Before the House Subcommittee
On Water and Power

The Honorable Grace F. Napolitano – Chairwoman

Oversight Field Hearing
"Managing Water for the Future: How Federal, State, and Local Entities Are Supporting Agriculture"

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Testimony of Eric W. Wilkinson
General Manager, Northern Colorado Water Conservancy District
Greeley, Colorado
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Ms. Chairwoman and Members of the Subcommittee:

I am Eric Wilkinson, General Manager of the Northern Colorado Water Conservancy District (Northern Water). I also serve as the South Platte Basin representative on both the Colorado Water Conservation Board (CWCB) and the statewide InterBasin Compact Committee (IBCC). The CWCB is statutorily charged with the management and protection of Colorado's water resources, while the IBCC has the statutory responsibility of developing a vision for Colorado's water future.

I was born and have lived my entire life in northern Colorado. I love and respect all that makes this region special, especially its very rich agricultural heritage and the important agricultural economy that has grown and flourished from that rich heritage. I appreciate the opportunity to testify and answer questions of the Subcommittee.

Northern Water has been in existence for nearly 75 years, being this state's first water conservancy district formed under Colorado's 1937 Water Conservancy Act. Northern Water was created in September 1937 by a decree of the Weld County District Court, just four months after passage of the Water Conservancy Act. The initial impetus for the creation of Northern Water was to be the local entity to contract with the United States Bureau of Reclamation (Reclamation) concerning the development, design, construction, and operation of the Colorado-Big Thompson (C-BT) Project. Northern Water entered into a formal contract with the United States in July 1938. This partnership continues with Reclamation today, as Northern Water operates and maintains the C-BT Project's water supply collection facilities and water distribution facilities, while Reclamation operates and maintains the Project's power generation facilities. The ownership of most all the original facilities of the Project is retained by the United States with the exception of the Project's water delivery canals, the ownership of which was transferred from the United States to Northern Water by two separate acts of Congress in 2002 and 2005.

The C-BT Project is the largest transmountain diversion project in Colorado and one of the larger Reclamation projects in the United States. Water from the Project provides a supplemental water supply to water users within Northern Water's boundary (see Attachment 1). The supplemental water supplies provided by the C-BT Project complement the already highly developed and managed available native water supplies.

With the settlement of the South Platte Basin (Basin) within Colorado, the development of native water supplies began in 1859. The development and management of the Basin's water resources continued at a rapid rate through the remainder of the 19th century. Early in the 20th century, demand for water, primarily for irrigated agriculture, exceeded available supplies in ever-growing parts of the year, causing the Basin to be classified as "water-short." The supplemental water supplies provided by the C-BT Project are critical to that portion of the South Platte Basin within Northern Water's boundaries. It is important to note that the Project provides between one-third and one-fourth of the total water supplies available to water users within those boundaries.

The water diverted by the Project from the headwaters of the Colorado River on Colorado's western slope is stored in and conveyed through Project facilities for beneficial use within Northern Water boundaries on Colorado's eastern slope (see Attachment 1). While being conveyed through the system for delivery and beneficial use, the water is utilized to generate power in the Project's five hydro-power generation plants. The supplemental water supplies provided by the C-BT Project are utilized for agricultural, municipal, domestic, and industrial beneficial uses, with secondary recreational use of the water being made as the water is stored in the Project's 10 storage reservoirs en-route to delivery. The water is delivered to over 40 cities, towns, and domestic water districts, and to over 120 ditch and reservoir companies. The Project serves water to over 650,000 irrigated acres within Northern Water boundaries. Water provided by the C-BT Project has been, and continues to be, instrumental in making this region one of the most productive agricultural regions in the nation. The county where you are now, Weld County, is currently ranked the eighth most productive agricultural county in the United States, the only county in the top eight that is located outside of California. Weld County's outstanding agricultural production is highly dependent of the native and imported waters that are available to Weld County's agricultural producers.

The C-BT Project's proven ability to provide a stable water supply has been critical to the region's prosperous agricultural economy. The water supplies provided by the Project have also played a key role in attracting many of the region's largest industries and providing water for the 830,000 citizens located within Northern Water's boundaries. C-BT Project supplies become even more critical during times of drought, as those supplies have helped this region endure and survive major droughts, including a multi-year drought in the mid-1950s, a severe single-year drought in 1977, and the worst drought on record which began in 2000 and continued for 8 years, with the most severe years experienced in 2002 and 2004.

