

**Lakeview Ranch Proposed OHV Route
Environmental Assessment
(OR135-08-EA-016)**

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Introduction

The Bureau of Land Management (BLM) is considering a proposal to designate a motorized route in the Lakeview Ranch Unit of the National System of Public Lands (hereafter public lands) in Lincoln County, WA. This area is managed by BLM Border Field Office of the Spokane District. The Spokane Resource Management Plan (RMP) limits motorized travel in this area to designated routes (no off-road travel is permitted). Recently, a non-profit motorized recreation advocacy group called the Odessa Citizens Action Committee (OCAC) identified a route on these lands adjacent to and north of the town of Odessa, WA that they would like the BLM to designate for motorized use (motorcycles and four-wheelers). With this designation, OCAC has stated that it seeks to: 1) increase Off-Highway Vehicle (OHV) recreational opportunities on the Lakeview Ranch management unit, and, 2) create an OHV-designated route linking the town of Odessa to existing motorized use routes in the northern part of the Lakeview Ranch Management Unit.

Location

The site of the proposed route is located in Lincoln County, WA with the proposed route proceeding north from the vicinity of the existing BLM trailhead located along the northwest boundary of the town of Odessa, which is approximately 80 miles southwest of Spokane (see map at Attachment 1). The location legal description of the immediate vicinity of the proposed route is T21N, R33E, Sec 6. T21N, R32E, Sec 1. T22N, R32E, Sec 23,26,35,36.

Background

The OCAC has stated that one of their primary goals is to provide economic development for the town of Odessa (estimated population 900), by attracting responsible OHV enthusiast tourists. To facilitate this tourism development, the Town of Odessa has: 1) passed an ordinance allowing limited OHV travel within the city limits, 2) passed an ordinance dedicating a small tract of land for a new OHV trailhead, as described in Alternative 1 below, and 3) obtained Lincoln County approval to allow regulated OHV travel on Lakeview Ranch Road, a county road that would complete the link between Odessa and the north end of the management unit, contingent on BLM's implementation of a new OHV trail connecting Odessa to Lakeview Ranch Road. OCAC's efforts beyond this proposed action extend to trying to build a much larger OHV trails network in the future, mostly on private land, linking a number of small rural communities within the region. However, none of this extensive network currently exists.

BLM acquired lands in the Lakeview Ranch Management Unit through several acquisitions between 1991 and 2008. The parcel size is approximately 12,690 acres. Management of the area has focused on supporting wildlife habitat, seasonal livestock grazing, and wildlife-based recreational opportunities.

The Spokane Resource Management Plan Record of Decision Rangeland Program Summary (USDI BLM 1987) states that "Acquisition of lands, or interests in lands, will emphasize

inholdings or lands adjacent to BLM lands with wilderness; threatened, endangered, or sensitive species habitat; high scenic or other recreational values, designated Areas of Critical Environmental Concern; and other opportunities to consolidate BLM lands within the twelve management areas or improve BLM and public access to other public lands.” Further, “Any land to be acquired within the Scattered Tracts Management Area [which included the project area], will be that which is needed to enhance or protect unique or important public land values such as threatened, endangered or sensitive species habitat, riparian habitat, or other recreation values.”

In 1992 an amendment to the Spokane RMP (USDI BLM 1992) established the Upper Crab Creek Management Area (MA), which includes the project area. The RMP Amendment states (p. 9) that “The management goal for this area is to enhance native riparian and sagebrush steppe habitat, enhance opportunities for wildlife-based recreation, identify and protect significant cultural values and to protect significant sensitive species habitat.” The document goes on to state (p. 13) that “[The] Upper Crab Creek MA would be managed under multiple use guidelines compatible with plant and animal management goals. Land exchange and other acquisition opportunities . . . would be pursued that would emphasize consolidation of public land ownership, complement the recreation opportunities, and enhance threatened and endangered species habitat and/or important riparian values.”

Much of the Lakeview Ranch land was grazed by livestock when it was under private ownership. Under BLM ownership, livestock grazing continued. However, stocking levels were reduced, grazing seasons shortened, and allotment management plans implemented with the objective of moving toward meeting the Standards for Rangeland Health and Guidelines for Livestock Grazing Management for Public Lands in Oregon and Washington.

This unique area sits at the confluence of the Lake Creek and Crab Creek coulees. This is part of the vast Channeled Scablands of eastern Washington, named for the coulees, buttes, and potholes carved by the Missoula Floods over 12,500 years ago. Outcrops of ragged and scarred Columbia River Basalt bedrock, stripped of topsoil are visible throughout the area. The shrub-steppe native habitat, common to the BLM lands in this area, is part of the small remnant of this type still found in the state of Washington. This habitat supports a wide variety of wildlife, plants and wildflowers, including some endemic and special status species.

Recreational opportunities include hiking, wildlife and nature viewing, horseback riding, camping, hunting, biking, geology, and limited motorized use. The Odessa to Pacific Lake Trail winds through 12.5 miles of shrub-steppe uplands and the Lake Creek Canyon between the town of Odessa and Pacific Lake/Lakeview Ranch. Nearly 3.5 miles of the north section of the trail are open for “limited” motorized vehicle use (vehicles are restricted to staying on the road, no off-road travel allowed) but motorized vehicles are prohibited on the remainder of the trail. Fishing and swimming were once popular, but are no longer available at Pacific Lake, as the lake has dried up.

Private lands adjacent to the Lakeview Ranch Management Unit consist of additional shrub-steppe, channeled scabland habitat, and agricultural land. Livestock grazing and wheat farming are the predominant uses on this private land.

Issues

Internal scoping by BLM revealed preliminary issues to be considered in analysis of the proposed action. The preliminary issues identified by BLM were made available, along with the proposed action, for public review during the scoping period. BLM review of scoping comments and recommendations from the Eastern Washington Resource Advisory Council (RAC) resulted in revision of the preliminary issues. The revised issues are listed below. These issues help define the purpose and need, develop alternatives, and focus the environmental analysis.

- 1) What steps will be taken to ensure that Federal, State, and BLM sensitive listed plant and animal species and unique ecological communities in the area won't be adversely affected?
- 2) How will cultural resources, known to be present in the project area, and adjacent to the proposed route, be protected?
- 3) Will soil, water, and air resources be adversely affected? How can this be avoided or minimized?
- 4) Will proposed motorized (OHV) recreational use conflict with the currently authorized grazing of livestock?
- 5) How can BLM reduce or eliminate the potential for increased conflicts between OHV recreational users and non-motorized recreational users, such as hikers, wildlife and nature viewers, campers, horseback riders, hunters, mountain bikers, as well as Native Americans engaged in plant gathering and other traditional activities?
- 6) Will BLM be able to support substantial costs associated with new facilities, monitoring, and enforcement to support new and increased use?
- 7) Will the proposed action and associated additional use increase the spread of noxious weeds into areas where occurrence of invasive species is currently minimal?
- 8) Will the proposed action and associated additional use increase the potential of human-caused fires?
- 9) Will noise from motorized use affect residents on adjacent private lands?
- 10) If unauthorized off-trail use occurs, will this lead to trespass on adjacent private lands?

Purpose and Need

BLM's need for the proposed action is:

- One of the Spokane District RMP (USDI BLM 1987) General Management Objectives states "Manage public lands and keep access routes open for a variety of recreational opportunities/experiences, including both motorized and non-motorized recreation activities."
- The Spokane District RMP Amendment (USDI BLM 1992) Upper Crab Creek Management Area stated goal is to enhance native riparian and shrub-steppe habitat, enhance opportunities for wildlife-based recreation, identify and protect significant cultural values and protect significant sensitive species habitat.

- BLM national OHV Policy (USDI BLM 2001) is to provide for the public’s recreational needs, protect resources, ensure the safety of the public, and minimize conflicts among the various public land uses.
- OCAC has requested that BLM designate a new motorized trail, linking the Lakeview Ranch County Road to the town of Odessa.

BLM’s purpose for the proposed action is to:

- Provide for public access and recreational needs while minimizing ground disturbance and other negative impacts to valuable resources, and minimizing conflicts with other public land uses.
- BLM must provide a reasonable response to the request from OCAC to designate a motorized route to connect Odessa with Lakeview Ranch County Road.

Conformance with Law

BLM seeks to ensure that the public lands are managed in accordance with the intent of Congress as stated in the Federal Lands and Policy Management Act of 1976 (43 U.S.C. 1701 et seq.) (FLPMA), under the principles of multiple use and sustained yield. As required by FLPMA and BLM policy, the public lands must be managed in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; that will provide for outdoor recreation and human occupancy and use.

BLM also seeks to ensure that the public lands are managed to comply with the Threatened and Endangered Species Act, and the National Environmental Policy Act of 1969 (NEPA).

Conformance with DOI/BLM National Policy

According to BLM’s National Management Strategy for Motorized Off-Highway Vehicle Use on Public Lands (USDI BLM 2001), “Proper ORV (Off-Road Vehicle) management provides for the public’s recreational needs, protects resources, ensures the safety of the public, and minimizes conflicts among the various public land uses.” The National OHV (Off-Highway Vehicle) Strategy was designed to help BLM managers implement on-the-ground solutions to motorized OHV issues while protecting public lands and resources.

Conformance with Land Use Plan

In accordance with Federal Regulations (43 CFR 1610.5-3), all resource management authorizations and actions shall conform to the approved [resource management] plan. For this proposed action, the Records of Decision for the Spokane District RMP (USDI BLM 1987) and

the Spokane RMP Amendment (USDI BLM 1992) are the applicable plans. As stated in the Purpose and Need Section above, the proposed action would be in compliance with, and implement the Spokane RMP and the Spokane RMP Amendment.

Conformance with Executive Orders and Federal Regulations

BLM also seeks to ensure that the public lands are managed in accordance with the following executive orders and Federal regulations associated with OHV use on public lands:

Executive Order 11644: Issued in February 1972 to establish policies and provide for procedures to control and direct the use of OHVs on Federal lands to: 1) protect the resources of those lands; 2) promote the safety of all users of those lands; and 3) minimize conflict between the use of OHVs and other types of recreation. The order closes wilderness and primitive areas to OHV use. It also requires the federal agencies to issue OHV use regulations, inform the public of the lands' designation for OHV use through signs and maps, enforce OHV use regulations, and monitor the effects of OHV use of the land.

Executive Order 11989: Issued in May 1977 and contains three amendments to Executive Order 11644. While these amendments lifted restrictions on the use of military and emergency vehicles on public lands during emergencies, they otherwise strengthened protection of the lands by authorizing agency heads to: 1) close areas or trails to OHVs causing considerable adverse effects; and 2) designate lands as closed to OHVs unless the lands are specifically designated as open to them.

Applicable OHV Federal regulations include:

43 CFR 8340 – Off-Road Vehicles

43 CFR 9260 – Law Enforcement; Criminal

Description of the Alternatives

BLM considered six alternatives. Four of these were analyzed in detail: Alternative 1 (Proposed Action), Alternative 2 (Fenced Route), Alternative 3 (Seasonal Closures), and Alternative 4 (No Action).

Two alternatives were considered but not analyzed in detail: Alternative 5 (Change the Route), and Alternative 6 (Re-designate the Existing Motorized Use Route to Non-Motorized Use). The section (Alternatives Considered but Eliminated from Detailed Analysis) provides more details about these two alternatives.

Actions Common to All Alternatives

1. The RMP specifies that motorized vehicle travel is limited to designated routes in this area. None of the alternatives proposes to change this. Therefore, under all alternatives,

off-road motorized travel and motorized use of routes not designated for motorized travel would continue to be prohibited.

2. In addition, BLM may invoke emergency closures of routes throughout the Spokane District to protect resources. While these emergency closures are not actually part of any of the alternatives, they are very likely to occur under any alternative. BLM invokes emergency fire closures during extreme fire danger each summer (usually July through September), which generally includes closure of most OHV routes. BLM also closes some routes during wet seasons (usually from mid-November through March) for public safety and to prevent excessive soil erosion.
3. If the alternative selected by BLM designates the OHV trail, implementation of that alternative would be contingent upon OCAC providing evidence to BLM that legal right of way for public access to the proposed new OHV trailhead near Odessa has been obtained.
4. Prior to implementation, the existing grazing authorization will require re-analysis to determine if any modifications are needed to the current authorization.

Alternative 1 (Proposed Action) See “Map of Proposed OHV Trail”: Attachment 2

As proposed by OCAC, BLM would designate, for certain types of OHV use (motorcycles and all-terrain vehicles), approximately seven miles of route on the BLM Lakeview Ranch Management Unit, creating a linear (non-loop) route linking the town of Odessa to Lakeview Ranch Road (a county road). Two miles of Lakeview Ranch Road would link the proposed route to the approximately seven miles of two-track roads currently established for limited motorized use in the northern portion of the Lakeview Ranch Management Unit. This alternative would follow the shortest route possible, linking Odessa and the county road, while utilizing existing roads and trails when possible.

As detailed in the attached map (Attachment 2), the route would include:

- 1) Designation of approximately six miles of existing two-track roads in the southern part of the management unit as open to motorized vehicles 60” in width or less. These existing two-track roads are currently only open to non-motorized travel.
- 2) Designation of approximately ¼ mile of existing non-motorized trail near Odessa to limited motorized access;
- 3) Construction of approximately ½ mile of new two-track road within T22N, R32E, Sec 26 to link the two existing two-track roads in that section;
- 4) Construction of a new OHV recreation access trailhead/gate approximately 200 yards north of the existing (non-motorized use) recreation access trailhead/gate, and from it approximately 1/4 mile of new OHV trail would be created, linking the new trailhead to the existing trail. The proposed OHV trailhead is needed in addition to the existing trailhead because there is insufficient clearance for ATVs to proceed via the first approximately 1/4 mile of trail from the existing trailhead.
- 5) Cattle Guards would be installed at each of the six fence crossings along the proposed route.
- 6) Where it is currently allowed, the approximately seven miles of roads at the north end of the parcel would be designated for LIMITED motorized use, meaning motorized use

would remain limited to the established road. If authorized, the only motorized vehicles that would be allowed to use the proposed route south of its junction with Lakeview Ranch Road, would be all-terrain vehicles (ATVs) and motorcycles.

In addition, Lincoln County has passed a resolution which will allow OHV/ATV use of the Lakeview Ranch County Road, if BLM approves motorized use of the proposed route. Therefore, use of the county road by ATVs is a connected action.

Alternative 2 (Fenced Route)

This alternative would include the same trail designations, and trail and trailhead construction as described under Alternative 1 (Proposed Action). In addition, it includes construction of an OHV barrier fence consisting of 26” field fence installed 12” above the ground (38” total height), on both sides of the OHV trail identified in Alternative 1 (Proposed Action), to create a fenced-in trail corridor. Both fences would run parallel to the trail, one on each side of the trail, at a distance of approximately 25 feet from the centerline of the trail. The fence would extend from the proposed trailhead at Odessa to the Lakeview Ranch Road. A total of approximately 14 miles of new fence would be constructed (7 miles on each side). The fence would be designed to create a barrier against unauthorized (off-trail) OHV use. Keeping riders confined to the trail corridor in this manner would reduce the potential for off trail use and the associated impacts to natural and cultural resources. BLM estimates that the total cost for materials and construction would be \$15,000 - \$19,000 per mile, including the cost for fences and cattleguards. The total acreage inside the OHV corridor along the proposed route would be approximately 42.5 acres.

Alternative 3 (Seasonal Closures)

This alternative would include the same trail designations, and trail and trailhead construction as described under Alternative 1 (Proposed Action). Seasonal closures would prohibit OHV use between March 1 and July 15 each year to prevent disturbance to wildlife (especially protected and sensitive species) during nesting, mating, rearing and/or other critical periods.

Seasonal Wildlife Closures:

- Mar 1 - May 31: Ferruginous Hawks during courtship and nesting;
- Mar 1 - June 15: Sage Grouse during nesting and early brood rearing;
- Mar 15 - May 15: Washington Ground Squirrels when young emerge and during peak activity.
- May 15 - July 15: Migratory and Special Status birds during nesting;

Signs would be posted indicating the wildlife closures. The closures would be enforced for the same periods from year to year. Due to the seasonal closures listed above, and anticipated emergency closures for fire and wet seasons, the proposed route normally would only be open to OHV use from approximately Oct 1 – Nov 15.

Cattle Guards would be installed at each of the six fence crossings along the proposed route.

Alternative 4 (No Action)

Under this alternative BLM would not create any additional OHV trails, or designate additional OHV routes in the Lakeview Ranch Management Unit, other than those already open for

motorized use.

Alternatives Considered but Eliminated from Detailed Analysis

Alternative 5 (Change the Route)

Under this alternative, the OHV route would follow the BLM fenceline along the eastern boundary of public lands, between the proposed new trailhead at Odessa and Lakeview Ranch Road. Similar to Alternative 2, the route would be fenced, but use the existing fence as the barrier on the eastern side of the fenced corridor.

This alternative was NOT analyzed because:

- 1) There are no established roads or trails to follow along this route. Construction of the new road would destroy and degrade a great amount of native sagebrush habitat that is prime wildlife habitat. Therefore, this alternative would not accomplish a key objective of the Purpose and Needs, to “minimize ground disturbance and other negative impacts to protected resources.”
- 2) Existing barbed wire fence along the eastern parcel boundary would have to be replaced with barbless OHV barrier fence since barbed wire fence poses a safety hazard when in close proximity to OHV recreational use. Hence this alternative would be the same as Alternative 2, except for the construction of much more new trail.

Alternative 6 (Designate the Existing Motorized Use Route to Non-Motorized Use)

Under this alternative, no new motorized route would be constructed or designated, and the seven-miles of two-track roads in the northern portion of the management unit, which are currently open to motorized use, would be designated as non-motorized (i.e. no longer open to motorized travel). These are currently the only motorized routes within the management unit. While this alternative would extend the range of alternatives considered, it was dropped from further analysis because it would not “keep access routes open for a variety of recreational opportunities/experiences, including both motorized and non-motorized recreation activities” as stated in the RMP and Purpose and Need.

Affected Environment and Environmental Consequences

Assumptions:

- 1) Creating the proposed OHV route would lead to increased development of OHV recreation tourism promoting Odessa as an “OHV Friendly” town directly connected to public lands OHV riding opportunities. This would result in a substantial increase in motorized recreational use at the Lakeview Ranch unit, on both the existing and proposed motorized routes.
- 2) The proposed route is relatively short, which may encourage riders to travel off-road. Riders would travel from Odessa to the northern tip of the route, and then have to return almost entirely along the same route. Even with mitigation, it is likely that a significant amount of unauthorized (off-road) use would occur. Studies show that the potential exists for approximately 23% – 66% of all OHV enthusiasts to ride illegally off-trail on

an occasional basis, and 15% - 50% of all riders to do so on a regular basis (Fischer, Blahna and Bahr 2002; Frueh 2001; Lewis and Paige 2006). Factors contributing to the likelihood of a significant amount of unauthorized OHV use at Lakeview Ranch include: 1) the route is too short to fulfill user expectations for a full day trail ride, 2) there is no connecting trail system adjoining the public land as an option for a longer ride, 3) the open, OHV-accessible terrain, and scenic nature of the project area will entice riders to go off of the designated trail, 4) there would be limited BLM law enforcement presence to enforce compliance. "In order to be successful and actually influence behavior, OHV users must be motivated to behave properly" (Frueh 2001). Law enforcement is a critical means for motivating proper behavior.

- 3) BLM reviewed the existing fences and terrain in the management unit and found that in some places, fences or areas of steep terrain would limit where potential unauthorized off-road OHV use would likely occur. However, much of the Lakeview Ranch unit is accessible (illegally) by OHV from the proposed and existing OHV routes. This area is considered the off-route Area of Potential Disturbance (APD) and is depicted in Attachment 4.

Water Quality:

Affected Environment: Crab Creek is an intermittent stream within the APD - on the southern boundary of the management unit. The existing non-motorized trail is at least ¼ mile from the stream. BLM has tested Crab Creek water quality over time and no real issues have emerged. The other dry drainages within the BLM parcels and the APD have only seasonal flows. Most likely late winter rain on snow events upstream would put water in these drainages for a few days at the most.

Alternative 1 (Proposed Action):

Water quality may be impacted where the proposed trail is near water courses, due to a combination of surface disturbance and overland flow created by storm events. Also, unauthorized (off trail) use could result in degradation of water courses within the project area. This could occur as a result of unauthorized OHV use in drainage areas, which would severely impact channel stability and create subsequent water quality/resource issues, such as increased sedimentation, increased water temperature, and reduced water table affecting riparian habitat.

Alternative 2 (Fenced Route):

Impacts would be similar to Alternative 1 if unauthorized use occurs outside the fenced area. However, the incidence of unauthorized (off-trail) would not likely occur due to the motorized route fence enclosure.

Alternative 3 (Seasonal Closures):

As in Alternative 1, water quality could be impacted primarily due to unauthorized (off-trail) use. Due to the limited amount of time the trail would be open under this alternative, effects to bank damage, silt and sediment delivery, and decreased water quality would be much less than under Alternative 1.

Alternative 4 (No Action):

Any impacts to water quality would occur from present or future natural conditions and events.

Cumulative Effects: The existing motorized route along with the regular cattle grazing in the BLM allotment and outside the allotment could contribute to damage to the riparian area, bank stability and increased silt and sediment delivered downstream. Along with these effects the new trail and publicity, per the above stated assumptions, would result in increased motorized use and degraded water quality from off road riding.

Riparian/Water Resources/Fisheries:

Affected Environment: As stated in the previous section, Crab Creek is an intermittent stream within the APD on the southern boundary of the management unit and the existing non-motorized trail is at least ¼ mile from the stream. Crab Creek supports a healthy rainbow trout population. No special status aquatic species occur in Crab Creek.

Alternative 1 (Proposed Action): The potential for illegal off road riding could damage riparian vegetation and disturb dry drainages to the point where additional silt and sediment would be added during flood events every 5-10 years, and during runoff snow melt into the down-stream sections of Crab Creek. This has the potential to deteriorate the rainbow trout habitat.

Alternative 2 (Fenced Route): The proposed fenced corridor would reduce the possibility of off road riding and therefore lessen the potential damage to riparian vegetation and dry washes. The fenced corridors would divide the pastures, and could change the habits of cattle grazing by concentrating the cattle into the intermittent or dry washes/coulees, having a negative impact on riparian areas.

Alternative 3 (Seasonal Closures): The seasonal closure collectively would leave less than a month of legal riding opportunities. The effects would be less than Alt. 1 assuming illegal off road use during the open periods were minimized.

Alternative 4 (No Action): The effects would be similar to Alternative 1 in those areas where OHV riding is currently allowed.

Cumulative Effects: If OCAC is successful, Odessa will become an OHV destination with greatly increased traffic on the trails. Although the stream beds are intermittent, combined impacts from grazing to the riparian areas plus a percentage of off trail riding by OHV enthusiasts could increase the riparian vegetation damage and stream bank damage which would then deliver additional silt and sediment downstream during spring runoff event.

Air Quality:

Affected Environment: The air quality in the project area is considered to be good and is in attainment for the National Ambient Air Quality Standards (NAAQS). There are no monitoring sites in the APD that can be used to provide data and because of the lack of air pollution sources

and population in the area it is very unlikely that an air quality monitor would be put there in the future. The primary air quality issues for Lincoln County are: 1) PM10 (particulate matter, 10 microns or less in diameter) in the form of dust generated through agricultural practices and unimproved roads, and 2) PM2.5 (particulate matter/aerosols, 2.5 microns or less in diameter) from smoke associated with both agriculture and outdoor burning and wildland fire. Any direct exposure to pollutants could cause an acute health effect. There is no monitoring data from the area because there are no sources that would contribute to an air quality problem, and the populations of the local communities do not meet the level that requires monitoring. (from telephone conversation with Paul Rossow, WA DOE, May22, 2009).

