Nebraska groundwater users from diverting water contributed by upstream states?*

A: **Mike Jess** -- No, I can't regulate the groundwater users, but I want to take exception to your premise. I don't see, at least in the Colorado case, that there will be any net gain with the proposed Tamarack project in water supply crossing the state line. What Doug Robotham didn't tell you were the details of the Tamarack project. He talked about taking water from the river and recharging the aquifer. At least, as his colleagues in the Department of Natural Resources explained it several weeks ago, there would be a net loss annually of some 10,000 acre-feet of water. There would be an additional 10,000 acre-feet, as I understood what they said, of irrigation water available near the Tamarack site, and there then would be shifting of water with more reaching the South Platte River in the summertime. But again, the total net effect would be 10,000 acre-feet less crossing the Nebraska/Colorado border than there is today.

Wyoming's proposal for the Three Brick plan, to enlarge the size of the Pathfinder Reservoir, I look at a good deal differently. I think it could provide additional waters with re-regulation, water that would be available for endangered species.

Q: **Betsy Rieke** -- *Mike, let me ask you a follow-up question. Assuming there is real water at the line contributed by Colorado or Wyoming with the proposal that the Nebraska Legislature is considering, which authorizes additional regulation of groundwater, would you or any other Nebraska official have a mandatory duty to protect water to and through the habitat?*

A: **Mike Jess** -- What Betsy is talking about is a legislative proposal, LB108, which would put in the hands of our Natural Resources Districts -- or if they were unable or unwilling, in the hands of the Department of Water Resources -- the authority to regulate groundwater users adjacent to the Platte Valley. If it is passed, the criteria in the bill say that endangered species or other federal activities can be a reason for making declarations and entering into that sort of a regulatory program.



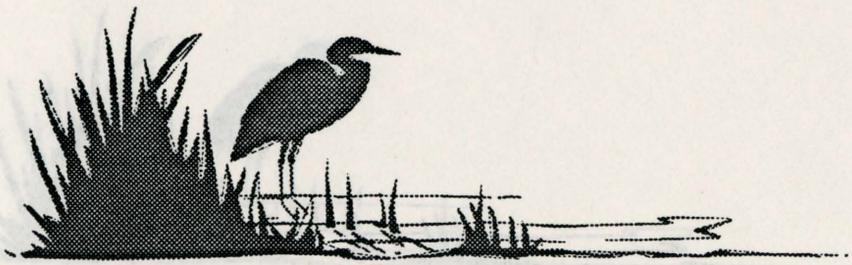
Q: **Betsy Rieke** – *I want to address the last set of questions to both Wyoming and Colorado. Each state has proposals to contribute water to this basin wide plan. Each state has also indicated that it may want to include in the basin wide plan the right to develop at least a limited number of additional water projects.*

The first question is: If current depletions already are causing significant problems for the species along a stream, how will additional depletions do anything other than aggravate the problem and cause the cost of this already very expensive program to go up?

The second question goes to your proposals that either store or re-regulate water upstream. The Nebraska proposal would also re-regulate water. Won't the water that you store and then release just end up in the Nebraska reservoir and in the account that Nebraska has said it will dedicate to the environment? Aren't you counting as your contribution the very same water that Nebraska will count?

A: **Jeff Fassett** – You are correct, Betsy, that we do have some things in mind. The Deer Creek Project is the standout example. We do have hope for that project which was designed to serve the municipal demands of our Casper metropolitan area. As to the future, I would be speculating as to what we might do, but I think it may be analogous to what occurs in the Upper Colorado. I think Colorado does have more future projects. It also has significant amounts of importation supply into the South Platte drainage that we do not have and which is outside the realm of possibility in Wyoming. What happened in the Upper Colorado and what will happen here is that people who are coming along today will know about the Endangered Species Act and that it is an issue you must address. That was not the case earlier. We had developed most of our water in the North Platte River 20 years before the Endangered Species Act even existed. For the future, this will be a new cost of doing business, and I suspect that the new depletion projects are clearly going to add some different level of costs associated with trying to offset those depletions when, as you suggested, there already is a problem. What the program has done is what has occurred, in my view, since the MOA process has been ongoing, but I at least stepped away from your premise that future depletions only make the problem worse. We don't know that.

There is disagreement about the framework biology, but the participants have agreed to try and advance the program and let adaptive management work. If I am right, adaptive management will suggest we are going to meet the goals on species well before some gigantic target number is reached.



If I am wrong, adaptive management will have us in a program for many years to come until we reach those goals, but it will be very difficult.

With the Three Brick proposal there is some potential for double-dipping, but that is not what the analyses show. We really can operate the reservoir system differently, and there are some savings by storing the water differently. We have tremendous elevational shift in this basin coming across our state. If you hold water high less of it evaporates than if you hold it low. There are some real benefits of operating the very complex system we have in the North Platte, where you have a river that flows about 1.5 million acre-feet with more than three million acre-feet of storage.

