Building Water Storage

The long dry spell for reservoir construction along the Front Range will soon be broken. The Parker Water and Sanitation District (PWSD) won approval February 2004 from the U.S. Army Corps of Engineers to build Rueter-Hess Reservoir – the first reservoir permitted to help solve Douglas County’s water woes.

The Corps of Engineers issued Parker Water the Federal 404 permit, which is required under the federal Clean Water Act, following nearly four and a half years of environmental impact study. The 404 permit was necessary because the reservoir requires dredged and fill material to be placed in wetlands and waters of the United States. The reservoir will be located about three miles southwest of the Town of Parker on Newlin Gulch, and will have a diversion structure on Cherry Creek to capture storm runoff.

With the Environmental Protection Agency veto of the 1.1 million acre foot Two Forks Dam in late 1990, the future of water storage along the Front Range of Colorado appeared in doubt. The chances seemed limited of permitting even the modest 16,000 acre foot proposed Rueter-Hess Reservoir (about half the footprint of Cherry Creek Reservoir). But a number of essential principles were applied to successfully win approval.

Among them:
- Establish a well-defined purpose and need
- Plan to fully mitigate impacts as a base assumption
- Work closely with the Corps of Engineers
- Assemble a quality and experienced team
- Maintain a strong public communication effort
- Persistence. There will be setbacks, delays and heavy expenses.

The following provides some background on PWSD’s successful effort to win approval from the federal government.

History

Hydrologic studies that began in 1985 indicated that the Parker Water District would face a 3,000 acre-foot shortfall based on the then-current master plan, and the then- adjudicated water rights. That report set in motion a series of studies which resulted in the development of Rueter-Hess Reservoir.

The first site selected for the water storage facility was in Castlewood Canyon. Because the Castlewood Canyon dam site is located within the Castlewood Canyon State Park, it was necessary to get Colorado Parks and Outdoor Recreation’s approval to build the dam at this site. Even though the District proposed to dedicate 2,200 acres of land as parks and open space to Castlewood Canyon State Park, the Colorado Parks and Outdoor Recreation Board objected to construction at the old Castlewood Dam site. Prior to the final decision regarding Castlewood Canyon (Colorado Supreme Court 1993) the District filed a water-rights motion to add the current (and successful) site of Rueter-Hess Reservoir.

With the elimination of the Castlewood Canyon Dam site, the District turned its attention to the Rueter-Hess site. Ultimately, the Rueter-Hess site turned out to be superior to the Castlewood Canyon dam site in a number of aspects.

In addition to a reservoir site capable of storing more than 16,000 acre-feet of water, the Rueter-Hess site allowed Parker Water to obtain the Denver Basin ground water beneath the land. Given a final surface acreage of about 2,000 acres, the District will have acquired approximately 3,000 acre-feet of water that can be extracted annually from the four principal Denver Basin bedrock aquifers. Since there will be no demands associated with the ground water beneath these undeveloped parcels, the ground water will serve as supplemental supply to the District’s water resource portfolio.

During the study and permitting phases of Rueter-Hess Reservoir, the need for increased water storage magnified as Douglas County became one of the nation’s fastest-growing counties in the country. The Parker area’s population grew from about 5,500 in 1990 to more than 35,000 in 2003. Keeping up with water demand is a major – and still growing – challenge. The drought has rendered water storage ever more critical because Parker depends on nonrenewable water resources.

Parker Water currently relies nearly 100 percent on ground water from Denver Basin aquifers. Recent studies show that underground aquifers are being depleted at a rate of approximately 30 feet per year. Rueter-Hess will help preserve the aquifers by storing storm runoff for use in dry years during peak summer usage.

Application for 404 Permit.

Parker Water and Sanitation District applied to the U.S. Army Corps of Engineers for a Section 404 permit for construction of the dam, reservoir, and associated facilities. The Corps determined that a full analysis of the environmental and social effects of the project and reasonable alternatives was necessary.

As required by NEPA (National Environmental Policy Act), the Corps provided an open process to determine significant issues to be addressed in the Environmental Impact Statement.

Nearly a year was spent defining the purpose and need of Rueter-Hess. One key to success was early coordination among the consulting team and Corps staff.

To ensure all the issues were identified, an initial scoping meeting was held with official stakeholders. Representatives from the following organizations participated: the Army Corps – Omaha District and Denver Regulatory Office; U.S. Environmental Protection Agency; U.S. Fish and Wildlife Service; Colorado Division of Wildlife; Colorado Historical Society – State Historic Preservation Office; Colorado Department of Public Health and Environment, Water Quality Control Division; Colorado Department of Natural Resources, Division of Water Resources; and Douglas County Planning. These agencies remained participants throughout the process.

