



GRAND COUNTY MANAGER'S OFFICE

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CERTIFICATE OF RECOMMENDATION

TO: GRAND COUNTY PERMIT AUTHORITY

FROM: Grand County Manager's Office

DATE: August 1 and 2, 2012

RE: 1041 Permit – 2012 Windy Gap Firing Project

APPLICANT: Municipal Subdistrict of the Northern Colorado Water Conservancy District, acting by and through the Windy Gap Firing Project Water Activity Enterprise.

LOCATION: As described in the Final Environmental Impact Statement for locations within Grand County, Colorado

ZONING: Forestry and Open Zone District (F)

APPLICABLE SECTION OF CODE: Grand County Administrative Regulations for Areas and Activities Designated as Matters of State Interest and Grand County Master Plan.

STAFF CONTACT: Lurline Underbrink Curran

EXHIBITS: Letter of Application and 1041 Application Packet, Planning Commission Draft Minutes and Draft Resolution

REQUEST: Applicant is requesting approval of a 1041 Permit for the 2012 Windy Gap Firing Project in order to firm up the yield originally contemplated by the Windy Gap Project.

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DISCUSSION:

The Municipal Subdistrict of the Northern Colorado Water Conservancy District (Subdistrict) is the owner of the Windy Gap project. The Subdistrict, acting by and through the Windy Gap Firming Project Water Activity Enterprise, has proposed the Windy Gap Firming Project (2012 WGFP) which would firm up the yield contemplated in the Windy Gap Project. The Subdistrict has submitted an application for a permit under Grand County Areas and Activities Designated as Matters of State Interest (1041 permit) for the 2012 WGFP. The Subdistrict has applied for the Grand County 1041 permit under protest. Applying under protest means that the Subdistrict is reserving all of its legal arguments as to why they do not need a new permit.

The Subdistrict bases its protest on the County's issuance of the original Windy Gap Permit which it feels covered the depletions contemplated as well as mitigated the impacts to Grand County. Further, the 2012 WGFP does not require any construction or alteration of the current Windy Gap Project in Grand County.

Listed below are some of the new issues that were not considered in the Original Windy Gap Project permit:

1. The 2012 WGFP proposes prepositioning, which is a different operational regime for the Windy Gap water rights. Prepositioning was never contemplated or permitted with the original Windy Gap Project and it changes the timing and magnitude of diversions from those originally taken into account by Grand County. Prepositioning is a method whereby Colorado Big Thompson Project (C-BT) water will be delivered through the system to the preferred alternative Chimney Hollow Reservoir, a non-federal facility thereby making additional room in Granby Reservoir. When Windy Gap or 2012 WGFP water is delivered into Granby Reservoir, the C-BT water in Chimney Hollow would be exchanged for a like amount of Windy Gap water (both 2012 WGFP and Windy Gap) in Granby Reservoir. Prepositioning requires an amendment to the existing Amendatory Contract (Carriage Contract).
2. The Carriage Contract is a contract issued by Bureau of Reclamation (Reclamation) to allow Windy Gap water to be transported through the C-BT project. Prepositioning would allow not only the 2012 WGFP water to be transported but also allows C-BT water to be stored in a non-federal facility until the exchange is made. The 2012 WGFP will change the impacts to the Colorado River over those being caused by the Windy Gap Project.
3. The amendment to the Carriage Contract is a Major Federal Action under NEPA that required the Bureau of Reclamation to prepare and Environmental Impact Statement to disclose the new impacts associated with the 2012 WGFP. In addition, Reclamation must make a determination that Windy Gap Firming Project is in compliance with Senate Document 80.

4. The original Windy Gap Agreement, also known as the Azure Agreement and the Windy Gap Supplement (1980 and 1985 Agreements) are incorporated into the Windy Gap water rights decrees. The draft Windy Gap FIRMING Project Intergovernmental Agreement (WGFP IGA) which is an attachment to the application amends the 1980 and 1985 Agreements and will be incorporated into the Windy Gap decrees.
5. The 1980 Grand County 1041 Permit was issued to the Subdistrict for the cities of Estes Park, Boulder, Longmont, Greeley, and Loveland as well as the Platte River Power Authority and their projected needs by the year 2000. The 2012 WGFP participants are City and County of Broomfield, Central Weld County Water District, Town of Erie, City of Evans, City of Fort Lupton, City of Greeley, City of Lafayette, Little Thompson Water District, City of Longmont, City of Louisville, City of Loveland, Platte River Power Authority and Town of Superior. The Subdistrict explains this difference by the fact that participants can sell or lease their respective shares and that the original Windy Gap Project was never intended to limit the original participants to the project forever. The additional participants change the demand from the demand projected in 2000. Grand County's 1980 Permit was based on the Purpose and Need as stated in the Environmental Impact Statement which did not discuss the possibility of sale or lease.
6. There is additional impact to the aquatic habitat and terrestrial life that were not considered in the original EIS or permit issued by Grand County. Even though the application submitted for the 2012 WGFP acknowledges there will be a loss of habitat, it states that it will not be substantial because it is less than 15%, Grand County does not use a 15% threshold to determine whether there will be significant deterioration or degradation.

HISTORY OF EXISTING WINDY GAP PROJECT

In order provide a complete review of the 2012 WGFP it is useful to understand the history of the original Windy Gap Project which is a diversion at the Windy Gap Reservoir that is pumped through a pipeline into and via the C-BT project to the front range to an identified group of participants.

1. **The 1980 Azure Agreement and 1985 Supplement.** West slope objections to the Windy Gap water rights led to the 1980 Azure Reservoir and Power Project Agreement (1980 Agreement). The 1980 Agreement was Attachment 1.A. of the Final Environmental Impact Statement (Final EIS) for the Windy Gap Project, as well as an attachment to the Grand County's 1041 permit, and the Windy Gap water right decrees.

West slope objections centered on the Subdistrict's failure to prepare a compensation plan as required by the Water Conservancy District Act. Whenever facilities are constructed by a conservancy district that diverts water from the Colorado River a compensation plan is required. Key elements of the 1980 Agreement are:

- Commitment by the Subdistrict to fund the construction of the Azure or a replacement Reservoir and Power Plant, or if infeasible, fund an alternative project or a cash payment to the CRWCD.

- Payment of \$25,000 to Grand County for salinity studies of the Colorado River.
- Payment of \$150,000 to the Town of Hot Sulphur Springs for assistance in improving its water treatment facility and \$270,000 for improving its wastewater treatment facility.
- Payment of \$500,000 to plan, construct, and design facilities needed for ranchers to maintain their diversion structures on the Colorado River.
- An agreement by the Subdistrict to subordinate its Windy Gap decrees to all present and future in-basin irrigation, domestic, and municipal uses, excluding industrial uses, on the Colorado and Fraser rivers and their tributaries above the Windy Gap Reservoir site.
- An agreement by the Subdistrict to volumetric limits on diversions, which included a maximum single-year diversion of 90,000 AF/year and a maximum of 65,000 AF during any consecutive 10-year period. Per the 1985 Supplement to the 1980 Azure Settlement Agreement, these diversion limitations apply to deliveries through the Adams Tunnel, as opposed to diversions at Windy Gap Reservoir.
- An agreement by the Subdistrict to bypass flows necessary to meet senior downstream water rights.
- An agreement by the Subdistrict to cooperate with CDOW and others to allow public use for recreation at Windy Gap Reservoir.

The 1980 Agreement was executed by the Subdistrict, Colorado River Water Conservation District, (River District), Grand County Board of County Commissioners, Northwest Colorado Council of Governments, Three Lakes Water and Sanitation District, Winter Park Water and Sanitation District, Middle Park Water Conservancy District, Town of Hot Sulphur Springs, Town of Granby, Ritschard Cattle Company, Inc. Colorado River Land Corporation, Jacques Ranch I, Jacques Ranch II, David Mayhoffer, Lloyd A. Palmer, Edna L. Palmer, Leo Marte, Eunice Marte, Jessie Joyce Thompson, David Howard Thompson, Joseph McElroy, Isabel McElroy, John H. McElroy, Mary K. McElroy, John Sheriff, Ida L. Sheriff, H. Grady Culbreath, Richard P. Doucette, Christine O. Doucette, Gene Ritschard, William Henry Thompson, Anita Lewis Thompson, Stanley Broome.

The parties to the 1980 Agreement also agreed that:

3. "Implementation of the provisions of this Agreement will constitute compliance with all objections to the Draft Environmental Impact Statement for the Windy Gap project by any Party hereto, furnishes satisfactory mitigation measures for the development of the Windy Gap Project and following a hearing and decision of the Grand County Commissioners under paragraph 36 (assuming the decision is favorable) will constitute compliance with all valid permitting requirements imposed by any of the Parties". 1980 Agreement Part IV, paragraph 3.

All parties to the 1980 Agreement, paragraph #35, agreed that "*All environmental concerns among the Parties have been resolved by this Agreement regardless of whether none, all or only*

one facility is constructed and operated” The parties further recognized the Windy Gap project and the Azure Reservoir and Power Plant Project were separate projects and that if the Azure Project could not be built for any reason, that an alternative project could be selected. Both Windy Gap and the alternate to the Azure Project, Wolford Mountain, were constructed. **(Paragraph #35 was deleted and superseded by the 1985 Supplement).**

In 1985, under Resolution 1985-3-5, the 1980 Agreement was supplemented to amend and/or deleted parts of the 1980 agreement (1985 Supplement). The Rock Creek Reservoir, originally considered as the replacement source for the Azure Power Project, was changed to the Wolford Mountain Project which was constructed.

The 1985 Supplement had several purposes including 1) It provided western Colorado with financial assistance (\$10,000,000) to enable the River District to construct a water storage facility in Water Division No. 5 (the Wolford Mountain Project was permitted by Grand County in 1990 with both a 1041 Permit and Special Use Permit); 2) It remove the Subdistrict from any obligation under the April 30, 1980 Agreement to construct the Azure Reservoir and Power Project or alternate facility and removed the restriction on Windy Gap diversions stated in paragraph 15 of the 1980 Agreement which restricted Windy Gap from diverting any water from the west slope of Colorado through Windy Gap prior to the initiation of construction of Azure Reservoir and Power Project or an alternate reservoir agreed to by the River District; 3) The 1985 Supplement designated the measuring point for diversion as the Adams Tunnel (previously it was measured at Windy Gap).

2. Volumetric Limitations on Windy Gap Water Rights.

The 1980 Agreement, paragraph #34, states that the *“Subdistrict may divert under its decrees an amount of water not in excess of 90,000 acre feet in any one year, and not to exceed an average of 65,000 acre feet per year in any consecutive ten year period. It is anticipated by the parties that the long term annual yield of water to the Subdistrict will be approximately 54,000 acre feet”*.

The Final EIS for the Windy Gap project also states under Purpose and Need that *“current and prospective West Slope water rights and users of Colorado River water would be compensated for loss of an annual average depletion of 54,000 acre-feet of water”*. The average annual firm yield expected of the Windy Gap project was 48,000 AF delivered to the east slope, 3000 AF to Middle Park Water Conservancy District (Middle Park), and “shrink” charges of 10%. Shrink is attributable to evaporation and system losses during storage and delivery.

The Record of Decision (ROD) issued by the Reclamation and a Record of Decision Permit Application No. 6520 issued by the U. S. Army Corp of Engineers (Corps) for the Windy Gap Project also refers to volumetric limitations.

The ROD (Paragraph II. A. 2.) states that

“the Windy Gap Project would divert a long term annual average of about 56,000 acre-feet from the Upper Colorado River Basin near Granby, Colorado. The diverted water would be pumped from the West Slope through Colorado-Big Thompson Project facilities

to the East Slope cities of Estes Park, Boulder, Longmont, Greeley, Loveland, and Platte River Power Authority.”

The 1980 Agreement documented the amount that could be diverted at Windy Gap Reservoir as a means of limiting the Windy Gap Project. The Subdistrict states that it can pump whatever water is in priority from the Colorado River, subject to storage capacity in Granby, as long as the amount of water transported through the Adams Tunnel is within the volumetric limits. As previously stated, the 1985 Supplement designated the measuring point for diversion as the Adams Tunnel (previously measured at the Windy Gap Reservoir).

Following is a summary of the Windy Gap decrees:

1. **Windy Gap Pump, Pipeline and Canal.** 600 c.f.s. absolute direct flow right from the Colorado River (no amount remain conditional). This started out as 300 c.f.s. (conditional) with an appropriation date of 6-22-1967 in CA 1768 decreed 2-24-1978, with the amount confirmed on remand in an Interlocutory Decree dated 10-27-1980. In Case No. W-4001, the **1st Enlargement** was decreed 10-27-1980, for an additional 100 c.f.s.(conditional) with an appropriation date of 7-9-1976. In Case No. 80CW108 the **2nd Enlargement** was decreed 10-27-1980, for an additional 200 c.f.s. (conditional) with an appropriation date of 4-30-1980, thus bringing the total to 600 c.f.s. in 1980. After the system was built in 1985, the district began to make the right absolute. In Case No. 88CW169 decreed 2-6-1989, 190 c.f.s. of the original 300 cfs was made absolute, leaving 110 c.f.s. conditional. Finally in Case No. 89CW298 decreed 7-19-1990, the remaining 110 c.f.s. of the original right was made absolute ($110 + 190 = 300$), plus the 100 cfs of the 1st Enlargement and the 200 c.f.s. of the 2nd Enlargement were made absolute, thus making the entire 600 c.f.s. for the direct flow right absolute as of 1990.