It is heavily regulated, to say the least. We had the biggest reservoir in the system, Seminole Dam, come into priority this year for the first time in eight years. That is the kind of water-short situation we have. When '95 came along, we stored everything possible this year in Wyoming and Nebraska and still 20,000 cfs was shooting through the habitat. So, hydrology is incredibly variable, but we believe that with the Three Brick concept, with a physical enlargement, we will be able to capture, re-regulate and shape the timing in some manner. There are some added benefits that the MOA group is looking at to make sure that the North Platte operation in Wyoming is operated in concert with what is envisioned at Lake McConaughy to get as much bang for those acre-feet as possible.

A: **Doug Robotham** -- Jeff pointed out that when we signed the MOA, we explicitly contemplated that the program we developed would cover not only existing facilities and existing depletions but also new facilities and new depletions. I pointed out in my remarks that we have emphasized the importance that this program be developed in concert with the South Platte River Compact, which fully allows Colorado to develop fairly significant amounts of new water if we can manage to solve the endangered species issues.

Mike Jess pointed out the re-regulation proposal that Colorado envisions may have a water development component attached to it. He sees this as negative because it would add to the system's depletions. I think actually it is a positive -- it shows that water development and endangered species management can proceed hand-in-hand, which is really the middle ground that we seek. We have to see if we can work this out in a practical and pragmatic way.

As it turns out, the water that would be re-regulated from winter flows to spring or summer periods by Colorado's proposed project is actually in excess of Fish and Wildlife target flows at Grand Island. Colorado's proposed project can be very effectively re-regulated down to the target flows during the wintertime. When enough water is available to meet endangered species needs later in the summer, whether it is made available for further development, frankly, is not necessarily an issue that we need to grapple with. The fact is that we can still meet those target flows through either

scenario during the wintertime, because that is when we have surpluses to work with.

With respect to whether the water derived through re-regulation is "real," I would point out that in our view it is quite real, because there is a surplus on an average annual basis during the wintertime, and we do have the ability to affect that re-regulation and reallocate those flows from November through March, and maybe in the April or May through September period. The South Platte is tied into this at the Kingsley system and also is affected by groundwater pumping in Nebraska. What happens to that water once it crosses the state line is Mike's problem, and maybe Ralph's problem. We feel that there ought to be very significant water benefits to be achieved through the re-regulation concept.

I will close by pointing out that the future will very likely see significant development proposals involving significant amounts of water. The most efficient way to approach mitigating the depletive impacts of this new development is not by requiring bypass flows from projects hundreds of miles away from the critical habitat, expecting that water not to be affected by all the operations of the intervening water rights between headwaters and the habitat. Rather, it is to go as close to the habitat as possible and engage in efficient water management practices. If we were to approach it in that fashion, we could leverage resources from throughout the basin in a way that improves water management practices to the benefit of the habitat and also results in some financial gain associated with deal-making for Nebraska water users.

QUESTIONS FROM THE AUDIENCE

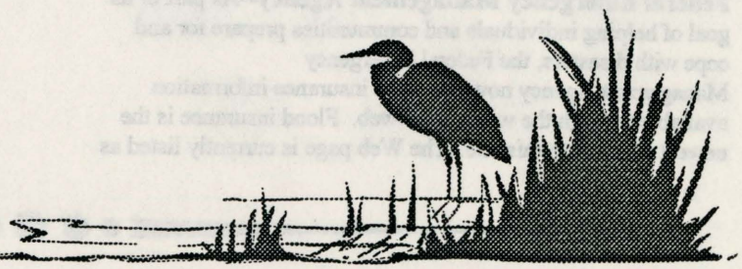
Q: *There are some really knotty issues to discuss in the coming months. What happens if we can't get resolution on this?*

A: **Ralph Morgenweck** -- We have agreement with the three states that whatever the Fish and Wildlife Service wants, they will give up (much laughter). Actually, right now we have a whole series of activities and meetings scheduled. In addition, Fish and Wildlife Service is working on a draft small depletions policy. This is how you handle small water depletions, and we hope to have that ready for review by the group in November. There also is some background work going on like trying to identify a baseline for major condition changes. All of these things are important, but the bottom line still will be the water, the money, and the discussions about whether or not we can make a deal in terms of who pays for what. I think if we get some kind of agreement on a first phase on water and money, we can probably have a skeleton agreement put together by December. If not, in true bureaucratic fashion, we could extend it.

Q: *Is the comprehensive plan approach part of the problem in the inability to reach resolution?*

