The Grand Mesa
Regional General Permit (RGP)
Scoping Study Final Report

Submitted to
Colorado Water Conservation Board
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Submitted by
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Section 1 Project Executive Summary

The objectives of this project were to:

- Define the permitting requirements and issues of the water providers that operate on the Grand Mesa,
- Define the permitting requirements and issues of the agencies involved in issuing permits and authorizations needed by the water providers,
- Determine if a Regional General Permit (RGP) would address the needs and requirements of the respective agencies involved in authorizing reservoir and ditch operations.
- Develop a draft process for establishing an RGP
- Develop a draft of an Army Corps of Engineers RGP specifically to support the maintenance, repair, and upgrading of water systems in the general area of the Grand Mesa.

These objectives were accomplished through the three tasks completed during this project.

Task 1: Establish the requirements and define relevant data: This was completed by reviewing the permitting mechanisms currently available for use. Identifying the utility and potential limitation of each mechanism and identifying the availability of alternative procedural issues and requirements of each permit mechanism.

Task 2: Develop communications processes for the effort and defined research grant funding strategies: This was accomplished through known and previously unknown sources. In addition, water providers on the Grand Mesa were also queried as to their desire to be involved at the grass roots level for assessing needs and providing input to the planning effort.

Task 3: Develop a process for completing the RGP. This was done through identification of issues though both public meetings and soliciting additional comments and issues through a take home survey. The purpose of the preliminary draft is to provide a means by which a preferred alternative can be developed and carried forward through a rigorous National Environmental Policy Act (NEPA) process if the RGP is warranted and desired.

The final report for this project contains:

- summaries of meetings
- The Draft RGP scoping document defining the preferred alternative proposal to carry forward through formal agency and public scoping processes
- proposed operation, maintenance and rehabilitation document including proposed terms and conditions that will be carried forward through agency and public scoping in the form of a standalone document

Section 2 Problem Background

The Grand Mesa supports over 350 natural lakes and reservoirs. These water resources provide critical service to many municipal and agricultural needs in the Grand Valley and lower Gunnison Basin. For the diverse group of organizations operating and maintaining these reservoirs, obtaining the permits for the work required in a timely, user-friendly fashion is key to keeping these critical water resources operational. These waters are protected under the Clean Water Act (CWA) as administered by the U.S. Army Corps of Engineers, (ACOE) and many are located on U. S. Forest Service (USFS) lands. Permits from both agencies (as well as other federal, state, and local agencies) are required for work within these water bodies.

Today, Section 404 of the CWA permit process has only two avenues for obtaining ACOE approval prior to initiating actions which result in impact of wetlands and waters of the US. The first is the Nationwide General Permit (NWP) process. In this process, proposed actions must fit within the defined scope of the NWP. In addition, they must also meet all the necessary general conditions for the permit. It is this factor that inhibits the utility of these permits on the Grand Mesa. Because there are extensive fen and spring resources on the Grand Mesa, and because the Grand Mesa supports a significant concentration of reservoir, ditch and water conveyance infrastructure, these resources are oftentimes located within or adjacent to fens or springs. As a result of the below defined conditions, the NWP's are simply not available for use.

Final Regional Conditions for Revocation/Special Notification Specific to Certain Geographic Areas (Within Colorado)

i. Fens: All Nationwide permits, except permit Nos. 3, 6, 20, 27, 32, 38 and 47, are revoked in fens and wetlands adjacent to fens. Use of nationwide permit Nos. 3, 20, 27 and 38, requires notification to the District Engineer, in accordance with General Condition 27 (Pre-Construction Notification), and the permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal.

The following defines a fen:

Fen soils (histosols) are normally saturated throughout the growing season, although they may not be during drought conditions. The primary source of hydrology for fens is groundwater. Histosols are defined in accordance with the U.S. Department of Agriculture, Natural Resources Conservation Service publications on Keys to Soil Taxonomy and Field Indicators of Hydric Soils in the United States (http://soils.usda.gov/technical/classification/taxonomy).

j. Springs: Within the state of Colorado, all NWPs, except permit 47 (original 'C'), require preconstruction notification pursuant to General Condition 27 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A spring source is defined as any location where groundwater emanates from a point in the ground. For purposes of this regional condition, springs do not include seeps or other discharges which do not have a defined channel.

Since many actions, typical to the operations of water providers on the Grand Mesa, generally do not fit within the scope of the NWP, the alternative avenue for 404 permitting of proposed actions is the Individual General Permit (IP). The approval of the IP is subject to full public review and a prolonged processing timeframe, often including an Environmental Impact Statement (EIS). The use of the IP on the Grand Mesa results in each individual water provider repeating a similar process every time a maintenance, repair, or upgrade action is needed. According to the results of our study, obtaining an IP causes the water providers significant additional costs and schedule slippage that cannot be determined during the initial planning of the project. At the same time, the processing of the IP's places significant burden on federal and state agencies as they support the water providers during the IP process. In general, reservoir and ditch companies operating on the Grand Mesa simply do not have the necessary resources to complete an IP process that may be required to comply with conditions required by another regulatory entity. As a result, significant senior water rights are in jeopardy due to the company's inability to meet regulatory requirements by the ACOE. These situations indicate that an alternative permitting mechanism is warranted and will provide value to both the water providers and the agencies.

Section 3 Task Results

The following three subsections detail the efforts and results from the three tasks completed during this project.

3.1 TASK 1 – Establish Requirements and Define Relevant Data

This task includes:

- Identification of key stakeholders from the public and private sectors. Key stakeholders include water providers, the U.S. Forest Service (USFS), CWCB, Basin Roundtables, Environmental Protection Agency (EPA), and Army Corps of Engineers (ACOE). These key stakeholders are identified in (Appendix A. Key Stake Holder Master List).
- Establishing an interagency review team (IRT) (Appendix B. Inter Agency Review Team Contact List) as a subcommittee within the stakeholders to support the project though meetings to discuss agency permitting authorities and regulatory requirements.
- Drafting and refining the purpose and need (P&N) statement for the Mesa Regional General Permit Scoping Study and developing a preferred alternative i.e., draft RGP which can be carried forward through a NEPA process. (Appendix C. Draft Regional General Permit.)
- Holding public and agency meetings, responding to comments and revision of the P&N statement. Alternative permit analysis (water rights, fill/drawdown restrictions and other maintenance, operation and rehabilitation challenges) would be derived from the outcome of the meetings and responses from all entities.(Appendix D. Meeting Notes)
- Categorizing the reservoir storage needs on the Grand Mesa by type (municipal or agricultural). Existing guidance documents for each need defined would be reviewed and applicable agency policies such as the U.S. Fish and Wildlife Service (USFWS) Fen Policy (Appendix E. Fen Policy) will be referenced in the RGP documentation.

- Gathering information that provides the basic maintenance, operations and rehabilitation needs and requirements of the potential permittees (water suppliers). (Appendix F. Current planned projects)
- Mapping and Geo-referenced Database (Appendix G.)
- WestWater Engineering and Painted Sky Project Team Members List.

Method/Procedure:
Letters and written or electronic documentation were drafted that described the intent of the Project, and were distributed to interested entities and the public. Three meetings were scheduled and held to introduce the project and identify potential issues that pertained to the Grand Mesa. It was the intent of these meeting to help initiate discussion in order to gain support and solicit input and recruit stakeholders for the project. The meetings were located conveniently to help facilitate the creation of a group of interested parties. Meetings were held in Cedaredge, Grand Junction, and Mesa Colorado on April 11 and 12th, 2010. The meetings were published in local newspapers with subsequent publishing on a prototype webpage. In addition, personal invitations were sent to all contacts found in Forest Service, CWCB, Roundtables, and Conservancy records. Follow-up phone calls were made to help ensure that meeting would be well attended. Appropriate state and federal organizations were also invited to each of the meetings. Members of each land management agency as well as key personnel from the regulatory agencies were present at the meetings.

An audit that consisted of data review and plotting of geo-referenced data. The data was supplied by the Grand Mesa Uncompaghre National Forest and is currently located in their data base in Delta Colorado. Data was also compiled from existing, SEO Division Engineer, reservoir, and Conservancy District records, however this data was not geo-referenced. This effort culminated in a geo-referenced data base complete with defined conceptual service area and is attached in Appendix G.

Interviews with reservoir companies, agencies and interested parties was completed to identify the types and levels required to achieve adequate reservoir operations, and a full spectrum analysis of those activities requiring special-use permitting through USFS and 404 permitting through the ACOE.

IRT meetings, independent of the public meetings, were held with each of the agencies represented. The chief topics of discussion were directly related to the issues identified at the public meetings. Details of topics can be found in Appendix D. These issues were used to facilitate discussion and to develop direction from each agency on how the RGP process should progress. IRT meetings were held independently with each agency throughout the spring from April to June 2010. The first meeting objective was to have agency line officer assignment so that a semi-permanent team could be identified. Subsequent meetings were held to discuss necessary agency inclusion and authority requirements such as fen policy, state, regional and special conditions, finalization and buyoff of RGP service area etc.

A detailed list of activities needing coverage under the RGP was developed, compiled and incorporated into the draft RGP for submittal to stakeholders for input and concurrence. The list was shared with ACOE personnel to begin dialogue regarding permit ability requirements.

3.2 TASK 2 – Develop Communications and Research Grant Application Strategies

3.2.1 Web Page Development and Utilization

A web page for data sharing, collection, and correspondence with interested parties and stakeholders was developed. The webpage can be found at www.westwaterco.com/cwcb/. The webpage has links to many downloads and pages including the ACOE website and the USFS - GMUG National Forest page. In addition, meeting notes from each of the meetings as well as mapping and other pertinent documentation can be found on the site. This site will continue to be used as the project progresses and other information is developed. Our current plan is to have an operational webpage through June 30, 2011 unless an additional effort for developing the Regional General Permit is developed.

3.2.2 Research on Funding Opportunities

Significant research on funding opportunities and grant writing of potential funding sources was completed. Formal presentation to both the Gunnison Basin and Colorado Basin Roundtables were given. In addition, discussions were held with the Colorado River District and CWCB for additional funding sources. It became apparent that additional support from the Water Providers themselves is needed before funding of this project can proceed. The decision was made to withdraw applications for funding until a water user group can be organized.

3.2.3 CWCB Water Supply Reserve Statewide Account Draft Proposal

As a result of the efforts in section 3.2.2, the decision was made to develop and draft proposal for the WSR Statewide account. The RGP effort fit perfectly within the requirements and evaluation criteria for this funding source. The draft proposal was sent to the Gunnison Basin Round Table, the Colorado River District, and Kirk Russell for review and comments. All comments were reviewed and incorporated into the draft proposal. As a result of additional information and lack of support from the ACOE and by the water users themselves, the application for funding under this account was withdrawn.

3.3 TASK 3 – Develop Draft RGP

Method/Procedure:

Issues identified during the public and IRT meeting processes were compiled and used to develop a conceptual format for the Regional General Permit. The draft RGP is attached as Appendix B. It is apparent from this effort that the two existing permit mechanisms are insufficient to deal with the myriad of activities required of reservoir and ditch operators by various land management and regulatory agencies. Of principal concern are the statewide and regional conditions regulating activities near and within fens and springs. A number of existing nationwide permits are revoked and withdrawn from use if the activity for which they are allowed for use occurs within or near the above referenced habitat types. Because of this, the

only permit alternative would be the use of an individual permit process, which most reservoir and ditch companies cannot afford to complete. The preparation of a conceptual process flow has been completed and submitted to the ACOE outlining the necessary requirements that must be followed to prepare the RGP for use. In addition, a draft RGP document has also been submitted to the ACOE for review and comment. The document would include the development of timelines, process flow, review team action items, issues and concerns, and conditions, should the ACOE desire to move it forward. To date, we have not received comments on either the flow or the Draft RGP from the ACOE.

