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December 29, 2008

VIA EMAIL: Chandler.J.Peter@usace.army.mil

Mr. Chandler J. Peter

U.S. Army Corps of Engineers

2232 Dell Range Blvd., Suite 210

Cheyenne, WY 82009

*Re: Northern Colorado Water Conservancy District, Windy Gap Firing Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application*

Dear Mr. Peter:

This letter has been prepared on behalf of our client, Grand County, and contains the County's comments on the Windy Gap Firing Project ("WGFP") Section 404 Permit application ("404 Permit"). We have serious concerns about the proposed action that are summarized in this letter. Although we believe that the proposed action fails to satisfy the 404(b) Guidelines and the public interest review, this letter also includes conditions that would be necessary if any permit were issued for the proposed action.

For a more complete discussion of the impacts of concern to Grand County, please refer to Grand County's letter dated December 29, 2008 to your office and the Bureau of Reclamation that contains Grand County's detailed comments on the WGFP Draft Environmental Impact Statement ("*Grand County DEIS Comment Letter*").

1. The DEIS is inadequate to form the basis of the Army Corps of Engineers' review. Grand County, as a cooperating agency for the NEPA review of the WGFP, has submitted extensive comments on each technical report and draft document, including the WGFP Draft Environmental Impact Statement ("DEIS") itself, that have been prepared as part of the Environmental Impact Statement process for the proposed WGFP.

Grand County's concerns are focused on the impacts to the Upper Colorado watershed associated with water depletions. The point of Grand County's participation as a cooperating agency was to lend its particular expertise regarding conditions in the Upper Colorado watershed to ensure that the DEIS would adequately evaluate those impacts to satisfy NEPA requirements and be sufficient to form the basis of the Corps of Engineer ("COE") review and permit. Unfortunately, Grand County's comments largely were ignored, resulting in a document that does not satisfy NEPA's "hard look" requirement

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 2

regarding impacts to the Upper Colorado Watershed, and that is not sufficiently accurate to form the basis of the COE's review. We therefore request that the COE delay making any decision until the deficiencies in the DEIS are corrected. In the alternative, we propose conditions of approval in the 404 permit that will guaranty that the impacts to the Upper Colorado Watershed are as minimal as predicted in the DEIS, and that if predictions are wrong, the permit be "re-opened" to impose additional requirements. Examples of conditions are included as Exhibit A of this letter.

There is a fatal flaw permeating the DEIS that makes meaningful or adequate 404(b) review futile. That flaw is the failure to use *actual* Windy Gap diversions as the baseline for existing conditions in the Upper Colorado watershed. Instead, the DEIS used modeled diversions that were significantly greater than *actual* conditions. Therefore, the DEIS describes "existing" stream flows downstream from Windy Gap Reservoir as lower than *actual* stream flows. This flaw results in a completely inaccurate and misleading depiction of the relative significance of the flow reductions that will be caused by the proposed action and masks the significance of the impacts to the Upper Colorado River watershed that are caused by these reductions.

In particular, Windy Gap diversions for "Existing Conditions" are listed throughout the DEIS as 36,532 af for an average annual amount. This is a modeled number that is over three times higher than the average annual diversions of 11,080 af that actually have occurred. (See Table 3, p. 22 of the *WGFP Water Resources Technical Report*.) The DEIS then derives downstream stream flow levels in the Colorado River by subtracting this inflated number. Diversions at the actual level of 11,080 af and the resultant flows downstream from Windy Gap Reservoir are what the Colorado River has experienced since Windy Gap diversions started in 1985. This is the amount that must be used as the description of existing conditions, and then compared to projected diversions for the WGFP to determine impacts. In order to fix this fatal flaw, the DEIS needs to be revised and/or supplemented because this flaw permeates every table, graph, and text that describes impacts in the Upper Colorado watershed associated with flow depletions. Accordingly, it is not possible to make an accurate comparison to determine the least damaging alternative to the aquatic ecosystem.

Table 3-2 of the DEIS is an example of how it is deceiving to present Windy Gap Diversions of 36,532 af as "existing conditions" rather than *actual* diversions when deriving differences and percentage of change. That table shows the percent difference in diversions at Windy Gap between "existing conditions" and condition after the proposed action to be 26%. In contrast, when *actual* existing conditions are used, i.e. average annual diversions of 11,080 af, the comparison looks much different and the impacts are significant. The percent difference following the proposed action would actually increase by 316%. Table 3-2 should be revised using *actual* existing conditions:

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 3

Location	Existing Conditions	Proposed Action		
	Avg Annual Diversion	Avg Annual Diversion	Difference	% Difference
Windy Gap Diversions (modeled)	36,532 af	46,084 af	9,552 af	26% increase
Windy Gap Diversions (actual)	11,080 af	46,084 af	35,004	316% increase

2. The review and permitting of the WGFP and Moffat Collection System Expansion project should be concurrent. Grand County has repeatedly requested that the Municipal Subdistrict's WGFP and Denver's proposed Moffat Collection System Expansion project be combined for review in a single EIS in order to expand the practicable alternatives and to accurately evaluate the combined impacts of those projects. Both projects divert from the same watershed, and in fact one is a direct depletion to the other. Both projects will have nearly identical aquatic, environmental, recreational, scenic and socio-economic impacts. Both are proposed to meet Front Range water supply demands that would otherwise consider similar alternatives and face nearly identical concerns. In fact, both projects are likely to have similar, if not directly cooperative, mitigation requirements. In spite of this, two completely different hydrologic models were used to estimate stream depletions and attendant impacts making it nearly impossible to imagine the combined impacts of both projects. Without evaluating and permitting these projects together, and reviewing the possible ways that the Municipal Subdistrict and Denver could coordinate their activities, it is impossible to determine if there might be modifications to the proposed action that would have less adverse impact on the Upper Colorado River watershed aquatic ecosystem.

For example, several years ago, Northwest Colorado Council of Governments ("NWCCOG"), the designated 208 water quality planning agency for the region encompassing Grand County, initiated the Upper Colorado Basin Project ("UPCO") which included Denver and Northern, among other stakeholders, to plan for and evaluate opportunities to provide water to satisfy in-basin needs and those of Denver and Northern in a manner that would minimize impacts to the Upper Colorado River watershed. One example evaluated by UPCO was the concept called "around-the-horn." Broomfield receives treated water from Denver via the Moffat Treatment plant. Around-the-horn would allow water that would be diverted from the Fraser River to Broomfield via Denver's Moffat collection system to flow down the Fraser River to Windy Gap instead. This water would be delivered to Broomfield in the same manner that they would receive water from WGFP.

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 4

Around-the-horn would reduce impacts associated with diversions from the Fraser River system by the Moffat collection system without reducing yield to either Northern or Denver. Only if WGFP and the Moffat Collection System Expansion project were evaluated and/or permitted together would Denver and the Municipal Subdistrict be induced to coordinate their actions to implement around-the-horn or similar mitigation.

