



# NORTHERN INTEGRATED SUPPLY PROJECT

NORTHERN COLORADO WATER CONSERVANCY DISTRICT



## How would it work?

### NISP BACKGROUND

The Northern Integrated Supply Project is a collaborative effort between the Northern Colorado Water Conservancy District and 15 northern Front Range municipalities and water districts to increase of their water supplies. By joining together to meet their water demands, the water providers may incur fewer environmental impacts and lower costs than if each entity developed an individual solution. The goal of NISP is to provide the 15 participants with 40,000 acre-feet of new water yield. No single project will meet all of the participants' long-term needs. However NISP will meet a portion of their needs during the next 50 years.

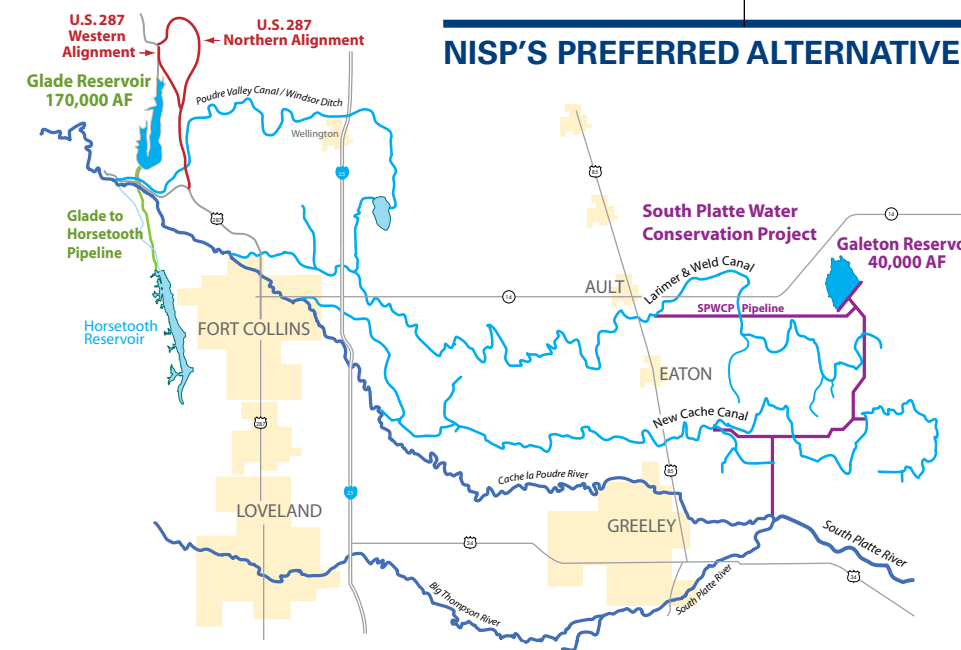
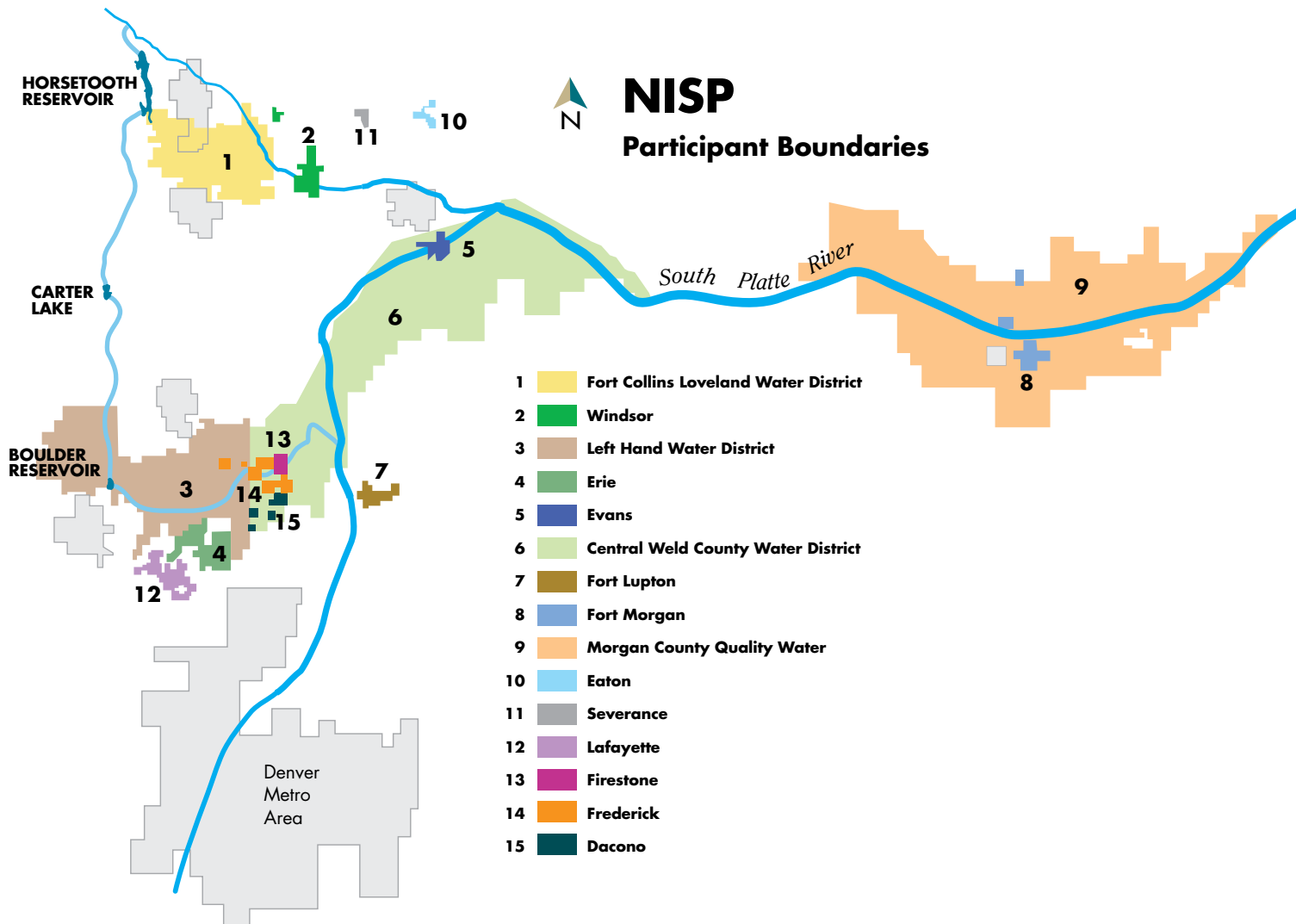
The U.S. Army Corps of Engineers selected the alternatives for evaluation in the NISP EIS using a screening criteria that fully complies with both National Environmental Policy Act and Clean Water Act Section 404(b)(1) guidelines. The Corps identified a no-action and these three action alternatives:

