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Draft Environmental Impact Statement: Summary

Cottonwood II Vegetation Management Project

Big Piney Ranger District, Bridger-Teton National Forest, Wyoming

Cottonwood II Vegetation Management Project
Draft Environmental Impact Statement
Sublette County, Wyoming

Lead Agency:	**USDA Forest Service**
Cooperating Agencies:	**U.S. Fish and Wildlife Service**
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Abstract: This Draft Environmental Impact Statement (EIS) was prepared to evaluate and disclose the environmental impacts of alternative vegetation management strategies to manage vegetation resources in the North and South Cottonwood Creeks drainages on the Big Piney Ranger District, Bridger-Teton National Forest (B-TNF). The Big Piney Ranger District is proposing to implement vegetation management in the North and South Cottonwood Creeks drainages over the next 5 to 10 years. Management opportunities, practices, standards and guidelines, and mitigation have been developed to help achieve desired resource conditions. These are the basis for this proposal and for further site-specific analysis of effects.

Reviewers should provide the Forest Service with their comments during the review period of the Draft EIS. This will enable the Forest Service to analyze and respond to the comments at one time and to use information acquired in the preparation of the Final EIS, thus avoiding undue delay in the decision-making process. Reviewers have an obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the agency to the reviewers' position and contentions *(Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553 [1978])*. Environmental objections that could have been raised at the Draft EIS stage may be waived if not raised until after completion of the Final EIS (C*ity of Angoon v. Hodel [9th Circuit, l986] and Wisconsin Heritages, Inc., v. Harris, 490 F. Supp. 1334, 1338 [E.D. Wis. 1980])*. Comments on the Draft EIS should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3).

Send Comments to:	**Gregory Clark** **P.O. Box 218** **Big Piney, WY 83113**
Date Comments Must Be Received:	**(Estimate) November 22, 2004**

SUMMARY

The Big Piney Ranger District on the Bridger-Teton National Forest (B-TNF) proposes to implement vegetation management in the North and South Cottonwood Creeks drainages over the next 5 to 10 years. Management opportunities, practices, standards and guidelines, and mitigation have been developed to help achieve desired resource conditions. These are the basis for this proposal and for further site specific analysis of effects.

The area affected by the proposal includes the North and South Cottonwood Creeks watersheds and is located approximately 25 miles northwest of Big Piney, Wyoming, in the Green River drainage, on the east slope of the Wyoming Range (see Figure 1-1). The analysis area is approximately 48,541 acres within this watershed and includes the tributary creeks of North and South Cottonwood Creeks, including Nylander, Ole, Hardin, Irene, Lander, Eagle, and Bare Creeks (see Figure 1-2). Lander Peak and Bare Mountain are within this area, as is Soda Lake. There are approximately 30,894 acres in the treatment area portion of the analysis area. The legal description includes portions of: T32N, R115W; T32N, R116W; T33N, R114W; T33N, R115W; T34N, R115W.

The Proposed Action, depicted in Figures 2-1 and 2-2, can be summarized as follows:

- Approximately 1,116 acres of aspen stands would be treated to regenerate healthy aspen and remove conifers that are growing into the stands and replacing the aspen component.
- Approximately 581 forested acres would be treated using a partial-cut treatment to thin overstocked conifer forests while maintaining a forested appearance.
- Most merchantable trees would be removed through a commercial timber sale on approximately 402 acres to provide for regeneration of declining lodgepole pine and mixed conifer forests and to enhance age class diversity across the landscape.
- Approximately 1.0 mile of the existing Nylander Road, which is to be used as a timber haul road for this project and to provide access to the Nylander Creek Trailhead, would be relocated out of the riparian area to the dry ridge area to the east.
- Twelve culverts and two bridges along the timber haul routes would be replaced or modified to either act as fish barriers or to allow passage of fish, as identified in the 1998-1999 road and stream crossing inventory.
- Reconstructing the South Cottonwood Road from Hidden Basin to just short of the South Cottonwood Creek crossing (approximately 1.0 mile) would provide safe access for log trucks, livestock haulers, and recreation traffic.

This action is needed, because of the following conditions:

- Aspen forests are predominantly old age classes, are being encroached by conifers, and are in declining growth and health. Desired conditions would maintain 50 to 55 percent of aspen stands in younger age classes.