3. There are practicable alternatives which would have less adverse impact on the aquatic ecosystem. Under both the 404(b) Guidelines and the COE's "Public Interest Review" obligations under 33 CFR 320.4, the COE must consider the "relative extent of the public and private need" for the project and "reasonable alternative location and methods to accomplish the objective" of the project. *Holy Cross Wilderness Defense Fund v. Madigan*, 960 Fed. 1515, 1524-1525, fn. 12 and 13.

The purpose and need for WGFP is drawn so narrowly that it improperly forecloses an analysis of other less environmentally damaging alternatives. The stated purpose is "to deliver 30,000 AF of water from the existing Windy Gap Project to meet a portion of the water deliveries anticipated from the original Windy Gap Project and to provide up to 3,000 AF of storage to firm water deliveries for [Middle Park Water Conservancy District]." The real purpose and need for the participants is for more water generally – it is not tied to need for more Windy Gap water. See DEIS Sections 1-6, 1-7 and 1-8. The source area of the water supplies for this project is an area of state-wide and regional value. Similarly, water supplies to meet the growing demands along the Front Range are an issue of state-wide and regional concern. The consideration of these two large-scale issues needs to be evaluated considering a much larger range of possible options than the very narrowly defined purpose and need statement.

The purpose and need statement might have more credibility if the original participants for Windy Gap were the same as those for the WGFP. Instead, of the original eight cities that participated in the Windy Gap Project, only three are participating in the WGFP, and only one, Longmont, to the full extent of its ownership. See Exhibit B of this letter, "Windy Gap Ownership and Transfer History". As the Table shows, only 28% of the requested storage volume would serve original owners, who collectively need only 26,000 af. The City of Broomfield, the participant requesting the most storage at 25,000 af was not even located within the boundaries of the Municipal Subdistrict when the water rights were appropriated or the ROD issued for the original project. The original owners either sold their units to other cities and entities or are not participating in the WGFP. "Need" for Windy Gap water becomes a self-fulfilling prophecy if units can be sold to strangers to the original appropriation and the Municipal Subdistrict expands its boundaries to serve those strangers. As a result, the DEIS fails to consider the availability of less damaging practicable alternatives.

Examples of alternatives that should have been evaluated include conservation and reuse

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 5

among the participants, and the transfer of irrigation water rights on the South Platte River to municipal purposes through interruptible water supply agreements. Something like the Aurora Prairie Waters Project should be evaluated. With such a narrow purpose and need statement, however, it is not possible to ascertain what projects could be pursued by the participants that would have a much less adverse impact on the Colorado River watershed.

4. The proposed action causes and contributes to violation of State of Colorado water quality standards. Because violations of water quality standards in the Upper Colorado River watershed will be caused by changes in stream flows, and the hydrology model is fatally-flawed, it is not possible to accurately predict violations to standards. In particular, the analysis is not done in a manner consistent with the approach required by Colorado water quality regulations. For example, the DEIS typically considers median water quality values and average flow conditions, which is not the approach Colorado Department of Public Health and Environment (“CDPHE”) uses for determining compliance with standards (5 CCR 1002-82) or in an anti-degradation review (5 CCR 1002-31.8(3)). Also, the DEIS fails to evaluate water quality impacts from WGFP in the Three Lakes system that result from the unpermitted discharge of pollutants associated with pumping. This is of particular concern to Grand Lake, where CDPHE recently adopted a water quality standard for clarity.

Although it is difficult to accurately predict violations of water quality standards because the hydrology is so flawed, it appears WGFP will degrade water quality and cause or contribute to violations of water quality standards. The DEIS identifies the following water quality issues associated with the proposed project:

- Temperature standards violations and increased ammonia, phosphorus and decreased dissolved oxygen concentrations in the Colorado River below Windy Gap Reservoir.
- Increased ammonia, dissolved iron and copper concentrations in Willow Creek.
- Increased phosphorous, nitrogen and manganese concentrations and decreased dissolved oxygen in the Three Lakes.
- Violation of the clarity standard in Grand Lake.
- Phosphorous in Shadow Mountain Reservoir.
- DO and manganese in the Three Lakes.

5. There is not sufficient information to determine whether there would be a

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 6

violation of the Endangered Species Act. The original Windy Gap Project was purported to divert an average of 56,000 af, but only 18,779 af of average depletions are being paid for under the Programmatic Biologic Opinion for fish in the Colorado River. DEIS. p 3-195. This may require an evaluation of the proposed action to see if it complies with the Endangered Species Act.

6. The proposed action may cause and contribute to significant degradation of waters of the United States. The COE has an obligation, when considering environmental impacts of the discharge, to not only consider the direct effects of the discharge, but also, the impact of the consequent reduction in water flows by increased consumptive use – even when the consumptive use is merely facilitated by the discharge. *Riverside Irrigation District v. Andrews*, 758 F.2d 508, 511, 512. As discussed in detail in *Grand County DEIS Comment Letter*, the DEIS is fatally-flawed so that the significance of the degradation is masked. Even though the DEIS is flawed, it is obvious that the proposed action, together with cumulative impacts, is likely to cause and contribute to significant degradation to the Upper Colorado River because the flow reductions caused by the proposed action are significant, and to Grand Lake because of increases in Windy Gap pumping.

The following table provides a summary of the cumulative depletions in the Colorado River.

Summary of Colorado River Streamflow and Diversions
Colorado River at Hot Sulphur Springs
Average Annual Flow

	Approx Avg Annual Flow Volume (ac-ft)	Remaining Avg Annual Flow (af)	% of Native Flow Volume Remaining	Notes
Native Flow	540,000		100%	Colorado River flow at Hot Sulphur Springs 1904-1936 (pre-Moffat, adjusted for approximate Grand River Ditch diversions)
Grand River Ditch	18,500	521,500	97%	Based upon CDSS recorded annual diversion from 1975-2007
Moffat Diversions*	57,000	464,,500	86%	Based upon Denver Water Diversion records at the East Portal from 1975-2006
CBT Diversions	228,800	235,700	44%	Based upon 1985-2005 diversions as shown in the WGFP EIS (Table 5)
CBT Evaporation	15,500	220,200	41%	Based upon 1975-2007 avg Granby content from BOR and SAC tables from NCWCD, plus full SMR, WC & WG acres
Windy Gap	11,100	207,900	39%	Based upon 1975-2004 diversions as shown in the Windy Gap FIRMING Project (WGFP) EIS
Grand County Uses				Based upon current Grand County Demands (3,100 af, UPCO 2003) with assumed 60% return flows
Current Flow	138,700		26%	Based on SEO streamflow records at Hot Sulphur Springs(1985-1940) Note measured flows less than estimated remaining flows
Windy Gap FIRMING Project	35,000	103,700	19%	Based upon projected additional future diversions projected in the WGFP EIS
Moffat Expansion*	9,300	94.400	17%	Based upon projected additional future diversions projected in the WGFP EIS
Future Flow	94,400		17%	Equal to the current flow less additional projected diversions.

* Moffat numbers may change based upon what is displayed in Moffat DEIS.

