

## Colorado-Big Thompson Project

The C-BT is Colorado's largest transmountain diversion project. Built from 1938 to 1957, the Project provides supplemental water to 32 cities and towns and more than 100 ditch and reservoir companies. Project water irrigates an estimated 693,000 acres of farmland. The complex collection, distribution and power system consists of 12 reservoirs, 35 miles of tunnels, 95 miles of



canals and 700 miles of transmission lines. It spans 150 miles east to west and 65 miles from north to south.



The Project system is designed to collect and deliver up to 310,000 acre feet of water annually from the upper Colorado



River basin. It transports this water via a 13-mile tunnel beneath the Continental Divide to the Front Range.

## NCWCD headquarters

The District moved its headquarters to Berthoud in September 2003 after 49 years in Loveland. The new 35 acre site includes shop, storage and office buildings, a C-BT Project interpretive area, and turf, landscape and agricultural demonstration sites.



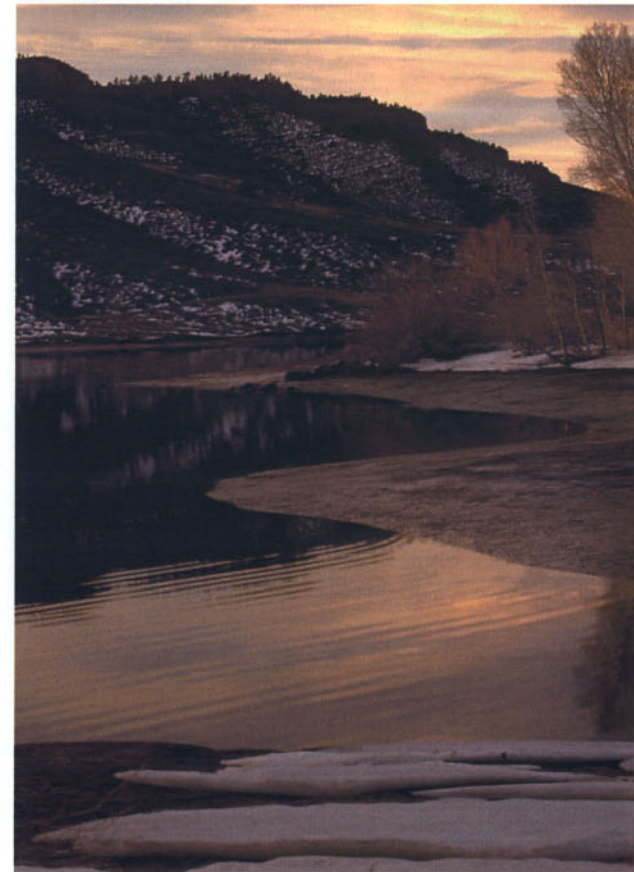
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# Northern Colorado Water Conservancy District



## 2005 Information

## General information

The Northern Colorado Water Conservancy District is a public agency created in 1937 under Colorado's Water Conservancy Act. Its original purpose was to contract with the U.S. Bureau of Reclamation to build the Colorado-Big Thompson Project.

The federally owned Project is jointly operated and maintained by the NCWCD and Reclamation. The C-BT provides supplemental water for agricultural, municipal, domestic and industrial uses in northeastern Colorado. An estimated 750,000 people live in the District. Its boundaries encompass nearly 1.6 million acres in portions of Boulder, Broomfield, Larimer, Logan, Morgan, Sedgwick, Washington and Weld counties.

The total value of agricultural production within District boundaries is more than \$300 million annually. Water assessments and ad valorem taxes form the NCWCD's primary revenue base.

The District administers and delivers approximately 213,000 acre feet of water each year. An acre foot is approximately 326,000 gallons of water, or the average amount two urban families use annually. As northeastern Colorado's major water distributor, District operations influence water resource activities throughout the region. NCWCD works with cities, towns, agencies, water districts and ditch companies on a variety of projects. It is uniquely positioned to help coordinate water resources and conservation planning because its service area overlaps numerous political and geographic boundaries.



## West Slope collection system

The C-BT's West Slope facilities consist of four reservoirs and two pumping plants. The principal features are:

- Lake Granby
- Farr Pumping Plant and Granby Canal
- Willow Creek Reservoir and Pumping Plant
- Shadow Mountain Reservoir
- Grand Lake
- Green Mountain Reservoir

The C-BT system collects high mountain runoff for diversion to the East Slope. Most of this water is stored in Lake Granby, accumulating mainly during spring snowmelt. Water is also collected in Willow Creek Reservoir and pumped to Lake Granby. From Lake Granby water is pumped to the Granby Pump Canal, where it flows into Shadow Mountain Reservoir and through a connecting channel to Grand Lake. On Grand Lake's southeast shore water enters the Alva B. Adams Tunnel on its way to the East Slope.

Green Mountain Reservoir stores Blue River water to meet downstream users' requirements on the Colorado River. Following Project construction, irrigation systems below C-BT Project facilities were enhanced to ensure continued use of existing Colorado River water rights. In 1961 the District agreed to provide minimum streamflows below Lake Granby, the first such flows ever below a Reclamation facility.

The West Slope Collection System provides many benefits to the region, including tourism and recreation.



## Alva B. Adams Tunnel

The 13.1-mile Adams Tunnel, lynchpin of the C-BT Project, is the nation's longest water tunnel built for irrigation. Constructed between 1940 and 1947, the tunnel drops 108 vertical feet from west to east, enabling gravity to carry water beneath the Continental Divide to the East Slope in less than three hours. The tunnel's capacity is 550 cubic feet per second.

The Adams Tunnel is named for a Colorado senator who championed the C-BT Project in Congress. Reclamation regularly inspects the tunnel.

## East Slope distribution system

The C-BT Project's East Slope Distribution System facilitates water storage and delivery throughout the District. After water exits the Adams Tunnel's east portal it is used to generate electricity, dropping almost a half mile through five power plants to the Front Range. The electricity pays a portion of Project costs.

Water is stored in three terminal Front Range reservoirs:

- Horsetooth Reservoir
- Carter Lake
- Boulder Reservoir

Horsetooth Reservoir primarily serves the District's northern region while Carter Lake and Boulder Reservoir supply the District's southern area.

The District releases water to farmers, industries and municipalities upon request. Agricultural water deliveries occur between April and October, the primary growing season. Municipal and industrial users may request water during the same period, or take year-round deliveries directly from Project reservoirs, the Southern Water Supply Project Pipeline, or the Pleasant Valley Pipeline.



The C-BT Project provides a reliable, supplemental water supply to Fort Collins, Greeley, Loveland, Longmont,

Boulder, Louisville, Lafayette, Broomfield, many smaller communities, and numerous rural domestic water districts. Industrial users include Kodak, IBM, Hewlett Packard and Anheuser-Busch.

NCWCD employs approximately 104 full-time staff members ranging from engineers to support personnel. Most work out of the District's headquarters in Berthoud; 23 are based at the Farr Pumping Plant on the West Slope near Granby.