The intent of the final draft RGP would be a proposed action and the guiding document/ proposed action alternative to be introduced into the NEPA process.

Section 4 Project Conclusions

The following conclusions are based on both data collected and the analysis completed for this project: Management of reservoir and ditch resources on the Grand Mesa is extremely complicated because water providers are subject to a number of land management and regulatory agencies responsible for regulating various aspects of their operation. For example the USFS is responsible for complying with NEPA requirements, 1891 and ditch bill easements, issuance of special use permits and compliance with other federal laws. The ACOE is responsible for regulating impacts of dredge and fill of wetlands and waters of the US. The State Engineers Office (SEO) is responsible for maintaining dam safety and the division of water resources is responsible for administering water rights. Below is a list of general conclusions based on direct information collected through this study

1. Reservoir and Ditch resources on the Grand Mesa are administered by both federal and state agencies. Agencies fall in to two categories i.e., land management and regulatory. Each agency operates under their specific authorities and are responsible for resources for which they regulate. One example of this was identified by a reservoir company that had a fill restriction imposed on by the SEO which limited their ability to fill the reservoir to a level sufficient to maintain their decreed water right. As a result, the water right was jeopardized and placed on an abandonment list. Wetlands grew within the reservoir basin that were determined to be jurisdictional by the ACOE requiring permitting under the CWA. These areas were previously inundated by authorized reservoir, however due to lengthy processing time frames, conditions changed which allowed wetlands to grow.
2. Regulated activities and conditions may be in direct conflict making management of the reservoir or ditch complex.
3. Routine Maintenance of Reservoir and Ditch Infrastructure may require authorization under CWA and require a PCN. Basic maintenance operations such as inflow or outflow structure replacement or riprap required by SEO or USFS through operations agreements may also require permitting under the CWA.
4. Most NWPs require filing a PCN. The PCN requires a formal delineation and ACOE verification. This process may result in unanticipated and excessive time delay and expense for small entities especially at high elevations that occur on the Grand Mesa.

5. Reservoir and ditch resources on the Grand Mesa oftentimes occur in or near fens and springs. Water infrastructure built at or around the turn of century were located in the easiest places to hold water. These were typically near springs or in basins that held water or where water was easy to be held. These locations were generally wetlands, fens, or small depressions in the landscape.
6. NWP's are subject to regional and statewide conditions which, oftentimes preclude their utility for maintenance, restoration or rehabilitation of reservoir and ditch infrastructure.
7. Processing of permits under an individual permit application is oftentimes the only method available for reservoir and ditch operators.
8. Costs associated with an individual permit are in excess of what typical reservoir and ditch companies can afford.
9. Restrictions and requirements of one agency may necessitate action by another agency, thus complicating procedural requirements.
10. Communication between agencies regarding their respective regulations needs improvement.
11. There is a need for a common vocabulary for agencies when dealing with reservoir and ditch resources on the Grand Mesa. For example, restoration and rehabilitation are activities authorized under a NWP3 however, Rehabilitation as defined by USFS typically requires more detailed NEPA analysis then that required by the ACOE process.
12. Development of a Regional General Permit allowing maintenance, rehabilitation, and restoration of reservoir and ditch infrastructure on the Grand Mesa is warranted.

Section 5 Project Recommendations

The following recommendations are based on the data collected and the analysis completed:

1. Development of a Water Provider organization composed of individuals and entities operating on the Grand Mesa is advised. The organization would be the clearinghouse for information exchange as well as a principal sponsor for negotiating, funding, and additional research that could be used for managing water resources on the Grand Mesa.
2. Scheduled meetings and additional correspondence between the agencies prior to summer field season is advised.
3. The effort will require significant monetary support. It is recommended that a financial funding plan be developed so that adequate resources can be raised to support the project through time.
4. It is recommended that public agencies continue to discuss their various authorities and develop a common vocabulary in order to understand how each of their regulations are interrelated and have the potential to effect operations and right to use the water on the Grand Mesa

Appendix A - Key Stakeholder Master Contact List

Name *attending mtg Agencies	Affiliation	Position	Address	Phone	E-mail	Water Body Name
Nall, Sue *	ACOE	Branch Chief	400 Rood Ave. Grd Jct., CO 81505	243-1199x16	susan.nall@usace.army.mil	
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Richmond, Charles *	US Forest Service	Forest Supervisor	2250 Highway 50 Delta, CO 81416	970-874-6600	csrichmond@fs.fed.us	874-6685
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Alan Comer *	Water Resources	Water Commissioner		970-245-5884	alan.comerer@state.co.us	
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Roy Greene *	Water Resources	Water Commissioner	Box 235, Mesa, CO	987-8808	ron.greene@state.co.us	Mesa Lakes, Coon Ck
Jim Boyd *	Water Resources	Water Commissioner	Box 783, Cedaredge	856-3527	jim.boyd@state.co.us	
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Ellis Fritchman *	Leon Lake	President	13166 2600 Rd Eckert, CO	835-3348		
Brian McPherson *	Leon Park/Lone Pine Ditch	President	25272 McPherson Rd Cedaredge, CO 81413	856-1077		
Lee Lent *	Grove Creek	Manager	P.O. Box 23 Mesa, CO 81643	487-3815		Big Creek, Vega

Name *attending mtg Agencies	Affiliation	Position	Address	Phone	E-mail	Water Body Name
Gene Struhl *	Grove Creek			487-0227		
Bill Morse *	Rancher		Box 34 Molina, CO 81646	487-3724		Cottonwood, Vega
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Mike Hanlon *	Hawxhurst (McCurry) Res	Manager	6087 Buzzard Rd Collbran, CO 81624	487-3403		
Todd Farrington *	Rancher		13489 59 Rd Collbran, CO 81624	986-1040	tandkexc@gmail.com	
Newspapers						
Mountain Valley News			Cedaredge	970-856-7499	publisher@mountainvalleynews.net	
Delta County Independent	Roxanne McCormick		Delta	(970) 874-4421	http://www.deltacountyindependent.com	
High Country Shopper			Paonia	(970) 527-4576	http://www.highcountryshopper.com	
Daily Sentinel			Grand Junction	(970) 242-5050	http://GJSentinel.com	

Appendix B – Interagency Review Team Contact List

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Colorado Water Conservation Board
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Appendix C - Draft Regional General Permit

DRAFT DEPARTMENT OF THE ARMY DRAFT

U.S. ARMY ENGINEER DISTRICT, SACRAMENTO CORPS OF ENGINEERS 1325 J STREET SACRAMENTO CA 95814-2922

REPLY TO ATTENTION OF

DRAFT REGIONAL GENERAL PERMIT NUMBER XXX GRAND MESA RESERVOIR OPERATIONS AND MAINTENANCE - WESTERN COLORADO

EFFECTIVE DATE: XXX X, 20XX EXPIRATION DATE: XXX X, 201X

In accordance with Section 404 of the Clean Water Act (33U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) the District Engineer, U.S. Army, Corps of Engineers, Sacramento District, hereby authorizes certain limited discharges of dredge and fill material associated with reservoir maintenance and operations on the Grand Mesa in western Colorado. New reservoir construction for any purpose is not appropriate uses of this RGP.

The Grand Mesa is a large geologic formation in western Colorado in the United States. The largest mesa in the world, it has an area of about 500 square miles (1300 km²) and stretches for about 40 miles (65 km) east of Grand Junction between the Colorado River and the Gunnison River, its tributary to the south. The north side of the mesa is drained largely by Plateau Creek, a smaller tributary of the Colorado. It rises about 5,000 feet above the surrounding river valleys, including the Grand Valley to the west, reaching an elevation of about 11,000 feet (4,000 m), with a maximum elevation of about 11,237 feet (Crater Peak). Much of the mesa is within Grand Mesa National Forest. Over 300 lakes, including many reservoirs created and used for drinking and irrigation water, are scattered along the top of the formation. The Grand Mesa is flat in some areas, but quite rugged in others.

The Grand Mesa is a unique land feature that was formed where uplift and erosion created a plateau that was once a large flat plain. The melting and retreat of the icecaps approximately 20,000 years ago shaped the geology and topography that we now see today. It is because of these water bodies and subsequently the operation of the reservoirs by many different parties that we have need for another mechanism by which project permitting can be guided.

LOCATION: This RGP is only applicable to Waters of the United States in western Colorado within the boundaries of the Sacramento District. The Sacramento District's eastern boundary is the Continental Divide. This includes, but is not limited to, lakes, ponds, and reservoirs located on the Grand Mesa in western Colorado. Certain water bodies are given special consideration such as occupied and critical habitat for fish species protected by the Endangered Species Act.

The Sacramento District will also carefully review applications to perform work under this RGP in western Colorado Reservoirs with special designations. Our review may include consultation with the Colorado Division of Wildlife on a case-by-case basis. These Reservoirs include: **All reservoirs and their attendant features located on the Grand Mesa above 9,000 feet above sea level.**

NOTIFICATION AND APPROVAL PROCEDURES: Your written notification requesting approval under the RGP should be sent to the appropriate Corps of Engineers Regulatory Office within western Colorado dependent on the geographic location of your project. For assistance in determining the appropriate regulatory office and point of contact, please telephone (970) 243-1199.

Anyone proposing to perform work authorized by this permit must provide the following information, in writing, to the Corps of Engineers, Sacramento District prior to beginning work:

1. Name, address and telephone number of the applicant responsible for the work, the owner of the affected lands (if different than the applicant), and the contractor(s) that will be performing the work;

2. Define the purpose and need for the work. Describe any erosion or unstable conditions. If possible, include photographs of the problem areas;

3. A legal description of the project location including section, township and range. If possible, include the UTM coordinates or latitude and longitude of the location;

4. A statement indicating that you have notified adjacent property owners of the proposed work;

5. A set of drawings with the dimensions of the proposed work. These drawings are very important in order to give us a clear understanding of your proposed work and also to check permit compliance later, if we approve the work. The drawings must show the following:

   a. Project location;
   b. Plan or top view(s) of the proposed work; and
   c. Typical cross-sectional or side view(s) of the work.

   The drawings should be on 8.5-inch by 11-inch paper with all pertinent dimensions such as length, width and height of the structures or work. A bar scale would be useful on each drawing. If known, provide the average gradient or slope based on the bank full elevation difference of the affected stream reach; and

6. If your project is located on Indian Lands, you must obtain water quality certification under Section 401 of the CWA from the U.S. Environmental Protection Agency (EPA) and provide a copy to the Corps of Engineers. For assistance, contact the EPA, (EPR-EP), Wetlands and Watersheds Unit, 1595 Wynkoop Street, Denver, Colorado 80202-1129.

Note:

The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below. **You must notify the Corps of Engineers, Sacramento District (in writing) and receive verification of approval from the Corps of Engineers, Sacramento District PRIOR to beginning work authorized by this permit**.

MAINTENANCE BASELINE: The maintenance baseline is a description of the physical characteristics (e.g., depth, width, length, location, configuration, or design capacity, etc.) of an existing reservoir located on the Grand Mesa, in Mesa County Colorado, within which maintenance activities are normally authorized by RGPXX, subject to any case-specific conditions required by the district engineer. The district engineer will approve the maintenance baseline based on the approved or constructed capacity of the reservoir facility, including any areas where there are constructed channels, but which are part of and are required to maintain the reservoir facility. The prospective permittee(s) will provide documentation of the physical characteristics of the reservoir facility (which will normally consist of an as-built or approved drawing) and documentation of the approved and constructed design capacities of the reservoir with water rights as approved through the Colorado Division of Water Resources and dam structure as approved and regulated through the state

engineers office. If no evidence of the constructed capacity exists, the approved capacity will be used as baseline condition. The documentation will also include best management practices to ensure that the impacts to the aquatic environment are minimal, especially in maintenance areas where there are no constructed channels. (The Corps may request maintenance records in areas where there has not been recent maintenance.) Revocation or modification of the final determination of the maintenance baseline can only be done in accordance with 33 CFR 330.5. Except in emergencies as described below, this RGP cannot be used until the district engineer approves the maintenance baseline and determines the need for mitigation and any regional or activity-specific conditions. Once determined, the maintenance baseline will remain valid for any subsequent reissuance of this RGP.

