

U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
50629 Highway 6 & 24
Glenwood Springs, CO 81602

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2008-044 EA

CASEFILE NUMBER:

PROJECT NAME: Clough Alber and East Fork Ponds

LEGAL DESCRIPTION: T.5 S., R.94 W. See Attached map.

APPLICANT: Bureau of Land Management

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: Construction of 11 stock ponds. Locations are shown on the attached map (Appendix A). The reservoirs would be constructed as described on the attached drawing and construction specifications (Appendix B). Each reservoir will be no more than 70 feet in diameter and will disturb no more than 0.1 acres of vegetation and soils at each site. A bulldozer will be used to perform the work on the reservoirs. All of the reservoirs are located adjacent to existing roads and would impound water from surface runoff (rain or snowmelt).

Construction of the above range improvements will be accomplished by the BLM's Force Account or the grazing permittee. The project would be authorized by a Cooperative Range Improvement Agreement as per 43 CFR 4120.3-2 and the grazing permittee would be responsible for maintenance. Construction is anticipated to begin anytime from May 15 to Nov. 30. In accordance with 43 CFR 4120.3-2(b), title of the range improvement shall be in the name of the United States.

Project Design Features:

- The U.S. Fish and Wildlife Service (USFWS) has determined that any federal action that will deplete water in the basin will prompt a "may affect" determination for the 4 Big River Fish under Section 7 of the Endangered Species Act. The project is covered by the programmatic biological assessment and will be included on the Resource Area's water depletion log, submitted to the FWS at the end of the year.
- Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site. The permittee will monitor the reservoir disturbances to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from reservoir construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying.
- These areas may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other

statutes and executive orders. The BLM may require modification to development proposals to protect such properties, or disapprove any activity that is likely to result in damage to historic properties or areas of Native American concern.

No Action Alternative: Construction of the reservoirs would not be authorized.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None

NEED FOR THE ACTION: The Clough-Alber allotment has been identified for development of an Allotment Management Plan (AMP). There is currently season long grazing which occurs mostly in or around the riparian areas of the allotment. The water developments would provide livestock and wildlife with an additional source of water away from riparian areas, would help improve grazing distribution, would maintain/improve the condition of riparian and upland areas, and would help maintain/achieve Colorado Public Land Health Standards 2 (riparian systems) & 3 (plant and animal communities).

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Glenwood Springs Resource Management Plan.

Date Approved: Jan. 1984, revised 1988, amended in November 1991 - Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; and amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance.

Decision Number/Page: The proposal implements land use plan decision LGM2 page 20

Decision Language: LGM2 states "construct facilities such as springs, reservoirs, fences, corrals, and livestock trails where necessary to control and distribute livestock."

Standards for Public Land Health:

In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five Land Health Standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

The Glenwood Springs Field Office is in the ongoing process of completing land health assessments on a landscape basis. The proposed action is located in the Roan Cliffs landscape which had land health assessment fieldwork conducted in 1999 and the determination report was approved on January 8, 2001. The Standard for riparian areas was being met on all but two sites. All riparian areas in the Clough-Alber allotment were "Functioning at Risk" with an upward trend. The determination report encouraged the continued construction of range improvements and grazing management practices to minimize the period of use in the vicinity of riparian areas.

The proposed action is designed to improve livestock grazing distribution and management to progress toward "Proper Functioning Condition" of the riparian areas. The impact analysis must

address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 1). Only those mandatory critical elements that are present and may be affected are described in the following narrative.

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources**.

Critical Elements

Table 1. Critical Elements of the Human Environment									
<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs	X			X	Special Status Species*	X		X	
Cultural Resources		X		X	Wastes, Hazardous or Solid	X		X	
Environmental Justice		X		X	Water Quality, Surface and Ground*	X		X	
Floodplains		X		X	Wetlands and Riparian Zones*	X			X
Invasive, Non-native Species	X		X		Wild and Scenic Rivers		X		X
Migratory Birds	X		X		Wilderness/ WSAs		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

AIR QUALITY

Affected Environment: The proposed action area (Garfield County) has been described as an attainment area under CAAQS (Colorado Ambient Air Quality Standards) and NAAQS (National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards. For more information on existing air quality in the area, refer to the Roan Plateau RMPA and EIS which describes potential effects from oil and gas development (BLM 2006:4-26 to 4-37).

Proposed Action:

Environmental Consequences/Mitigation: The proposed action would result in short-term localized vehicle emissions from dozer operations associated with construction of the stock ponds. Additionally, there is a potential for some dust generation if these

activities occur in dry conditions. These effects would be minor, of short duration, and overall would have little or no effect on air quality.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on air quality.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: One of the 11 proposed ponds is right on the boundary of the Trapper Creek ACEC on a ridgeline at the head of Yellowjacket Creek. All of the ponds occur along ridgelines at the headwaters of tributaries which flow into either Trapper Creek ACEC or East Fork Parachute Creek ACEC. The ACECs were designated to protect the Colorado River cutthroat trout, the hanging gardens, and other natural plant communities within Trapper Creek, lower Northwater Creek, and East Fork Parachute Creek.

Proposed Action:

Environmental Consequences/Mitigation: Actions which would result in additional sedimentation or changes in hydrologic flows into the creeks may adversely affect the cutthroat trout and the plant communities for which the ACECs were designated. The proposed ponds would be constructed immediately adjacent to the road and each would involve less than one acre of surface disturbance. The pond sites are relatively flat and erosion and sediment potential from pond construction and livestock concentration should be minimal and should not impact the cutthroat trout. The amount of water impounded would result in minimal changes in hydrologic flows into the creeks. The action would not result in any degradation to the values of the Trapper Creek ACEC or East Fork Parachute Creek ACEC.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no ponds would be constructed. Livestock would continue to concentrate in the creek bottoms which would negatively impact habitat for the Colorado River cutthroat trout by reducing streamside cover and increasing sedimentation which can impact fish by silting in spawning and pool habitats. Extended livestock grazing in the riparian areas may also degrade the riparian natural plant communities by reducing plant vigor, increasing mortality and by creating niches for the invasion of noxious weeds.