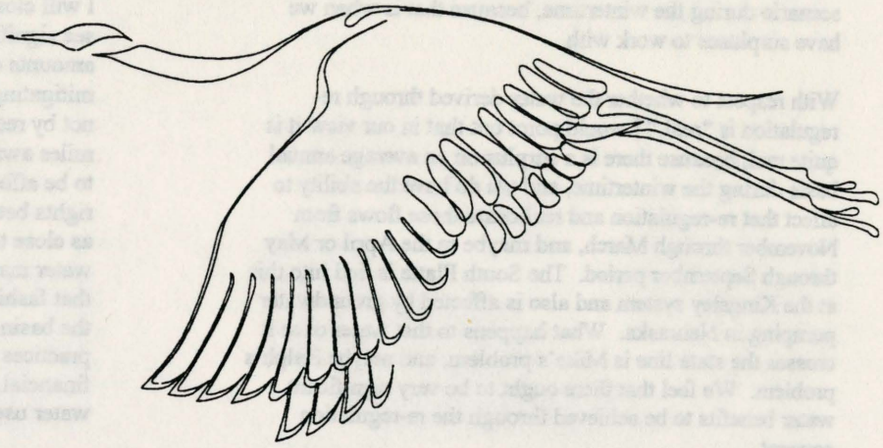
A: **Jeff Fassett** -- I don't think it is. From Wyoming's perspective, based on our water laws and the water we have, a new user is accommodated at this point because of the priority system and through a process of reallocation. That means you have to buy a water right and change its use. Our laws allow for that. The issue here is, Who is going to pay to buy the water to change the use? The Three Brick idea that we have proposed, combined with the other projects, only goes a short way toward what the Service would like to see. Beyond that, I think this entire program faces a marketing-type future -- get the water, get a willing buyer and a willing seller, and then it's a matter of who pays. Where will those dollars come from? The comprehensiveness is important because, when you look at Wyoming, we can't touch a stream in the North Platte drainage without falling under a federal nexus. It is not the same everywhere across this basin. If you really want to help the species, you have to look at the whole picture; you can't just look at the people who happen to come before you. That doesn't seem very efficient, very effective, or very fair from the Wyoming perspective.

A: **Doug Robotham** -- We talk a good game about the comprehensiveness of this program, and maybe it is from the standpoint of addressing all the federal actions that might trigger the ESA in the Platte, but in reality we are a long way from comprehensiveness. What we are dealing with right now are actually three distinct state water management proposals that are trying to link. It might as well be three separate arrangements worked out with the Fish and Wildlife Service on an individual basis. We may find synergies in integrated operation of the three proposals, but the limited analysis that we have done to date suggests that the additional water associated with integrated operation is probably not very great. My hope is that if we do tackle this in a comprehensive fashion, if we do figure out that water marketing element that Jeff mentioned, then everyone stands to benefit. Upstream water users, whether in Wyoming or Colorado, could gain substantially by pushing beyond the limits of what these three discrete proposals might involve to really provide that long-term certainty that is so important to water management. We are just scratching the surface of comprehensiveness, so I don't think it is getting in the way at this point.



Q: *Could Mike respond to Doug's remarks regarding engaging in efficient water management practices close to the area of concern? I wonder how Nebraska feels about that?*

A: **Mike Jess** -- Doug is essentially saying the same thing that the Denver Water Board used in trying to support its Two Forks proposal -- buy the land, buy the water down in Nebraska, and we will develop all we want in Colorado. That comes across in my state as mighty unfair.



WET SPOTS ON THE WEB

FIND WATER DATA QUICKLY AND EASILY -- SEE WHAT'S ON-LINE

by Julie Eyre

As promised in the August issue of *Colorado Water,* we have been surfing the web looking for water resources information. Web sites are constantly changing and it is difficult to keep up with all of them; therefore, we recommend that you continue to revisit sights to keep up with changes that we have overlooked.

Wetland Expertise --The University of Arizona's Water Resources Research Institute, with the U.S. Forest Service, has published a directory of Riparian/Wetland Expertise in the Southwest. The directory lists researchers from universities, state and federal agencies, and private firms, and can be searched for areas of expertise and location of research projects. It is found at the following URL:

http://ag.arizona.edu/AZWATER/

Water Quality --Looking for water quality information? You now can access a water quality database at Purdue University that has more than 100 water quality documents and 1700 bibliographic references. State Cooperative Extension Services supplied lists of current public education publications and audiovisuals. To access the database: telnet hermes.ecn.purdue.edu, at the "login" type purdue, and at the "password" type demo. Or you can use a modem and call (317)494-8350, then type cerf for the "type of service." Use bye to leave.

Federal Emergency Management Agency--As part of its goal of helping individuals and communities prepare for and cope with disasters, the Federal Emergency Management Agency now has flood insurance information available through the world wide web. Flood insurance is the newest addition to this site. The Web page is currently listed as one of the top 5-percent websites. Take a look and see what type of disaster information it has to offer you. The URL is located at:

http://www.fema.gov

Growth and Development -- For those interested in the Governors Initiative on Smart Growth and Development, a world wide web page has been created for updating the public on the latest issues. Also included is the Governors Nine-Step Plan to Smart Growth, along with a schedule of regional meetings. Stop by this site and check it out. You can also send them your comments and suggestions. This URL is located at:

http://www.colorado.edu/SmartGrowth/frontpage.html

Colorado Courts --You can now get online information about courts in Colorado. Along with Colorado information, there are also links to nationwide legal information. A lot of the pages are not complete because this is a new server, but continue to check for new information being added all the time. This URL is located at:

http://www.rmii.com/slv/courts/colcts.htm

Water Resources Research Institutes--The **Wisconsin Center** now has an on-line searchable library of institute reports. With telnet access the directory can be reached directly, instructions are available on the webpage. This URL is located at:

http://www.library.wisc.edu/libraries/Water_Resources/wrrs.html.