Alternative 1 (Proposed Action): Air quality will be impacted when OHVs drive on dirt trails or off-road and raise fugitive dust, PM10, and because OHV engines will emit fine particulates (PM2.5) as a byproduct of combustion. With that, the emissions from the proposed action will be minimal. The air quality is good in that area, with the normal air pollution load on the airshed being very low; dust added to the air would not have a significant health impact as defined by the NAAQS. If there was unauthorized off-trail use the dust and fine particulate would be dispersed over a larger area. Unless that use became rampant and widespread there would not be enough of an increase to have a significant effect.

Alternative 2 (Fenced Route):

Air quality would be similarly impacted as in Alternative 1.

Alternative 3 (Seasonal Closures):

Effects to air quality would be similar to Alternative 1. Periods of effects would be less due to seasonal closures. Air quality would be impacted to a much lesser degree because the period that OHVs would be riding in the area would be significantly decreased, and because high levels of dust do not usually occur during this period (late fall).

Alternative 4 (No Action):

The air quality in the area is good and it would not be impacted by OHV use.

Cumulative Effects: Fugitive dust from OHV use will add to other fugitive dust raised by wind erosion from local farming and use of graveled county roads in the vicinity. Fugitive dust from OHV use and the proposed action or alternatives will be minimal compared to the other local contributors. During a wildland fire there could be enough particulate matter added to the airshed that the impact could be more significant, but because the trail would be subject to a seasonal fire closure this should not be an issue.

Soil Resources:

Affected Environment: The following table and subsequent soils series descriptions identify the six soil types occurring along the proposed OHV corridor (approximately 45 acres). The soils are assigned a soil name and map symbol by the Soil Survey of Lincoln County Washington (Stockman 1981). Table 10 (pages 121 and 122) of the Lincoln County Soil Survey rate each of the soils based on suitability for recreational development. Table 10 states the degree of soil limitation, expressed as slight, moderate or severe. "Slight means that soil properties are

generally favorable and limitations are minor and easily overcome. *Moderate* means that limitations can be overcome or alleviated by planning, design, or special maintenance. *Severe* means that soil properties are unfavorable and that limitations can be offset only by costly soil reclamation, special design, intensive maintenance, limited use, or by a combination of these measures” (Stockman 1981). The table classifies the various activities including “paths and trails”. Five of the six soil types are classified as “Severe” except the Strat soil type (map symbol 76) which, is classified as moderate.

Map Symbol	Soil Type	Acres in Trail Corridor	Degree of Soil Limitation
60	Roloff silt loam, 0 to 5 percent slopes	4.15	Severe
61	Ritzville silt loam, 5 to 25 percent slopes	1.33	Severe
65	Roloff-Bakeoven-Rock outcrop complex, 0 to 15 percent slopes	9.93	Severe
75	Starbuck cobbly silt loam, 0 to 20 percent slopes	3.13	Severe
76	Strat very cobbly silt loam, 3 to 25 percent slopes	15.27	Moderate
77	Stratford gravelly silt loam, 0 to 15 percent slopes	1.96	Severe

Roloff series

The Roloff series consists of moderately deep, well drained soils that formed in loess over basalt. These soils are on plateaus. The elevation is 1,300 to 1,700 feet. The slope is 0 to 15 percent. The average annual precipitation is 9 to 12 inches, and the mean annual temperature is about 50 degrees F.

Ritzville series

The Ritzville series consists of very deep, well drained soils. These soils formed in loess on uplands. The elevation is 1,300 to 2,000 feet. The slope is 0 to 25 percent. The average annual precipitation is 9 to 12 inches, and the mean annual temperature is about 49 degrees F.

Roloff series

The Roloff series consists of moderately deep, well drained soils that formed in loess over basalt. These soils are on plateaus. The elevation is 1,300 to 1,700 feet. The slope is 0 to 15 percent. The average annual precipitation is 9 to 12 inches, and the mean annual temperature is about 50 degrees F.

Starbuck series

The Starbuck series consists of shallow, well drained soils that formed in loess over basalt. These soils are on basalt plateaus along major drainage-ways. The elevation is 1,400 to 2,000 feet. The slope is 0 to 20 percent. The average annual precipitation is 8 to 12 inches, and the mean annual temperature is about 50 degrees F.

Strat series

The Strat series consists of very deep, well drained soils. These soils are on outwash plains and terrace escarpments. They formed in glacial outwash that is mixed with loess in the upper part. The elevation is 1,300 to 1,700 feet. The slope is 3 to 25 percent. The average annual precipitation is 9 to 12 inches, and the mean annual temperature is about 49 degrees F.

Stratford series

The Stratford series consists of very deep, well drained soils. These soils are on outwash plains and terraces. They formed in glacial outwash that is mixed with loess in the upper part. The elevation is 1,300 to 1,700 feet. The slope is 0 to 15 percent. The average annual precipitation is 9 to 12 inches, and the mean annual temperature is about 50 degrees F.

Alternative 1 (Proposed Action): The soils along the proposed OHV trail would be impacted directly and exposed to erosive factors from OHV traffic, seasonal precipitation and wind. Soil movement along the corridor would increase from the disturbance caused by OHV activity. Vegetation and other factors maintaining the stability of the soils would be reduced or lost. Depending on the topography of the soils along the proposed route, severe erosion may occur that would allow rills or gullies to form. The soils associated with the Sand Springs water development in T22N, R32E, Sec 26 (see Attachment 7), are alluvial in nature and may be prone to move into the Sheep Creek drainage. The proposed OHV trail crosses the Sheep Creek drainage approximately $\frac{3}{4}$ mile above the confluence of Crab Creek and Sheep Creek. During run off events there is an increased probability that soil destabilized by the proposed OHV activities will enter the Sheep Creek drainage and subsequently enter Crab Creek. During these periods an increase in turbidity is to be expected for both riparian bodies. If implemented, this alternative may require that soil stabilization preventative measures be in place prior to any authorized use. Additional consultation with the interdisciplinary team will assist in determining if erosion control measures are required, and how they should be properly implemented. Additional soil stabilization measures could be needed along other portions of the proposed OHV route. In the case that unauthorized (off-trail) OHV use occurs, stabilization measures would be enacted, if required to stabilize soils. It is reasonable to deduce that any additional unauthorized use will compound the issues of soil erosion factors directly impacted by the activity.

Alternative 2 (Fenced Route): Effects to soil resources would be similar to Alternative 1, except the area affected will be confined within the boundary of the associated fence corridor. Periodic maintenance and soil stabilization measures may need to be implemented along the trail to ensure soil stability and trail integrity

Alternative 3 (Seasonal Closures): Effects to soil resources would be similar to Alternative 1. However, there would be fewer occurrences of soil disturbance due to seasonal closures. Soil movement may still occur from activities during periods of proposed authorized use. The extent of this soil movement will be dependent on the amount and severity of soils affected by this use. Monitoring will be necessary to determine if soil stabilization measures are necessary.

Alternative 4 (No Action): There would be no impacts to soils from this alternative.

Cumulative Effects: Soil compaction and destabilization currently occur in small areas where

livestock tend to congregate (Sheep Creek Livestock Water Development). The addition of OHV use in this area will likely compound and possibly increase the extent of the area impacted. The footprint of the current non-motorized recreational trail is established and the impact to the associated soils slight. The joining of the proposed OHV trail under alternatives 1, 2 and 3 with the non-motorized trail will compound the impacts and destabilize these soils.

Vegetation/Plant Communities/Sensitive Plant Species:

Affected Environment: The project area is located within Daubenmire's big sagebrush/ bluebunch wheatgrass and big sagebrush/ Idaho fescue zones. The major upland plant community on deeper soils is big sagebrush/ bluebunch wheatgrass, often with a substantial amount of Thurber's needlegrass. Some north-facing slopes support big sagebrush/ Idaho fescue and threetip sagebrush/ Idaho fescue communities. Plant communities on lithosols (shallow rocky soils) include stiff sagebrush/ Sandberg's bluegrass and snow buckwheat/ Sandberg's bluegrass. Gravelly slopes are dominated by purple sage - roundheaded buckwheat/ Thurber's needlegrass. Minor communities include shrub garlands on talus slopes, basin wild rye along drainage channels and meadow edges, and saltgrass flats. Exotic species, particularly cheatgrass and tumble mustard, are common invaders in big sagebrush communities. Crested wheatgrass, a non-native species frequently planted for forage and erosion control, also occurs in the project area.

The northern end of the proposed route would start in an area with crested wheatgrass and cheatgrass, and continue into a big sagebrush/ bluebunch wheatgrass - Sandberg's bluegrass community with well developed soil crusts. The stiff sage/ Sandberg's bluegrass community on lithosols also has good crust development. Basin wild rye and needle and thread grass also occur along this portion of the route. Cheatgrass is present in scattered patches, but does not predominate. These conditions prevail for the first mile of the trail (section 23). The route would then cross into section 26, where the trail is not yet developed. The first half mile is primarily crested wheatgrass, big sagebrush and non-native annual grasses. Soil crusts are good, however. Russian knapweed, a noxious weed, is present along this part of the route, and Dalmatian toadflax, also a noxious weed, is common.

There is an east-west fence halfway through the section, and south of this fence there is again an existing trail. The vegetation along this segment is primarily native species with big sagebrush/ bluebunch wheatgrass - Sandberg's bluegrass predominating, although it is quite weedy (cheatgrass, tumble mustard) immediately adjacent to the existing trail. Lithosols are in good condition, with well established crusts. Continuing south, the route enters section 35, going south and then west; vegetation condition is varied, with some patches of vigorous native bunchgrasses and other areas that are largely non-native annual grasses. In section 36, the trail passes through big sagebrush/ bluebunch wheatgrass habitat in excellent condition, and through lithosol communities that include purple sage and round-headed buckwheat, as well as snow buckwheat and stiff sagebrush. Cheatgrass is present in patches, particularly on the lower slopes.

Berry-producing plants, including serviceberry (*Amelanchier alnifolia*), choke cherry (*Prunus virginiana*), hawthorn (*Crataegus douglasii*), golden currant (*Ribes aureum*), wax currant (*R. cereum*), elderberry (*Sambucus cerulea*), and Wood's rose (*Rosa woodsii*), occur in the project

area. Culturally important root crop plants include Canby's lomatium or "white camas" (*Lomatium canbyi*), Coeur d'Alene lomatium (*L. farinosum*), bigseed lomatium (*L. macrocarpum*), wild onions (*Allium* spp.) and bitterroot (*Lewisia rediviva*) on shallow soil areas, and nineleaf lomatium (*Lomatium triternatum*) and yampah (*Perideridia gairdneri*) in meadows and gently sloping grasslands.

No federally listed plant species occur within the project area, and no habitat for those species appears to be present. The area is outside the known geographical range of the listed plants Spalding's catchfly (*Silene spaldingii*) and Ute ladies'-tresses (*Spiranthes diluvialis*), and the wetlands on the property do not appear to be appropriate habitat for the listed plant water howellia (*Howellia aquatilis*). Two BLM Sensitive species occur within the project area. Washington polemonium (*Polemonium pectinatum*) occurs at several sites along Crab Creek, and in two depressions with steep talus walls. Snake River cryptantha (*Cryptantha spiculifera*) occurs on lithosols in snow buckwheat/ Sandberg's bluegrass communities at multiple locations within the project area, particularly along the southern half of the proposed route, and also in the area to the north where the existing motorized route is located.

Alternative 1 (Proposed Action): Vehicles traveling over vegetated areas break off and crush aboveground portions of plants, and the pressure exerted on the soil surface can uproot plants and disrupt root systems' relationship to the surrounding soil (Lathrop and Rowlands 1983). Plant survival and growth is also affected by soil compaction produced by repeated vehicle passage. Soil compaction restricts the physical ability of roots to grow through the soil, and also causes decreased infiltration of precipitation, and decreased availability of oxygen that is necessary for aerobic processes within soil pore spaces (Lathrop and Rowlands 1983). Soils on existing roads and trails are likely to be somewhat compacted already from past use, but as mentioned above, OHV travel is expected to occur off-trail as well as on the trails. This is likely to lead to loss of existing vegetation, and favor the growth of plants that can tolerate compacted soils and repeated physical disturbance, typically non-native invasive species (Ouren et al. 2007). By the time that detrimental effects to vegetation are noted, soil properties may be affected to such an extent that the changes are not readily reversible.

The mechanical action of vehicle passage also destroys biological crusts on the soil surface. These crusts, composed of a mixture of cyanobacteria, green algae, lichens, mosses, microfungi, and bacteria, play important roles in soil stabilization and cycling of water, carbon and nutrients. Vehicle passage not only compresses the soil surface, but can turn the surface layer over, burying crusts (Belnap et al. 2001). Frequent surface disturbance maintains crusts at an earlier successional stage with a lower proportion of moss and lichens. Soil crusts include photosynthetic organisms that fix carbon, which then becomes available to other microflora and to consumer organisms. Certain components of the crust fix atmospheric nitrogen, and some of this is available to plants. Several studies have shown that plants growing in soils with biological crusts have higher tissue concentrations of nitrogen than those grown in similar soils lacking crusts (Belnap et al. 2001).

Decreased vegetative cover and loss of crusts expose more of the soil surface to wind and water erosion, and also increase the amount of dust that is stirred up by ongoing vehicular traffic. Dust settles on the vegetation adjacent to the trails, particularly on the side downwind of the prevailing

wind direction. Dust adhering to leaf surfaces reduces the efficiency of photosynthesis, which can result in reduced growth and vigor of the affected plants. Sharifi et al. (1997) studied dust impacts on several desert shrubs and found that photosynthetic rates were lower, leaf area was smaller, and shoot growth was less in plants receiving heavy dust exposure. Seed production and resource storage, both important strategies for survival in a drought-prone climate, are likely to be decreased, leading to a reduced number of individuals and smaller size of surviving individuals.

Decreased cover of native perennial species and of soil crusts increases opportunities for invasive plants to become established. Soil crusts can reduce germination of seeds that lack “self-burial” mechanisms (Belnap et al. 2001); when crusts are removed, seeds of non-native annual grasses such as cheatgrass are able to germinate and establish. With increased vehicle traffic, there is likely to be an increase in the number of seeds of invasive species being brought into the area on vehicle tires, gear and clothing, as well as an increased potential for the spread of invasive species already present in the area.

Changes in plant species composition in the vicinity of OHV trails are likely to occur (Ouren et al. 2007). Munger et al. (2003) found that native shrubs, native bunchgrasses, and microbotic soil crusts had lower cover values and lower frequency at a distance of two meters from the edge of trails than at 100 meters from trails, and that cheatgrass and rabbitbrush (a disturbance-associated shrub) had higher cover and frequency closer to trails.

There would be no impacts to any federally listed plants, because none occur within or near the project area. There are potential impacts to two Bureau sensitive plant species. Some of the Washington polemonium sites near Crab Creek are within a half mile of the trail route, and the plants and their habitat could be adversely affected by off-trail travel. Snake River cryptantha sites in the project area are likely to experience damage to plants and habitat under this Alternative, because this plant occurs in the middle of existing trails, including portions of the proposed OHV route, and on sparsely vegetated lithosols that could be subject to off-trail travel. It also occurs on portions of trails north of the project area that are currently open to OHV use and would be likely to receive increased use if the Proposed Action is adopted.

In summary, the effects of Alternative 1 are expected to be a decrease in the amount of acreage occupied by native perennial plants, and an increase in the amount of acreage occupied by annuals, many of which are non-native. Adverse impacts to populations of two Bureau Sensitive species are possible. These changes would be most pronounced in the immediate vicinity of the trail, but are highly likely to occur away from the designated trail as well, because of the high potential for off-trail travel that would create new trails.

Alternative 2 (Fenced Route): Compared to Alternative 1, impacts to vegetation, soil compaction and destruction of soil crusts would be limited to the area between the trail and the corridor fencing. The amount of soil surface subject to erosion would be reduced. The amount of dust stirred up by traffic would likely be similar under Alternatives 1 and 2, but it would be more concentrated along the trail and areas immediately adjacent to it under Alternative 2. Spread of noxious weeds and other non-native invasive species would be more concentrated along the trail in Alternative 2 as compared to Alternative 1. Overall, effects on native plant

communities would be less pronounced than under Alternative 1, because disturbance would be restricted to a smaller area. However, vegetation changes within the trail corridor itself would be greater than under Alternative 1, because of the concentration of vehicle travel within the corridor. Washington polemonium would not be affected under this Alternative, as none of the sites are within the trail corridor. Snake River cryptantha would experience some damage and loss of individuals under this Alternative.

Alternative 3 (Seasonal Closures): Compared to Alternative 1, soil compaction and destruction of soil crusts would likely be reduced under this alternative, because of the limited amount of time during which OHV use could take place. Soil erosion and dust production would also likely be reduced, although those effects would become more concentrated into a shorter period of time under this alternative. Spread of noxious weeds and other non-native invasive plants would be less than under Alternative 1. Overall, effects on native plant communities would be less than under Alternative 1. Effects would be more spatially widespread than under Alternative 2, but less intensive within the trail corridor itself. Washington polemonium and Snake River cryptantha would not be directly affected under this Alternative because the plants would be dormant during the period that the trail is open for use, but they could experience indirect effects from damage to soils.

Alternative 4 (No Action): Under the No Action alternative, levels of soil compaction and soil crust damage would be similar to what is presently occurring as a result of occasional administrative vehicle use and authorized livestock use. Soil erosion and dust production would be likely to continue at present levels. Noxious weeds and other non-native invasive plants would continue to spread by livestock movement and non-motorized recreational activities, but to a lesser degree than under the first three alternatives. The condition of native plant communities would be maintained or improved, depending on the effects of other ongoing activities (such as livestock grazing) occurring within the project area. There would be no effects to Washington polemonium or Snake River cryptantha under this Alternative.

Cumulative Effects: Other past, present, and reasonably foreseeable actions that have occurred or may occur within the project area include livestock grazing, motorized travel, and non-motorized use such as hiking, horseback riding, and cycling. The area has a history of livestock grazing when the land was in private ownership. As a result of this activity and actions related to it, such as attempts to reduce sagebrush cover, and seeding of forage species including non-native plants, the vegetative composition of the area has been altered. Livestock create trails that contribute to soil erosion and airborne dust, and they consume and trample vegetation. Invasive non-native species have been spread by livestock and the human activities associated with their maintenance, and have become established in a number of sites within the project area.

Current livestock grazing is conducted under Allotment Management Plans; BLM regulates stocking densities and establishes grazing rotation plans to allow for regrowth of vegetation, with the objective of meeting Rangeland Health Standards on grazing allotments. Native vegetation has partially recovered under BLM management practices, although non-native species remain part of the landscape, and some, such as cheatgrass, are likely to persist indefinitely. Livestock grazing at current use levels is expected to continue in the foreseeable future. Some portions of the project area are not leased for grazing at the current time, but there is a possibility that they

may be in the future.

Motorized travel within the project area occurred under past private ownership, creating the existing dirt roads and trails. Currently, those trails are subject to vehicle traffic from BLM personnel and lessees for administrative purposes, and for activities associated with the movement and maintenance of livestock. The trails in the northern part of the project area that are currently open to motorized use experience some recreational motorized traffic, primarily during the hunting season in fall, and there is likely some unauthorized off-trail motorized use in the vicinity as well. Non-motorized recreational use on foot, horseback or mountain bike occurs primarily on trails that are part of the Odessa to Pacific Lake Trail, and there is also off-trail use by non-motorized recreationists, particularly during the hunting season. Current levels of motorized and non-motorized travel are expected to continue in the future, and may increase.

There is no data on population size or distribution of Washington polemonium and Snake River cryptantha within the project area prior to the introduction of livestock grazing, but it is likely that the loss of native vegetation has reduced populations of Washington polemonium, as its characteristic habitat (swales and riparian areas) has been largely altered by past grazing. Snake River cryptantha grows on shallow soils that do not support as much forage and thus receive less grazing, and are less likely to be heavily invaded by weedy species. As a result, that species has probably been less affected by past activities, except in those locations where vehicle or livestock trails pass through the population. Current livestock grazing probably has minimal effects on those species, as the Washington polemonium locations are largely in areas that are unavailable to livestock, and the Snake River cryptantha locations are on sparsely vegetated shallow soils that receive relatively low livestock use. Existing motorized uses have no effects on Washington polemonium; they may affect individual plants of Snake River cryptantha that are growing adjacent to trails or in the vegetated area between tire tracks, but have little effect on the population as a whole. Non-motorized recreational uses probably have no effects on Washington polemonium, and no or minor effects on Snake River cryptantha.

Under Alternative 1 (Proposed Action), OHV use on the proposed route would have minor cumulative effects on vegetation in the areas where trails are already present; some vegetation would be damaged in portion of the route where a new trail would be constructed. Anticipated off-trail OHV activity is likely to add substantially to the extent of trail creation and mechanical damage to soils and vegetation. Snake River cryptantha would likely experience increased mechanical impacts both on and off trails; the anticipated increase in motorized use of the trails currently open to this use in the northern part of the area would be likely to result in more impacts to this species.

Under Alternative 2 (Fenced Route), cumulative effects on vegetation within the trail corridor could result in higher levels of mechanical impacts and dust than in Alternative 1, but if the fenced corridor is less attractive to OHV users than an open route, use could be less and the impacts less intensive. Livestock grazing impacts within the corridor would be removed, because livestock would not have access to the fenced corridor. Livestock movement patterns would be changed by the presence of the fence, resulting in increased impacts to vegetation in some locations, and reduced impacts elsewhere. Effects on Snake River cryptantha would be concentrated within the trail corridor and could result in greater loss of individuals than in

Alternative 1.

Under Alternative 3 (Seasonal Closures), cumulative effects on vegetation and sensitive plant species would be less than in Alternatives 1 and 2 because of the short time that the route would be open, and because many plants, including the sensitive species mentioned above, would be dormant during that period.

Under Alternative 4 (No Action), current activities would continue and cumulative effects of those activities on vegetation and sensitive plant species would be minimal. The condition of native vegetation would be maintained or improved over time, and sensitive species populations would be maintained or increased.

Noxious Weeds:

Affected Environment: Class B designate weeds are non-native species designated for control in regions where they are not yet widespread. Preventing infestations in these areas is a high priority. Class B noxious weeds present in the project area include: Russian knapweed, Dalmatian toadflax and rush skeletonweed. Class C designate weeds are non-native species that are widespread in the region. Long-term programs of suppression and control are needed. Class C noxious weeds present in the project area include: Absinth wormwood, Canada thistle, bull thistle, field bindweed, and whitetop. Also present within the project area are a number of common non-native invasive species including cheatgrass, Japanese brome, ventenata, tumble mustard, common mullein, common teasel, common cocklebur, horseweed, curly dock, and prickly lettuce.

Alternative 1 (Proposed Action):

Under this alternative, noxious weed populations would increase. New noxious weed species would be introduced as a result of noxious weed seed being transported into the area on OHVs. New and existing weed infestations would flourish with the repeated ground disturbance created by OHV use. Noxious weed treatments would be required to keep noxious weed populations under control.

Alternative 2 (Fenced Route):

Noxious weed populations would become established on the proposed and existing OHV trails, requiring ongoing treatments. The spread of noxious weeds would be less than under Alternative 1 due to confinement of OHV use along the proposed trail.

Alternative 3 (Seasonal Closures):

Under this alternative noxious weed populations would increase as stated in Alternative 1. However, fewer periods of disturbance will result in fewer opportunities for weed populations to become established.

Alternative 4 (No Action): There would be no impact from this alternative on the spread of noxious weeds.