- A majority of conifer forests are in older age classes with declining growth and health, heavy forest fuel loads, and high tree densities for site conditions. Desired conditions would maintain 15 to 20 percent of stands in seedling/sapling stages, maintain forest structure in snags, down logs and tree clumps, maintain lower tree densities in many areas, and promote natural regeneration.
- Many of the reforested areas have high tree densities that will not support optimal tree growth or sustained big game hiding cover. Desired conditions would maintain lower tree densities to sustain hiding cover longer and improve tree growth and health.
- Some roads and road culverts are substandard and contribute to sedimentation in streams, damage riparian areas, and impair fish passage and habitat. Desired conditions would bring roads and culverts up to standard or rehabilitate them to reduce sedimentation and improve adjacent resource conditions.

The need for vegetation management in this area has previously been identified and studied in the *Bridger-Teton Land and Resource Management Plan* implemented in 1990 (Forest Service 1990), in the *Cottonwood Plan Implementation Study* (CPIS) (Forest Service 1993), conducted from 1991 to 1993, and in the *Cottonwood/Maki Environmental Assessment* conducted from 1999 to 2003 (Forest Service 2003a). Each effort included extensive public and Forest Service interdisciplinary input, as well as use of the best data available on Forest resources.

Public scoping for the Cottonwood projects began during the CPIS phase in 1991. Throughout 1991 and 1992, a series of public mailings, meetings, and field trips were completed to discuss implementation of the Forest Plan in the Cottonwood area. Public input received during this period was used to develop desired future resource conditions and site objectives to reach the desired conditions. Projects originally proposed and scoped included vegetation management, improvement of recreational facilities, and road rehabilitation and improvement work in the North and South Cottonwood Creeks drainages. The original Cottonwood project was divided into two separate projects: the Maki project and the Cottonwood II Vegetation Management project.

The first proposed project from the planning described above was to conduct a detailed analysis focusing on management activities only in the Maki Creek area, a portion of the North Cottonwood Creek drainage.

Scoping for the second Cottonwood project, the Cottonwood II Vegetation Management project, was initiated by publishing a Notice of Intent (NOI) in the Federal Register on December 24, 2003, (Vol. 68, No. 247) to prepare an EIS. A public scoping letter was sent to individuals, interest groups, Shoshone-Bannock and Nez Perce Tribes, local governments, and other agencies. Thirteen letters from 14 individuals or groups were received.

Using the comments from the public, other agencies, and Tribal Nations, the Forest Service Interdisciplinary Team (IDT) developed the following list of significant issues to address:

- Old Growth and Canada Lynx. The project area has been documented as occupied Canada lynx habitat. Effects of the proposed activities on lynx habitat should be addressed.

- Big Game. The effects of the proposed activities on big game populations.
- Colorado River Cutthroat Trout. The effects of the proposed activities on Colorado River cutthroat trout habitat.
- Watersheds. The effects of the proposed activities on the functions and values of watersheds including vegetation, wildlife, aquatic species, water quality, wetlands, and bank stability.

These issues led the agency to develop alternatives to Alternative B, Proposed Action, including:

- **Alternative A, No Action.** There would be no vegetation management activities in the North and South Cottonwood Creeks drainages with implementation of the No Action Alternative.
- **Alternative C, Reduced Harvest and Temporary Roads.** The management objective of Alternative C is the same as the Proposed Action. However, in response to public scoping comments suggesting an alternative with less timber harvesting using clearcutting, the Forest Service IDT developed Alternative C. Alternative C reduces the number of acres where vegetation management is conducted, reduces the number of acres clearcut, increases the acres of aspen treatment for habitat improvement, and reduces temporary road miles needed. Elements of Alternative C are depicted in Figures 2-2 and 2-3.

Major conclusions are described in the following text.

Vegetation

Under the No Action Alternative, no effects from vegetation management treatments would occur except for occasional removal of dead trees along roads for firewood under personal use firewood permits. However, fire disturbance would continue to not be allowed to play its historic role. Vegetation manipulation using timber harvest, which began in the 1920s, would discontinue. Stands already changed by harvest would receive no further management or maintenance. Conifers would continue to grow into the aspen stands, replacing the aspen component. The risk of stand replacing wildfire, in the absence of smaller scale disturbances, particularly in older conifer forests would continue and increase.