2. **Windy Gap Reservoir.** Out of the total amount of 1,546.14 AF, 445 AF is absolute and 1,101.14 is conditional for a storage right from the Colorado River. This started out as 1,546.14 AF (conditional) with an appropriation date of 6-22-1967 in CA 1768 decreed 2-24-1978, with the amount confirmed on remand in an Interlocutory Decree dated 10-27-1980. In Case No. 88CW169 decreed 2-6-1989, 445 AF of the original 1546.14 AF was made absolute, leaving 1,101.14 AF conditional. In Case No. 08CW92 decreed 4-12-12 (which is the latest diligence decree) the 1,101.14 AF was continued as conditional until April 2018.

3. **Jasper Pump and Pipeline.** All 300 c.f.s. remains conditional for this direct flow right from Willow Creek. This right has an appropriation date of 6-22-1967 in CA 1768, decreed 2-24-1978, with the amount confirmed on remand in an Interlocutory Decree dated 10-27-1980. In Case No. 08CW92 decreed 4-12-12 (which is the latest diligence decree) the 300 cfs was continued as conditional until April 2018.

4. **Jasper Reservoir.** All 11,292.58 AF remains conditional for this storage right from the Colorado River and Willow Creek. This right has an appropriation date of 6-22-1967 in CA 1768, decreed 2-24-1978, with the amount confirmed on remand in an Interlocutory Decree dated 10-27-1980. In Case No. 08CW92 decreed 4-12-12 (which is the latest diligence decree) the 11,292.58 AF was continued as conditional until April 2018.

In summary:

All 600 c.f.s. is absolute for the Windy Gap direct flow diversion

445 AF is absolute for the Windy Gap Reservoir storage right with 1,101.14 AF remaining conditional

All 300 c.f.s. of the Jasper direct flow right remains conditional

All 11,292.58 AF of the Jasper Reservoir storage right remains conditional

3. Mitigation for Original Windy Gap Project.

The 1980 Agreement contained some mitigation for the impacts of the Windy Gap Project. The ROD for the original Windy Gap Project incorporates the 1980 Agreement and refers to additional mitigation.

Section V of the ROD provides in pertinent part:

“The following mitigation measures have been agreed to by the sub district: (1) about 11,000 acre-feet of the average annual project yield of 56,000 acre-feet will be committed to maintain minimum “instream flows; (2) existing and some future water rights will be protected; (3) disturbed soil and vegetation will be reclaimed; (4) various commitments by the sub district to West Slope interests will protect prospective West Slope uses of Colorado River water; and (5) threatened and endangered fish will be protected by resolution of the sub district to provide certain conservation measures”.

The Record of Decision Permit No. 6520 states under paragraph 2. “... and current and prospective West Slope water rights and users of Colorado River water would be compensated for loss of an annual average depletion of 54,000 acre-feet of water”. The permit goes on to apply mitigation.

“All practicable means to avoid or minimize environmental harm from the project have been adopted. As identified in the EIS, the following mitigation measures will be incorporated to substantially reduce impacts associated with the project:

A minimum flow agreement between Northern Colorado Water Conservancy District and the Division of Wildlife was signed 23 June 1980. The terms of the agreement will lessen the adverse impacts of the project on aquatic life.

The pipeline route will be revegetated and vegetation will be planted around the reservoir to minimize impacts on vegetation.

A plan to mitigate wetlands inundated by the reservoir will be prepared and coordinated with the Environmental Protection Agency.

Reservoir operations and architectural controls on structures are being utilized to lessen the impacts of aesthetics.

Impacts on cultural resources are being mitigated through controlled surveys and data gathering.

Roads will be permanently and temporarily relocated to reduce interference with normal traffic flow.

Conservation measures to aid recovery of endangered fishes in the Colorado River will be accomplished.

Mitigation associated with salinity increases and reduced flows downstream are being handled by the Colorado River Salinity Control Project.

Monitoring of pre- and post-project water temperatures will occur to direct and possibly correct and post-project temperature changes.”

The instream flows were implemented through a Memorandum of Understanding between the Subdistrict, Northern and Division of Wildlife, Colorado Department of Natural Resources, Relating to Minimum Stream Flow in Association with the Windy Gap Diversion Project, it was agreed to the following fixed rates of flows:

- From Windy Gap Diversion Point to the mouth of the Williams Fork River: 90 cfs.
- From the mouth of Williams Fork River to the mouth of Troublesome Creek: 135 cfs.
- From the mouth of Troublesome Creek to the mouth of the Blue River: 150 cfs.
- In addition, once in every three years, if equivalent flushing flows do not otherwise occur pas the Windy Gap Diversion Point, Subdistrict shall release on call by the Colorado Water conservation Board, on the recommendation of the Division of Wildlife, a total of

450 c.f.s. of water for fifty hours, or its equivalent, during the period of April 1 through June 30, for flushing flow purposes.

These CWCB minimum instream flow rates are required only when Windy Gap is diverting. Otherwise, the inflow is required to be the outflow.

Colorado Water Conservation Board (CWCB) decrees for instream flows in these amounts and stream segments described above were issued under 80CW446, 80CW447 and 80CW448 dated September 24, 1982.

4. The Windy Gap Project 1041 Permit.

The Windy Gap Project was permitted in 1980 by the Grand County Board of County Commissioners acting as the 1041 Permit Authority by Resolution 1980-6-1. The permit was reviewed and issued under Chapter 5 of the Grand County 1041 Regulations for Municipal and Industrial Water Projects. Grand County also issued a Special Use Permit for the Windy Gap Project under Board of Commissioner Resolution 1980-6-4. Grand County's Zoning Regulations required a Special Use Permit for reservoirs impounding 100 acre feet or more of water.

The 1041 Permit that was issued by Grand County relied upon the Draft EIS and the 1980 Agreement. The Purpose and Need stated in the Final EIS was *"to supply the municipal and industrial water needs of the cities of Estes Park, Boulder, Loveland, Longmont, and Greeley; and Platte River Power Authority. The Project would supply all of the additional municipal and industrial water needs of the service area projected for the year 2000"*. It further relied on the outcome of a Final EIS in substantial accord with the Draft EIS as well as the ROD issued by Reclamation and Record of Decision Permit issued by the Corps.

Grand County's 1041 permit allowed the design, construction and operation of the Windy Gap Project, Reservoir and Pipeline, as proposed and described in the Environmental Impact Statement. The permit also required the Subdistrict to comply with all terms and provisions of Senate Document 80.

The 1041 Permit was amended in 1985 to recognize the 1985 Supplement.

5. Special Use Permit.

The County issued a Special Use Permit for the Windy Gap Project. Recent case law clarifies that the County does not have jurisdiction to require that the Subdistrict obtain a Special Use Permit for the 2012 WGFP. See *Board of County Commissioners of the County of Boulder vs. Hygiene Fire Protection District* dated December, 2009. This decision says that no County zoning or land use regulations (other than 1041) apply to special districts or governmental entities. When a project is proposed to a county by a governmental entity, the C.R.S. § 30-28-110(1)(c) "location and extent" controls.

6. Other Agreements

In 1988, Grand County entered into a Water Allotment Contract with Middle Park. This allotment was based on Grand County's desire to obtain a portion of Middle Parks' water

designated to be stored in Granby Reservoir. The allotment contract was specifically subject to and described in the Windy Gap Agreement and Supplemental Agreement. Grand County was responsible for obtaining whatever Court proceedings were necessary to transfer the rights to the location and use necessary for the County. Middle Park agreed to convey to Grand County 15 acre feet per year of water free of charge which was transferred to the County in the form of a Quit Claim Deed.

MITIGATION

There has been much confusion regarding the mitigation that will be required and applied to the incremental impacts for the 2012 WGFP and the subsequent impacts of the Windy Gap Project that were not identified or considered properly in the permitting of that project. The unforeseen impacts of the Windy Gap Project are not direct impacts of the 2012 WGFP. As previously documented in the history of the Windy Gap Project, implementation of the provisions of the 1980 Agreement constituted compliance and furnished satisfactory mitigation measures for the development of the Windy Gap Project.

The direct impacts of the 2012 WGFP will have to be mitigated and mitigation has been proposed in the Final EIS. The ROD has not been issued nor has the permit required from the Corps of Engineers. These two documents may require additional mitigation beyond what has been suggested in the Final EIS. The State of Colorado through the Wildlife Commission, has issued a Wildlife Mitigation Plan for both the 2012 WGFP and Denver's Moffat Firming Project.

All mitigation applied, by any agency having permitting authority, will be permit conditions of the 2012 WGFP, if approved. Grand County is a cooperating agency on the 2012 WGFP. As such, it has continued to advocate for appropriate mitigation and to provide all information requested by the Lead Agency (Reclamation) as well as the Corps.

ENHANCEMENTS

There has been a great deal of confusion regarding mitigation vs. enhancements. The Subdistrict has proposed certain enhancements through a draft document called the Windy Gap Firming Project Intergovernmental Agreement (WGFP IGA). The enhancements are intended to address, in part, existing conditions in the Colorado River below Windy Gap particularly during the low flow periods when Windy Gap is not pumping. The enhancements are NOT mitigation and the WGFP IGA is specific that the enhancements are not to be used as mitigation.

Temperature exceedances and low flow stresses the aquatic environment during the low flow periods. Low flow also makes it difficult for the irrigators to access their water rights. Currently there are no resources available to address these existing concerns.

The enhancements are defined in the WGFP IGA and address a number of concerns expressed by Grand County, Middle Park, and the River District. If the 2012 WGFP is not approved, the enhancement offerings will be withdrawn.

Since Grand County is a permitting agency for the 2012 WGFP, the Board of County Commissioners was not involved in the negotiations for the enhancements and has not approved the proposed WGFP IGA.

There are some instances where the proposed enhancements could be considered to provide additional offset to impacts of the 2012 WGFP.

PROPOSED WINDY GAP FIRING PROJECT INTERGOVERNMENTAL AGREEMENT

The Subdistrict first approached Grand County prior to the Preliminary EIS for the 2012 WGFP to discuss possible enhancements to help improve existing conditions in the Colorado River. The existing Windy Gap Project has had impacts to the aquatic environment of the Colorado River that were not predicted in the original EIS or ROD. The enhancements offered in the WGFP IGA would be aimed at the current conditions. Over the past several years, County staff, Middle Park, and the River District have been negotiating a draft WGFP IGA with the Subdistrict and Northern that could address some of these exiting impacts.

The Subdistrict has included a copy of the draft WGFP IGA in the application packet. This WGFP IGA is still in draft form as the Board of County Commissioners has not reviewed or approved the WGFP IGA. If approved, this WGFP IGA may have to be modified depending on the outcome of the 1041 permit review and hearings, as well as State of Colorado's finding on the legality of implementation strategies for some of the offerings, and any permits issued by federal agencies which could conflict or change sections of the WGFP IGA.

The WGFP IGA allows for the construction of a 90,000 AF Chimney Hollow Reservoir or any combination of reservoir or reservoirs on the East Slope that are constructed as an alternative or in addition to the preferred alternative (Chimney Hollow) identified in the Final Environmental Impact Statement (Alternative Reservoir) provided that the cumulative active storage capacity of Chimney Hollow Reservoir and any Alternative Reservoirs does not exceed 90,000 acre feet AND as long as the environmental footprint in Grand County is not affected.

The WGFP IGA provides enhancements to Grand County and Middle Park as well as certain assurances to the River District in its mission to protect the Colorado River.

A summary of the negotiated enhancements for the Colorado River in Grand County include:

- An opportunity for Grand County to pump and store water in Granby Reservoir for release to the environment as directed through the effort termed Learning by Doing. Most of the current stresses to the river occur in the late summer and early fall, typically when Windy Gap or the proposed 2012 WGFP would not be pumping. The proposed WGFP IGA provides water for Grand County under three scenarios.
 - a. Transfer Water. Middle Park calls for water for its contractees at the beginning of the pumping season currently. Any water not released for Middle Park at the end of the season reverts back to the Subdistrict and is transported to the east slope. Under the draft WGFP IGA, the water that Middle Park does not use at the end of the season is transferred to Grand County to be released to the environment or stored for the next season in space provided in Granby Reservoir. If the Subdistrict is issued all of the necessary permits for construction of Chimney Hollow Reservoir and accepts the permits, the transfer water will be available to Grand County on a shared basis until Chimney Hollow is constructed.

b. Variable Water. Grand County would have an opportunity to pump water on completion of WGFP. Grand County would receive 3.8% of the 2012 WGFP pumping after the project pumps 15,000 AF up to a net credited storage of 1500 AF. If the 2012 WGFP participants stop pumping prior to the time Grand County has received 1500 AF and the rights are still in priority, Grand County can elect to continue pumping to attain the 1500 AF if there is storage available. On average, this variable water provides 500 AF.

c. Year End Pumping. After the 2012 WGFP ceases to pump, Grand County can elect to continue pumping Windy Gap water constrained only by the carryover storage available. Grand County will be required to pay for the pumping costs. *In the Colorado River Cooperative Agreement, Denver Water will provide \$1M to offset the pumping costs to Grand County. It can be used annually to pay for 50% of the pumping costs.*

d. Grand County is provided with 4500 AF of storage space and Middle Park 3000 AF for a total of 7500 AF, which can be shared between the two entities. Grand County is allowed the total 7500 AF of storage upon approval of the WGFP IGA. Upon completion of the Chimney Hollow, the storage for Grand County reduces to 6000 AF. Upon an 85% fill of the active storage capacity of Chimney Hollow Reservoir, Grand County's storage space is reduced to 4500 AF but can then be shared with Middle Park's 3000 AF of storage.

e. Learning by Doing is akin to adaptive management in that conditions of the resources, as they unfold in the future, will be analyzed and the enhancements offered will be applied to address those conditions. It keeps the determination as to what may be a benefit from being static and instead being active as to condition presented. There is a set membership on the management team with advisory team members anticipated. All members are committed to the process for perpetuity and cannot disengage. This allows for a partnership in making appropriate decisions, with no finger pointing. Denver and Northern are both on the management committee. A consensus as to how the water and money resources is the method of decision, but if a consensus cannot be reach in any given year, Grand County will determine how the water resource will be applied that year.