- 1) GLADE RESERVOIR AND THE SOUTH PLATTE WATER CONSERVATION PROJECT (SPWCP)
- 2) CACTUS HILL RESERVOIR AND THE SPWCP
- 3) AGRICULTURAL TO MUNICIPAL TRANSFERS, GLADE AND A SMALLER SPWCP

### CURRENT STATUS

As required by the National Environmental Policy Act, the U.S. Army Corps of Engineers will complete an environmental review of NISP and its alternatives. This review will be documented in an Environmental Impact Statement report due in early 2008.

The NISP participants' preferred alternative, Glade Reservoir and the South Platte Water Conservation Project (SPWCP), is detailed below. For information on the other alternatives, please visit [www.ncwcd.org](http://www.ncwcd.org), click on projects and go to NISP.



### FEATURES OF NISP

The goal of NISP is to produce new, reliable water yield for the 15 participants. Therefore, for a NISP alternative to be feasible, it must include a water right and water storage. The preferred NISP alternative would utilize currently undeveloped water rights on two rivers, the Cache la Poudre and the South Platte. It would also include a new reservoir within both basins to store the water.





## THE POUDRE BASIN: GLADE RESERVOIR

### WATER RIGHTS

NCWCD holds a conditional 1980 water right on the Poudre River, which would be utilized with Glade



Reservoir. NCWCD is entitled to a 7/8 share of the right, while the Cache la Poudre Water Users Association holds the remaining 1/8 share. This right originally allowed 220,000 acre-feet of storage at the mainstem Grey Mountain reservoir site. In July 2006, the District completed its water court case, giving it the ability to divert and store the water right associated with the Grey Mountain site at alternate locations, including Glade Reservoir.

### RESERVOIR SITE

The Glade Reservoir site is located in a valley approximately one mile north of the junction of Highways 287 and 14. The preferred size is 170,000 acre-feet, slightly larger than nearby Horsetooth Reservoir. The high water line mark is 5,520 feet in elevation. The proposed reservoir, at its largest, covers 1,700 surface acres and is 260 feet deep. NCWCD owns about 2/3 of the land affected by the reservoir site. The remaining 1/3 is owned primarily by the State of Colorado, with private entities holding a small amount. No homes not currently owned by NCWCD would be inundated by the reservoir.

### OPERATIONS

During times when NISP's Poudre River water right is in priority, the project would divert water at the existing Poudre Valley Canal diversion dam near the mouth of Poudre Canyon. This will usually occur in periods of high

river flow, such as during better than average snowmelt years or during large rain events. The maximum diversion rate would be limited to 1,000 cfs. The canal, which the NISP participants would upgrade, will carry the water to the Glade forebay reservoir, where pumps with a total of 30,000 horsepower would move it into Glade. The water could be distributed to the participants in several ways, including new pipelines or by exchange.