WATER NEWS DIGEST

WATER ALLOCATION

Wet Spring Brings Strong Supply and Dilemma

With the recent snowfall, Colorado has started to build up its precious winter snowpack. Even so, many water users are already relaxed, knowing they have drought insurance in hand even before winter starts. One of the wettest springs on record left the Northern Colorado Water Conservancy District holding 140,000 extra acre-feet of water in its reservoir system. As of mid-October Lake Granby remained 97 percent full, when in a normal year it would be only 70 percent full in October. This oversupply gives the district a storage level in the Colorado Big Thompson Project that is 142 percent of average, a good starting point for meeting next year's water supply demands.

Things are not as cheerful in the Arkansas River basin, where last spring's heavy rains and runoff have left farmers with little space in which to store water for next summer. Participants in the Winter Water Storage Program heard recently that only 66,000 acre-feet of room is available at Pueblo Reservoir and that the space must be cleared by April of next year. Usually the Winter Storage Program uses storage in Pueblo Reservoir's Conservation Pool, but this year that portion of the reservoir is full, leaving little room in the joint-use pool until April. The joint-use portion of the lake's body is used to capture and hold any floodwaters each spring and summer, and so it must be emptied each spring.

Fort Collins *Coloradoan* 11/4/95, 11/17/95; *Pueblo Chieftain* 10/27/95

Arsenal Seeks Water Supply

The Rocky Mountain Arsenal wants to take over Fitzsimons Army Medical Center's water rights when the post closes due to defense cuts. The arrangement would not cover drinking water for post residents or the hospital but would pertain to water from the High Line Canal now being used to irrigate about 50 acres of farmland near Fitzsimons. The land is planted in alfalfa. Arsenal officials want to use the water to help clean up contamination at the site where Shell Oil Co. once manufactured pesticides and the U.S. Army made chemical weapons. Arsenal officials have asked the Army for its rights to 525 acre-feet of water. The Arsenal would use the water to replant some areas with prairie grasses after contaminated soil is removed.

Denver Post 11/10/95

Westminster Buys Water Rights

Westminster officials have paid $8.7 million for one of the city's largest water acquisitions in more than 10 years. The water will be enough to serve about 2,400 single-family homes. The city purchased the water rights from Broomfield, which is switching its water supply. Through a joint bid, Westminster, Arvada, and Northglenn purchased the water rights for Church Ditch. Westminster will get the largest portion, 1,200 acre-feet; followed by Arvada, 600 acre-feet; and Northglenn, 465 acre-feet.

Denver Post 11/2/95

WATER QUALITY

Fort Collins Finds Tainted Reservoir Caulk

Fort Collins city officials announced in November 16 that drinking-water reservoirs in the northwest part of town contain PCB-contaminated caulk and that the caulk has been flaking off into the water. In February the city performed a routine check and discovered that the 30-year-old caulk was deteriorating. At that time they decided to replace the sealant, but in April, after reading a technical journal article about a California town that found PCBs in its reservoir caulk, the city decided to give its caulk a second look. Chemical analysis showed that it contained PCBs. Tests of both drinking water and groundwater showed no measurable levels of the chemicals, but soil outside a reservoir drain showed contamination levels 10 times higher than the Environmental Protection Agency allows. Since then, the city has reported its discovery to the EPA, state and county health departments, and Colorado State University, whose Foothills Campus borders the contaminated site. The city plans to remove the old caulk and replace it with a new, safer sealant, as well as dig up all the contaminated soil.

Fort Collins *Coloradoan* 11/17/95

Cities' Water in Compliance

A study by three environmental groups concludes Colorado water is within federal standards for arsenic, radioactive radon, and trihalomethanes. The groups used Environmental Protection Agency data from 1993 and 1994 to track levels of the three hazardous substances in public water systems. It determined that none of the Colorado cities, except Arvada, came close to exceeding those standards. Arvada exceeded the level for trihalomethanes slightly on several occasions in 1994, but city officials have said that the problem has been fixed.

Denver Post 10/30/95

Greeley Deepens Bittersweet Lake

The city of Greeley plans to hire a contractor later this month to dredge tons of sediment from Bittersweet Lake, deepening it between 3-5 feet. Work is expected to begin the first or second week of December. The deepening project is intended to restore the lake's flood detention capacity. Water is being drained from the lake so the $300,000 project can begin. The city expects the work to be finished by next spring, when the lake will be refilled in time to be stocked with trout for early-season fishing.

Greeley Tribune 11/6/95

WETLANDS

Elaborate Effort in Fort Collins to Enrich River

A former construction supplies storage site in northeast Fort Collins, currently home to broken concrete, scrap metal, and piles of rubble, will soon be a natural wetlands area complete with

native wildlife and plant species. The project will filter stormwater from downtown and provide river habitat for native wetland species. Federal law requires cities with more than 100,000 people to treat stormwater before releasing it into a river. Fort collins is fine for now, but the city will need to have treatment options in place after the 2000 census. The wetlands project will treat stormwater runoff from parking lots and roads, which is often laden with such contaminants as oil, heavy metals, animal droppings, grass clippings, and fertilizers.