SCOPE OF WORK: This RGP authorizes certain discharges of dredge and fill material for reservoir maintenance and operations as described below:

1. Spillway-Re-design/Construction

The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This RGP authorizes the maintenance, repair, rehabilitation, or replacement of those structures

2. Outlet works – replacement and repair

Activities related to the construction or modification of outfall structures and associated intake structures, where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted by, or that are otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the Clean Water Act). The construction of new intake structures is not authorized by this RGP, unless they are directly associated with an authorized outfall structure.

3. Erosion Control-Rip Rap etc.

The use of Rip Rap for erosion control purposes is expressly authorized by this RGP: Riprap is material placed along an eroding bank to armor it and reduce erosion. Riprap material must be durable angular rock or broken concrete free from large quantities of organic material and erodible material such as dirt and gravel. The size of broken concrete pieces shall not be smaller than 12 inches or larger than 48 inches in any dimension. Pre-cast concrete blocks may be used as riprap contingent upon case-by-case approval by the Corps of Engineers. Rounded river cobble or stone, used as riprap, is not acceptable as riprap and is **not** authorized under this permit. Properly anchored trees and logs may be used in combination with large rock riprap. Proper anchoring of trees and logs is especially important because floatable materials can dislodge and move with currents, potentially causing downstream erosion and blockages. Rock-filled gabion baskets or cages may be approved under this permit in limited situations.

4. Floating Debris Removal (Structures)

This RGP also authorizes the removal of accumulated sediments and debris in the vicinity of and within existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 400 feet in any direction from the structure. This 400 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the district engineer under separate authorization. The placement of riprap must be the minimum necessary to protect

the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer.

5. Instrumentation-Flumes, Utilities, Power, Remote Telemetry

Activities required for the construction of flumes, utilities, power and remote telemetry, provided the activity meets all of the following criteria:

(a) The discharge into wetlands and Waters of the United States does not exceed 100 cubic yards of concrete, rock, crushed stone or gravel into forms, or in the form of pre-cast concrete planks or slabs, unless the 100 cubic yard limit is waived in writing by the district engineer;

(b) Reclamation of disturbed area is completed to pre construction condition;

(c) The base material is crushed stone, gravel or other suitable material;

(d) The excavation is limited to the area necessary for site preparation and all excavated material is removed to the upland; and,

(e) Infrastructure foundations, pads and attendant features that are necessary for the use and maintenance of the existing reservoir facility.

6. Support Needs -Heliports, Docks, Boat Launches

Activities required for the construction of boat ramps, provided the activity meets all of the following criteria:

(a) The discharge into wetlands and Waters of the United States does not exceed 100 cubic yards of concrete, rock, crushed stone or gravel into forms, or in the form of pre-cast concrete planks or slabs, unless the 100 cubic yard limit is waived in writing by the district engineer;

(b) The boat ramp does not exceed 25 feet in width, unless this criterion is waived in writing by the district engineer;

(c) The base material is crushed stone, gravel or other suitable material;

(d) The excavation is limited to the area necessary for site preparation and all excavated material is removed to the upland; and,

(e) Building foundations, building pads and attendant features are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, Reservoir Operations and water management facilities.

The use of unsuitable material that is structurally unstable is not authorized. If dredging in navigable Waters of the United States is necessary to provide access to the boat ramp, the dredging may be authorized by a NWP, another regional general permit, or an individual permit.

7. Silt Removal

Dredging of no more than 100 cubic yards below the plane of the ordinary high water mark or the mean high water mark from navigable waters of the United States (i.e., section 10 waters). This RGP does not authorize the dredging or degradation through siltation of wetland sites that support submerged aquatic vegetation (including sites where submerged aquatic vegetation is documented to exist but may not be present in a given year), or the connection of canals or other artificial waterways to navigable waters of the United States (see 33 CFR 322.5(g)). (Sections 10 and 404)

8. Trash Removal

This RGP also authorizes the removal of trash, litter and debris found within the vicinity of included in the ordinary high water mark of the reservoir.

9. Vegetation Control/Removal at Outlet

Activities required for mechanized land clearing, grubbing, or mowing to remove non-native invasive, exotic, or nuisance vegetation; and other related activities are authorized by this RGP. If needed, this RGP

authorizes the use of soil amendments such as top soil, fertilizer and the like to support planting of only native plant species and their seeds.

10. Increase in Crest Rise

To the extent that a Corps permit is required, activities authorized by this RGP include a maximum crest rise of 20% of water depth as measured from the bottom of dam to the spillway; the removal of accumulated sediments; the installation, removal, and maintenance of small water control structures, dikes, and berms; are authorized by this permit.

11. Minor Storage Expansion

To the extent that a Corps permit is required, activities authorized by this RGP include, but are not limited to: the removal of accumulated sediments; the installation, installation and maintenance of small water control structures, dikes, and berms; to increase storage capacity to that authorized by the Colorado State Division of Water Resources through a formal adjudication process. This RGP does not authorized new inundation of fen.

12. Major Storage Expansion…?????

13. Access Road Maintenance and Improvements

Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this RGP. Access roads used solely for construction of the utility line must be removed upon completion of the work in accordance with the requirements for temporary fills.

14. Drainage Repairs

the placement of in-stream habitat structures; modifications of the stream bed and/or banks to restore or establish stream meanders; the backfilling of artificial channels and drainage ditches; the removal of existing drainage structures

15. Inlet Deadfall/Blowdown Removal….???????

16. Emergency Repair

In general, the prospective permittee should wait until the district engineer issues an RGP verification before proceeding with the watershed protection and rehabilitation activity. However, in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur, the emergency watershed protection and rehabilitation activity may proceed immediately and the district engineer will consider the information in the pre-construction notification any comments received as a result of agency coordination to decide whether the RGP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

All work will be completed in accordance with the plan(s) approved by the Corps of Engineers, Sacramento District.

Notification: For activities authorized by paragraph (b) of this RGP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 27). Where maintenance dredging is proposed, the pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)

Note: This RGP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance**.**

Permit Conditions:

General Conditions:

Upon receiving approval to perform work under this permit, you will have three years to complete the work, unless specified otherwise in a Corps of Engineers verification letter. If more time is required, you must seek an extension of time from the Corps of Engineers. Your request for an extension of time should be submitted to the Corps of Engineers at least 45 days prior to the 3-year completion date. Upon completion of the work, you will submit a signed certification to the Corps of Engineers that will include:

a. A statement that the authorized work was done in accordance with the Corps of Engineers authorization including any general or specific conditions;

b. A statement that any required mitigation was done in accordance with the permit conditions; and,
c. The signature of the permittee certifying the completion of the work and mitigation.

1. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

2. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or it the site is eligible for listing in the National Register of Historic Places.

3. If you sell the property associated with this permit, you must obtain a transfer of this authorization from the Corps of Engineers to the new owner.

4. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. In Colorado, excluding Indian Lands, the Regional General Permits are unconditionally certified by statute. On Indian lands, you must receive water quality certification from the U.S. Environmental Protection Agency, Region VIII, which may impose conditions in a certification.

5. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being, or has been, accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. Material may not be placed in any wetlands, or in any location or manner which will impair surface water flows into or out of any wetlands. Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, wet meadows, willow/alder thickets, and similar areas. Some of the typical plants found in wetlands are sedges, rushes, bulrushes, cattails, alders, and willows.

2. Destruction of riparian or riverine vegetation, especially mature trees, shall be avoided to the maximum extent practicable. The permittee is cautioned that large trees may be locally very important for bald eagles which are protected under the Bald and Golden Eagle Protection Act. When

work authorized by this permit causes damage to riparian vegetation that is not directly covered by a permanent feature, these scarred areas shall be replanted with a mixture of native trees, shrubs, forbs and grasses. Seeding, sprigging, or other means of planting native woody and herbaceous plants is highly recommended and advantageous to further stabilize stream banks. For further information on planting, contact your local Natural Resources Conservation Service office or the Corps of Engineers.

3. This permit does not authorize discharges of dredge or fill material as associated with channelization, ditching, mechanized land clearing, cutting off meanders, or blocking off naturally occurring channels or waterways.

4. Any activity authorized under this permit shall not jeopardize the continued existence of a threatened or endangered species, or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which is likely to destroy or adversely modify the critical habitat of such species. As appropriate, the Corps of Engineers will consult with the U.S. Fish and Wildlife Service on specific requests to perform work under this permit if the project may affect a threatened or endangered species, or critical habitat. For example, any activity which impacts the following rivers in western Colorado. The following rivers are occupied habitat for several fish species protected by the ESA: Consultation may conclude with the identification of conservation recommendations by the U.S. Fish and Wildlife Service (USFWS) in a non-jeopardy Biological Opinion (BO). At the Discretion of the Corps of Engineers, these recommendations will be incorporated into an approval. The Corps of Engineers, Sacramento District will enforce compliance with accepted recommendations. If the USFWS renders a jeopardy BO and its identified reasonable and prudent alternatives cannot be implemented, the project will require an individual Department of the Army permit. Authorization of an activity under this permit does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a BO with "incidental take" provisions, etc.) from the USFWS, both lethal and non-lethal "takes" of protected species are in violation of the ESA.

5. Any dredge or fill material shall not consist of unsuitable material [e.g., trash, debris, waste metal products, bituminous concrete (asphalt), car bodies, etc.] and must be free from toxic pollutants in toxic amounts.

6. All in-stream work should generally be performed during low water periods and the use of heavy equipment in stream beds, especially in live or flowing water, should be minimized. However, brown trout, *Salmo trutta*, begin spawning activity as early as mid-September when the hydrograph is generally receding. Depending on the location of a project, care must be taken so that low flow work dies not adversely impact natural recruitment of wild trout.

7. Any discharges of dredged or fill material shall not occur in close proximity of a public water supply or reservoir intake, should not limit the ability of any existing diversion structure to appropriate water, and should not adversely impact a stream gauging station.

8. Activities occurring in a component of the National Wild and Scenic River system, or in a river officially designated by Congress as a study river for possible inclusion in the system while the river is in an official study status, is not authorized by this permit.

9. An activity may not impair reserved tribal rights including, but not limited to, reserved water rights and treaty fishing and hunting rights.

10. An activity may not substantially disrupt the movement of those species of aquatic life indigenous to a water body, including those species which normally migrate through the area.

11. An activity in breeding areas for migratory waterfowl must be avoided to the maximum extent practicable.

12. Upon receiving approval to perform work under this permit, you will have the following mitigation measures available provided sequencing requirements have been met through the permitting process. Mitigation may take the form of any one or portions of all measures identified below:

    a. The use of fill timing with regards to season and duration of reservoir fill;

    b. The use of drawdown timing with regards to season and duration of reservoir drawdown;

    c. The use of an approved and certified wetland mitigation bank;

    d. The complete transference of an 1891 access easement right to the US Forest Service for sterilization;

    e. Restoration of a degraded wetland/fen at a ?:1 ratio or greater at the discretion of the division engineer;

    f. Persistence or establishment of wetland/fen within two feet of ordinary high water level;

    Each mitigation measure or combination of measure(s) will be approved through a formal review and certification of a mitigation plan. The mitigation plan and permit issuance shall be at sole discretion of the division engineer.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity in accordance with:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344)

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization:

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

1. Reliance on applicant's Data: The determination of this office that that verification based upon this permit is not contrary to the public interest was made in reliance on the information that you provided.