Manipulation of vegetation on 2,099 acres under the Proposed Action would help achieve desired conditions in the five treatment areas. The effects would be to thin overstocked conifer forests while maintaining a forested appearance; regenerate declining lodgepole pine and mixed conifer forests and to enhance age class diversity across the landscape; and to regenerate healthy aspen and remove conifers that are growing into the stands and replacing the aspen component. The risk of stand replacing wildfire would be reduced on a small scale. The construction of temporary roads and skid trails would result in the temporary loss of forest productivity and habitat for 5 to 10 years. Relocation of a portion of Nylander Road out of the riparian area would restore riparian habitat.

Manipulation of vegetation is proposed on 2,032 treatment acres under Alternative C to help achieve desired conditions and respond to project issues in the five treatment areas. Additional acres of aspen would be treated with this alternative and less forested area would be disturbed by clearcutting and constructing temporary roads and skid trails. Other effects to vegetation would be similar to those described for the Proposed Action.

Wildlife

There would be no direct impacts on wildlife from the No Action Alternative (Alternative A). Over time, lack of forest management actions is likely to indirectly contribute to the decline in habitat values for elk and migratory birds that use aspen. The current conditions of dense mature conifer stands that often have limited herbaceous and shrub understories—which limits use by a number of species because of lack of cover and food—would continue.

With implementation of the Proposed Action (Alternative B), prescribed burns would reduce habitat for species that use mature aspen stands. However, in the absence of treatments, the quality of this habitat is declining. Primary and secondary cavity nesting birds would benefit from prescribed burns for several years. Declining aspen areas that are burned would provide renewed habitat for many species after they regenerate over a period of many years. Timber harvest and temporary roads would result in short-term increases in water temperature and sediment, with adverse effects on spotted frogs and other amphibians. Timber harvest would also remove habitat for species that use mature conifer forest. Aspen burning and timber harvest would increase herbaceous and shrub growth for 5 to 15 or 20 years, with benefits for big game and ground- and shrub-nesting species.

Direct and indirect impacts to all wildlife species from implementation of Alternative C would be similar to those described for the Proposed Action from aspen treatment, except for a greater area of aspen treated. Effects from logging and mechanical treatment would be somewhat less than under the Proposed Action, because fewer acres of coniferous forest would undergo treatment and there would be fewer created openings. Beneficial impacts would be approximately the same as under the Proposed Action. Long-term habitat improvement and progress toward desired future conditions (DFCs) would be somewhat less than under the Proposed Action, but greater than under the No Action Alternative.

Fire

Implementation of the No Action Alternative would result in a continued increase in fuel loading within timbered stands, loss of fire resistant aspen communities to succession, and decadence. Continued fire exclusion of all types would continue to exclude fire from playing its historical ecological role in the analysis area.

Alternative B would meet project purpose and need by treating 1,041 acres of conifer forest and 1,058 acres of aspen forest by burning in the analysis area. Thinning overstocked stands and harvesting timber (with effective activity fuel treatment) would

modify fuel characteristics and help break up fuel continuity within the analysis area. Future expected fire behavior in treatment areas would be reduced. Fuel loads would continue to increase in unmanaged timber and aspen stands. Fire would be reintroduced under a controlled scenario to play its historical role in the analysis area. Aspen stands would be regenerated by commercial harvest and prescribed fire, providing forage and renewed cover for elk, which migrate through the area, and other wildlife. Density and coverage of encroaching conifers would be reduced by the Proposed Action. Surface fuel in aspen stands would be reduced, thus reducing potential fire behavior. Partial-cut treatments would be used in conifer forests to remove insect and disease-infested trees, further reducing future fuel loads.

Alternative C does not meet project purpose and need as well as Alternative B (Proposed Action). Under Alternative C, reduced harvest levels of 974 acres of conifer forest and meeting the proposed 1,058 acres of aspen burning only meets project need in part. Thinning overstocked stands and harvesting timber (with an effective activity fuel treatment) would modify fuel characteristics and help break up fuel continuity within the analysis area. Future expected fire behavior in treatment areas would be significantly reduced. Fuel loads would continue to increase in unmanaged timber and aspen stands. Fire would be reintroduced under a controlled scenario to play its historical role in the analysis area.