CULTURAL RESOURCES

Affected Environment: Three Class III cultural resource inventories (GSFO# 380, 789, 8396-1) have been conducted encompass within the proposed pond areas. The majority was covered by a large survey conducted for the Department of Energy in 1996 (GSFO # 8396-1). No historic properties were identified in the pond areas. However, dense vegetation on top of the Roan Plateau may have obscured any surface evidence of cultural material.

Proposed Action:

Environmental Consequences/Mitigation: While no historic properties were identified during the inventories the ponds are located in moderate to high sensitivity areas within the Roan Plateau Planning Area Record of Decision. A determination of “**May**

Adversely Affect” has been made for this project. In order to mitigate this potential affect and comply with the Roan Plan Cultural Resource Management Plan all pond construction must be monitored by a qualified archaeologist and any cultural manifestation identified must be mitigated as it is found.

Additional direct impacts occur where livestock concentrate particularly around ponds. These impacts include trampling, chiseling, and churning of site soils, cultural features, and cultural artifacts, artifact breakage, and impacts from standing, leaning, and rubbing against historic structures, above-ground cultural features, and rock art. Indirect impacts include soil erosion, gulying, and increased potential for unlawful collection and vandalism. Continued grazing may cause substantial ground disturbance and cause cumulative, long term, irreversible adverse effects to historic properties.

Education/Discovery/NAGPRA stipulation needs to be added to the permit. All persons specifically associated with this operation must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with this operation any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36CFR800.110 & 112, 43CFR 0.4).

No Action Alternative: Under this alternative potential impact to significant buried cultural resources would be reduced.

ENVIRONMENTAL JUSTICE

Affected Environment: Review of 2004 data from US Census Bureau indicates the median annual income of Garfield County averages \$50,119 and is neither an impoverished or wealthy county. Median annual income of Eagle County averages \$59,037 and is not impoverished but is considered a wealthy county. U.S. Census Bureau data from 2006 shows the minority population of Garfield and Eagle County comprises less than 0.3 % of the total population of Colorado¹.

Garfield County
Median Household Income (2004)
Estimate
\$50,119

Environmental Consequences/Mitigation: The proposed action and alternatives are not expected to create a disproportionately high and adverse human health impact or environmental effect on minority or low-income populations within the area.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: No noxious weeds or invasive, non-native species have been officially

¹ Source U.S. Census Bureau: State and County QuickFacts. Data derived from Population Estimates, Census of Population and Housing, Small Area Income and Poverty Estimates, State and County Housing Unit Estimates, County Business Patterns, Nonemployer Statistics, Economic Census, Survey of Business Owners, Building Permits, Consolidated Federal Funds Report
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documented at the proposed project site. However, given the widespread nature of noxious weed infestations throughout the resource area, it is assumed that some level of infestation does exist in the project area.

Environmental Consequences/Mitigation:

Proposed Action: All surface disturbing activities provide a niche for invasion by noxious weeds and increase the potential for weeds to become established in an area. The Project Design Features of the Proposed Action (pg 1-2) has supplied adequate measures for the control of potential weed infestations at the project area; therefore, no other mitigation measures are needed. The Proposed Action will not significantly impact invasive, non-native species within the project area if project design features are followed.

No Action Alternative: Under this alternative, the project would not be constructed. There would not be a niche created for noxious weed invasion. The presence of noxious weeds would likely continue under current conditions

MIGRATORY BIRDS

Affected Environment: Vegetation at the proposed pond sites includes sagebrush, mixed mountain shrubs and perennial grasses and forbs. These habitat types provide nesting and foraging habitat for a variety of migratory bird species. One priority species on the USFWS Birds of Conservation Concern List, Virginia's warbler may nest in the area.

Environmental Consequences/Mitigation:

Proposed Action: The Proposed Action would have minimal impacts to migratory birds. Nesting attempts may be disrupted and some nests may be accidentally destroyed if the ponds are constructed during the breeding season (May – July). As this would impact just over one acre of habitat, potential for impacts would remain low. Once construction of the water development is complete, there would be no further potential to interfere materially with nest substrate. Additional water sources may improve migratory bird habitat by evenly distributing grazing throughout the allotment. Habitat in the immediate vicinity of the pond would be degraded by livestock congregation, however, this should not affect the productivity of the surrounding habitat. The Proposed Action would have little influence on the abundance or distribution of breeding migratory birds at a landscape level.

No Action Alternative: There would be no impact to migratory birds or their habitat.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: The Ute tribes claim this area as part of their ancestral homeland. At present, no Native American concerns are known or were identified during the surveys. If new data are disclosed, new terms and conditions may have to be negotiated to accommodate their concerns.

Proposed Action:

Environmental Consequences/Mitigation: Although there would be no direct impacts from the proposed action, indirect impacts from increased access and personnel in the vicinity of the proposed project could result in impacts to unknown Native American resources ranging from illegal collection to vandalism.

The standard Education/Discovery/NAGPRA Stipulation for cultural resource protection would be attached and stressed to all participants informing them of their responsibilities to protect and report any cultural resources encountered.

No Action Alternative: Under this alternative potential impact to significant buried Native American resources would be reduced.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes an analysis on Standard 4)

Affected Environment:

According to the latest species list from the U. S. Fish and Wildlife Service (<http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.htm>), the following Federally listed, proposed, or candidate plant and animal species may occur within or be impacted by actions occurring in Garfield County: Uinta Basin hookless cactus (*Sclerocactus glaucus*), Ute Ladies' Tresses orchid (*Spiranthes diluvialis*), Parachute beardtongue (*Penstemon debilis*), DeBeque phacelia (*Phacelia submutica*), Canada lynx (*Lynx canadensis*), Mexican spotted owl (*Strix occidentalis*), yellow-billed cuckoo (*Coccyzus americanus*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), and humpback chub (*Gila cypha*). The U. S. Fish and Wildlife Service announced the delisting of the bald eagle in June, 2007 with an effective date of August 8, 2007. The BLM now considers the bald eagle a sensitive species.