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 7

Examples of degradation in the Colorado River watershed include but are not limited to:

a. **Impacts to municipal water supply.** If flows in the Colorado River are reduced, the Town of Hot Sulphur Springs water treatment facility diversion structure may need to be redesigned, as it is already receiving a lot of air in the pipe. In addition, if turbidity increases, the treatment plant will have difficulty treating for potable water.

The Town of Kremmling has established a diversion point in an infiltration gallery on the Colorado River that pumps water to the Town's reservoir where it is blended and used for municipal purposes. The DEIS does not describe Kremmling's domestic water supply system or the relationship between flows in the Colorado River and that system. Water quality degradation associated with the proposed action could lead to increased treatment costs for the Town of Kremmling.

b. **Impacts to wastewater treatment plants.** The discharge permit for the Hot Sulphur Springs wastewater treatment plant is due for renewal in mid-2009. Without the flows that now exist, the wastewater treatment plant will not be able to renew its permit. Hot Sulphur Springs is one of the smallest towns in the region and has limited means to make upgrades to its infrastructure, especially when the need for upgrades is not caused by its customers.

c. **Significant degradation of Grand Lake.** Grand Lake is a national and state treasure.¹ Grand Lake is not only the largest natural lake in Colorado it was specifically protected by Senate Document 80 which requires that the Colorado-

¹ As described in the 1911 Colorado Business Directory for Grand Lake.

<http://files.usgwarchives.org/co/grand/directories/1911-grandlk.txt>. "Inspiring and sublime beyond the power of words to tell, without an equal or a peer in all the wonderland of Colorado, is this gem of the Rockies—beautiful Grand Lake. Like a mighty jewel, nestled in the breast of the mountains by the hand of the Almighty, its sparkling surface reflecting the blue of the sky and tue [sic] green of the fringing forest; its ever-changing beauty and silent grandeur, guarded forever by the faithful hills, whose rock domes reach up, ever upward, toward the eternal stars. A song whose sweet and entrancing melody could come from no concourse of human tongues; a picture whose rapturus [sic] and romantic beauty no artist can ever convey to canvas. Such is Grand Lake. You have heard it said of some things that they must be seen to be appreciated. [sic] Of nothing is this so true as of Grand Lake. You have looked upon the picture; you have read the word painting of a writer—but you have not seen Grand Lake. Oh, no! You know nothing of it until you have stood upon its wave-kissed shores and listened to its sweet song. The lake is a mile in width, and is two miles long. Its greatest depth has never been sounded. Its waters, as well as the streams running in and out of it, are alive with the finest mountain, rainbow and brook trout. The United States fish commissioner is now operating a fish hatchery at Grand Lake. There are numerous drives and horseback trails leading to points of interest. The fishing in Grand Lake and surrounding streams is unsurpassed anywhere in the state."

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 8

Big Thompson project (“C-BT”) must be operated to “preserve the fishing and recreational facilities and the scenic attractions of Grand Lake . . .” (emphasis added). “Preserve” is defined as

1. To keep safe, as from injury or peril: PROTECT.
 2. To maintain unchanged.
 3. To keep or maintain intact.
- Webster’s II New College Dictionary (1999).

The DEIS demonstrates that water quality has not been preserved in Grand Lake. Instead it has been degraded, polluted, and changed. Use of the C-BT facilities for the proposed action to pump more water through Grand Lake will make conditions even worse.

d. **Significant adverse effects to aquatic life.** The fisheries below Windy Gap already are stressed due to reduced stream flows from the combined effects of CB-T, Moffat System and Windy Gap. The WGFP will only make matters worse. Currently, there are violations of chronic temperature standards for this reach (DEIS page 3-67). WGFP will further reduce stream flows during critical late summer periods and is projected to increase stream temperature (DEIS page 3-96). But the problem is even worse than disclosed in the DEIS. By using QUAL2K to model temperature impacts on a single day only, the DEIS underestimates the potential for stream temperature increases, particularly during periods where diversions will reduce stream flows to near minimum bypass levels more than one day. As a result, the conclusions about impacts to fisheries from temperature are flawed. In addition, the health of the fisheries below Windy Gap is already at a tipping point from the cumulative impacts of historic diversions upstream, as evidenced by reduced size and abundance (Jon Ewert, CDOW personal communication 11/14/08).

e. **Significant adverse effects to aquatic ecosystem diversity.** The DEIS shows a loss in fish habitat by as much as 24% in average stream flow years. DEIS, pages 3-137 through 3-139. This is significant, especially in a stream system that already has been severely depleted by transmountain diversions. The DEIS also underestimates this habitat loss because it uses modeled Windy Gap diversions, rather than actual diversions as the “existing conditions.”

f. **Significant reduction in flushing flows that are necessary to protect the aquatic environment.** The DEIS says that flushing flows were based on a 1981 study. DEIS p. 3-62. This should be updated. Grand County’s Stream Management Plan recommends a flushing flow of 750 to 1200 cfs for a three-day duration with a frequency of one in two years during the May to late June period. The proposed action will not produce these necessary flows. Flushing flows are

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 9

critical to transport sediment and maintain a healthy stream system. One example of the problem associated with the increase of sediment is the Tubifex worm and the attendant whirling disease that has devastated the rainbow trout below Windy Gap Reservoir.

g. **Significant impacts to recreational, aesthetic and economic values.**

Exhibit F to the *Grand County DEIS Comment Letter* is a report prepared by Coley/Forrest ("*Coley/Forrest Memorandum*") that details the impacts to recreational, aesthetic and economic values caused by the proposed action. Senate Document 80, the document that controls operation of the C-BT, states that one of the primary purposes of C-BT is "[T]o preserve the fishing and recreational facilities and the scenic attraction of Grand Lake, the Colorado River..." As part of discussion of the cumulative effects, the DEIS should disclose whether fishing, recreation and scenic attractions have been preserved. The DEIS should rely on and make reference to the 1951 report prepared by the US Fish and Wildlife for the Bureau of Reclamation which detailed the devastating effects of Granby Dam on the Colorado River. The DEIS also fails to evaluate whether existing bypass flow requirements below Lake Granby and Windy Gap are appropriate for protection of the environment or whether prolonged durations at those flow levels as a result of WGFP alternatives will have an adverse impact on fisheries. The DEIS needs to be supplemented to evaluate the effects below Granby Dam.

h. **Significant impacts to wild and scenic values in the Colorado River.**

The DEIS fails to disclose the potential effects of the proposed action on the BLM's current evaluation of segments of the Upper Colorado River. Many of the ORV's for the segments under evaluation are largely or entirely flow-dependent, and additional depletions from the WGFP will adversely impact these values. Federal law and policy requires these ORVs to be taken into account before any permit can be issued.