Fort Collins *Coloradoan* 10/27/95

Telluride Ski Resort Settles Wetlands Dispute With EPA

Officials of the Telluride Ski Resort reported in October that the resort has settled its dispute with the Environmental Protection Agency over wetlands violations. Details of the settlement cannot be released until it is cleared with U.S. District Judge John Kane. Last year Kane rejected a proposed settlement, saying it was too lenient, and ordered the resort and EPA to prepare a new agreement or try the case. In May, however, Kane ruled the EPA had waited too long to file its case, and said it could only charge the resort with violations that occurred after 1988 because of a statute of limitations. The dispute had stalled Telluride's public transit gondola until the EPA decided to permit its construction to go ahead. One of the purposes of the gondola is to cut traffic into Telluride and reduce air pollution.

Grand Junction *Daily Sentinel* 10/6/95

WATER PROJECTS

Officials Approve Enlargement of Reservoir

An enlargement of Elkhead Reservoir north of Craig will allow Yampa Basin water use to increase and help meet the water needs of endangered fish. The $38 million project, which would allow 30,000 acre-feet of storage to the reservoir, was endorsed in mid-October by the Colorado River Water Conservation District board. Under a tentative agreement between the river district, the city of Craig, the Colorado Water Conservation Board, and the owners of the Craig power plants, the river district would be the project manager for the enlargement. The enlarged reservoir would store more of the peak spring runoff on Elkhead Creek, a major Yampa tributary, so it could be released in the late summer and fall to maintain base flows for irrigators and fish. It will help basin water users meet one of two new instream flow filings that the state water board plans to make in December to meet the needs of endangered fish.

Grand Junction *Daily Sentinel* 10/17/95

ENVIRONMENT

Summitville Chief Indicted

The top manager of the Summitville mine was indicted on Nov. 2 and accused of covering up creek pollution near the gold project in southwestern Colorado. A federal grand jury indicted Samye N. Buckner, the mines general manager and second Summitville official to be indicted. The grand jury also returned new charges against Thomas S. Chisolm, the mine's environmental manager, who was indicted on 35 other felony charges in June. The 15 felony counts in the November indictment include violating the federal Clean Water Act, allowing unauthorized discharges of pollutants, falsifying documents, and making false statements. The charges cover events dating back to mid-1989.

Denver Post 11/3/95

Effort to Reclaim Upper Animas Basin Making Headway

In the Upper Animas basin a small crusade to reclaim the river after more than 100 years is making headway. Abandoned mines, perhaps 80 years old, actively drain into the Animas River or its tributary creeks. They add heavy loads of heavy metals to natural mineralization of the water, rendering the river lifeless from its confluence with Cement Creek to its confluence with Elk Creek. No government or mining company wanted to shoulder the blame or the cost, but the Colorado Water Quality Control Commission, seeking broad-based public involvement in a basin cleanup process, asked the Colorado Center for Environmental Management in early 1994 to organize the basin's factions into a stakeholders group. That was the genesis of an initially uneasy alliance of industry, citizens, and federal and state agencies.

At Sunbank Mine, in Placer Gulch, the dump has been moved, and installation of settling ponds, bulkheads, and limestone to reduce the acidity of surface water has occurred. At the Silverwing Mine, active from 1875 to 1965, a small-scale project is underway with private funds to improve water quality. Sunnyside Gold Corp. began reclamation on Sunnyside Gold Mine, even before the mine closed in 1991, and the company is offering the mill property to the San Juan County Historical Society.

Fort Collins *Coloradoan* 10/21/95

LEGISLATION

Five-Percent Royalty OK'd in Compromise on Mining Plan

Mining interests endorsed on Nov. 16 a House-Senate budget compromise that imposes a 5 percent royalty on minerals taken from federal lands. Critics said reforms to the 1872 Mining Law impose royalties only after mining companies deduct expenses from their gross production. The compromise reached by House/Senate negotiators was accepted by an industry that once argued any royalties would force many companies out of business or out of the country. Key elements of the mining proposal:

- Five percent royalties on "net proceeds" after deductions of expenses associated with a particular mine, up from zero under current law and 3.5 percent under the current House plan.
- Patent prices would be set at the fair market value of the mine site's surface land, up from today's rate of $2.50 to $5 an acre.
- Patented lands can be used only for mining activities, and title to patented lands would revert to the Interior Department if mining activity stops.
- A fund created by 40 percent of royalty payments would be set up to pay for abandoned-mine reclamation.

Denver Post 11/17/95

LITIGATION

Court Lets Landowners Keep Islands in River

In early October, the Supreme Court rejected the federal government's claim of ownership to six islands in a 15-mile stretch of the Colorado River. The court, without comment, let stand the rulings that the islands belong to those private landowners who own the nearest riverfront property. Government lawyers had argued that the lower court rulings call into question the ownership of thousands of islands, never surveyed, the government claims to own. The islands at issue are located along a non-navigable stretch of the Colorado River between Glenwood Springs and Grand Junction. The islands, ranging in size from six to 67 acres, were not included in government surveys conducted in the area in the 1880s and 1890s. The federal government sold the riverfront land in that area to private landowners between 1892 and 1894.

Grand Junction *Daily Sentinel* 10/11/95

ENDANGERED SPECIES

The Colorado Water Conservation Board has shaped a set of instream flow water rights for endangered fish in the Colorado River from Palisade to the Gunnison River. The first right calls for year-round base flows ranging from 581 to 2,000 cubic feet per second, depending upon the month. This 1995 right would not put water back into the river, but it may be effective in protecting water when it is available. Fish and Wildlife officials had sought base flows ranging from 810 to 7,260 cfs.

