

**FINAL ENVIRONMENTAL ASSESSMENT
GRAZING AND NOXIOUS WEED CONTROL MEASURES
ELK CREEK PROJECT
JACKSON COUNTY, OREGON**

INTRODUCTION

Elk Creek project is located in Jackson County, Oregon 26.5 miles northeast of Medford, Oregon at river mile 1.7 above the confluence of Elk Creek with the Rogue River (see attached Rogue River Basin map). The Elk Creek project was authorized as one of three multiple purpose projects designed to operate as a system to reduce flooding in the Rogue River Basin and to accomplish additional purposes such as irrigation, recreation, fish and wildlife enhancement, and water quality control. The other two dams are complete and operational; Lost Creek Dam was completed in 1976 and Applegate Dam in 1980.

Construction of Elk Creek project was initiated in 1971 with acquisition of project lands by the U.S. Army Corps of Engineers (Corps) (totaling 3,502 acres) and relocation of residents, roads, and utilities. Of the project land area, approximately 3/4 are fee-acquired lands and 1/4 are withdrawn Bureau of Land Management (BLM) lands. Several legal actions ensued over a period of several years that resulted in an injunction against completion of the project, and halted construction at 1/3 the dam's design height. The last of these legal actions, by the United States Court of Appeals, Ninth Circuit Court in April 1995, required a comprehensive review of a wide range of issues under the National Environmental Policy Act (NEPA) before construction could continue.

In 1995 Congress was notified of the Corps' intention to evaluate options for long term management of the project in its uncompleted state. Phase 1 of the evaluation is to determine fish passage requirements and implement a fish passage system to reduce annual expenditures and improve biological conditions for anadromous fish, most importantly the Federally-listed southern Oregon / northern California (SONC) coho salmon (*Oncorhynchus kisutch*). Phase 2 is to provide a comprehensive review of all other issues required for long term management of the project land in the project's uncompleted state including potential disposition of sand and gravel stockpiles, potential restoration of areas disturbed by construction, land management purposes and uses, and long range planning for resource management which includes regulation of cattle grazing. An Interim Management Plan (IMP) for the project was developed by the Corps in 2001 to aid in land management direction until the Phase 2 management plan is completed.

Cattle grazing throughout the Elk Creek project land has probably occurred since the lands came into Federal ownership and fences were either removed or neglected. Prior to Federal ownership, cattle grazing in the project area would have been dependent on land use practices of local landowners. Several local ranchers currently have grazing leases that allow them to graze cattle on either the Lost Creek or Flat Creek allotments. These leases, issued by BLM authorize ranchers to graze cattle on adjacent BLM land and

appear to apply to BLM-withdrawn lands that lie within the Elk Creek project. Currently there are no fences of significance within the Elk Creek project land. As a result, cattle stray from BLM lands and graze on Elk Creek project land. The Corps, to date, has not used its enforcement authority to remove cattle from Elk Creek project lands.

Because of delays in implementation of Phase 1 fish passage measures, which in turn delayed evaluation of Phase 2 actions, the Corps developed interim management plans to guide actions until the Phase 2 plan is implemented. In addition, active management of the Elk Creek project land has gained more interest with the resource agencies and concerned citizens since the Federal listing of SONC coho salmon as threatened in 1997 and designation of Critical Habitat for this fish.

It was agreed in a July 31, 1996 meeting by resource agency personnel representing the Corps, BLM, the U.S. Forest Service, and ODFW that livestock have not impacted riparian areas along Elk Creek (Bureau of Land Management 1996). Elk Creek has rocky bottoms and sides, which minimize turbidity when animals enter the creek. The Corps found no significant evidence of riparian browsing during an on-site visit on October 20-21, 1999. During an on-site meeting on November 16, 2000, it was agreed by Corps and National Marine Fisheries Service (NMFS) personnel that no significant level of cattle grazing impact was evident in riparian habitat along Elk Creek (U.S. Army Corps of Engineers 2000). Adjacent meadow habitat, however, is disturbed as evident by and abundance of non-native noxious weeds, most notably yellow starthistle (*Centaurea solstitialis*) and Himalayan blackberry (*Rubus discolor*).

NEED AND PURPOSE FOR ACTION

The need for the proposed action is to implement cost-effective interim management measures to meet the goals of the IMP developed in 2001 until Phase 2 long-term plans are resolved. It is anticipated that interim management would be implemented for a minimum of 2 years. The IMP was developed because of delays in implementing Phase 1, public concerns about noxious weeds and cattle grazing impacts, and the Corps' desire to begin making improvements in our land management actions that are prudent until Phase 2 plans are completed. The goal of the IMP was to propose measures to allow the Corps to more effectively manage noxious weeds and maintain riparian habitat quality and to formally address the presence of cattle on Corps' Elk Creek project lands. Cattle grazing is prohibited on Corps' project lands unless authorized by lease, license or other written agreement with the District Commander.