Cumulative Effects: Noxious weeds have, and will continue to spread due to present and/or

future natural conditions and events which include wildlife, livestock grazing, fire, flooding, and general public recreation use. The proposed OHV route, which lies in the Upper Crab Creek Watershed, would introduce new weed species and increase existing weed populations on BLM land due to ground disturbance caused by increased OHV use. This would result in the need for additional weed treatment efforts, including herbicide applications and biological control agents, as well as more efforts to reestablish native vegetation communities. These expected increases in weed population may spread to adjacent private lands.

Wildlife:

Affected Environment: The project area includes four predominate habitat types – shrub-steppe, cliffs/talus, riparian/wetland, and Conservation Reserve Program (CRP) fields.

Shrub-Steppe: Shrub-steppe habitat represents the majority of the project area. In Washington 163 wildlife species (10 amphibian, 88 bird, 50 mammal, and 15 reptile) are associated with this habitat type (O’Neil et al. 2001). Species occurring commonly include the red-tailed hawk, northern harrier, short-eared owl, raven, black-billed magpie, western meadowlark, vesper sparrow, mule deer, deer mouse, coyote, pocket gopher, great basin pocket mouse, and garter snake.

In the area of potential disturbance this habitat is characterized by big sagebrush, native bunchgrasses (particularly bluebunch wheatgrass and Idaho fescue) and forbs, biological soil crusts, and non-native annuals and weedy plant species. Shrub-steppe habitat is not uniform across the project area. Sagebrush densities and age classes vary, with high concentrations of tall big sagebrush at the northern end of the proposed OHV route and the lowest densities near the middle of the route. The lower density areas support more grassland associated species. The integrity of the habitat varies also. There are large areas of high quality habitat with a preponderance of native species and intact biological crusts along the proposed OHV route, such as in sections 23 and 36. Elsewhere the cover of cheatgrass and weedy species is higher and there is more disruption of the biological soil crust.

Shrub-steppe is considered one of the most endangered habitats in the United States (Noss et al. 1995). Historically shrub-steppe was the dominant habitat in eastern Washington (Daubenmire 1970). Approximately 60% of this habitat type has been lost, primarily to agricultural development of deep soil areas (Dobler et al. 1996). Much of the remaining areas of shrub-steppe are fragmented and degraded (Schroeder et al. 2000) by roads, powerlines, fences, invasion of non-native plant species, and changes in fire frequency. Less than 10% of sagebrush ecosystems remain unaltered by human activities (West et al. 1999).

Cliffs/Talus: Small cliffs with talus slopes at the base are common along the proposed OHV route. Large cliffs are present in the area of potential disturbance, particularly surrounding the Bob’s Lakes canyon. These features provide valuable habitat for crevice- and cliff-dwelling/nesting species such as the cliff swallow, canyon wren, rock wren, prairie falcon, big brown bat, yellow-bellied marmot, and western rattlesnake. Shrub garlands along the talus slopes provide browse for herbivores and nesting habitat for birds.

Riparian/Wetland: Lotic riparian areas within the area of potential disturbance include 1.67 miles along Crab Creek (of this 0.5 mile is on private), 2.13 miles in the Lake Creek corridor, and 1.8 miles of Sheep Creek and a tributary drainage. Species commonly found in riparian/wetland habitats include the tiger salamander, Pacific chorus frog, carp, belted kingfisher, long-billed curlew, mallard, and Wilson's snipe.

The proposed trail route passes within 95 meters (312 feet) of Crab Creek at the south west end of the route. Woody riparian vegetation along Crab Creek in the area of potential disturbance is limited to scattered individual trees or small stands of willows, hawthorn, water birch, and rose. Portions of the creek have steep earthen banks that are used by colonies of swallows for nesting.

Historically Lake Creek connected the Bob's Lakes, a series of lakes located in the area of potential disturbance in a large canyon approximately 0.5 mile west of the proposed OHV route. In recent years the southern Bob's Lakes have dried up and the creek no longer flows or supports riparian vegetation in this area.

The portion of Sheep Creek within the area of potential disturbance supports very little woody vegetation. A portion of the creek which does include woody riparian vegetation has been fenced to exclude livestock. Upland shrub-steppe vegetation predominates where the proposed OHV route crosses this creek. Here there are tall steep cutbanks which are used by colonies of swallows for nesting.

Lentic (wetland) riparian habitat in the area of potential disturbance consists of scattered seeps, springs, and small ponds. Most of these are located in the northern end of the area of potential disturbance. The vegetation at these locations is predominantly bulrush, rushes, cattails, reed canarygrass, basin wildrye, rose and hawthorn. Historically the Bob's Lakes and Pacific Lake provided large areas of open water habitat, but in recent years these features have been completely dry, with the exception of the northernmost of the Bob's Lakes. This lake is largely on private land, although the southernmost end of the lake is on BLM. There is very little riparian vegetation around this lake due to seasonal fluctuations in water levels. This lake supports warmwater fish which are prey for piscivorous birds.

CRP: Approximately 0.25 mile of the proposed OHV route passes through a field in section 26 historically enrolled in the Conservation Reserve Program (CRP). CRP is a federal program that pays landowners that have highly erodible cropland or land of high conservation value to establish vegetative cover, such as tame or native grasses, wildlife plantings, trees, filterstrips, or riparian buffers, for a minimum of ten years. Crested wheatgrass predominates about 73 acres along this section of trail, with very little plant diversity. Species diversity in CRP fields varies with the surrounding environment and age of the field. Wildlife commonly found in CRP fields includes savannah sparrows, horned lark, and western harvest mouse.

Special Status Species (Threatened and Endangered and BLM Sensitive): Numerous special status species occur or potentially occur in the area affected by the proposed OHV route (see Table 1). Attachment 3 contains detailed descriptions for each species.

Other Species of Concern: Other wildlife species of concern are summarized in Table 2.

Attachment 3 contains detailed descriptions for each species.

Alternative 1 (Proposed Action): In general, wildlife including special status species (Washington State T&E and BLM sensitive) and other species of concern (migratory and locally important birds, Washington State candidate and monitor species, and big game) would be directly and indirectly affected by impacts associated with OHV activities. Direct effects include vehicle-animal collisions, altered behavior patterns due to excessive noise on the trail (decibel levels/noise durations well above those of typical background noise), and mortality due to breakage of nest-supporting vegetation and collapsed burrows from off trail riding. Indirect effects, those that occur later in time or removed in distance, include altered distributions and dispersal patterns due to excessive noise and long-term habitat degradation (increased bare ground, changed vegetation structure and function) from off trail use. Combined, these effects would result in reduced productivity and survivorship leading to declines in local wildlife populations (Ouren et al. 2007).

While a single pass by one OHV probably has negligible effects on animal distributions, when OHV traffic is intense and chronic, animal densities may decline (Ouren et al. 2007). Because the proposed OHV route originates near the Odessa town center, and the community is actively promoting its OHV opportunities, OHV traffic is expected to be intense and chronic. Because the proposed route will link to the county road and an existing route that historically receives mainly only truck use during hunting season, the use type on the existing route will change to a higher use level by 4-wheelers and motorcycles, causing the above impacts to extend beyond the area of the proposed route to include the area of the county road and existing route. Because little enforcement will be provided and the terrain is open and accessible, off-route riding is expected to degrade a large block of valuable shrub-steppe habitat in the area (see Attachment 4).

Special Status Species (Threatened and Endangered and BLM Sensitive)

Greater Sage-Grouse (BLM Sensitive, Federal Candidate, State Threatened)

The BLM National Sage-Grouse Habitat Conservation Strategy identifies off-road vehicle use as a significant disturbance to sagebrush habitat and sage-grouse, particularly when use extends into key areas (USDI 2004). Vehicle and human activity can cause larger than normal sage-grouse home range sizes and cause lek, nest, and brood abandonment that results in reduced mating opportunities and decreased production (Stinson et al. 2004). Off highway vehicles are identified as a potential disturbance in the WDFW Sage-Grouse Recovery Plan, and the plan recommends limiting continuous noise within 1.9 miles (3058 m) of nesting and brood rearing habitats between March 1 and June 15 (Stinson et al. 2004). On-route OHV use would result in noise and human activity disturbance causing a degradation of suitable nesting and brood rearing habitat for sage-grouse for 1.9 miles (3058 m) on each side of the route. Over the length of the proposed route, OHV noise and activity disturbance would degrade 35,324 acres (11,655 on BLM and 23,669 on private land) of suitable sage-grouse habitat (Attachment 5). On BLM, this amounts to 92% of the Lakeview BLM parcel.

Table 1. Special Status Species.

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	COMMENTS
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	FE	SE	Last observed in region in 1956, extirpated, no further consideration.
Greater sage-grouse	<i>Centrocercus urophasianus</i>	FC, SCC	ST	Ongoing reintroduction in Crab Creek Sage-grouse Management Area. Individual observed <1 mile from route, 2008. Adult with young observed 1.75 miles from route, 1993.
Washington Ground Squirrel	<i>Spermophilus washingtoni</i>	FC	SC	Observed 0.2 miles from proposed route, 2008. Observed along existing route.
Long-billed Curlew*	<i>Numenius americanus</i>	BLMS, SCC	SM	Observed along route, 2008. Designated habitat in area of potential disturbance.
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	BLMS	ST	Known lek 2.5 miles from route.
American White Pelican*	<i>Pelecanus erythrorhynchos</i>	BLMS	SE	Concentrations observed foraging at Bob's Lake, 0.8 miles from route, 2003 and 2008.
Ferruginous Hawk*	<i>Buteo regalis</i>	BLMS, SCC	ST	Several historical nest sites < 1 mile from route.
Peregrine Falcon*	<i>Falco peregrinus</i>	BLMS, SCC	SS	Nesting pair < 11 miles from route, 2008. Individual observed 2.4 miles from route, 2004. Suitable nesting habitat.
Bald Eagle**	<i>Haliaeetus leucocephalus</i>	BLMS	SS	Sighting of juvenile flying over, 2005. Insufficient habitat, no further consideration.
Burrowing Owl*	<i>Athene cunicularia</i>	BLMS, SCC	SC	None detected in 2008 callback survey. Suitable habitat.
Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	BLMS	SC	Surveys needed. Potential habitat.
Pallid Bat	<i>Antrozous pallidus</i>	BLMS	SM	Surveys needed. Potential habitat.
Spotted Bat	<i>Euderma maculatum</i>	BLMS	SM	Surveys needed. Potential habitat.
White-tailed Jackrabbit	<i>Lepus townsendii</i>	BLMS	SC	Numerous occurrences near route.
Black-tailed Jackrabbit	<i>Lepus californicus</i>	BLMS	SC	Suitable habitat.
Sagebrush Lizard	<i>Sceloporus graciosus</i>	BLMS	SC	Observed ~5 miles from route, 2001. Surveys needed. Suitable habitat.
Side-blotched Lizard	<i>Uta stansburiana</i>	BLMS	None	Surveys needed. Suitable habitat.
Striped Whipsnake	<i>Masticophis taeniatus</i>	BLMS	SC	Observed ~5.5 miles from route, 1989. Surveys needed. Suitable habitat.
Night Snake	<i>Hypsiglena torquata</i>	BLMS	SM	Surveys needed. Suitable habitat.

*Migratory bird species protected by the Migratory Bird Treaty Act 1918.

**Protected by Migratory Bird Treaty Act 1918 and Bald Eagle Protection Act 1940.

FE = Federal Endangered SE = State Endangered ST = State Threatened
 FC = Federal Candidate SC = State Candidate SM = State Monitor
 BLMS = BLM Sensitive SS = State Sensitive
 SCC = Migratory Bird Species of Conservation Concern

Table 2. Other Species of Concern

COMMON NAME	SCIENTIFIC NAME	FEDERAL STATUS	STATE STATUS	COMMENTS
Golden Eagle**	<i>Aquila chrysaetos</i>	SCC	SC	Observed flying in area of potential disturbance in 2004 and 2008. Suitable habitat.
Merlin*	<i>Falco columbarius</i>	None	SC	Possible winter resident. Suitable habitat.
Loggerhead Shrike*	<i>Lanius ludovicianus</i>	SCC	SC	Frequently observed in vicinity of route, including possible nesting pair on Sheep Creek <0.25 mile from route, 2003 and an individual <0.1 mile from route in 2005.
Sage Thrasher*	<i>Oreoscoptes montanus</i>	None	SC	Frequently observed in vicinity of route. 9 thrashers, including 1 pair, observed along route during 2008 survey. Sagebrush obligate.
Sage Sparrow*	<i>Amphispiza belli</i>	SCC	SC	Numerous occurrences 0.3 to 3 miles from route. Sagebrush obligate.
Grasshopper Sparrow*	<i>Ammodramus savannarum</i>	SCC	SM	Observed along route 2008.
Bank and Northern Rough-winged Swallow*	<i>Riparia riparia, Stelgidopteryx serripennis</i>	None	None	Nesting colonies along Sheep Creek canyon walls and along Crab Creek.
Brewer's Sparrow*	<i>Spizella breweri</i>	SCC	None	Sagebrush obligate. Suitable habitat.
Swainson's Hawk*	<i>Buteo swainsoni</i>	SCC	SM	Historically nested in vicinity of route. Suitable habitat.
Prairie Falcon*	<i>Falco mexicanus</i>	SCC	SM	Nesting 0.6 mile from route at Bob's Lake.
Merriam's Shrew	<i>Sorex merriami</i>	None	SC	Surveys needed. Suitable habitat.
Sagebrush Vole	<i>Lemmys curtatus</i>	None	SM	Observed 2 miles from route, 2006. Surveys needed. Suitable habitat.
Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>	None	SM	Surveys needed. Suitable habitat.
Badger	<i>Taxidea taxus</i>	None	SM	Burrows common.
Small-footed Myotis	<i>Myotis ciliolabrum</i>	None	SM	Observed in vicinity of route, 2002. Suitable habitat.
Long-eared Myotis	<i>Myotis evotis</i>	None	SM	Surveys needed. Potential habitat.
Fringed Myotis	<i>Myotis thysanodes</i>	None	SM	Surveys needed. Potential habitat.
Long-legged Myotis	<i>Myotis volans</i>	None	SM	Observed in vicinity of route, 2002. Suitable habitat.
Canyon Bat	<i>Parastrellus hesperus</i>	None	SM	Possible roost site identified <6 miles from route, 1986. Surveys needed. Potential habitat.
Tiger Salamander	<i>Ambystoma tigrinum</i>	None	SM	Museum records. Surveys needed. Suitable habitat.
Short-horned Lizard	<i>Phrynosoma douglassi</i>	None	SM	Surveys needed. Observed in vicinity of route 2002.
Racer	<i>Coluber constrictor</i>	None	SM	Surveys needed. Suitable habitat.
Mule Deer	<i>Odocoileus hemionus</i>	None	G	Popular game species commonly observed in area of potential disturbance.

*Migratory bird species protected by the Migratory Bird Treaty Act 1918.

**Protected by Migratory Bird Treaty Act 1918 and Bald Eagle Protection Act 1940.

SCC = Migratory Bird Species of Conservation Concern
 SC = State Candidate

SM = State Monitor
 G = Game

Considering that the Lakeview parcel is one of the largest blocks of valuable shrub-steppe habitat in the Crab Creek Sage Grouse Management Unit, the loss of high quality sage-steppe habitat in the Lakeview BLM parcel would severely hinder recovery and augmentation efforts for sage-grouse.

Washington Ground Squirrel (BLM Sensitive, Federal and State Candidate)

Washington ground squirrels are active above ground from late January to about June 15 and spend the remainder of the year estivating in underground burrows (Sherman 2000, Goodman 2003). From March 15 to May 15, Washington ground squirrel young emerge from their burrows and a peak in activity occurs in preparation for summer estivation (Sherman 1999, Goodman 2003). Excessive noise and human activity during periods of activity could alter essential behavior patterns such as foraging and food caching in preparation for summer estivation and alter predator evasion due to diminished auditory cues (Ouren et al. 2007). These effects would be most pronounced during emergence of the young and peak activity (March 15 to May 15) because of the increased vulnerability of inexperienced young and higher rates of exposure to threats when ground squirrels are active. During periods of estivation (June 15-late January), noise can cause estivating animals to emerge from their underground burrows during inappropriate times causing diminished body mass, reduced productivity, and/or poor survivorship (Ouren et al. 2007). It is not possible to quantify the actual impact of excessive noise to Washington ground squirrels because no disturbance buffers have been studied or developed for this or related species. In the absence of standard buffers, we assume an area similar to that for migratory birds (250 meters on each side of the route) will be impacted. Over the length of the proposed route, noise disturbance would degrade 3388 acres (3045 on BLM and 343 on private land) of suitable Washington ground squirrel habitat (Attachment 5). On BLM, this amounts to 24% of the Lakeview Recreation Area. Two small and declining squirrel colonies on the existing northern route would be impacted from increased OHV use. One large and one small colony would be severely impacted along the proposed OHV route. These are new colonies found in 2009 during clearance surveys for this proposed route. One is 50 acres in size and appears to be the second largest colony in the area. Because the colony is centered directly on the proposed route and occurs 300-700 feet off the route, the potential for direct and indirect effects is high. Chronic disturbance and habitat degradation would likely extirpate this colony. The consequences of losing the second largest colony in the area where satellite colonies are also declining and the main colony is in need of active management would be a severe loss in the overall meta-population size, connectivity, and viability of the species.

Long-Billed Curlew (BLM Sensitive, State Monitor)

There is no information on the effects of OHVs on long-billed curlews. General migratory bird guidance suggests that disturbance should be limited during the nesting season, which for curlews is March through July. Disturbance during the nesting season would likely increase stress hormone levels (Gaines et al 2003) and increased nest abandonment rates (Barton and Holmes 2007). The effects of OHV noise and activity would extend at least 250 m (0.15 miles) from the trail (Barton and Holmes 2007) (Attachment 5). Due to their habitat requirements, curlews are most likely to be affected in the approximately 716 acres of PHS-designated curlew habitat along the existing northern route. Change in use on this route from occasional pickup trucks to increased OHV use would disturb 716 acres of PHS-designated curlew nesting habitat.

Sharp-Tailed Grouse (BLM Sensitive, State Threatened)

Sharp-tailed grouse are sensitive to disturbance during their breeding season (March through June), and WDFW recommendations suggest limiting disturbance within 2 km of leks (Schroeder and Tirhi 2003). No grouse are known or expected within 2 km of the proposed and existing routes, so effects to sharp-tailed grouse here are not expected.

American White Pelican (BLM Sensitive, State Endangered)

The non-breeding group of pelicans that use Bob's Lakes for foraging would not be affected by on-route OHV disturbance because the trail is approximately 1 km (0.6 mi) from Bob's Lakes and not in direct view from the lakes.

Ferruginous Hawk (BLM Sensitive, State Threatened)

Ferruginous hawks are sensitive to disturbance; pairs may abandon nests even when mildly disturbed during nest building or incubation (1 March through 31 May) (White and Thurow 1985, Richardson et al. 1999). However, OHV noise can be as high as 110 decibels, which is near the threshold of human pain (Lovich and Bainbridge 1999), so this activity is not considered mild disturbance. Instead, OHV impacts would be considered noisy and prolonged. Management recommendations from WDFW and the research community suggest that noisy, prolonged (0.5 hr to several days) activities should not occur within 1 km (0.6 mi) of nests during the breeding season (1 March to 15 August) (Suter and Jones 1981, Richardson et al. 1999). Disturbed nests fledge fewer young, they often are not reoccupied the year following disturbances, and rather than becoming acclimated to repeated disturbance, ferruginous hawks become sensitized and flush at greater distances (White and Thurow 1985), which may result in increased clutch or brood mortality due to exposure, predation, starvation, or nest desertion. Noise disturbance would extend 1 km (0.6 mi) from the proposed route, county road, and existing route in the north and preclude breeding at 4 historic breeding sites. Historic breeding areas are very important to the recovery of this species (pers. com. J. Watson, WDFW). Noise disturbance would make unsuitable 12,346 acres (8733 on BLM and 3613 on private) of suitable breeding habitat in the WDFW North Recovery Zone (Attachment 5).

Peregrine Falcon (BLM and State Sensitive)

Peregrine falcons are susceptible to disturbance, which can cause desertion of eggs or young, and later in the breeding season can cause older nestlings to fledge prematurely (Hays and Milner 1999). WDFW Management Recommendations suggest that human activity along the cliff rim, on the face, and immediately below be restricted within 800 m of the eyrie from March through June (Hays and Milner 1999). On-route use would not affect peregrine falcons because the only suitable cliff habitat is in the Bob's Lake area 1.5 km from the proposed route and 300 m from the existing route (i.e., not along the rim or immediately below the cliffs).

Burrowing Owl (BLM Sensitive, State Candidate)

Burrowing owls are fairly tolerant of human disturbance and can also become tolerant to street vehicle disturbance (Nordstrom 2003). However, impacts due to OHV vehicles have not been studied, and activities that destroy burrows adversely affect this species. Burrowing owls would not be affected by on-route OHV disturbance because no burrowing owls are likely to be present directly on the route.

Townsend's Big-eared Bat, Pallid Bat, and Spotted Bat (BLM Sensitive)

No roosting sites are known or likely to occur immediately adjacent to the proposed and existing routes, so no impacts from on-route OHV use would occur to these bat species.

White-Tailed and Black-Tailed Jackrabbits (BLM Sensitive, State Candidate)

There is no information on the effects of OHVs on either of these jackrabbit species. Excessive noise and activity during periods of activity could alter essential behavior patterns such as foraging and alter predator evasion due to diminished auditory cues (Ouren et al. 2007). In the absence of standard buffers, we assume an area similar to that for migratory birds (250 meters on each side) will be impacted. Over the length of the proposed route, noise disturbance would degrade 3388 acres (3045 on BLM and 343 on private) of jackrabbit habitat (Attachment 5).

Sagebrush Lizard, Side-Blotched Lizard, Striped Whipsnake, Night Snake (BLM Sensitive)

Impacts to reptiles include reductions in species richness, abundance, and biomass in OHV areas with abundance declining to 28-45% of natural population levels (Luckenback and Bury 1983, Bury et al 1977). Reductions in reptile abundance are presumably caused by loss of cover, reduction in invertebrate food sources, disturbance of social structure and casualties (Busack and Bury 1974) and have been documented to occur up to 100 m from OHV trails (Munger et al 2003). On-route use would degrade 1384 acres of reptile habitat along the proposed and existing routes (Attachment 5) resulting in sharp reductions (more than 50%) in population sizes.

Other Species of Concern

Golden Eagle (State Candidate)

Golden eagles are sensitive to disturbance during their nesting season (February 15 to July 15) and are likely to flush from nests due to OHV noise within 2 km (1.2 mi) (Suter and Jones 1981). Flushing would cause increased stress and reduced survival of chicks. On-route use will disturb approximately 6 km (3.7 mi) of suitable cliff nesting habitat in the Bob's Lakes area because it is within 2 km (1.2 mi) of the existing and proposed routes.

Merlin (State Candidate)

Merlins, which are present only in winter, would only be affected by OHV disturbance while foraging. Disturbance during this time would likely cause merlins to flush away from the trail. Because these birds are highly mobile habitat generalists, this disturbance would only be temporary, and they would likely find foraging areas away from any OHVs present on the parcel.

