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The Central Nebraska Public Power & Irrigation District
(Central, District or Tri-County)

***CNPPID Issues and Concerns That May Be Relevant To Integrated Management
In The Tri-Basin Natural Resources District (TBNRD)***

The purpose of this paper is to assist TBNRD and the Department of Natural Resources (DNR) in better understanding some of Central's institutional concerns that have the potential to influence Central's positions on integrated management planning or the implementation of objectives. They are not listed in any order of importance; please note there may be significant overlap between the points identified.

Expectation of Drought Occurrences

Integrated management should account for variations in water supply and plan for times of shortage. Long-term policy should be sufficient to address management for a short water supply.

The current drought is not an anomaly. Atmospheric data show numerous drought occurrences in this area over time and lead us to the rational assumption that the current drought is likely not the final one. The period of development may have been wetter than should be expected going forward and the basin may experience drought with increasing frequency.

Recorded drought occurrence in the North Platte River basin upstream of Lake McConaughy has been cyclic over time. Drought is predictable as an intermittent event and was the driving force for construction of the Tri-County and Sutherland projects. Kingsley Dam was designed to impound a volume of water that could irrigate contracted acres through significant periods of below average precipitation.

Upstream Sources of Water

Integrated management should avoid short-term, local decisions or solutions that have long-term consequences to upstream supply.

There is significant interference to Central's water supply from Panhandle wells, particularly in times of shortage, and a direct correlation between that interference and Central's ability to make deliveries and provide incidental recharge in this area. Wells between Lake McConaughy and Central's diversion point at North Platte also intercept Central's water supply.

The Tri-County project was built in reliance of expected return flows. Prior to the construction of Kingsley Dam, Bureau of Reclamation (BOR) projects impounded upstream waters of the North Platte River for irrigation and power production. Return flows to the river from those project canals and contracted lands were and are the primary water supply for Lake McConaughy. The special master in the 1945 Decree recognized these return flows as expected water supplies for downstream water users.

In any basin, unappropriated supply is all that is available for a new consumptive use without creating harm. Water to meet new consumptive uses of this basin supply has come at the expense of Central's appropriations.

Central is concerned that the identification of lands that are hydrologically connected and subject to regulation should be based on the true idea of *de minimis* or insignificant impacts, and not be arbitrarily set in a way that is politically expedient at the expense of surface water users.

Recharge and Access Fairness Issues within TBNRD Area

Hydrologic data exist to confirm the groundwater mound has been formed by Central operations since 1941. Central customers have provided and continue to provide a service to groundwater users within the NRD; incidental recharge of the water stored underground. Supply has been augmented and lift has been reduced throughout the recharge area. Groundwater use does not contribute to the mound; but instead consumes both the naturally occurring ground water and water that has been incidentally stored as a result of Central's operations.

Access by Central's customers to the groundwater and incidentally stored water supply after September 15th, 2004 is restricted or conditional in time of need. At the very minimum, Central customers should have access to underground storage equal to that of other groundwater users when there is a shortage of surface water supply. Any state-mandated offsets to new consumptive use for these users should be borne by a broad cross-section of beneficiaries of the groundwater mound rather than the individual water user. An equitable plan would not require individual offset requirements by these users and a fair approach will not deny equal access to a farm operation that is providing, financing and sharing a significant portion of that body of water with their neighboring groundwater users. While Central may work with TBNRD, DNR and users to find additional means of providing new water or offsets to the area, it should not be expected or required that Central do so.

While it may seem contradictory for Central to advocate the possibility of new well installation on its contracted lands in this Natural Resources District (NRD) while insisting on a reduced groundwater use upstream of Lake McConaughy, the standard applied to use of the resource is exactly the same. Total pumping volume and consumptive use of the groundwater supply must be weighed with respect to the rights of downstream appropriators. Reasonable, beneficial and sustainable consumptive use of that recharged supply should then be available as appropriate to all rightful users.

External and Extra-TBNRD Uses and Pressures

Groundwater recharge of the U-2 and U-12 areas is not the only indirect benefit of Central's operations. Beneficiaries external to the TBNRD and external to agriculture within TBNRD also exist; a brief overview follows. Contracts and regulations address some of the uses and in cases where no water rights are held, political pressure is sometimes applied as the means to maintaining a benefit.

Recreation – Concessionaire and individual lessees and private cabin owners occupy lands surrounding some of Central's lakes. The general public spends an estimated 1.5 million visitor-days annually at the lakes, impacting local economies and the Nebraska Game & Parks Commission's (NGPC) workload and budget. Businesses, residents and visitors want lake levels to be maintained at optimum levels for their use; high enough for good boat access and fishery survival in short supply conditions and low enough to maintain desirable beachfronts in wet years.

