



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

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### Spivey Pond Alder Thinning Project (CA-180-14-50) Finding of No Significant Impact September 2014

It is my determination that this decision will not result in significant impacts to the quality of the human environment. Anticipated impacts are within the range of impacts addressed by the Sierra Resource Management Plan (RMP). Thus, the proposed action does not constitute a major federal action having a significant effect on the human environment; therefore, an environmental impact statement (EIS) is not necessary and will not be prepared. This conclusion is based on my consideration of CEQ's following criteria for significance (40 CFR §1508.27), regarding the context and intensity of the impacts described in the EA and based on my understanding of the project:

1. *Impacts can be both beneficial and adverse and a significant effect may exist regardless of the perceived balance of effects.* Potential impacts include vegetation removal, targeting a riparian species. Impacts will be beneficial for California red-legged frog. No other adverse impacts will occur.
2. *The degree of the impact on public health or safety.* No aspects of the proposed action have been identified as having the potential to significantly and adversely impact public health or safety.
3. *Unique characteristics of the geographic area.* The project is located within the Spivey Pond Area of Critical Environmental Concern which was designated for the protection of the federally threatened California red-legged frog. No adverse impacts to California red-legged frog will occur, and thus no adverse impacts to the ACEC values were identified.
4. *The degree to which the effects on the quality of the human environment are likely to be highly controversial.* No anticipated effects have been identified that are scientifically controversial. As a factor for determining within the meaning of 40 C.F.R. § 1508.27(b)(4) whether or not to prepare a detailed environmental impact statement, "controversy" is not equated with "the existence of opposition to a use." *Northwest Environmental Defense Center v. Bonneville Power Administration*, 117 F.3d 1520, 1536 (9th Cir. 1997). "The term 'highly controversial' refers to instances in which 'a substantial dispute exists as to the size, nature, or effect of the major federal action rather than the mere existence of opposition to a use.'" *Hells Canyon Preservation Council v. Jacoby*, 9 F.Supp.2d 1216, 1242 (D. Or. 1998).
5. *The degree to which the possible effects on the human environment are likely to be highly uncertain or involve unique or unknown risks.* The analysis does not show that the proposed action would involve any unique or unknown risks.

6. *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.* The proposed action is not precedent setting.
7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.* No significant site-specific impacts have been identified. The proposed action has low potential to cause adverse cumulative impacts, and is consistent with the Sierra RMP.
8. *The degree to which the action may adversely affect National Historic Register listed or eligible to be listed sites or may cause loss or destruction of significant scientific, cultural, or historical resources.* The proposed action would not adversely affect cultural properties listed in or eligible for the National Register of Historic Places.
9. *The degree to which the action may adversely affect ESA listed species or critical habitat.* California red-legged frog, a species listed as threatened by the U.S. Fish and Wildlife Service, under the Endangered Species Act, is present within the project area, and the project area is within the area designated as critical habitat for the California red-legged frog. In addition, the area was designated as an Area of Critical Environmental Concern for the protection of California red-legged frog and its habitat. Because of the sensitivity of Spivey Pond and interest by the U.S. Fish and Wildlife Service (FWS) in this population, BLM is in informal consultation with FWS on the project, however BLM believes that there is no effect of the project on California red-legged frog or its critical habitat, due to several measures being taken to protect the California red-legged frog from any possibly project effects.
10. *Whether the action threatens a violation of environmental protection law or requirements.* There is no indication that the proposed action will result in actions that will threaten such a violation.

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William S. Haigh, Field Manager

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Date



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**EA Number:** CA-180-14-50

**Proposed Action:** Spivey Pond Alder Thinning Project

**Location:** MDM, T. 10 N., R. 12 E., Section 1 (see attached project area map)

### 1.0 Purpose of and Need for Action

#### 1.1 Need for Action

Alders, along with other vegetation, have covered the banks of the new pond. This complete vegetative cover has created a lack of bank basking habitat for the federally threatened California red-legged frog. The alder thinning is being proposed to create necessary basking habitat for California red-legged frog along the banks of the newer pond. Basking habitat is important for absorbing solar energy and raising the body temperature of the adults and tadpoles. This helps a frog have a temperature higher than its environment. An increased body temperature accelerates growth, digestion and produces fat deposits.