The WGFP Final EIS proposes mitigation for impacts of the 2012 WGFP that were identified in the EIS process. Comments submitted to the Corps and the Reclamation on the 2012 WGFP DEIS and Final EIS question whether the proposed mitigation is adequate to address the new impacts to the Colorado River, Grand Lake, and Willow Creek. The County received copies of those concerns. They are part of the record of this proceeding and will be introduced at the public hearing.

- The WGFP IGA provides a firm yield to Middle Park and describes how that firm water will be delivered. Middle Park's current yield of 3000 AF is not firm and is subject to the same non-reliance as the original Windy Gap Project.
- Public access and protection of open space.

- There will be a pump fund established for the Meadow Pumpers above Kremmling to assist with repair and replacement of pumps.
- A flow measuring fund will be established, however if not used in ten years, will be split between the Subdistrict and Learning by Doing.
- The Subdistrict's Jasper Water rights will be abandoned.
- Future water acquisition, appropriation and development of projects in Grand County are curtailed unless approved by Grand County and the River District.
- Shoshone outage protocol is included for the Subdistrict.
- Participation in Learning by Doing.
- Study of a bypass through Windy Gap Reservoir is provided.

List of Agreements to be executed together with WGFP IGA (closing documents)

- Agreement with Northern Water
- Grand Lake Clarity Agreement (known as Umbrella agreement)
- Appraisal Study now known as Alternates Development Report
- Processed Materials Agreement
- Windy Gap Decree
- Grand County RICD Stipulation
- Learning by Doing Cooperative Effort
- Green Mountain Reservoir Administration
- Contracts for Delivery of Water to Grand Valley
- Guidelines for Meadow Pumpers Fund
- Guidelines for Measuring Devices Fund
- Form of Easement for Access for Telemetry
- Agreement Among Middle Park, Grand County and River District on Operating and Administering Water Apportionments and Carryover Balances
- Amendatory Contract (Carriage Contract)
- Side letter from Subdistrict to River District re: no opposition to use of WG water for uses incidental to irrigation such as fish screen, fish ladder, etc.

DESCRIPTION OF THE PROPOSED 2012 WINDY GAP FIRING PROJECT WITH COMPARISONS TO “NO ACTION”

The Subdistrict has requested that the original Windy Gap 1041 Permit remain in effect with no changes as a vested right regardless of the outcome of the 2012 WGFP 1041 permit, however it also states that if the 2012 WGFP Permit conflicts with 1980 Windy Gap Permit, the 2012 WGFP provisions will control. This request raises legal issues that will be evaluated during the course of permit hearings. The County Attorney will consider and respond to the relationship between the two permits and advise the Permit Authority.

PREFERRED ALTERNATIVE (CHIMNEY HOLLOW)

The Subdistrict acting by and through the Windy Gap Firing Project Water Activity Enterprise, has applied for a permit utilizing Grand County’s regulations of Areas and Activities Designated as Matters of State Interest (1041) for the 2012 WGFP. The Final EIS for the 2012 WGFP identifies the relationship with the original Windy Gap EIS and the 2012 WGFP EIS in section 1.4.2.2 on page 1-7. This section states:

The proposed Firing Project would not exceed the average annual diversion of 56,000 AF evaluated in the 1981 EIS and ROD or any other diversion-related limitations or water rights.

The Windy Gap Project has not met the firm yield expectation (56,000 AF average annual yield) of the Subdistrict nor the original participants. On average, the project has had a shortfall of 30,000 AF on an average annual basis. The 2012 WGFP proposes to firm 30,000 AF with the construction of a 90,000 AF. Chimney Hollow Reservoir, which is the **preferred alternative** identified in the Final EIS for the project. In order to provide for an additional annual firm yield of 30,000 AF, a storage reservoir of three times that capacity must be constructed.

Because Windy Gap must rely on space in Granby Reservoir and delivery capability of the C-BT Project through the Adams Tunnel, there has been many times when delivery and space available for Windy Gap water was not possible, especially in wet years. The original Windy Gap Project was estimated to delivery about 48,000 AF of firm yield following conveyance and evaporation losses (shrink) and allocations to Middle Park Water Conservancy District (3000 AF). Each Windy Gap participant was entitled to 1/480th share (units) of the annual yield which was expected to provide 100 AF per year per unit. According to the Final EIS for the Windy Gap Firing Project (WGFP Final EIS) between 1985 and 2004, Windy Gap was only able to deliver an average of less than 10,000 AF per year or 20 AF per unit. (See Section 1.5.2, WGFP EIS).

NO ACTION ALTERNATIVE

The Final EIS for the 2012 WGFP contains five alternatives. The preferred alternative is Chimney Hollow Reservoir. The National Environmental Policy Act (NEPA) requires that a project proponent also analyze a “no action” alternative. Under the “no action” alternative, Reclamation would not approve the connection of the WGFP facilities (Chimney Hollow or alternate reservoirs) to C-BT facilities.

The Subdistrict would maximize the delivery of Windy Gap water to participants under existing agreements between Reclamation and the Subdistrict (Carriage Contract). Participants would seek to maximize their delivery of Windy Gap water using existing facilities, but would be limited by the Carriage Contract. Continued operation and delivery of the Windy Gap water would not require NEPA compliance or a permit from the Corps, but if the City of Longmont decided to enlarge Ralph Price Reservoir to firm its Windy Gap water, it is likely to result in a discharge to a regulated water of the U. S., which is subject to Corps permitting requirements and other NEPA compliance (EIS. P.2-15 and 2-17).

Table ES-2 (p.ES11) provides the average annual changes in the Colorado River flow and diversions by alternative. Of particular interest are the existing conditions, Alt. 1 which is the “no action” alternative and Alt 2 which is the preferred alternative.

On average, the project has diverted 36,532 AF since it became operational. It would anticipate delivering on average 46,084 AF if permitted for the preferred alternative. The “no action” alternative would produce 43,573 AF of average annual diversions. This equates to an 8% (12,000 AF) decrease in flow below Windy Gap for the “no action” alternative and 14% (21,000 AF) decrease for the preferred alternative. Another way of looking at this is that an increase of 7000 AF of diversions would occur for the “no action” and 9500 AF for the preferred alternative.

Table ES-2. Average annual changes in Colorado River flow and diversions by alternative.

Alternative	Colorado River below Granby Reservoir		Windy Gap Diversions		Colorado River below Windy Gap		Colorado River below Kremmling	
	AF	%	AF	%	AF	%	AF	%
Existing Conditions	59,385	—	36,532	—	151,358	—	701,801	—
Alt 1 – No Action	55,345	-7	43,573	+19	138,914	-8	689,357	-2
Alt 2 – Proposed Action	50,220	-15	46,084	+26	130,075	-14	680,512	-3
Alt 3	52,071	-12	48,052	+32	130,370	-14	680,807	-3
Alt 4	52,091	-12	47,997	+31	130,453	-14	680,890	-3
Alt 5	51,903	-13	48,483	+33	129,681	-14	680,118	-3

The projected increases for the two alternatives are more fully understood if compared to Table 3-2 (p. 3-11 and 3-12). Actual deliveries from 1985 – 2008 were 14,865 AF average annual diversions. For the period from 2001 – 2008, average annual diversions were 27,447 AF. The largest annual diversion was 64,200 AF in 2003 and the smallest being zero. The majority of the diversions to date have occurred in May and June with five years showing small diversions in April. There is only one diversion in the time period that occurred in July and that was 2276 AF in 1985.

Table 3-2. Historical monthly Windy Gap diversions (AF) at Windy Gap Reservoir.

Year	April	May	June	July	Total
1985	0	488	0	2,276	2,764
1986	0	0	0	0	0
1987	0	3,730	0	0	3,730
1988	0	0	19,966	0	19,966
1989	0	0	4,036	0	4,036
1990	0	4,980	9,612	0	14,592
1991	0	0	19,303	0	19,303
1992	0	11,213	10,683	0	21,896
1993	254	11,372	10,116	0	21,742
1994	0	8,336	2,448	0	10,784
1995	0	13,620	441	0	14,061
1996	0	0	0	0	0
1997	0	0	0	0	0
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	0	0	0	0
2001	58	10,300	3,892	0	14,250
2002	0	0	0	0	0
2003	6,166	27,592	30,442	0	64,200
2004	0	327	0	0	327
2005	3,697	18,103	19,520	0	41,320
2006		14,858	10,163		25,022
2007	7,079	21,140	12,714		40,933
2008	3,128	19,315	11,080		35,523
Minimum	0	0	0	0	0
Maximum	7,079	27,592	19,520	2,276	64,200
Average 1985-2008	886	6,891	6,851	108	14,685
Average 2001-2008					27,447

CUMULATIVE EFFECTS (with and without reasonably foreseeable actions)

There has been concern raised with regard to the cumulative effects of the 2012 WGFP when coupled with reasonably foreseeable future actions. One such future action that is of concern is the Moffat Firing Project which will increase diversions from the Fraser River of 14,000 AF on an average annual basis. Table 3-20 (p.64 EIS) provides a summary of the average monthly depletions and flows in the Colorado River at Windy Gap for cumulative effects for the model period. Line #3 is for depletions for “no action” including reasonable foreseeable actions and Line #4 is for the preferred action including reasonable foreseeable actions. The reasonably foreseeable actions include Grand County growth and the Moffat Project.

Table 3-20. Summary of average monthly depletions and flows in the Colorado River at Windy Gap for cumulative effects for the WGFP model study period from 1950 through 1996 (AF).

Line #	Description	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Annual
1	Native Flow at Windy Gap	13,194	9,371	8,184	7,784	6,856	8,657	28,180	113,006	172,575	73,454	26,816	14,848	482,926
2	Flows at Windy Gap with Existing Conditions Diversions	5,772	5,456	4,750	4,508	4,205	6,076	11,969	23,671	51,472	25,960	8,644	4,917	157,401
3	Depletions for No Action (Alt 1) Including Reasonable Foreseeable Actions	111	209	262	242	183	154	-19	1,963	8,796	7,611	1,896	380	21,787
4	Depletions for Proposed Action (Alt 2) Including Reasonable Foreseeable Actions	135	183	262	242	183	154	-28	3,630	15,543	6,989	1,963	614	29,870
5	Depletions for Alternative 5 Including Reasonable Foreseeable Actions	175	197	262	242	183	154	-28	3,773	13,804	8,762	2,161	453	30,138
6	Percent of Native Flow Remaining Under Alternative 1	43%	56%	55%	55%	59%	68%	43%	19%	25%	25%	25%	31%	28%
7	Percent of Native Flow Remaining Under Alternative 2	43%	56%	55%	55%	59%	68%	43%	18%	21%	26%	25%	29%	26%
8	Percent of Native Flow Remaining Under Alternative 5	42%	56%	55%	55%	59%	68%	43%	18%	22%	23%	24%	30%	26%

“Model results indicate that the percentage of native flows remaining after the various depletions ranges from less than 20% in May to about 60% in March under all alternatives.” (EIS p. 3-63).

Tables 3-21, 3-22 and 3-23 in the EIS (p. 3-65, 3-66, 3-67) detail the diversion amounts at key location during average, dry and wet years under the “no action”, preferred and Dry Creek/Rock Creek scenarios. For example, at the confluence of the Fraser and Colorado Rivers this is what would be expected for cumulative effects:

Average Year

Existing conditions	No Action	Preferred
91,025 AF	79,729 AF (-12%)	79,714 AF (-12%)

Dry Year

35,432 AF (-13%)	30,787 AF (-13%)	30,787 AF (-13%)
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Wet Year

178,477 AF	156,645 AF (-12%)	156,715 AF (-12%)
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There has been concern about the cumulative effects of the 2012 WGFP when coupled with the proposed Moffat Project. This question was one posed in the Planning Commission review of the 2012 WGFP. The information from the modeling work is directly out of the EIS in order to provide a more complete picture of what could occur if the future follows the past.

DISCUSSION OF COMPLIANCE OF GRAND COUNTY'S REGULATIONS FOR AREAS AND ACTIVITIES DEEMED AS MATTERS OF STATE INTEREST

According to Grand County's Regulations for Areas and Activities Deemed as Matters of State Interest, Chapter 5, Municipal and Industrial Water Projects, section 5-103 Definitions:

"Municipal and industrial water project" means a system and all integrated components thereof through which a municipality or industry derives its water supply from either surface or subsurface sources. This includes a system and all integrated components thereof through which a municipality or industry derives water exchanged or traded for water it uses for its own needs".

The source development area for the project means, "that geographic area or region wholly or partially within this County which will be developed or altered in connection with the development of a municipal or industrial water project as these terms are defined in §5-102(3).

§5-102(3) is in the Purpose and Intent for the project, and reads as follows: "Insure that municipal and industrial water projects are developed in such a manner so as not to pollute rivers, streams, lakes, reservoirs, ponds and aquifer recharge areas within the source development area".

Section 1-305 Approval or Denial of Permit Application

- (1) If the Permit Authority finds that there is not sufficient information concerning any material feature of a proposed development or activity, the Permit Authority may deny the application or it may continue the hearing until the additional information has been received. However, no such continuance may exceed sixty (60) days unless agreed to by the applicant.*
- (2) The Permit Authority shall approve an application for a permit to engage in development in an area of state interest or development for the conduct of an activity of state interest if the proposed development or activity complies with the provisions of the regulations governing such area or activity. If the proposed development does not comply with such regulations, the permit shall be denied.*
- (3) The Permit Authority conducting a hearing pursuant to this section shall state, in writing, reasons for its decision and its findings and conclusions.*
- (4) The Permit Authority shall reach a decision on a permit application within one hundred twenty (120) days after the completion of the permit hearing, or the permit shall be deemed approved.*

Review of the EIS for the 2012 WGFP, associated information, studies and permits included in the application packet and other pertinent information, along with public testimony will determine if the source development area will be adequately protected given the additional diversions and method of storage and transfer contemplated.