Environmental – Enhanced habitat and the U.S. Fish and Wildlife Service (USFWS) environmental account (EA) in Lake McConaughy benefit numerous fish and wildlife species. Water from the EA is intended to benefit endangered species habitat in the central reach of the Platte River. Lake McConaughy's habitat attracts one of the largest and most diverse bird populations documented in the United States and the Lake McConaughy/Lake Ogallala fishery is recognized as one of the finest in the state. Short supply takes lake and stream levels lower than desired by this group of users.

Power production - Lake McConaughy stores water for power production at four hydroplants owned by Central and another owned by Nebraska Public Power District (NPPD). These five hydroplants have capacity to generate electricity for 45,500 homes (i.e., a city with a population approximately four times larger than Kearney). In addition, water from Lake McConaughy is needed to cool the condensers at two fossil-fuel power plants, the Canaday Steam Plant near Lexington and the Gerald Gentlemen Station at Sutherland (the largest generating station in Nebraska).

Irrigation - Lake McConaughy provides water for direct or indirect irrigation of more than 530,000 acres in the Platte River Valley. This estimate includes Central's 112,000 acres, more than 110,000 acres served by smaller irrigation canals (most lacking their own storage facilities) and groundwater recharge benefits to more than 310,000 acres in and adjacent to Central's irrigated area.

Expectations Regarding Historic/Current Rates of Recharge

Resolution of the upstream interference to Central's appropriations is a large factor in the ability to maintain the mound recharge, as is the right to transfer water to other uses within the irrigated area.

Continued ability to recharge the mound at historic levels or at an increased level, both of which exceed the current level with allocations is not easily assumed; it is possible that Central cannot continue to provide its average historic recharge levels. Without relief from upstream interference to our water appropriations, the TBNRD may need to reduce groundwater withdrawals to meet its groundwater level commitment to the Republican Basin Compact Agreement. NRD authorities granted by the State should not extend to mandating the continuation of surface water recharge volumes.

The current rates of recharge to the groundwater mound were lower in WY2005-2006 than in previous years due to the water allocations necessitated by supply. Half-volume flows were provided in shortened seasons to customers and allocations are necessary again in WY2007.

Central's water supply depends on inflows to Lake McConaughy and the carryover storage which incorporates - in part - the effects of annual precipitation in the irrigated area. Annual inflows to Lake McConaughy fell below the 600,000 AF level for the first time in the history of the District in WY2002 and have remained in the annual range of 450,000-550,000 AF through WY2006. Lake McConaughy storage volume has experienced record low annual peaks consecutively since WY2003. The previous record low volume after the initial fill occurred during the drought of 1956-7; peak storage in those years exceeded the current low volumes by 200,000 AF or more.

Treatment of Comingled Lands

Central's water that is transferred to new irrigated land or a new use within the TBNRD always benefits the TBNRD area and should be recognized as a beneficial import of water to the local area rather than treated as a new consumptive use. Conversely, a permanent change from a comingled status to a fully dedicated groundwater well is an increase in consumptive groundwater use in this area. Rules should cover this circumstance.

Treating the intermittent use of the mound to irrigate acres in a comingled situation equal to use on acres where groundwater is the only irrigation source is detrimental to keeping surface water and recharge volumes in this area. Not all irrigated acres have the same impact to maintenance of the mound. Acres served by fully dedicated groundwater wells consume mound water where acres served by wells supplementing surface water in years of short supply are net contributors to the mound over the long term.

Irrigation Contracts

Central cannot divert a portion of irrigation water supply to other uses or withhold water delivery from its customers without specific cause. Surface water contracts come with a cost to maintain a delivery system coincident with rights to that delivery.

Central's contracts dictate that in exchange for payment, "... the District will deliver water ... during each irrigation season as nearly as practical, a total amount of water that bears relation to all the water that it determines it has available for irrigation during such year ... to all the land entitled ...". Contracts continue indefinitely until the Owner or District terminates by written notice ten years in advance of the termination (beginning at the end of the irrigation season in the first year the termination notice is signed). The contract transfers to heirs and successors and the water cannot be used on other lands, sold or transferred for use on other lands except by mutual agreement.

1954 Agreement

Central must store the first 125,000 AF of inflows annually to Lake McConaughy for NPPD's senior rights before any water can be stored for Central water users. Other contracts exist with NPPD but none have a negative affect on water quantity currently at use in this NRD.

Central and NPPD operate under a joint agreement and prepare an annual joint-operation plan that governs both; any changes to that operating plan must be by agreement. Each party operates its system to accomplish the maximum beneficial use of the water supply that is available to both parties.