2. Reevaluation f Permit Decision. This office may reevaluate its decision on this permit, or verification based upon this permit, at any time the circumstances warrant.

   Circumstances that could require a reevaluation include, but are not limited to, the following:

   a. You fail to comply with the terms and conditions of this permit.

   b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate.

   c. Significant new information surfaces which this office did not consider before verifying that your project is authorized by this permit.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate.

You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of our decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.
This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

Issued for and in behalf of Colonel Thomas C. Chapman, District Engineer

Susan Bachini Nall, Chief, Colorado West Regulatory Branch (DATE)

Appendix D – Meeting Notes

Cedaredge Meeting Notes
April 12, 2010

ISSUES IDENTIFIED/SOLUTIONS

1. Water source is a spring that is surrounded by a wetland. We also have an aging water collection system (40 years old) which may be undersized. We have only one water storage tank, and we may need an additional tank in case there is failure in the tank.

2. Regulators are not always known…who are they, what is their role, who is the point of contact?

3. It's not always known what activities are in need of a permit.

4. Information sharing/flow is a problem, between agencies and water users; when there is a question, the response is often not timely.

5. Maintenance definitions used by the various agencies differ.

6. Definition between maintenance and construction is a problem; what is routine maintenance?

7. What are the regulatory exemptions?

8. Historical maintenance vs. current restrictions; what defines these?

9. The Corps may have changed policy, and the company doesn't understand these changes. Sometimes the company must wait 60-70 days, which is difficult in a short construction season.

10. EIS for every company is overkill; the hope is that an agreement can be formed between the Corps and water companies.

11. For existing reservoirs with no intent of expansion, that is a type of project that should be handled separately.

12. Short period of time for construction; need for a pathway to a quick permit for maintenance would be beneficial.

13. For larger, future projects, a RGP (between nationwide and individual permit) would be beneficial. Full blown IP takes literally years.

14. Interagency communication needs to improve, between the various government agencies involved.

15. Concern is that loans in play may be lost, if the timeline for permitting is 4-5 years. For mature projects, is there a mechanism for the permit to be sped up?

16. Would like to see a common database of like projects or issues; include a spatial dataset that any company can go to so the company doesn't have to start from scratch.

17. Include measuring devices for reservoirs, ditches, etc.

HAVE ISSUES RESULTED IN CHALLENGES TO FUNDING OF PROJECTS?

1. Yes, even small projects have required NEPA compliance, which resulted in the company's inability to utilize Federal grant money.

2. Yes, not always a big problem.

3. The smaller water companies have had to spend $8-15,000 in the waiting period between when the Corps asks them to halt, and delineation of wetlands begins. The feeling is that an MOU would be helpful (a wish).

HOW MUCH TIME HAS BEEN REQUIRED TO RECEIVE NECESSARY PERMITS FOR PROJECTS (IN MONTHS)? ESTIMATED COST ASSOCIATED WITH PERMITTING?

1. 24 months; 20% to 50% of project cost is for permitting.

GRAND JUNCTION MEETING NOTES
April 13, 2010

ISSUES IDENTIFIED/SOLUTIONS

1. Every ten years at least, the outlet structure needs to be inspected. Downstream of the Dam, access may be an issue. An outcome may be a high-hazard designation, or restrictions on water level on the dam. (Object of inspection is to identify potential dam failure in the future.)

2. Expansion of existing reservoirs. May raise level of water without expanding the size of the dam in some cases.

3. Access to riprap, if dam must be re-riprapped. Borrow areas in general.

4. Annual maintenance is hard to estimate during winter, timing issue with short construction season and permit.

5. Differences in definition; need descriptions of 'maintenance' or 'repair'. What is routine maintenance?

6. Blading the crest of a dam; riprap; rodent control, filling holes, etc.; …are these 'routine maintenance'?

7. Access for equipment, cutting trees, crossing wetlands; typical annual or routine projects.

8. For high-hazard dams, there's a State requirement for the owners to maintain equipment access to the crest. Issues with roadless areas, wilderness areas, etc. A dam safety rule. Up to 30% of dams are high-hazard.

9. Would be nice for water providers if there were just one point of contact, one authorized agency. Suggestion is for an MOU between agencies, in addition to RGP.

10. Lining of an outlet, a significant repair that, without it, might result in a restriction.

11. Would be nice to have a consistent definition of a fen; size, depth, moisture, elevation. (ACOE, USFWS uses NRCS definition); not all agencies implement the NRCS definition in the same way. Different federal agency fen policies. Issue is requirement for further studies to define a fen.

12. Downstream of a dam, usually wetlands, maintenance requirements in those locations, this is a grey area. It's maintenance, partial flume or rechanneling water along the toe, putting in drains. Not routine in that this in not annual work.

13. Stream areas; a diversion needs repair, needs special permit; pipelines, ditches.
14. May need a coffer dam while working on a diversion structure; fill required for coffer dam requires permit.

15. Cleaning a ditch, what can you do with the spoils?

16. Repairs identified one year may not get done that year; permits should have extensions (which is the case).

17. Another timing issue, temporary restriction vs. enlargement of reservoir. Some under restrictions for 35 years. If ID need for significant rehab, engineering study requires 2-3 years, is this an enlargement or a rehabilitation of current condition.

18. Drought for a period of years, followed by average rain year which inundates wetlands.

19. Why can't you get credit for raising water level and essentially creating new wetlands in fringe areas?

HAVE ISSUES RESULTED IN CHALLENGES TO FUNDING OF PROJECTS? HOW MUCH TIME HAS BEEN REQUIRED TO RECEIVE NECESSARY PERMITS FOR PROJECTS (IN MONTHS)? ESTIMATED COST ASSOCIATED WITH PERMITTING?

1. Costs have been an issue. Permitting is 3x the cost of design, and we're not sure how close we are to a permit. Five plus years is the timeframe.

MESA COLORADO PUBLIC MEETING NOTES
April 13, 2010

ISSUES IDENTIFIED/SOLUTIONS

1. Forest Service (1891) Easements need protection, to maintain access to water structures. Issues include the need for O&M, presence of fens, and access. Granted after the reservation of the forest.

2. There is a need for a common definition of 'Operation and Maintenance';

3. Ideally it would be good if there were one process and a single point of contact that would cover all the bases in one process Federal Agency - USFS, EPA, ACOE, USFWS,)

4. Water provider has a reservoir in serious need of repair within a Roadless area (dam is under a 'breach order'; access issues due to the roadless rule. Dam is in serious need of repair (Not Uncommon Problem).

5. Difficulty for small reservoir/ ditch companies to comply with regulations and restrictions (due to limited staff, resources, etc).

6. Permitting process is too complicated; results in more time and expense than is necessary.

7. Cost of permitting is way too high compared actual cost of moving the dirt; puts lots of small companies on the brink of going out of business.

8. Fen definition is vague; need better definition; differences in interpretation of what a fen is, and what some of the regulations are, between agencies. Suggestion is to look at doing more studies so we can come up with a good definition.

9. Agricultural exemption for reservoirs with non-domestic or consumptive use below the high water line for any maintenance activities.

10. It would be nice in a regional permit to have the ability to install coffer dams for the construction of new diversions; corps views that as fill material; an RGP may be a solution.

11. Another common activity is riprap sorting, which results in fill material that is classified by the Corps as fill.

12. When working in a channel, and a company redirects a channel with a piece of equipment, the need is to divert the water and maintain the channel diversion.

13. Relationship between access and easements; need to have ability to get equipment to sites. Reservoir easements or ditch bill easements.

14. We should try to improve communication between agencies, for the benefit of the companies. Some of the providers are 'caught in the crossfire' between agencies and the lack of communication.

15. Access is an issue, to do repairs; often ends up until there is an emergency.

16. Washed out head gates; taking out water diversion and gauging structures.

17. Beavers causing problems with structures and ditches.

18. Piping of a portion of a ditch that picks up surface runoff.

19. RGP that covers time sensitivity removal of PCN that requirement for maintenance activities.

HAVE ISSUES RESULTED IN CHALLENGES TO FUNDING OF PROJECTS? HOW MUCH TIME HAS BEEN REQUIRED TO RECEIVE NECESSARY PERMITS FOR PROJECTS (IN MONTHS)? ESTIMATED COST ASSOCIATED WITH PERMITTING?

1. One company spent 7 years from initiation to receipt of permit.

2. One company spent $720K on a permit process which is still not in hand, compared to a design cost of $270K.

3. One company spent 4 years at a cost of $150K, which was 10%. This meant that if they didn't spend this, they would have lost 300 acre feet of water rights. (State, WL Issue, Broader Benefits, Protection of 1922 Water Rights, Fish –Preservation of Functions of Values.)

Appendix E – Fen Policy

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

FWS/R6
ES

MAR 2 0 1999

Memorandum

To: Project Leaders for Ecological Services, Refuges and Wildlife, and Fish and Wildlife Management Assistance, Region 6

From: Regional Director, Region 6

Subject: Regional Policy on the Protection of Fens, As Amended

This policy was originally approved by Acting RD Mary L. Gessner on June 8, 1998. As a result of input received from users, Region 6 decided to clarify some of the language regarding the soils aspect of fens. The modifications are minor from a policy standpoint.

One of the Fish and Wildlife Service's wetland priorities in Region 6 (the Mountain-Prairie Region) is the protection and conservation of fens. Fens are wetlands that are primarily made up of organic soil material (i.e., peat or muck). Because they take thousands of years to develop, they are essentially irreplaceable. Many fens occur in the Mountain-Prairie Region, particularly in the middle to higher elevations of the Rocky Mountains and in the Nebraska sandhills. However, most fens are small and occupy an extremely small percentage of the overall landscape. They probably occupy much less than 1 percent of the total area in Region 6 and comprise only a small percentage of the total acreage of wetlands.

Although fens only occupy a minor portion of the landscape, they perform important hydrological and water quality functions. For example, rare native cutthroat trout often benefit from the water cleansing action of fens in headwaters of streams. They also often possess unique biotic assemblages, especially fens that are high in pH and calcium. The definitions of various classes of fens, the scientific justification for special consideration for these habitats, the functions of fens, and literature references are described in the attachment.

Because of their uniqueness and importance, Region 6 decided that all its functioning fens, which were identified on U.S. Geological Survey, National Wetlands Inventory, or other maps, and for which location information has been provided to applicable regulatory agencies, fall within Resource Category 1 of the Service's "Mitigation Policy" (Federal Register, Vol. 46, No. 15, February 4, 1981). The mitigation goal for Resource Category 1 is *no loss of existing habitat value*. In other words, because of the irreplaceability of the type of habitat, every reasonable effort should be made to avoid impacting that habitat type.

Functioning fens are those that (a) continue to support native plant communities and perform the functions inherent to fens or (b) have the potential to rapidly recover those functions with the removal or rectification of drainage, grazing, or other impacts.

Maps and other readily available documentation, such as descriptions of the functions of the fens, will be provided to applicable regulatory agencies (e.g., Corps of Engineers and State departments of water quality). When practicable, this information will be provided by Ecological Services and other Region 6 field offices in advance of project development to assist project planners in accordance with the intent of the Mitigation Policy.