5-306 Approval of Permit Application. A permit application for development of a municipal or industrial water project shall be approved if the proposed development complies with the following criteria (County criteria is in **bold** type):

(a) The need for the proposed water project can be substantiated.

The application substantiates the need for the project at pages 8-14, and 53 of the application. A need that is not defined in the Purpose and Need but is disclosed on page 19 of the application causes concern.

New industrial uses such as “fracking” on the front range can expand the need for water without limitation thereby increasing the likelihood of future diversions from Grand County. The draft WGFP IGA (IV. J. 2.) attempts to address this concern by stating that Grand County “*will not allow Subdistrict or the WGFP Enterprise, without prior express written consent of Grand County and the Colorado River Water Conservation District to acquire any existing water rights in Grand County, construct additional water supply facilities in Grand County, appropriate new water rights in Grand County, or appropriate any new water rights in Water Division No. 5 that will result in depletions of water from Grand County*”.

RECOMMENDATION: This criterion 5-306(a) appears to be satisfied.

(b) Assurances of compatibility of the proposed water project with federal, state, regional and county planning policies regarding land use and water resources.

1. Identified Plans. The application lists the applicable plans, permits, and approvals at page 53 of the application:

- Clean Water Act 404 permit
- CDPHE 401 certification
- Fish and Wildlife Mitigation Plan, C. R. S. § 37-6-122.2
- Water Conservancy Act, C.R.S. § 37-45-101 et seq.
- Clean Water Act 208 Plan (NWCCOG 208 Plan)
- Grand County 1041 Permit
- Grand County Stream Management Plan.

The proposed WGFP IGA is intended to satisfy section 37-45-118(1)(b)(II) of the Water Conservancy Act. *See* WGFP IGA Section VI F. In order to make that determination, the WGFP IGA must be enforceable and the Subdistrict must be able to comply with all components of the WGFP IGA.

The Fish and Wildlife Mitigation Plan has been approved by the Colorado Wildlife Commission along with The Fish and Wildlife Enhancement Plan. These plans cover both the 2012 WGFP and the Moffat Project.

As a matter of federal law, the 2012 WGFP cannot be constructed until the 404 permit has been issued by the Corps of Engineers and Colorado Water Quality Control Commission has issued the 401 Certification.

The Stream Management Plan will guide the Learning by Doing process in which the Subdistrict will participate as required by the WGFP IGA.

2. Other Plans Not Included in Application. The following applicable plans, permits and approvals are not identified in the application:

Grand County Master Plan. Grand County Master Plan was last updated in 2011. This plan had broad community input and support. The Plan contains seven elements which are considered the core of the plan. Those elements include Natural Resources; Land Use – Growth and Development, Development: the Build Environment; Community and Public Facilities; Transportation; Economic Base; and Administration & Process. Each section contains a number of subsections. Grand County’s 1041 process incorporates these Master Plan provisions into the permit process through reference to plans in 5-**306b**. Sections of the Master Plan relevant to this application are Natural Resources, Land Use-Growth and Development, Community and Public Facilities, and Economic Base.

Natural Resources

Natural Resources include several subsections, but those under which this application will be reviewed are wildlife, wetlands, and water resources, and visual resources:

Wildlife: The quality, integrity and interconnected nature of critical wildlife habitat in Grand County should be preserved and protected. In order to accomplish this goal, there has to be recognition of the economic, recreational, environmental and cultural importance of hunting, fishing, and wildlife watching in Grand County, and the minimization of impacts to critical wildlife habitat and/or corridors.

The 2012 WGFP application, and the WGFP IGA and closing documents, contains elements that would address these requirements along with the stream restoration and temperature requirement in the Fish and Wildlife Mitigation Plan. Participation in the Learning by Doing sustain these efforts for the future.

Wetlands: Provide for the long-term protection of wetland functions and values.

The 2012 WGFP application addresses wetlands, but does not address long term protection as could be associated with the stream depletions. There will be conditions recommended to address this goal under criterion (f).

Water Resources: The long term protection of water resources and water quality in Grand County is the goal.

This section includes working with entities and other parties to maximize water levels in the Colorado River and, other water bodies while exploring the feasibility of in-stream flows for environmental and recreational purposes, maintaining optimum flows in streams and rivers, working to retain and protect existing water rights for use in Grand County, and supporting projects that restore stream channels and natural conditions, and improve fish and wildlife habitat.

These goals could be met by the additional water for Grand County's use provided in the proposed WGFP IGA and through the endangered fish releases from Granby Reservoir. Also, protection of water rights in Grand County from future transbasin diversion by the Subdistrict and Northern, and restoration of stream channels through the approved State Fish and Wildlife Mitigation and Enhancement Plans, could help to achieve this goal. Participation in Learning by Doing would support this goal.

Visual Resources: Visual resources play a major role in the county's character, quality of life and economy. Recognition of the importance of visual resources by maintaining those resources to promote overall rural character, quality of life and the tourist and recreation based economy.

The 2012 WGFP could meet this goal with the WGFP IGA and closing documents which would continuation of work to improve the water clarity in Grand Lake, maintain lake levels for recreation, provide additional public access around Willow Creek and specify development of Subdistrict land through Grand County Rural Land Use Process.

Land Use, Growth and Development

Land Use, Growth and Development include several subsections, but those under which this application will be reviewed are Pattern of Development, Rural and Open Land Pattern:

Generally under all of the subsections mentioned, Grand County's goal is to direct development so as to preserve economic success by striking a balance between quality of life, preservation of the environment and the County's rural character.

The 2012 WGFP application and WGFP IGA with closing documents will require that future development of lands held by the Subdistrict would proceed under the Rural Land Use Process. The WGFP IGA provides water for the environment, restoration opportunities through the Fish and Wildlife Mitigation Plan, and lake level preservation. Through Learning by Doing, the Subdistrict and Northern participate in ongoing efforts to maintain the environment.

Community and Public Facilities

Community and Public Facilities include several subsections, but the one associated with this application is Recreation Facilities:

Recreation Facilities: Develop recreational resources within the county to meet the needs of all age and interest groups.

The WGFP IGA and associated documents requires the Subdistrict and Northern to remove their objections to the Recreational Instream Channel Diversion (RICD) that Grand County is pursuing. Additional water released for the endangered fish as well as Grand County environmental water will help preserve existing recreational resources.

Economic Base

Economic Base includes numerous subsections, but those appropriate to this review are Recreation & Tourism Based Industry and Natural Resource Based Industry.

Recreation and Tourism Based Industry: Encouragement and support of year-round recreation while making effort to retain Grand County's unique rural, western and scenic character that is so appealing to tourists.

The 2012 WGFP IGA and closing documents will help support the year-round recreation by providing water resources, a process for improving clarity in Grand Lake, maintaining lake levels, and protection of the rural, western and scenic character by committing to development of its properties under the Rural Land Use Plan.

The WGFP IGA also provides that the Subdistrict will arrange with Northern to allow for public access along Willow Creek, and the designated area is to be managed by the Colorado Parks and Wildlife or other agency approved by Northern. However, the public access could be revoked if Northern were to sell its property. If this provision is to be considered to address this requirement of the Master Plan, then the Subdistrict must provide a plan for how it would replace the value of the public access that would be lost if Northern sells its property and revokes the public access.

Natural and Resource Based Industry: Encouragement and support of natural resource based industry and renewal energy such that it compliments and/or enhances the County's rural character and natural setting and sustains quality of life for County residents.

The 2012 WGFP IGA and closing documents provide funding for irrigators above Kremmling to repair and replace pumps necessary to access agricultural water. The agricultural base of Grand County is essential to sustaining the quality of life for County residents.

Compliance with the Grand County Master Plan could be satisfied with the following conditions:

1. The WGFP IGA and closing documents are executed either in conjunction with any permit executed by the Permit Authority, or any permit issued by Grand County is

contingent upon execution of the of the WGFP IGA and closing documents and compliance with the WGFP IGA and closing documents.

2. The Subdistrict provide a plan for how public access will be compensated if the public access provided in the WGFP IGA were to be revoked due to the sale of the property by Northern.

Senate Document 80. The 2012 WGFP must comply with Senate Document 80. This is also a requirement of the WGFP IGA. The requirement to comply with Senate Document 80 also applies to the on-going operations of the C-BT.

Grand Lake is Colorado's largest natural lake and was conscripted into the C-BT Project as a conduit for water. Senate Document 80 provided assurances from the C-BT Project to both the East and West Slope. There are five primary purposes stated in Senate Document 80 under which the project must be operated. Those five purposes are:

To preserve the vested and future rights in irrigation.

To preserve the fishing and recreational facilities and the scenic attractions of Grand Lake, the Colorado River, and Rocky Mountain National Park.

To preserve the present surface elevations of the water in Grand Lake and to prevent a variation in these elevations greater than their normal fluctuation.

To so conserve and make use of these waters for irrigation, power, industrial development, and other purposes, as to create the greatest benefit.

To maintain conditions of river flow for the benefit of domestic and sanitary uses of this water.

2012 WGFP compliance with Senate Document 80 is covered in detail in Section 5-306(d), below.

Bureau of Land Management Resource Management Plan. The 2012 WGFP was considered to be included in the Wild and Scenic portion of the BLM Resource Management Plan and has been agreed to by all parties participating. Subdistrict will make a contribution to this effort as described in the WGFP IGA.

Arapahoe National Recreation Area Policies (ANRA) – The ANRA was created in 1978:

“...so as to Protect the area’s enduring scenic and historic wilderness character and its unique wildlife and to preserve the areas’ scientific, educational, recreational, and inspirational resources and challenges; and

So as to preserve and protect the natural scenic, historic, pastoral, and wildlife resources of the area and to enhance recreational opportunities.

Administration of the ANRA provides that

the Secretary shall administer the area in accordance with laws and regulations applicable to the national forests so as to protect recreation and enjoyment, conservation and development of the scenic, natural, historic and pastoral values; utilize and dispose of natural resources that will not impair the purposes for the recreation area; and manage for water quality.

The Secretary shall develop an overall management plan for the ANRA.

Compliance with the ANRA policies could be met with the provisions provided WGFP IGA and closing documents. If the U. S. Forest Service requires additional mitigation, these measures will be included in any permit issued by Grand County.

Amendatory Contract with the Bureau of Reclamation. The 2012 WGFP will require an amendment or new contract for the operation contemplated.

Northwest Colorado Council of Governments (NWCCOG). NWCCOG is the designated management agency for the State for the Areawide Water Quality Management Plan (208 Plan). NWCCOG’s review letter will be submitted into the record. In summary, the following is required for the 2012 WGFP to comply with the 208 Plan:

Policy 1 – Protect and Enhance Water Quality

Grand County must review and approve the monitoring plan used to verify compliance with the nutrient removal goal including the proposed agricultural nonpoint source nutrient control projects. The County should review and approve future mitigation measures intended to remove the remaining 2,785 kg/yr of total nitrogen, including the monitoring plan necessary to verify permanent removal of this additional load.

The applicant must commit to participating in the implementation of the proportional share of any measure to reduce clarity impacts identified through the Grand Lake Clarity MOU in order to offset the impact to Grand Lake clarity associated with WGFP pumping.

The proposed mitigation of temperature should not be limited either by the July 15 date or by the definition of WGFP pumping proposed in paragraph 2 under “MWAT chronic Threshold Exceedances – Reduction or Curtail of WGFP Pumping” on page 41 of the 1041 permit application.

Policy 2 – Water Use and Development

Temperature and Three Lakes water quality issues discussed under Policy 1 above apply under Policy 2 as well. Those project impacts must be mitigated to comply with Policy 2.

NWCCOG recommends that the Subdistrict provide and implement a monitoring plan for fish and aquatic invertebrates. The purpose of the plan would be to assess the benefits of the proposed habitat enhancements, additional flows provided in the WGFP IGA, the effect of increased flushing flows, and aquatic life trends associated with the MMI.

Policy 3 – Land Use and Disturbance

NWCCOG recommends the Subdistrict implement a monitoring plan to document potential degradation of riparian areas. The plan should include species inventory and photo documentation.

Policy 4 – Domestic, Municipal, and Industrial Water and Wastewater Treatment Facilities

WGFP would be in compliance with 208 Plan Policy 4.

Policy 5 – Chemical Management

This policy does not appear to apply to the aspects of the proposed WGFP project in Region 12.

Policy 6 – Management System

The proposed project is a nonpoint source pollution issue associated with hydrologic modifications. Grand Count is the 208 Management Agency with appropriate jurisdiction over the proposed project under the 208 Plan through its 1041 permitting

authority. The existing Windy Gap Project was permitted by Grand County. The proposed WGFP is a change in operations and facilities for that project and will therefore require a new or amended 1041 Permit. This approach complies with the 208 Plan Policy 6.

Colorado Parks and Wildlife. CPW's letter will be entered into the public record. In summary the letter supports the mitigation required by the Fish and Wildlife Mitigation Plan, CPW's securing of \$250,000 to study potential modifications to the Windy Gap Reservoir, support of the 10825 Endangered Fish Water which could address temperature, Learning by Doing effort, and the WGFP IGA and urge the participants to work to execute this agreement.

Additional Reviews:

No additional comments were received by the Colorado Department of Health and Environment.