To assure that the maximum beneficial use is made of all available water supplies, Northern Water is a strong advocate of water management and water conservation and is very proud of its water conservation program and conservation educational efforts – one of the first of its kind west-wide. Northern Water began an agricultural water conservation program in 1981, with the

focus being to show farmers how to more accurately calculate crop water needs and schedule irrigations to more efficiently meet those water needs. More than 20 state-of-the-art weather stations are located throughout Northern Water's boundaries to gather and archive weather data that is then used to calculate crop water needs for any crop grown within Northern Water's boundaries on various time intervals, ranging from an hour, to a full day, to multiple-day periods. Northern Water also operated two demonstration farms for more than 10 years to show agricultural producers more efficient methods of utilizing water and to encourage them to use those techniques in their respective operations. Participating growers realized an increase in irrigation efficiency and a more efficient use of their available water supplies.

Northern Water is currently partnering with Colorado State University on an alfalfa irrigation study on a four-acre plot at Northern Water's headquarters campus in Berthoud, Colorado. This study is analyzing the effects on alfalfa crop yield caused by reduced irrigation water application at differing times during the growing season. Alfalfa is one of the major crops grown in the region and is very important to the region's cattle feeding and dairy industries. The results of this study will provide a basis for farmers to determine the amount and timing of water application to maximize crop yield while utilizing a lesser amount of water. This knowledge becomes even more critical during droughts such as the one recently experienced in 2000 through 2008.

Northern Water continues these water conservation efforts today with one of the leading landscape and urban turf management programs in the nation, promoting the wise use of water at every opportunity. Our 2.5-acre Conservation Garden is one of the best xeriscape demonstration and educational sites in the entire western United States.

The construction of the C-BT Project began in 1938 and was fully completed in 1957. 1957 was also the first year of full project operations and water deliveries. Since 1957, through 53 years of full operation, the C-BT Project has time-and-again illustrated its value to northern Colorado farmers, industry, and citizens. However, during the last five decades, the region has changed dramatically. The population within Northern Water's boundaries has grown from 50,000 residents in 1938 when the contract between Northern Water and the United States was signed, to more than 800,000 today. Demographer estimates indicate that current populations will more than double in the next 40 years. While the majority of people were rural and agriculturally-oriented 72 years ago, that isn't the case today, nor will it be the case in the future.

This regional evolution has affected Northern Water and the C-BT Project and is clearly reflected in the change of ownership of allotment contracts[1] issued by Northern Water, as well as the change in the amounts of water delivered for specific beneficial uses. In 1957 (that first full year of C-BT deliveries) nearly all of the C-BT water was delivered to farmers – 98 percent. The ownership of the allotment contracts and associated acre-foot units was also farmer centric with 85 percent of C-BT units owned by agricultural interests.

[1] Water from the C-BT Project is distributed to the holders of Allotment Contracts, who are referred to as Allottees. Each Allotment Contract grants to each allottee a specific number of "acre-foot units" which entitles each allottee to a pro-rata share of the yield annually declared to be available from the C-BT Project by the Northern Water Board of Directors. There is a total of 310,000 acre-foot units issued through a current total of approximately 3,700 allotment contracts. Therefore, for each acre-foot unit held by an allottee, that allottee will receive 1/310,000th of the yield declared available by the Northern Water Board of Directors in that specific water year. Allotment contracts are issued specifically for agricultural, domestic, municipal, industrial, or multiple beneficial uses.

During the past five decades, those statistics have changed appreciably. Today, C-BT Project water deliveries are about 60 to 65 percent agricultural and 35 to 40 percent to municipalities, domestic water districts, and industry (referred to as M&I uses). The evolution of the change in C-BT Project deliveries is depicted on Attachment 2. The more dramatic change has occurred in the ownership of allotment contracts and associated acre-foot units. Allottee ownership in 2010 is now 34 percent agricultural and 66 percent M&I, a reduction of 51 percentage points in agricultural ownership. The change in C-BT Project allotment contract ownership is depicted on Attachment 3. It is important to note that all the transactions associated with this evolution in ownership were on a basis of willing buyer, willing seller. The driver of these transactions most often is the economics of the situation. M&I users in need of water are willing to pay a price sufficiently high to incentivize agricultural allottees to sell their water. The current agricultural economy makes it difficult to raise $2.00 per bushel corn using water that has a market value of $16,000 per acre-foot when calculated on a firm yield basis.