#### 1.2 Conformance with Applicable Land Use Plans

The proposed action is consistent with the Sierra Resource Management Plan Record of Decision (ROD), approved in February 2008. On page 14 of the ROD, a management action states "Implement the Spivey Pond Management Area Plan". On page 39 of the ROD, a management action states "Designate the 54-acre Spivey Pond ACEC and manage in accordance with the Spivey Pond Management Plan to protect federally threatened California red-legged frog". On page 51 of the ROD, an objective states "Stabilize and manage the California red-legged frog population at Spivey Pond".

### 2.0 Proposed Action and Alternatives

#### 2.1 Proposed Action

The proposed action is to remove alders from the banks of the pond beginning in fall, 2014. Alder maintenance would be planned for twice a year, once in spring and again in fall, in each subsequent year, as necessary to maintain adequate bank basking habitat. The alders would be removed with the following criteria:

- Older alders would be retained.
- Banks with greater sun exposure would be emphasized.
- No more than 20% of the total alders would be removed in any one cutting event.
- Alder clumps would be retained with 10 foot spacing between clumps.

The work would be done with hand crews using non-mechanized equipment, mainly loppers.

## **2.2 Project Design Features**

- Education of the work crew in the identification of California red-legged frog.
- California red-legged frog survey by a qualified biologist immediately prior to project implementation.
- Avoidance of areas on the bank if California red-legged frogs are found during the survey.
- If deemed absolutely necessary for project implementation, a qualified biologist will carefully move any individual California red-legged frog out of harm's way.

## **2.3 No Action**

Under the no action alternative, BLM would not thin alders around the newer pond.

## **2.4 Alternatives Considered but Eliminated from Detailed Analysis**

None

## **3.0 Affected Environment**

The project area is located at approximately 3200 feet elevation in the west-central Sierra Nevada foothills near Pollock Pines, California. Specifically, the project area is within the North Fork Webber Creek watershed, part of the larger American River watershed.

Spivey Pond consists of two ponds, an older pond (1 acre) and a newer pond (1/2 acre) which was built in 2004. Both ponds are breeding habitat for the California red-legged frog, a species listed by the U.S. Fish and Wildlife Service as threatened under the Endangered Species Act. The Spivey pond population of California red-legged frog is one of only seven known breeding populations to occur in the Sierra Nevada. The Spivey Pond population of California red-legged frog has never been documented to be more than 17 individuals. Spivey Pond is within California red-legged frog Critical Habitat designated by the U.S. Fish and Wildlife Service. Spivey Pond was designated as an Area of Critical Environmental Concern (ACEC) with the adoption of the Sierra Resource Management Plan in 2008. The ACEC was designated for the protection of California red-legged frog and its habitat.

The slopes above the ponds are moderately steep and densely forested with Douglas fir, incense-cedar, madrone, and black oak. The understory species includes live oak, big-leaf maple, and mountain misery, as well as various herbaceous species. The vegetation on the pond's bank and within the pond includes alders, willows, sedges, perennial bunch grasses, rushes, cattails, and Himalayan blackberry. Project area's botanical resources were inventoried by the BLM botanist in 2003. The project area was inventoried for cultural resources by a BLM archaeologist in 2003.

Recreational use of project area is considered to be low, probably because the public is unaware that the land is publicly owned. BLM manages the project area in accordance with class III visual resource management (VRM) standards. BLM's objective for class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat basic elements found in the predominant natural

features of the characteristic landscape. The project area does not fall within areas with special designations such as an ACEC, wild and scenic river corridor, etc.

#### **4.0 Environmental Effects**

The following critical elements have been considered for this environmental assessment, and unless specifically mentioned later in this EA, have been determined to be unaffected by the proposed project, as well as, the no action alternative: air quality, prime/unique farmlands, floodplains, hazardous waste, wild and scenic rivers, wilderness, and environmental justice.