Water Rights

Central holds several water rights to divert and store water for irrigation, power and in-stream use. Each right needs to be maintained and each has a specific point of diversion, annual volume and/or rate of diversion attached. A summary of the most significant water rights held are enumerated in Table 1 below along with their purposes, partitioned by category;

Table 1. Central water rights significant to TBNRD integrated management planning.

<i>Storage</i>		
Lake McConaughy	1,782,500 AF	Irrigation, Power, fish/wildlife
Elwood Reservoir*	40,500 AF	Irrigation
<i>Natural Flow and Storage Use for Irrigation</i>		
Natural Flow	125,728.2 acres	Supplemental Irrigation
Storage Use	126,494.6 acres	Supplemental Irrigation
<i>Power Generation</i>		
North Platte River	5720 cfs	Kingsley unit
Platte River	1500 cfs/330 ft. h	Jeffrey, J-1, J-2 units
Platte River	additional 48.32 ft h	Jeffrey, J-1, J-2 units
Platte River	700 cfs	Jeffrey, J-1, J-2 units
McConaughy storage	500,000 AF	power storage
<i>Other specified purposes</i>		
In-stream Use	215,000 AF	McConaughy storage
Incidental underground U-2	355,999.92 acres	See attached Map 1.
Incidental underground U-12	53,844.45 acres	See attached Map 1.

*transfer of Lake McConaughy storage right

National and Nebraska Wildlife Federations (NWF) Agreement

In January of 1992, the Central and NWF settlement agreement was reached to resolve a water rights dispute. Central must maintain a reduction in diversions of 27,444 AF annually.

The reduction in diversions was achieved through on-farm conservation, installation of canal lining or pipelines and implementation of the new operating plan at Elwood Reservoir. Compacted canals, membrane linings and pipelines have a useful life and must be replaced over time by new conservation measures to maintain the savings.

Elwood Reservoir operations plan saves an estimated 5,700 AF of the 27,444 AF in diversions annually. Any changes to the fill/release schedule that increases seepage losses could be contrary to the NWF Agreement, or could require an alternate conservation effort and future replacement costs to maintain that change.

Federal Energy Regulatory Commission (FERC) License

The license to generate power with Platte River waters was renewed after significant time and expense. Conditions are attached to the license that affect the Central system as a whole and affects the amount of water available as recharge to the mound. A brief description of the main FERC limitations to water supply for the Tri-Basin area follows;

Environmental Account - Ten percent of the storable inflows to Lake McConaughy go into the EA, which is managed by the USFWS. A maximum of 200,000 AF may be held in the account. Releases are for in-stream flow in the critical habitat area (a 53-mile-long and 3-mile-wide

corridor in the Big Bend reach, extending from Lexington to Denman) for the recovery of endangered and threatened species although the water may be used to generate power along the way.

Operational requirements – Requires winter releases from Lake McConaughy for the Sutherland Supply Canal and Central’s Diversion Dam, depending on water supply. Annual waivers which reduce the required releases have been secured recently during the current drought; however future waivers may or may not be granted by FERC and should not be expected.

Participation in Platte Program - The license issued by the FERC requires that Central must cooperate but not fund the programs and projects of the Platte River Implementation and Recovery Program (Program) and abide by terms of the “new depletions” plan.

Program

The Program adds USFWS target flows and Program water action plans (WAP) as state protected waters and identifies Central as the source for many WAP projects.

The USFWS has identified certain flows in the Platte Basin that must be protected from depletions under the Program. In addition, in Nebraska’s new depletion plan, Nebraska will protect flows needed for new water action plan projects that are in excess of these target flows.

Central has been identified as a primary component of many of the WAP projects, including hydropower interference, leasing of water rights from Central’s customers, use of the mound, and construction of reservoirs along Central’s Supply Canal.

Increased Competition For Water

The Program has been identified as a potential purchaser of new water supplies in the Platte River basin. Industry or municipalities are possible new users of significant water supplies within the TBNRD boundaries. Potential projects have also been identified to provide water to the Republican Basin.

Central Budget

Central must balance annual budgets and hold reserves to cover the cost of high-dollar emergency and maintenance issues for key infrastructure items such as outlet works, water gates, siphons, powerhouse generators, transmission equipment and computer automation and control equipment. The Board recognizes that both reserve funds and water must be stored in wet seasons and used in times of short supply, however, balanced budgets with reserves in place should be the norm.

Central Directors are facing a sixth continuous year of a deficit budget for the 2007 calendar year and shortfalls increase as interest income from reserves is lost. The average annual shortfall for the 2002-2006 budget years was 2.5 million dollars with a projected shortfall of 3.5 million dollars in 2007.