Shrub-Steppe Obligate and Migratory Song Birds

Seven species of concern are included in this section: sage sparrow, sage thrasher, loggerhead shrike (State Candidates), grasshopper sparrow (State Monitor), Brewer's sparrow, northern rough-winged and bank swallows (locally important). Direct effects of on route OHV use on shrub-steppe obligate and migratory song birds include increased stress hormone levels (Gaines et al 2003) and increased nest abandonment rates (Barton and Holmes 2007). Over time, an indirect effect of OHV use is altered composition of bird communities that favor generalist over specialist species (Miller et al. 1998). Shrub-steppe obligate songbirds are considered specialist species, so would not be favored over generalists in an OHV-altered environment. The area

affected by this type of disturbance probably depends on many factors, but a recent study of a similar songbird community suggests that the effects of OHV noise and activity would extend at least 250 m (0.15 miles) from the trail (Barton and Holmes 2007). To avoid unintentional take of migratory and shrub-steppe obligate birds, BLM “best management practices” recommend limiting this type of disturbance during the nesting season from May 15 to July 15 (USDI 2007). When OHV disturbance is allowed during the nesting season, this activity is likely to cause nest abandonment and take of nestlings for a distance of at least 250 m from the proposed route and lead to an eventual decline in shrub-steppe obligate and some migratory birds in the parcel. Over the length of the proposed route, noise disturbance would degrade 3388 acres of effective migratory and shrub-steppe obligate songbird habitat (Attachment 5). On BLM, this amounts to 27% of the Lakeview BLM parcel.

Swainson’s Hawk (State Monitor)

Swainson’s hawks are easily disturbed during nesting and will abandon nests if disturbed before eggs hatch. One known nest site is located in the Lakeview parcel, but is 1.7 km (1.1 mi) from the proposed route, so no disturbance impacts are expected from on-route use.

Prairie Falcon (State Monitor)

Prairie falcons are sensitive to disturbance during their nesting season (late February to late June) and are likely to flush from nests due to OHV noise within 800 m (0.5 mi) (Suter and Jones 1981). Flushing would cause increased stress and reduced survival of chicks. The one nesting territory known to the Lakeview parcel is approximately 800 m (0.5 mi) from the existing route. Change in use on this route from occasional pickup trucks to increased OHV use would disturb this nesting territory during the nesting season.

Merriam’s Shrew (State Candidate), Sagebrush Vole (State Monitor), Northern Grasshopper Mouse (State Monitor)

Habitat degradation from OHV use has been shown to decrease small mammal abundance to 20% of natural levels (Luckenback and Bury 1983, Bury et al 1977). These effects are presumably due to fragmentation, edge effect, and reductions in food and cover. No information exists on the distance from the trail that these decreases would be expected, but using data on reptiles, an area 100 m (328 feet) on each side of the trail may be affected (Munger et al 2003) (Attachment 5). On-route use would degrade 1384 acres of small mammal habitat along the proposed and existing routes resulting in sharp reductions (more than 80%) in population sizes.

American Badger (State Monitor)

No information exists on OHV impacts to badgers. Denning sites are not likely to be affected because they are somewhat protected underground, and badgers regularly move from den to den, so if disturbed they would likely shift their den site to an undisturbed location. Only minor effects to badgers are expected due to habitat degradation and reductions in some, but not all, prey species.

Small-footed Myotis, Long-eared Myotis, Fringed Myotis, Long-legged Myotis, and Canyon Bat (State Monitor)

There are numerous small cliffs and talus slopes immediately adjacent to the proposed and existing routes that may support individual or small groups of bats, although no roosts have been

identified. These rocky features are not likely to be affected by OHV traffic, and bats disturbed by noise would be expected to move to sites farther from the OHV route, so minimal impacts from on-route OHV use would occur to these bat species.

Tiger Salamander (State Monitor)

On-route use would not affect tiger salamanders because of the relatively small footprint of the route compared to the amount of surrounding habitat. Tiger salamanders would not be directly killed on the trail because they are surface active only on rainy nights when OHVs would not be present.

Short-Horned Lizard and Racer (State Monitor)

Impacts to reptiles include reductions in species richness, abundance, and biomass in OHV areas with reductions in abundance ranging to 28-45% of natural population levels (Luckenback and Bury 1983, Bury et al 1977). Reductions in reptile abundance are presumably caused by loss of cover, reduction in invertebrate food sources disturbance of social structure and casualties (Busack and Bury 1974) and have been documented to occur up to 100 m from OHV trails (Munger et al 2003) (Attachment 5). On-route use would degrade 1384 acres of reptile habitat along the proposed and existing routes resulting in sharp reductions (more than 50%) in population sizes.

Mule Deer (Game)

Mule deer will alter their foraging and use patterns to avoid OHV disturbance, and those deer harassed by OHVs have reduced reproductive output compared to unharassed deer (Yarmoloy et al. 1988). For big game (deer and elk) in forested habitats, researchers have reported decreased use of areas adjacent to roads for 0.25 to 0.50 miles (Thomas 1979). Due to the open terrain surrounding the proposed OHV route, we can expect decreased use by mule deer at the higher end of this range (approximately up to 0.50 miles or 805 m from the route). Over the length of the proposed route, noise disturbance would degrade 10,072 acres (7685 on BLM and 2387 on private) of mule deer habitat (Attachment 5). On BLM, this amounts to 60% of the Lakeview BLM parcel. The hunting season closure recommended as mitigation for recreation impacts may result in higher deer abundance in the one-mile-wide deer disturbance corridor surrounding the proposed route than if OHV noise was allowed during hunting season.

Off-Route Impacts: Off-route use is expected to degrade habitat by increasing bare ground and invasive annual weeds and by reducing valuable herbaceous plant and shrub cover, structure, and function. In addition, noise and human activity disturbance would extend off route to further reduce the habitat quality for a variety of special status species. Considering the location of fences that may contain off route use, 9867 acres of shrub-steppe and associated habitats, or 78% of the Lakeview BLM land would be adversely affected (Attachment 4). Off-route impacts to wildlife will be diminished marginally by the hunting season closure recommended as mitigation for recreational impacts.

Special Status Species (T&E and BLM Sensitive): The off-route impacts will reduce habitat suitability for sage-grouse, which require shrub-steppe habitat in relatively good condition and without noise impacts during their breeding and early brood-rearing season. For Washington ground squirrels, Greene (1999) found a significant difference between mean bare ground cover

at occupied (3.1%) and unoccupied sites (12.9%), so habitat quality for Washington ground squirrels would be degraded, including at four occupied sites. Ferruginous hawks, which are highly susceptible to noise disturbance, would likely not nest in the four historical nest sites and other suitable cliff nesting habitat. Peregrine falcons would also be discouraged from nesting on the approximately 500 m of unoccupied suitable cliffs. Off-route use would disturb the non-breeding group of pelicans, causing them to flush and unnecessarily expend energy. The availability of foraging areas is vital to the success of pelican populations, and WDFW Management Recommendations suggest that these areas be protected from human disturbance (Doran et al 1998). Habitual disturbance would likely cause the pelicans to abandon the lakes entirely. Off-route use in the sandy soils of Sheep Creek, where possible historic burrows and suitable nesting habitat for burrowing owl are present, would collapse these and any future burrows. This would impact approximately 200-300 acres of suitable burrowing owl nesting habitat. Ground impacts across the 9867 acres of land at risk for off-route impacts (Attachment 4) would degrade suitable reptile habitat resulting in reductions to sagebrush lizard, side-blotched lizard, striped whipsnake, and night snake if they occur. Degradation of habitat suitability would also affect long-billed curlew, burrowing owl, and white and black tailed jackrabbit habitat. In the Pacific Lake area, off-route use would impact approximately 65 acres of sharp-tailed grouse nesting habitat. Bat species are very sensitive to disturbances at their roost sites. The cliffs and talus slopes in the Bob's Lakes canyon are currently difficult for the public to access. Designation of the proposed route will enable off trail users to easily access these sites and will increase levels of recreational use of the talus slopes and cliffs, thereby increasing the probability that sensitive bat roosts could be disturbed and abandoned by these species (pers comm. P. Ormsbee, USFS). Off-trail use would also be expected to negatively affect the prey base for pallid bats, which forage in shrub-steppe, and for spotted and Townsend's bats that forage over water, if riparian areas become degraded.

Other Species of Concern: Off-route use that reduces habitat quality by the mechanisms discussed above will affect a number of other species of concern. Because mule deer are habitat generalists, they would be affected more by off-route disturbance than by habitat degradation. Disturbance would result in decreased mule deer reproductive output and cause deer to become scarcer in the 9876 acres affected. Five species of shrub-steppe obligate song birds and other migratory song birds of concern would experience reduced habitat quality when off-route use degrades the shrub-steppe vegetation. In the Bob's Lakes area, off-route use would disturb one known prairie falcon nesting territory and approximately 6 km (3.7 mi) of suitable cliff nesting habitat for golden eagle. Off-route impacts to vegetation would degrade 9876 acres of habitat for Merriam's shrew, sagebrush vole, northern grasshopper mouse, short-horned lizard and racer habitat leading to declines in abundance where these species are present. Because badgers forage on small mammals, reptiles and birds, they could be affected by declines in prey base due to off-route OHV use. Approximately 4730 acres of upland tiger salamander habitat surrounding 8 ponds would be impacted by off-route OHV activity by the crushing of burrows, reduction in small mammal densities that create burrows, and reductions in insect prey due to habitat degradation (increased bare ground). Bat species would be affected as described for special status species of bats above.

Alternative 2 (Fenced Route): Fencing the route on both sides would eliminate all off-route impacts in the south portion of the parcel, protecting 4859 acres of shrub-steppe, riparian and cliff habitat. However, approximately 5008 acres associated with the county road and existing

route in the north would remain vulnerable to increased OHV and off-route use. Habitat degradation of these 5008 acres would affect habitat for the following special status species (T&E and BLM Sensitive): sage-grouse, ferruginous hawk, Washington ground squirrel, sagebrush lizard, side-blotched lizard, striped whipsnake, night snake, long-billed curlew, white and black-tailed jackrabbits, three species of bats, and 65 acres of sharp-tailed grouse nesting habitat, and affect the following other species of concern: mule deer, five species of shrub-steppe obligate songbirds, other migratory birds, Merriam's shrew, sagebrush vole, northern grasshopper mouse, short-horned lizard, racer, five species of bats, and 3905 acres (a reduction of 825 acres impacted compared to Alternative 1) of tiger salamander upland habitat surrounding 8 ponds.

Although riders could access Bob's Lakes from the unfenced area in the north, this is less likely than in Alternative 1 due to rough terrain and only a narrow passage to the lakes. Therefore, species associated with the Bob's Lakes area would be mostly protected from off-route riding. These include the following special status species (T&E and BLM Sensitive): peregrine falcon, American white pelican, and three species of bats, and the following other species of concern: golden eagle, prairie falcon, and five species of bats.

The fenced corridor would enclose, and render unsuitable for all wildlife discussed above 34 acres of shrub-steppe habitat.

Because the fence is designed for wildlife passage (12 inches off the ground and only 38 inches tall) deer would easily navigate this fence. So, the fence itself would not impact deer movement. However, fences near sage-grouse breeding, brood rearing, or winter habitats can increase the risk of collision mortalities and/or predation on sage-grouse by hawks, eagles and ravens by providing perches in otherwise open habitat (Connelly et al. 2004). Additional perches for avian predators would also increase the risk of predation to the following special status species (T&E and BLM sensitive): Washington ground squirrel, sagebrush lizard, side-blotched lizard, striped whipsnake, night snake, burrowing owl, long-billed curlew, and white and black-tailed jackrabbits, and the following other species of concern: five species of shrub-steppe obligate songbirds, other migratory birds, Merriam's shrew, sagebrush vole, northern grasshopper mouse, short-horned lizard, and racer.

Alternative 3 (Seasonal Closures): Seasonal closures are a common method for reducing wildlife impacts during the most important phases of species' life history. By enacting seasonal closures, wildlife is protected and the disruptive action is allowed during a time period that creates fewer impacts to sensitive wildlife. Seasonal closures were developed for the species with the highest status (Washington State T&E) and the highest risk of disturbance (considering known species locations, special habitat designations, and species sensitivity). Only the newly proposed route would be subject to restrictions. The county road and existing route in the north would not have a seasonal restriction.

The following seasonal closures would reduce impacts to the species discussed below, but they would also greatly reduce impacts to all other special status and other wildlife species of concern discussed in this document. These other species would benefit because they too fulfill most of their life history requirements in the spring. Additionally, a springtime closure would reduce the

off-route impacts by roughly the proportion of time closed.

March 1 - May 31: Ferruginous Hawks

This time period corresponds to the courtship and nesting phase for ferruginous hawks. As discussed, ferruginous hawks are very susceptible to noise disturbance and will abandon nests even when only mildly disturbed. Eliminating disturbance to the hawks during this period would allow nesting territories to establish at suitable cliff sites in Bob's Lakes area and at two historic breeding sites in the south. Eliminating courtship and nesting disturbance in the south would maintain the suitability of approximately 4859 acres of shrub-steppe and cliff habitat in the WDFW North Recovery Zone, but still leave somewhat vulnerable to disturbance approximately 5008 acres of habitat associated with the existing route in the north, including two historic territories. If occupancy surveys are done and no hawks initiate nesting by April 31, this seasonal restriction may be lifted on May 1 without affecting the hawks.

March 1 - June 15: Sage-grouse

This time period corresponds to nesting and early brood rearing when sage-grouse are most susceptible to disturbance. As discussed, disturbance during this time can result in lek, nest or brood abandonment resulting in decreased production. Eliminating disturbance to sage-grouse during this period would allow grouse from the augmentation and recovery program to re-establish a population in suitable portions of the Lakeview Parcel. The seasonal restriction would maintain the suitability of approximately 4859 acres of shrub-steppe in the Crab Creek Sage-grouse Management Area, but still leave somewhat vulnerable to disturbance approximately 5008 acres of habitat associated with the existing route in the north. If the sage-grouse augmentation and recovery program ends without successful re-establishment of grouse, this seasonal restriction may be removed without affecting sage-grouse.

March 15 - May 15: Washington Ground Squirrels

This time period corresponds to when young emerge and during peak Washington ground squirrel activity. As discussed, disturbance during this time can result in alterations to behavior patterns such as foraging and food caching in preparation for summer estivation and predator evasion due to diminished auditory cues. Eliminating disturbance to Washington ground squirrel during this time would maintain the suitability of approximately 4859 acres of shrub-steppe habitat potentially used by Washington ground squirrels, but still leave somewhat vulnerable to disturbance approximately 5008 acres of habitat associated with the existing route in the north, including two Washington ground squirrel sites.

May 15 - July 15: Migratory and Special Status Birds

This time period corresponds to the generalized nesting period for migratory birds. As discussed, disturbance during this time would lead to increased stress hormone response and nest abandonment. Eliminating disturbance to migratory and special status birds during this time would maintain the suitability of approximately 4859 acres of shrub-steppe habitat used by migratory and special status birds, but still leave somewhat vulnerable to disturbance approximately 5008 acres of habitat associated with the existing route in the north. This time period may be modified to local breeding periods if specific data are developed for nest chronology of migratory and special status birds on the parcel.

Alternative 4 (No Action): Taking no action would avoid all the impacts associated with the proposed trail, and the existing trail in the north would continue to have some, but little, effect on wildlife. Without the disturbance and off-route impacts caused by the proposed route, 35,324 acres of suitable sage-grouse nesting habitat in the Crab Creek Sage-grouse Management Unit would be maintained in its current state and contribute to recovery objectives. Also, 12,346 acres of ferruginous hawk habitat including 4 historic breeding sites would be left undisturbed in the North Recovery Zone; 3,388 acres shrub-steppe habitat supporting shrub-steppe obligate and migratory birds, white-tailed and black-tailed jackrabbits, long-billed curlew, and Washington ground squirrel would be left undisturbed; 1,384 acres of reptile and small mammal habitat potentially supporting four special status and five other species of concern would be left undisturbed; and 10,072 acres of effective mule deer habitat would be left undisturbed. Off-route impacts would not occur, protecting 9867 acres of shrub-steppe and associated habitats from degradation. Increased bare ground and invasive plants, reductions in valuable herbaceous plant and shrub cover, structure, and function, and noise disturbance, including disturbance to cliff-dwelling species and pelicans in Bob's Lakes, would not occur, maintaining the parcel as valuable shrub-steppe habitat.

Cumulative Effects: The effects of the proposed action are considered in relation to other effects from past, present, and reasonably foreseeable future actions. As discussed in the Affected Environment section, historical development of the region for agricultural uses (primarily) and urban development has eliminated 6.2 million acres of the 10.4 million acres of shrub-steppe habitat that once existed in Washington (Dobler et al. 1996), and has fragmented and degraded the quality of most of the remaining 4.3 million acres of habitat. Construction of fences through shrub-steppe habitats has increased the risk of fence-strike mortality to birds, particularly grouse. Fence posts and power poles provide hunting perches for birds of prey. Historical grazing (before the Lakeview parcels were acquired by the BLM) degraded the area of potential disturbance, causing erosion, introducing invasive nonnative plants, and altering fire regimes.

Past and ongoing BLM actions that affect wildlife in the analysis area include three allotment management plans (AMPs) for grazing. The effect of livestock grazing as managed by the BLM in these allotments was determined by past environmental analyses to have little effect on special status wildlife and be consistent with wildlife values aside from increasing the height and density of the vegetation compared to pre-AMP grazing practices (USDI-BLM 2000, 2002a, 2002b). Other past actions include authorizations for special recreation permits that have allowed one spring-time motorcycle "sport ride" on the existing OHV trail in the north. Effects are negligible because the event occurs only on one day, on the existing route, and with a limited number of riders. Similarly, an equestrian endurance ride is authorized in the fall, but due to timing this event also has no effect on wildlife. The grazing and special recreation permits are likely to continue into the future.

If Alternatives 1, 2, or 3 are implemented, it is reasonably foreseeable that additional OHV route creation and designations will occur, using the BLM route and county road as a starting point. OCAC has expressed a goal to create a much larger trail network, mostly on private lands and local businesses have endorsed their efforts. If additional trails on private land were developed, they would lead to a proliferation of routes across the sagebrush habitats in Lincoln County, causing impacts similar to those described here but at a countywide level.

The total area of land enrolled in CRP in Lincoln County is expected to be stagnant or declining due to economic conditions (pers. comm. J. Anderson, WDFW). High wheat prices in the recent past will discourage landowners from removing their lands from crop production for the contract term of at least 10 years. If CRP acres decline, then the total acres of wildlife habitat will also decline.

Alternative 1 (Proposed Action): The effects of the proposed action (large areas of disturbance to special status and other wildlife species of concern habitat along the proposed and existing routes and 9,867 acres of off-route habitat degradation) would add to the historical loss and degradation of shrub-steppe habitat in Washington. It would add to, and far outweigh, impacts from grazing and special recreation use permits.

The proposed action would synergistically affect the development of OHV routes in Lincoln County and the resulting fragmentation and degradation of the remaining 473,674 acres of shrub-steppe habitat in the county (Dobler et al. 1996).

Habitat degradation and fragmentation resulting for the proposed action will add to habitat losses resulting from decreased private land enrollment in the CRP.

Alternative 2 (Fenced Route): Effects are the same as Alternative 1, but with only 5,008 acres of off-route habitat degradation. This would result in smaller additive effects with historical habitat loss, fragmentation, and degradation; grazing effects; special recreation use permits; and future loss of CRP habitat. However, increased fencing would at least partially offset the reduction in effects to habitat by further fragmenting the habitat and increasing the likelihood of sage-grouse fence strikes. No thresholds for fence density have been identified for sage-grouse management. Synergistic effects with regional development of OHV routes would be the same as described for Alternative 1.

Alternative 3 (Seasonal Closures): Effects are similar to Alternative 1, but with no disturbance during important wildlife breeding and activity periods and less off-route habitat degradation due to less time available to OHV users. This would result in smaller additive effects with historical habitat loss, fragmentation, and degradation; grazing effects; special recreation use permits; and future loss of CRP habitat. Synergistic effects with regional development of OHV routes would be the same as described for Alternative 1.

Alternative 4 (No Action): Effects of the existing trail in the north would remain, with no new additive or synergistic effects to wildlife.

Cultural Resources, Native American Values:

Affected Environment:

Ethnographic/Historic: Ethnographically, the proposed route is located in the traditional use area of the Sinkiuse or “Columbia Salish”, also known as the “Moses Columbia”, one of the Confederated Tribes of the Colville Reservation. (CCT). The Sinkiuse followed a way of life characterized by seasonal movement to harvest various resources as they became available. The

annual pattern generally included: spring movement from winter villages in sheltered areas, usually along major streams, to upland areas to hunt and harvest roots, berries, and other plant materials; return to the rivers and streams to catch, process, and store the anadromous fish whose annual runs carried marine nutrients far into the interior; travel back to the uplands for fall hunting and gathering; and back to the villages to winter near stored food supplies (Anglin 1995:25; Chalfant 1974:357; Ross 1998:272-274; Wynecoop 1969:8). Boundaries of the traditional territories in which each group followed its version of this seasonal round, while well defined near villages and fishing sites, were vague near their margins. Sharing of such areas by neighboring groups was common (Ray 1936:117).

The ethnographically recorded Sinkiuse village closest to the proposed route appears to be a summer village on Crab Creek at the site of the present town of Odessa where there was good water and grazing and some camas and small game were available (Ray 1974:16-1). Considering the fact that there were several Columbia Salish settlements to the north in the vicinity of Creston and to the northwest on Canniwai and Wilson creeks (Ray 1974:17) and a travel route along Crab Creek (Sharley 1997:2), there was probably traffic along Lake Creek through the project area between these locations. This view is supported by the presence of numerous archaeological sites in the project area as documented in the Department of Archaeology and Historic Preservation (DAHP) site database.

Euro American settlement of the project and immediately surrounding area was preceded by Government Land Office Surveys in 1874 and 1877 (Richardson 1874, Van Vleet 1877) which established the township, range and section boundaries. These surveyors often left the earliest written accounts of Native American travel routes, settlements and economic activities. One such travel route was noted in the Lake Creek drainage in 1878. It ran along Lake Creek and followed Crab Creek to the Columbia (Sharley 1997:2)

Actual Euro American settlement of the area did not begin until 1889. Although the first wheat crop in the Odessa area was harvested in 1886, most of the earliest Euro American settlers concentrated on cattle and sheep production. Completion of the Great Northern transcontinental railroad in 1882 and exceptional wheat harvests in the mid 1890s produced an influx of settlers and more concentration on wheat. The town of Odessa was platted in 1899 and continued to grow into the 1920s (Walter 1988).

The first homestead in the project area was patented in 1904, the last in 1925 (USDI nd, nda, b, c.). The town site of Waukesha was platted in 1907 but was apparently never occupied (Walter 1988:253-254) According to the historical documentation available (Richardson 1874), an historic transportation route crosses the south end of the project area, but this portion of the road has not yet been located.

The southernmost of the Chain Lakes, which the GLO surveyors apparently encountered roughly one half mile south of the present dam site (Van Vleet 1877: 7), was confined to the lake's present boundaries by an earth and concrete dam in the 1940s (Perry 2001). BLM lands in the project area have been used for grazing, recreation and oil and gas leases, although there has been no development in the last field. A pipeline was laid from Pacific Lake to several small ponds in 1983. A hiking and horseback trail was developed between Odessa and

Pacific Lake.

Cultural Resources/Archaeology: Slightly over 900 acres, or approximately 10%, of the project area has been included in BLM Class III Cultural Resource inventories. These surveys have resulted in the recoding of 17 cultural sites and numerous isolated artifacts. Nine of the sites are prehistoric, five are historic, and two may include both historic and prehistoric components. Two of the historic sites, Lakeview Ranch and the dam at the south end of Bob's Lakes, have been evaluated and found ineligible for nomination to the National Register of Historic Places. According to the USGS quadrangle map of the Pacific Lake Quadrangle, one unrecorded historic site near the east side of the project area includes a well which may present a hazard to OHV users who venture off the established route. The prehistoric sites include numerous talus pits and rock features in and just outside the project area and a more complex site including stone tools, beads, ash and animal bone in the project area. There is also a known, but unrecorded pictograph site nearby.

