



**Zayo Prineville to Reno Fiber Optic
Project**

Horizontal Directional Drilling
Inadvertent Returns

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Prepared for:

Zayo Group LLC
18110 SE 34th Street, Ste. 100
Vancouver, Washington 98683

Prepared by:

Stantec Consulting Services Inc.
1340 Treat Boulevard, Suite 300
Walnut Creek, CA 94597

ZAYO PRINEVILLE TO RENO FIBER OPTIC PROJECT

Horizontal Directional Drilling Inadvertent Returns

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Abbreviations

ac	acres
applicant	Zayo Group, LLC
ADI	area of direct impact
APM	applicable proposed measure
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
EI	Environmental Inspector
HDD	horizontal directional drilling
ILA	in-line amplifier
IR	Inadvertent Return
Plan	Horizontal Directional Drilling Inadvertent Returns Contingency Plan
project	construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada
RRP	Revegetation and Restoration Plan
US 395	U.S. Highway 395



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1 Introduction

This Horizontal Directional Drilling (HDD) Inadvertent Returns (IRs) Contingency Plan (Plan) provides specific preventive and mitigative measures to be used by the contractors during HDD installation. This is a preliminary Plan, and more specific procedures will be developed by Contractors for each location based on site-specific conditions. HDD operations potentially pose a risk to wetlands and water bodies through IRs. An IR occurs when the drilling fluid is released through fractured bedrock and sands. Drilling fluid typically consists of a mixture of bentonite, water, and soil cuttings. This mixture is not hazardous or toxic, but it could potentially affect the water quality of a waterbody if it were introduced.

IRs can occur at any place along any point of an HDD installation, although they are more likely to be observed at the entry and exit points (i.e., locations where the drilling bit or head is shallow). If an IR occurs and no control measures are in place, the drilling fluid could potentially reach the surface water or wetland that is above the HDD installation. This contingency plan outlines measures to minimize the potential for IRs; addresses the methodology that will be used for detection of IR; and describes countermeasures to be taken should an IR be detected.

2 Project Overview

Zayo Group, LLC (applicant), a California telephone corporation, proposes the construction and operation of an underground fiber optic network from Prineville, Oregon, to Reno, Nevada (project), spanning 433.8 miles. The purpose is to improve the quality of rural broadband in south-central Oregon, northeastern California, and northwestern Nevada, and to make affordable broadband internet services available to currently underserved communities in these areas.

The portion of the project in California would extend 194 miles across the northern edge of Modoc County (59.8 miles) and the city of Alturas (1.6 miles), through Lassen County (129.6 miles), and along the eastern edge of Sierra County (3.1 miles). In Modoc County, the project crosses through Alturas and unincorporated communities, including New Pine Creek, Davis Creek, Ramsey, and Likely. Within Lassen County, the project traverses the communities of Sage Hen, Pinnio, Madeline, Brockman, Moran, Termo, Viewland, Litchfield, Standish, Buntingville, Milford, and Doyle. In Sierra County, the project does not pass through any cities or census-designated communities. To minimize environmental impacts, the project has been sited along existing rights-of-way where other utilities are currently located. Most of the project would follow U.S. Highway 395 (US 395). A portion of the line between the communities of Standish and Buntingville in Lassen County would follow Standish Buntingville Road (Lassen County Road A3) for 7.35 miles and Cummings Road for 1.15 miles before returning to the right-of-way parallel to US 395 (Appendix A Figure 1).



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Along most of the route, conduit to house the new fiber optic cable would be buried using a combination of plowing or trenching construction techniques. Ancillary equipment would be installed at three small buildings that would serve as in-line amplifier (ILA) sites. Fiberglass vaults would be installed flush to the ground along the running line to provide maintenance access and at splice locations. All construction activities would be conducted in compliance with California Department of Transportation (Caltrans) requirements and county utility encroachment permit procedures. The applicant would be installing conduit beyond the immediate need of the current project to provide future increased capacity.