##### **4.1 Impacts of the Proposed Action and Alternatives**

**Vegetation** – The BLM botanist analyzed the impacts of the proposed action on botanical resources, especially special status plants. The analysis was designed to help BLM meet its obligations under the Endangered Species Act and other special status policy. Special status plants have not been found within the project area. The botanist recommends that the proposed action would not affect threatened and endangered plants or other BLM special status plants. The proposed action calls for the removal of some alders. Alders would always be present on the bank due to a number of criteria that is designed to retain alders to provide hiding cover for California red-legged frog on the banks. In addition, all of the other vegetation on the bank, including sedges, perennial bunch grasses and rushes would not be removed. The proposed action would cause negligible effects to common vegetation.

**Wildlife** – The BLM wildlife biologist analyzed the impacts of the proposed action on wildlife, especially on special status wildlife. Her analysis was designed to help BLM meet its obligations under the Endangered Species Act and other special status policy. Alder thinning along the banks of the newer pond would have beneficial impacts to California red-legged frogs by creating and maintaining basking habitat along the banks, and preserving water quality in the pond. Bank vegetation thinning at Sailor Flat resulted in an increase in the number of California red-legged frogs, particularly juveniles, detected in subsequent surveys. Basking is important for absorbing solar energy and raising the body temperature of the adults and tadpoles. This helps a frog have a temperature higher than its environment. An increased body temperature accelerates growth, digestion and produces fat deposits.

Although largely beneficial, removal of alder along the banks could potentially reduce hiding cover for California red-legged frog, which could increase the frogs' exposure to predation. To counteract this affect, the older alders would remain in place to maintain hiding cover for California red-legged frog along the banks. In addition, only 20 percent of total alders could be removed during any one cutting event, so that there are always alders available along the bank. The alders would be removed in clumps with 10 foot spacing between clumps to allow some alders to remain in place for escape cover. Alder removal on the banks with greater sun exposure (south and west-facing), and therefore more suitability for basking frogs, would be emphasized over banks with less suitable sun exposure.

All of these elements (retention of older alders, certain percentage cut during each cutting event, and retention of alder clumps) are part of the proposed action. In addition, there are several other understory plant species available as hiding cover along the bank, including sedges, perennial bunch grasses and rushes. Exposure to predation due to lack of hiding cover would be eliminated with careful project planning. There is some potential that California red-legged frog

could be stepped on when work crews are trimming and removing alders. This is unlikely due to the tendency of California red-legged frogs to jump into the water when approached on the bank (personal observation). However unlikely this event is to occur, stepping on a frog can cause injury or death, and cannot be completely ruled out. The work crew will be educated in identification of the California red-legged frog. A qualified biologist will go out ahead of the work crew to insure that no California red-legged frogs are on the bank prior to work commencing. If California red-legged frog is encountered on the bank, the frogs will either be removed from the bank and carefully placed out of harm's way, or the area with the frogs will be avoided. If the frogs are moved, handling of California red-legged frogs would be required. This handling can lead to stress, and possibly mortality/injury to some individuals. Only a qualified biologist will handle California red-legged frog and only if absolutely necessary.

With education, a prior frog survey, and careful and limited handling of frogs by qualified individuals, injury or mortality of California red-legged frog will not occur. Because of the sensitivity of Spivey Pond and interest by the U.S. Fish and Wildlife Service (FWS) in this population, BLM is in informal consultation with FWS on the project; however, BLM believes that there is no effect of the project on California red-legged frog or to its designated Critical Habitat.

Cultural/Native American concerns – The project area inventoried by a BLM archaeologist in November 2003. The archaeologist found no cultural properties in the APE. The primary purpose of the study was to identify affects to the significant cultural resources or “historic properties”, in accordance with Section 106 of the National Historic Preservation Act. No historic properties were identified that would be affected by the proposed action. Alder thinning would not affect historic properties.

Riparian habitat – Alders would be thinned around the bank. This thinning would be done in a manner which retains alders at all times on the bank. In addition, several riparian plant species, including sedges, rushes, and willows would not be removed. Overall, there would be negligible effects to riparian vegetation and the wetland would continue to be assessed as properly functioning.