Native American Concerns: Areas near Lakeview Ranch are still used by Native Americans and others as a source of traditionally important plant materials. Groups harvesting native plants may utilize parts of the area at any time during the seasons when the various plants are available for harvest. Harvest of edible roots including *Lomatium* species and bitterroot (*Lewisia rediviva*) occurs regularly in the Lakeview area. A recent Traditional Cultural Property study of the Chain Lakes area which includes the project area recommends that "A restriction should be placed on off road vehicles in areas with traditional root crops" (Wazaney 2007:66).

All of the alternatives except the No Action alternative would necessitate consultation with the CCT, the Spokane Tribe and DAHP, conduct of a Class III Cultural Resources Inventory of areas likely to be affected by OHV traffic, evaluation of sites likely to be affected, and monitoring of the effect of OHV traffic on known cultural sites. If OHV traffic is shown to have impacts on sites, mitigation measures would be designed and implemented with further consultation with the CCT and DAHP. The installation of the cattle guards and trailhead required in alternatives 1-3 and the extensive fencing required in Alternative 2 may also require archaeological monitoring during excavation. While the more numerous rock cairn and talus pit sites are not likely to suffer direct damage from increased OHV traffic resulting from implementation of alternatives 1, 2, or 3, the increase will also increase the human presence in the area and present increased possibility for looting and vandalism. Historic sites, most of them unrecorded, are more vulnerable to direct effects of OHV traffic.

Alternative 1 (Proposed Action): The probable rutting and soil displacement, described under "Soils" above, and the greater potential for erosion due to decreased vegetative ground cover would pose a threat of damage to both known cultural material and any previously undiscovered sub surface cultural material that could be exposed by erosion.

Unauthorized (off-trail) activity causing surface disturbances such as reduced vegetation, soil compaction, soil displacement, and increased runoff would increase this threat over a wider area. Identification of additional portions of the historic wagon road could become impossible because of the overlay of unauthorized trails. Increased human presence in the area would also produce increased possibility of looting and vandalism. Cattle guard installation and trailhead

construction would pose a threat of damage to any previously undiscovered sub surface cultural material.

The direct effects of soil compaction, displacement, erosion and decreased plant cover also have the potential to decrease the availability of Native American food plants, primarily roots, which are plentiful in the area. If use by traditional plant gathering groups coincides with OHV use, the safety of both root harvesters and OHV users could be compromised.

Mitigation: Cultural resources inventory will be conducted in areas determined likely to be impacted under this alternative. Sensitive cultural sites or other properties eligible for the National Register of Historic Places likely to be damaged by OHV activity will be protected by fencing, monitoring or other mitigation measures. If OHV traffic cannot be restricted to the designated route, cultural resource inventory, evaluation, and mitigation will be conducted in areas likely to be impacted by OHV activities.

Alternative 2 (Fenced Route): The area within the fenced corridor would be subject to the same impacts described under Alternative 1 above, but the potential for off-trail activity would be reduced. Additional impacts to previously undiscovered sub surface cultural material would be posed by installation of fence posts, cattle guards and the new trailhead. Impacts to the existing northern part of the route, which would not be fenced, would result due to increased traffic as described for Alternative 1 above.

The fences along the southern portion of the OHV route would limit access to the area by Native Americans engaged in root harvesting and other traditional pursuits.

Mitigation: The fenced corridor will be inventoried for cultural resources, and evaluation, monitoring, and impact mitigation as described above for Alternative 1 would be conducted. This process will be applied to the northern part of the project area accessible from the unfenced northern part of the route. The installation of the cattle guards, trail head, and corner posts for the extensive fencing may also require archaeological monitoring during excavation. The limitation of access by the fences may be addressed by installation of pedestrian-only gates in the fences.

Alternative 3 (Seasonal Closures): Both known and previously undiscovered subsurface cultural materials and native food plants would still be at risk from the effects to soils described under Alternative 1 above, but the risk would be substantially reduced by closure during wet seasons and by decreased total potential traffic due to the limited period of use.

Possible conflict with traditional root harvest activity would be eliminated because the area would be closed for OHV use during the harvest season.

Alternative 4 (No Action): The No-Action alternative would produce no additional impact to cultural resources. The impacts of grazing and non-motorized trail use would continue, probably at somewhat increased levels due to local publicity and increasing trail use. The northern area,

already open to motorized use, would probably experience some increase in use due to local publicity and opening of some county roads to OHV traffic.

Cumulative Effects: In order to assess the cumulative effects of the proposed OHV route on cultural resources and Native American concerns, an area extending one mile from the boundaries of the project area has been selected for analysis. This includes areas of terrain similar to that in the project area that have been affected by similar historical processes. The area of analysis encompasses locations outside the project area where activities (e.g. agricultural development) have taken place but are not well represented in the project area.

Alternative 1 (Proposed Action): Most of the known prehistoric cultural sites in the project and immediately surrounding area are rock features or talus pits which are unlikely to be directly affected by OHV traffic. While these are sites unlikely to experience direct effects from implementation of the OHV route, they are, however, subject to the indirect effect of increased human presence in the area which increases the possibility of vandalism (unstacking or adding to rock cairns or altering talus pits). The one prehistoric site that is not a rock feature is vulnerable to looting as well as vandalism and site destruction by unregulated digging.

Quantitative data on the effect of the existing non-motorized trail on human presence in the area is not available, but the “moderate” use postulated in the Recreation section and the availability of maps showing the route can be assumed to have increased use of parts of the project area. There is some evidence, in the form of culturally modified lithics eroding from the existing trail and from cattle trails and informal two-track maintenance “roads” generally not shown on maps, that grazing and existing trail use are producing an impact on subsurface archaeological materials by exposing them. Implementation of Alternative 1 would compound this existing impact to an unknown extent. Since there has been little or no survey work done on non-BLM lands in the area, the site density is unknown and cannot be compared with that in the project area.

Many of the historic wagon roads shown on the original GLO cadastral plats have been overlaid with modern transportation routes (Freeman 1954:130). The portions on public land may provide the only parts of these roads available for interpretive use. The DAHP database shows few sites identified as parts of historic wagon roads. Impacts to the as yet unidentified portion of the historic travel route running through the project area could impair the opportunity to study and interpret it.

The historic sites in the area are vulnerable to both direct and indirect impacts from OHV traffic. This would affect only a small fraction of the known and suspected historic sites in the expanded cumulative effects area. This conclusion is supported by the fact that, of the 90 homestead patents issued in the area analyzed for cumulative effects, only 21 are actually in the project area (USDI nd, nda, b, c, and d.). Of the 21 structures shown on a 1911 map of the area, only 3 are located in the project area (Ogle 1911).

If OHV users confine their activity to designated routes and if the mitigation measures proposed for Alternative 1 are applied, the OHV route’s effects on cultural and archaeological sites should be slight. If there is intense and chronic use of off-trail areas, adverse impacts to sites within the

project area is expected.

Aboriginally, the entire “Big Bend” area of approximately 900 square miles in Douglas, Grant and Lincoln counties was available to Native American groups for hunting and gathering (Wazaney 2007:12). This area has been dramatically diminished by the introduction of grazing, agriculture, the European derived system of land division and tenure and, the segregation of Native groups on Indian Reservations. Native informants interviewed for a CCT proprietary report on traditional cultural properties in the Chain Lakes area, including the project and expanded cumulative effects area, indicated that traditional resource gathering “ceases only when access to the grounds is prohibited, or in areas permanently altered by environmental change caused by farming and ranching” (Wazaney 2007:65). Most of the land in the Big Bend has undergone these environmental changes. In 1988 roughly half of the 147,520 acres that make up Lincoln County were in use as cultivated wheat land, an additional 40 % was rangeland, and the remaining 10% was “grazable woodland” (Stockman 1981:10).

The situation in the project and surrounding area is not so extreme. Air photos taken in 2005 and 2006 indicate that less than a quarter of the expanded cumulative effects area is cultivated or shows signs of cultivation at some time in the past. Even less of the project area shows signs of any cultivation. The entire area has probably been grazed. In view of this extreme reduction in useable gathering area, the project area has great significance as an accessible root ground which is still in use. If OHV use can be confined to the designated routes, there should be little direct impact to gathering activities. Indirect impacts including noise and the increased presence of people unconnected with the traditional activity may have a negative impact on the activity, particularly on the teaching aspect which could be disrupted by such distractions.

If OHV activity is not confined to designated routes, direct impact to the plant resources, particularly roots that are the focus of gathering activity, could be severe as a result of erosion, soil compaction and damage to vegetative cover. Considering the relatively small land base left for gathering, the cumulative effect would be a severe negative impact to traditional gathering activity.

If there are still native religious activities being practiced in the project area, the noise and presence of large numbers of people would have a profound negative effect on these very private practices.

Alternative 2 (Fenced Route): The cumulative effects noted for Alternative 1 above would still apply to the northern portion of the route outside the fence. In the fenced portion of the route these effects would be restricted to the fenced corridor and cumulative effects would be somewhat reduced. The fence, however, could produce further limitation on the available gathering area, adding slightly to the cumulative loss of gathering ground.

Alternative 3 (Seasonal Closures): Seasonal closure of the OHV route would significantly decrease or possibly eliminate the impacts noted for Alternatives 1 and 2 above, decreasing the project’s contribution to cumulative effects, compared with the contribution from the first two alternatives.

Fire:

Affected Environment: Fuel type in this area consists of: (A) fuel model characterized by short grass of either the annual or perennial varieties, and (B) scattered fuel model which is represented by scattered sagebrush in the proposed area. Both fuel types are highly flammable but fairly easily controlled with a moderate suppression effort.

From 1998 thru 2008 no wildfires occurred in this area. Three prescribed fires have occurred nearby in this time frame and proved to be beneficial in eradicating undesirable vegetation occurring in that area.

With a great deal of the proposed area consisting of non-burnable fuel types such as rocky areas and scab-like vegetation, fire may never have a chance to ignite. If a fire should ignite, Lincoln/Adams Fire Department, located in Odessa, WA, 1 - 9 miles from the proposed route, should be able to provide suppression before the ignition spreads beyond their initial attack capability.

During periods of high fire danger, BLM issues a fire closure that would prevent use of unimproved and two-track roads. At this time, there has been no record of fire starts caused by OHV use on the Spokane District.

Alternative 1 (Proposed Action): Since fires have been scarce in this area, it would be fairly safe to assume that a proposed recreational OHV route will not greatly contribute to additional fires occurring within the area. If fire did occur, it would be quickly suppressed by the local fire departments.

Alternative 2 (Fenced Route): Same conclusion as for Alternative 1 with even less chance of fire ignition due to the fence preventing off-trail use.

Alternative 3 (Seasonal Closures): Same conclusion as for Alternative 1 with even less chance of fire ignition due to the very short period of OHV use.

Alternative 4 (No Action): No impacts different than under existing and future natural conditions.

Social/Economic:

Affected Environment: Since 2005, the Dual Sport 500 Classic Sport Ride motorcycle event has annually brought many motorcycle riders and enthusiasts from Washington, Oregon, Idaho and elsewhere to the Odessa, Washington area. Participants in this event travel on public roads using licensed motorcycles. Along with other motorcycle rallies, this event has helped popularize Odessa as a motorcycling recreation destination, and event participants and spectators have provided a financial boost to some small businesses in Odessa. Additionally, the town's annual "Deutchesfest" has introduced many tourists to the surrounding landscape and current recreational opportunities in the area.

This rural town's economy remains largely agricultural-based, and its population (currently close to 900) has been reduced by approximately half over the last decade or so. Many people have

moved out of Odessa as the business model has gone from single-family wheat farms to an agribusiness wheat farming model.

It is with this background of some social and economic depression that OCAC has resolved to help improve the town's economy through developing OHV recreation tourism opportunities by increasing OHV riding opportunities. Forty-eight percent of scoping comments (11 respondents), all proponents, supported the proposed action as a means to provide new OHV riding opportunities. Backed by many local businesses, OCAC has been working to try to develop Odessa, Washington as the "HUB" for ORV recreational activity in Eastern Washington" (OCAC drafted logo - 2006). OCAC's recreational tourism planning ambitions include developing Odessa as an "OHV friendly" town directly connected to an OHV trail system beginning on neighboring BLM public lands. The group envisions a future extensive OHV trail system that connects various rural towns within the region. This trail system would cross private land, and potentially use some county roads if involved counties are willing to designate and regulate those roads for OHV use.

Alternative 1 (Proposed Action):

Positive social/economic impacts: BLM is not aware of an economic development plan, OHV Recreation Tourism plan, or economic data to use to estimate the amount of economic benefit OCAC expects Odessa to receive under its proposed action. From the scoping comments received, 22% of respondents (5 respondents) stated they believed the proposed action would stimulate the local economy. Four percent (1 respondent) stated that the proposed action would stimulate the economy only if the trail system on BLM was more developed/larger, and should not be considered given the existing limitations. Four percent (1 respondent) believed it would not improve the local economy very much because most OHV tourists bring their own gas, food, and beer, and stay in their campers. With a boost from economic outreach developed by Odessa/OCAC, and from eastern Washington in general, if designated, the route is expected to become popular with locals, and to become somewhat of a draw, especially from OHV enthusiasts living in the Spokane and Moses Lake metropolitan areas. In particular, Odessa's motels and businesses supplying food, beverages, or gas would benefit economically from patronage by visiting OHV enthusiasts. Additionally, OCAC has envisioned developing science learning or other educational programs in conjunction with OHV riding that would provide positive social impacts.

Negative social impacts: Four scoping comments (17% of respondents) from adjacent or nearby land owners stated problems they have with the action as proposed in Alternative 1 – including how they believe it would reduce their quality of life and interfere with their lives. In summary, those problems were:

- OHV noise, including echoing in the canyon
- Reduced quality of life (privacy loss, noise, trespass)
- Reduced land value
- Deer getting stuck on fences while running from OHV's
- Trespass and fence cutting, especially during hunting season
- Litter
- Widespread unauthorized use
- Target shooting/safety concerns

Mitigation: Set thresholds for instances of trespass, land owner harassment, and safety hazards (especially shooting in vicinity of private residence or livestock), that would trigger temporary or permanent closure of all, or segments of, the proposed OHV trail. Also, hours of OHV use could be regulated to prevent OHV noise in early morning and late evening hours.

Alternative 2 (Fenced Route): Impacts would be the same as explained for Alternative 1. However, problems with adjacent land owners would be substantially reduced because most unauthorized (off-trail) OHV use would be prevented by the OHV corridor fence barriers, especially if the fence is eventually extended along the entire trail system. Odessa might experience a reduction in related economic benefit compared to Alternative 1, because the fenced trail opportunity is likely to attract fewer OHV tourists than an unfenced trail.

Mitigation: Regulate hours of OHV use to prevent early morning and late evening noise and other problems for adjacent land owners.

Alternative 3 (Seasonal Closures): Due to the very short time period(s) when OHV use would be allowed, the economic benefit to Odessa businesses would be minimal under this alternative. However, there would be a significant reduction in problems for private land owners from authorized and unauthorized OHV activities.

Alternative 4 (No Action): Few impacts are expected short term from unauthorized use, beyond the existing condition. No additional OHV-associated tourism or economic benefit would occur. Minimal land owner problems from unauthorized OHV use would continue. Odessa would have to seek alternative means to improve their local economy.

Cumulative Effects: Past and ongoing BLM actions that affect social/economic impacts at Lakeview Ranch include continued recreation management per RMP Amendment management direction, for “wildlife-based” recreational activities in the southern part of the Lakeview Ranch unit. This recreational use provides some economic stimulus to the Odessa economy, mostly from regional visitors, who come to pursue non-motorized recreational activities, especially to view nature, hike, ride horses, bike, camp and hunt. BLM has identified that non-motorized recreational use has been steadily increasing there, but data has not been collected to clearly quantify how much of an increase.

Other actions and activities that also affect the resource:

- 1) Two pending applications for livestock utilization on the Lakeview Ranch unit, if authorized, would increase the total acreage within which motorized and non-motorized recreation would conflict with grazing use.
- 2) OCAC’s larger OHV recreation/tourism development scheme includes working towards developing a large OHV trail system within their region that would connect various rural communities, and involves trying to obtain county approval to allow regulated OHV travel on numerous county roads.
- 3) A motorized recreation advocacy group in Odessa is working to develop alternative motorized recreation opportunities in the area tied to economic development, including

“dual sport riding” mostly along county roads between rural communities within range of Odessa, by street and highway licensed motorcycles suited for both on- and off-road travel.

Alternative 1 (Proposed Action): The designation of the OHV route may increase tourism events or opportunities, and some tourism dollars could flow into the Odessa economy, especially if in combination with other motorized recreation projects undertaken beyond the scope of the proposed action, outside of BLM public lands.

The most significant cumulative social impacts would be due to the expected increase in OHV use on the Lakeview Ranch unit stemming from development of a connected regional OHV trail system and/or regional dual sport rides, and OHV riders seeking multiple riding opportunities. This increased use on the Lakeview Ranch Management Unit would lead to 1) increased problems between adjacent landowners and unauthorized OHV use, and 2) a reduction of quality of life for those landowners due to loss of privacy, trespass, noise, and safety issues associated with OHV use.

Alternative 2 (Fenced Route): The types of cumulative impacts would be approximately the same as in Alternative 1 Cumulative Effects, and occur primarily due to the proposed action, although the severity of problems between adjacent landowners and unauthorized OHV use would be reduced substantially by OHV use being confined to the trail. However, if the OHV fence is not extended along the entire length of the trail, substantial unauthorized (off-trail) OHV use may occur in the northern portion of the unit. Economic benefit to Odessa would be reduced somewhat because some people would choose not to travel regionally to ride their OHVs at an area where they are confined to a single, short, fenced OHV trail corridor.

Alternative 3 (Seasonal Closures): The types of cumulative impacts would be approximately the same as in Alternative 1 Cumulative Effects, and occur primarily due to the proposed action, although the severity of problems between adjacent landowners and unauthorized OHV use would be reduced substantially by the OHV periods of authorized use being reduced substantially by seasonal and emergency closures. Most unauthorized (off trail) OHV use is expected to occur during time periods authorized for on-trail OHV use.

Alternative 4 (No Action): Cumulative impacts are expected to be minimal under the No Action alternative, other than currently occur under existing conditions. Continued occasional unauthorized OHV use would occur, especially during big game hunting seasons, causing some loss of privacy, trespass, noise, and/or safety problems with adjacent landowners. Odessa groups would have to review other tourism development opportunities to improve the town’s economic viability.

Recreation:

Affected Environment: Current management of recreation activities on the Lakeview Ranch parcel emphasizes non-motorized recreational activities, in accordance with the RMP Amendment management objective for the Upper Crab Creek Management Area, identified in the Background section: “The management goal for this area is to enhance native riparian and sagebrush steppe habitat, enhance opportunities for wildlife-based recreation, identify and

protect significant cultural values and to protect significant sensitive species habitat.” Because motorized use along the existing segment of OHV route has been minimal, that use has caused few recreational impacts. No significant impacts have been identified due to non-motorized recreational use. However, as identified in the Assumptions section: a) motorized use is expected to increase significantly if the proposed route is implemented, and b) a significant amount of unauthorized/off trail use is expected within the Area of Potential Disturbance (see map Attachment 4). Both of these factors would contribute to increase recreational impacts, as well as impacts to natural resources.

A motorized use route currently exists in the northern section of the Lakeview Ranch parcel that consists of approximately seven miles of two track roads. Per the Spokane District RMP, all motorized travel within the Upper Crab Creek Management Area is limited to designated routes, meaning no off-road travel is allowed. All types of motorized vehicles are allowed on the existing route currently open for motorized use, which would not be the case for the proposed route between Odessa and Lakeview Ranch Road.

The existing segment of OHV route is not heavily used for motorized recreation due to its short length of approximately seven miles, and its distance from Odessa. Currently, most motorized use along this segment occurs during big game hunting season, with two- or four-wheeled drive vehicles. The beginning point for the existing OHV route is easily accessible, located approximately nine miles from Odessa by four miles of good condition graveled county road (Lakeview Ranch Road) and five miles of Highway 21. Currently, OHV use is not allowed on Lakeview Ranch Road. Lincoln County is willing to allow regulated OHV use along applicable portions of Lakeview Ranch Road contingent on BLM designating the proposed OHV route, since Lakeview Ranch road would connect the proposed OHV route and the existing OHV route.

As detailed in the Assumptions section, at approximately 13 miles in length, the combined existing and proposed route is considerably shorter than a desired day’s ride for most OHV enthusiasts. This means that unless a connecting trail system outside of public land is co-developed, OHV use on the proposed route would likely be comprised mostly of local OHV users, and those coming from the Spokane and Moses Lake metropolitan areas that would come for a ¼-day or ½-day ride. Those OHV enthusiasts willing to travel a long distance (regionally) to ride would likely seek out lengthier riding opportunities (Conversation with Cathi Bailey, OR/WA BLM State Recreation Program Lead – May 5, 2009).

Strong preferences for specific recreation settings are leading to competition for the recreational resources of this country (English et. al, 1999). Competition is especially evident between motorized and non-motorized users, on-foot versus riding participants, fast-moving versus slow-moving styles, highly specialized versus novice participants, commercial versus private users, and risk/adventure versus sensing/learning motivated users (USFS 2007).

Primary non-motorized recreational activities on Lakeview Ranch include hiking, horseback riding, hunting on foot, nature/wildlife watching, camping, picnicking, and mountain biking.

In 2001, BLM opened the 13-mile Odessa to Pacific Lake Trail for non-motorized recreational use, to enhance recreational experiences on the unit. A Cooperative Management Agreement

was drawn up between BLM and the city of Odessa, under which Odessa provided a trailhead parking area on city land at the south end of the trail, 0.2 miles of trail easement on private land, and directional signs from Highway 28 to the trailhead. Since that time, the trail has received moderate use for a variety of non-motorized recreational activities, especially hiking, hunting, horseback riding and mountain biking, and is known regionally for the non-motorized recreation opportunities currently provided there.

To provide a balance of opportunities for people to experience the outdoors, BLM opened approximately seven miles of two-track roads for motorized use at the north end of the management unit. As detailed in the map in Attachment 2, approximately 3.5 miles of this motorized use route is shared use since the Odessa to Pacific Lake Trail follows that distance of the motorized route at its northern reaches. Assumedly largely due to the current sporadic use by both motorized and non-motorized users, to date there has been a negligible effect of social conflict between motorized and non-motorized recreation activities along the shared use portion of the trail.

Also visible on the map in Attachment 2, under the action proposed in Alternative 1, the first approximately five miles of the Odessa to Pacific Lake Trail, beginning at the proposed new OHV trailhead at Odessa, would also have to be shared by non-motorized and motorized recreational users.

Scoping comments show that 43% (10 respondents) are opposed to implementing the proposed action, 48% (11 respondents) are in favor of it, and 9% (2 respondents) did not indicate a preference either way. 21.7% (5 respondents), all opponents, stated concerns that implementing the proposed OHV route would create conflicts between non-motorized and motorized recreational users.

Recreational Social Conflicts: There is a great disparity in opinions about the effects on a person's recreational experience when they encounter others on the trail. Some people using non-motorized modes of travel become upset when they encounter or hear motorized equipment. The reverse situation is not as frequently true; most people using motorized modes of travel do not seem to be disturbed when they encounter people on foot or horseback, or on bicycles. Often the situation is erroneously defined as "user conflict", but there generally is no physical or safety conflict associated with one party encountering another party on the trail. The situation is more accurately defined as a failure to fully meet the social expectations of the non-motorized visitor (USDA Forest Service 2007).