The process officially launched when it was announced in the Federal Register in July 2000. Two public meetings were held to present the project to the public and solicit comments. In addition, the Corps met with 20 Native American tribes and councils regarding their concerns.

Comments, concerns, and issues brought forth during the public involvement process were incorporated into the Draft EIS, which was published in February 2002. The EIS process included public comment and studies on environmental impacts in such areas as wetlands, wildlife, vegetation, noise, air quality, ground and surface water.

The EIS identified a number of environmental impacts, which will be mitigated by Parker Water with the creation of additional wetlands, improved habitat plantings and areas specifically set aside for certain species. The EIS study determined that 15 acres of Preble’s meadow jumping mouse habitat will be impacted, but Parker Water will compensate with habitat enhancement at a 4:1 ratio. In addition, impacts to about six acres of wetlands will be mitigated by creation of nearly 12 acres of wetland.

Frank Jaeger, GM of the Parker Water and Sanitation District holds up the Federal Permit for Rueter-Hess

Continued on page 3
Colorado Water Rights

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Water Law Seminar.

CWC 2004 Laws Enacted of Water Interest

In July or August, the Colorado Water Congress will publish a book containing all water and water related laws of the second regular session of the 64th General Assembly. This book also includes the complete status sheet for the regular and special (if there is one) sessions. Since this book will be over 180 pages, and paper, printing, postage, and labor are significant costs - the price of the book is $50.00 (CWC members) and $100.00 (non-members), plus a charge for handling, postage and taxes if applicable. Incidentally, the final status of all bills introduced during the 2004 session are included in this publication. Readers are urged to place their order for the "2004 Colorado Laws Enacted of Interest to Water Users" as quickly as possible. For further information or to place an order, please e-mail, call or write the Colorado Water Congress at macravey@cowatercongress.org, phone (303) 837-0812, fax (303) 837-1607.

The Wayne N. Aspinall Award nomination form is due at the CWC offices by August 4, 2004. The scholarship nominations are due at the CWC offices by July 1, 2004. If you are interested in any of the above forms, please contact the Colorado Water Congress at their website www.cowatercongress.org or at 1580 Logan St., Suite 400, Denver, CO 80203. E-mail address: macravey@cowatercongress.org, phone (303) 837-0812, fax (303) 837-1607.

Opinions expressed by the authors are not necessarily those of the officers, members, and staff of the Colorado Water Congress.

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Send us your name, organization, and e-mail address to macravey@cowatercongress.org.

Then, we can copy your e-mail address directly to our database. Thank You.
Treatment plant boosts Parker Water’s history of water reclamation

When Parker Water and Sanitation District opened its state-of-the-art water reclamation facility in February 2004, it doubled its treatment capacity and furthered its place on the vanguard of water reuse. The $26 million facility can treat up to 2 million gallons of water per day — enough to serve 24 Parker families for a year. It boosts Parker Water’s total treatment capacity to 4 million gallons per day.

In effect, this facility increases our supply. And that is a critical component to preserving the aquifer and supplying our customers.

Appropriately, the Parker Water community understands the importance of its new reclamation facility — evidenced by the nearly 200 community members and business leaders who showed up for tours and a dedication ceremony Feb. 20, 2004.

Parker Water currently relies almost 100 percent on non-renewable ground water, which makes water reuse critical to our overall water supply. Parker Water won approval to build Rueter-Hess Reservoir, which will store water for use in dry years. Reclaiming wastewater and building Rueter-Hess are key components to Parker Water’s efforts to maximize water resources.

Without the new treatment facility, Parker Water would be forced to drill more and deeper wells. Ultimately, water reclamation helps keep water costs down for our customers.

Parker Water has been reclaiming and treating water since 1973. The new plant keeps pace with customer demand and allows the District to meet the needs of our growing community. Reclaimed water will be released to Cherry Creek to maintain stream flows.

The new high-tech plant includes an in-house lab for testing and maintaining Parker Water’s high water quality. The plant is located at E-470 and South Parker Road.

Building Water Storage, cont.

Continued from page 1

In building Rueter-Hess Reservoir, Parker Water will create more than 2,000 acres of open space available for such things as fishing, hiking and biking trails and non-motorized boating.

The most significant mitigation undertaken by Parker Water was the purchase of agricultural water in Logan County for the purpose of meeting depletion requirements of the U.S. Fish and Wildlife Service. If Logan County water must be used to meet downstream requirements, it will be done in a manner to protect agricultural productivity in the area.

Public Communication

Parker Water developed an early and ongoing communication program that included lobbying, public opinion surveys, informational videos, regular newsletters and public forums.