BLM sensitive animal species with habitat and/or occurrence records in the project area include Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*).

The proposed ponds would be located adjacent to roads located on ridgetops within the East Fork Parachute Creek, Northwater Creek, and Trapper Creek drainages. Each of these streams contains core conservation populations of Colorado River cutthroat trout.

There are no Federally listed, candidate or BLM sensitive plant species with potential habitat within the project area.

Environmental Consequences/Mitigation:

Proposed Action:

Construction of the ponds would result in a minimal (approximately one acre) amount of total disturbance. Ponds would capture water and sediment from adjacent roads during rainfall and snowmelt events. These ponds would serve to help better distribute livestock and keep cattle in the uplands instead of the stream bottoms. It is likely that livestock concentration at the ponds may increase localized vegetation disturbance. Erosion and sediment potential from pond construction and livestock concentration should be minimal and should not impact downstream fisheries.

No Action Alternative:

Under the no action alternative, no ponds would be built. Livestock would continue to concentrate in the creek bottoms which would negatively impact fisheries and riparian habitats by reducing streamside cover, sloughing streambanks, widening and warming streams, and result in increased sediment which can impact fish by silting in important, limited spawning and pool habitats. These impacts would result in reduced fish productivity.

Analysis on the Public Land Health Standard for T&E Species:

A formal Land Health Assessment was completed for the area in 1999. At that time riparian assessments found that the majority of the streams were either Properly

Functioning (PFC), or functioning at risk (FAR) with various trends. Since that time livestock grazing on this allotment has caused an apparent downward trend in land health condition. Many riparian segments within this allotment are being over-utilized and are in deteriorating condition. The proposed action should help to improve riparian and stream habitat conditions and move toward the attainment of Standard 4 for Special Status Species. The no action alternative would likely result in the continued downward trend in stream and riparian habitat condition and move these streams away from the meeting of Standard 4 for Special Status Species (Colorado River cutthroat trout).

WASTES, HAZARDOUS OR SOLID

Affected Environment: Vehicle fuel and lubricants would be used for dozer operations and transportation during project implementation.

Proposed Action

Environmental Consequences/Mitigation: Fuels and lubricants would be stored in appropriate containers and refueling would occur in designated areas. Based on the distance of the proposed activities from area drainages, the existing slope angles, and good vegetative cover; it is unlikely that fuels or lubricants would be transported to area drainages.

No Action

Environmental Consequences/Mitigation: Under the no action alternative there would be no fuel or lubricants present associated with vehicles.

WATER QUALITY, SURFACE AND GROUND (includes an analysis on Standard 5)

Affected Environment: Proposed activities would occur on the Roan Plateau within two major 6th field watersheds. To the north is a 21,862 acre 6th field watershed that contains the perennials Northwater and Trapper Creeks and to the south is a 26,345 acre 6th field watershed that contains the perennials East Fork of Parachute and Ben Good Creeks. As mentioned in the proposed action, the proposed activities would occur along existing roads at some distance from these perennial drainages.

The State of Colorado has developed *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37)) that identify beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters. The perennial drainages mentioned above have been classified aquatic life cold 1, recreation 2, water supply, and agriculture. These classifications indicate that this segment is capable of sustaining a wide variety of cold water biota, not suitable or intended for primary contact recreation, and suitable or intended to become suitable for potable water supplies and agricultural purposes that include irrigation and livestock use.

The State of Colorado has also developed a *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone and a *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) that identifies waterbodies suspected to have water quality problems. At this time, the perennial drainages mentioned in the Affected Environment section above are not on either of these lists. In addition, there are no current water quality data available for these drainages.

Proposed Action

Environmental Consequences/Mitigation: Proposed activities would remove some vegetation and could alter soil conditions through compaction and displacement associated with dozer operations. These impacts would result in an increase in erosion potential and possible offsite sedimentation. Additionally, there is a potential for contaminants associated with fuel and lubricant spills to be transported. Based on the distance of the proposed activities from area drainages, the existing slope angles, and good vegetative cover; it is unlikely that sediment, fuels, or lubricants would be transported to area drainages.

No Action

Environmental Consequences/Mitigation: The no action alternative would have no effect on water quality.

Analysis on the Public Land Health Standard 5 for Water Quality: The proposed action and no action alternative would not likely prevent Standard 5 for Water Quality from being achieved. In 1999, the BLM Glenwood Springs Field Office conducted the Roan Cliffs Land Health Assessment. During that time, it was determined that all waterbodies evaluated were meeting Standard 5.

WETLANDS & RIPARIAN ZONES (includes a analysis on Standard 2)

Affected Environment: Construction of the proposed reservoirs would occur on upland vegetation sites which do not contain wetlands or riparian zones. The proposed reservoirs are near riparian zones along Timber Gulch, JV Gulch, Camp Gulch, Grassy Gulch, Raspberry Creek, Yellowjacket Creek, and Bull Gulch. These riparian zones would be indirectly affected.

Environmental Consequences/Mitigation:

Proposed Action: There would be no impacts to wetlands or riparian zones from construction activities since these resources are not present at the reservoir locations. The proposed reservoirs would improve grazing distribution by providing additional drinking water sources for big game and livestock away from riparian areas. Consequently, the intensity and the amount of grazing use in riparian areas would be reduced. This would help maintain/enhance the condition of the riparian areas listed in the Affected Environment section.

No Action Alternative: Improved grazing distribution would not occur. Grazing use along riparian areas would not be reduced; consequently, this alternative would not help maintain/enhance the condition of riparian areas.