Overall, Alternative B proposes the most modification and reduction of fuels among the alternatives evaluated, and would therefore reduce future fire behavior within the analysis area the most. Commercially harvested units with post-activity fuels treatment also would be anticipated to reduce future expected fire behavior. Thinning regenerating stands would promote stand resiliency by reducing crown densities and promoting health of the stand. The reduction of crown densities would decrease the chance of a stand-replacing crown fire.

Soils

The extent of detrimentally disturbed soils is within regional guidelines. There would be no change under the No Action Alternative. Detrimentally disturbed soil would increase slightly in the short-term with implementation of the action alternatives, but there would be no long-term impact.

Hydrology

Road density is not expected to increase with implementation of the No Action Alternative. One subwatershed currently exceeds the desired standard of 2.5 road miles per square mile. Road density would increase slightly with both action alternatives. Three subwatersheds would exceed the desired standard under the Proposed Action and two subwatersheds would exceed the desired standard under Alternative C. For broad scale evaluation, road densities should be maintained below 2.5 mile/square mile (Forest Service 2003a). At the watershed scale, this guideline will not be exceeded under any of the alternatives. However at the smaller subwatershed scale, some areas exceed the

guideline because of localized activities. Because the guideline is based on a broad scale evaluation, these exceedances at the subwatershed level are not significant.

Hydrologically connected roads would decrease with implementation of both action alternatives. Equivalent clearcut area would not exceed 30 percent with implementation of any alternative. There would be a short-term increase in sediment deposition into streams with both action alternatives at culvert and bridge improvement locations. Overall, sediment deposition would decrease with action alternative implementation.

Fisheries

Currently suppressed Colorado River cutthroat trout (CRCT) population conditions in the analysis area are likely to continue with the No Action Alternative. Both action alternatives (Alternatives B and C) are expected to result in short-term disturbances to the aquatic system and, thus, CRCT and their habitat from sediment input into the streams. However, the long-term benefits of Alternatives B and C should lead to a reduction in chronic sediment inputs, especially under the Proposed Action (Alternative B). Both action alternatives would improve CRCT access to other potentially important habitats that are currently unavailable within the Cottonwood Creeks drainages. Overall, the expected effects (benefits) to CRCT habitat and passage from the action alternatives would provide a better opportunity for the recovery of the local CRCT populations than that of the No Action Alternative (Alternative A). The Proposed Action provides more opportunities for chronic sediment reductions than Alternative C. Both Alternatives B and C equally improve access to upstream habitats.

Sensitive Species

There are unlikely to be any direct or indirect adverse impacts to any federally listed wildlife threatened, endangered, or candidate species; Forest Service wildlife sensitive species; or wildlife Management Indicator Species (MIS) under the No Action Alternative.

During implementation of the Proposed Action treatments, grizzly bear, gray wolf, and Canada lynx may be disturbed. Grizzly bear foraging habitat may temporarily improve and snowshoe hare habitat should improve in burned aspen areas. Snowshoe hares are the primary prey for Canada lynx. The potential exists for impacts on several sensitive species. The determination for these species was that the Proposed Action may impact individuals or habitat, but would not likely contribute to a trend toward Federal listing or loss of viability to the population or species. Wildlife sensitive impacts from implementation of Alternative C would be similar to those described for the Proposed Action.

There are no adverse impacts expected to any federally listed plant species from implementation of any alternative. Although there are known occurrences of Payson's milkvetch, Payson's bladderpod, and Shultz's milkvetch inside the analysis area, these occurrences are not located within proposed treatment areas and no adverse impacts from implementation of any alternative are expected. Habitat criteria for these species would

predict that unknown populations of Payson's bladderpod and Shultz's milkvetch are unlikely to occur within the treatment areas. Payson's milkvetch is an early succession species and unknown populations of Payson's milkvetch may occur within treatment areas, but are not likely to be adversely impacted by any alternative.

Transportation

The only treatment activities identified for implementation in inventoried roadless areas are some aspen prescribed burns, not requiring roads, under Alternatives B and C. Therefore, no impacts to roadless areas would occur. No permanent roads would be constructed under any alternative. A total of 13.8 miles of temporary roads and skid trails would be constructed under the Proposed Action. A total of 9.3 miles of temporary roads and skid trails would be constructed under Alternative C. All temporary roads would be restored to their original contour and vegetation type to avoid permanent impacts from road construction. Two bridges would be improved and one culvert would be replaced with a bridge. There would be a short-term sediment discharge increase to North Cottonwood Creek during construction, but no instream construction would be allowed. Traffic patterns would be disrupted during construction.