The BLM National OHV Strategy (USDI-BLM 2001) recognizes, as does the policy outlined in BLM Manual 8340 (May 25, 1982), that off-road vehicle use is an "acceptable use of public land wherever it is compatible with established resource management objectives." As established by the Federal Land Policy and Management Act of 1976 (FLPMA), the BLM is required to manage the public lands on the basis of multiple use and sustained yield, while protecting natural values (USDI-BLM 2001).

Multiple-use trails accommodating motorized and non-motorized uses (including hiking, stock, and bicycles) are preferable so as to meet the needs of many people, especially where use levels are low (USDA Forest Service 2007).

However, in comparison to typically much larger blocks of public land BLM administers in Western states other than Washington, the approximately 12,000 acre Lakeview Ranch Management Unit is very small for development as an OHV recreational destination in balance with non-motorized recreational use and other public land uses, with an attraction of a single approximately 13-mile trail to be shared with non-motorized recreational activities, especially without a connecting OHV trail system.

Alternative 1 (Proposed Action): Substantial increased motorized use at Lakeview Ranch would reduce, to some degree, the quality of experience for some of the non-motorized recreational users co-located on the trail or nearby, and social conflicts, of either a confrontational or non-confrontational type, would result. OHV noise and fast-moving OHVs would: 1) disturb those seeking an immersion in nature and solitude experience – as some people value the chance to visit an environment where the natural sounds of wind, grasslands, streams, birds, and animals predominate, with minimal intrusions of man-made sounds; 2) potentially frighten horses and people as OHVs pass by; 3) scare away some wildlife, thereby interfering with recreationists who are there to view wildlife or hunt on foot. OHV noise can be as high as 110 decibels, which is near the threshold of human pain (Lovich and Bainbridge 1999). Loud OHV noise levels would carry long distances, possibly echo in the canyon, and annoy some non-motorized recreational users sharing the same trail or vicinity as OHVs.

If the OHV route is designated as proposed in Alternative 1, some OHV users would likely engage in target shooting and hunting along the proposed route. Non-motorized recreational users would expect an increase in the amount of shooting on the parcel during hunting season. However, an increase in target shooting would be an ongoing source for recreational social conflict, and would create a potential safety hazard for other recreational users, adjacent land owners, and livestock. Allowing OHV use during hunting seasons (upland bird and big game) would tempt some OHV users to engage in unauthorized (off trail) use to seek, track or chase game, and/or to retrieve game. A 2006 Montana Fish, Wildlife and Parks survey revealed that 51.6% of registered OHV user respondents stated that sometimes they traveled illegally off of designated OHV routes to retrieve game (Lewis and Paige 2006).

OHV use, especially in wet conditions and along trails where off-route travel is unauthorized, can lead to substantial rutting of the trail. Both in their wet condition, and once dried, ruts would be an impediment to horseback riders, hikers and mountain bikers, and reduce their quality of recreational experience. However, the converse can be true as well, as heavy use by stock can impede OHV navigability. Because of a lack of incentive at this area for regular guided stock schedules, severe rutting caused by stock use is not expected.

Trail erosion and dust would be increased by OHV use, especially from sport riding when tire traction is not continuously maintained. High levels of trail dust would reduce quality of experience for all users.

Currently, litter is not a problem along the proposed route. It is difficult to estimate the extent to which this would become a problem, although littering, especially target shooting waste, is expected to increase.

The Assumptions section details why it is assumed that a significant amount of unauthorized use, meaning off-trail OHV riding, will occur. Unauthorized use would likely extend to some extent throughout the Area of Potential Disturbance (see map Attachment 4). Unauthorized use has the potential to significantly compound negative impacts of OHV use. If extensive unauthorized use was to occur, recreation related problems would include an increase in social conflicts between motorized and non-motorized recreational users, and reduced quality of recreational experience, especially for those who came for a solitude or immersion in nature experience, and for wildlife viewing. And, safety hazards would increase from shooting from off-trail locations.

There are several BLM ranch buildings along Lakeview Ranch Road. BLM often allows horse riders to use corrals to temporarily hold their stock during their visit, and to camp in the vicinity of the buildings for group events. Although the proposed route includes the portion of Lakeview Ranch Road that runs through the ranch buildings site, only a negligible affect is expected from OHV use conflicting with visitor use of the ranch buildings site.

Mitigation:

- 1) If the proposed OHV route is designated, BLM should consider creating an alternate trail, or trails, exclusively for non-motorized recreational use so as to reduce social conflicts between motorized and non-motorized recreational activities. In the event Alternative 1 is implemented, BLM should also monitor motorized and non-motorized recreational use on the management unit, complaints, and resource impacts related to conflicts between non-motorized and motorized recreational users (such as litter and personal safety). Also, surveys of all types of recreational users should be undertaken that identify instances of conflicts, and quality of recreational experience. Results would help BLM determine if further mitigations are necessary, or if temporary or permanent closure to OHV use should be considered, along all, or segments of, the OHV trail. Additional administrative costs would be incurred for monitoring and surveys, as well as for law enforcement contracts if administered.
- 2) To help reduce social conflicts, as well as rutting, erosion and dust, and create a safer environment, a maximum speed of approximately 20 mph could be regulated for the route. However, with the very limited law enforcement presence expected, this mitigation may only be marginally effective.
- 3) Mitigation: “Rules of the Road” signage should be placed to identify mandatory trail sharing rules/etiquette.
- 4) Hours of OHV use might be established to prevent OHV noise from carrying to adjacent private residences, so as to not disturb land owners in early morning and late evening hours.
- 5) Primarily to reduce unauthorized (off-trail) OHV use, and to avoid conflict with hunters traveling by foot, it might become deemed necessary to enforce an OHV closure during deer general modern rifle hunting season. Dates for this closure would vary with state

established hunting seasons. Modern rifle general deer season in Eastern Washington in 2008 was Oct. 11 – 22nd. A special exception could be made for a specified period (maybe a couple of days or a week), to allow persons with disabilities a chance to utilize OHVs on the trail during this hunting season.

- 6) On- and off-trail rutting by OHVs could be partly mitigated by instituting emergency closures to OHV use during wet seasons, approximately Nov 15 – March 31.
- 7) An agreement could be reached for OCAC, other OHV clubs, and other recreational groups to patrol and pick up litter on a regular, ongoing basis.
- 8) In anticipation of multiplied effects from unauthorized use, upon designating the proposed route, ongoing monitoring would have to be done, and abuse thresholds set, to dictate temporary or permanent OHV trail closure due to abuses including unauthorized (off-trail) use, resource damage, and trespass on adjacent private lands. Restoration of areas damaged by unauthorized OHV use might also be required.
- 9) In some cases, public land management agencies collaborate with trail riding clubs and organizations that provide volunteers for trail maintenance to reduce effects from unauthorized use. However, this is a resource recovery approach and would not substantively remedy recreation related impacts.
- 10) Development of the area as a fee for OHV use area was considered, so as to invest those fees back into the area for such things as trail maintenance, resource restoration, and additional law enforcement. Expected impacts from developing Lakeview Ranch as an OHV use fee area without adding additional trail segments include a significant increase in unauthorized (off trail) use and subsequent elevated level of social conflict between motorized and non-motorized recreational activities. This would be due to expectations for better riding opportunities as found in other OHV fee-for-use areas.

Alternative 2 (Fenced Route): Under this alternative, recreational impacts would mostly be the same as described for Alternative 1 with the following exceptions:

- 1) Quality of recreational experience would be diminished somewhat for both motorized and non-motorized recreational activities, by boxing in those recreational users seeking an immersion in nature experience. Also, because the fence would be 12 inches off the ground and 38 inches high, it would be difficult or impossible for pedestrian travel off of, or crossing, the trail from any given point, since many pedestrians would be unable to step over, or go under, the fence. Also, as an artificial structure, the fence would detract some from the quality of the viewscape, but not significantly more than already occurs from livestock fences on these lands.
- 2) The total cost of fence materials and construction is expected to be \$7,000 - \$9,000 per mile of fence, and there would be ongoing costs for fence and trail maintenance. The total acreage inside the OHV corridor along the proposed route would be approximately 42.5 acres.
- 3) Social conflicts resulting from unauthorized use would be considerably diminished when compared to Alternative 1, because it is not likely that very many OHV riders would breach the fence to illegally ride off-trail. However, the potential remains for social

conflicts along the trail, if both motorized and non-motorized recreational users share the trail.

- 4) Because the OHV corridor fences would not extend farther north than where the proposed route connects with Lakeview Ranch Road, under Alternative 2 a total of approximately 5,008 acres of Area of Potential Disturbance (APD) would be unprotected from unauthorized OHV use off of Lakeview Ranch Road, and off of the existing route open for motorized use at the north end of the management unit. Once the new route became established as an OHV recreation destination and OHV use increased, a significant amount of unauthorized use would likely occur where no fenced OHV corridor would exist.
- 5) Especially with fences present, safety concerns are tied to responsible OHV use. OHV riders irresponsibly traveling at a high rate of speed or too close to others sharing the trail would pose a safety hazard to themselves and other people and stock sharing the trail, by loss of vehicle control or by spooking stock, resulting in an accident. However, the 50-foot-wide OHV trail corridor is more than wide enough for OHV users to avoid accidents to themselves or others if riding responsibly.

Mitigation:

- 1) Pedestrian only crossing points should be built into the fence approximately every ½ mile to allow pedestrians to cross through both sides of the fence, and development of separate, exclusively non-motorized recreational use trail(s) on either or both sides of the fenced OHV trail corridor should be considered to improve quality of recreational experience for non-motorized recreational activities, reduce social conflicts, and improve safety.
- 2) BLM would attempt to enter a cooperative agreement with Lincoln County and the adjacent landowner to extend the fenced OHV corridor along the trail segment on Lakeview Ranch Road, and also extend it along the currently open motorized route at the north end of the management unit. Otherwise, thresholds should be considered under which levels of unauthorized use would lead to temporary or permanent OHV trail closure for trail segments or for the OHV trail's entire length.
- 3) A maximum speed of approximately 20 mph could be regulated for the route. However, with the very limited law enforcement presence expected, this mitigation may only be marginally effective.
- 4) "Rules of the Road" signage should be placed at the trailhead and elsewhere to identify mandatory trail sharing rules/etiquette.

Alternative 3 (Seasonal Closures): Under this alternative, the types of impacts would be the same as detailed in Alternative 1, but would be greatly reduced due to the short timeframe within which OHV use would be allowed.

Alternative 4 (No Action): Levels of motorized recreation would not be likely to increase substantially on the unit for at least several years, although it is difficult to predict levels of unauthorized OHV use originating from the existing motorized use area in the north part of the

unit, or from OHV trail riding opportunities on adjacent private lands.

Non-motorized recreational use would remain available in the south part of the unit, and minus competition from motorized recreational use, social conflicts between motorized and non-motorized recreational activities would be negligible. In the likely event that non-motorized recreational use increases, associated impacts would be negligible for at least several years, probably much longer, because most non-motorized recreational uses at this unit are low impact activities. Motorized use would remain allowed in the north part of the management unit where it is currently allowed, but due to the short total distance of that OHV route, and its distance from Odessa, the management unit would not likely see a great increase in authorized or unauthorized OHV use for at least several years.

Cumulative Effects:

Alternative 1 (Proposed Action): Other actions and activities that also affect the resource:

- 1) Two pending applications for livestock utilization on the Lakeview Ranch Management Unit, if authorized, would increase the total acreage within which motorized and non-motorized recreation would conflict with grazing use.
- 2) OCAC's larger OHV recreation/tourism development scheme includes working towards developing a large OHV trail system within their region that would connect various rural communities, and involves trying to obtain county approval to allow regulated OHV travel on county roads well beyond the scope of this proposed action.
- 3) A motorized recreation advocacy group in Odessa is working to develop other motorized recreation opportunities in the area tied to economic development, including "dual sport riding" mostly along county roads between rural communities within range of Odessa, by street and highway licensed motorcycles suited for both on and off-road travel.

The proposed action would be a primary contributor to cumulative effects. The most significant recreation-related impacts would be increased social conflicts between motorized recreational users and non-motorized recreational users, and diminished quality of recreational experience for non-motorized recreational users seeking an immersion in nature experience.

Barbed-wire stock fences on the Lakeview Ranch unit adversely affect experiences. Fences interrupt the natural landscape. There are six gates along the existing trail in the southern portion of the management unit which non-motorized users must stop to open and close as they proceed along the trail. These gates would be replaced by cattle guards under the proposed action. BLM plans to continue to maintain existing stock fences on the management unit, and currently there are no plans to build additional fences.

Past and ongoing BLM actions that affect recreation at Lakeview Ranch include ongoing "wildlife-based recreation" management per the RMP Amendment management goal for the Upper Crab Creek Management Area, which contains the Lakeview Ranch unit, as well as Twin Lakes and Telford, two other BLM public lands management units located in the general vicinity of Odessa. Subsequently, no routes have been designated for motorized use at either of these other two areas, and neither is designating any motorized use routes under consideration for these units. This means there are no other BLM public lands units within the vicinity of Odessa

to consider as alternate locations for developing OHV recreation opportunities. Twin Lakes and Telford are both at some distance from Odessa. Twin Lakes, the closer of the two, is about a 37 mile drive northeast from Odessa, which means that it is too far away from Odessa for its development for OHV use to provide significant economic benefit to Odessa.

The only other public lands near Odessa besides BLM lands are several scattered sections of Washington Department of Natural Resources (DNR) lands. DNR prohibits public off-road motorized use on those units.

Currently, most OHV recreation in the immediate vicinity of Odessa is limited to private lands (with landowner permission), and use of the existing OHV route on Lakeview Ranch. Destination OHV use areas in the region (Eastern and Central Washington) include: 1) Grant County's Moses Lake Sand Dunes area near Moses Lake, WA, 2) BLM Saddle Mountains area near Royal City, WA, 3) Washington DNR's Beverly Dunes near Vantage, WA, 4) Toes Motocross Park near Yakima, WA, 5) Horn Rapids ORV Park near Richland, WA, and 6) BLM Juniper Dunes OHV Area near Pasco, WA. Moses Lake and Juniper Dunes, in particular, provide extensive open OHV riding opportunities.

If Lincoln County eventually decides to open an increasing number of its county roads for OHV use, it could draw OHV enthusiasts from around the region, and subsequently a related increase of OHV use could concurrently happen on the proposed route if designated, and so increase the extent of related impacts. The additional use would be by OHV recreational users seeking multiple riding opportunities within Lincoln County. Potential future decisions by Lincoln County to open multiple county roads to OHV use could provide additional motorized recreation opportunities beyond those associated with the proposed action. BLM cannot guess the likelihood of Lincoln County changing how it manages county roads in the future, and that possibility is presented here only as speculation.

Alternative 2 (Fenced Route): The types of cumulative impacts would be approximately the same as in Alternative 1 Cumulative Effects, and occur primarily due to the proposed action, and primarily involve social conflicts between motorized and non-motorized recreational activities and reduced quality of recreational experience for both motorized and non-motorized recreational activities due to confinement by the fence, especially for those seeking an immersion in nature experience. The fence would lessen the scale of cumulative effects significantly by limiting the area within which unauthorized motorized activities occur, especially if the fenced corridor was extended to enclose the entire length of the trail. If that was to occur, a fence gap would potentially occur in the vicinity of the BLM ranch buildings, which would be the point where unauthorized use would most likely occur.

Alternative 3 (Seasonal Closures):

The types of cumulative impacts would be approximately the same as in Alternative 1. However, the seasonal closures would lessen the scale of cumulative effects significantly by reducing the timeframes when OHV use is allowed, which is also when most unauthorized motorized use is expected to occur.

Alternative 4 (No Action):

Cumulative impacts are expected to be minimal under the No Action alternative, other than currently occur under existing conditions. Continued occasional unauthorized OHV use would occur, especially during big game hunting seasons. Locally, OHV enthusiasts would continue to utilize private lands with permission. Locally and regionally, OHV enthusiasts would continue to utilize the regionally available OHV areas indicated in the cumulative effects section for Alternative 1, and elsewhere including in Idaho, Montana and Oregon.

Range:

Affected Environment: The proposed OHV trail crosses, or is contained within, four grazing allotments in Upper Crab Creek Management Area, Border Field Office. Three of the four allotments currently have existing grazing authorizations and are managed under Allotment Management Plans (AMPs), a map showing the affected allotments can be found in Attachment 7. The AMPs establish permitted use and ensure livestock management is in compliance with *The Rangeland Health Standards and the Guidelines for Livestock Grazing Management*. The Spokane Resource Management Plan Record of Decision (ROD) 1987, page 26, specifies developing AMPs to establish livestock use levels, grazing systems, season of use, and necessary range improvements. The Three Creeks allotment # 00679 (USDI-BLM 2002) is located nearest the proposed trail head in the southwest portion of the proposed OHV trail. The trail then crosses the north south boundary fence near Sand Springs and is located on the Bob's Lake Allotment #00592 (USDI-BLM 2000). The proposed trail enters newly acquired lands adjacent to the Pacific Lake allotment #00635 (grazed until 1994, currently not leased for livestock grazing and pending application). The trail terminates on the Goetz Lake allotment # 00661 (USDI-BLM 2002). The portion of the trail on the Goetz Lake allotment is currently available to the public for "limited" motorized travel, meaning they must stay on the road, for those road segments identified on BLM Lakeview Recreation Area maps as available for public use.

Alternative 1 (Proposed Action):

The proposed OHV trail will affect the Bob's Lake Allotment #00592 (approximately 2 miles of proposed trail or 12 acres) and the Three Creeks Allotment # 00679 (approximately 3 miles of trail or 18 acres). The designation of the trail and subsequent use by OHV's will have a direct impact on the amount of forage available for livestock forage utilization on BLM administered lands. The proximity of the trail to the Sand Springs livestock water development and enclosure, which is the only viable livestock watering source in section 36, may cause livestock to avoid the area when approached by OHV users. This will change the distribution of livestock and utilization patterns, which will require additional monitoring and potentially require a change in the existing AMP. Changes in the authorized use or terms and conditions of the authorizations may be required. Changes in authorized grazing use would have to be implemented by documented agreement or decision following consultation, cooperation and consultation with the lessee and other affected interests. (43 CFR 4130.3-3 and 4160.1) In addition, 43 CFR 4110.3-3(a) states: "After consultation, cooperation, and coordination with the affected permittee or lessee, the State having lands or managing resources within the area, and the interested public, reductions of permitted use shall be implemented through a documented agreement or by decision of the Authorized Officer." Any unauthorized off trail OHV use or harassment of livestock will likely exacerbate the situation on the ground and potentially lead to a confrontational situation among the various authorized uses on the BLM administered lands.

Alternative 2 (Fenced Route): The implementation of a fence on both sides of the proposed OHV trail will drastically alter the ability of the livestock operation to occur as presently analyzed under the current AMPs. The east-west fence in sections T21N, R33E sections 1 and 6 will isolate the ground north of the fence from existing water sources, creating a pasture without a livestock water source. This will require that alternative water sources be developed or additional means of watering livestock occur. This will alter utilization patterns and will require further analysis. Any decision or notice of closure requiring modification of authorized grazing use will be in accordance with 43 CFR 4110.3-3, 4130.3-3 and 4160.1. Changes in authorized grazing use would have to be implemented by documented agreement or decision following consultation, cooperation and consultation with the lessee and other affected interests (43 CFR 4130.3-3 and 4160.1). The lands east of the proposed fence on the Bob's Lake Allotment will be isolated from any water source on the allotment. The lands will either be removed from the authorization or permitted use adjusted accordingly. The portion of the Bob's Lake Allotment may be combined with lands on the Three Creeks Allotment and the permitted use adjusted. All adjustments will require that the Three Creeks and Bobs Lake Allotment Management Plans be re-analyzed and any changes made in accordance with the 43 CFR 4110.3-3, 4110.4-2, 4130.3-3 and 4160.1. The noise associated with the OHV use of the fenced trail (physical barrier between livestock and OHV users) may have some initial impact on the livestock utilization of the allotment, but livestock quickly become accustomed to the noise. An example of this can be observed by watching livestock grazing adjacent to busy roads/highways. Fence construction activities should be timed in order to not interfere with the livestock operation. Any unauthorized improper OHV use will have similar impacts as mentioned in alternative 1.

Alternative 3 (Seasonal Closures): The effects of the seasonal closure are the same as for Alternative 1. Due to the implemented AMP and existing rotational nature of the grazing on the affected allotments, the seasonal closures may coincide with the livestock use. In the case that livestock are due to rotate into a pasture with the potential presence of OHV users, a conflict may occur. Livestock may avoid users entirely, or be harassed by OHV's, which could potentially lead to the destruction of fences or injury to livestock. Portions of the pasture that are used by OHVs may also be avoided entirely by livestock. The implementation of the seasonal closures will eliminate conflict between potential authorized OHV use and livestock. Impacts to the vegetative community and loss of forage will be similar in extent to that in alternative 1. At times, when seasonal closures are not in effect, livestock and OHV users may encounter each other on the BLM allotments. Therefore, the impacts will be as stated in the analysis of Alternative 1.

Alternative 4 (No Action): This alternative will have similar impacts to the existing condition. Previous Allotment Management Plans have shown that the current livestock use and other designated uses in the area are compatible and consistent with the Multiple Use Directive outlined in the Spokane Resource Management Plan Record of Decision (ROD) 1987.

Cumulative Effects:

Alternative 1 (Proposed Action): Cumulative effects result from the potential for an increase in recreational use on the Pacific Lake trail. The proximity of people and horseback riders to existing water developments could cause avoidance of these areas by livestock. The potential to

add newly acquired lands into the grazing rotation may offer additional watering points and provide additional forage available for utilization by livestock.

The cumulative effects of combining livestock utilization and OHV use on the allotment may lead to increased livestock use in areas that previously received light or no use without OHV's present. Livestock may change travel patterns (new cow trails) which would lead to areas of soil compaction. Over time, vegetation and forage species composition may change. Areas of soil degradation may be compounded by the presence of OHV use and livestock dusting areas. Currently the non-motorized Odessa to Pacific Lake trail utilizes existing roads and livestock trails (horse and cattle trails). Combining the current non-motorized use and the proposed OHV trail which utilizes portions of the same trail network will increase the erosion potential of the trail system, reduce vegetative cover and eliminate available forage. Livestock may avoid watering facilities when encountering the approach of OHV's. The implementation of the proposed OHV trail would in all probability increase OHV use on Goetz Lake and Pacific Lake allotments. Impacts associated with the interaction of livestock and OHV use would thus proportionately increase respectively.

Alternative 2 (Fenced Route): Cumulative impacts would be similar to those in alternative 1. The additional fence would require maintenance and would increase the workload of the livestock permittee. Arrangements could be made with other user groups to ensure that fences are maintained and the potential conflict of use could be avoided. It may be necessary to incorporate several crossing points into the proposed fence to facilitate the existing permitted livestock use. The portions of the allotment isolated from livestock use by the proposed fence would no longer have impacts associated with livestock utilization. Depending on seasonal variability and the availability of moisture, individual plants in the ungrazed portion would increase in above ground biomass. That portion of the allotments isolated for OHV use by the proposed fence would also be removed from the grazing management system. Any forage within the fenced area would be subject to direct impacts such as plant mortality and erosion associated with concentrated OHV use. The reduction in forage availability would require the review and subsequent change in the grazing authorization. Changes in authorized grazing use would have to be implemented by documented agreement or decision following consultation, cooperation and consultation with the lessee and other affected interests (43 CFR 4130.3-3 and 4160.1).

Alternative 3 (Seasonal Closures): This alternative would have similar impacts as Alternative 1 (Proposed Action). The distinction between this alternative and Alternative 1 is that no impacts will occur from authorized OHV use during the period of the proposed trail closure.