7. The permittee has not proposed appropriate and practicable steps to minimize adverse impacts to the aquatic ecosystem. Steps to minimize adverse impacts are not adequate because the DEIS has not accurately predicted impacts of the proposed action. Examples of undisclosed impacts include reduced clarity in Grand Lake from discharge of turbid waters by pumping, cumulative impacts to fisheries in the Colorado River below Windy Gap from temperature increases for extended periods, adequacy of releases to provide sediment flushing flows and aquatic habitat in the Colorado River below Granby Reservoir, effect of quagga mussels currently existing in the Three Lakes system, whirling disease associated with Windy Gap Reservoir, nuisance aquatic weed and algae growth in Shadow Mountain Reservoir, and establishment of didymo (rock snot) in the Colorado River below Windy Gap Reservoir. Because these

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap Firming Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 10

impacts are not disclosed, the permittee has not proposed any steps to minimize them.

Analysis of water quality impacts for the Colorado River and Three Lakes system is based on the presumption that wastewater facilities will be upgraded to advanced treatment for nitrogen and phosphorus removal. The cost of providing for nutrient removal processes at these facilities should be borne by the applicant and identified as a step to minimize adverse impacts instead of assuming that Grand County dischargers would construct these facilities. Also missing is any proposal to minimize impacts to Grand Lake, such as pumping Windy Gap directly to the Adams Tunnel to avoid exacerbating impacts to Grand Lake clarity.

Included with this letter, as Exhibit A, is a list of proposed conditions that if implemented might reduce the adverse impacts of the proposed action, but there are so many flaws in the DEIS it is not possible to make that determination.

8. The DEIS is inadequate for the COE to make the required findings of the proposed action on the physical, chemical and biological components of the aquatic environment. As detailed in *Grand County DEIS Comment Letter*, the DEIS is fatally-flawed and thus cannot form the basis of the required findings. In addition to the issues discussed earlier in this letter, the following issues need to be addressed in writing by the COE:

- a. **Water circulation, fluctuation, and salinity determinations.** The impact of WGFP on salinity concentrations, as measured by total dissolved solids, is only evaluated on the Colorado River to the confluence with the Blue River. Recent studies have indicated that the real salinity concerns from diversions in the Upper Colorado River watershed are experienced in the Grand Valley (Reconnaissance Study, Blue River Pumpback and Wolcott Reservoir Alternatives, October 2007). The DEIS fails to disclose these potential downstream impacts of total dissolved solids.
- b. **Suspended particulate/turbidity determinations.** Impacts to the turbidity, or clarity, of Grand Lake associated with pumping foul water from Shadow Mountain Reservoir is not disclosed although it is well-documented. The State of Colorado recently adopted a water quality standard for clarity of Grand Lake.
- c. **Determination of cumulative effects on the aquatic ecosystem.** As discussed in more detail in the *Grand County DEIS Comment Letter*, the Upper Colorado River is significantly depleted due to the cumulative

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

Page 11

impacts of upstream transmountain diversions. Impacts to the Colorado River are caused by flow depletions. The table, below, provides a summary of those depletions.

**Colorado River High/Low Annual Streamflow Comparison
1950 - 2005***

1950-2005		*1954-2005		*1962-2005		1950-2005	
Fraser at Winter Park		Colorado blw Baker Gulch		Colorado nr Kremmling		Colorado nr Dotsero	
Top 5 Wettest							
Year	Total AF	Year	Total AF	Year	Total AF	Year	Total AF
1984	34,081	1984	79,294	1984	1,772,380	1984	3,064,944
1957	33,045	1983	77,719	1983	1,321,769	1983	2,394,818
1995	32,595	1997	77,054	1997	1,260,346	1997	2,370,025
1983	31,712	1995	72,782	1962	1,239,785	1957	2,338,400
1996	23,256	1986	66,978	1996	1,141,010	1962	2,332,556
Top 5 Driest							
Year	Total AF	Year	Total AF	Year	Total AF	Year	Total AF
1966	5,017	1977	25,856	1964	418,582	1981	850,017
1964	4,706	1989	25,712	1981	406,927	2004	829,383
2002	4,617	1981	22,787	1963	401,375	1954	803,510
1963	4,557	1954	20,353	2004	373,800	1977	766,998
1954	4,011	2002	18,063	2002	362,861	2002	626,028

*Highlighted years are NOT included in the WGFP modeling for these locations.

d. **Determination of secondary effects on the aquatic ecosystem.** The cumulative effects, as summarized on the above table show that the streamflows in the Upper Colorado River, downstream of the Windy Gap Project, have been significantly reduced. This dramatic depletion of streamflow, combined with the projected future depletions, will have a significant adverse effect on the recreation and tourism of this region. This portion of the Colorado River has historically been a destination for river-based recreation and tourism, which is a significant portion of the economy of the region. Please refer to the *Coley/Forrest Report* attached as Exhibit F to the *Grand County DEIS Comment Letter* for a more detailed description of these issues.

Mr. Chandler J. Peter

*Re: Northern Colorado Water Conservancy District, Windy Gap Firming Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application*

December 29, 2008

Page 12

Thank you for an opportunity to discuss Grand County's concerns regarding the effects of the WGFP to the Upper Colorado River aquatic ecosystem. We would look forward to a meeting to discuss these concerns at any time.

Sincerely,

Barbara J.B. Green

cc: Board of County Commissioners of Grand County
Lurline Underbrink Curran
Will Tully (via email: WTULLY@gp.usbr.gov)
J. Scott Franklin (via email: j.scott.franklin@usace.army.mil)
Deborah Lebow-Aal, EPA
George Parrish, EPA
Steve Gunderson, CDPHE
Jim Martin, Director, CDPHE

EXHIBIT A
PROPOSED 404 PERMIT CONDITIONS
FOR
WINDY GAP FIRING PROJECT

1. **Adaptive Management Plan.** Prior to construction of any project feature, the permittee shall develop an Adaptive Management Plan for the Upper Colorado River watershed that can be used to establish flow regimes, habitat improvements and other methods to ensure the health of the aquatic environment.

1.1 The Adaptive Management Plan shall be developed in consultation with the key stakeholders in the Upper Colorado River watershed and shall use as its base Grand County's Stream Management Plan.

1.2 The Adaptive Management Plan shall include a management structure and process whereby key stakeholders meet at regular key intervals during the water year to evaluate snow-pack, stream flows, conditions of fisheries and other influences on and indicators of the health of the aquatic environment. Based on these periodic evaluations and monitoring results, the parties will agree to coordinated operations of reservoir releases, by-passes, diversions, and habitat improvements that will be designed to protect the aquatic environment while allowing the permittee to obtain the available yield for the project.

1.3 The Corps of Engineers shall have continuing jurisdiction over the project during the course of a monitoring period established by the Adaptive Management Plan and shall retain the authority to impose additional conditions as necessary to protect the aquatic environment.