Northern Water has a robust water rental program that allows water to be transferred on an annual basis from an allottee to a designated water user. In this way, allottees with excess water in a particular water year can rent their water to others in need of water. Most rental water moves from municipalities or domestic water districts into irrigated agriculture. This is of great assistance and value to the agricultural community. In the severe drought of 2002-2003, agricultural allottees rented their water to the municipalities and domestic water districts, again because of the economic incentive provided to the agricultural allottees by the municipality or district. In these years, many farmers made more income off their rental water than they could have ever hoped to make using the same water to grow a crop.

What has happened with the transfer of C-BT Project allotment contracts is likely a precursor to what may likely happen to native agricultural water supplies in this region in the future. This is particularly true if actions are not taken to provide adequate sources of water supplies to meet the growing M&I needs of the region. It should be noted that absent the ability to develop and acquire water supplies from other sources, the default action for providing water for the region's ever-growing population and industrial demands will be to purchase irrigated farmland and the associated senior water rights, dry-up those farms, and transfer those senior rights to M&I uses[2]. This is by far the most serious threat to the sustainability of agriculture in this region. This is particularly significant, especially as we work toward providing water not only for our growing communities and burgeoning new energy economy, but also in maintaining enough water for those farmers who wish to continue providing food for Americans.

The CWCB, in an effort to plan for Colorado's water future, began Phase I of the Statewide Water Supply Initiative (SWSI) in 2003. The purpose of SWSI is to study water supplies and existing and projected water demands for each of the major river basins within Colorado. Phase I of this comprehensive study projected both supplies and demands forward to 2030, while later phases have projected forward to 2050. By looking at both developed, existing, water supplies and water projects planned by water users to meet future water needs (referred to in the studies

[2] This action of acquiring irrigated farmland and the associated water rights, then transferring the water off the land to M&I uses, and drying up the farm is referred to as "buy and dry." This has dramatic impacts on, and ramifications to, the existing and future viability of agriculture in this region.

as Identified Projects and Processes, or IPPs), and comparing those total supplies to the projected demands, the "gap" between supply and demand is determined. Phase I of SWSI assumed that all IPPs would be 100 percent successful, being an overly optimistic approach. The results for the South Platte Basin from this Phase I study showed an additional demand for M&I water by the year 2030 of 409,000 acre feet. With the assumption that the IPPs would be 100 percent successful, this left a "gap" of approximately 69,000 acre feet. That "gap" would likely come from "buy and dry" of irrigated farmland. The study's conclusion was that between approximately 130,000 acres and 230,000 acres of irrigated agricultural land would be dried up in the South Platte Basin to meet the 2030 basin demands. This does not bode well for the sustainability of irrigated agriculture in the South Platte Basin, or for the communities that depend on the irrigated agricultural economy.

Subsequent phases of the SWSI studies have extended projections to 2050. By 2050, the population within the South Platte Basin is expected to more than double. Under certain scenarios, in excess of 50 percent of irrigated agriculture in the South Platte Basin may be affected by "buy and dry." This paints yet a darker picture for the sustainability of irrigated agriculture in the South Platte Basin. This is particularly impactive on the area within Northern Water's boundaries because of the intensity of irrigated agriculture in that area.

No one can stop people from moving here, nor do we want to, but we must find options, other than the "buy and dry" of our existing farmland to provide new residents and industry a viable and reliable water supply. If we don't find alternatives, we will lose one of the very special things that make the northern Front Range economically viable and such an incredible place to live.

There are many reasons why this region is continuing to attract industry and people. We have a bustling and robust economy that is becoming a hub for the new energy economy. We have recently become home to a variety of industries manufacturing equipment for everything from wind turbines to solar panels. These industries include Vestas, Hexcel Corporation, and Abound Solar. One of the key reasons these businesses have chosen to locate here is the assurance that clean, reliable water supplies would be available.

