The Windy Gap Project is located just west of the Town of Granby on Colorado's Western Slope. It consists of a diversion dam on the Colorado River that creates the 445-acre-foot Windy Gap Reservoir, a pumping plant, and a six-mile pipeline to Lake Granby. This system is capable of delivering an average of 48,000 acre-feet of water annually, diverted primarily during the spring runoff season between April and July.

During these periods of high flows in the Colorado and Fraser rivers, water is pumped from Windy Gap Reservoir to Lake Granby, where it is stored for delivery through the Colorado-Big Thompson (C-BT) Project facilities to water users on the Front Range.
Windy Gap was born out of an effort starting in the summer of 1967 when Longmont Mayor Ralph Price filed for water rights for a water storage project on the Colorado River. Price was acting as trustee for a coalition of six northern Colorado cities—Boulder, Estes Park, Fort Collins, Greeley, Longmont and Loveland. The project they jointly considered was located at a local natural geologic cut called Windy Gap, located just below the confluence of the Colorado and Fraser rivers. The cities envisioned that Windy Gap would provide "water for the future." They also regarded it as a partial solution for meeting the water supply needs of the rapidly growing northern Front Range area through the year 2000 and beyond.

The spillway at Windy Gap Reservoir is 345 feet long and can discharge 32,000 cfs at capacity
After studying growth rates and water supply demand projections, the six Front Range cities concluded that it would be necessary to develop a water supply project specifically to meet municipal needs. The cities eventually settled on the concept that would lead to the development of the Windy Gap transmountain diversion project to meet those needs. In 1969 the six cities realized that the amount of work and expertise necessary to build the Windy Gap Project required a stronger organization than they could provide independently. They subsequently petitioned for the formation of a municipal subdistrict within the Northern Colorado Water Conservancy District (NCWCD).

Northern Colorado Water Conservancy District

The NCWCD was established in 1937. Its original charge was to develop and maintain the C-BT Project and to distribute the supplemental water supply provided by the Project to water users within the seven-county District service area in northeastern Colorado.

The C-BT Project diverts and stores runoff from the headwaters of the Colorado River west of the Continental Divide and delivers it to the water users of the District east of the Rocky Mountains as a supplemental water supply for agricultural, municipal, domestic, industrial and recreational purposes.
The C-BT Project consists of 12 reservoirs, six power plants, three pumping plants, 95 miles of associated canals and waterways, 35 miles of underground tunnels and siphons and the necessary control and measurement facilities. The 13.1-mile Alva B. Adams Tunnel carries the collected water under the Continental Divide to the Eastern Slope. After exiting the tunnel the water is directed through five power plants constructed by the U.S. Bureau of Reclamation (USBR) as it falls one-half mile in elevation to the eastern plains. The sale of the hydroelectric power generated by these plants helps to repay the federal government’s cost of constructing, operating and maintaining the C-BT Project.

Subdistrict Formation

Formation of the Northern Colorado Water Conservancy District’s Municipal Subdistrict (Subdistrict) required submitting petitions to the District Court in Greeley. The signatures of at least 5 percent of the landowners within each of the six cities and 25 percent of the owners of irrigated land within the proposed boundaries had to be obtained before the petitions could be considered by the court.
With no opposition voiced, the court approved formation of the Subdistrict on July 6, 1970. The Subdistrict became a political subdivision of the State of Colorado and a separate and independent conservancy district with the same powers and legal standing as the parent NCWCD.

By statute, the Subdistrict Board of Directors is the same as the District, though the Subdistrict elects a different slate of officers than the District. These two agencies are headquartered in the same Loveland office and share many of the same resources, staff and equipment.

**Carriage Contract**

After its formation, the Subdistrict negotiated a Carriage Contract with the USBR and NCWCD specifying how Windy Gap water would be stored and carried to the Eastern Slope cities through the C-BT Project. The Carriage Contract executed in October 1973 was a crucial first step in the development of Windy Gap. With the ability to use excess capacity of the existing C-BT Project’s storage and conveyance facilities, the Project is economically and environmentally viable.