Rationale: Adaptive Management is an iterative process of applying principles of scientific investigation to design and implementation of operations and mitigation in a complex aquatic ecosystem. Such a process is based on the recognition that the impacts to the Upper Colorado River watershed from water depletions associated with the WGFP cannot be accurately predicted, and that how the ecosystem might respond to mitigation techniques is uncertain. The difference between the projected impacts and real world impacts of the original Windy Gap Project are an example of this uncertainty. Adaptive Management also recognizes that establishing absolute mitigation requirements without taking into account actual conditions and the results of monitoring may result in mitigation requirements that either miss the mark altogether, or that impose unnecessary constraints on the permittee. In order to better understand the Upper Colorado River ecosystem and reduce the key uncertainties, there is a need to continuously refine mitigation. Key stakeholders who have an interest in the Upper Colorado River watershed would be involved in the process to identify problems and opportunities.

The Grand County Stream Management Plan identifies problematic stream reaches and identifies scientifically-based recommendations to protect the aquatic environment. As such, the Stream Management Plan provides an excellent base upon which to build an

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap Firming Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

Adaptive Management Plan for the Upper Colorado River watershed.

2. **Grand Lake Water Quality Monitoring and Mitigation.** Prior to construction of any project features, the permittee shall submit to the COE, Grand County, NWCCOG, CDPHE and EPA for approval a monitoring plan for Shadow Mountain Reservoir canal and Grand Lake. The monitoring plan shall identify the parameters and timing of monitoring necessary to evaluate the effect of pumping from Windy Gap Reservoir on Grand Lake clarity. Once the monitoring plan is approved, the permittee shall comply with said plan. When monitoring data indicates WGFP pumping is causing degradation of Grand Lake water quality including a violation of the relevant State of Colorado water quality standards for Grand Lake, or causing a reduction in clarity to below four meters Secchi disk depth or other standards, then pumping shall cease until Grand Lake clarity recovers to pre-pumping levels and a corrective action plan is approved by the COE, Grand County, NWCCOG and EPA.

Rationale: CB-T and Windy Gap pumping introduces pollutants to Grand Lake and this is well documented (*see for example:* US Bureau of Reclamation Report, *Nutrients, Chlorophyll-a and Secchi Disk Transparency of Five Reservoirs on the Colorado Big Thompson Project, 2005 to 2006*, Davine Lieberman, April 2007). The DEIS completely fails to address this problem, although it has been raised by Grand County in many forums. This condition would address the impact of discharging pollutants into Grand Lake via WGFP pumping and is necessary to prevent degradation of the aquatic environment.

3. **Temperature monitoring and mitigation.** Prior to construction of any project features, the permittee shall submit to the COE, Grand County, NWCCOG and Colorado Division of Wildlife (“CDOW”) for approval a temperature monitoring plan that will provide for real time temperature monitoring above and below Windy Gap Reservoir on the Colorado River at locations determined by CDOW for the assessment of whether WGFP pumping causes or contributes to violations of temperature standards. Once the monitoring plan is approved, the permittee shall comply with said plan. If monitoring shows that WGFP diversions are causing or contributing to violations of temperature standards then diversions from the Colorado River at Windy Gap shall be reduced or releases of water shall be made until the project is not causing or contributing to temperature standards violations.

Rationale: The DEIS indicates that the WGFP will cause and/or exacerbate exceedances of temperature standards in the Colorado River. Also, the original 404 permit for the Windy Gap Project required temperature monitoring and such monitoring never took

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap Firming Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

place. This condition is necessary to ensure that the project will not cause or contribute to violations of water quality standards.

4. **Aquatic weed growth.** The increase in aquatic weed growth in Shadow Mountain Reservoir is prohibited. The permittee shall implement methods to control increased aquatic weed growth in Shadow Mountain Reservoir including but not limited to purchase and operation of a weed harvester, drawing down the reservoir water level to allow freezing of weeds every 3 to 5 years or as needed, dredging of sediment deltas that provide substrate for aquatic weed growth, etc.

Rationale: Aquatic weeds and sediment deltas interfere with recreation in the reservoir and contribute significantly to the water clarity problems and other water quality problems in Grand Lake when this water is then discharged into Grand Lake during pumping. DEIS page 3-74. Control of the Shadow Mountain Reservoir weed problem is necessary to prevent WFGP pumping from exacerbating these impacts to the aquatic environment.

5. **Wastewater treatment nutrient removal systems.** The permittee shall pay for the construction of nutrient removal processes at wastewater treatment facilities in the Fraser River so that these facilities are able to discharge effluent quality of 5,000 ug/L total nitrogen and 15 ug/L total phosphorus as assumed in the DEIS impact analysis.

Rationale: DEIS concludes that the Proposed Action will cause limited water quality impacts, specifically increases in nutrient concentrations. These assumed nutrient concentrations relate to algae growth in the Colorado River and the Three Lakes system as well as compliance with water quality standards. These conclusions are based on the assumption that wastewater treatment discharge effluent nutrient concentrations are those listed above. Page 30, Stream Water Quality Modeling and Methods Report, May 2008. Therefore, the permittee should provide these concentrations.

6. **Protection of drinking water supplies.** Prior to construction of any project feature, the permittee shall submit to COE, Grand County, NWCCOG and CDPHE for approval a water quality monitoring plan for those water quality parameters that affect drinking water supplies (*see* Colorado Basic Standards and Methodologies for Surface Waters, 5 CCR 1002-31). Once the monitoring plan is approved, the permittee shall comply with said plan. If monitoring indicates that the project is causing elevations of these parameters, then diversions from the Colorado River at Windy Gap shall cease and a corrective action plan shall be submitted to and approved by the COE, Grand County, NWCCOG and CDPHE.

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

Rationale: Water quality degradation could lead to water treatment problems for communities downstream of Windy Gap. Small communities can not afford increased water treatment costs. WGFP will divert mostly clean water from the Colorado River at its upstream point, which would impact downstream potable drinking water supplies at Kremmling and Hot Sulphur Springs. The Town of Kremmling has an infiltration gallery just above the "USGS site near Kremmling" in the Colorado River.

7. **Compliance with Colorado Water Conservancy Act.** Prior to the construction of any project feature that would facilitate the export of water from the Colorado River, including but not limited to Chimney Hollow Reservoir, the permittee shall prepare and submit to COE, Grand County and the Colorado River Water Conservation District, a plan that includes facilities and other means to protect the Colorado River basin as required by the Colorado Water Conservancy Act.

Rationale: The Colorado Water Conservancy Act, C.R.S. § 37-45-118(1)(b)(II) requires that: "Any works or facilities planned and designed for the exportation of water from the natural basin of the Colorado river and its tributaries in Colorado, by any district created under this article, shall be subject to the provisions of the Colorado river compact, and the 'Boulder Canyon Project Act.' Any such works or facilities shall be designed, constructed, and operated in such manner that the present appropriations of water and, in addition thereto, prospective uses of water for irrigation and other beneficial consumptive use purposes, including consumptive uses for domestic, mining, and industrial purposes, within the natural basin of the Colorado river in the state of Colorado from which water is exported will not be impaired nor increased in cost at the expense of the water users within the natural basin. The facilities and other means for the accomplishment of said purposes shall be incorporated in and made a part of any project plans for the exportation of water from said natural basin in Colorado." The Municipal Subdistrict is an entity created by this Act. The alternatives, including Chimney Hollow Reservoir, are "works" or "facilities" that would export water from the Colorado River.