Recreation and visual resources management – The proposed action would not negatively impact recreational use. Recreational use is uncommon in the area affected by the proposed action. The proposed action may have a noticeable impact on visual resources. BLM manages the area in accordance with VRM class III standards, though the area does have natural scenic beauty. The proposed action is in line with the management objective for class III, which is to partially retain the existing character of the landscape.

Area of Critical Environmental Concern (ACEC) – The Spivey Pond ACEC was designated in 2008 for the protection of the federally threatened California red-legged frog and its habitat. Because the project would be conducted in a manner that eliminates impacts to California red-legged frog, then it also has no effect on ACEC values.

## 4.2 Impacts of the No Action Alternative

Alders would not be removed from the newer pond at Spivey Pond Management Area. This could benefit vegetation and riparian habitat, in that no vegetation would be removed. Cultural resources, visual resources, and recreation would be impacted the same as with the proposed project. The largest impact of not thinning the alders would be to California red-legged frog and to the Spivey Pond ACEC. Without the thinning of alders, California red-legged frog basking habitat would not be created along the banks of the newer pond. The alders would continue to completely cover the bank up to the water's edge, allowing for no frog basking areas along the bank. Bank vegetation thinning at Sailor Flat resulted in an increase in the number of frogs, particularly juveniles, detected in subsequent surveys. Basking is important for absorbing solar energy and raising the body temperature of the adults and tadpoles. This helps a frog have a temperature higher than its environment. An increased body temperature accelerates growth, digestion and produces fat deposits. California red-legged frog at the newer pond would not receive the benefits of establishment and maintenance of basking habitat.

## 4.3 Cumulative Impacts

Factors contributing to the threatened status of the species include: urban encroachment, construction of reservoirs and water diversions, contaminants, agriculture. These activities can destroy, degrade, and fragment habitat. The introduction of non-native predators, competitors, and disease are additional factors that continue to threaten the viability of many California red-legged frog populations.

Habitat loss and alteration, over-exploitation, and introduction of exotic predators were significant factors in the species' decline in the early to mid-1900s. Reservoir construction, expansion of introduced predators, inappropriate grazing and prolonged drought fragmented and eliminated many of the Sierra Nevada foothill populations. Red-legged frogs are currently threatened by human activities, many of which operate synergistically and cumulatively with each other and with natural disturbances (*i.e.*, droughts and floods). Current factors associated with declining populations of the red-legged frog include degradation and loss of its habitat through agriculture, urbanization, mining, overgrazing, recreation, timber harvesting, non-native plants, impoundments, water diversions, degraded water quality, and introduced predators. These factors have resulted in the isolation and fragmentation of habitats within many watersheds, often precluding dispersal between sub-populations and jeopardizing the viability of metapopulations (broadly defined as multiple subpopulations that occasionally exchange individuals through dispersal, and are capable of colonizing or "rescuing" extinct habitat patches). The fragmentation of existing habitat and the continued colonization of existing habitat by nonnative species may represent the most significant current threats to red-legged frogs. Red-legged frog populations are usually threatened by more than one factor.

Several researchers in central California have noted the decline and eventual local disappearance of California and northern red-legged frogs (*Rana aurora aurora*) in systems supporting bullfrogs (*Rana catesbiana*) (Hayes and Jennings 1986, Twedt 1993). Other non-native species that suppress California red-legged frog populations are the red swamp crayfish (*Procambarus clarkii*), signal crayfish (*Pacifastacus leniusculus*), and several species of warm water fish including sunfish (*Lepomis* spp.), goldfish (*Carassius auratus*), common carp (*Cyprinus carpio*), and mosquitofish (*Gambusia affinis*).