After Phase 1 fish passage issues are resolved, Phase 2 will focus on long-term land management of the project in its uncompleted state. Scientific information gathered from interim management measures will aid in establishment of long-term management protocol. This long-term management will focus on a variety of issues including noxious weed control and maintenance of quality riparian habitat.

PREVIOUS DRAFT EA AND PUBLIC COMMENTS

The initial Draft Environmental Assessment (EA) (U.S. Army Corps of Engineers 2001a) proposed project boundary fencing as an interim measure to regulate cattle grazing on project lands in concert with implementation of weed management strategies. Initial investigation into fencing costs favored boundary fence construction. However, after meeting with local concerned ranchers and other citizens and after obtaining more accurate estimates of boundary fence construction, the Corps opted to revise the initial Draft EA and propose a new alternative, based on new information gathered during the public review period.

The Corps met with local concerned ranchers and other citizens on June 25, 2001. During this meeting, a draft plan was presented to the Corps that recommended use of regulated cattle grazing to aid in weed control on project lands (Affected Parties and Concerned Citizens for Environmentally Safe and Economically Sound Re-Habilitation of Elk Creek, 2001). This report was prepared in large part by Randy White, a rangeland scientist with the Oregon State University Agricultural Extension Service. In addition to material presented in this report, other scientific literature has shown regulated cattle grazing to be successful in controlling yellow starthistle (Thomsen et. al 1989, Thomsen et. al 1993, Thomsen et. al 1996, and Thomsen et. al 1997).

Cattle grazing is typically one management component used in concert with other activities to control yellow starthistle. The report presented to the Corps proposes that areas of heavy weed infestation would be planted with subterranean clover that would act to shade out the primary weed of concern, yellow starthistle, and that the grazing regime would allow for utilization of yellow starthistle to reduce its seed production.

PROPOSED ACTION AND ALTERNATIVES

Cattle Grazing and Noxious Weed Control Measures Alternative (Proposed Action):

The Corps' plans to implement interim measures to reduce weed infestation and maintain riparian habitat quality. This adaptive management program will be planned on a yearly basis, although some measures may be planned for longer periods given the knowledge that positive results can only be expected over time. A monitoring program will be established and implemented to quantify benefits of the program, and this information will be used to aid in future management efforts.

The Corps consulted with BLM to develop general plans for the year 2002. The Corps also obtained information from the Oregon State University Extension Service, Oregon Department of Fish and Wildlife (ODFW), and interested ranchers in the development of the general plan.

Weed control efforts planned for the year 2002 include the following:

- Release of cattle on April 1 on lands included in BLM leases (the number of cattle allowed on the range will be in accord with last years BLM-issued grazing leases).
- Removal of cattle from lowland areas sometime between May 15 and June 15 dependent on range conditions determined by the involved resource agencies. Cattle will remain off lowland areas for the remainder of the grazing season (through October) unless needed to assist in the seeding process in the late summer or early fall.
- Mechanical mowing of yellow starthistle (areas to be mowed could be limited by height of plants) and blackberry on Corps' property on the west side of Elk Creek (between 150-200 acres) when the yellow starthistle is in the early flowering stage (likely in June or July) (no vegetation associated with the riparian area along Elk Creek will be mowed).
- Site preparation for fall seeding on Corps' property on the west side of Elk Creek which may include mowing, grazing, spike tooth harrow for example dependent on range conditions.
- Seeding (likely using a seed drill) of Corps' property on the west side of Elk Creek (between 150-200 acres) prior to fall rain and frost (considerations for seeding may include subterranean clover, sheep fescue, orchardgrass, and others). This may include the presence of cattle to assist in working seed into the ground.
- Removal of cattle from all Corps' Elk Creek project property per BLM-issued grazing lease by October 31.
- Monitoring of vegetation changes by photo records and collection and analyses of data.

This alternative also requires a written agreement with local cattle owners who have leases to graze on adjacent BLM lands to allow their presence on Corps' lands. This agreement has been signed by both parties. The Corps' included conditions in this agreement in concord with management objectives for year 2002.

Future management protocol would be analyzed and coordinated with the appropriate resource agencies and appropriate documentation would be prepared to comply with NEPA, the Endangered Species Act (ESA), and other applicable environmental laws.

Boundary Fencing and Noxious Weed Control Measures Alternative:

This alternative was the preferred alternative identified in the initial Draft EA. This alternative involves construction of barbed wire fencing around the approximately 22-mile perimeter of the project boundary.