8. **Reuse.** In order to minimize the amount of water removed from the Colorado River at the Windy Gap Pumping Plant and Reservoir, each of the eastern slope WGFP participants shall, to the maximum extent feasible, reuse and make successive use of their native and foreign reusable water supplies. The maximum extent feasible shall be defined as reusing upon successive uses 80% of the reusable return flows following the initial use. The 80% target includes water that is successively used to extinction. To ensure compliance with this condition, each participant shall prepare and submit to the Bureau of Reclamation, Grand County, COE and EPA an annual report summarizing its total water supplies, total return flows and the amount of reusable water supplies and provide accounting showing the total amount of water that was reused within its water service area. Failure to

Mr. Chandler J. Peter

Re: *Northern Colorado Water Conservancy District, Windy Gap FIRMING Project*
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

make a reuse and successive use of 80% of the water diverted over a cumulative ten year rolling average shall result in an equivalent reduction in diversions from the Colorado River at Windy Gap in the following cumulative ten year period.

Rationale: Maximizing the current and future water supplies of the participants will both minimize the amount of water removed from Western Colorado and minimize the adverse effects to the aquatic ecosystem. (The basis for the 80% figure is the City of Lafayette's reuse plans. DEIS p. 1-27) This permit condition is necessary to satisfy the requirements of: Section 230.11 which requires permittees to take steps to "minimize potential adverse effects" to the aquatic ecosystem; Section 320.4 (a)(1) which requires an evaluation of the impact on the public interest and a balancing of the benefits of the projects (water supply for the participants) against the detriments (impacts to the Colorado River system); Section 320.4(m) requiring implementation of water conserving measures; and Colorado law concerning the reuse of transmountain water in order to lessen the amount of water diverted from the western slope. ("In order to minimize the amount of water removed from Western Colorado eastern slope importers should, **to the maximum extent feasible**, reuse and make successive use of the foreign water." *Denver v. Fulton Irrigating Ditch Company*, 506 P.2d 145, 148 (Colo. 1972) (emphasis added).

9. **Conservation and Drought Response Plans.** Prior to construction of any project feature, the permittee shall require as a condition of service delivery that each participant (except the Plat River Power Authority which is covered separately) shall prepare and implement: 1) a supply-side water conservation plan that shall include among other things a goal of less than 8% system loss that will include leakage in water pipes, pipe breaks, pipe flushing and unaccounted-for water in the raw and treated water distribution systems; 2) a demand side water conservation plan, that shall include among other things a goal of a system-wide average per capita use of 120 gpcd or less; and 3) a drought response plan that has goals of reducing demands based on droughts in ranges of 10%, 25%, 50%, and up to 66%, which will include a prohibition on outdoor watering except to save tree canopies.

Prior to construction of any project feature, the permittee shall require as a condition of service delivery that the Plat River Power Authority ("PRPA") prepare a supply and demand side water conservation plan that is based on best management practices applicable to the industry. PRPA shall also identify steps it has and will take to respond to a drought to reduce its water use, including provisions to acquire power from external sources instead of depleting the Colorado River for this purpose.

The plans shall be submitted to the Bureau of Reclamation, the COE, the

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

Municipal Subdistrict and its participants, NWCCOG and Grand County which shall review these plans and makes recommendations for implementation. If any participant fails to implement these plans, the Municipal Subdistrict shall reduce the amount of water diverted from the Colorado River at Windy Gap by an amount equivalent to the amount that would be provided to such participant.

Rationale: The DEIS notes that water conservation includes both supply-side and demand-side management. If the WGFP is to be permitted as the least damaging environmental alternative, (Section 230.210(a)) then conservation measures need to be included in the permit to correspond with the projected needs of the participants and the statements in the DEIS concerning conservation. The public interest review by the COE requires a balancing of water supply and conservation and efficient use of water resources in all actions which involve the significant use of water, such as the WGFP. Section 320.4(m).

10. **Permit contingent upon compliance with federal, state and local laws.** Prior to construction of any project facility, the permittee shall demonstrate to the satisfaction of COE that it has received the necessary permits, approvals and conditions from all local, state and federal agencies including but not limited to:
 - i) water court change decrees for C-BT and Windy Gap water rights;
 - ii) Congressional approval of Chimney Hollow Reservoir as a C-BT project feature and pre-positioning as a change of C-BT project operations;
 - iii) Congressional approval of C-BT facilities to convey non-irrigation water;
 - iv) compliance with Senate Document 80; v.) State of Colorado 401 Certification;
 - vi) Grand County special use and 1041 permits; vii) compliance with the NWCCOG Water Quality Management Plan; viii) a plan that includes facilities and other means to protect the West Slope as required by the Colorado Water Conservancy Act C.R.S. § 37-45-118(1)(b)(II); and ix) a fish and wildlife mitigation plan as required by C.R.S. § 37-60-122.2.

Rationale: The COE cannot issue a 404 permit for a project that does not comply with law. The decision process related to the WGFP requires resolution of many threshold legal questions, under federal, state and local law that have not yet been resolved. These legal questions are identified in *Grand County DEIS Comment Letter*.

11. **Storage on east slope reservoir other than Chimney Hollow prohibited.** Storage of Windy Gap water will be subject to its water right decrees that allow such storage and administration by the Colorado State Engineer's Office pursuant to the decrees. On the east slope, Windy Gap water can only be stored in Chimney Hollow Reservoir, and no other facility. For purposes of this condition, storage shall mean that water shall not be held in any facility other than Chimney

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

Hollow Reservoir for more than 72 hours.

Rationale: The DEIS states that the Windy Gap water is not stored in any east slope C-BT reservoirs other than Chimney Hollow Reservoir. DEIS p. 2-14. All impact analyses for the proposed actions were made on this basis. This condition is necessary to ensure that this will in fact be the case, to prevent increased depletions to the Colorado River, and to ensure that steps are taken to minimize potential adverse effects to the aquatic ecosystem.

12. **Water Accounting.** The permittee shall submit detailed daily water accounting to the State of Colorado Division Engineer on a monthly basis (with a copy to Grand County), or as required more frequently by the State of Colorado Division Engineer subject to the following requirements:

12.1 The accounting shall: i) show on a daily basis the total amount of water delivered through the Adams Tunnel under each of the C-BT project water rights and the Windy Gap project water rights; ii) distinguish between water delivered directly from Colorado River sources, water delivered by exchange, and stored water being delivered through the tunnel; and iii) show combined storage accounts for each project in all legally available storage facilities, including any and all exchanges between storage accounts.

12.2 The accounting forms for each reservoir shall show carry over storage from the previous year and the corresponding space available under the Colorado "one-fill" rule.

12.3 The accounting forms shall be acceptable to the State of Colorado Division Engineer, Grand County, the Colorado River Conservation District, and the Middle Park Water Conservation District.