The second right is for what is being called "recovery flows." This right would protect the high flows of spring runoff. Base flows are aimed at protecting the existing population of adult squawfish, while the recovery flows would give the fish spawning and nursery habitat. Debate continues over whether to attach specific numbers to this recovery right or to characterize it as the remaining river flows. In between the two rights, the state board will fit an allowance for future water development of 100,000 acre-feet a year in the mainstem of the Colorado.

In addition, another 300,000 acre-feet per year of water from within the recovery flow instream right would be "modifiable." That means it could be converted from an instream flow to use for more future development in the basin. The recovery and modifiable flows, which add up to 400,000 acre-feet, sew up much of the water Colorado has yet to develop under its interstate compact entitlement, but water for the base flow and the recovery flow is water that must be sent to downstream states anyway.

Grand Junction *Daily Sentinel* 10/21/95, 10/22/95

PEOPLE

Ken Salazar Named by President Clinton as a member of the Western Water Policy Review Advisory Commission

President Clinton announced on November 20 his intent to appoint Kenneth L. Salazar to serve as a member of the western Water Policy Review Advisory Commission. Salazar is an environmental and water resources attorney with the Denver law firm of Parcel, Mauro, Hultin, and Spaanstra, where he specializes in water and natural resources law. He is the former Executive Director of the Colorado Department of Natural Resources, a position he held from 1990-1994. Salazar served as Chief Legal Advisor to Governor Roy Romer from 1986-1990. A native of Colorado, he has been active in his family farm operation in Conejos County, Colorado all his life. The Western Water Policy Review Advisory Commission was authorized as part of the Reclamation Projects Authorization and Adjustment Act of 1992 to review federal activities that affect the allocation and use of water resources in 19 Western states.

Press Release from the White House, Office of the Press Secretary 11/20/95

Water Expert to be Honored for Defense of National Parks

Dan Kimball, chief of the National Park Service's Water Resources Division in Denver, was honored on Nov. 11 by a citizen group during the annual meeting of the Association of National Park Rangers in St. Paul, Minnesota. Kimball was instrumental in preventing the siting of a nuclear waste repository next to Canyonlands National Park in 1985 and later orchestrated inquiries into the danger posed to Glacier National Park by the proposed Cabin Creek coal mine, which never opened. When the threat of geothermal leasing near Yellowstone National Park was imminent, he helped forge a compact with the state of Montana that puts strict limits on the allocation of geothermal waters. He played a major role in minimizing damage to Grand Canyon National Park from waters released from Glen Canyon Dam. Kimball was honored with the Stephen Tyng Mather Award from the National Parks and Conservation Association.

Denver Post 11/11/95

Colorado and Montana to Combine Fish Centers

In February, the U.S. Fish and Wildlife Service plans to consolidate its Fish Health Center in Fort Morgan with its Fish Technology Center in Bozeman. The combined facility will be the most versatile of the six facilities in the U.S. Fish and Wildlife Service, and should also help in the study of Whirling disease. The Fort Morgan Fish Health Center move was supported by the Whirling Disease Foundation and the local chapter of Trout Unlimited.

Grand Junction *Daily Sentinel* 10/28/95

WATER RATES

CRWCD Lowers Mill Levy

The Colorado River Water Conservation District will lower the mill levy in its 15-county district because of a 10.8 percent increase in assessed valuation and a hefty carryover from 1995. In spite of a mill decrease for 1996, the district's property-tax revenues are expected to rise from $1.7 million in 1995 to $1.9 million in 1996. Tax revenues are to be augmented by $560,000 in carryover and $220,000 in other earnings and fund reimbursements.

Grand Junction *Daily Sentinel* 10/18/95

PUBLIC LANDS

Arkansas Compact Complicates State Park Plans

Hopes for Southeastern Colorado's first state park, the Great Plains Reservoirs State Park, remain alive, although the prospects have been changed by the Arkansas River Compact lawsuit. At issue is the area's ability to meet the habitat and recreation needs of the park as well as their Compact obligations. To maintain a permanent pool for recreation and wildlife pursuits in four Great Plains lakes, the state plan calls for Amity Mutual Irrigation Co. to transfer some of its storage there from John Martin Reservoir. When the project was proposed, transit and evaporative losses and water quality all were issues, but the obligation of return flows complicates the issue even further.

Pueblo Chieftain 10/26/95

Congress Scraps Plans to Privatize Ski Areas

Congress has agreed to drop plans to sell more than 40 ski areas on public land -- including some of Colorado's biggest resorts -- to resort operators to help balance the federal budget. House and Senate conferees, ironing out different versions of an Interior Department spending bill, agreed in mid-November to scrap a controversial House-passed measure that would have offered the ski runs for sale. The idea upset some people in ski towns where the U.S. Forest Service now controls the land. Opponents said it would allow resort operators to develop the mountains as they saw fit, adding to congestion and other growth-related problems.