The fence would be four feet high and would be constructed to allow safe passage of mammals such as deer and elk in accord with BLM specifications (Bureau of Land Management 1993). This would include placement of the first strand of barbwire at a height of 16 inches above the ground and placement of the top strand at least 12 inches from the next strand. These specifications would allow mammals to slip underneath or jump over the fence with minimal risk of injury.

Fence construction would require some removal of brush and debris for access along the fence alignment. The clearing would avoid removal of any trees with a diameter at breast height of greater than 6 inches. The action would also include removal of noxious weeds in several areas within the project boundaries, including yellow starthistle, Himalayan blackberry, and scotch broom. This vegetation would be removed by hand grubbing or selective herbicide application. This alternative, after review of comments on the initial Draft EA and further investigation, was determined to be cost prohibitive as an interim management measure.

No Action Alternative:

All land management issues, for example meadow habitat management/restoration, are interrelated with cattle management. Under the no action alternative, there would be no management of noxious weeds and cattle access to the project would remain unrestricted (subject to the Corps' authority to issue citations to cattle owners) with no employment of other management measures, as has been the case for years.

Additional Alternatives Discussed in the IMP:

A discussion of alternatives considered and a proposed management plan was included in the IMP for Grazing, Riparian Management and Noxious Weeds, prepared by the Corps in 2001. This report outlined two additional alternatives: 1) Restrict access and issue citations and 2) Issue letter agreements and grazing leases for grazing. Restricting access and issuing citations is complicated by the fact that BLM grazing leases appear to apply to withdrawn BLM lands that are interspersed within the Elk Creek project land and comprise about 1/4 of total Elk Creek project land. This alternative is considered impractical at this time because BLM would need to modify their grazing leases to remove withdrawn lands from the grazing allotments. Under the proposed action, the Corps will be incorporating the second alternative by entering into a written agreement with ranchers to allow grazing.

AFFECTED ENVIRONMENT

The project area totals 3,502 acres. The area around the dam has been extensively altered by construction of the dam, which is currently in an uncompleted state. Areas immediately upstream and downstream of the dam have been altered by grading for contractor work areas, stockpiling of construction rock, sand, and gravel, and creation of settling ponds for sand and gravel washing operations. The streambed has also been realigned from its original location.

Elk Creek stream flows vary greatly depending on the amount of precipitation in any given season. High flows can range to above flood stage [6000 cubic feet per second (cfs)], while low flows average 5 cfs. Turbidity is very high during high flows. Water temperatures likewise vary with lows of 33 degrees F in the winter months and highs as much as 86 degrees F in the summer. Algal blooms typically occur during the summer

months. Elk Creek supports game fish such as rainbow trout, sea-run cutthroat trout, summer and winter steelhead, coho salmon, and a small number of spring chinook salmon adults as well as non-game fish such as Klamath smallscale suckers, reddsideshiner, sculpin, and Pacific lamprey.

Habitats in and around the project area support a wide variety of wildlife including elk, black-tailed deer, mountain lion, black bear, gray fox, coyote, beaver, otter, waterfowl, raptors, upland game birds, and songbirds. Riparian vegetation along Elk Creek consists of alder, willow, cottonwood and riparian understory species. Upland vegetation includes Ponderosa pine, Douglas fir, Oregon white oak, ceanothus sp., manzanita and a variety of grasses and forbs. Non-native invasive species such as yellow starthistle Himalayan blackberry, scotch broom and are widespread in lowland areas adjacent to Elk Creek.

Threatened and endangered species which may occur around Elk Creek project are bald eagle (*Haliaeetus leucocephalus*), northern spotted owl (*Strix occidentalis*), Gentner's fritillary (plant) (*Fritillaria gentneri*), and SONC coho salmon (*Oncorhynchus kisutch*).

Extensive cultural resource investigations were conducted at the Elk Creek project prior to construction. Locations of archeological sites are known within the project area.

ENVIRONMENTAL CONSEQUENCES

Cattle Grazing and Noxious Weed Control Measures (Proposed Action):

Environmental consequences are expected to be positive. Measures proposed for the year 2002 and measures that would be proposed for future years are aimed to reduce weed infestation and would be based on prior research into integrative methods for weed control and upon experience of professional range specialists and other scientists employed by the involved resource agencies. Currently, meadow habitat adjacent to Elk Creek is disturbed, as evident by the abundance of non-native noxious weeds, most notably yellow starthistle and Himalayan blackberry, that abound in these areas.