12.4 The current daily update between Northern, State of Colorado Division Engineer and Bureau of Reclamation concerning project operations shall be updated to include Windy Gap deliveries and such update shall be provided to Grand County.

Rationale: This condition is necessary to distinguish between Windy Gap and C-BT water being delivered by the projects and to prevent an increase in diversions of C-BT water rights and prevent an increase in storage as stated in the DEIS p. 2-25.

13. **Limitation on C-BT Water Rights.** The C-BT water rights diversions shall be subject to the following limitations:

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

- 13.1 Deliveries through the Adams Tunnel for all C-BT water rights: i) shall not exceed the average monthly volumes; ii) shall not exceed the monthly flow rates and; iii) shall not exceed the average annual volume shown on the table below.

30-Year Rolling Average
CBT Deliveries through Adams Tunnel (1975 – 2004)

Month	(acre-feet)	(cfs)
Jan	24,602	400
Feb	21,907	395
Mar	19,459	317
Apr	13,817	232
May	18,075	294
Jun	14,045	236
Jul	21,469	349
Aug	21,797	355
Sep	17,054	287
Oct	13,690	223
Nov	18,116	305
Dec	24,760	403
Annual	228,791	316

Source; WGFP DEIS WRTR and CDSS Records

- 13.2 The maximum annual diversions for all C-BT water rights through the Adams Tunnel shall not exceed 449,000 af in any single year.

- 13.3 The combined storage of C-BT water in Chimney Hollow and Granby Reservoirs in any year shall be limited to the active storage capacity of Granby Reservoir of 465,568 af and which amount shall include the combined carry over storage in Granby Reservoir and Chimney Hollow Reservoir from the previous year.

Rationale: The DEIS states that total C-BT storage will not change and C-BT water rights and diversions will not be enlarged by the project p. 2-25; that prepositioning will not change the storage yield of C-BT project water p. 2-24; and that C-BT water delivered would not exceed current amounts p. 3-16. This condition is necessary to ensure that this in fact will be the case. All of the impact analyses are based on these assumptions and conditions are necessary to ensure adverse effects to the aquatic ecosystem do not result from any expansion of the C-BT Project depletions as a result of

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

the WGFP. The DEIS states that when C-BT water is stored in Chimney Hollow Reservoir, more space is created in Granby Reservoir. DEIS p. 2-24. More space in Granby Reservoir creates the ability of the C-BT water rights, which are senior to Windy Gap, to store in that space or to store water in Chimney Hollow Reservoir under prepositioning. This creates the potential for expansion of use of the C-BT water rights. The basis for the figures above are historical diversion records for the C-BT Project, as shown in Figure 1 of the WGFP Water Resources Technical Report (December 2007), Table I-2 of the WGFP Water Resources Technical Report Appendices (December 2007), and records from the Colorado Decision Support System of the Colorado State Engineer.

14. **Didymo study and mitigation.** Prior to any WGFP diversions, the permittee shall fund an independent study of the current algae build-up in the Colorado River below Windy Gap diversion dam known as “didymo.” The study shall determine the causes of the problem and identify potential solutions, and shall be reviewed and approved by a panel of representatives from Northern and the Municipal Subdistrict, Bureau of Reclamation, COE, CDOW, EPA and Grand County. If the study shows that the reduction in streamflow is a principal cause of the “didymo” problem, diversions under the WGFP shall cease until a plan to alleviate impacts from didymo can be developed and successfully implemented.

Rationale: This permit condition is necessary to prevent degradation of the aquatic environment.

15. **Three Lakes nutrient studies.** The permittee shall continue to participate in and fund on-going nutrient studies to provide a better understanding of water quality issues in the Three Lakes system. If the studies indicate that WGFP is contributing to violations of water quality standards then pumping shall cease until a management approach is developed that allows pumping in a manner that does not result in water quality degradation.

Rationale: The DEIS identifies water quality issues in the Three Lakes, including violations of existing water quality standards. DEIS Table 3-41. The on-going nutrient study was initiated because of a recognized need to develop water management approaches that minimize impacts to the Three Lakes System. This condition helps insure those studies are meaningful and that WGFP does not contribute to further problems.

16. **Protection of fisheries.** Prior to the construction of any project feature, the permittee shall present for approval to Grand County, COE, EPA and the CDOW a monitoring plan to identify impacts to the fisheries that may be caused by the project. If on the basis of monitoring the CDOW determines that flows in the

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMing Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

Colorado River below Windy Gap have been depleted to the levels that will negatively impact the trout fishery, then bypass flows shall be increased or other mitigation agreed to by CDOW shall be implemented.

Rationale: Recent CDOW studies indicate that trout species, size and abundance have been significantly altered in the Colorado River below Windy Gap by the cumulative impacts of upstream diversions. This is a Gold Medal fishery. WGFP cannot exacerbate impacts to this significant resource.

17. **Protection of boating on the Colorado River.** The permittee shall reduce diversions if flows in the Colorado River as measured at the Kremmling gage drop below the levels necessary for float boating during boating season in Gore Canyon.

Rationale: This condition is necessary to protect water-based recreation.

18. **Limitations on deliveries to participants.** WGFP shall only deliver water to each participant so long as the Windy Gap deliveries constitute no more than 50% of each participant's long-term average water supplies from all sources. Each participant shall submit an annual report to Bureau of Reclamation, Northern, Municipal Subdistrict, EPA, COE and Grand County documenting its water supply ownership and the estimated average-year yield and percentage of yield from all sources.

Rationale: The original and continuing purpose of the C-BT Project is to provide supplemental water supply to water users on the East Slope. Because Windy Gap is a supplemental source of water delivered through the C-BT system, diversions from the Colorado River should also be considered a supplemental water supply. This permit condition is necessary to satisfy the requirements of Section 230.11 which requires permittees to take steps to "minimize potential adverse effects" to the aquatic ecosystem; Section 320.4 (a)(1) which requires an evaluation of the impact on the public interest and a balancing of the benefits of the projects (water supply for the participants) against the detriments (impacts to the Colorado River system); and Section 320.4(m) requiring implementation of water conserving measures ensuring that Windy Gap water remains a supplemental supply.

19. **Middle Park Water Conservancy District to receive firm yield.** The WGFP shall provide a firm annual yield to Middle Park of 3,000 af/year.

Rationale: One of the stated purposes of the WGFP is provide Middle Park with 3,000 af of firm yield. The DEIS indicates that the proposed action will not satisfy this purpose

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap Firming Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

because it will only provide 429 af of firm yield supply for Middle Park. DEIS p. 3-54. Middle Park is the only West Slope entity in the WGFP and because the WGFP diverts water exclusively from the West Slope, Middle Park should be provided water as part of this project, or an alternative project that is less environmentally damaging should be identified that meets the purposes and needs of Middle Park. Otherwise, the WGFP does not meet the requirements of Section 230.10(a).