I also encourage other agencies to help gather this important documentation. For example, the locations of fens also should be obtained (a) when wetland delineations are conducted in conjunction with project planning and development of permit applications under section 404 of the Clean Water Act and (b) for analysis of mitigation requirements for "Swampbuster" and section 404 violations. These wetland delineations should identify any fens in the project impact area and distinguish them from other wetland types. Fens identified during those delineations should be added to the regulatory agencies' databases and considered to be categorized as Resource Category 1 habitats.

For the purposes of this policy, fens will be defined as wetlands with organic material accumulations that are ground water driven. In other words, they may receive water from rain, snow, and surface sources. However, the hydrology, minerals, and nutrients that support the wetland are derived principally from ground water sources. Fens in Region 6 also normally have pH's above 5.5 and are dominated by grasses, sedges, or willows.

Region 6's recommended definition of a fen also includes soil characteristics. To qualify for this policy, the wetland soils should meet the Natural Resources Conservation Service's definition of a Histic epipedon or a Histosol in at least some part of the contiguous wetland, unless justified otherwise on

a functional basis by a scientist with substantial expertise in fens. Histosols are widely recognized as organic soils formed by slow accumulation of plant debris in waterlogged situations where growth exceeds decomposition and decomposition progresses very slowly. Fens in the Rocky Mountains have particularly slow decomposition rates because of the cold climate.

The 1998 USDA "Keys to Soil Taxonomy" require that Histosols have organic soil materials and meet one or more of four criteria, which are described in the attachment to this policy. One of the criteria requires that organic materials constitute two-thirds or more of the total thickness of the soil to a densic, lithic, or para lithic contact *and* have no mineral horizons or have mineral horizons with a total thickness of 10 cm or less.

In accordance with those criteria, fen wetland complexes can have a significant presence of mineral soils in layers or mosaics, and they may support unique minerotrophic flora. Fens also are not required to have thick organic layers. Such fen wetlands are common in the Rocky Mountains. They meet the aforementioned hydrologic criteria, are saturated throughout most if not all of the year, and may occur on high gradients or in headwater systems.

Mitigation for losses of fen wetlands is problematic because, as mentioned above, the rate of organic material (e.g., peat) accumulation in fens is extremely slow. For example, many of the fens of Colorado are over 10,000 years old with organic soil accumulation rates ranging from 4.3 to 16.2 inches per thousand years. In consideration of this slow accumulation rate, such wetlands cannot seriously be considered a renewable resource. In addition, removal of organic material (e.g., for peat mining) results in alteration of site hydrology and the substrate in which fen plant species can grow. Therefore, onsite or in-kind replacement of peat wetlands is not thought to be possible. Furthermore, at present there are no known reliable methods to create a new, fully functional fen or to restore a severely degraded fen.

Because of their vulnerability, protection of all fens are a priority in this Region, including those which have not yet been mapped and officially designated as Resource Category 1. Accordingly, in a letter dated April 1, 1997, I requested the applicable Division and District Engineers of the U.S. Army Corps of Engineers to revoke the use of Regional and Nationwide Permits pursuant to section 404(e) of the Clean Water Act for projects involving fens. This position was reiterated when the Corps proposed modifying its Nationwide Permits in 1998. I am pleased to note that, as a result, the Corps is giving increased attention to fen protection during permit processing in this Region.

With regard to individual permit applications, Region 6 field offices will encourage the Corps to closely scrutinize all applications involving fens to ensure they meet the requirements of the Environmental Protection Agency's Section 404(b)(1) Guidelines. For example, the project sponsor must prove that, in accordance with section 230.10(a), every effort to avoid the impacts has been made through selection of the least damaging alternative, there is no practicable alternative for nonwater dependent activities, and the siting of a water-dependent project in a fen is essential to the project.

If those requirements are first met, every reasonable effort must be made to minimize potential adverse impacts through project modifications and project conditions then in accordance with Section 230.10(d) of the Guidelines. The ES Offices should encourage their counterparts in the Corps to require that projects with the potential to adversely affect fens strictly adhere to the mitigation sequencing requirements of the Memorandum of Understanding between the Department of the Army and the Environmental Protection Agency, dated February 6, 1990. Unavoidable impacts remaining after those steps have been satisfied must be fully compensated when practicable through restoration of nearby and in-kind fens that have been previously degraded but which are recoverable (e.g., through elimination of grazing or restoration of hydrology).

Similar steps should be required for other federally funded, licensed, or constructed projects affecting fens that are subject to the requirements of the Fish and Wildlife Coordination Act, Endangered Species Act, Migratory Bird Treaty Act, or National Environmental Policy Act. This type of increased scrutiny also should be applied to natural wetlands that surround or are immediately adjacent to fens because they may not easily be separable and their functions will often overlap.

Proposed in-kind restoration mitigation for unavoidable impacts to fens should be thoroughly evaluated for likelihood of success before a permit is issued. Because of the high degree of uncertainty associated with attempts to mitigate impacts, the success of proposed mitigation should be demonstrated prior to project initiation, and thorough postproject monitoring and reporting should be required. Furthermore, all such applications will be considered on a site-specific, case-by-case basis.

Because unavoidable impacts will rarely be satisfactorily compensated by replacement of in-kind habitat, Region 6 Ecological Services Field Offices will normally recommend denial of all permits for projects that may adversely affect functioning fens. However, they also will look for opportunities to restore degraded fens. Draining, mining, and filling of all fens will be

strongly discouraged. In addition, concentrated efforts will be made to encourage relocation of proposed reservoirs and linear projects (e.g., roads, utility lines, and canals) that might impact fens, when practicable.

Furthermore, restoration and proper management of fens should be given high consideration during the development and implementation of management plans on refuges and other public lands. Opportunities for restoration of fens also should be an area of focus for partnership opportunities with other agencies, citizens' organizations, and private landowners.

Copies of this policy were provided to several Federal and State agencies for their consideration, and this information will be available to other applicable entities for use in project planning and decisionmaking. However, the policy does not have any legal authority over Government or private decisions, and it does not affect ongoing, authorized development. The purposes of this policy are to help ensure consistent and effective recommendations by Service personnel and to provide other Federal, State, and local government agencies advance notification of Region 6's position regarding fens.

The attachment to this policy further describes the characteristics of fens in general but only specifically discusses fens in Colorado. Therefore, I reiterate the request stated in the cover memorandum to the draft policy that was sent to Region 6 ES offices for review. Please continue to work with the Natural Heritage Programs and other sources of data in each State so we can broaden the base of our knowledge on fens in other States in Region 6 and further substantiate the position Region 6 has taken in this policy. Please keep my ES staff abreast of new data development in this subject area. Questions on this policy should be directed to Dennis Buechler, Senior Staff Specialist for Federal Activities, at (303) 236-7400, ext. 231.