A BA was submitted to the U.S. Fish and Wildlife Service in 2001 (U.S. Army Corps of Engineers 2001b) for the alternative proposed in the initial Draft EA (U.S. Army Corps of Engineers 2001a), boundary fencing, and concluded that the proposed action would have no adverse effect on bald eagle, northern spotted owl, and Gentner's fritillary. The Corps has determined that the proposed action in this EA would have no effect on these listed species. The action proposed in this EA will not involve clearing of native vegetation and will have no effect on the above-mentioned Federally listed species. A BA addressing the Federally listed SONC coho salmon will be prepared if warranted by future management actions.

A No Effect determination was made for management actions proposed for year 2002 for the four above-mentioned Federally listed species to comply with ESA, and reasoning for these determinations are discussed below.

A pair of bald eagles are known to nest on BLM lands adjacent to Lost Creek Lake (Isaacs et al. 2000). The Lost Creek pair is greater than four miles distant from the Elk Creek project area with a high ridge and Lost Creek Lake as intervening features. Observations of adult bald eagles has also occurred at Elk Creek Lake Project. No apparent nesting attempts have occurred in Elk Creek drainage. Eagles are known to forage in the tailrace of Elk Creek. Eagles foraging in tailrace locations is a fairly common event in the Pacific Northwest and principally occur in winter. Should eagles be present in the project vicinity during spring, the presence of cattle would not alter use of perch trees or foraging of eagles in Elk Creek.

Six existing or former nesting territories for northern spotted owls occur within three miles of Elk Creek Lake Dam. These territories are Spot Creek, Morine Creek (2), Alco Ridge, Bear Mountain, and Camel Hump. General nesting locations are provided below. The Spot Creek pair occurs approximately two miles northwest of Elk Creek Dam; the two Morine Creek nesting pairs occur approximately 3 miles northwest of Elk Creek Dam; and the Alco Ridge pair occurs approximately 3 miles north of Elk Creek Dam. A large, forested ridge south of West Branch Elk Creek lies between these pair's territories and Elk Creek Dam. The Bear Mountain and Camel Hump nesting pairs occur 2-3 miles south of Elk Creek Dam on the other side of the Rogue River. Elk Ridge, a large, forested ridge lies between these pair's territories and Elk Creek Dam. The presence of cattle will not impact nesting of spotted owls and owls would not be expected to use the lowlands adjacent to Elk Creek for nesting or foraging.

An extensive survey for Gentner's fritillaria was conducted during spring, 2001 over the majority of the 22-mile perimeter of the project, when the Corps was considering boundary fencing. Most of the land surveyed was forested (this plant would not be expected to occur in meadow areas designated for weed management adjacent to Elk Creek). No known populations of the plant occur in the immediate vicinity of the project. The survey resulted from the Corps' consideration of boundary fencing which would have involved brushing and clearing around the perimeter of the project. The current proposal will involve no brushing of forested land and will not impact this plant.

With respect to SONC coho salmon, cattle grazing on project lands is not analogous to high intensity grazing of arid lands that have been shown to have negative effects on riparian ecosystems. The number of head of cattle occurring on BLM allotments adjacent to Corps' property was based on acreage and conditions on BLM allotment lands, which did not include Corps' property (3,502 acres). The number of head of cattle allowed during year 2002 will not increase from previous years despite a large increase in land allowed for grazing. Also, a range rider, will be available to remove cattle from Corps' lowlands if there is indication or prediction of deleterious effects to the riparian ecosystem that could result, for example, from low seasonal amounts of rainfall. The Corps found no significant level of riparian browsing during an on-site visit on October 20-21, 1999. During an on-site meeting on November 16, 2000, it was agreed by Corps and NMFS personnel that no significant level of cattle grazing impact was evident in riparian habitat along Elk Creek. It was agreed in a July 31, 1996 meeting by resource agency personnel representing the Corps, BLM, the U.S. Forest Service, and ODFW that

livestock have not impacted the riparian areas along Elk Creek. Elk Creek has rocky bottoms and sides, which minimize turbidity when animals enter the creek.

Cattle likely browse blackberry infrequently because they are intolerant of spiny vegetation. Reduction of this species may require future management actions, other than the currently planned mechanical mowing, not proposed in this EA.

Appropriately timed mechanical mowing of yellow starthistle, at the early flowering stage, has been shown to significantly reduce seedling densities (Thomsen et. al 1997). Yellow starthistle seeds can remain viable in the soil for many years so observing a significant reduction in yellow starthistle infestations may not occur after only one year of treatment but reduction in seed output on a yearly basis via mechanical mowing should show significant reductions in yellow starthistle plant density.