Heritage Resources

There is no potential for direct impacts on heritage resources under the No Action Alternative. Cultural resource sites would continue to be located, recorded, and protected from loss of integrity and physical damage primarily in reaction to ongoing resource management activities. There is the potential for indirect impacts to heritage resources under the No Action Alternative. If vegetation treatment projects are not implemented, then the increase in dead and dying trees and accumulation of fuels could lead to large stand replacing wildfires that could destroy the many historic tie hack cabins that are present throughout the North and South Cottonwood Creeks drainages. There would be no cumulative effects to heritage resources under the No Action Alternative.

Under the Proposed Action, clear cutting on three units may result in an adverse effect to the Old Indian Trail because these harvest units may be visible from the trail. There would be no impact to other heritage resources because those sites would be avoided by project activities. Indirect impacts may include increased damage to historic properties, such as the tie hack cabins, because of increased public use or activities in the analysis area. The risk of stand replacing wildfires would be reduced, resulting in lower potential for indirect effects to historic cabins in the event of wildfires. The removal of vegetation through prescribed burns may expose and facilitate the discovery and removal of artifacts. No cumulative impacts on heritage resources are anticipated under the Proposed Action.

Under Alternative C, the proposed harvest units in the vicinity of the Old Indian Trail would have only dead and dying trees removed, thereby reducing the visual intrusion to the trail compared to the Proposed Action. There would be no direct impacts on heritage resources under this alternative because all sites would be avoided. Indirect and cumulative effects would be the same as described for the Proposed Action.

Environmental Justice

None of the alternatives would cause disproportionate adverse human health or environmental direct, indirect, or cumulative effects to minority or low-income populations. During implementation of Alternatives B and C there is the potential for employment of members of minority groups. Minority groups would not be disrupted by project implementation under either Alternative B or C, because implementation would occur in a completely rural setting where there are no permanent human residents and the population in adjacent areas is very dispersed.

Recreation

Implementation of Alternative A (No Action) would not change existing recreation opportunities. Adverse impacts to existing hunting opportunities would be expected from the lack of vegetation management activities. Adverse impacts to fishing opportunities are expected to continue from the ongoing sedimentation into Nylander Creek from Nylander Road. Existing fishing opportunities along the creeks in the treatment area would not be improved through culvert and stream crossing replacements. Recreation traffic safety would continue to be less than desired on South Cottonwood Road because of the road's current width and configuration.

Implementation of the Proposed Action (Alternative B) would result in some short-term disruption of spring, summer, and fall recreation opportunities and use in the treatment area through the closure of certain areas, trails, or roads, or through required detours. Habitat quality within the treatment area is expected to improve, which could result in more wildlife species inhabiting the area. Big game hunting opportunities may then improve, and an associated benefit to hunters in the area may occur. A long-term reduction in potential for large-scale wildfire in the area is expected as a result of implementation of Alternative B, which would be a benefit to recreationists.

The action alternatives' (Alternatives B and C) vegetation management activities would potentially improve existing hunting opportunities, and provide associated benefits to hunters. The proposed relocation of Nylander Road and replacement of culverts and improvements to stream crossings could potentially improve fishing opportunities. Recreation traffic safety on South Cottonwood Road could potentially improve and provide associated benefits to recreationists traveling on that road.

Visual Resources

Vegetation management would not occur under the No Action Alternative and therefore, no visual impacts would be expected. Vegetation management under Alternatives B and C would result in some visual impact, particularly where the regeneration harvests are visible. Habitat quality within the treatment area is expected to improve, which could result in more wildlife species inhabiting the area.

Economics

There would be many non-market benefits from implementing the proposed project (Alternatives B and C), in addition to the market costs and benefits. The most important non-market benefit would be improvements in aspen stands, which would benefit wildlife and livestock. Estimated net revenue for the three alternatives is (minus) $238,852 for Alternative A, (plus) $284,283 for Alternative B, and (plus) $216,048 for Alternative C. The estimated value to the community and taxes generated for the proposed project would be $5,968,500 and $895,275, respectively, under Alternative B, and $5,190,000 and $778,500, respectively, under Alternative C.

Based upon the effects of the alternatives, the responsible official will decide if an action alternative (Alternatives B and C) should be implemented or if No Action (Alternative A) is warranted at this time.

FIGURES