Neil Kaetman

Attachment

cc: See Distribution List

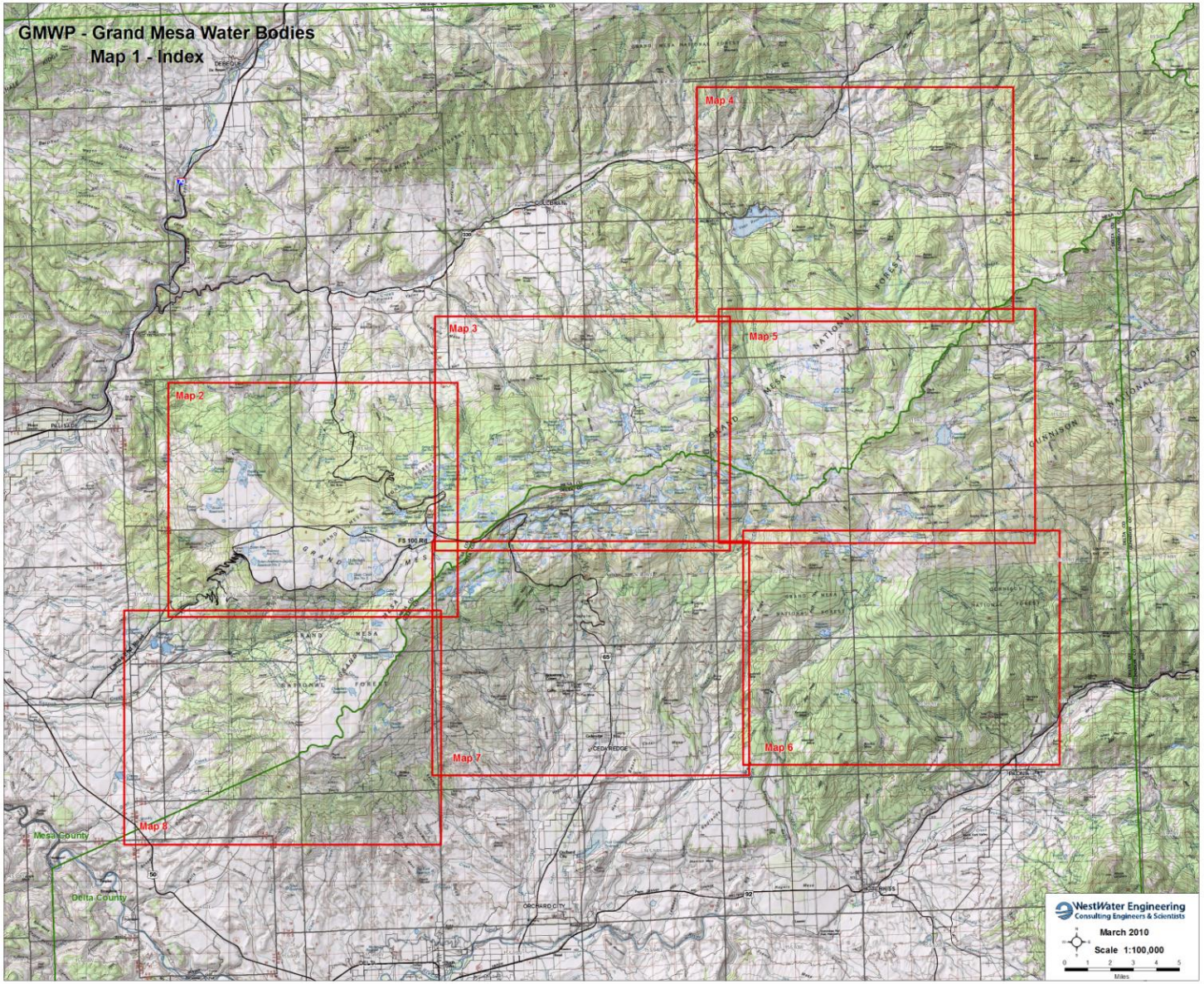
Appendix F - Current Planned Projects

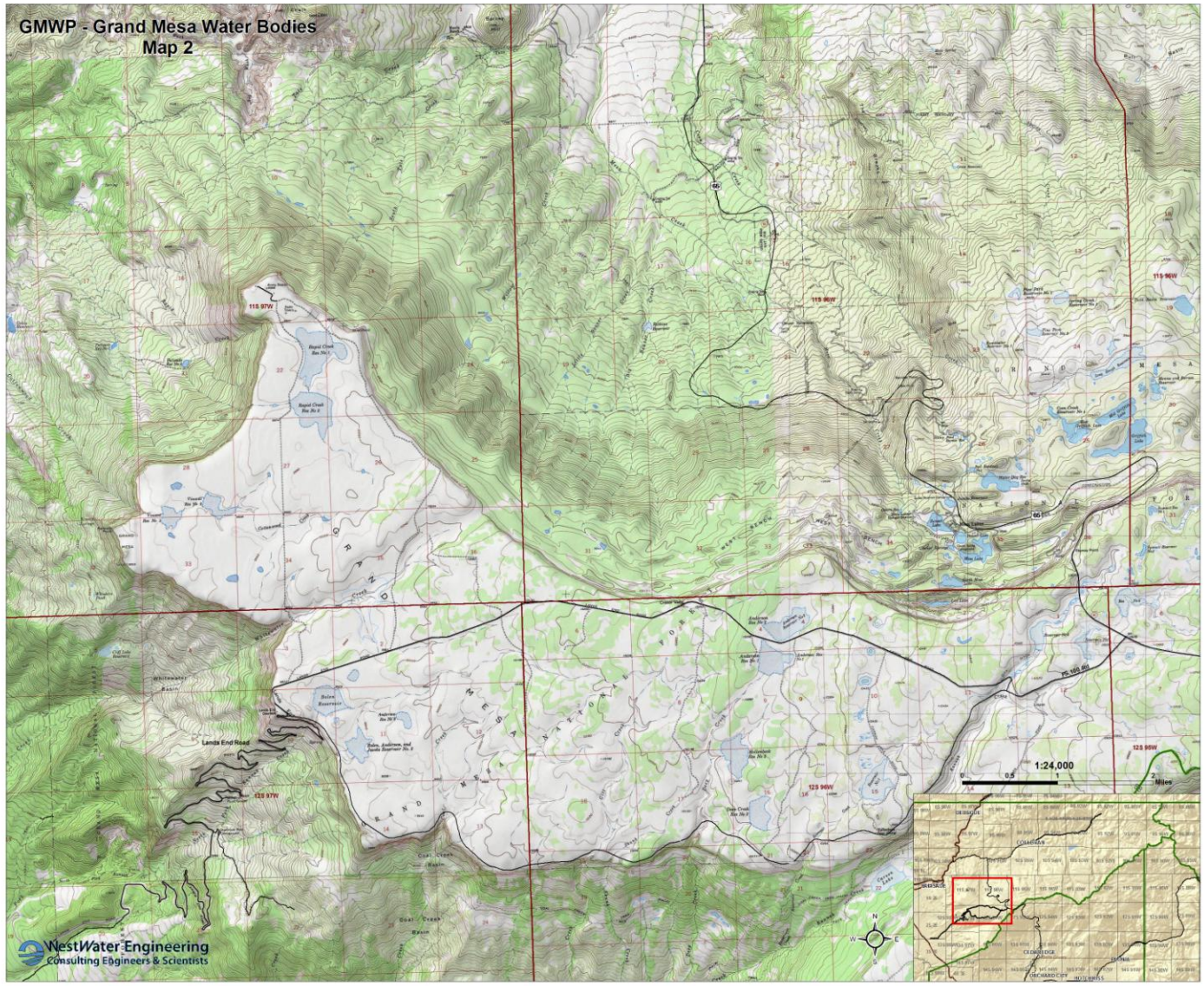
Water Group Name	Contact	Phone	E-mail	Water Infrastructure Name (Reservoir, Ditch, Springs)	Past (5 Years) Projects		Planned Projects within 1 yr (annual maintenance)		Planned Projects within 5 yrs		Planned Projects within 10 yrs		Map#
					Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	
Leon Lake D & R Co.	Chuck Richards	856-3165	gmwua@tds.net	Leon Lake	Leon Lake	Dam Excavation/Repair	Leon Lake	Spillway Cleaning	Leon Lake	1400' tunnel repair	Leon Lake	Tunnel repairs	5
Leon Lake D & R Co.				Leon Lake			Leon Lake	Ditch excavation	Leon Lake	Toe drain cleaning	Leon Lake	Spillway excavation	5
Leon Lake D & R Co.				Leon Lake			Leon Lake	Head gate repair					5
Leon Lake D & R Co.				Leon Lake			Leon Lake	Dam dress-up					5
Bull Creek Reservoir Company	John Groo	268-5561	jwgworld@yahoo.com	Bull Creek 1,2,3,4,5	BC 3	Rehab & Enlargement	BC 4	Finish Construction	BC 1	Dam repair & spillway rebuild	BC 5	Dam rebuild & outlet replacement	3
Bull Creek Reservoir Company				Bull Creek 1,2,3,4,5	BC 5	Spillway enlargement, Breakpoint const.	BC 5	Maint. & Repair	BC 2	Spillway rebuild			3
Bull Creek Reservoir Company				Bull Creek 1,2,3,4,5	BC 1	Stub dam repair							3
Town of Cedaredge						Regular Maint.		Regular Maint.		Regular Maint.		Regular Maint.	
Coalby Reservoir	Dawn Sudmeier	856-7838	dawnsud@tds.net	Coalby R & D	Water Filter	Water Treatment Plant	Coalby R & D	Replace distribution lines	Coalby R & D	Replace collection lines			
Coalby Reservoir				Coalby R & D					Coalby R & D	Replace storage tank			
City of Delta	Steve Glammeyer	874-7566 x229	steve.glammeyer@delta.us.gov	Burnett Res., Doughspoon Res., Doughspoon pipeline, Maude South ditch, Hoosier ditch, Pitgairn Res., Dugger Res., Porter Res 1&4, Morris Res., Clark Res., Dirty George pipeline, Kelly Creek Res., Big Battlement Res., Little Battlement Res., Basin Res. 1&2	Big Battlement	Spillway repair							
City of Delta				All water structures	All	Annual Maint.	All	Annual Maint.	All	Annual Maint.	All	Annual Maint.	
Granby Reservoirs	George Fulton	856-7357	fulton@tds.net	Granby Reservoirs	Granby 12	Dam Rehab, toe drain, dam reinforce	All structures	Routine Maint. - rodent control, blade dam crest, clear spillways, level flumes, clear brush/trees, clean ditches	All structures, Granby 12	Routine Maint.; Fill Granby 12	All structures	Routine Maint.	7
Grand Mesa Res. Co/City of Grand Junction	Terry Franklin	244-1495	terrf@gjcity.org	Grand Mesa Res.6,8&9, Scales Res. 1&3	GM 1	Rehab Res - spillway reline outlet, toe drains	GM 8	Replace outlet flume and recorder house	GM 6,8,9 & Scales 1&3	Routine Maint.	GM 6	Replace flume and recorder house, replace outlet valve and reline outlet tube	
Grand Mesa Res. Co/City of Grand Junction				Grand Mesa Res.6,8&9, Scales Res. 1&3	GM 9	Replace flume, replace recorder house					GM 8	Replace outlet valve and reline outlet tube	
Grand Mesa Res. Co/City of Grand Junction				Grand Mesa Res.6,8&9, Scales Res. 1&3							GM 9	Replace outlet valve and reline outlet tube	
Grand Mesa Res. Co/City of Grand Junction				Grand Mesa Res.6,8&9, Scales Res. 1&3							Scales 1	Replace outlet valve and reline outlet tube	
Grand Mesa Res. Co/City of Grand Junction				Grand Mesa Res.6,8&9, Scales Res. 1&3							Scales 1	Replace outlet flume and recorder house	

Water Group Name	Contact	Phone	E-mail	Water Infrastructure Name (Reservoir, Ditch, Springs)	Past (5 Years) Projects		Planned Projects within 1 yr (annual maintenance)		Planned Projects within 5 yrs		Planned Projects within 10 yrs		Map#
					Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	
Grand Mesa Res. Co/City of Grand Junction				Grand Mesa Res.6,8&9, Scales Res. 1&3							Scales 3	Replace outlet flume and recorder house	
Overland D & R Co	Philip Ceriani	260-2057	Pceriani@paonia.com	Overland Ditch and Res.	Overland D & R	Routine Maint., Reset two parshall flumes, repair undershots on Hubbard and Terrors, replace flume on Roatcap Ck, repair Cow Ck diversion, repair flume approach on Leroux Ck, reset Cow Ck flume,	Overland Res. Expansion project, Engineering analysis at MM 12.2-13, Engineering Analysis at MM 2 & 4.	Construction and Engineering analysis	Complete Res. Expansion,		Reservoir expansion	Complete expansion	
Overland D & R Co				Overland Ditch and Res.					Ditch repair	Install pipe in ditch sections as needed	Ditch and SCADA	Complete improvement to ditch and SCADA control	
Overland D & R Co				Overland Ditch and Res.					Ditch repair	Install SCADA control on upper ditch			
Overland D & R Co				Overland Ditch and Res.					flume work	repair/rebuild flumes			
Overland D & R Co				Overland Ditch and Res.					diversion box	repair/rebuild diversion box at Cow Ck			
Ute Water Conservancy	Ed Tolen	242-7291	etolen@utewater.org	Hunter Reservoir, Monument Reservoir #1 &#2, Long Slough, Bull Basin Res. #1 & #2, Twin Basin Res., Jensen Res., Coon Creek Res. #1, 2,3.	Routine Maint.	Rebuild breached embankment, line outlet pipes, riprap embankment slopes, embankment crest grading, ditch cleaning, piping sections of ditch that are prone to sliding, rebuild diversion structures, wetland mitigation, install seepage drains on embankments, clear access to reservoirs	Routine Maint.	Rebuild breached embankment, line outlet pipes, riprap embankment slopes, embankment crest grading, ditch cleaning, piping sections of ditch that are prone to sliding, rebuild diversion structures, wetland mitigation, install seepage drains on embankments, clear access to reservoirs	Routine Maint.	Rebuild breached embankment, line outlet pipes, riprap embankment slopes, embankment crest grading, ditch cleaning, piping sections of ditch that are prone to sliding, rebuild diversion structures, wetland mitigation, install seepage drains on embankments, clear access to reservoirs	Routine Maint.	Rebuild breached embankment, line outlet pipes, riprap embankment slopes, embankment crest grading, ditch cleaning, piping sections of ditch that are prone to sliding, rebuild diversion structures, wetland mitigation, install seepage drains on embankments, clear access to reservoirs	

Water Group Name	Contact	Phone	E-mail	Water Infrastructure Name (Reservoir, Ditch, Springs)	Past (5 Years) Projects		Planned Projects within 1 yr (annual maintenance)		Planned Projects within 5 yrs		Planned Projects within 10 yrs		Map#
					Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	Project Name	Type of Project	
Ute Water Conservancy				Kiggins & Salisbury Ditch, Coon Creek Feeder Ditch, Long Slough Feeder Ditch, Spring Creek Feeder Ditch, Little Finn Ditch, Leon Ditch, Mason & Eddy Ditch, Wildcat Ditch,	Routine Maint.		Routine Maint.		Routine Maint.		Routine Maint.		
Ute Water Conservancy				Carver Ranch Pipeline, Mesa Creek Pipeline, Coon Creek Pipeline, Brown Ditch, Craig & Stewart Ditch, Independent Ditch, Mesa Creek Ditch, Vance 7 Fortsch Ditch, Heely Ditch	Routine Maint.		Routine Maint.		Routine Maint.		Routine Maint.		
Ute Water Conservancy				#1-6, Pisel Ditch, Welch Ditch, Bull Basin Highline Ditch, Boyle Creek Ditch, Hill-Johnson Ditch, Cedar Ditch, Blackman, Dunlap & Clark Ditch	Routine Maint.		Routine Maint.		Routine Maint.		Routine Maint.		