## THE SOUTH PLATTE BASIN: SOUTH PLATTE WATER CONSERVATION PROJECT

### WATER RIGHTS

The South Platte Water Conservation Project includes several key water rights and priorities:

- A 500 cfs diversion right with a 1992 priority date to directly use and store water from the Poudre and South Platte rivers;
- A 400 cfs pumping station right on the South Platte River and a 400 acre-foot forebay reservoir right;
- Two storage water rights with 1992 and 1997 priority dates, which allow up to 81,604 acre-feet of storage at Galeton Reservoir;
- Appropriative exchange rights along the Poudre River to move water from the Larimer & Weld and New Cache ditch systems to upstream locations on the Poudre River.

### RESERVOIR SITE

Galeton Reservoir would be the main storage facility for the SPWCP. Galeton is located near Highway 14, approximately five miles northeast of the Town of Galeton. At its



The Galeton Reservoir site

## How would it work?

maximum size, the reservoir would cover 2,800 acres and would be 65 feet deep. The preferred size is 40,000 acre-feet. The high-water line elevation is 4,865 feet. The land affected by Galeton is privately owned. However no homes would be inundated.

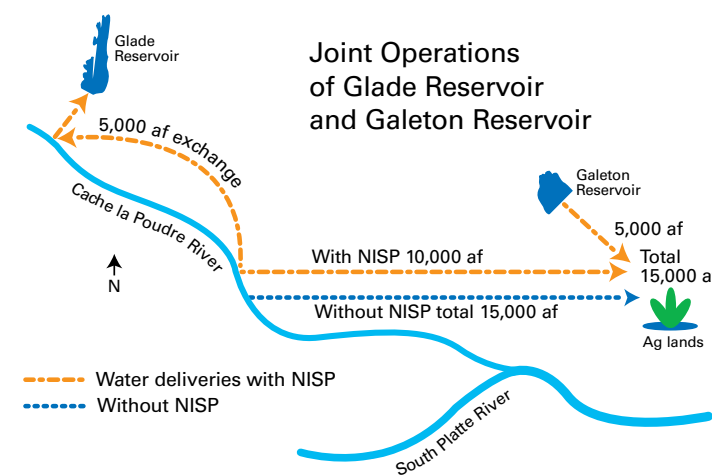
### OPERATIONS

When the SPWCP's water rights are in priority the project would divert South Platte River water from a new diversion structure near the confluence of the Poudre and South Platte rivers. The water would flow into a forebay reservoir where pumps with a total of 9,000 horsepower would move it either to Galeton Reservoir for storage or to irrigation canals for direct use.

## GLADE & GALETON:

### A MUTUALLY BENEFICIAL WATER TRADE

On its own, Glade Reservoir could provide up to 20,000 acre-feet of new yield for the NISP participants. Coupling Glade with the South Platte Water Conservation Project can increase the new water yield from NISP to 40,000 acre-feet, which meets a portion of the current and future water needs of the participants.

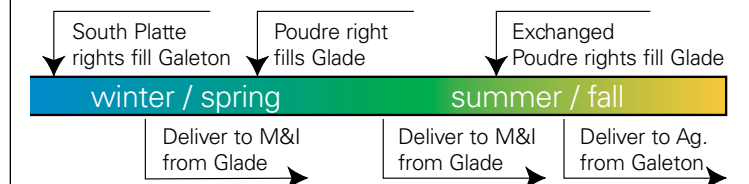


Joint operations of Glade and Galeton reservoirs is a win-win situation for both agricultural and municipal water users. It is simple in theory: two agricultural ditch companies currently divert Poudre River water for delivery to their shareholders further east. Under NISP, a portion of that water would instead be diverted into Glade Reservoir for municipal use by the NISP participants. The ditch companies would take a like amount of water from Gale-

ton Reservoir, which they would distribute to their shareholders in lieu of the Poudre River water.

Currently, several agricultural ditch companies divert water from the Poudre River. In the example shown at left, the ditch companies divert a combined 15,000 af (shown in blue) from the Poudre River and move the water east to irrigate croplands. With NISP operational (shown in orange), the same ditch companies would divert only 10,000 af from the Poudre River, which would be supplemented by deliveries of 5,000 af from Galeton Reservoir. The 5,000 af of Poudre River water that was replaced by Galeton deliveries would be placed into Glade Reservoir for use by the municipalities participating in NISP.

For the project to take full advantage of NCWCD's water rights year-round, both Glade Reservoir and the South Platte Water Conservation Project are necessary. The timeline below illustrates the operations of NISP during an average water year.



In the winter/spring months of an average water year, NISP would utilize both the Poudre and South Platte water rights to fill Glade and Galeton. During the summer/fall months, NISP would deliver Galeton water to its agricultural partners, fill Glade with an equal amount of Poudre River water, and deliver Glade water to its municipal partners.

## ESTIMATED TIMELINE:

ENVIRONMENTAL PERMITTING: 2004-2008

GLADE DESIGN: 2009-2011

GLADE CONSTRUCTION: 2011-2015

GLADE OPERATIONAL: 2015

SPWCP DESIGN: 2015-2016

SPWCP CONSTRUCTION: 2016-2018

SPWCP OPERATIONAL: 2020