Denver Post 11/17/95

MEETINGS

12TH HIGH ALTITUDE REVEGETATION WORKSHOP
Feb. 21-22, 1996

University Park Holiday Inn, Fort Collins, CO. The invited keynote speaker is Bruce Babbitt, U.S. Department of the Interior. Historian Robert Brown will discuss his slides of ecological recovery from the previous century in the Central City and Gilpin County area of Colorado. The workshop will include a display of poster papers. To volunteer a poster exhibit contact Jeff Pecka at 303/770-0747, John Lawson at 208/756-6300, or Krystyna Urbanska at 632-4308 in Zurich, Switzerland. There will also be educational and commercial exhibitor displays. **For information contact Gary L. Thor, HAR Committee Secretary, Department of Soil and Crop Sciences, Colorado State University, Fort Collins, CO 80523. FAX: 970/491-0564.** A student scholarship fund is available to help defray expenses for students. To apply contact Peter Moller at 719/486-2015 or Camille Farrell at 970/728-5487.

AWRA 1996 Conference and Symposia Schedule

January 4-8, 1996/ Orlando, Florida
CONSERV96
Water Conservation Technology, Strategies and Solutions

July 14-17, 1996/ Syracuse, New York
Annual AWRA Symposium
Watershed Restoration Management

September 22-26, 1996/ Fort Lauderdale, Florida
32nd Annual AWRA Conference & Symposium

For Information contact
AMERICAN WATER RESOURCES ASSOCIATION
Phone: (703) 904-1225 Fax: (703) 904-1228
E-Mail: awrahq@aol.com

THE CLEAN WATER ACT: *NEW DIRECTIONS*

A Four Hour Satellite Seminar, BROADCAST LIVE – To Over 73 Locations, Thursday, January 18, 1996

The Water Environment Federation and the American Bar Association's Section of Natural Resources, Energy, and Environmental Law -- in cooperation the U.S. Environmental Protection Agency -- announce the first annual Clean Water Act satellite seminar. Senior EPA and state officials, representatives from regulated industries and municipalities, and public interest advocates will discuss innovative permitting, enforcement, and water quality control tools being used to address complex Clean Water Act issues. The satellite seminar also will address issues being debated as part of the pending Clean Water Act reauthorization.

The telecast will begin with an interview with EPA's Assistant Administrator for Water, Robert Perciasepe. Topics will include an overview of EPA's National Water Program and initiatives such as the Watershed Protection Approach and the Common Sense Initiative. There will be live commentary and supplementary programs in the ten EPA regional cities (Denver is Region VIII) and at other selected viewing sites,.

Registration	9:30 a.m.
National Telecast Begins	10:00 a.m.
National Telecast Ends	2:00 p.m.

For additional information write: ABA Center for Continuing Legal Education, Dept. ALN, 541 No. Fairbanks Court, Chicago, IL 60611-3314 or call 312/988-5522. Tuition: Standard $160, Student $50. Limited number of scholarships available.

CALLS FOR PAPERS

WATERSHED PLANNING AND MANAGEMENT, March 15, 1996, Denver, CO. An integrated, holistic approach to planning and management of water resources systems, although certainly not a new idea, has emerged as a key concept in the '90s. Throughout the country, planning and management activities for both water quality and quantity issues are being performed on a watershed-level basis, because better decisions are made when all relevant aspects of the issues at hand are considered. Plan to attend this full-day symposium to examine and discuss this approach to water resources, especially as it has been applied in the West. Subjects for which papers are sought include, but are not limited to, the following:

- Total Maximum Daily Load (TMDL) and Wasteload Allocation (WLA) studies
- Conjunctive surface water/groundwater use studies
- Sanitary surveys
- Market-based approaches to pollution control
- Institutional concerns and approaches to integrated management
- Development of integrated operating rules for multi-jurisdictional systems
- Use of optimization and systems techniques
- Federal, state and local government agency approaches

Presentations, including discussion, will be approximately 20 minutes. Submit one-page abstract to: AWRA, P.O. Box 9881, Denver, CO 80209-0881, Attn: Annual Symposium. For information contact: Keith Little, Phone 303/320-1964; or Steve Forvilly, Phone 303/286-3325. **Deadline: Dec. 31, 1995**.

RIVERTECH '96, 1st International Conference on New/Emerging Concepts for Rivers, Chicago, IL, Sept. 22-25, 1996. Will celebrate the 25th anniversary of the International Water Resources Association and focus on the following topics: River Management; River Ecology and Water Quality; River Hydrology and River Hydraulics. Send a one-page abstract of about 500 words for peer review. Include author's names, title, addresses, phone, FAX, e-mail (if available) and one-page resume for presenting author by **December 31, 1995** to: Rivertech '96, IWRA, University of Illinois, 1101 West Peabody Drive, Urbana, IL 61801-4273. email: nbarrett@uiuc.edu, FAX: 217/333-9561. Those selected to present papers or posters must register for the conference -- $275 for IWRA members; $325 for nonmembers.

HYDROLOGY DAYS 1996, April 15-19, 1996, Colorado State University, Fort Collins, CO. Dedicated to Emeriti Professors Everett V. Richardson, Hsieh Wen Shen and Daryl B. Simons. Special Session on Hydraulics and Ecology; General Session on Hydrologic Engineering. Featured Speaker: Professor M. Levent Kavvas, Editor, Journal of Hydrologic Engineering. Presentations by students in oral or poster form. **Deadline** to submit an abstract for oral or poster presentation **January 23, 1996**. For information contact: H.. J. Morel-Seytoux, 57 Selby Lane, Atherton, CA 94027. Phone: 415/365-4080; FAX 415/365-4080; email: Morelsey@leland.stanford.edu or Janet Montera, Civil Engineering, Colorado State University, Fort Collins, CO 80523. Phone: 970/491-7425; FAX 970/491-7727.