Appendix G - GEO Referenced Maps


GMWP - Grand Mesa Water Bodies
Map 1 - Index
Map 2
Map 3
Map 4
Map 5
Map 6
Map 7
Map 8
Mesa County
Delta County
WestWater Engineering
Consulting Engineers & Scientists
March 2010
Scale 1:100,000


GMWP - Grand Mesa Water Bodies
Map 2
Lands End Road
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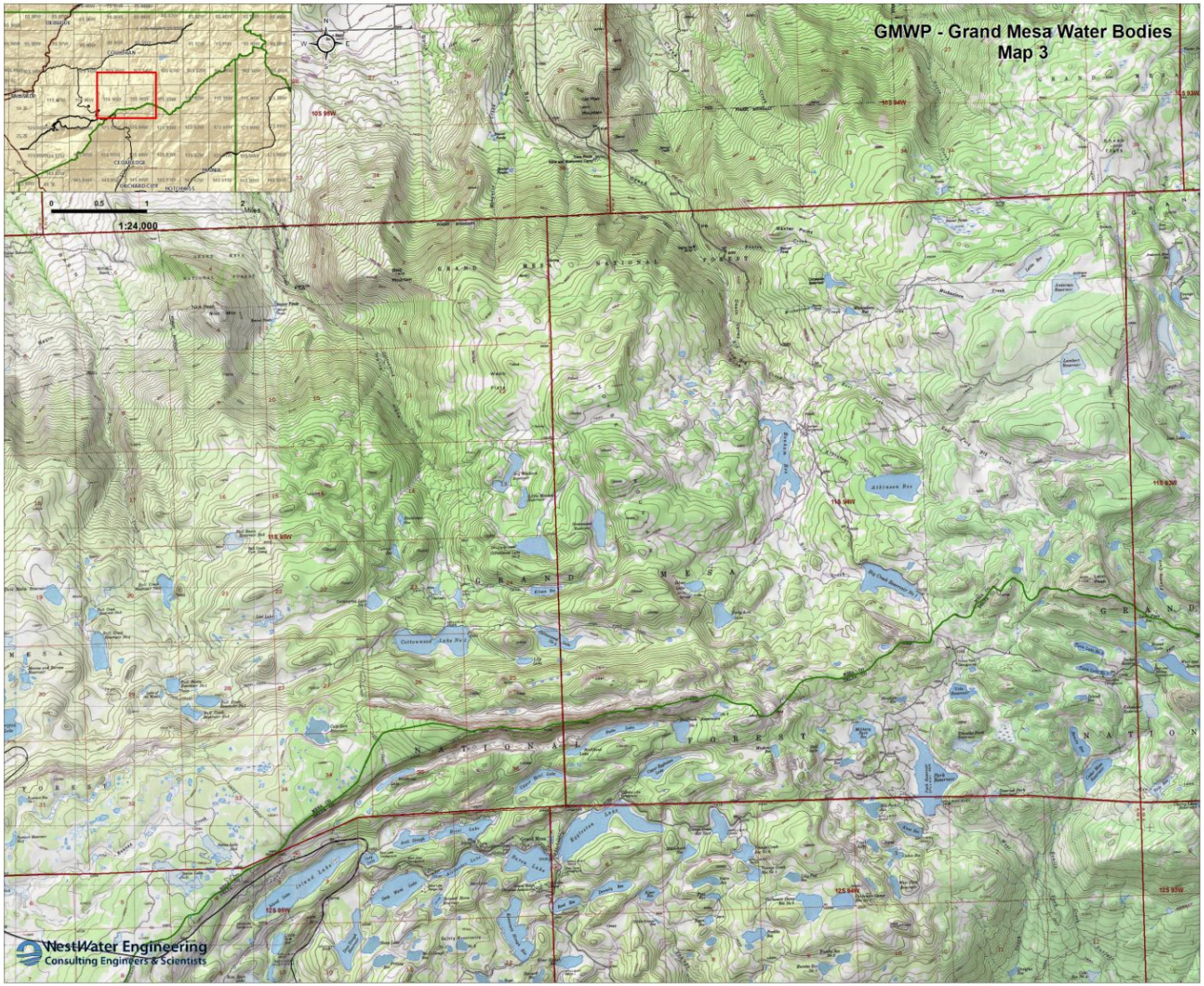
WestWater Engineering
Consulting Engineers & Scientists


GMWP - Grand Mesa Water Bodies
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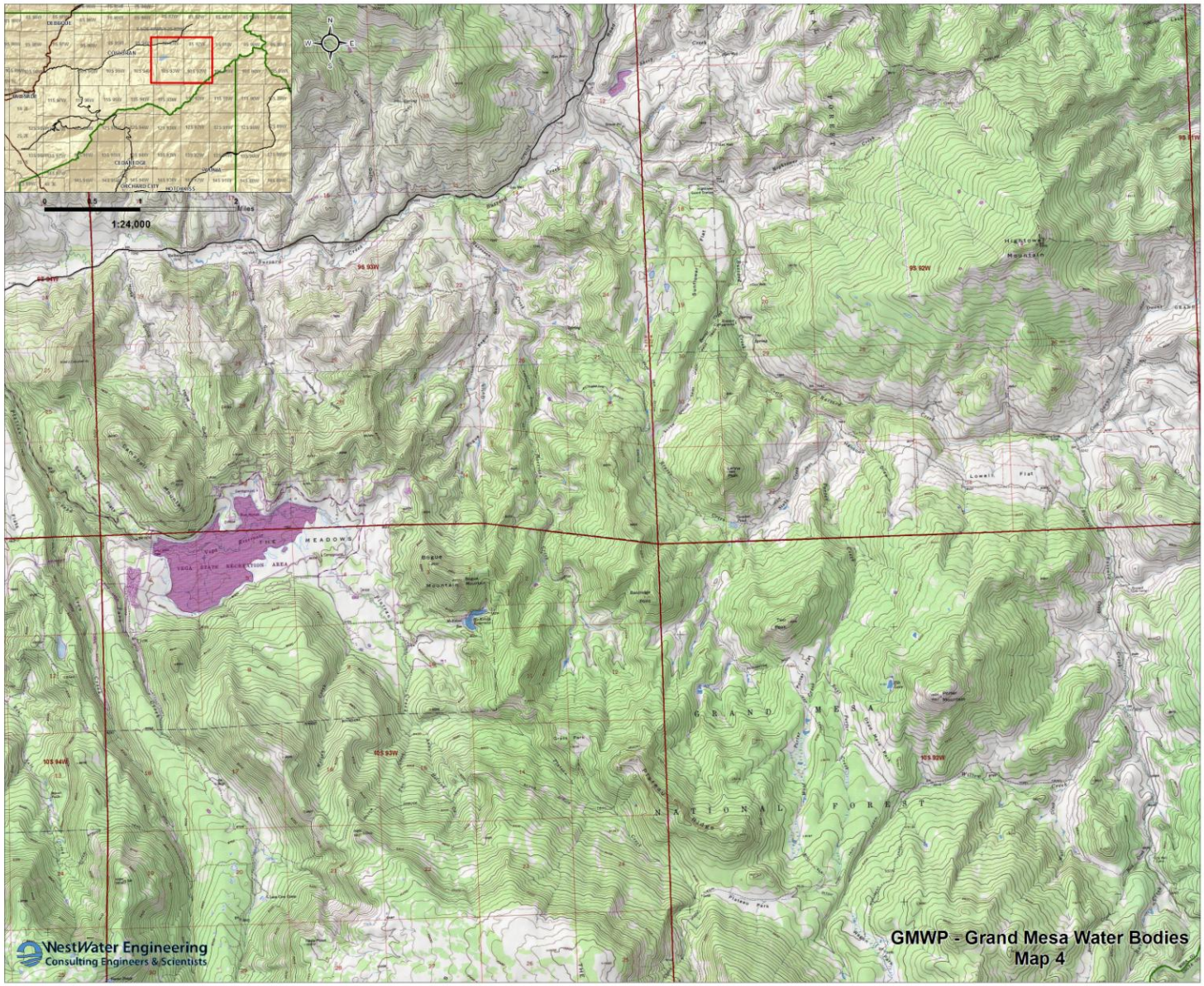
Consulting Engineers & Scientists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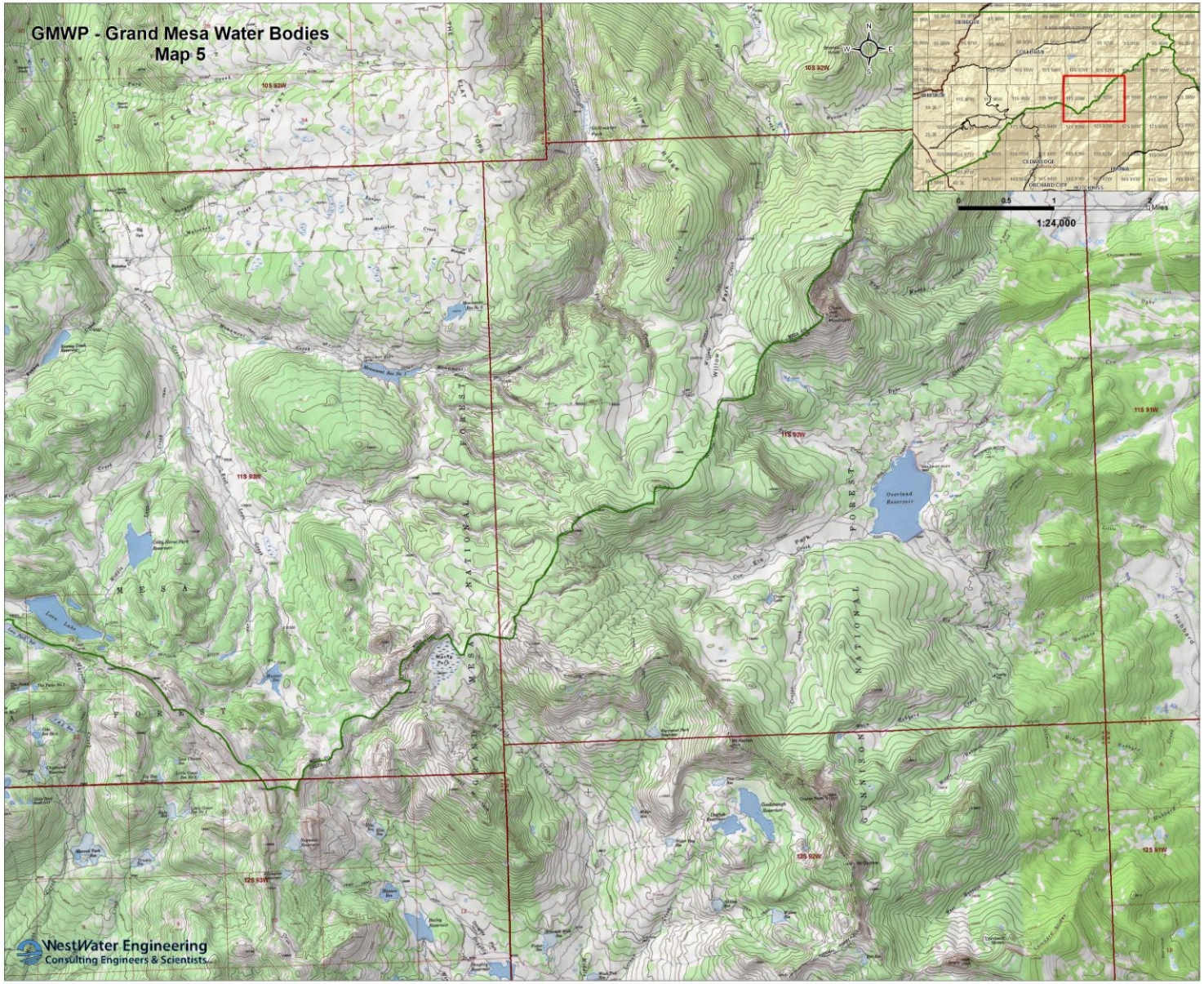
WestWater Engineering
Consulting Engineers & Scientists
GMWP - Grand Mesa Water Bodies
Map 4