RECOMMENDATION: *This criterion would be satisfied if the following conditions are met:*

1. The 2012 WGFP project requires federal and state approvals and cannot go forward without them. Consequently if the County issues a 1041 permit for the project, those permits and approvals will become attachments to Grand County permit, and any permit issued by the County will not become effective until all those permits are issued and Grand County is provided copies of same. Grand County will not enforce the State and Federal, but any violation of those permits will be considered a violation of any Grand County permit.
2. The Subdistrict must comply with the requirements of the 208 Plan as outlined in NWCCOG's letter dated July 6, 2012.
3. The County recognizes that Grand Lake water quality has been a problem for many years and additional pumping by the 2012 WGFP is likely to exacerbate the issue. One of the closing documents is a proposed agreement between Grand County, Reclamation, and Northern which requires all three entities to stay engaged in processes that would see Grand Lake meeting the State Water Quality Standard, which is currently set at 4 meters. Besides this agreement, there is also work proceeding between the three entities to move to the next step in the process for providing increased clarity in Grand Lake and Northern executing a supplemental repayment contract with Reclamation to finance this next step. Because Northern is not the applicant for this permit, it is imperative that the Subdistrict provide a method by which clarity issue addressed in the closing document (Grand Lake Clarity Agreement) is bound to any permit issued by Grand County. This condition is likely to be satisfied if any permit issued by Grand County is contingent on the execution of the Grand Lake Clarity Agreement. The WGFP IGA and closing documents are executed and made a part of any permit issued by the County.

4. The Subdistrict shall provide a plan for how public access will be compensated if the public access provided in the WGFP IGA were to be revoked due to the sale of the property by Northern.
5. If the U. S. Forest Service requires additional mitigation or information to comply with the policies of the ANRA, that mitigation and/or information will become part of any permit issued by Grand County.

(c) Municipal and industrial water projects shall emphasize the most efficient use of water, including, to the extent permissible under existing law, the recycling and reuse of water. Urban development, population densities, and site layout and design of storm water and sanitation systems shall be accompanied in a manner that will prevent the pollution of aquifer recharge areas.

The application describes efficient use of the water, recycling and reuse of water at pages 17-20 of the application. The Subdistrict also indicates that some of the water will be used for fracking in the oil and gas industry. Fracking water is typically injected into the ground and not reused or recycled.

Efficient use of water also is discussed in the Final EIS as well as specific mitigation required to guarantee efficient use is detailed in Table 3-164 (1b) of the Final EIS. One of the mitigation measures stated is the need for all project participants to have conservation plans prior to the delivery of water.

According to the 1041 application (at pg 18)

“ nine of the participants, Broomfield (City and County), Erie, Greeley, Evans, Fort Lupton, Central Weld, Lafayette, Little Thompson Water District, and Longmont have approved Colorado Water Conservation Board (CWCB) conservation plans since the passage of the Water Conservation Act of 2004 (Colorado House Bill 04-1365). Louisville anticipates completing its plan in 2012. Platte River is an industrial water user not covered by HB 04-1365, but implements measures for efficient use and reuses its water supply to extinction. As a component of the Water Conservation Act, project participants would update their conservation plans approximately every seven years”.

The application states, at pg 18, that the Subdistrict is a raw water provider and cannot enforce water conservation through its allotment contracts, but the mitigation in the EIS does not recognize that distinction. In order to meet the mitigation required, the Subdistrict will be need to verify that not only does every participant comply with the conservation plan requirement of the EIS as well as the Water Conservation Act, as currently in effect or which may be amended in the future, but also that each project participant updates their plans approximately every seven

years. The Subdistrict may have to amend its allotment contracts to comply with law and mitigation requirements.

The Subdistrict has stated that according to its policies, the project participants are allowed to sell or lease their shares (units). Because of the mitigation requirement for conservation as well as compliance with the Water Conservation Act, no sale or lease of participant shares to other municipalities will be allowed unless the new owner or lessee has a valid conservation plan in place and updates every seven (7) years as required.

The current participants own 440 of the 480 shares (units). The remainder is owned by some of the original Windy Gap Participants or other entities that have since purchased them. The City of Boulder and the Town of Estes Park collectively own 40 Windy Gap shares (units). These two Windy Gap participants are not part of the 2012 WGFP.

According to the EIS, (pg 1-3) delivery of 40 shares of water will be similar to current operation and may increase over time as demand grows. The EIS states “*the amount of water delivered to these entities will not be expanded or diminished by WGFP*”.

The WGFP IGA reaffirms the 1980 and 1985 Agreements as they relate to volumetric limits and state that those limits apply to both the Windy Gap Project and the 2012 WGFP. To be clear, those limits, 90,000 AF of diversion in any one year, and not to exceed an average of 65,000 in any ten year running average, apply cumulatively to both projects and NOT to each one individually. The WGFP IGA also does not allow the expansion of the C-BT project storage with the combination of water stored in Chimney Hollow and Granby Reservoir. As previously discussed, the Subdistrict states that it can pump whatever water is in priority from the Colorado River, subject to storage capacity in Granby, as long as the amount of water transported through the Adams Tunnel is within the volumetric limits.

Any permit issued by Grand County should be clear that volumetric limits and their application to both the Windy Gap and 2012 WGFP participant’s use of water is in compliance with the Windy Gap decrees and Colorado law.

There is no construction within Grand County so there will be no effect on storm water and sanitation systems or pollution of aquifer recharge systems.

RECOMMENDATION: This criterion would be satisfied if the following conditions are met:

1. Subdistrict shall provide the County with documentation of conservation plans for all municipal project participants prior to delivery of water through the 2012 WGFP, and that participants are complying with the Water Conservation Act with regard to updating the conservation plans every seven years.
2. Subdistrict shall provide written notice to the County when shares of the 2012 WGFP are sold or leased and verification that the new owner or lessee has complied with conservation requirements.

3. Within 30 days of acceptance of an approved 1041 permit, the Subdistrict shall provide the County with written documentation of how use of water for fracking satisfies this criterion.

4. Any permit issued by Grand County is subject to the volumetric limits of the WGFP IGA and the requirements of the 1980 Agreement or 1985 Supplement that may remain in effect if not changed by the WGFP IGA.

(d) Provisions to insure the proposed water project will not contaminate surface water resources.

The application, at p. 55, states that the 2012 WGFP water will not contaminate surface water resources as it will be transported through existing facilities. The County disagrees with this statement because the additional transport of water through the C-BT system will exacerbate the water quality in the Three Lakes (Granby Reservoir, Shadow Mountain Reservoir and Grand Lake) by increasing introductions of lower quality water from Windy Gap into Granby Reservoir, and increased diversions of particulate-laden water through Shadow Mountain Reservoir and Grand Lake. Although the Subdistrict has proposed mitigation of nutrient loading, no mitigation is proposed for the non-algal particulates.

The clarity in Grand Lake has been an issue since the C-BT Project began pumping. The first documented concern was in 1952 from the City of Loveland to the Bureau of Reclamation complaining about algae in its water supply after the Farr Pumping Plant began to transport water into the C-BT. Reporting on water quality from both east and west slopes continued intermittently until the late 1990's when a group of citizens around Grand Lake worked to heighten awareness and sought Grand County's support to rectify the loss of Grand Lake's scenic attraction as protected in Senate Document 80. For the last decade, there has been a concerted effort to bring the clarity in Grand Lake back to its pre-C-BT project clarity of 9 meters.

In 2006, Northern, Grand County, and several other entities began participation in the Nutrient Study for the Three Lakes System (Grand Lake, Shadow Mountain and Granby Reservoirs). A spin off from this study group is the Three Lakes Technical Committee which focuses primarily on west slope water quality. In 2006, it was thought that nutrient loading was the root cause of most of the water quality issues in the Three Lakes, including Grand Lake clarity, but years of additional study, monitoring and reporting have proven that nutrients are not the only cause of reduced clarity.

In 2008, the Colorado Water Quality Control Commission adopted two standards for clarity in Grand Lake: a narrative standard supporting "the highest level of clarity attainable, consistent with the exercise of established water rights and the protection of aquatic life", along with a numeric standard of 4 meter Secchi disk depth with 85% compliance in any given year for the months of July, August and September. The numeric standard becomes effective January 1, 2015.

Pumping from Granby Reservoir to Shadow Mountain Reservoir, and subsequent water transfer to the east slope via the Adams Tunnel, causes decreased clarity in Grand Lake, as evidenced by stop-pump trials, water quality monitoring, and photographic records. Two two-week stop pump trials (2008 and 2009), as well as a seven-week stop pump in 2011 made possible by extremely high runoff and full storage all resulted in improved clarity: the 2011 “gift of nature” resulted in the best clarity in Grand Lake since the C-BT became operational.

Recent studies have identified non-algal particulate matter as being considerably more important to clarity than as nutrient loading. The source of the non-algal organic particulates is currently under investigation.

The Subdistrict is proposing that reductions in nutrient loading will come from a combination of wastewater treatment improvements to reduce point source nutrient loading above Windy Gap as well as land use changes that would reduce non-point source nutrient loading. Wastewater treatment plants above Windy Gap were evaluated to determine which, if any, treatment plants would be capable of achieving the level of nutrient loading reduction required to meet the 1:1 (nutrient neutral) standard applied in the Final EIS. The Fraser Valley Consolidated Plant is the only one capable of meeting a portion of the reduction necessary. By financing improvements to the Fraser Valley Consolidated Plant, it is expected that 822 kg/year of Nitrogen and 774 kg/year of Phosphorus will be removed. The cost of the plant improvements is estimated to be \$3.3M with increased annual operating costs ranging from \$120,000 to \$230,000/year.

Part of the non-point source reduction proposed by the Subdistrict will come from two ranches in the Willow Creek drainage above Windy Gap. The 265 acre E-Diamond H Ranch is currently irrigated and periodically fertilized. To reduce nutrient discharges from run-off, the ranch will no longer be irrigated or fertilized. It is estimated that this will reduce total nitrogen loading by 685 kg/year and total phosphorus by 117 kg/year. C Lazy U Ranch would implement best management practices on 300 acres by a reduction in chemical fertilizer application, use of vegetated buffer strips adjacent to Willow Creek and stream bank restoration to reduce erosion. This action is estimated to produce a reduction of total nitrogen loading of 1,836 kg/year and 237 kg/year of total phosphorus loading.

Even with these actions, the Subdistrict notes that the total nitrogen loading must be reduced by another 2,785 kg/year to be nutrient-neutral. The Subdistrict is proposing that the additional reduction in total nitrogen loading will be met prior to construction of the 2012 WGFP in cooperation with Reclamation and Corps of Engineers. Grand County must be provided with documentation of how the Subdistrict intends to meet the additional reductions in nitrogen.

According to the Final EIS (Table ES-6, p. ES16), and the application (p. 24 and 25) manganese and chlorophyll- α are predicted to increase, and dissolved oxygen (DO) would decrease in the entire Three Lakes System. The lower DO levels would contribute to continued exceedance of manganese standard in the Three Lakes. Secchi disk depth would decrease in Grand Lake.

In addition to increasing nutrients, a report titled *2010 Water Quality Report Flowing Sites* prepared by Northern identifies higher conductivity and total organic carbon in flows pumped from Windy Gap, meaning that dissolved constituents in additional pumped flows are likely to increase under the 2012 WGFP. A report titled *Factors Controlling Transparency in Grand Lake, Colorado* prepared for Three Lakes Technical Committee documents that non-algal particulates are also a contributing factor to reduced water quality in Grand Lake. While this information was not available in time for publication of the Final EIS, it is also not mentioned or provided in the application. It is relevant to the impact of the 2012 WGFP.

The application states that the 2012 WGFP impact on particulate transfer is not currently known but that the flow increase through the C-BT project is relatively small when compared to the C-BT diversions. To date, the amount of Windy Gap water than has been pumped through the C-BT system is relatively small, but if the 2012 WGFP is approved, this will no longer be insignificant when compared to the C-BT overall volume.

The application further states that it is possible that the particulates are substantially moved during the “first flush” of pumping and/or natural runoff into the lakes, in which case 2012 WGFP would have no additional effect (at pg. 30 of the application). These statements are not supported by the conclusions in *Operational and Water Quality Summary Report for Grand Lake and Shadow Mountain Reservoir: 2010* prepared for Northern, Reclamation, and Grand County, which shows that turbidity is highest in Grand Lake at high rates of reverse flow through Shadow Mountain Connecting Channel, and that many of the native inflows to the Three Lakes are pristine even in high flow conditions.

The Subdistrict has identified other ongoing processes related to Grand Lake water clarity on page 29 of the application:

Reclamation, Grand County, and Northern Water have entered into a separate MOU to finance and begin an Appraisal Study, the first step in Reclamation’s Planning Process (Reclamation has since determined that the Planning Process is not the appropriate avenue in which to contemplate corrections to the C-BT Project, and this report has been retitled the Preliminary Alternatives Formulation Report);

Grand County, Reclamation, and Northern Water are continuing to move ahead with Reclamation’s process by participating in a Contributed Funds Act Agreement for executing a C-BT West Slope Collection System Technical Review of Alternatives Analysis and Plan of Study; and

Grand County and Northern Water have agreed to enter into the Memorandum of Understanding, known as the Grand Lake Clarity project.

The C-BT Project is a Reclamation Project and it is imperative to solicit its cooperation in addressing the Grand Lake clarity issue. The Memorandum of Understanding known as the Grand Lake Clarity project must also gain the approval of the Reclamation, and the draft agreed to by Grand County and Northern has been sent to Reclamation, hopefully for approval and execution. Reclamation has stated it is reviewing the document. It is also working on submitting a Supplemental Repayment Contract to Northern for partial funding of the next step.