Analysis on the Public Land Health Standard for riparian systems: The proposed water developments would help improve grazing distribution, maintain/improve the condition of riparian areas, and help achieve Colorado Public Land Health Standards 2 (riparian systems).

Other Affected Resources

In addition to the critical elements, the resources presented in Table 2 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 2. Other Resources Considered in the Analysis.

<i>Resource</i>	<i>NA or Not Present</i>	<i>Present and Not Affected</i>	<i>Present and Affected</i>
Access and Transportation		X	
Cadastral Survey	X		
Fire/Fuels Management		X	
Forest Management		X	
Geology and Minerals	X		
Law Enforcement		X	
Paleontology	X		
Noise	X		
Range Management			X
Realty Authorizations	X		
Recreation		X	
Socio-Economics		X	
Soils*			X
Vegetation*			X
Visual Resources		X	
Water Rights	X		
Wildlife, Aquatic*			X

*Public Land Health Standard

RANGE MANAGEMENT

Affected Environment: The Clough-Alber allotment consists of 5,323 acres of public land and supports 1090 AUMs. There are two permittees on the allotment as described below:

Operator Number	Livestock Number and Kind	Season of use	Percent Public Land	AUMs
0503691	1000 Sheep	6/20 to 10/1	80	547
0507621	134 Cattle	6/16 to 10/15	100	537

The East Fork allotment consists of 8,461 acres of public land and supports 2540 AUMs. There are seven permittees on the allotment as described below:

Operator Number	Livestock Number and Kind	Season of use	Percent Public Land	AUMs
0501855	95 Cattle	6/16 to 10/15	100	381
0503688	112 Cattle	6/16 to 10/15	100	449
0507593	173 Cattle	6/16 to 10/15	100	694
0507610	86 Cattle	6/16 to 10/15	100	345
0507621	112 Cattle	6/16 to 10/15	100	449
0507671	44 Cattle	6/16 to 10/15	100	176
0507676	12 Cattle	6/16 to 10/15	100	48

Environmental Consequences/Mitigation: The proposed action to add additional water sources will improve livestock distribution and promote a more even utilization. The construction would be done by the permittees with their own equipment. The permittee would likely be reimbursed for 60% of the construction costs by the Grazing Advisory Board and would be responsible for the maintenance of the ponds including weeds that appear due to construction efforts.

No Action Alternative: No ponds will be constructed and livestock would continue to use the riparian zones for a majority of watering. Degradation of riparian areas would be more likely under this alternative without changes to the grazing permits.

SOILS (includes a analysis on Standard 1)

Affected Environment: According to the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985), the proposed action would be located on the soil map units Northwater loam, Parachute-Rhone loams, and Rhone loam. Following is a brief description of the three soil map units encountered in the project area.

- Northwater loam – This deep, well drained soil is found on mountainsides at elevations ranging from 7,600 to 8,400 feet and on slopes of 15 to 65 percent. The Northwater loam is derived from sedimentary rocks. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include grazing, wildlife habitat, and recreation.
- Parachute-Rhone loams – These gently sloping to steep soils are found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. The Parachute soil is derived from sandstone and or marlstone while the Rhone soil is derived from fine-grained sandstone. Approximately 55 percent of this unit consists of the Parachute soil while approximately 30 percent is the Rhone soil. The Parachute soil is moderately deep, well drained, and has a moderate erosion hazard with medium surface runoff. The Rhone soil is deep, well drained, and has a slight erosion hazard with slow surface runoff. Primary uses for these soils include grazing and wildlife habitat.
- Rhone loam – This deep, well drained, gently sloping to steep soil is found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. This soil is derived from sandstone and marlstone. Surface runoff for this soil is slow and the erosion hazard is slight. Primary uses for this soil include wildlife habitat and limited grazing.

Proposed Action:

Environmental Consequences/Mitigation: Proposed activities would result in soil compaction and displacement associated with dozer operations and the construction of the stock ponds. This could result in an increase in erosion and sediment available for transport to area drainages. These impacts would be short term and minor prior to vegetation reestablishment. Based on the distance of the proposed activities from area drainages, the existing slope angles, and good vegetative cover; it is unlikely that sediment would be transported to area drainages.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on soil resources.

Analysis on Public Land Health Standard 1 for Upland Soils: The proposed action and the no action alternative would not likely prevent Standard 1 for Upland Soils from being met. In 1999, the BLM Glenwood Springs Field Office conducted the Roan Cliffs Land Health Assessment. During that time, it was determined that Standard 1 was being met at all upland sites evaluated.

VEGETATION (includes an analysis on Standard 3)

Affected Environment: Vegetation at the proposed pond sites includes sagebrush, mixed mountain shrubs and perennial grasses and forbs. Several pond sites are immediately adjacent to aspen forests; however, no aspen trees would be removed for pond construction.

Environmental Consequences/Mitigation:

Proposed Action: Construction of 11 ponds would result in the destruction of approximately one acre of sagebrush, mixed mountain shrub, and perennial grass/forb vegetation. The surface disturbance associated with pond construction may encourage the invasion of noxious weeds. The ponds would help to improve livestock distribution within the allotment and reduce the amount of time cattle graze in the riparian areas thereby improving riparian vegetation condition. Livestock concentration at the ponds may result in additional losses of upland vegetation around the ponds and an increase in bare ground. Seeding the disturbed areas with native perennial grasses may help reduce the amount of bare ground and the risk of noxious weed invasion. The INVASIVE, NON-NATIVE SPECIES section outlines mitigation measures to control any noxious weed invasions at the pond sites.

Mitigation: The surface disturbances around the pond sites will be seeded with native perennial grasses adapted to the site. All seed to be applied will be certified weed-seed free.