GMWP - Grand Mesa Water Bodies
Map 5
WestWater Engineering
Consulting Engineers & Scientists
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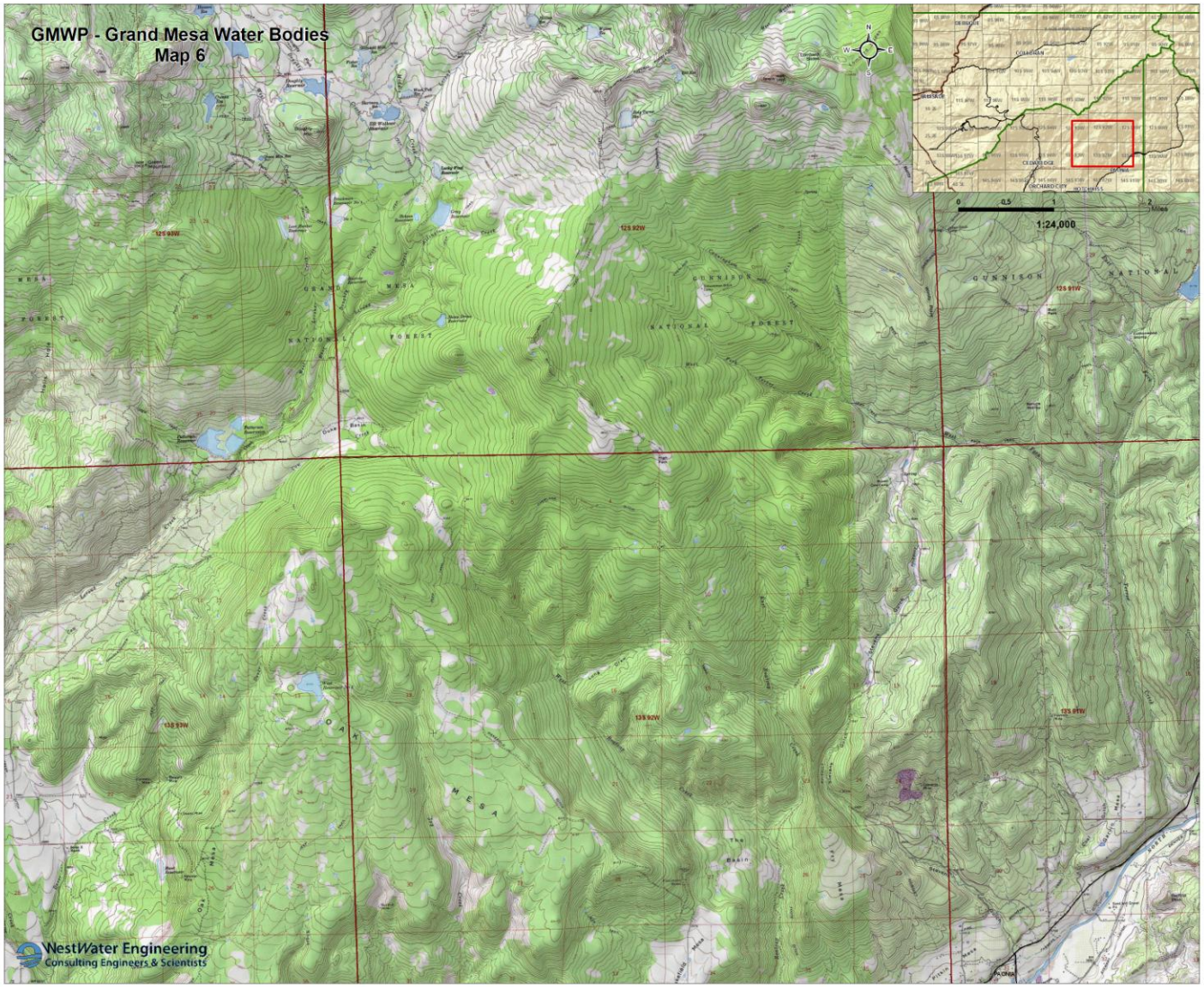
GMWP - Grand Mesa Water Bodies
Map 6
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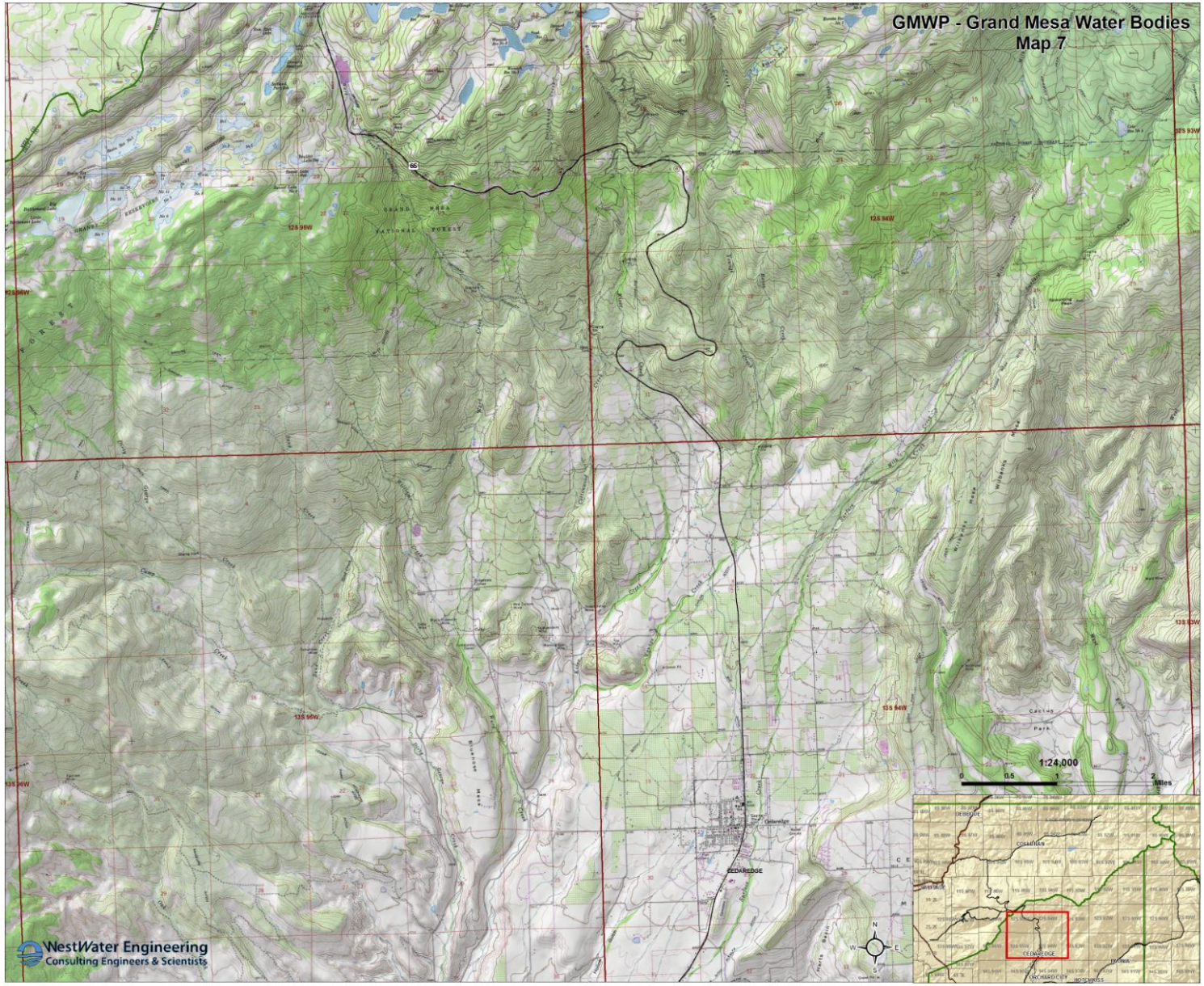
WestWater Engineering
Consulting Engineers & Scientists


GMWP - Grand Mesa Water Bodies
Map 7
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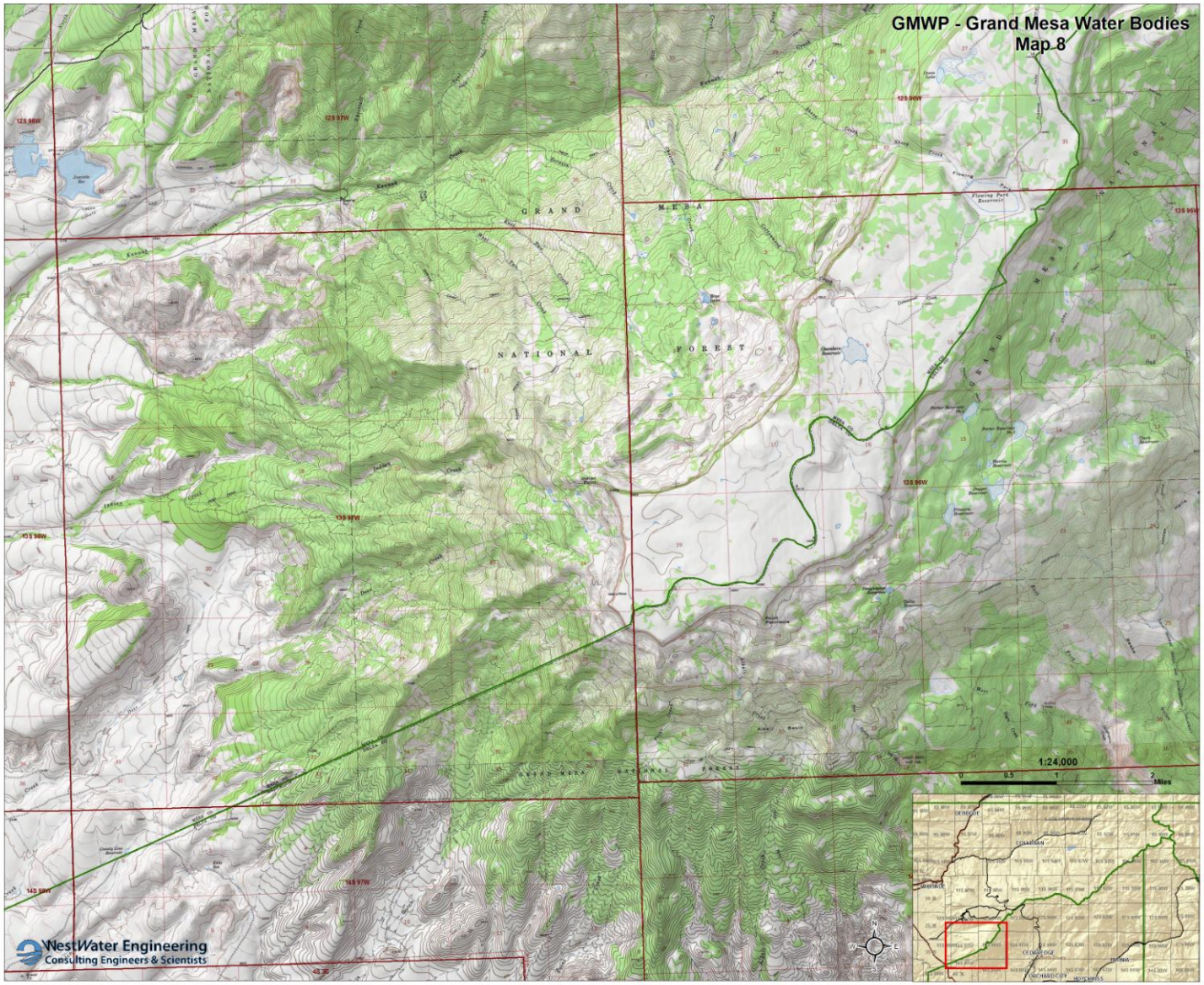
WestWater Engineering
Consulting Engineers & Scientists


GMWP - Grand Mesa Water Bodies
Map 8
GRAND
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NestWater Engineering
Consulting Engineers & Scientists