Establishment of bullfrogs has a notably destructive effect on red-legged frog populations, because they impact red-legged frogs during all life stages and in multiple ways. Cook (1997) documented bullfrog predation of a large adult red-legged frog. Larval bullfrogs enter their carnivorous stage during the spring, concurrent with the early stages of red-legged frog larval development, at a time when red-legged frog larvae are small and non-carnivorous. In addition to predation, bullfrogs may have a competitive advantage over red-legged frogs: bullfrogs are larger, possess more generalized food habits (Bury and Whelan 1984), possess an extended breeding season (Storer 1933) where an individual female can produce as many as 20,000 eggs during a breeding season (Emlen 1977), and larvae are unpalatable to predatory fish (Kruse and Francis 1977). In addition to competition, bullfrogs also interfere with red-legged frog reproduction. Both California and northern red-legged frogs have been observed in amplexus with (mounted on) both male and female bullfrogs (Jennings and Hayes 1990, Twedt 1993). Thus bullfrogs are able to prey upon and out-compete red-legged frogs.

Many pesticides and fertilizers have been shown to have deleterious effects on both red-legged frogs and treefrogs. Nebeker and Schuyttema (2000) found that ammonium sulfate significantly reduced growth and survivorship for tadpoles of both species. Ammonium nitrate, ammonium chloride, ammonium sulfate, and ammonium nitrate all have adverse effects on Pacific treefrog embryos. Effects range from cardiac and abdominal edema, deformity, and death (Schuyttema, and Nebeker 1999). Red-legged frog tadpoles are less sensitive to nitrates than other anurans, but respond to nitrites by reduced feeding, less vigorous swimming, disequilibrium, deformity, paralysis, and death (Marco *et al.* 1999). Runoff of pesticides from golf courses (Odanaka *et al.* 1994, Ryals *et al.* 1998, Suzuki *et al.* 1998) may suppress California red-legged frogs by significantly eliminating their prey base and by direct, reduced fitness to individual frogs.

Additional threats to the California red-legged frog are chytrid fungus and trematode infestations. The chytrid fungus attacks keratinized tissue (Mazzoni *et al.* 2003), which impairs foraging ability of tadpoles by digesting and deforming their mouth parts. Chytridiomycosis (chytrid infection) also disrupts metamorphosis by reducing keratin availability for structural changes. Chytridiomycosis has caused localized extinction in many anuran species (Daszak and Cunningham 1999, Australian Government 2004) and has been found in California red-legged frog populations (U.S. Fish and Wildlife Service 2002).

Parasitic infection from the trematode, *Ribeiroia ondatrae*, has been shown to result in limb deformations in the northern red-legged frog and in the Pacific treefrog. These deformations range from missing or partial limbs in 7 to 8 percent of infected individuals to additional limbs in 34 to 48 percent of individuals tested in northern California and Oregon (Johnson *et al.* 2002). Frogs with additional or missing limbs are unable to move about their ecosystem effectively, especially when their hind limbs are compromised.

## 5.0 Agencies and Persons Consulted

U.S. Fish and Wildlife Service, Sacramento Field Office

## 5.1 BLM Interdisciplinary Team

Reviewers:

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NEPA Coordinator/Cultural Resources Specialist

*/s/ Jeff Horn* 8/29/14

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Outdoor Recreation Planner/VRM Specialist

*/s/ Beth Brenneman* 8/28/14

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Botanist

*/s/ Peggy Cranston* 8/28/14

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Wildlife Biologist

## 5.2 Availability of Document and Comment Procedures

This EA, posted on Mother Lode Field Office's website ([www.blm.gov/ca/motherlode](http://www.blm.gov/ca/motherlode)) under Information, NEPA (or available upon request), will be available for a 15-day public review period. Comments should be sent to the Mother Lode Field Office, 5152 Hillside Circle, El Dorado Hills, CA 95762 or emailed to [jjbarnes@blm.gov](mailto:jjbarnes@blm.gov) or [pcransto@blm.gov](mailto:pcransto@blm.gov).