No Action Alternative: Under the No Action alternative, no ponds would be constructed. There would be no loss or destruction of upland vegetation; however, the condition of riparian vegetation would not improve.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): A formal Land Health Assessment was completed for the area in 1999. In general, plant and animal communities were in healthy and productive condition. The proposed action should improve livestock distribution throughout the allotment. Pond construction would result in the loss of approximately one acre of upland vegetation and some concentrated grazing around the ponds would create a localized reduction in upland plant condition, but may result in an improvement in the condition of riparian vegetation. The proposed action would not cause a failure to achieve Standard 3 for healthy plant communities.

WILDLIFE, AQUATIC (includes an analysis on Standard 3)

Affected Environment:

The proposed ponds would be located adjacent to roads located on ridgetops within the East Fork Parachute Creek, Northwater Creek, and Trapper Creek drainages. Each of these streams contains core conservation populations of Colorado River cutthroat trout. East Fork Parachute Creek also contains brook trout. In addition, each stream contains an abundance of aquatic insects.

Environmental Consequences/Mitigation:

Proposed Action:

In addition to the analysis completed under the THREATENED, ENDANGERED, AND SENSITIVE SPECIES section for Colorado River cutthroat trout, East Fork Parachute Creek contains brook trout. Construction of the ponds would result in a minimal (less than one acre) amount of total disturbance. Ponds would capture water and sediment

from adjacent roads during rainfall and snowmelt events. These ponds would serve help better distribute livestock and keep cattle in the uplands instead of the stream bottoms. It is likely that livestock concentration at the ponds may increase localized vegetation disturbance. Erosion and sediment potential from pond construction and livestock concentration should be minimal and should not impact brook trout found in East Fork Parachute Creek.

No Action Alternative:

Under the no action alternative, no ponds would be built. Brook trout located in East Fork Parachute Creek would not be impacted as this stream is outside of the allotment.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial):

A formal Land Health Assessment was completed for the area in 1999. At that time riparian assessments found that the majority of the streams were either Properly Functioning (PFC), or functioning at risk (FAR) with various trends. Since that time livestock grazing on this allotment has caused an apparent downward trend in land health condition. Many riparian segments within this allotment are being over-utilized and are in deteriorating condition. The proposed action should help to improve riparian and stream habitat conditions and move toward the attainment of Standard 3 for aquatic wildlife. The no action alternative would likely result in the continued downward trend in stream and riparian habitat condition and move these streams away from the meeting of Standard 3 for aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment: Vegetation at the proposed pond sites includes sagebrush, mixed mountain shrubs and perennial grasses and forbs. These communities typically provide habitat for big game species as well as small mammals, reptiles and birds.

Environmental Consequences/Mitigation:

Proposed Action: The construction of eleven small ponds should have minimal impact to terrestrial wildlife. Just over one acre of upland habitat would be impacted to accommodate the ponds. The ponds would provide resident wildlife with an additional upland water source and would help distribute grazing throughout the allotment. It is likely that livestock would concentrate around the pond, which could result in increased utilization of upland vegetation in the immediate area. However, the creation of the pond should improve overall habitat conditions across the greater area to the benefit of a variety of wildlife species.

No Action Alternative: There would be no impacts to terrestrial wildlife species or their habitat under this alternative.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): A formal land health assessment has been completed for the Clough Alber and East Fork Allotments. Both allotments were meeting this standard. The proposed ponds would have minimal impacts to wildlife species. This standard is currently being met and will continue to be met with the proposed action.

CUMULATIVE IMPACTS SUMMARY:
No cumulative impacts have been identified.

PERSONS / AGENCIES CONSULTED:
Jason and Susan Lynch – Grazing Permittee

INTERDISCIPLINARY REVIEW:

<i>Name</i>	<i>Title</i>	<i>Responsibility</i>
Isaac Pittman	Rangeland Management Specialist	Rangeland Management, NEPA Lead
Michael Kinser	Rangeland Management Specialist	Wetlands and Riparian Zones
Kay Hopkins	Outdoor Recreation Planner	WSR, Wilderness, VRM
Cheryl Harrison	Archaeologist	Cultural Resources and Native American Concerns
Desa Ausmus	Wildlife Biologist	Migratory Birds, T&E, Terrestrial Wildlife
Carla DeYoung	Ecologist	Vegetation, T/E/S Plants, Land Health Stds, ACEC
Jeff O'Connell	Hydrologist	Soil, Air, Water, Geology
Dereck Wilson	Rangeland Management Specialist	Invasive, Non-Native Species
Tom Fresques	Fisheries Biologist	Wildlife Aquatic, T&E Fish

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CO-140-2007-056 EA

The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The proposed action with any approved mitigation measures result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION RECORD

DECISION: It is my decision to adopt the proposed action to construct the reservoirs as described in the proposed action in accordance with the project design features, specifications drawings, and mitigation measures identified below.

RATIONALE: Construction of the reservoirs would provide cattle and wildlife with an additional source of water, help improve grazing distribution, maintain/improve the condition of riparian and upland areas, and help achieve Colorado Public Land Health Standards 2 (riparian systems) & 3 (plant and animal communities).

MITIGATION MEASURES:

- Disturbed areas will be reseeded with a certified weed-free seed mixture of native species adapted to the site. The permittee will monitor the reservoir disturbances to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from reservoir construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying.
- The surface disturbances around the pond sites will be seeded with native perennial grasses adapted to the site. All seed to be applied will be certified weed-seed free.
- All persons specifically associated with this operation must be informed that any objects or sites of cultural, paleontological, or scientific value such as historic or prehistoric resources, graves or grave markers, human remains, ruins, cabins, rock art, fossils, or artifacts shall not be damaged, destroyed, removed, moved, or disturbed. If in connection with this operation any of the above resources are encountered, the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified in writing to proceed by the authorized officer (36CFR800.110 & 112, 43CFR 0.4).