**Litigation**

Following execution of the 1973 Carriage Contract, the Colorado River Water Conservation District (CRWCD) filed a lawsuit seeking to invalidate the Carriage Contract for alleged failure to comply with the National Environmental Protection Act (NEPA) and the Administrative Procedures Act. The court confirmed the legality of the contract in 1977 after three years of litigation.
following its formation in 1970, one of the primary charges of the Municipal Subdistrict was acquiring the conditional water rights for the diversion of water from the Colorado River. In the spring of 1974 a special referee, based on the evidence presented two years earlier, recommended that the court grant conditional decrees for the Windy Gap Project. Four years later, the district court in Glenwood Springs agreed and granted the conditional decrees for Windy Gap water rights.

The CRWCD immediately appealed to the Colorado Supreme Court. The state Supreme Court referred the case back to the District Court in the fall of 1979 for further definition of the Subdistrict’s Windy Gap proposal.

The high court took this action to protect the Western Slope from any adverse effects that might be caused by the Windy Gap Project. The Water Conservancy Act, under which the District and the Subdistrict were created, mandates that any conservancy district seeking to divert Colorado River water out of its native basin assure that diversion does not impair the water rights of users within that basin. The Act in effect requires that water storage projects be designed and constructed to “compensate” the Western Slope for Colorado River transmountain water diversions by water conservancy districts.

This issue was resolved through provisions negotiated in the 1980 Windy Gap Settlement Agreement. The Subdistrict agreed to provide mitigation measures. The court granted conditional decrees totaling 600 cubic feet per second for the Windy Gap Project on Oct. 27, 1980. That quantity was confirmed in a final absolute decree nearly a decade later following construction and operation of the Project.

This is a project that is best for our future. It is best for our children’s future, and it is best for the future of our state of Colorado.

Colorado Sen. Hank Brown
Settlement Agreement

Following the Supreme Court decision to uphold the legality of the Carriage Contract, the Subdistrict began negotiating with the CRWCD and other Western Slope interests to resolve conflicts and enable Windy Gap Project construction to begin.

On April 30, 1980, a Settlement Agreement was reached among the Subdistrict, CRWCD, Northwest Colorado Council of Governments, Grand County, Middle Park Water Conservancy District (MPWCD), Three Lakes Water and Sanitation District, and numerous area ranchers.

The Agreement required the Subdistrict to provide up to $15 million for the study and construction of the Azure Reservoir Project on the Colorado River below Kremmling in exchange for the CRWCD supporting the Windy Gap Project.

Separate agreements were reached with the other interests for withdrawal of their objections. As a result of these settlements, MPWCD receives a 3,000-acre-feet allotment of water annually if divertable by the Windy Gap Project; Hot Sulphur Springs was given $420,000 to upgrade its water and wastewater treatment facilities; and Grand County received $25,000 to conduct salinity studies on the Colorado River.

The Subdistrict spent more than $500,000 constructing improved water diversion facilities and pumps below the Windy Gap Reservoir so that ranchers with water rights senior to the Windy Gap Project would not be adversely affected by the Project. Some
ranchers opted for a cash settlement instead. The Subdistrict maintained the pumps and diversions during the years following their construction, an obligation fulfilled in May 1995.

An agreement to maintain a blue-ribbon sport fishery in the Colorado River below the Windy Gap Project through adequate release of water was also accomplished through the Settlement Agreement. This demonstrated the Subdistrict’s commitment to mitigate environmental concerns.

A final provision stated that the Subdistrict would subordinate its Windy Gap water rights to agricultural and municipal uses within the Fraser and Colorado River Basins upstream of the Project.

Supplemental Agreement

In 1985, the Subdistrict and CRWCD reached an agreement that supplemented the 1980 Settlement Agreement. This Supplemental Agreement stated that the Azure Project should no longer be pursued because intensive study deemed the project infeasible. Instead of building the Azure Project for to benefit Colorado River Basin water users, the Subdistrict agreed to pay $10.2 million to the CRWCD so it could construct an alternative storage project for the Western Slope. That summer, the Water Court for Water Division 5 in Glenwood Springs approved the application of the Subdistrict for approval of the Supplemental Agreement.

After careful study of various alternatives, the CRWCD decided to pursue the construction of Wolford Mountain Reservoir on Muddy Creek as the alternative storage project. Wolford Mountain Reservoir was completed in 1995 and began storing water that same year.