The effort was highly effective. Opinion leaders and the public remained strongly supportive of the project. A survey conducted in February 2004 showed 86 percent of PWSD voters approved the bond guarantee.

The reservoir will be a key water management tool for Parker Water, allowing it to store runoff, capture and reuse water and better manage peak summer pumping. Parker Water is a leader in water reclamation, conservation, xeriscape education and efforts to develop renewable water resources. The reservoir will serve the Parker Water area and could be used by other communities through specific partnership agreements. Construction will begin by the end of 2004 and is expected to take two and a half years.

The effort was long and arduous, but worth it. The reservoir is a milestone for Parker Water and the entire region. Almost equally important, it demonstrates that building new storage is possible — even in post-Two Forks.

Building Rueter-Hess Reservoir

New & Longtime Residents

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 years or less</td>
<td>0%</td>
</tr>
<tr>
<td>6 - 10 years</td>
<td>2%</td>
</tr>
<tr>
<td>11 years or more</td>
<td>98%</td>
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Ciruli Associates, N/A, 2004

Question: The Parker Water & Sanitation District is proposing to build the Rueter-Hess Reservoir about 3 miles southwest of the town of Parker. The reservoir’s surface area is about one-half the size of Cherry Creek Reservoir. The reservoir would store storm water and irrigation runoff that is normally lost downstream. From what you have seen or heard about the proposed reservoir, at this time do you support building it or oppose building it?

Building Rueter-Hess Reservoir Site Advantage

- Proximity to District’s water supply facilities for reservoir storage and for direct distribution
- Proximity to District’s treatment plant for use of AWT effluent
- Proximity to District’s Denver Basin well fields for conjunctive use plan
- Fewer permitting issues due to the off-stream nature of the reservoir

Federal Project Purpose

The basic project purpose is to provide a safe, adequate, and sustainable municipal water supply that is capable of meeting the peak demands for the area within the District’s currently zoned boundary for the next 50 years.

Primary Consultants

<table>
<thead>
<tr>
<th>Consultant</th>
<th>Project Planning</th>
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<tbody>
<tr>
<td>Cherry Creek Pump Station</td>
<td>Project Planning</td>
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<tr>
<td>Integra Engineering</td>
<td>Halsepaska &amp; Associates</td>
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<tr>
<td>Diversion Facility</td>
<td>Project Planning</td>
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<td>RG Consulting Engineers</td>
<td>RG Consulting Engineers</td>
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<td>Public Information</td>
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<td>URS Corporation</td>
<td>Citrus Associates</td>
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<tr>
<td>Peer Review of Dam Structure</td>
<td>Regional Park Pump Station</td>
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<tr>
<td>Base Point Design Corporation</td>
<td>Tetra Tech RMC</td>
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Rueter-Hess Reservoir

GEI Consultants, Inc.

G erry Rights

Robert Krassa, J.D.

EIS Consultants

States West Water Resources Corporation

North Water Treatment Plant Facts

- Treats up to 2 million gallons per day
- Treated water exceeds federal drinking water standards
- 35,000 Parker Water customers
- Doubles Parker Water’s treatment capacity
- Parker Water began treating wastewater in 1973

Tours available, call 303.841.4627

Colorado Water Rights
2004 11th Annual Water Festival
Grand Junction, Colorado

By Claudia Rossman – Ute Water Conservancy District

What do Kids + Water equal? FUN.

and that is exactly what took place on May 11th and 12th at the Mesa State College Campus in Grand Junction. Spilling off of buses and on foot, approximately 1800 5th grade students from Grand Junction converged on the campus for the Eleventh Annual Water Festival.

Students participated in various courses teaching them about water conservation, backflow, canal and river safety, snow measurement, weather and much more. Most of the 42 classes are hands-on and designed so that the kids absorb knowledge and are being entertained at the same time. When it's time to visit the exhibit hall, the kids load their bags with handouts, stickers, and magazines and then anxiously wait their turn to be engulfed by a giant bubble from head to toe. Kids and water just go together and what better way to educate them about what precious resource water really is in their lives and in their community.

Sponsored by Ute Water Conservancy District, Clifton Water and the City of Grand Junction, the Water Festival is touted to be one of the best in the State. There is a huge sense of commitment as there are also 9 underwriters and many other organizations that provide sponsorship and volunteers to make this festival so successful and have done so now for eleven years. It's a huge undertaking, but well worth the time, money and effort to invest in educating children about water for their future. The festival gets bigger and better every year and I am proud to be a part of such a collaborative, successful endeavor. If you are in Grand Junction May 17 and 18 next year, stop by the Mesa State College Campus for number twelve and be ready to get WET!

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