NAME OF PREPARER: Isaac Pittman, Rangeland Management Specialist

SIGNATURE OF AUTHORIZED OFFICIAL:

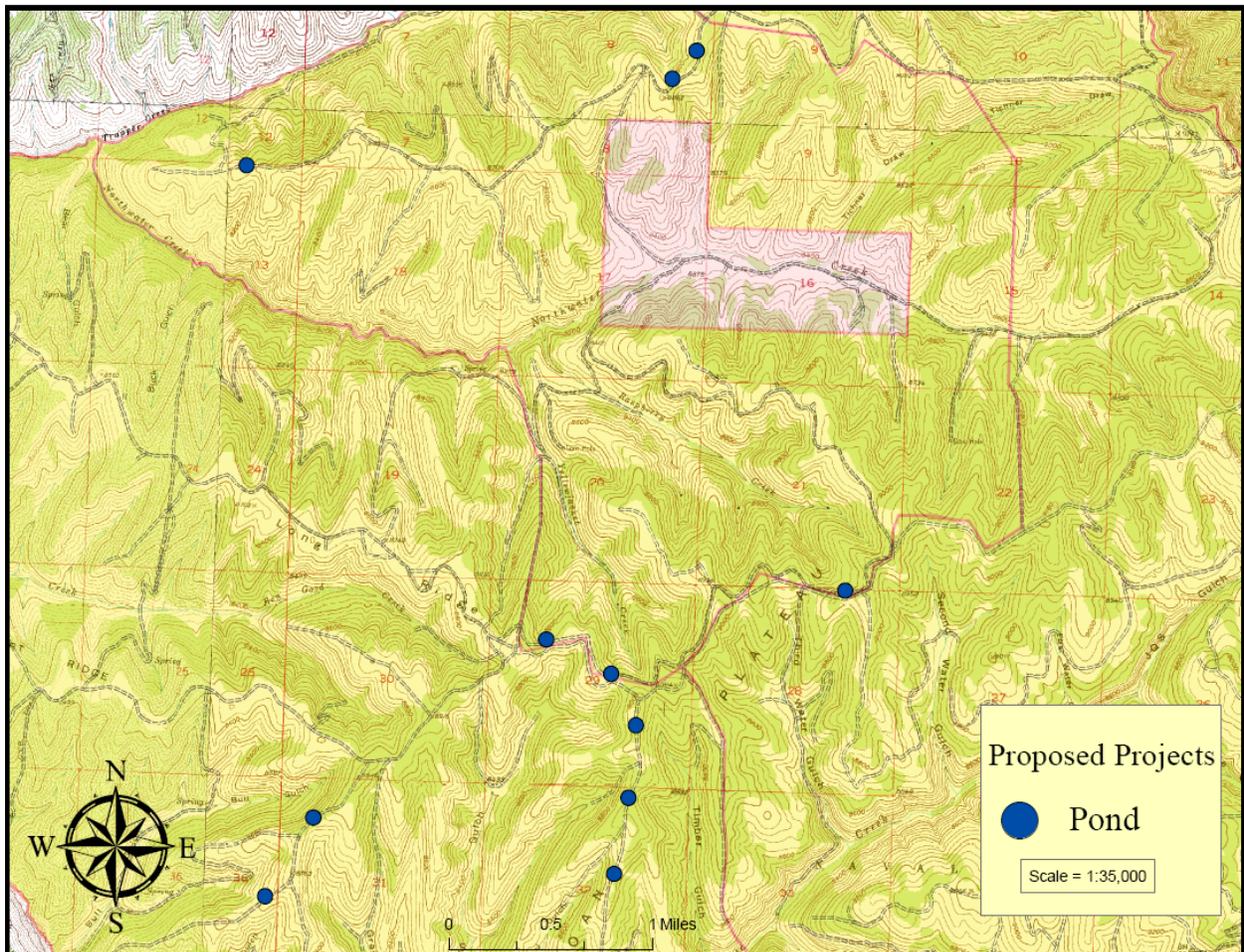

Authorized Officer

DATE SIGNED: 5/8/2008

APPENDICES: Location map, specifications and drawings.

ATTACHMENTS: None

Appendix A



Appendix B
Project Specifications

02291
WORK DATA SHEET

for

SECTION 02291 - MINOR EARTH DAMS AND PITS

1. Pit depth in ft 4 to 6 ft
2. Pit length in ft (L): 10 to 15 ft
3. Pit width in ft (W): 10 to 15 ft
4. End slope: 2:1
5. Side slope: 3:1
6. Embankment shape: U
7. Distance between pit and berm (A): None
8. Dam height in ft: 5 to 8 ft
9. Crest width: 12 ft
10. Crest length: 70 to 150 ft
11. Downstream slope (D.S.): 2:1
12. Upstream slope (U.S.): 2.5:1
13. Cut spillway width: 6 to 8 ft
14. Cut spillway side slope: 1:1
15. Cut spillway depth: 2 to 3 ft
16. Natural spillway depth: 2 to 3 ft
17. Depth of cut off trench (core): 2 to 4 ft
18. Borrow area side slope: 1:1
19. Borrow area end slope: 3:1

SECTION 02291

Minor Earth Dams and Pits

PART 1: GENERAL

1.01 SUMMARY:

- A. Section Includes: Clearing, grubbing, excavation, embankment development, and core trenching for construction of minor earth dams and water-retention pits.
- B. Related Sections:
Clearing and Grubbing - Section 02231

1.02 DEFINITIONS:

- A. Common Excavation: Materials to be removed from excavation, except igneous, metamorphic and sedimentary rock which cannot be excavated without blasting, will be considered common excavation. When ripping is required, the material will also be considered common excavation. Material which cannot be ripped with a rear-mounted, heavy duty, single-tooth, ripping attachment mounted on a crawler tractor having a power rating of at least 195 net flywheel hp shall be considered rock.

PART 2: PRODUCTS

2.01 MATERIALS:

- A. General: See definitions.
- B. Embankment: Excavated materials shall be placed in the embankment. Pervious materials, such as sand and gravel, shall be placed above the high water level.