The application, at pg 55, states that “Although not specifically related to the WGFP, Northern Water and Grand County have agreed to enter into an agreement with Reclamation (Grand Lake Clarity MOU) to identify causes and potential solutions to Grand Lake clarity issues”. Grand County does not agree that clarity is not related to the 2012 WGFP because the FINAL EIS discloses that Secchi disk depth will be reduced.

RECOMMENDATION: This criterion 5-306(d) would be satisfied if the following conditions are met:

1. The 1041 permit should be contingent upon the execution of and compliance with the Clarity Project MOU and the C-BT West Slope Collection System Technical Review of Alternatives Analysis and Plan of Study are executed along with the supplemental repayment contract.
2. Prior to the beginning of construction for Chimney Hollow Reservoir, Grand County must be provided with a copy of an executed agreement between the Subdistrict and the wastewater treatment provider(s) who will be contracted with to remove some of the nutrient loading. This agreement must include the cost of improvements required plus whatever operation and maintenance costs the provider(s) require for the future.
3. The Subdistrict shall submit the Nutrient Reduction Plan to Grand County for review at the same time it is submitted to Reclamation and the Corps but no later than the execution of the WGFP IGA and related documents and agreements.
4. The Subdistrict’s monitoring plan must be robust enough to assure that nutrient loading from the 2012 WGFP for total nitrogen and total phosphorus are adequately reduced to meet the 1:1 level; that manganese, mercury, and chlorophyll a do not increase; that DO does not decrease; and that Secchi disk depth does not decrease in Grand Lake due to the operation of the 2012 WGFP. The monitoring plan shall include a schedule for monitoring and reporting. Grand County must be included in all reporting. The project must be operated in compliance with the Nutrient Reduction Plan and monitoring plan.

(e) The proposed water project is capable of providing water pursuant to standards of the Colorado Department of Health.

The application, at pg 55, states that the 2012 WGFP provides raw water to a number of municipal users. The water will be treated by those end users as required by Colorado law.

RECOMMENDATION: This criterion appears to be satisfied.

(f) The proposed diversion of water from the source development area will not decrease the quality of peripheral or downstream surface and subsurface water resources in the source development area below that designated by the Colorado Water Quality Control Division on January 15, 1974 and effective June 19, 1974 or below stricter standards subsequently adopted.

Granby Reservoir is currently on the State of Colorado's 303(d) list for impaired waters due to mercury. This likely occurs from atmospheric deposition from coal fired power plants. The application, at pg 55, states that the 2012 WGFP does not affect this impairment. As with manganese (p. 25 app.), lower dissolved oxygen (DO) levels would contribute to continued exceedance of the mercury standard in Granby Reservoir.

Sections of the Colorado River are also on the Colorado Water Quality Control Commission 303(d) list for existing temperature exceedances. In Grand County this includes the mainstem from Granby Reservoir to the where the Colorado River leaves Grand County (this exceedance extends to the Roaring Fork River). Exceedances are especially critical in the reach from Windy Gap to the Williams Fork where chronic and acute temperature standards are being exceeded especially during the summer months.

The 2012 WGFP is predicted to exacerbate these exceedances of temperature standards. The federal Clean Water Act prohibits a permitted project from causing or contributing to the violation of a water quality standard. Mitigation for the impacts of the WGFP on temperature has been proposed in the Fish and Wildlife Mitigation Plan approved by the Colorado Wildlife Commission. The Army Corps of Engineers may add additional requirements or adopt the mitigation proposed in the State plan.

According to the State Fish and Wildlife Mitigation Plan, the Subdistrict, working with Denver Water, will install, operate and maintain two continuous real time monitoring stations on the Colorado River, one at Windy Gap gage and one upstream of the confluence of the Williams Fork River. The Fish and Wildlife Mitigation Plan provides that the Subdistrict will implement the following mitigation for temperature:

Temperature Thresholds: The threshold temperatures will be the following, as measured at the temperature monitoring stations identified above:

MWAT Chronic Threshold: 18.2°C (64.8° F), based on the Water Quality Control Commission

current Maximum Weekly Average Temperature (MWAT) Chronic Standard

DM Acute Threshold: 23.8°C (74.8° F), based on current Water Quality Control Commission Daily Maximum (DM) Acute Standard.

Mitigation for MWAT Chronic Threshold Exceedances – The Fish and Wildlife Mitigation Plan proposes that for the period after July 15th of each year:

At such times as the Weekly Average Temperature (WAT) exceeds the MWAT Chronic Threshold, the Subdistrict will reduce or curtail WGFP pumping at the Windy Gap diversion to the extent necessary to maintain temperatures within the MWAT Threshold. Reduced pumping may not be sufficient to maintain temperatures below the threshold.

The Fish and Wildlife Mitigation Plan defines “WGFP pumping” as “pumping that occurs at such times as the Northern Colorado Water Conservancy District determines, based on its most probable forecasts of inflows to Lake Granby, that a spill of water from Lake Granby is reasonably foreseeable.” All other pumping will be considered to be for the original Windy Gap Project.

Nonetheless, no project can cause or contribute to a violation of a water quality standard.

What this limitation means is that the Subdistrict will not reduce or curtail exceedances of the MWAT unless 2012 WGFP is pumping, and whether WGFP is pumping will be based on whether Northern forecasts that a spill is probable from Lake Granby. However, as stated above, **no project can cause or contribute to a violation of water quality standards.** Therefore, any violation of this standard, whether 2012 WGFP or original Windy Gap project is operating, pumping must be curtailed to not exceed the temperature standards.

Mitigation for DM Acute Threshold Exceedances - The Fish and Wildlife Mitigation Plan proposes that:

“At such times as the Daily Maximum temperature is within 1°C of the DM Acute Threshold, the Subdistrict will reduce or curtail pumping for the original Windy Gap Project or the WGFP at the Windy Gap diversion to the extent necessary to maintain temperatures within the DM Threshold. “Reduced pumping may not be sufficient to maintain temperatures below the threshold. In the future, the 1 degree buffer may be altered, based on experience, to maintain compliance with the DM Threshold.”

According to the Fish and Wildlife Mitigation Plan, the temperature mitigation measures will be suspended when there is “no material causal relationship between Windy Gap Project or Windy Gap Farming Project operations and any exceedance of the MWAT Chronic threshold or DM Acute threshold at the monitoring stations identified above.”

The Plan defines a “material causal relationship” as “either an actual measureable impact on temperature using readily available monitoring technology or a modeled impact on temperature

that is not de minimus and is based on a computer model or studies accepted “by the Colorado Division of Wildlife.”

This limitation is problematic because it leaves it up to the Division of Wildlife (now Parks and Wildlife) to make a judgment on impacts to water temperature. The proper entity for approving of such a model should be the Water Quality Control Commission. The Management Committee to the Stream Management Plan also should be consulted.

Other than the proposed mitigation, other actions could have a positive effect in the Colorado River below Windy Gap to reduce stream temperatures. The first is the 5412.5 AF of water for the Endangered Fish (10825 FONSI in application) that will be released from Granby Reservoir. According to the Programmatic Biological Opinion (Opinion) for the Endangered Fish, 5412.5 AF of water will be released for each of the east slope and west slope diversions. For the first ten years of the Opinion, Denver Water released for the east slope diverters and the River District for the west. The Opinion calls for a permanent source of water as Denver Water and the River District would not commit to releasing water after their committed period. The permanent source of 5412.5 AF of water for the east slope is from Granby Reservoir provided by Red Top Valley Ditch water owned by Northern. The west slope contribution will come from Ruedi Reservoir. If for some reason the endangered fish water is no longer required in the future, Northern, by separate agreement, has guaranteed this water for release to the Grand County environment for perpetuity.

As early as 2013, this 5412.5 AF of water could be released during the later part of the summer and early fall. If the U. S. Fish and Wildlife Service do not call for the water for the endangered fish, Grand County, through Learning by Doing, could call for the water for environmental purposes. When the water arrives at the confluence of the Blue River, it would be booked back into Green Mountain Reservoir for release at such time as the U. S. Fish and Wildlife Service call for the water.

Secondly, Grand County, through the proposed WGFP IGA, could have additional water as described in the WGFP IGA stored in Granby Reservoir to be used for the environment. This amount of stored water could be increased by sharing the 3000 AF of storage space with Middle Park. Again, through Learning by Doing, this water could be released to cool the water to help avoid temperature exceedances.

RECOMMENDATION: This criterion would be satisfied if the following conditions are met:

1. Installation and maintenance of real time temperature gauges. The Fish and Wildlife Mitigation Plan requires the installation of real time temperature gauges below Windy Gap Reservoir and above the confluence of the Colorado and Williams Fork Rivers. This installation will also be a condition to any permit issued by Grand County, but in addition, the Subdistrict must verify every spring, before the beginning of pumping, that these gauges are in good working order, that they remain so during the time of the year when the temperature standard is in place, and that they are replaced or repaired when necessary and timely to their need in reporting temperature.

2. Curtailment of Pumping in the Event of Threshold Exceedances. In addition to the proposed temperature mitigation in the Fish and Wildlife Mitigation Plan and other terms and conditions to address temperature that may be imposed as part of the 401 Certification or federal approvals for the WGFP, the Subdistrict shall not cause or contribute to temperature exceedances in the Colorado River below Windy Gap, at the points of measurement set forth in the Fish and Wildlife Mitigation Plan, when either the 2012 WGFP or the Windy Gap Project are pumping. **No project is allowed to cause or contribute to water quality violations.**
3. If the MWAT is exceeded, the Subdistrict shall immediately notify the County. Temperature mitigation may be suspended when there is no material causal relationship between 2012 WGFP or Windy Gap Firming Project operations. The determination of a causal relationship shall be based upon a model approved by the Colorado Parks and Wildlife, Grand County, and the Water Quality Control Division.
4. The delivery of 10825 endangered fish water from Granby Reservoir is an essential consideration in temperature reductions. The Subdistrict must participate in securing approval of the 10825 agreement and must arrange with Northern to do the same.

(g) The proposed development and the potential diversions of water from the source development area will not significantly deteriorate aquatic habitats, marshlands and wetlands, groundwater recharge areas, steeply sloping or unstable terrain, forests and woodlands, critical wildlife habitat, big game migratory routes, calving grounds, migratory ponds, nesting areas and the habitats of rare and endangered species, public outdoor recreational areas, and unique areas of geologic, historic or archaeological importance.

Aquatic Habitat

The application states, at pgs 8, 37, 42-43 and 57, the greatest decrease in fish habitat in the Colorado River would occur from Windy Gap to Williams Fork River confluence with the greatest decrease in July and August. In this section there could be a decrease of 34% in the adult Rainbow population and 8% in the Brown Adult in August. Diversions, according to the modeling, would increase in August from 6 times in 47 years to 15 times in 47 years. Decreased habitat of up to 15% is predicted below Williams Fork for juveniles of both Rainbow and Brown Trout. No adverse impacts are expected for spawning.

The impacts predicted by diversions in August are stated to be infrequent in the application and offset by considerations in the Fish and Wildlife enhancement plan which includes habitat improvement below Windy Gap, additional water committed to Grand County for the environment and to be used through Learning by Doing as well as the 10825 endangered fish

water. However there is no way to know if these enhancements and improvements will actually address the loss of aquatic habitat and no mitigation has been proposed.

The Nehring Report, *Colorado River Aquatic Resources Investigation Federal Aid Project F-237R-18* identifies a relationship between hydrologic modifications and macro invertebrates. The report is based on current conditions and decades of transbasin diversion impacts to the Colorado River. The report ranks six significant issues that should be taken into account, according to Nehring, when considering the health of the Colorado River downstream of Windy Gap. They are 1. restoration of channel connectivity; 2. channel reconfiguration, stream power and flushing flows; 3. Sediment deposition and transport; 4. water temperature; 5. encroachment of rooted aquatic vegetation; and 6. whirling disease. Nehring concludes that the “two things that must be done if there is truly any hope of enhancement of aquatic ecosystem in the upper Colorado River in the future are a bypass channel and a major investment in stream channel reconfiguration for the Colorado River below Windy Gap Dam. Either one without the other will have virtually no chance of succeeding”.

This report was not made public until after the Wildlife Commission hearing on the Mitigation Plan, but the State of Colorado Department of Natural Resources states it was considered by the Commission’s staff when making its recommendation to the Wildlife Commission.

The Fish and Wildlife Mitigation Plan requires maintaining of lake levels (maintaining Granby Reservoir at 8250 elevation when prepositioning is in play), improved flushing flows from 450 c.f.s. for 50 hours to 600 c.f.s. for 50 hours, temperature mitigation, and nutrient reduction plan for Grand Lake water quality.

The Fish and Wildlife Enhancement Plan provides stream restoration from Windy Gap diversion to the lower terminus of the Kemp-Breeze Wildlife Area (segment). There are two sources of funding proposed for this restoration work. Denver Water (\$1.5M), Subdistrict (\$3M) and CDOW (\$0.5M) with a potential funding from Learning by Doing (\$1M – this is the swing money offered by Denver Water) for a total of \$6 million. Future funding sources include \$0.5 M from Denver Water, \$1M from Subdistrict for an overall total of \$7.5 M. A plan has yet to be developed for which sections of the segment will be included in the restoration.

In addition, the Subdistrict will provide \$250,000 to study methods for bypass of flows, sediment, and/or fish around Windy Gap Reservoir. This same offering is included in the WGFP IGA under Grand County’s section.