## 6.0 References

- Australian Government. 2004. Chytridiomycosis Fact Sheet. Department of the Environment and Heritage. Canberra, ACT. 3 pp.
- Bury, R.B., and J.A. Whelan. 1984. Ecology and management of the bullfrog. U.S. Fish and Wildlife Service Resource Publ. 155. 23 pp.
- Cook, D. 1997. Microhabitat use and reproductive success of the California red-legged frog (*Rana aurora draytonii*) and bullfrog (*Rana catesbeiana*) in an ephemeral marsh. Master's thesis. Sonoma State University, Sonoma, California.
- Daszak, P., and A.A. Cunningham. 1999. Extinction by infection. Trends in Ecol. and Evol. 14: 279.
- Emlen, S.T. 1977. "Double clutching" and its possible significance in the bullfrog. Copeia 1977(4): 749-751.
- Hayes, M.P., and M.R. Jennings. 1986. Decline of ranid frog species in western North America: Are bullfrogs (*Rana catesbeiana*) responsible? J. Herpetol. 20(4): 490-509.
- Jennings, M.R., and M.P. Hayes. 1990. Final report of the status of the California red-legged frog (*Rana aurora draytonii*) in the Pescadero Marsh Natural Preserve. Prepared for the California Department of Parks and Recreation under contract No. 4-823-9018 with the California Academy of Sciences. 30 pp.
- Johnson, P.T., J.K.B. Lunde, E.M. Thurman, E.G. Ritchie, S.N. Wray, D.R. Sutherland, J.M. Kapfer, T.J. Frest, J. Bowerman, and A.R. Blaustein. 2002. Parasite (*Ribeiroia ondatrae*) infection linked to amphibian malformations in the western United States. Ecol. Monographs 72: 151-168.
- Kruse, K.C., and M.G. Francis. 1977. A predation deterrent in the larvae of the bullfrog, *Rana catesbeiana*. Trans. Amer. Fish. Soc. 37(5): 248-252.
- Marco, A., C. Quilchano, and A.R. Blaustein. 1999. Sensitivity to nitrate and nitrite in pond-breeding amphibians from the Pacific Northwest. Environmental Toxicology and Chemistry 18:2836-2839.
- Mazzoni, R., A.A. Cunningham, P. Dasak, A. Apolo, E. Perdoma, and G. Speranza. 2003. Emerging pathogen of wild amphibians in frogs (*Rana catesbeiana*) farmed for the international market. Emerging Infectious Diseases 9(8): 995-998.
- Nebeker, A.V., and G.S. Schuytema. 2000. Effect of ammonium sulfate on growth of larval northwestern salamanders, red-legged and Pacific treefrog tadpoles, and juvenile flathead minnows. Bull. Environ. Contam. and Toxicol. 64(2): 271-278.

Odanaka, Y., Taniguchi, T., Shimamura, Y., Iijima, K., Koma, Y., Takechi, T. and Matano, O. (1994). Runoff and leaching of pesticides in golf course [sic]. *Journal of Pesticide Science*, 19(1): 1-10.

Ryals, S.C., Genter, M.B., and Leidy, R.B. (1998). Assessment of surface water quality on three eastern North Carolina golf courses. *Environ.Toxicol.Chem.*, 17(10): 1934-1942.

Schuytema, G.S., and A.V. Nebeker. 1999. Effects of ammonium nitrate, sodium nitrate, and urea on red-legged frogs, Pacific treefrogs, and African clawed frogs. *Bull. Env. Contam. and Toxicol.* 63: 357-364.