PART 3: EXECUTION

3.01 PREPARATION:

- A. Clearing and Grubbing: Shall be in accordance with Section 02231 - Clearing and Grubbing.
- B. Conservation of Topsoil: Suitable material removed in conjunction with clearing, grubbing, bank sloping, and borrow area preparation shall be conserved in neat stockpiles at locations designated by the BLM.
- C. Depth of Stripping: Normal stripping depth is not expected to exceed 6 inches, although variations may be encountered. The Contractor shall conserve available topsoil.

3.02 INSTALLATION:

- A. Placement of Topsoil: After construction of the embankment and excavation areas is completed, the stockpiled topsoil shall be uniformly placed over cut and fill areas above high water line with priority to the top and upstream slopes of reservoirs, spillways, and borrow pits. Spreading of topsoil

shall not be done when the ground or topsoil is frozen, or excessively wet. Topsoil shall be spread to depths as shown on the plans or designated by the BLM.

- B. Excavation: Additional excavation for the convenience of the Contractor, or due to careless operations, including the cost of backfilling, shall be at the expense of the Contractor. The Contractor shall use care not to disturb sod or vegetation in natural spillways or sodded watercourse areas below excavated spillways. Further requirements are:
1. End and side slopes of the borrow excavation shall be as shown on the Work Data Sheet. The dimensions of excavation shall be as shown on the drawings and the Work Data Sheet.
 2. Suitable materials from excavations for specified permanent construction shall be used in the embankment and shall either be placed in the embankment directly from excavation or shall be placed in temporary stockpiles and later placed in the embankment as approved by the BLM.
 3. Excavated materials which are unsuitable for, or are in excess of the requirements, for the embankment or other earthwork, as determined by the BLM, shall be deposited as waste. The material shall be placed immediately below the downstream toe of the embankment in a manner that shall not leave windrows. Compaction of such waste materials shall not be required. Costs of placing material in temporary stockpiles shall be included in the unit price for common excavation.
 4. Core trenches, where required, shall be excavated and suitable materials, as determined by the BLM, shall be placed in the embankment. Material determined not suitable shall be wasted at the downstream toe of the embankment in a manner that will not leave windrows.
- C. Embankment: The embankment shall be constructed downstream from the borrow excavation, as shown on the drawings. Embankment materials shall be free of sod, roots, brush, snow, other waste matter and rocks of a shape or size that will interfere with uniform placement of materials in layers of specified thickness. Fill materials shall not be placed when either materials, or surface on which they will be placed, are frozen or too wet for satisfactory compaction as determined by the BLM. The scarified surface shall be compacted with the first layer of earthfill. Further requirements are:
1. Materials shall be placed parallel to the axis of the embankment in even, continuous, horizontal layers not more than 8 inches in thickness as deposited by scrapers. The full cross section of the fill shall be maintained as each successive layer is placed.
 2. Successive loads of material shall be dumped on earthfill so as to produce an optimum distribution of material, subject to approval of the BLM. Distribution and gradation of materials throughout earthfill shall be free from lenses, pockets, streaks, or layers of material differing substantially in texture or gradation from

surrounding material. Combined excavation and placement operations shall be such that materials, when compacted in the embankment, shall be blended sufficiently to secure the optimum compaction and stability.

3. Slopes of embankments shall be finished to conform to lines and grades shown on the Work Data Sheet. The top of the embankment shall be constructed level.
4. Core trenches, where required, shall be backfilled with material excavated from the pit, spillway, or borrow area, with its suitability determined by the BLM.

3.03 FIELD QUALITY CONTROL:

- A. Core Trenches: During backfill operations, the Contractor shall operate hauling equipment evenly over the full width of the excavated core trench to obtain maximum compaction.
- B. Embankment: The Contractor shall route hauling equipment over the layers of embankment material already in place, and shall distribute travel evenly over the entire width of the embankment to obtain maximum compaction while placing material. Overcompaction shall be avoided along hauling route.

END OF SECTION

SECTION 02231

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Clearing of vegetation, and grubbing of stumps, roots, and debris; disposal of unutilized materials; and other incidental work related to preparing the site for later use.
- B. Related Sections:
 - Trenching - Section 02321
 - Minor Earth Dams and Pits - Section 02291

1.2 DEFINITIONS

- A. Clearing: Clearing shall consist of the felling, trimming, and cutting of obstructions such as trees into sections and the satisfactory disposal of the trees and other surface vegetation designated for removal, including down timber, snags, brush, and rubbish occurring in the areas to be cleared.
- B. Grubbing: Grubbing shall consist of the removal and disposal of below-surface stumps, roots larger than 75 millimeters (3 inches) in diameter, and matted roots from the designated grubbing areas.
- C. Hazardous Waste: Substance likely to cause death or injury by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful; and includes, but is not limited to flammable dust, flammable fiber, combustible liquid, dangerous chemical, flammable gas, liquified flammable gas, and flammable liquid.

1.3 PROJECT/SITE CONDITIONS

- A. Work Limits: Area to be cleared and grubbed will be the excavation area. Total width of clearing shall not exceed 15 feet. This width may be to one side of the pipeline or partially to both sides. Scalping of topsoil during clearing operations will not be permitted.
- B. Burning of Slash: Shall not be permitted.
- C. Landscape Preservation: Protect vegetation outside the work limits from injury. Existing trees and shrubs shall not be disturbed or damaged.

PART 2 PRODUCTS

2.1 PREPARED PRODUCTS

- A. Tree Wound Paint: Bituminous based material of standard manufacture specially formulated for tree wounds.

- B. Herbicide: Comply with Federal Insecticide, Fungicide, and Rodenticide Act, Title 7 U.S.C. Section 136, for requirements on Contractor licensing, certification, and record keeping.

2.2 EQUIPMENT

- A. Spark Arresters: Shall meet the requirements of the U.S. Forest Service Spark Arrester Guide, Volume 2, dated 1993.