Alternative 4 (No Action): No cumulative effects associated with the proposed OHV trail and livestock will occur under this alternative. By the nature of the no action alternative, the current authorized uses and impacts associated with those uses will not change (refer to the background description).

Public Involvement

On June 1, 2007, the BLM held a public meeting in Odessa to discuss OCACs tentative proposal

for a motorized route in the Lakeview Ranch management unit. The Eastern Washington Resource Advisory Council, an advisory council for the BLM and USDA Forest Service, participated and helped facilitate the meeting. Information from the meeting was used to help identify preliminary alternatives and issues.

In 2008, BLM prepared a scoping letter and made it available for public review from April 24 to May 23, 2008. BLM received 23 comment letters and emails. Specific concerns identified in these scoping comments helped identify the issues, refine the proposed action, and develop alternatives. A number of the comments received were addressed and referenced in the Affected Environment and Environmental Consequences section of this EA. In June 2009, consultation has been initiated with the Department of archaeology and Historic Preservation (DAHP), the Colville Confederated Tribes (CCT), and the Spokane Tribe of Indians.

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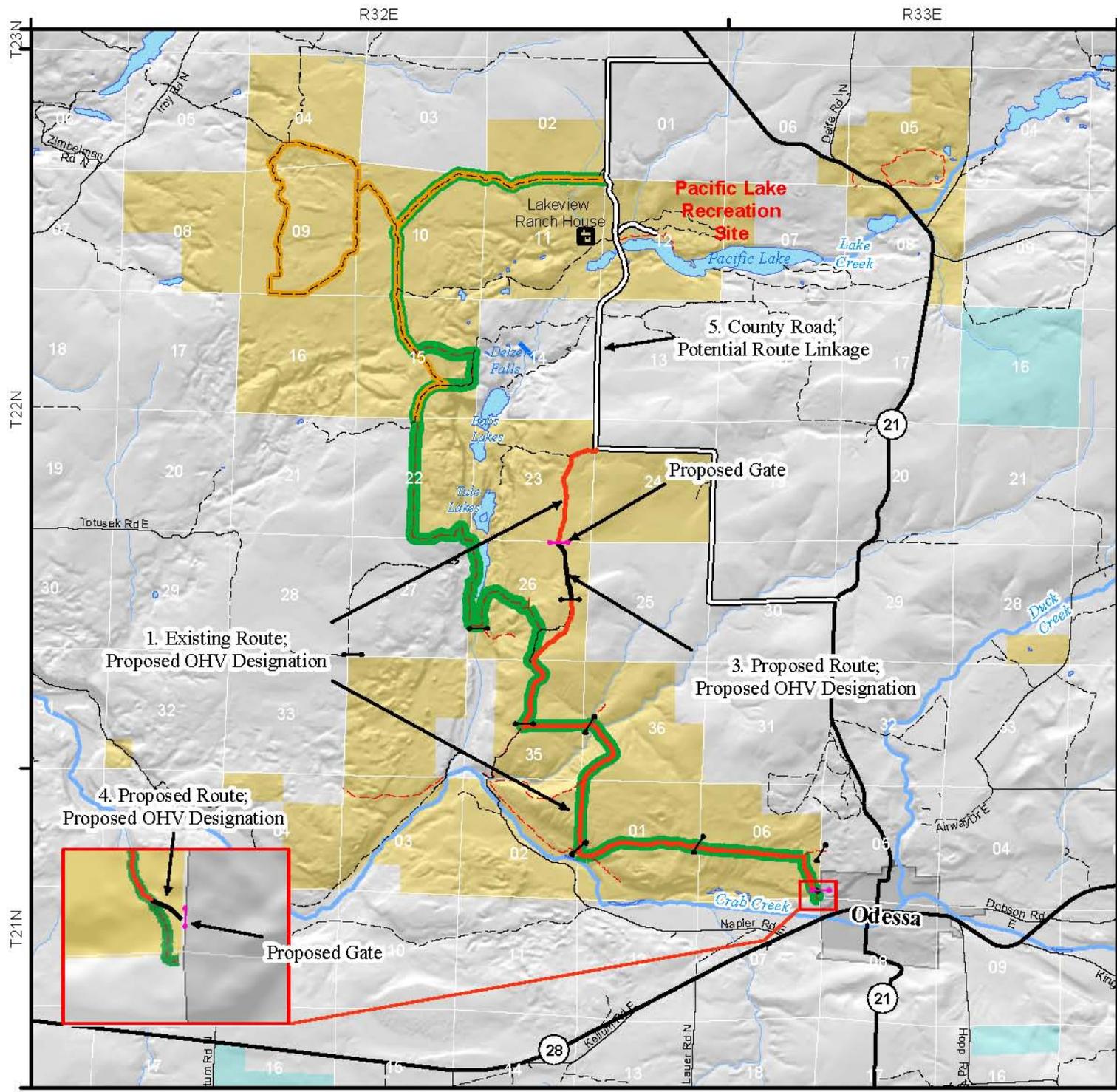
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Proposed OHV Route Lakeview Ranch Area

- Existing Gate
- Proposed Gate
- Existing Trail, Proposed OHV Designation
- Proposed Trail, Proposed OHV Designation
- Access Route
- State Highway
- Improved Road
- Other Road or Trail, Access as Designated
- OHV Use Limited to Designated Road
- Non-Motorized Trail
- Odessa to Pacific Lake Trail
- Lake
- Stream
- Urban Area
- WA Dept. of Natural Resources
- BLM Administered Land



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Attachment 3: Wildlife Species Detailed Affected Environment

Special Status Species (Threatened and Endangered and BLM Sensitive):

Pygmy Rabbit (Federal Endangered): The pygmy rabbit is the only species listed as federally endangered that could occur in the area of potential effect. It is also listed as endangered by the state of Washington. Pygmy rabbits are known to have occurred in Lincoln County within 5.5 miles of the proposed OHV route (WDFW 2008). In 2003 the only known extant pygmy rabbit population in Washington, in Douglas County, was removed for captive breeding. Currently none are known to occur in the wild and the species is considered extirpated in Lincoln county (McAllister 1995). Therefore no effects to pygmy rabbits are expected and it will not be considered further in this document.

Greater Sage-Grouse (BLM Sensitive, Federal Candidate, State Threatened): The greater sage-grouse is an obligate sagebrush species requiring sagebrush throughout its life cycle to provide food and/or cover. The Washington State Recovery Plan for the Greater Sage-Grouse states that “The sage-grouse has been declining in Washington and many parts of its range in North America. The reduction in sage-grouse numbers and distribution in Washington is primarily attributed to loss of habitat through conversion to cropland and degradation of habitat by historic overgrazing and the invasion by cheatgrass and noxious weeds. Sage-grouse occur on about 8% of their historical range in the state. The population is estimated to have declined 62% from 1970 to 2003” (Stinson et al 2004).

The area of potential effect is included in the Crab Creek Sage-grouse Management Area, which historically supported a breeding population of sage-grouse. An adult with young was observed in the area of potential effect 1.75 miles from the proposed OHV route in 1993. In spring and fall 2008 radio-collared sage-grouse were released in the Crab Creek Sage-grouse Management Area as part of an ongoing reintroduction project by the Washington Department of Fish and Wildlife (Schroeder et al 2007). One of the radio-collared sage-grouse was observed in Autumn 2008 in the Lakeview area less than one mile from the proposed OHV route. The Lakeview parcel has been identified as key habitat for the species recovery in the Crab Creek Sage-grouse Management Area, where additional releases of sage-grouse are planned.

Washington Ground Squirrel (BLM Sensitive, Federal and State Candidate): The Washington ground squirrel is a fossorial species of grassland and shrub-steppe habitats that requires deep soils for burrowing. The distribution of this species is limited to the Columbia Plateau south and east of the Columbia River in Washington and between the John River and the Blue Mountains in adjacent Oregon (Rickart and Yensen 1991).

There are active colonies of Washington ground squirrels in the Lakeview area and directly on the proposed OHV route. The Lakeview population consists of two large colonies (>10 individuals) and four satellite colonies (1-5 individuals). One large and one satellite colony is located directly on the proposed route. The large colony occupies an area of shrub-steppe habitat approximately 50 acres in size along 0.6 miles of the proposed trail. The satellite colony is approximately 3 ac along 0.05 miles of the proposed trail. Two other satellite colonies exist on

the existing OHV route to the north. These colonies were discovered in 2004 and 2007 and one had numerous burrows. However, no recent detections have been made at these indicating that these colonies may have declined. A partial survey of the proposed route was conducted in 2008, and a 100% survey of the the entire proposed route (including 10 meters on each side) was conducted in 2009 using a standard protocol, so no other colonies are likely along the proposed route. However, there is potential, based on soils and dispersal distances for the species (Stockman 1981), that undiscovered colonies exist >10 meters from the route. The remaining colonies (one large and one satellite) are located well away for any proposed OHV activity areas. This satellite colony appeared to be extirpated in 2009. The larger colony is isolated from other large colonies and is being intensively managed via trapping and augmentations by WDFW to prevent inbreeding. In 2009, 15-30 individuals were estimated to this colony. This species is an important prey item for ferruginous hawks, burrowing owls, prairie falcons, golden eagles, and badgers. Washington ground squirrel colonies are often used by burrowing owls for nesting sites.

Long-Billed Curlew (BLM Sensitive, State Monitor): The long-billed curlew is a shorebird species that nests on the ground in steppe and open shrub-steppe habitats. Once abundant, long-billed curlews declined as a result of hunting in the 1800s. Protection has helped the birds rebound, and now habitat destruction is their biggest threat. As more and more native grassland is converted to agriculture, the amount of potential long-billed curlew nesting habitat is shrinking (BirdWeb 2008). There is an area of 713 acres of state designated priority curlew habitat in the area of potential effect 1.5 miles from the proposed OHV route (WDFW 2008), and a curlew was observed on the proposed OHV route during May 2008.

Sharp-Tailed Grouse (BLM Sensitive, State Threatened): The entire proposed OHV route is considered historical sharp-tailed grouse habitat. These grouse typically use habitats dominated by perennial grasses interspersed with patches of deciduous trees and shrubs for food and cover throughout the year (Connelly et al. 1998). Most of the historical sharp-tailed grouse habitat in Washington has been converted to cropland. Currently less than 25% remains, and much of this has been degraded and fragmented (Schroeder et al. 2000). Sharp-tailed grouse were observed on private lands southeast of Pacific Lake, approximately 1.48 km from the area of potential effect and 2.25 miles from the proposed OHV route, in 2003 and 2005 (pers. comm., H.Ferguson, District Wildlife Biologist, Washington Department of Fish and Wildlife). This site is believed to be a lek site and there are approximately 65 acres of sharp-tailed grouse habitat within the area of potential effect associated with it.

American White Pelican (BLM Sensitive, State Endangered): Large groups of American white pelicans have been observed in the area of potential effect. Breeding occurrences of this species historically occurred on large lakes in eastern Washington but are currently limited to two islands in the Columbia River. However, eastern Washington still supports a significant number of non-breeding pelicans during the summer and may play an important regional role in sustaining non-breeding summer residents (Doran et al. 1998). This species forages in shallow, open lakes supporting warmwater fish populations. Habitat destruction and human disturbance appear to be the most important factors limiting American white pelican populations in Washington (Motschenbacher 1984). On several occasions groups of pelicans have been observed foraging on Bob's Lake, as recently as 2008. Foraging habitat in the project area has been decreasing as

the local lakes (including Pacific Lake and the southern Bob's Lakes) dry up.

Ferruginous Hawk (BLM Sensitive, State Threatened): There are six records of ferruginous hawk nest sites within 5 miles of the proposed OHV route (WDFW 2008). Three of these are within the area of potential effect, the nearest being within 0.4 mile of the proposed OHV route. The other two nest sites in the area of potential effect are within 50 meters and 0.5 mile of the existing OHV trail. The area of potential effect is within the North Zone identified by the Ferruginous Hawk Recovery Plan (Richardson 1996). This species is very sensitive to disturbance and typically they nest farther away from human habitations than other shrub-steppe raptors, in open country on rocky outcrops, cliffs, isolated trees, power poles, and hillsides. Ferruginous hawks avoid nesting close to large areas of cropland (Richardson et al. 1999). Their diet consists primarily of small and medium sized mammals, although snakes, birds, and insects are also common prey items (Richardson et al. 1999). Ferruginous hawks avoid hunting in landscapes dominated by cheatgrass (Richardson 1996). Their populations may be limited by the absence of nesting sites in undisturbed habitat supporting an adequate prey base (Richardson et al. 1999).

Peregrine Falcon (BLM and State Sensitive): The cliff walls surrounding the Bob's Lake canyon (in the area of potential effect approximately one mile from the proposed OHV route) could provide nesting habitat for the peregrine falcon. This species typically nests on big cliffs (>=150'tall) near open foraging areas, particularly bodies of water. The diet of the peregrine falcon predominantly consists of birds, including waterfowl, shorebirds, doves and pigeons, and songbirds (White et al. 2002). The distribution of this raptor is limited due to the lingering effects of pesticides (DDT) and the lack of suitable nesting sites near foraging areas free from human disturbance (Hays and Milner 1999). Potential foraging habitat in the project area has been decreasing as the local lakes (including Pacific Lake and the southern Bob's Lakes) dry up. A pair of peregrine falcons has nested within 11 miles of the proposed OHV route (but outside of the area of potential effect) for the last several years. An individual peregrine was observed flying in the area of potential effect in 2004.

Bald Eagle (BLM and State Sensitive): A single bald eagle was observed on one occasion in 2005 flying over the area of potential effect approximately 2 miles from the proposed OHV route. Bald eagles typically nest in large trees near marine or freshwater shorelines. Although there could be large trees in the Lake Creek and Crab Creek canyons that might be suitable for nesting, the area of potential effect lacks large bodies of water suitable for foraging. Therefore, no effects to bald eagles are expected and it will not be considered further in this document.

Burrowing Owl (BLM Sensitive, State Candidate): The burrowing owl is a bird of prey that may occur along the proposed OHV route. This owl nests in burrows in open shrub-steppe and steppe habitats (Nordstrom 2003). Although the burrowing owl is capable of digging, the burrows it uses are typically created by other species, including ground squirrels and badgers. The burrowing owl requires areas with suitable soils and fossorial mammal populations to provide nesting habitat and a prey base (Nordstrom 2003). A call and response survey conducted by the BLM along the proposed OHV route in 2008 failed to find any burrowing owls although suitable habitat was present. There are possible historical burrowing owl nest sites in the earthen banks along Sheep Creek adjacent to where the proposed OHV route crosses it. In 2008 these sites

were being used by rodents.

Townsend's Big-Eared Bat, Pallid Bat, and Spotted Bat (BLM Sensitive): The cliff walls potentially provide roosting habitat for three sensitive bat species - Townsend's big-eared bat (state candidate), pallid bat (state monitor), and spotted bat (state monitor). Little is known about the use of talus and cliff habitats by these bat species in the area of potential effect. An unaided acoustic survey performed by the BLM in 2003 in the Bob's Lake canyon noted that bat activity was high.

White-Tailed and Black-Tailed Jackrabbit (BLM Sensitive, State Candidate): Two sensitive species of jackrabbits, white-tailed and black-tailed, may occur along the proposed OHV route. There are numerous sightings of white-tailed jackrabbits in the vicinity of the proposed OHV route (WDFW 2008). Three of these sightings are within the area of potential effect, the nearest within 400 meters of the proposed OHV route. White-tailed jackrabbits use grassland habitats with low densities of sage, typically on hillsides above valley bottoms. Black-tailed jackrabbits (BLM sensitive, state candidate) are typically found in valley bottoms, are more tolerant of higher densities of brush, and use a wide variety of habitats (O'Connell 2007). Jackrabbits are important prey for raptor species, including the ferruginous hawk and golden eagle. Jackrabbits were once so common that rabbit drives were held to reduce their numbers. Currently their numbers are so diminished that the hunting season for both species of jackrabbit is closed year round.

Sagebrush Lizard, Striped Whipsnake, Side-Blotched Lizard, and Night Snake (BLM Sensitive): There are four BLM sensitive reptile species potentially occurring along the proposed OHV route – the sagebrush lizard, striped whipsnake (both state candidate), side-blotched lizard, and night snake (state monitor). Little is known about the distribution of these species in the area of potential effect, although both the sagebrush lizard and the striped whipsnake have been observed within six miles of then proposed OHV route but outside of the area of potential effect (WDFW 2008). Conversion of shrub-steppe habitats to agricultural or urban uses and the invasion of cheatgrass are the primary threats to these species (Hallock and McAllister 2005).

Other Species of Concern:

Golden Eagle (State Candidate): The golden eagle is the largest raptor potentially occurring in the area of potential effect, and is also protected by the Bald Eagle Protection Act 1940. This species uses cliffs and less commonly large trees for nest sites although they typically avoid the interiors of forested areas. Golden eagles depend upon a prey base of medium- and small- sized mammals, such as jackrabbits, marmots and ground squirrels, as well as grouse, pheasant and pigeon (Watson and Whalen 2003). This species is limited by habitat conversion, lack of suitable undisturbed nesting sites, and reductions in prey base (Watson and Whalen 2003). Incidental observations of a single golden eagle flying over the area of potential effect within 1.3 miles of the proposed OHV route were made in 2004 and 2008.

Merlin (State Candidate): Merlins could potentially winter in the area of potential effect as well as pass through as a migrant (Wahl et al. 2005). During the winter this falcon will use a variety of open habitat types and preys upon small- to medium-sized birds (Warkentin et al. 2005).

Christmas Bird Count data indicate that the wintering population of merlins in Washington increased 1.5% annually during the years 1959 through 1988 (Sauer et al. 1996).

Shrub-steppe Obligate and Migratory Songbirds

The sage sparrow, sage thrasher, and Brewer's sparrow are all sagebrush obligate bird species that occur in the area of potential effect.

Sage sparrows (state candidate) in Washington are geographically isolated from the majority of the species population that is found in the Great Basin. Increased development and destruction of shrub-steppe habitat have contributed to a range-wide decline in the sage sparrow population. Breeding Bird Survey data for the Columbia Plateau shows an annual decline of 4.29% for this species for the period of 1997 to 2007 (Sauer et al. 2008). Less than 20% of the existing steppe area in eastern Washington is considered preferred sage sparrow habitat, and much of that is patchily distributed. Sage sparrows are sensitive to fragmentation of sagebrush cover and are found more frequently in areas of extensive (>2,470 acres) shrub-steppe (Vander Haegen et al. 2001) and will abandon habitat that has been taken over by cheatgrass (Vander Haegen et al. 2001). Sage sparrows have been observed repeatedly during point count surveys in the area of potential effect and incidentally within 0.4 mile of the proposed OHV route.

Sage thrashers (state candidate), similar to the sage sparrows, typically use areas with extensive sagebrush cover, avoiding areas dominated by cheatgrass (BirdWeb 2008). Sage thrashers are less sensitive to habitat fragmentation than sage sparrows and will nest in fragments of sagebrush surrounded by agricultural development, although nest predation may be higher at these sites (Vander Haegen 2003). Rangeland this species has declined rapidly in many areas and has been extirpated from some (BirdWeb 2008). Breeding Bird Survey data for the Columbia Plateau shows an annual decline of 4.00% for this species for the period of 1997 to 2007 (Sauer et al. 2008). This species has been frequently observed during point count surveys in the area of potential effect and nine thrashers (including one pair) were observed on the proposed OHV route during a survey in 2008.

The Brewer's sparrow is also a sagebrush obligate species and the most abundant bird in the intermountain west during Spring and Summer (Rotenberry et al. 1999). Recently, Brewer's sparrow numbers have declined significantly throughout its breeding range (Rotenberry et al. 1999), possibly due to habitat loss and fragmentation (Rotenberry et al. 1999). In Washington Brewer's sparrow nests in fragmented shrub-steppe habitats showed evidence of lower nesting success than in continuous unbroken areas (Vander Haegen et al. 2001). Breeding Bird Survey data for the Columbia Plateau shows an annual decline of 3.16% for this species for the period of 1966 to 2007 (Sauer et al. 2008). Brewer's sparrows are one of the most frequently observed species observed during point count surveys in the area of potential effect. They are commonly found along the proposed OHV route in shrub-steppe habitats.

The loggerhead shrike (state candidate) uses more open areas than the sage thrasher or sage sparrow and could occur in both shrub-steppe and steppe habitats in the area of potential effect. Scattered trees or shrubs with dense foliage are used for nesting. Areas with dense cheatgrass are avoided (Vander Haegen et al. 2001). Loggerhead shrikes are highly territorial, maintaining larger territories than other insectivorous perching bird species of similar size (Vander Haegen

2003). Numbers of loggerhead shrikes have declined across North America (BirdWeb 2008) (Vander Haegen 2003). Possible factors limiting populations of this species include loss of breeding habitat, loss of wintering habitat, contamination by pesticides, and high mortality due to vehicle collisions (Vander Haegen 2003). Loggerhead shrikes have been observed repeatedly during point count surveys in the proposed OHV route vicinity and incidentally within 150 meters of the proposed OHV route. A nesting pair was observed 360 meters from the proposed OHV route in 2003.

The grasshopper sparrow (state monitor) is a breeding resident of steppe habitats, preferring grasslands with sparse shrub cover. This species prefers large tracts of habitat over smaller fragments (Vickery 1996). Grasshopper Sparrows were more numerous before large tracts of shrub-steppe habitat were converted to intensive agriculture (BirdWeb 2008). Habitat loss, fragmentation and degradation are the primary factors causing the species decline in North America (Vickery 1996). Breeding Bird Survey data for the Columbia Plateau shows an annual decline of 4.16% for grasshopper sparrows for the period of 1966 to 2007 (Sauer et al. 2008). This species has been frequently observed during point count surveys in the area of potential effect and singing males were observed along the proposed OHV route in 2008.

There are colonies of northern rough-winged swallows and bank swallows nesting in the steep earthen banks along the Sheep Creek corridor. These sites are in highly erodible soils immediately adjacent to the proposed OHV route. There are also colonies of these species in the banks along Crab Creek within the area of potential effect. Breeding Bird Survey data from the last 30 years for these two species do not indicate any significant population trends (Sauer et al. 2008). Potential nesting habitat for these two species may be increasing due to man's activities, such as sand and gravel quarries and road cuts. Both species seem tolerant of disturbance due to human activity, and will nest in areas of high human activity, including active sand and gravel pits (Garrison 1999, De Jong 1996).

Swainson's Hawk (State Monitor): The Swainson's hawk nests in isolated trees in steppe and shrub-steppe habitats (England et al. 1997) and in Washington typically preys on pocket gophers and snakes (Wahl et al 2005). This species commonly forages in agricultural fields (particularly hay fields) as well as native habitats. Swainson's hawk numbers and/or distribution have been reduced from historical levels throughout its range (England et al. 1997). Nesting Swainson's hawks may habituate to regular ongoing noises in urban and agricultural settings but are intolerant of loud, irregular, unpredictable activities (England et al. 1997). There are numerous records of Swainson's hawk nest sites within 10 miles of the proposed OHV route. Only one of these records is within the area of potential effect, approximately within 1.5 miles from the proposed OHV route (WDFW 2008). An individual was observed flying over the area of potential effect in 2006.

Prairie Falcon (State Monitor): The prairie falcon nests primarily on cliff ledges in shrub-steppe and steppe habitats (Steenhof 1998). This species also winters in eastern Washington. Their primary prey include ground squirrels, meadowlarks, and horned larks (Hays and Dobler 1999). Despite some declines in developed areas, overall the current population is stable (BirdWeb 2008). Habitat loss remains a threat to prairie falcons because of their need for steppe and shrub-steppe habitats near suitable cliff nesting ledges, which are limited in distribution (Hays and

Dobler 1999). Prairie falcons have been observed occasionally during breeding bird surveys in the area of potential effect. Pairs have nested within the area of potential effect in the cliffs above Bob's Lake for several years, including 2007 and 2008.