A balance must also occur, or nearly so, whereby the irrigation division and the hydropower divisions each generate income to balance expenses. Due to the lack of power production, both divisions are now in deficit spending.

Increasing irrigation rates is difficult in a period of reduced deliveries. Revenue for recharge benefits may need to be examined as a means of maintaining the system that provides those benefits.

Water Supply to Central is Limited

The Central infrastructure system is finite and its water appropriations enumerated.

Budget considerations aside, Central's appropriations are not capable of providing water for all uses that may be conceived by others. The hope of Central's appropriations meeting every need is not realistic; a harsh truth for those in genuine need.

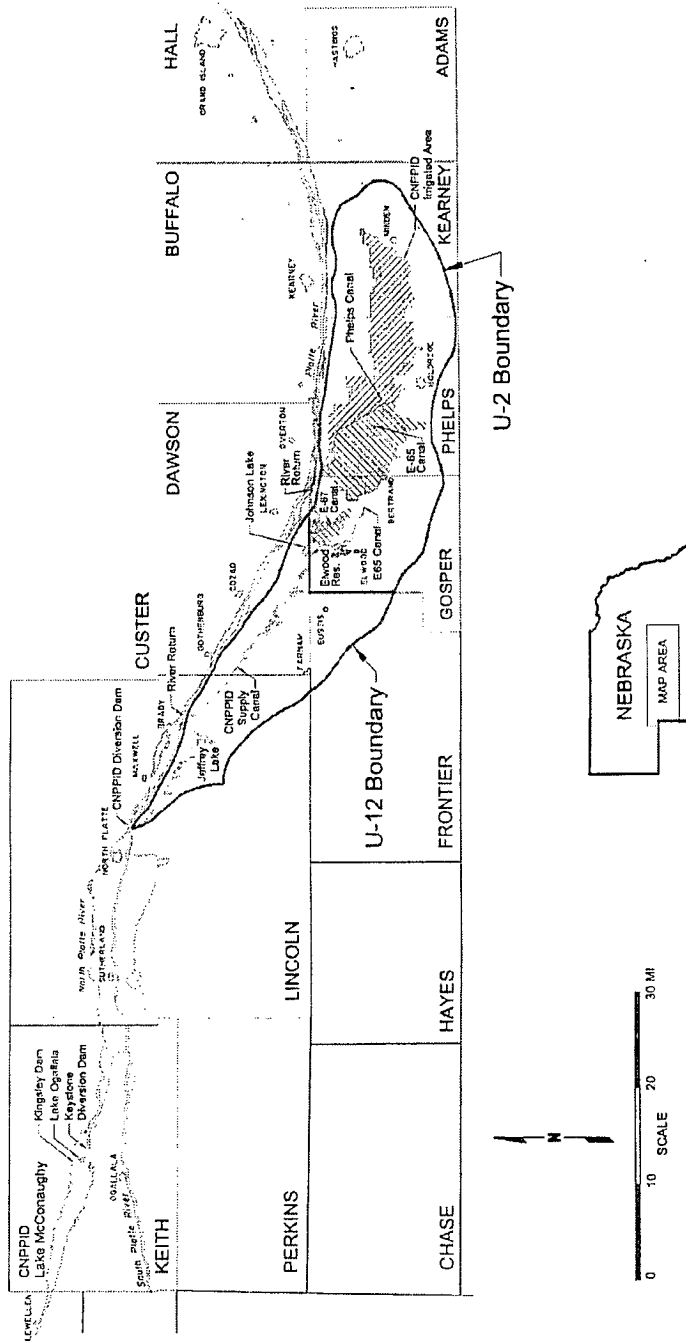
In the TBNRD area, system losses to seepage may not provide sufficient recharge water to sustain the 1981-85 average groundwater levels; especially when the volume of groundwater pumping is unknown, unmetered and not verified or allocated. A pumping allocation is real possibility that should be addressed in the planning process prior to an urgent need.

IMP rules should not prohibit a genuine opportunity to move water to an area in need if circumstances would ever allow such a transfer.

District Autonomy

Integrated management must avoid removing, diluting or otherwise harming the authorities of the Boards.

Central, as represented by its Board of Directors must operate its system as a distinct regional unit that provides benefits within several NRDs. Rules instituted within each NRD unit must not conflict so as to prevent efficient operations of the Central system as a whole. TBNRD and DNR likely have similar expectations for maintaining autonomy, even as we work together to solve problems.



Map 1. Boundaries of the U-2 and U-12 Incidental Underground Storage and Recovery water rights.