PART 3 EXECUTION

3.1 PROTECTION

- A. Utility Lines: Protect existing utility lines that are indicated to remain from damage. Notify the BLM immediately of damage to or an encounter with an unknown existing utility line. The Contractor shall be responsible for the repairs of damage to existing utility lines that are indicated or made known to the Contractor prior to the start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, the Contractor shall notify the BLM 72 hours prior to interruption of the service.

3.2 CLEARING

- A. Requirements: Clear trees, stumps, roots, brush, and other vegetation in areas to be graded; cut off flush with or below the original ground surface, except such trees and vegetation indicated or directed to be left standing. Trees designated to be left standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter and be painted with an approved tree-wound paint. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches. Trees and vegetation to be left standing shall be protected from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require. Clearing shall also include the removal of existing obstructions that are a distance of 5 feet beyond the perimeter of to-be-built structures.

3.3 GRUBBING

- A. Requirements: Material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, shall be removed to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed. Depressions made by grubbing shall be filled with suitable material and compacted to make the surface conform with the original adjacent surface of the ground. Debris not suitable for foundation purposes shall be removed.
- B. Low Embankment Areas: When the finished subgrade is less than 3 feet above the original ground, remove stumps, roots, and debris to a minimum of 6 inches below the original ground. Backfill stump and root holes with approved material and compact before placing embankment material.

C. High Embankment Areas: When the finished subgrade is 3 feet or more from the original ground, stumps may be cut flush and left in place. Removal of undisturbed stumps and roots and nonperishable solid objects will not be required. The surface of the original ground shall be scarified before starting the embankment operation.

3.4 SALVAGE

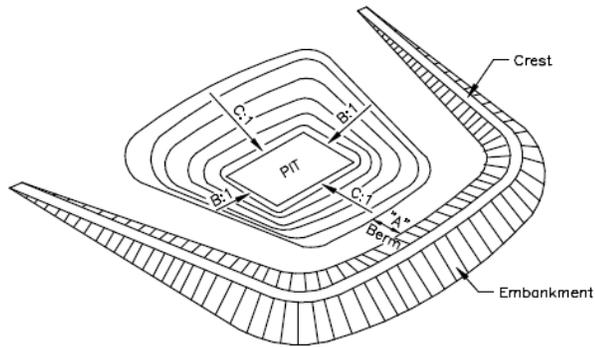
A. Trees and Limbs, 8-inch Diameter and Larger: Trim limbs, cut into approved log lengths, and stockpile where directed. The stockpiled materials will remain the property of the Government.

B. Trees and Limbs, 3-inch to 8-inch Diameter: Cut logs into 4-foot lengths and stack where directed. The stockpiled material will remain the property of the Government.

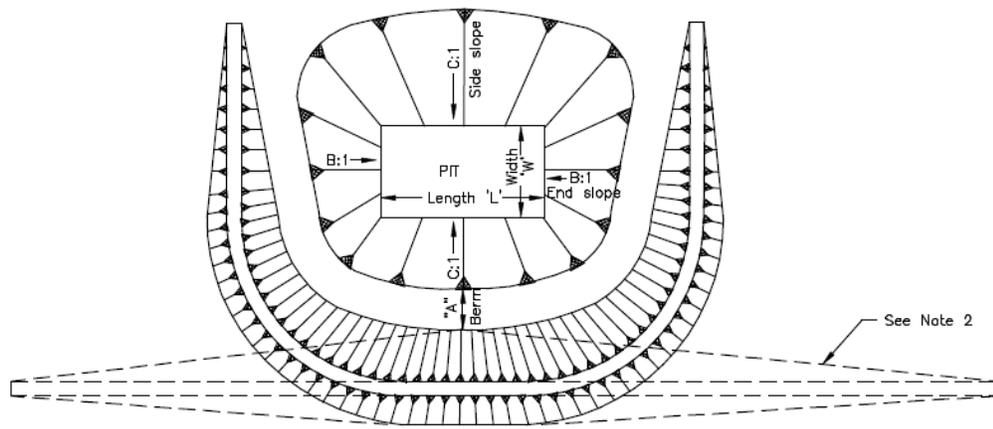
3.5 DISPOSAL

A. Requirements: Material that is not to be salvaged shall be removed from the project site and legally disposed of offsite or disposed of by a combination of burying and removal. Burning will not be permitted.

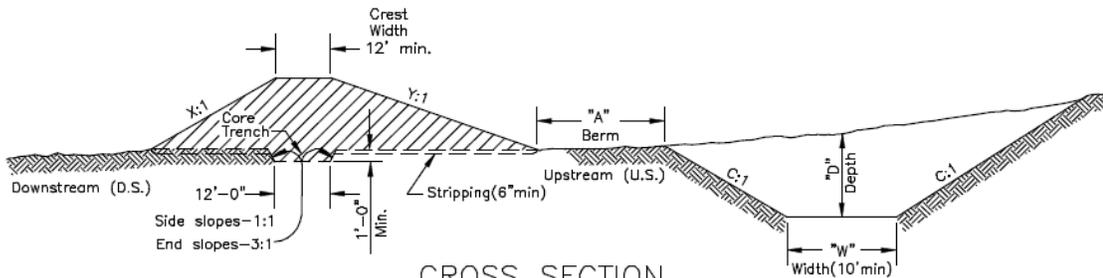
END OF SECTION



PERSPECTIVE VIEW



PLAN



CROSS SECTION

NOTES:

1. Pit and embankment slopes and dimensions shall be as shown on the Work Data Sheet or as staked.
2. Embankment may be "U", "L", "I", or straight line shape. Construct as indicated in specifications or as staked.

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT DIVISION OF TECHNICAL SERVICES SERVICE CENTER	
TYPICAL WATER RETENTION PIT	
DESIGNED	by others
REVIEWED	
APPROVED	
DRAWN	SCALE NONE
DATE AUGUST 5, 1990	SHEET OF
DRAWING NO. 02291-1	