Merriam's Shrew (State Candidate): The Merriam's shrew is an insectivorous resident of steppe and shrub-steppe habitats. This species will use the runways and burrows of other small mammals including the sagebrush vole, although there is evidence to suggest that the Merriam's shrew is not dependent on these other species (Azerrad 2004). The shrew's lack of mobility and its apparent dependence on shrub-steppe and steppe habitats suggests that loss of this habitat type has negatively impacted populations in Washington (Azerrad 2004). Information about the presence of this species in the area of potential effect is lacking, but suitable habitat is distributed throughout the area of potential effect.

Sagebrush Vole (State Monitor): The sagebrush vole is an herbivorous, fossorial, colonial resident of shrub-steppe habitats with loose well-drained soils. Typically this vole occurs where brush is scattered and grasses sparse (Johnson and Cassidy 1997). Sagebrush voles have been observed in the area of potential effect (pers. comm. Schroeder, M. Wildlife Biologist, Washington Department of Fish and Wildlife). Many of the 58 burrow entrances in the 1.25" to 5" range counted along the proposed OHV route during a Washington ground squirrel survey in Spring 2008 could have been sagebrush vole burrows, which have entrances in the 1.6-2.0 (40-50 mm) range. Suitable habitat for the sagebrush vole is distributed throughout the area of potential effect.

Northern Grasshopper Mouse (State Monitor): The northern grasshopper mouse is a solitary, fossorial rodent found in open, sandy, sagebrush habitats, often in the more mesic areas within these habitats (O'Connell 2007). The diet of this species is predominantly insects and other arthropods, although other small mammals may be preyed on. In winter they consume plant materials (O'Connell 2007). This species is difficult to trap and records of occurrences in Washington are sparse (Johnson and Cassidy 1997). Information about the presence of this species in the area of potential effect is lacking.

American Badger (State Monitor): The badger is a carnivorous, fossorial resident of steppe and sagebrush steppe habitats with deep soils. A recent study in Lincoln County showed that badgers were associated with big sagebrush and basin wildrye (Paulson 2007). This study also found that the most common prey were northern pocket gophers (Paulson 2007). Other common prey species are ground squirrels (NatureServe 2008) and voles (Shefferly 1999). Abandoned badger burrows are used by many fossorial species, including burrowing owls and Washington ground squirrels. The species is common across its range but probably has declined substantially in areas converted from native habitats to intensive agriculture and where colonial rodents such as prairie dogs and ground squirrels have been reduced or eliminated (NatureServe 2008). This species is considered a furbearer although there is no season for trapping in Washington. Abandoned badger burrows are common in the area of potential effect and along the proposed OHV route.

Small-Footed Myotis, Long-Legged Myotis, Long-Eared Myotis, Fringed Myotis, and Canyon Bat (State Monitor): Two species of insectivorous bat, the small-footed myotis and the long-

legged myotis, are known to occur in the area of potential effect. An additional three species, the long-eared myotis, fringed myotis, and canyon bat may occur in the area of potential effect. All five species are state monitor species known to roost in cliff and rock crevices. Small cliffs and talus slopes are common along the proposed OHV route and in the area of potential effect. The steep, tall cliff walls surrounding the Bob's Lake canyon in the area of potential effect provide large amounts of potential roosting habitat for these species. High levels of bat activity have been observed in the Bob's Lakes canyon. The long-eared myotis, long-legged myotis, and fringed myotis will also roost under tree bark and in tree hollows, which may occur in the Crab Creek riparian corridor in the area of potential effect. Little is known of the natural history of these species in the Lakeview area, including population trends. A capture survey in 2002 using mist-nets trapped a small-footed myotis and a long-legged myotis. The site for this survey was on the Crab Creek corridor 0.2 mile outside of the area of potential effect, but within 0.7 mile of the proposed OHV route.

Tiger Salamander (State Monitor): Tiger salamanders occur primarily in arid shrub-steppe habitats (Hallock and McAllister 2005). Knowledge of the life history, population ecology and trends, and habitat requirements of this species in Washington is limited (Hallock and McAllister 2005). Although breeding takes place primarily in perennial ponds, seasonal ponds are also used (Hallock and McAllister 2005). When not breeding, adult terrestrial tiger salamanders are typically found underground in burrows within two kilometers of ponds or wetlands, although they will spend time aboveground at night. The species may be limited by the introduction of predatory fish to perennial ponds, and the use of larvae for bait may threaten some populations. Larval die-offs have been reported in Lincoln County (Hallock and McAllister 2005). A lack of perennial or long-term water bodies along the proposed OHV route suggests that tiger salamanders would not be expected along the proposed OHV route; however, there are suitable ponds within the area of potential effect. There are approximately 4,730 acres of upland tiger salamander habitat (within 2 km of suitable water) in the area of potential effect. Museum records indicate historical occurrences of tiger salamanders within the area of potential effect at Bob's Lake (WDFW 2008), and at Bulgarian's Lake, which is within 1.2 kilometers of the area of potential effect.

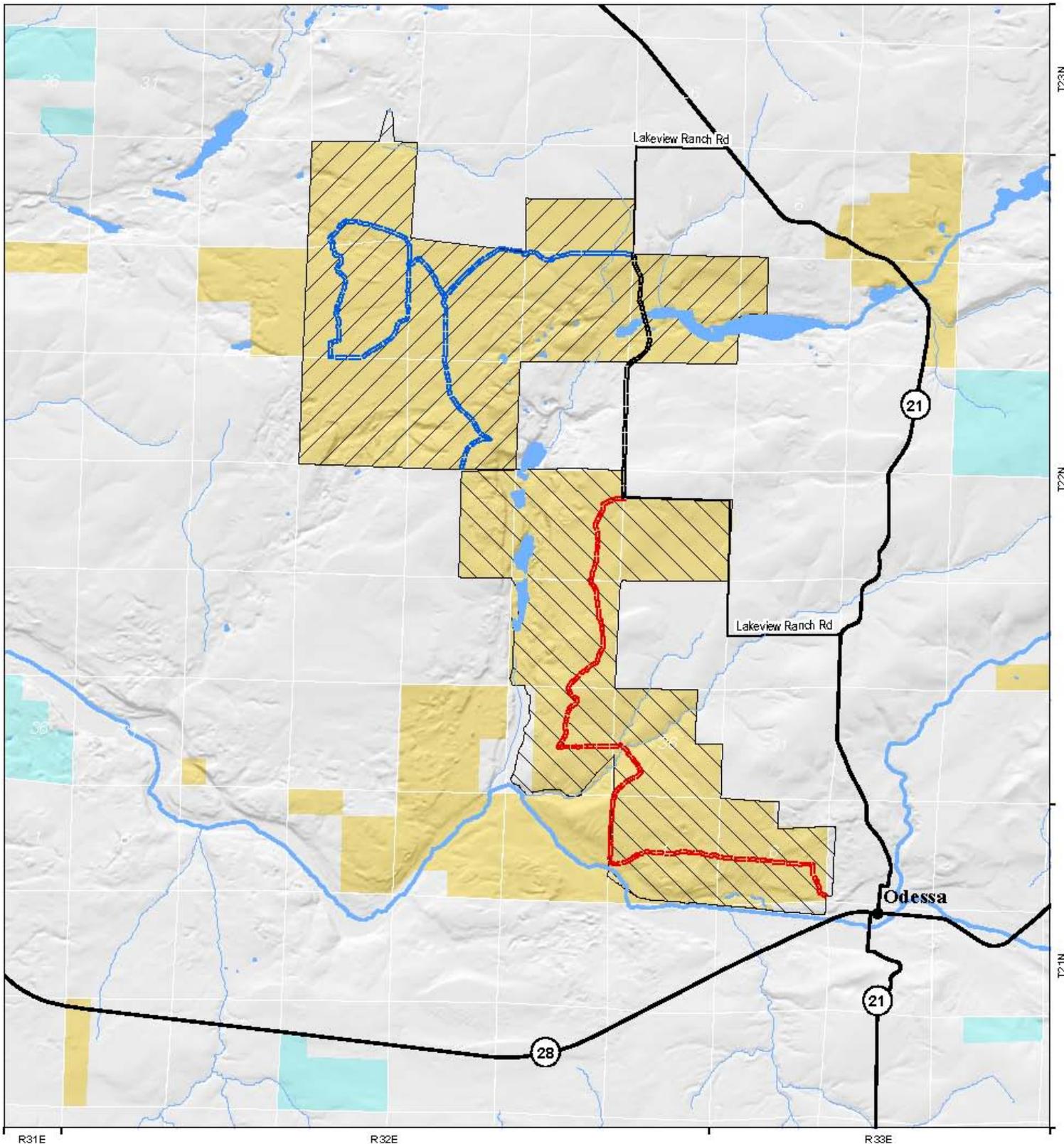
Short-Horned Lizard (State Monitor): The short-horned lizard occurs in Washington primarily in shrub-steppe habitats (Hallock and McAllister 2005). Studies in Kittitas County found that the species typically occurs in areas of sparse brush and grass cover and suggested that it requires a variety of soil types (including lithisol and loamy soils) to complete its life cycle (Hallock and McAllister 2005). Short-horned lizards primarily eat ants as well as other insects. There have been anecdotal reports of declines in local populations in Washington. Conversion of habitats to agricultural or urban uses is believed to be the main threat to this species (Hallock and McAllister 2005). A Short-horned lizard was observed incidentally in the area of potential effect in 2002. Surveys have not been conducted for this species.

Racer (State Monitor): The racer occurs in a variety of open habitats. Racers typically use the same summer ranges and winter den sites from year to year. Their diet includes lizards, small rodents, other snakes, frogs, birds and insects (St. John 2002). The species is believed to be widespread, abundant, and secure in Washington (Hallock and McAllister 2005), although the Puget Sound population is believed to be extirpated (St. John 2002). Little is known about the

distribution of these species along the proposed OHV route, however suitable habitat is distributed throughout the area of potential effect.

Mule Deer (Game): The mule deer is a popular game animal that is relatively common in shrub-steppe habitats. Wooded riparian areas provide important habitat for fawning mule deer. Its diet in shrub-steppe habitats is diverse, but forbs and the early growth of shrubs are important (Vander Haegen et al. 2001). Mule deer are incidentally observed with regularity in the area of potential effect, which is in Game Management Unit (GMU) 136. The mule deer population in GMU 136 is considered stable, although severe winters can cause die-offs. It can take several years for the populations to recover from severe winter events (WDFW 2007). The majority of the use of the currently designated OHV trail occurs during the general hunting season for mule deer.

Attachment 4: Area of Potential Disturbance (APD)



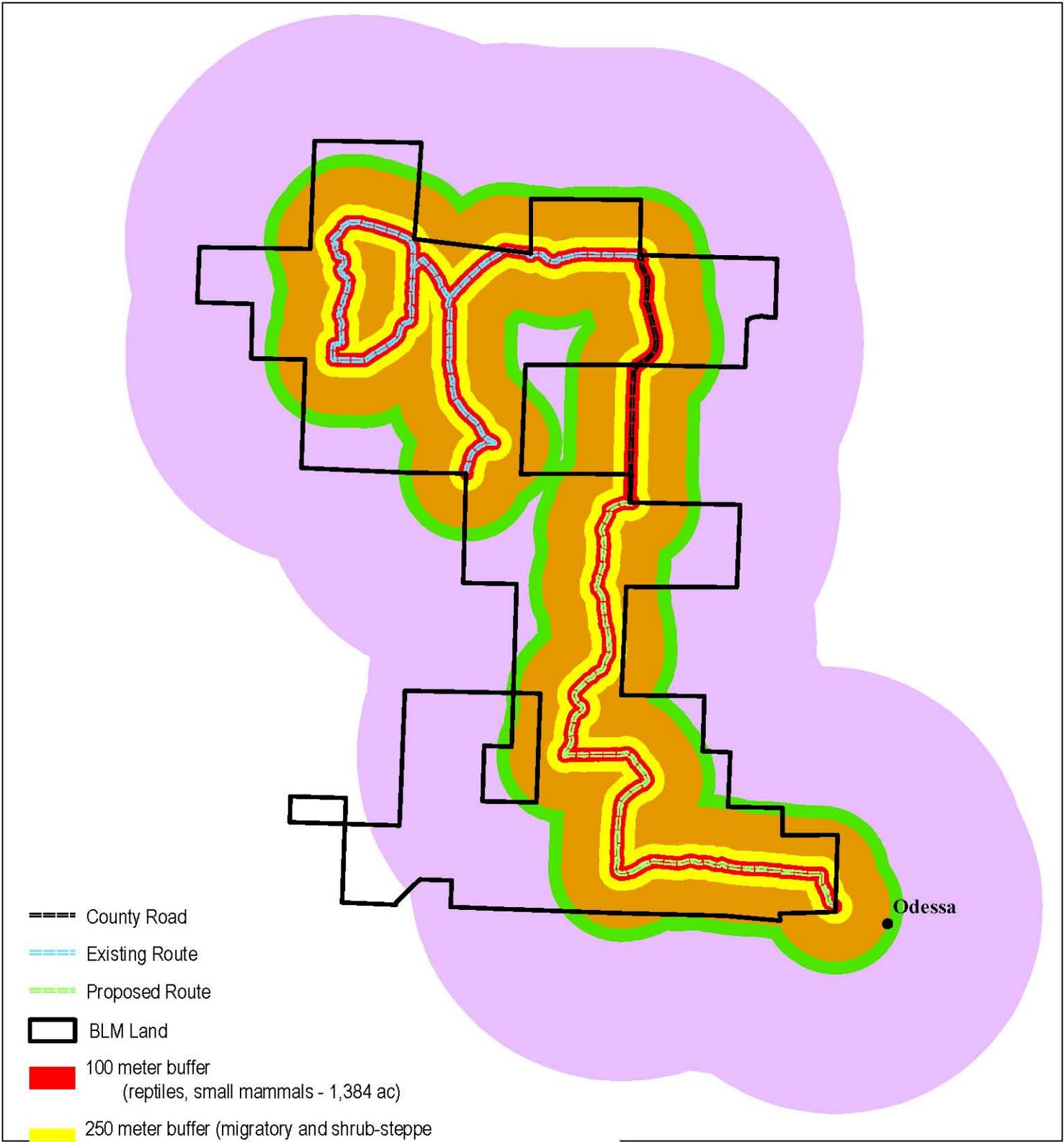
- County Road
- Existing Route
- Proposed Route
- State Highway
- Bureau of Land Management
- WA Dept. of Natural Resources
- APD - Existing Route
- APD - Proposed Route



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notice.



Attachment 5: Wildlife Disturbance Areas



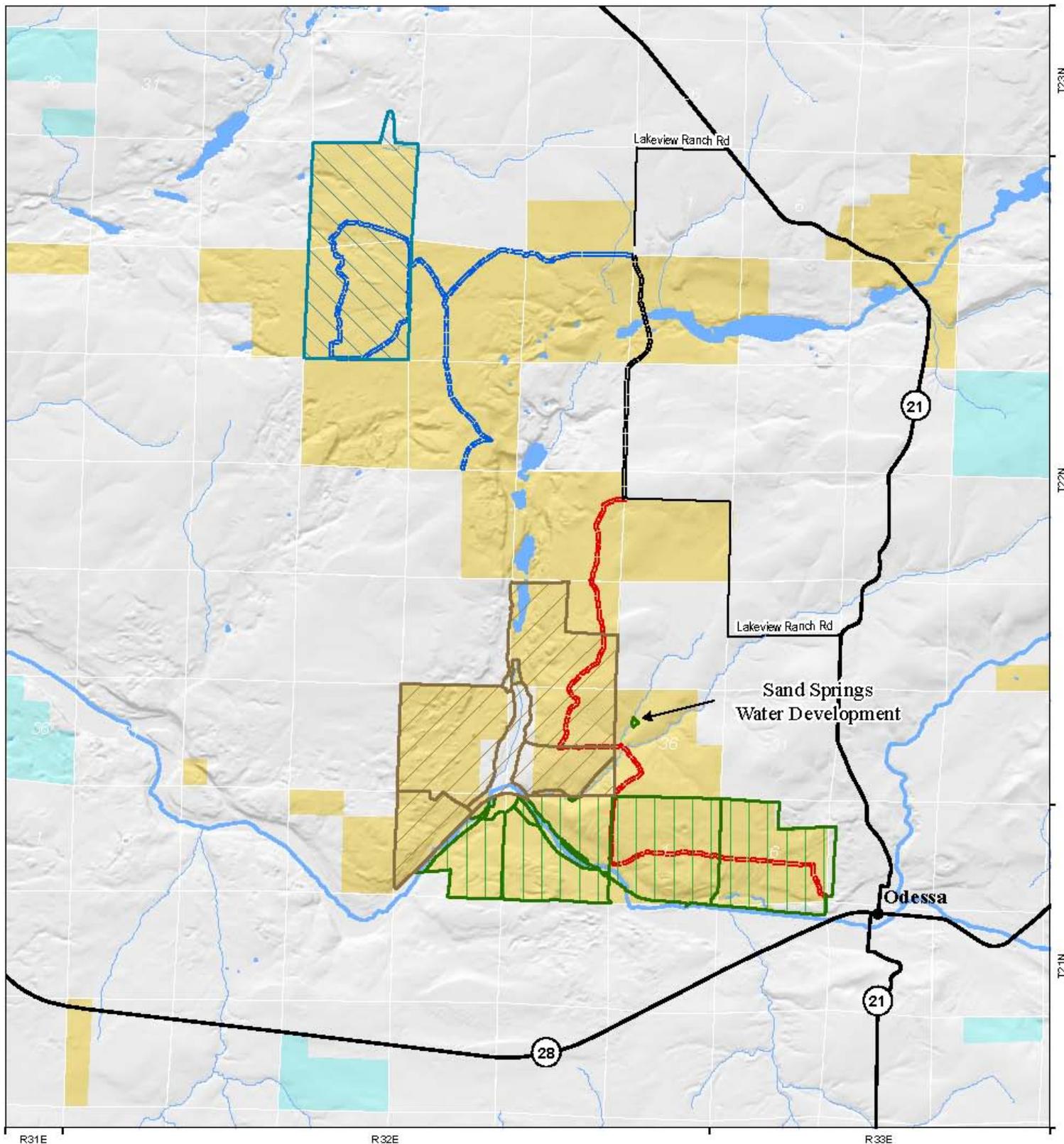
-  County Road
-  Existing Route
-  Proposed Route
-  BLM Land
-  100 meter buffer
(reptiles, small mammals - 1,384 ac)
-  250 meter buffer (migratory and shrub-steppe
obligate birds, jackrabbits, curlew, WA ground squirrel - 3,388 ac)
-  805 meter buffer
(mule deer - 10,072 ac)
-  1000 meter buffer
(ferruginous hawk - 12,346 ac)
-  3058 meter buffer
(sage grouse - 35,324 ac)



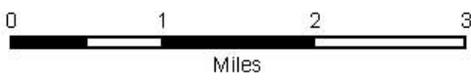
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.



Attachment 6: Affected Allotments



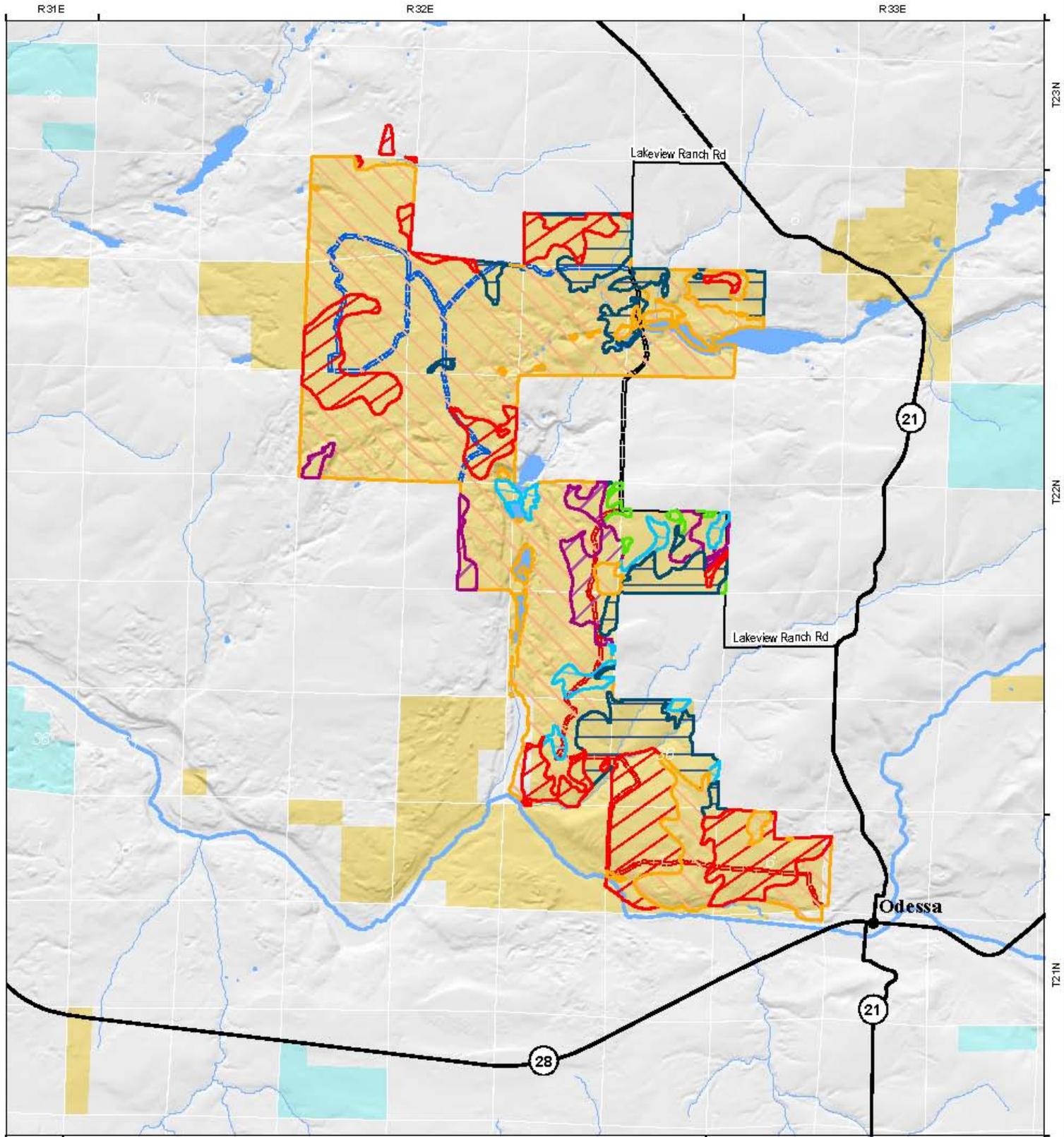
- County Road
- Existing Route
- Proposed Route
- State Highway
- Allotment 00592
- Allotment 00661
- Allotment 00679
- Bureau of Land Management
- WA Dept. of Natural Resources



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Attachment 7: Affected Soils



- County Road
- Existing Route
- Proposed Route
- State Highway
- Bureau of Land Management
- WA Dept. of Natural Resources
- Roloff silt loam - Map Symbol 60
- Ritzville silt loam - Map Symbol 61
- Roloff-Bakeoven-Rock outcrop complex - Map Symbol 65
- Starbuck cobbly silt loam - Map Symbol 75
- Strat very cobbly silt loam - Map Symbol 76
- Stratford gravelly silt loam - Map Symbol 77



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