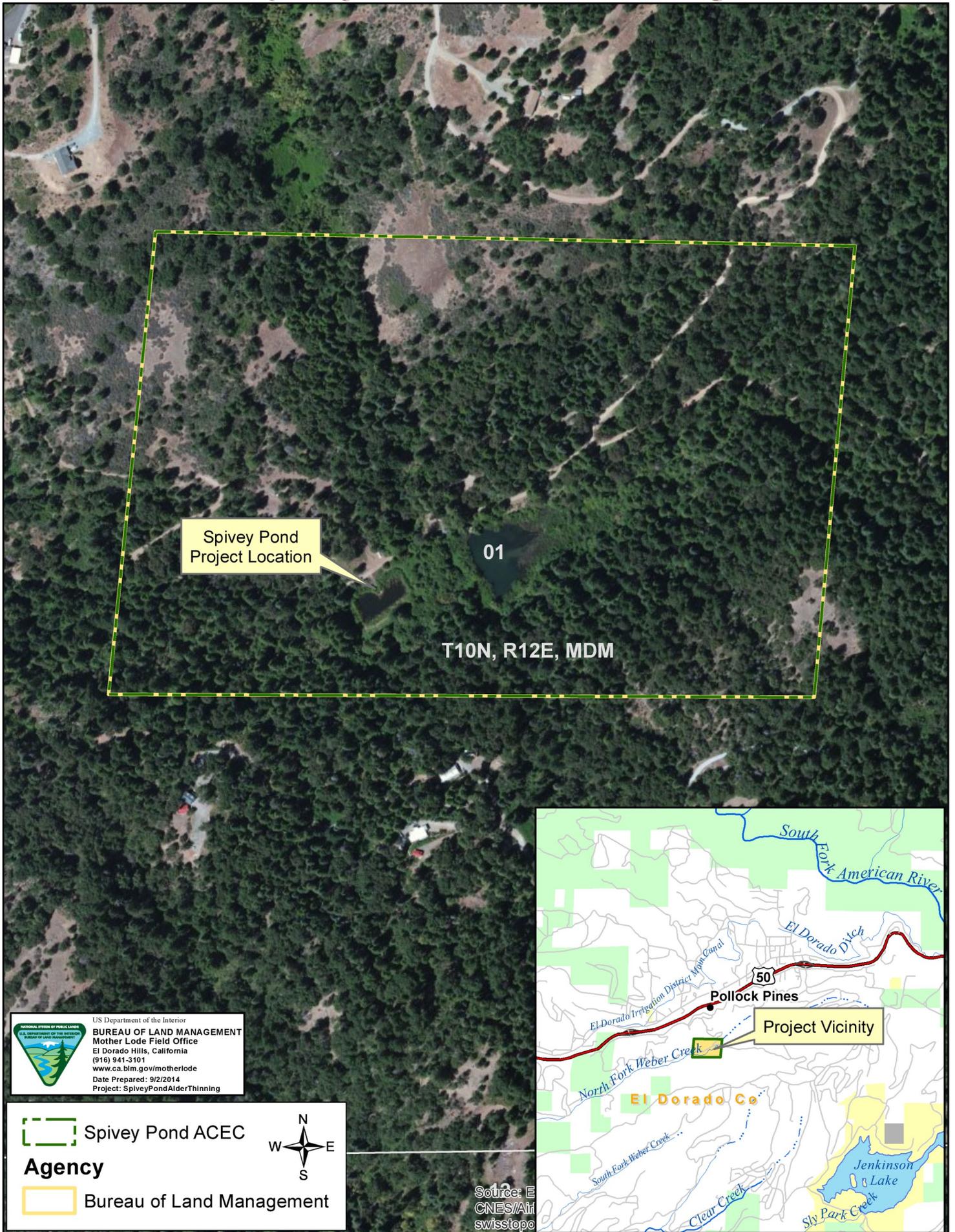
Storer, T.J. 1933. Frogs and their commercial use. *California Fish and Game* 19(3): 203-213.

Suzuki, T., Kondo, H., Yaguchi, K., Maki, T., and Suga, T. (1998). Estimation of leachability and persistence of pesticides at golf courses from point-source monitoring and model [sic] to predict pesticide leaching to groundwater. *Env.Sci.Tech.*, 32(7): 920-929.

Twedt, B. 1993. A comparative ecology of *Rana aurora* Baird and Girard and *Rana catesbeiana* Shaw at Freshwater Lagoon, Humboldt County, California. Master's Thesis, Humboldt State University, Arcata, California. 53 pp. plus appendix.

U.S. Fish and Wildlife Service. 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). Region 1, Portland, Oregon. 181 pp.

# Spivey Pond Alder Thinning




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 Spivey Pond ACEC  
**Agency**  
 Bureau of Land Management



Source: E  
 CNES/Air  
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1:4,000

1 inch = 333 feet