Planting of species capable of competing with yellow starthistle has also been shown to be an effective control measure (Thomsen et. al 1996 and Thomsen et. al 1997). Some species effective at reducing yellow starthistle, sub-terreanean clover for example, require grazing to proliferate. Yellow starthistle is a deep-rooted annual that has a great capacity for rapid root growth. Thus, it can compete very well for water in dry ground situations. While taking into account that site soils are likely compacted and altered from their original state, choice of plantings will be designed to return the area to a self-sustaining plant community that through competition (for light, moisture, nutrients, etc.) can minimize the presence and spread of noxious weeds. Cattle will not be present in lowlands during the time when yellow starthistle will be producing seeds, and thus will minimize opportunity to spread seeds of this weed.

Adaptive management activities in future years, although not specifically addressed in this EA, will be dependent on information gathered from previous years and would be analyzed and coordinated with the appropriate resource agencies and appropriate documentation would be prepared to comply with NEPA, ESA, and other applicable environmental laws.

Cultural resources occur on the Elk Creek project land (Mountain Anthropological Research 1991). Most sites occur on the east side of Elk Creek although several small sites occur on the west side. No sub-surface ground disturbing activities, such as seeding using a seed drill, would be permitted over identified cultural resource sites. A Corps' staff Cultural Resource Specialist will identify cultural resource sites via flagging on the west side of Elk Creek before any sub-surface ground disturbing activities occur.

Boundary Fencing and Noxious Weed Control Measures Alternative:

Environmental consequences are expected to be positive. Construction of the perimeter fence would require minimal clearing of some brush and debris along the fence line around the project boundary. Vegetation likely to be removed by this action would include buckbrush, manzanita, oak and pine seedlings as well as tree branches and other

debris. Disturbed areas would be reseeded with native species following construction. The fence construction would entail little additional ground disturbance. Where crossings of Elk Creek and tributary streams are required, fence construction would be implemented in a manner to least disturb adjacent riparian habitat.

Once installed, the fence could impede movement by larger mammals such as deer, elk and bear. However, the fence design would allow these mammals to pass under or jump over the designed height with little or no injury expected. By the same token, the fence is intended to prevent indiscriminate cattle grazing on project lands. This would allow the project meadows and riparian areas to recover to a healthier condition if other management techniques are implemented. Cattle excluded from project lands would forage more intensively on adjacent lands. Future cattle grazing on Elk Creek project lands under managed conditions would be considered

Removal of invasive, non-native vegetation would occur over a several year period using a combination of acceptable removal practices. These management practices could include machine mowing, machine and hand digging and grubbing, herbicide application, seeding, and regulated cattle grazing. Herbicides would be applied using hand sprayers to avoid inadvertent spraying of adjacent vegetation. Areas where invasive species are removed would be replanted with native species and grasses.

A Biological Assessment (BA) (U.S. Army Corps of Engineers 2001b) has been prepared to address potential effects on Federally listed wildlife and plant species. This assessment concluded that this alternative would not adversely affect listed species: bald eagle, northern spotted owl and Gentner's fritillaria. No determination was made for SONC coho salmon because the Corps was in the process of analyzing methods for fencing across Elk Creek and its tributaries when it was determined that fencing was not feasible.

Cultural resources would likely not be affected by the proposed work as subsurface disturbance would be minimal. A cultural resource specialist would possibly be required on-site during construction to observe potential exposure of artifacts.

No Action Alternative:

Environmental consequences may be negative, as cattle grazing alone probably increases density of noxious weeds. Under this alternative, cattle grazing would continue on Corps-owned Elk Creek property by cattle roaming from adjacent BLM-leased grazing lands unless the cattle owners employ measures to restrict their cattle from the project lands or the Corps uses its enforcement authority to facilitate the removal of cattle. The Corps-owned meadows adjacent to Elk Creek constitute the best early season (April-June) grazing lands within the Elk Creek project area.

The Corps found no significant level of riparian browsing during an on-site visit on October 20-21, 1999. During an on-site meeting on November 16, 2000, it was agreed by Corps and National Marine Fisheries Service (NMFS) personnel that no significant level of cattle grazing impact was evident in riparian habitat along Elk Creek (U.S. Army

Corps of Engineers 2000). Adjacent meadow habitat, however, is disturbed and non-native noxious weeds, most notably yellow starthistle and Himalayan blackberry, abound in these areas.

It was agreed in a July 31, 1996 meeting by resource agency personnel representing the Corps, BLM, the U.S. Forest Service, and ODFW that livestock have not impacted the riparian areas along Elk Creek (Bureau of Land Management 1996). Elk Creek has rocky bottoms and sides, which minimize turbidity when animals enter the creek.

Density of yellow starthistle and blackberry will not be reduced by continued presence of cattle on Elk Creek project lands without using cattle grazing in concert with other management techniques. Cattle likely browse blackberry infrequently because they are intolerant of spiny vegetation.