“"The Windy Gap Project is a model for responsible water resources development."

Richard Lamm, former Colorado governor
WINDY GAP BY THE NUMBERS

31,000

length in feet of pipeline from Windy Gap Reservoir to Lake Granby (or nearly six miles)

600
discharge capacity in cubic feet per second of all four Windy Gap pumps

48,000

average annual yield in acre feet of the Windy Gap Project
**WINDY GAP PROJECT**

- **12,000** horsepower rating of motors powering each of four Windy Gap pumps
- **23** number of licenses and permits required to construct the Windy Gap Project
- **90** minimum streamflow in cubic feet per second required below Windy Gap
- **27** height in feet of the Windy Gap Dam
- **42** number of archaeological sites deemed eligible for National Register consideration during 1981 dig
- **6** number of cities that cooperated to develop the Windy Gap Project

Additional information:
- Crane used for maintenance at the pump plant
- Aerial view of Windy Gap during construction
- **South Platte River**
- **Cedar Creek**
- **Cottonwood Creek**
- **Bijou Creek**
- **Kiow Creek**
- **Bijou Creek**
- **South Platte River**
- **Wildcat Creek**
- **Sterling**
- **Julesburg**
A n Environmental Impact Statement (EIS) was required for the Windy Gap Project to comply with NEPA provisions. With the USBR acting as the lead agency, the Subdistrict financed environmental studies as part of the draft and final EIS. Approval was delayed pending the issuance of numerous permits and licenses necessary for construction of the Windy Gap Project. Adoption of the Settlement Agreement in 1980 cleared the way for obtaining some of these permits. That Agreement also satisfied the NEPA requirements stated in the Settlement Agreement with the Western Slope, which made it possible to file the final EIS.

**Licenses and permits**

A fter the requisite public comment period, the USBR gave final approval of the EIS in the spring of 1981. The Subdistrict then set about acquiring the 23 local, state and federal permits required to complete the project.

In connection with filing of the EIS, a “non-jeopardy” biological opinion was obtained from the U.S. Fish and Wildlife Service regarding the Project’s impact on threatened and endangered species. In conjunction with that opinion, the Subdistrict agreed to help finance biological investigations of endangered species and their habitat on the Colorado River.

Additionally, all rights-of-way on private lands were obtained by the Subdistrict prior to Project construction.
ARCHAEOLOGICAL FINDINGS

Archaeology played an important role in the construction of the Windy Gap Project. While excavating the pipeline route in September 1981 at a site north of Granby, several Native American ruins were uncovered dating back 4,000 to 8,000 years.

Construction was halted immediately so a team of archaeologists from Western Cultural Resources Management of Boulder could excavate and study the sites, which were later deemed eligible for placement on the National Register of Historic Places. As federal funding was unavailable for research of these sites located on private property, the Subdistrict provided $370,000 for excavation and study of the finds. An additional $85,000 was obtained by the federal government from private foundations.

Construction of the pipeline resumed in August 1982. Field specimens and notes from the archaeological investigation were submitted for laboratory analysis. An exhibit about the archaeological excavations is on display at the Grand County Museum in Hot Sulphur Springs. It includes a scale model and representations of the artifacts uncovered. The museum also features a related exhibit about Native Americans.
In the summer of 1975 the Subdistrict entered into water allotment contracts with each of the six cities. Each retained a one-sixth share in the project.

Allotment contracts provide that participants annually receive their proportional share of Windy Gap water. Every unit equals 100 acre-feet of water, or one 1/480 of the annual average yield produced.

Each water allotment contract requires participants to make annual payments equal to the corresponding share of the costs related to the Subdistrict’s acquisition of water rights, and operation, maintenance and replacement of Windy Gap Project features, as well as carriage charges to the NCWCD and USBR for using the C-BT Project for storing and delivering Windy Gap water.

With Subdistrict Board approval, participants may transfer all or part of their water allotment to another entity within the Subdistrict. In 1975, the Platte River Power Authority acquired one-half of the Loveland and Estes Park allotments as well as all of the water designated for Fort Collins. Five additional water suppliers have since become Windy Gap Project participants—Broomfield, Louisville, Superior, the Left Hand Water District and the Central Weld County Water District.