The highly managed existing water supplies, most of which was developed from 1859 to 1960, have been instrumental in making Weld County the 8th leading agricultural producing county in the United States. Agricultural production in Weld County tops $1.5 billion annually. A clear example of a value-added agricultural industry locating in this region is Leprino Foods, currently building a cheese plant in Greeley. It is this region's dairy industry, an industry wholly dependent on irrigated agriculture, which attracted Leprino to Greeley. Leprino's future viability and success is directly dependent on the sustainability of the region's irrigated agriculture.

In addition to their contribution to the local economy, our rich agricultural lands are also important in providing community buffers, the open spaces our citizen's desire, and many aesthetic qualities and amenities they provide, including rich green farmland, wildlife habitat, and wetlands just to name a few.

As cities grow, additional water is necessary to meet the needs of new residents. Many times the easiest and cheapest way to acquire those supplies is through "buy and dry" of irrigated farmland. Without other options, we will continue to lose farmland at an accelerated rate. This is the major reason Northern Water, acting on behalf of 11 growing communities and four water districts, is coordinating the Northern Integrated Supply Project, or NISP. Nearly a decade ago these water providers approached Northern Water and asked if it could help them secure additional future water supplies as an alternative to drying up northern Colorado's farmland. Over the past 10 years, Northern Water has been working closely with the 15 participants to move this collaborative, cooperative, and innovative project to reality.

The Northern Integrated Supply Project (NISP) will provide 40,000 acre feet of water each and every year to the project participants (see Attachment 4). Without NISP, these 15 entities would secure senior agricultural rights that would provide a like quantity of water, resulting in the drying up nearly 100 square miles of irrigated farmland. Independent studies conducted by the U.S. Army Corps of Engineers (Army Corps) elaborate on the consequences that will be suffered if this project is not built, including these estimates of farmland dry up.

The NISP participating entities currently supply water to 200,000 residents, and their populations are estimated to double within the next 20 to 25 years. With this realized growth, the water provided by NISP is urgently needed.

NISP involves a unique partnership with two large ditch companies in northern Colorado. Through agreements with these ditch companies and the farmers served by the companies, a suitable substitute water supply will be provided to these companies in exchange for the companies allowing the NISP participants to use their higher-quality water supplies for M&I uses. Through these agreements, these companies will also receive additional benefits. These exchange agreements depend on the continuing viability of agriculture under these two irrigation systems. Thus, the 15 participants in NISP have an ongoing and continuous stake in the health, vitality, and continued existence of these two ditch companies. It's a relationship that benefits the farmers, the cities and water districts, and all of northern Colorado. In turn, the cities get much needed water supplies without "buy and dry" of additional farmland.

Every major agricultural organization in the state of Colorado has endorsed the NISP project, and for good reason (See Attachment 5). They understand the benefits of the project and what may happen in the event NISP is not built.

The NISP Project is currently in the supplemental environmental impact statement process. The Army Corps is the lead federal agency on this project, although there are numerous other federal, state and local agencies participating.

The NISP participants fully support the Army Corps supplemental environmental impact statement process and the associated additional studies. Further, the participants recognize the need to complete this permitting process in a fair, transparent and comprehensive scientific manner. The NISP participants have a greater resolve today in seeing this permitting process completed successfully than at any other time since the formal National Environmental Policy Act (NEPA) process was begun in 2004. NISP participants feel NISP is absolutely essential to

the future well-being of their communities and to northern Colorado. NISP is needed to both provide the water supplies needed for generations to come as well as to protect our incredible agricultural economy.

Northern Colorado has a long and rich agricultural heritage and a robust agricultural economy. However, the continued existence of irrigated agriculture in northern Colorado is threatened by population pressures and the need for water to supply an ever-growing municipal and industrial demand. Unless alternatives are found to supply this burgeoning need for water, "buy and dry" will become the means by which water supplies for municipal and industrial growth are developed. We owe it to ourselves to pursue alternatives, such as NISP, and adaptive operation of other water projects, to lessen, to the amount reasonably possible, the "buy and dry" of northern Colorado's valuable and highly-productive irrigated farmland.

Attachment 1: Map entitled "Northern Water - Colorado-Big Thompson Project – Northern Water Boundaries and Facilities"
Attachment 2: C-BT Project Deliveries – Agricultural – Municipal and Industrial Usage
Attachment 3: C-BT Ownership
Attachment 4: Northern Integrated Supply Project Brochure
Attachment 5: NISP Support/Endorsements