While long duration cattle grazing keeps individual yellow starthistle plants short and does not allow them to grow to full height, it does not prevent flowering and seeding. As yellow starthistle bolts in early summer, it develops flowers and spines. Cattle will not graze it after spine development. Yellow starthistle is a prolific seeder and most seeds germinate within 5 feet of the parent plant. Therefore, patches of yellow starthistle infestations tend to expand without appropriate management.

Cultural resources would not be affected by the proposed work as subsurface disturbance would not occur.

COORDINATION

The initial Draft EA (that proposed boundary fencing) prepared to address the requirements of NEPA, was issued for 30-day public and agency review on May 8, 2001 under Public Notice CENWP-PM-E-01-05. The public notice was extended for an additional 30 days based on requests from the public.

The Draft EA for the current proposed action prepared to address the requirements of the NEPA, was issued for 30-day public and agency review under Public Notice CENWP-PM-E-02-02. Comments were received and have been incorporated into this Final EA.

PUBLIC COMMENTS AND RESPONSES

A Draft EA was issued for 30-day public and agency review on February 21, 2002. The Draft EA was sent to the following for comment:

Bureau of Land Management
National Marine Fisheries Service
U.S. Fish and Wildlife Service

Oregon Department of Fish and Wildlife
Department of State Forestry
Oregon State University Extension Service
Jackson County Board of Commissioners
Jackson Soil and Water Conservation District
The Confederated Tribes
Valley Library, Oregon State University
Rogue Basin Flood Control and Water Resources Association
Audubon Society
Klamath Siskiyou Wildlands Center
Headwaters
Oregon Natural Resource Council
The Pacific Rivers Council
Rogue Group of Sierra Club
Siskiyou Project
Association of O&C Counties
Boise Cascade
Charles Boyer
Fraser Brooks
Pat Brooks
Stan Dupree
Fred Fleetwood
Rob Kavenaugh
Fraser Brooks
Paula Brooks
Don Nelson
Paula Nork
Wayne Rogers
Chuck Steahly
Rev. Andrei Urusov

Comments were received by the closing date of the public notice for the Draft EA from Oregon Department of Fish and Wildlife, Headwaters, Fred Fleetwood, and Rob Kavenaugh. Comments have been summarized and responded to below. Some comments were not related to the Draft EA and are not addressed. Comments and responses, including some that appear to be adequately addressed in the Draft EA, are provided below:

Were citations issued to cattle operators for cattle occurrence on Corps land adjacent to land included in BLM grazing leases?

No, issuing citations is a discretionary action that the Corps did not pursue.

Are cows currently on Corps of Engineers' land?

No, cattle are scheduled to be released on April 1 and be off by end of October. This is consistent with BLM leases on adjacent lands.

Who will develop protocol for management of Corps' land?

The Corps will be the decision-maker regarding all actions. The Corps will seek input from range management experts from BLM and the Oregon State University Extension Service, and possibly other natural resource agencies as needed, to develop plans. Input from other interested parties is encouraged. The management plan is adaptive in nature and will utilize monitoring and evaluations to aid in future management protocol.

Cumulative impacts should be addressed.

Currently, cattle graze on lands under BLM grazing leases adjacent to the Corps' Elk Creek project lands (Corps' project lands encompass 3,502 acres). The proposed action is expected to have positive effects on lands grazed in Jackson County. Positive effects would be imparted on a relatively small area grazed in Jackson County, Oregon including lowland areas occurring within the Corps' Elk Creek project lands. Benefits would occur on lowland areas adjacent to Elk Creek by utilization of cattle, along with implementation of other management practices aimed to reduce weed infestation and to ensure continued health of the riparian ecosystem.

Why was a no effect determination made for coho salmon / northern California coho salmon?

A no effect determination was made for coho salmon, a federally threatened fish. The Corps found no significant level of riparian browsing during an on-site visit on October 20-21, 1999. During an on-site meeting on November 16, 2000, it was agreed by Corps and NMFS personnel that no significant level of cattle grazing impact was evident in riparian habitat along Elk Creek.

It was agreed in a July 31, 1996 meeting by resource agency personnel representing the Corps, BLM, the U.S. Forest Service, and ODFW that livestock have not impacted the riparian areas along Elk Creek. Elk Creek has rocky bottoms and sides, which minimize turbidity when animals enter the creek.

Cattle grazing on project lands is not analogous to high intensity grazing of arid lands that have been shown to have negative effects on riparian ecosystems. The number of head of cattle occurring on BLM allotments adjacent to Corps' property was based on acreage and conditions on BLM allotment lands, which appears to have included approximately ¼ of the Corps' project lands that lie within the Elk Creek project (also known as BLM-withdrawn lands). The number of head of cattle allowed during year 2002 will not increase from previous years despite an increase in land authorized for grazing. Also, a range rider, will be available to remove cattle from Corps' lowlands if there is indication or prediction of deleterious effects to the riparian ecosystem that could result, for example, from low seasonal amounts of rainfall.