While funds have been offered for a study of a possible bypass/bythrough, there continues to be concern. Many feel that it is already documented as to the effect of Windy Gap Reservoir, and that instead of a study to determine the effect, there should be a study as to how to rectify. To that end, there has been extensive discussion and negotiation occurring between State of Colorado Department of Natural Resources, Colorado Parks and Wildlife, Subdistrict, Grand County, River District, Middle Park, Trout Unlimited, and a group of landowners on the Colorado River below Windy Gap known as the Upper Colorado River Alliance (UCRA). This group is close to agreeing on a Scope of Work to proceed on a study of how to enact a

bypass/bythrough, and how, if combined with downstream restoration, the aquatic environment could be improved. This Scope of Work must also contain protection for the immediate downstream owners from Windy Gap, the Schmuck Family Trust. There is a possibility that this Scope of Work could be provided for Permit Authority consideration during the public hearing, but if not completed by the time of the hearing, staff feels it would be to the Permit Authority's benefit to have this document to consider during any future deliberations. Therefore, staff would ask that this be allowed.

If the Scope of Work and any funding agreement were to be agreed upon by the entities involved, the Subdistrict has offered to provide the \$250,000 to begin the process before any permits are issued or any other agreements are executed.

The bypass/bythrough was of extreme concern to the Planning Commission with all members but one stating that it needed to be done. A more in depth discussion of the Planning Commission review will be provided further in this certificate.

There are additional offerings in the WGFP IGA and closing documents that could also offset some the current conditions of the aquatic resource such as maintaining riparian habitat and temperature issues. The use of these resources would be guided by Learning by Doing.

- The 10825 endangered fish water released as needed by Grand County.
- The variable, transfer and end of year pumping opportunities for Grand County.

The Fish and Wildlife Mitigation Plan requires an increase in flushing flows from 450 c.f.s. for 50 hours, 1 out of 3 years, to 600 c.f.s., if at any time in the previous two years the flows have not exceeded 600 c.f.s for 50 hours. While this increase is an improvement, it is unknown if it will be sufficient.

Previous to the Windy Gap project, the median flushing flows May through June were 1145 and 1795 c.f.s. according to Grand County's Stream Management Plan (SMP) (p. CR4-7). The SMP recommends a **minimum** flow of 600 c.f.s. every other year. This flow is what was required by the Fish and Wildlife Mitigation Plan. However, 600 c.f.s. would only move spawning gravel and not larger cobble needed to maintain stream health. Channel maintenance flows are unknown and there is conflicting data around this issue.

When Windy Gap water is pumped into the C-BT project, Reclamation immediately applies a 10% "shrink" for evaporation and transportation loss. Grand County has always felt that the majority of the transportation loss is after the water exits Adams Tunnel and that evaporation losses on the west slope are much less than on the east slope. Grand County has requested Reclamation, in any decision for the Carriage Contract for the 2012 WGFP, to apply a shrink lesser than 10% to water stored on the western slope in the C-BT Project and not transported through the system to the east slope. The Subdistrict has requested the same consideration for its water stored on the west slope. If this is granted, the Subdistrict could gain water to the project.

If the Subdistrict were to “bank” this additional water for a five year period, and in the 6th year provide a flushing flow of 1145 c.f.s. for 72 hours, it would not lose yield.

For example, a 5% “shrink” instead of 10% of 56,000 AF annual yield results in 2800 AF average annual or 1400 c.f.s. In five years, depending on conditions, this could more than provide the 1145 c.f.s. for 72 hours plus not interfere greatly with the County’s possible year-end pumping.

Flushing flows typically occur during the rising limb of the hydrograph. This is also the time when the 2012 WGFP as well as the Windy Gap Project are pumping so the reservoir is typically full. In 2011, there was one of the largest spring flows in recorded history. It moved spawning gravel below Windy Gap, moved large rocks and cobble, but did not de-arm the stream immediately below Windy Gap. It also did not move the spawning gravel from the inflow of the reservoir through the reservoir and out the outflow end to replace the spawning gravel that had moved there. Looking at Windy Gap today, one can see the piles of spawning sized gravel on the eastern side of Windy Gap that, in a natural scenario, would have moved and been deposited fairly equally throughout the river reach.

While this issue may well be included in the stream restoration efforts of the Colorado Parks and Wildlife Enhancement Plan, it must be recognized and planned to replace the spawning gravel immediately below the dam if future plans do not result in this occurring. Grand County believes this effort should be included in the plan that would be developed by Colorado Parks and Wildlife for stream restoration and feels that the Subdistrict should support this inclusion in that plan. As part of the Stream Team for that effort, the Subdistrict is in a position to do so.

RECOMMENDATION: This criterion pertaining to aquatic habitat would be satisfied if the following conditions are met:

1. The Subdistrict shall prepare and submit to Grand County a fish and aquatic invertebrates monitoring plan to determine if the enhancements for habitat restoration and additional water provided in the WGFP IGA would prevent the predicted loss of aquatic habitat. This information will assist the Learning by Doing effort in making decisions for the future of the aquatic habitat. The monitoring will continue as long as the Learning by Doing effort requires this information. If the bypass/through is constructed, this monitoring plan can be adapted as necessary to analyze the benefits of the bypass/through.
2. The original Windy Gap 1041 permit does not allow the creation of mud flats at Windy Gap Reservoir. If the bypass/through were to be implemented, mud flats are likely to be created at the time the channel would be operating. The Subdistrict shall prepare and submit to the County a plan for minimizing blowing dust. It might consider aquatic vegetation/revegetation to minimize against blowing dust.

3. The bypass study should begin immediately and if proven beneficial, the bypass/by-through for Windy Gap Reservoir should commence as soon as possible after acceptance of any permit issued by Grand County.

4. If, during a five (5) year period, natural conditions meet or exceed flows of 600 c.f.s. as recommended by the SMP so that the Subdistrict is not required to make releases to achieve recommended stream conditions, then in the sixth year, Subdistrict shall provide a 1145 c.f.s. flow for 72 hours to move large cobble.

Marshlands and Wetlands

The application states, on pgs 22 and 23, that changes in stream stage is unlikely to adversely affect riparian and wetland vegetation along Colorado River and Willow Creek. However there are reductions in stream flow and bank full conditions that could affect riparian vegetation.

RECOMMENDATION: This criterion pertaining to marshlands and wetlands would be satisfied if the following condition is met:

1. Vegetation Monitoring Plan for Colorado River and Willow Creek. Subdistrict shall prepare and submit to the County for approval a monitoring plan for vegetation along the Colorado River and Willow Creek within thirty days of issuance of the ROD by the Corps of Engineers. Monitoring will continue until the LBD management team has determined that riparian and wetland vegetation has not been adversely affected, or has recovered due to mitigation or other efforts. At a minimum this monitoring must continue at least ten (10) years after commencing of pumping for the 2012 WGFP.

Groundwater Recharge Areas

The application states, at pgs 23 and 56, that there will be no effects on groundwater levels and groundwater quality.

RECOMMENDATION: This criterion pertaining to groundwater recharge areas appears to be satisfied.

Steeply Sloping and Unstable Terrain

The application states, at pg 23 and 56, impacts are considered minimal or non-existent and are not discussed. Most of this impact will be associated with the Chimney Hollow construction.

RECOMMENDATION: This criterion pertaining to slopes and terrain appears to be satisfied.

Forest and Woodlands

The application states, at pgs 23 and 56, impacts are considered minimal or non-existent and not discussed. Most of this impact will be associated with Chimney Hollow construction.

RECOMMENDATION: This criterion pertaining to forest and woodlands appears to be satisfied.

Critical Wildlife Habitat, Big Game Migratory Routes, Calving Grounds

The application states, at pgs 23 and 56, the only critical habitat affected is in the 15-mile reach of the Colorado River near Grand Junction. Impacts in Grand County are considered minimal or non-existent and are not discussed in the application.

The Watchable Wildlife Area associated with Windy Gap is the only wildlife habitat in Grand County that would be affected by the 2012 WGFP, and then only if the bypass/through is constructed.

Critical wildlife habitat affected is the Threatened and Endangered Fish in the 15 mile reach in the Grand Valley. The EIS has applied mitigation in the form of monetary compensation to address the Subdistrict's responsibility.

The 10825 water designated for the Threatened and Endangered Fish will be released from Granby Reservoir in the future, and be shepherded through Grand County and the Colorado River to the fish. This water will do double duty in Grand County by helping address temperature and flow issues and protecting aquatic habitat on its way to its main purpose.

The Northern District has provided guarantees, in the form of an agreement (closing document), that if the water for the endangered fish is not required in the future, that the 5412.5 AF will be perpetual to Grand County and will be used to protect and enhance the aquatic environment in Grand County. Northern has offered to provide Grand County with written verification of their ability to provide this water if not needed for the endangered fish.

There are no big fame migratory routes or calving grounds impacted by the 2012 WGFP in Grand County.

RECOMMENDATION: This criterion pertaining to Critical Wildlife Habitat, Big Game Migratory Routes, Calving Grounds appears to be satisfied if the following conditions is met:

1. The Northern Agreement (closing document) that provides the 10825 water must be executed and Northern must provide Grand County written verification that it is able to provide the water in perpetuity if no longer required for the endangered fish.

Migratory Ponds, Nesting Areas

The application states, at pgs 23 and 56, that the only migratory ponds and nesting areas affected are in the 15-mile reach of the Colorado River near Grand Junction. Impacts in Grand County are considered minimal or non-existent and not are discussed in the application.

As previously discussed, if the bypass/through becomes a reality in the future, the function of the Windy Gap Reservoir as a migratory pond and nesting area could be diminished for a certain part of the year. This is not addressed in the EIS as it was not considered as mitigation for the proposed project. If it were to be instituted, it would be considered an enhancement.

When Windy Gap was reviewed, the Subdistrict agreed to allow public access above the reservoir if it did not interfere with the operation of the facility. This has never occurred, but the Subdistrict did allow the construction of the Watchable Wildlife Area at the reservoir. This project was funded by Colorado Department of Transportation funds through a grant written by Grand County. It is a popular area and enjoyed by the public in viewing many varieties of waterfowl. The type of variety of waterfowl could change with a bypass/through and that could be an issue with some people, however, there might also be different types of wildlife to view when the reservoir is drawn down to accommodate the bypass/through.

Changes in variety of number of water fowl associated with re-establish a channel through the reservoir shall not be deemed a violation of the County's 1041 regulations.

The loss of any nesting areas and the function of Windy Gap as a migratory pond would be minimal due to the proximity of the Three Lakes area, Williams Fork Reservoir, Wolford Mountain Reservoir and the migratory bird pond established on the Division of Wildlife Kemp/Breeze Units below Parshall.

RECOMMENDATION: This criterion pertaining to migratory ponds and nesting areas appears to be satisfied.

Habitats for Rare and Endangered Species

The application states, at pg 57, that the only habitats for rare and endangered species affected are in the 15-mile reach of the Colorado River near Grand Junction. Impacts in Grand County are considered minimal or non-existent and are not discussed in the application.

The endangered fish in the 15 mile reach of the Colorado River above Grand Junction are addressed in the EIS. Mitigation has been established in the form of a monetary contribution. This mitigation meets the requirements of the Programmatic Biological Opinion for the fish. The delivery of water from Granby Reservoir also meets the requirements of this opinion.

RECOMMENDATION: This criterion pertaining to rare and endangered species appears to be satisfied.

Public Outdoor Recreational Areas

Please see section (b) and (d) of this certificate.

Areas of Geologic, Historic or Archaeological Importance

The application states, at pgs 30 and 56, those impacts are considered minimal or non-existent and are not discussed in the application.

There is no deterioration of unique areas of geologic, or archaeological importance associated with the 2012 WGFP in Grand County. Any such impacts could be associated with the construction of Chimney Hollow Reservoir.

However, historic irrigation could be affected by the 2012 WGFP. The importance of irrigation to the County is documented in a report prepared for Grand County by Coley Forrest documenting the impacts of water diversions on the County. Water levels are predicted to decrease 4 inches to 1 foot due to the 2012 WGFP. Although there have been several past agreements on the repair and maintenance of the pumps, the Subdistrict is providing additional funds to further compensate the irrigators for pump repairs and replacement, but this does not address the access to water from a drop in flow.

RECOMMENDATION: This criterion pertaining to areas of historic importance would be satisfied if the following condition is met:

1. Plan for Access to Headgates. Prior to execution of the WGFP IGA, the Subdistrict shall submit to Grand County for approval a plan for regular maintenance of the rock structures above each pump site for the irrigators above Kremmling (defined in the WGFP IGA) that allows higher water to be captured and held so the pumps can reach the irrigation water more effectively.

GRAND COUNTY PLANNING COMMISSION REVIEW

Under Grand County's 1041 Regulations, the Planning Commission is not included as a recommending body. However, the Permit Authority wanted to have input from this group, which is representative of the citizenry in the county. The Planning Commission was provided with a staff certificate for a courtesy review of the proposed project. The Planning Commission reviewed the proposal on July 11, 2012 and recommended denial of the application.

There were members of the public present who also provided testimony to the Planning Commission. The attorney for Trout Unlimited as well as the attorney for UCRA both testified. While they felt there had been good progress on most issues, the bypass/bythrough at the Windy Gap Reservoir and flushing flow issue remained paramount for these two groups but did acknowledge ongoing negotiations which could diminish their concerns. There were concerns expressed with regard to the clarity in Grand Lake from both the Town of Grand Lake and a representative of the Greater Grand Lake Shoreline Association, with this representative stating opposition to the project.

Concerns expressed by the Planning Commission included additional pumping, temperature, flushing flows and most importantly the bypass. All but one member stated that the bypass was essential. Other issues were lake levels and the possibility of use of the water for fracking. Cumulative impacts of the Denver project coupled with the 2012 WGFP were raised as a

concern. Discussion on restoring what has happened before taking more, irrigator's funds not adequate, and decisions being forever were expressed.