PLATTE RIVER BASIN ECOSYSTEM SYMPOSIUM, Feb. 27-28, 1996, Kearney, NE. Scientists, managers and administrators are invited to participate. Reports on completed research are encouraged. Abstracts and title of presentation and/or poster topic are due Jan. 19, 1996 to: Mike Eckert, Platte Watershed Program Coordinator, 221 L.W. Chase Hall (East Campus), University of Nebraska, Lincoln, NE 68583-0726. Phone 402/472-0891; FAX 402/472-6338.

SHORT COURSES

DESIGN OF WATER QUALITY MONITORING SYSTEMS, Colorado State University, Fort Collins, CO, June 3-7, 1996. This short course was developed using the collective research and design experience of the instructors over the past 21 years. The course will begin with a review of basic statistics and cover its use in the analysis of water quality data. It will cover detailed procedures for designing a water quality monitoring system including: information expectations, design criteria, network design, operating plans and procedures, and reporting formats and schedules. A free social and recreational program is planned for family members and guests accompanying short course attendees including trips to historic Larimer Square and Estes Park. For information contact:

Water Quality Short Course
Office of Conference Services
Colorado State University
Fort Collins, CO 80523
Phone: 970/491-7501 FAX: 970/491-3568

Future Short Courses at Colorado State University
(Contact Office of Conference Services)

HAZARDOUS MATERIALS/WASTE MANAGEMENT TRAINING -- June 11-13, 1996.

ACTIVATED SLUDGE PROCESS CONTROL SHORT COURSE -- June 24-28, 1996.

ROCKY MOUNTAIN WATER AND WASTEWATER PLANT OPERATORS SCHOOL FUNDAMENTALS -- University of Colorado at Boulder, Boulder, CO, January 21-26, 1996. Designed to furnish operators with basic information needed for the performance of their duties, and geared to the beginning operator. For information contact:

Office of Conference Services
Campus Box 454
Boulder, CO 80309-0454
Phone: 303/492-5151.

CALENDAR

Jan. 3-4 2ND ANNUAL ARKANSAS RIVER BASIN WATER FORUM, "*A River of Dreams and Realities*, Pueblo, CO. Contact: Mike French, 640 W. Reservoir Rd., 719/561-9230 or Frank Sobolik, 215 W. 10th, 719/583-6566.

Jan. 10-12 SEVEN STATES UNITED, Joint Annual Conference, 4-States Irrigation Council and Upper Missouri Water Users Assoc. Cheyenne, WY. Contact: Brian Werner at 970/667-2437.

Jan. 16-19 CONFERENCE ON TAILINGS AND MINE WASTE '96, Fort Collins, CO. Contact: Linda Hinshaw, Department of Civil Engineering, Colorado State University, Fort Collins, CO 80523. Phone: 970/491-6081; FAX: 970/491-7727.

Feb. 21-24 SEVENTH AMERICAN FOREST CONGRESS, Washington DC. Contact: Office of the Seventh American Forest Congress, Phone 203/432-5117.

Feb. 25-28 WATER REUSE 96, San Diego, CA. Contact: Susan Blount, American Water Works Assoc., Phone 303/794-7711, FAX 303/794-8915.

Mar. 11-13 THE MIGHTY MISSOURI, 25th Annual Nebraska Water Conference, Omaha, NE. Contact: Water Center/Environmental Programs, University of Nebraska, Phone 402/472-3305, FAX 402/472-3574, email psis@unlinfo.unl.edu.

June 11-14 COMPUTERS IN AGRICULTURE, 6th International Conference, Cancun, Mexico. Contact: Susan Buntjer, American Society of Agricultural Engineers. Phone 616/428-6327, FAX 616/429-3852, email: buntjer@asae.org.

June 16-19 URBAN WET WEATHER POLLUTION FROM THE STREAM'S PERSPECTIVE, Quebec City, Quebec, Canada. Water Environment Federation. Call 1-800/666-0206, Select Option #4 to put your name on mailing list.

July 21-24 INDUSTRIAL WASTEWATER TREATMENT: MUNICIPAL AND INDUSTRIAL PERSPECTIVES, Indianapolis, IN. Water Environment Federation. Call 1-800/666-0206, Select Option #4 to put your name on mailing list.

Aug. 17-22 10TH ANNUAL RESIDUALS MANAGEMENT BIOSOLIDS SPECIALTY CONFERENCE, Denver, CO. Water Environment Federation. Call 1-800/666-0206, Select Option #4 to put your name on mailing list.

April 1996 -- 4th STORET Modernization Conference
Denver, Colorado -- For additional information call 1-800/424-9067

January 25-26, 1996
COLORADO WATER CONGRESS
38TH ANNUAL CONVENTION
Holiday Inn - Northglenn
For information call 303/837-0812

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