Why was a no effect determination made for Gentner's fritillaria?

A no effect determination was made for Gentner's fritillaria, a federally endangered plant based on an extensive survey of the project boundary conducted during the flowering period of the plant by BLM botanists. The survey was conducted during spring, 2001 over the majority of the 22-mile perimeter of the project. Most of the land surveyed was forested (this plant would not be expected to occur in meadow areas designated for weed management adjacent to Elk Creek). No known populations of the plant occur in the immediate vicinity of the project. The survey resulted from the Corps' consideration of boundary fencing which would have involved brushing and clearing around the perimeter of the project. The current proposal will involve no brushing of forested land.

The number of head of cattle occurring on BLM allotments adjacent to Corps' property was based on acreage and conditions on BLM allotment lands, which, which appears to have included approximately 1/4 of the Corps' project lands that lie within the Elk Creek project (also known as BLM-withdrawn lands). The number of head of cattle allowed during year 2002 will not increase from previous years despite an increase in land allowed for grazing.

Why does this proposal have no effect on cultural resources?

Cultural resource locations are known on-site and mechanical ground disturbing activities, such as seeding with a seed drill, will avoid these areas.

Why will cattle be grazing past the flowering period of starthistle?

Cattle will be removed from lowlands, where starthistle occur, before flowering. They will be off weed management areas until after the plant produces seed and may be brought back onto lowlands in fall to aid in working seed of preferred plants into the ground.

Why not rely only on mechanical methods of starthistle control without cattle?

Management of starthistle has shown to be possible with use of cattle and without use of cattle. The monitoring program that the Corps will implement will provide useful information that could be used in long-term land management, which may be implemented with or without cattle.

What is the plan for year 2002?

The plan is outlined in general in this EA. Specifics of the plan, such as seeding densities and species, will be developed over the next several months. This necessitates much collaboration between biologists and range scientists familiar with this project.

Monitoring plots have been established within areas planned for weed management during year 2002 since issuance of the Draft EA.

A soil analysis should be conducted.

Compaction of soil has likely occurred on project land and this can influence what plants are capable of growing there. Compaction can result from grazing, the extent to which has not been determined on-site. Choosing of appropriate species to use in seeding of the area will likely involve soil analysis.

More alternatives are needed.

The Corps believes that an adequate number of alternatives were provided in the Draft EA. The management plan is adaptive in nature and will utilize monitoring and evaluation to aid in future management protocol. It is difficult to assess outcomes of management strategies on this particular piece of land without implementation and monitoring. The protocol developed for year 2002 and specifics to be developed will be based on actions that are believed to have a high probability of success given on-site environmental conditions.

Does the Corps have sufficient personnel to restrict cattle access? How will cattle be rounded up and kept off project lands?

Yes, a range rider will be available who would be responsible for removal of cattle from Corps' lowland areas if environmental conditions suggest that grazing could have deleterious effects to the riparian ecosystem and to keep cattle off lowlands if they should wander back.

How will spread of starthistle seeds by cattle be prevented?

Cattle are scheduled to be off of lowland areas where yellow starthistle occurs during the time this plant comes into seed.

Has new information developed regarding costs of boundary fencing?

Yes, new information has become available as a result of public comment on the initial Draft EA that identified boundary fencing as the preferred alternative. It has been determined that boundary fencing would be economically infeasible as a means of interim management until fish passage issues are resolved.

Since the Draft EA states that boundary fencing would allow project lands to recover, they must not be properly functioning.

The Draft EA states that boundary fencing would be beneficial in concert with implementation of other management techniques. There is no evidence that the riparian ecosystem is not properly functioning. The current proposal aims to improve meadow conditions while protecting the riparian ecosystem.

The program should involve herbicide treatment and enclosure fencing.

The program is adaptive in nature. Herbicide treatment would require coordination with NMFS. These two management methods may be considered as part of the adaptive management program in future years.

Some Himalayan blackberry should be left for wildlife habitat in the project area and timing of mowing of blackberry should be sensitive to nesting birds.

Deer and elk and native birds use the Elk Creek watershed. Some blackberry will be left for wildlife purposes. The amount and distribution of blackberry to benefit wildlife as well as timing of mowing of blackberry will be coordinated with regional wildlife experts from ODFW.