20. **Mitigation storage space.** The permittee shall make available up to 15,000 af of storage space in Granby Reservoir for use by the West Slope, and credit 10% of all water pumped each year to this mitigation storage account, which water may be carried over to subsequent years. Windy Gap pumping facilities shall be available to store other water to be provided by the West Slope whenever capacity exists. Windy Gap shall be reimbursed for any unit costs for the pumping of non-Windy Gap water supplies. The 15,000 af storage account shall be considered “if and when” storage, subject to spilling upon filling of Lake Granby by C-BT or Windy Gap water supplies. This mitigation pool shall be available to Grand County for use on the West Slope for streamflow enhancements identified in the Stream Management Plan and as part of the Adaptive Management Plan, additional water supplies, as an off-set to recreational impacts at Lake Granby, or any other purpose.

Rationale: The Upper Colorado River has been significantly depleted from native conditions, and water supplies available to maintain the remaining flows to support and protect the aquatic ecosystem are extremely limited. See cumulative impacts sections in Chapter 3 of DEIS including Figures 3-3 and 3-4; *Bishop Brogden and Associates Report* (Exhibit C to *Grand County DEIS Comment Letter*), describing that only 17% of the native flows will remain after the two pending firming projects; and *Coley/Forrest Memorandum*. To mitigate this degradation this condition is necessary to satisfy the requirements of Section 230.11 which requires steps to be taken to “minimize potential adverse effects” to the aquatic ecosystem and Section 320.4 (a)(1) which requires an evaluation of the impact on the public interest and a balancing of the benefits of the projects (water supply for the participants) against the detriments (impacts to the Colorado River system). The national concern for protection and utilization of this valuable resource tips the balance in favor of providing a mitigation pool of water to help to minimize the effects on the aquatic environment in the Colorado River.

21. **Limitation of Further Diversions by Windy Gap Participants and non-WGFP users.** This permit does not authorize the owner of Windy Gap units that are not part of the WGFP to divert additional water from the Colorado River over that amount that has historically been diverted by those owners from 1985 to 2007. Permittee shall provide records of diversions by owners of those units that

Mr. Chandler J. Peter

Re: Northern Colorado Water Conservancy District, Windy Gap FIRMING Project
Grand County Cooperating Agency Comments:
Section 404 Permit Application

December 29, 2008

EXHIBIT A, continued:

are not included in the WGFP for inclusion of those amounts in this permit. Water from the WGFP shall be limited to use by the participants identified in the DIES in the percentages of ownership as described on Exhibit B, "Windy Gap Ownership and Transfer History" of this letter.

Rationale: The DEIS discloses that the WGFP only "firms" 315 [sic 344.5] units of the 480 units in the WGFP p. 1-39. The DEIS likewise discloses the participants in the WGFP on Table 1-6. (Exhibit B attached of this letter lists those current owners and their percentages) This term is necessary to ensure that the additional units of Windy Gap Project that are not included in the WGFP are not attempted to be firmed by this project and that the projected users of WGFP water are limited to those disclosed in the DEIS. Otherwise there would be an increase in depletions to the Colorado River with additional water users creating additional demands on these water resources.

22. **Monthly and Daily Windy Gap Diversion limitations.** Diversions by the Windy Gap water rights shall be limited to the daily rates (cfs/day) and monthly volumes (af/month) set forth in the following table:

Month	April	May	June	July	August	Sept-Mar
af/month	4,521	19,866	14,618	6,006	1,072	0
Days	30	31	30	31	31	Na
af/day	151	641	487	194	35	0
cfs/day	76	324	246	98	17	0

af/month divided by days in month = af/day; divided by 1.98 = cfs/day

Rationale: By using a monthly time step model the DIES projects diversions on a monthly basis through the entire study period, rather than on a daily basis. DEIS p. 3-14. Impacts and percentage changes in the DEIS are then displayed on an average monthly basis or an annual average basis, rather than on a daily basis. See, DEIS Table 2-6 for direct and indirect effects and Tables 3-14, 3-15 and 3-16 for cumulative effects. Because impacts will occur on a daily basis, this condition is necessary to ensure that the diversions creating the impacts on a monthly basis will not in fact be exceeded and to take steps to minimize potential adverse effects to the aquatic ecosystem. The bases for the figures in this table are Table D-3 of the Water Resources Report Technical Appendices (December 2007).

EXHIBIT B
WINDY GAP OWNERSHIP AND TRANSFER HISTORY

Owners	Units Transferred	Current Windy Gap Units Owned	Windy Gap Firming Project Units	Requested Storage Volume (af)
ORIGINAL OWNERS				
Longmont (80 Units)	0	80	80	13,000
Boulder (80 Units)	43 Units to Broomfield in 1991	37	0	-
Estes Park (80 Units)	77 Units 40 Units to PRPA in 1976 1 Unit to Central Weld County WD in 1985 35 Units to Superior in 1988 1 Unit to Left Hand WD in 1988	3	0	-
Fort Collins (80 Units)	80 Units to PRPA in 1976	0	0	-
Greeley (80 Units)	20 Units [??] 13 Units to Broomfield in 1989 3 Units to Fort Lupton in ____ 5 Units to Evans in ____ 12 Units to Little Thompson Water District in ____	64	44	7,000
Loveland (80 Units)	40 Units to PRPA in 1976	40	40	6,000
Totals (480 Units)		224 Units	184 Units	26,000
SUBSEQUENT OWNERS				
PRPA	Acquired 160 Units in 1976	160	51.5	13,000
Central Weld County Water District	Acquired 1 Unit in 1985	1	1	330
Superior Metropolitan District #1	Acquired 35 Units in 1988 6 Units to Louisville in 2002	15	15	4,500

EXHIBIT B
WINDY GAP OWNERSHIP AND TRANSFER HISTORY

Owners	Units Transferred	Current Windy Gap Units Owned	Windy Gap Firming Project Units	Requested Storage Volume (af)
	7 Units to Erie in 2002 & 2003			
Left Hand Water District	Acquired 1 Unit in 1988 1 Unit to Lafayette in _____	0	0	-
Broomfield	Acquired 13 Units in 1989 Acquired 43 Units in 1991	56	56	25,200
Louisville	Acquired 6 Units in 2002 Acquiring 3 Units from Greeley	6	9	2,700
Erie	Acquired 3 Units in 2002 Acquired 4 Units in 2003 Acquired 7 Units from _____	14	20	6,000
Evans	Acquiring 5 Units from Greeley	0	5	1,750
Little Thompson Water District	Acquiring 12 Units from Greeley	0	12	4,850
Lafayette	Acquired 1 Unit from Left Hand Water District Acquiring 7 Units from _____	1	8	1,800
Fort Lupton	Acquired 3 Units in _____	3	3	1,050
Middle Park		0	0	3,000
Totals		480	344.5	90,180

SOURCE:

- Attachment #7 to Package of City of Longmont 2005 City Council Retreat Water Supply and Storage Issues
- Exhibit A to Longmont City Council Communication May 6, 2008, Windy Gap Firming Project Update
- DEIS for Windy Gap Firming Project (August 2008), Section 1.7 and Table 1-6