A benefit to Subdistrict allottees is that allotment contract holders are granted total consumptive use of their Windy Gap water. Allottees can use and reuse Windy Gap water because it is imported water not native to the South Platte Basin. After first use within Subdistrict boundaries, participants may lease, transfer or sell the reuse or successive use rights for use within or outside Subdistrict boundaries.
Financing for the $120 million Windy Gap Project was provided through the sale of revenue bonds. The series of bonds is being retired through payments made by sub-district water allottees.

Construction on the Project officially began with the groundbreaking ceremony on July 11, 1981, ending nearly 17 years of planning and negotiation. Internation-al Engineering Co. of San Francisco was hired as the project management firm. Western States Construction Co., Inc. built the pumping plant and part of the pipeline, while Johnson Brothers Corp. installed the remainder of the pipeline. Despite a flood at the pumping plant in 1983 and the shutdown for archaeological investigations, the Project was completed within four years.

The Project was completed, tested and became operational in the spring of 1985.
The Windy Gap Project is operated from a control center located at the Farr Pumping Plant at Lake Granby. The center is staffed 24 hours a day 365 days a year. A state-of-the-art, computer-based supervisory control and data acquisition (SCADA) system allows remote monitoring, operation and control of the Windy Gap Project. Conveying operational information through a microwave communication link, the SCADA system helps maximize the amount of water being diverted while minimizing the cost of power for pumping and complying with constraints contained in the Settlement Agreement.

Should the Farr control center be rendered inoperative during an emergency, operations would automatically be transferred to the backup control center at the Subdistrict’s Loveland office. The plant would automatically shut down should the backup control system fail. Windy Gap can also be operated manually on-site if necessary.

“We all firmly believe that Colorado has a great future and projects like Windy Gap will increase that future.”

Chris Jouflas, former Colorado River Water Conservation District president

Control panels at the Farr Pumping Plant
One of Colorado’s premier wildlife viewing sites is located along the shores of Windy Gap Reservoir. The watchable wildlife area project completed in 1995 was a joint venture of the Subdistrict, Grand County, the Town of Granby, Great Outdoors Colorado, the U.S. Forest Service, the Bureau of Land Management, the Colorado Division of Wildlife, and Colorado Department of Transportation. The area consists of handicapped-accessible wildlife viewing blinds, a half-mile trail, information kiosks, restrooms, a parking area and picnic shelters. It provides the public opportunities to view more than 150 different species of birds and wildlife, the most in one location in the entire state.

Three islands constructed by the Subdistrict as part of the Settlement Agreement also provide a unique wildlife habitat. Species viewed at Windy Gap and not before known to exist in Grand County include the river otter and white pelican.

Goose nests were constructed as part of the environmental mitigation.
The foresight exhibited by the Windy Gap participants continues providing an additional source of high-quality water to keep the northern Front Range an economically diverse and environmentally balanced place to live. By making municipal supplies more secure, the Windy Gap Project also reduces the need to convert agricultural water to municipal use. Windy Gap participants such as the communities of Broomfield, Longmont, Louisville and Superior now have improved access to their Windy Gap water through a new pipeline from Carter Lake. Termed the Southern Water Supply Project,
the pipeline will convey Windy Gap and C-BT project water supplies to 13 water providers in Boulder, Larimer, Morgan and Weld counties. In years of abundant supplies, Windy Gap also will provide water for rental to other users in the NCWCD boundaries.

By supplementing the region’s limited water supplies, the Windy Gap Project plays an important role in providing a secure source of water for northeastern Colorado. Its role will become increasingly important as the demand for water increases in the region.

The Windy Gap Project was born from a vision that required 18 years to reach reality. The magnitude of that undertaking clearly demonstrates the dedication and commitment necessary to provide the water supplies needed to assure a stable future for a region never far removed from its drought-plagued past.

"Future generations on both sides of the mountains will enjoy the benefits of these projects for many generations to come."

W.D. Farr, Subdistrict president 1970-1995

More than 500 people attended the Windy Gap Dedication on June 29, 1985