CONSULTATION REQUIREMENTS

- a. Clean Water Act of 1977 (33 USC 1344): No in-water work is proposed for this action.
- b. Coastal Zone Management Act of 1972, as amended: Not applicable.
- c. Endangered Species Act (ESA) of 1973, as amended: A BA was submitted to the U.S. Fish and Wildlife Service in 2001 for the alternative proposed in the initial Draft EA, boundary fencing, and concluded that the proposed action would have no adverse effect on bald eagle, northern spotted owl, and Gentner's fritillary. The Corps determined that the proposed action would have no effect on the listed species.

The action proposed in this EA also will have no effect on the above-mentioned Federally listed species. A BA addressing the Federally listed SONC coho salmon will be prepared if warranted by future management actions. The current action will have no effect on SONC coho salmon.

A No Effect determination was made for management actions proposed for year 2002 for the four above-mentioned Federally listed species to comply with ESA.

Future management protocol would be analyzed and coordinated with the appropriate resource agencies and appropriate documentation would be prepared to comply with the NEPA and ESA.

- d. Fish and Wildlife Coordination Act: The proposed action has been coordinated with the U.S. Fish and Wildlife Service in compliance with this Act concurrent with the review of this EA.
- e. Wild and Scenic Rivers Act: This action would have no effect on the Rogue River Wild and Scenic section.
- f. Marine Protection, Research and Sanctuaries Act of 1972, as amended: No marine resources would be affected by the proposed work.
- g. Cultural Resources Acts: A cultural resources survey was conducted for the construction of Elk Creek project and the results of this survey were coordinated with the Oregon State Historic Preservation Officer. Cultural resources occur on the Elk Creek project land (Mountain Anthropological Research 1991). Most sites occur on the east side of Elk Creek. Several small sites occur on the west side. No sub-surface ground disturbing activities, such as seeding using a seed drill, would be permitted over identified cultural resource sites.
- h. Executive Order 11988, Flood Plain Management, 24 May 1977: The proposed action would have no adverse effect on flood plains or flood heights.
- i. Executive Order 11990, Protection of Wetlands, 24 May 1977: No wetlands would be affected by this project.
- j. Analysis of Impacts on Prime and Unique Farmlands: The proposed work would not impact any prime or unique farmlands.
- k. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The proposed action would not be affected by the requirements of this Act.

LITERATURE CITED

Affected Parties and Concerned Citizens for Environmentally Safe and Economically Sound Re-Habilitation of Elk Creek (Draft). 2001. History of Dam Development Activity and Proposed Action Plans for the Re-Habilitation of Elk Creek.

Bureau of Land Management. 1993. Standard Livestock Fences. Drawing No. OR-11-9113.4-21.

Bureau of Land Management. 1996. Letter to U.S. Forest Service, dated July 10.

Isaacs, F. B., R. G. Anthony, and D. P. Anderson. 2000. Bald eagle nest locations and history of use in Oregon and the Washington portion of the Columbia River Recovery Zone, 1971 through 2000. Oreg. Coop. Wildl. Res. Unit, Oreg. State Univ., Corvallis. 33 pp.

Mountain Anthropological Research (prepared for the U.S. Army Corps of Engineers). 1991. Prehistory of the Upper Rogue River Region: Archaeological Inventory and Evaluation within the Elk Creek Lake and Lost Creek Lake Project Areas, Jackson County, Southwest Oregon, vol. 1, 399 pp.

Thomsen, C.D., M.P. Vayssieres, and W.A. Williams. 1997. Mowing and subclover plantings suppress yellow starthistle. *California Agriculture*, 51(6): 15-20.

Thomsen, C.D., W.A. Williams, M.R. George, W.B. McHenry, F.L. Bell, and R.S. Knight. 1989. Managing yellow starthistle on rangeland. *California Agriculture*, 43(5): 4-7.

Thomsen, C.D., W.A. Williams, and M. Vayssieres. 1996. Yellow starthistle management with grazing, mowing, and competitive plantings. Proceedings of the California Exotic Pest Plant Council Symposium. Oct. 4-6, San Diego, Calif.

Thomsen, C.D., W.A. Williams, M. Vayssieres, F.L. Bell, and M.R. George. 1993. Controlled grazing on annual grassland decreases yellow starthistle. *California Agriculture*, 47(6): 36-40.

U.S. Army Corps of Engineers. 2000. Letter to National Marine Fisheries Service, dated August 3.

U.S. Army Corps of Engineers. 2001a. Draft Environmental Assessment for Boundary Fence Construction at Elk Creek Project, Jackson County, Oregon. 5 pp.

U.S. Army Corps of Engineers. 2001b. Biological Assessment for Bald Eagle, Northern Spotted Owl and Gentner's Fritillaria for Fence Construction for Cattle Grazing Regulation at Elk Creek Project, Jackson County, Oregon. 5 pp.