There were eight members present. The vote for denial was five (5) to two (2) with the Chairman not casting a vote. The Planning Commission Resolution and Minutes are included in the list of exhibits for the public hearing. In addition, a CD with the entire planning commission meeting is also included as an exhibit to the hearing.

Grand County's 1041 Regulations requires that a permit be denied if it fails to satisfy all criteria outlined in 5-306. In order to make that finding, the criteria which are not satisfied must be specified. While the Planning Commission recommended denial, there was no specific declaration as to what criterion was not satisfied.

STAFF RECOMMENDATION:

Grand County's regulations for Areas and Activities Designated as Matters of State Interest provide for approval of a Municipal and Industrial Water Project if the proposed development complies with the criteria of 5-306. The Permit Authority is charged with deciding if all of criterion has been met, and its decision will be based on staff's review as well as public testimony and information provided during the public hearing.

If the Permit Authority closes the public hearing to further testimony or taking of information, staff feels that several pieces of information that may become available after the public hearing are essential to allowing the Permit Authority to make a comprehensive decision. One is the final version of the WGFP IGA which may undergo further modifications based on outside factors such as State and Federal approvals, the Grand Lake Clarity Agreement and C-BT West Slope Collection System Technical Review of Alternatives Analysis and Plan of Study which are currently under review by Reclamation, the outcome of the Appraisal Study which is due the end of August, and the possible Scope of Work and financing methods for the bypass/bythrough. These items have been discussed in this certificate so are not new subjects. **Staff would recommend that the record remain open for the limited purpose of allowing these materials to be submitted until deliberations are complete.** All parties will be provided copies of these documents if and when available for Permit Authority consideration. All deliberations are conducted in the public forum so all parties will have an opportunity to hear the Permit Authority's consideration of these items. The County Attorney will provide further guidance on staff's request.

Staff's review finds that the criterion stated under Section 5-306 would be met for the 2012 WGFP if the following conditions are applied to any permit issued by Grand County (there will be various timeframes recommended for certain conditions):

GENERAL CONDITIONS

- 1.** The County Attorney will consider and respond to the relationship between the Windy Gap Project Permit and the 2012 WGFP Permit and advise the Permit Authority. Once the Permit Authority has been advised, it will make a determination on the relationship between the two.
- 2.** The permit for the 2012 WGFP (2012 Permit) will be in effect for the life of the project and considered a vested right as long as the project is in compliance with the terms and conditions of all permits and approvals for the 2012 WGFP.
- 3.** The 2012 WGFP is not transferrable to any other entity unless the County approves such transfer by Resolution.
- 4.** The 2012 Permit allows construction of a 90,000 AF Chimney Hollow Reservoir or any reservoir or reservoirs on the East Slope that are constructed as an alternative or in addition to the reservoir identified in the Final Environmental Impact Statement (Alternative Reservoir) provided that the cumulative active storage capacity of Chimney Hollow Reservoir and any Alternative Reservoirs does not exceed 90,000 acre feet as long as the environmental footprint in Grand County is not affected.
- 5.** The 2012 WGFP shall not exceed the volumetric limits stated in the WGFP IGA for the Windy Gap and 2012 WGFP, and the 2012 Permit is contingent upon the participant's use of water is in compliance with the Windy Gap decrees and Colorado law.
- 6.** In order to satisfy the Subdistrict's compliance with its obligations under section 37-45-118(1)(b)(IV) of the Water Conservancy District Act, the 2012 Permit shall not take effect until the WGFP IGA has been executed and is conditioned upon the Subdistrict's compliance with its obligations under the WGFP IGA. A breach of the WGFP IGA by the Subdistrict shall constitute a violation of this 2012 Permit.
- 7.** While the Subdistrict is not a party to the Grand Lake Clarity Agreement, the Permit Authority has relied on the Grand Lake Clarity Agreement in determining whether the 2012 WGFP complies with its 1041 Regulations; therefore, the 2012 Permit shall not be effective until the Grand Lake Clarity Agreement and C-BT West Slope Collection System Technical Review of Alternatives Analysis and Plan of Study have been executed.
- 8.** The closing documents listed on page 12 of this certificate support the obligations of the Subdistrict under the WGFP IGA and the Permit Authority has relied upon the Subdistrict's obligations under the WGFP IGA in determining whether the 2012 WGFP complies with its 1041 Regulations; therefore, this 2012 Permit shall not be effective until those documents have been executed.

9. The construction of the 2012 WGFP shall not commence until the water court approves the Windy Gap decree as amended by incorporation of the WGFP IGA. The Subdistrict shall provide Grand County with documentation of this approval. This condition does not preclude further planning and design for the project.

Conditions to satisfy Criterion (b):

10. The 2012 Permit shall not be effective until issuance of necessary state and federal permits and approvals for the 2012 WGFP, the terms and conditions of those permits and approvals are hereby incorporated by reference into this 2012 Permit, and this 2012 Permit is contingent upon the Subdistrict's compliance with those terms and conditions. If there is a conflict between a term and/or condition in the 1041 Permit and a state or federal permit or approval, the condition that is the more protective of the environment shall control. Grand County will not enforce the requirements of any state or federal permit or approval, but any violation of those permits and approvals will be a violation of the 2012 Permit. Subdistrict shall provide Grand County with copies of all approved federal and state permits and approvals issued for the 2012 WGFP. Following is a list of anticipated State and Federal permits and approvals (this may not be a complete list):

- Clean Water Act 404 permit
- CDPHE 401 certification
- Fish and Wildlife Mitigation Plan, C. R. S. § 37-6-122.2
- Water Conservancy Act, C.R.S. § 37-45-101 et seq.
- Clean Water Act 208 Plan (NWCOG 208 Plan)
- Compliance with Senate Document 80
- Amendatory Contract
- Record of Decision issued by Reclamation
- Record of Decision issued for Corps

11. The 2012 Permit shall terminate and be in no force and effect if construction of Chimney Hollow Reservoir, or other alternate reservoir(s), has not begun within 10 years of the latter of the issuance of the Record of Decision for the WGFP by Reclamation or the Corps of Engineers.
12. Diversions and pumping associated with the 2012 WGFP must cease if the water provided by the Subdistrict to Grand County is not released and available for use by Grand County in accordance with the WGFP IGA.
13. To show compliance with the Master Plan, the Subdistrict shall provide the County with a plan for how loss of public access will be mitigated if the public access provided in the WGFP IGA is lost due to the sale of the property by Northern.

14. The Subdistrict shall comply with recommendations for compliance with requirements of the 208 Plan as outlined in NWCCOG's letter dated July 6, 2012 which is incorporated into this 2012 Permit and attached hereto.

Conditions to satisfy Criterion (c):

15. Prior to delivery of water through the 2012 WGFP, Subdistrict shall provide the County with documentation of conservation plans for all municipal project participants and lessees and shall continue to provide documentation that participants are complying with the Water Conservation Act with regard to updating the conservation plans every seven years.
16. Subdistrict shall provide written notice to the County when shares of the 2012 WGFP are sold or leased and verification that the new owner or lessee has complied with conservation requirements.
17. Within 30 days of acceptance of this 2012 Permit, the Subdistrict shall provide the County with written documentation of how use of water for fracking satisfies criterion c of the Grand County 1041 Regulations, if at all.
18. This 2012 Permit is subject to the Subdistrict's compliance with the terms and conditions of the 1980 and 1985 Supplement that remain in effect after execution of the WGFP IGA.

Criterion to satisfy Criterion (d):

19. Condition #7 above is essential to satisfaction of this criterion also.
20. Prior to the beginning of construction for Chimney Hollow Reservoir, the Subdistrict shall provide Grand County with a copy of an executed agreement between the Subdistrict and the wastewater treatment provider(s) to remove some of the nutrient loading entering Grand Lake. This agreement shall include the cost of improvements required plus whatever operation and maintenance costs the provider(s) require for the future.
21. The Subdistrict shall submit the Nutrient Reduction Plan required by Reclamation to Grand County for review at the same time it is submitted to Reclamation and the Corps but no later than the execution of the WGFP IGA and closing documents.
22. Within six months of issuance of the last Record of Decision for the 2012 WGFP, Subdistrict shall submit to the County a robust monitoring plan to assure that nutrient loading from the 2012 WGFP for total nitrogen and total phosphorus is reduced to the 1:1 level; and a mitigation and monitoring plan to ensure that operation 2012 WGFP does not cause an increase in manganese, mercury and chlorophyll a, a decrease in DO, a decrease in Secchi disk depth in Grand Lake. The monitoring plan shall include a schedule for monitoring and

reporting and Subdistrict shall provide Grand County with all reports. The 2012 WGFP shall be operated in compliance with the Nutrient Reduction Plan and Nutrient Monitoring Plan.

Condition to satisfy Criterion (f)

23. Installation of the real time water temperature gauges required by the Fish and Wildlife Mitigation Plan shall be a condition of this 2012 Permit and the Subdistrict must verify every spring, before the beginning of pumping, that these gauges are in good working order, that they remain so during the time of the year when the standard is in effect, and that they are replaced or repaired when necessary and timely to their need in reporting temperature.
24. Notwithstanding proposed temperature mitigation in the Fish and Wildlife Mitigation Plan and other terms and conditions to address temperature that may be imposed as part of the 401 Certification or federal approvals for the WGFP, the 2012 WGFP shall not cause or contribute to temperature exceedances in the Colorado River below Windy Gap, at the points of measurement set forth in the Fish and Wildlife Mitigation Plan.
25. If the MWAT is exceeded, the Subdistrict shall immediately notify the County. Temperature mitigation may be suspended when there is no material causal relationship between the 2012 WGFP. The determination of causal relationship shall be based upon a model approved by the Colorado Parks and Wildlife, Grand County, and the Water Quality Control Commission.
26. Because the delivery of the 10825 endangered fish water from Granby Reservoir is an essential consideration in temperature reductions, the Subdistrict must participate in securing approval of the 10825 agreement and must arrange with Northern to do the same.

Conditions to satisfy Criterion (g)

Aquatic

27. The Subdistrict shall prepare and submit to Grand County a fish and aquatic invertebrates monitoring plan to determine if the enhancements for habitat restoration provided in the Fish and Wildlife Mitigation Plan and additional water provided in the WGFP IGA would prevent the loss of aquatic habitat predicted in the WGFP EIS. The monitoring information shall be provided to the Learning by Doing effort and monitoring shall continue as long as the Learning by Doing effort requires this information. If the bypass/through is constructed, this monitoring plan shall be adapted as necessary to analyze the benefits of the bypass/through in consultation with the Management Committee of Learning By Doing.
28. The Subdistrict shall prepare and submit to the County a plan for minimizing blowing dust if the bypass/bythrough is constructed. It might consider aquatic vegetation/revegetation to minimize against blowing dust.

29. The bypass study should begin immediately, and if the results of the study demonstrate that the bypass/by-through will benefit the Colorado River, then the bypass/by-through shall commence as soon as possible after acceptance of this 2012 Permit.
30. If, during a five (5) year period, natural conditions meet or exceed flows of 600 c.f.s. as recommended by the SMP so that the Subdistrict is not required to make releases to achieve recommended stream conditions, then in the sixth year, Subdistrict shall provide a 1,145 c.f.s. flow for 72 hours to move large cobble and de-armor the stream.

Marshlands and Wetlands:

31. Subdistrict shall prepare and submit to the County for approval a monitoring plan for vegetation along the Colorado River and Willow Creek within thirty days of issuance of the ROD by the Corps of Engineers. Monitoring will continue until the Learning By Doing management team has determined that riparian and wetland vegetation has not been adversely affected by the 2012 WGFP, or has recovered due to mitigation or other efforts. At a minimum this monitoring must continue at least ten (10) years after commencing of pumping for the 2012 WGFP.

Groundwater recharge areas, steeply sloping or unstable terrain, forests and woodlands:

Appear to be satisfied.

Critical wildlife habitat, big game migratory routes, calving grounds migratory ponds, nesting areas and habitats of rare and endangered species:

32. The 10825 water for the endangered fish must be approved and delivered from Granby Reservoir and Northern must provide Grand County written verification that it is able to provide the water in perpetuity if no longer required for the endangered fish.

Public Outdoor Recreation Areas:

Satisfied by conditions applied under (b) and (d) above.

Unique areas of geologic, historic and archeological importance:

33. Prior to execution of the WGFP IGA, the Subdistrict shall submit to Grand County for approval a plan for regular maintenance of the rock structures above each pump site for the irrigators above Kremmling (defined in the WGFP IGA) that allows higher water to be captured and held so the pumps can reach the irrigation water more effectively.

DOCUMENTS RELIED UPON FOR 1041 REVIEW

Board of Commissioner Resolution 1980-6-1
Board of Commissioner Resolution 1985-3-5
1980 Agreement
1985 Supplemental Agreement
Final EIS Windy Gap Project
Final EIS WGFP
Fish and Wildlife Enhancement Plan
Fish and Wildlife Mitigation Plan
FONSI – 10825 endangered fish water
Draft Windy Gap Firming Project IGA and closing documents
Grand County Stream Management Plan
Clean Water Act - 404 and 401 (b)
Grand County Master Plan
Senate Document 80
Arapaho National Recreation Public Law 95-450
Communication to Reclamation with regard to decreased water clarity 1952 forward
Comments on Preliminary, Draft, and Final EIS for WGFP
Report - *2010 Water Quality Report Flowing Sites*
Report - *Factors Controlling Transparency in Grand Lake, Colorado*
Report - *Operational and Water Quality Summary Report for Grand Lake and Shadow Mountain Reservoir: 2010*
Nehring Report - *Colorado River Aquatic Resources Investigation Federal Aid Project F-237R-18, June 2011*
Report- *Three Lakes Water Quality Model Nutrient Sensitivity Analysis* prepared for the Three Lakes Technical Committee.