3 Project Location

The California segment of the project is located in Modoc, Lassen, and Sierra Counties, California. The study area encompasses approximately 5,976 acres (ac) and consists of a linear alignment running approximately 192 miles along US 395 from the California-Oregon border to the California-Nevada border as shown in Appendix A Figure 1. Table 1 provides the 7.5-minute U.S. Geological Survey quadrangles and township, range, and sections that fall within the study area.

Table 1. Quadrangles and Township, Range, & Sections

Quad	Township/Range	Section(s)									
Alturas	41N 12E	1	2	11	12	13	24				
	42N 12E	12	13	14	23	24	26	35			
Anderson Mtn	36N 13E	8	17	19	20	29	30	32			
Beckwourth Pass	22N 17E	2	11	14	23						
	23N 17E	1	2	11	14	23	25	26	35	36	
Constantia	23N 17E	1									
	24N 17E	2	11	12	13	24	25	36			
	24N 18E	30	31								
	25N 17E	21	27	28	34	35					
Davis Creek	44N 14E	5									
	45N 14E	8	17	20	29	32					
Doyle	25N 17E	6	7	8	17	18	20	21			
Evans Canyon	21N 17E	1	12								
	21N 18E	18	19								
	22N 17E	23	26	35	36						
Five Springs	31N 15E	2									
	32N 15E	23	26	35							
Herlong	26N 15E	11	12								



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Quad	Township/Range	Section(s)										
Infernal Caverns	39N 13E	5										
	40N 13E	5	8	17	20	29	32					
	41N 12E	24	25									
	41N 13E	30	31									
Karlo	31N 15E	2	10	11	14	15	22	27	34			
	32N 15E	35										
Lauer Reservoir	44N 13E	25										
	44N 14E	5	7	8	18	19	30					
Likely	38N 13E	5	8	17								
	39N 13E	5	8	17	20	29	32					
Litchfield	29N 14E	10	11	14	15	16						
Madeline	37N 13E	3	9	10	16	21	28	32	33			
	38N 13E	16	17	21	27	28	34					
Mahogany Ridge	42N 12E	1	12									
	42N 13E	5	6	7								
McDonald Peak	35N 13E	10	14	15	23							
	36N 13E	5	8	32	33							
	37N 13E	32										
McKesick Peak	25N 16E	1										
	25N 17E	6										
	26N 15E	11	12	13								
	26N 16E	7	17	18	20	21	22	26	27	35	36	
Milford	26N 15E	2	3	4	11							
	27N 14E	25	26									
	27N 15E	30	31	32	33							
Ravendale	33N 14E	1										
	33N 15E	6										
	34N 14E	15	22	23	25	26	36					
Shaffer Mtn	29N 14E	13	14									
	29N 15E	4	8	9	17	18						
	30N 15E	3	10	15	22	27	33	34				
	31N 15E	34										
Shinn Mtn	32N 15E	14	23									
Snowstorm Mtn	32N 15E	3	4	9	10	11	14	15				
	33N 15E	6	7	8	17	18	20	28	29	33		



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Quad	Township/Range	Section(s)									
Standish	28N 13E	1	2	11	14	23	24	25			
	28N 14E	5	6								
	29N 14E	15	16	17	20	21	29	32			
Stony Ridge	27N 14E	5	6	8	9	16	21	22	26	27	
	28N 13E	25	36								
	28N 14E	31									
Sugar Hill	45N 14E	5	8								
	46N 14E	3	4	9	15	16	21	22	28	32	33
	47N 14E	34									
Surprise	42N 13E	4	5								
	43N 13E	1	2	11	14	22	23	27	28	33	
	44N 13E	25	36								
Termo	34N 14E	5	6	8	9	15	16				
	35N 13E	23	25	26	36						
	35N 14E	31									
Tule Mountain	38N 13E	17									
Willow Ranch	47N 14E	1	2	11	14	15	22	23	27	34	
	48N 14E	24	25	36							

The approximate center of the study area is located at latitude 40.74027 degrees, longitude -120.3196 degrees (World Geodetic System of 1984). The study area is shown in figures 1 through 33 of the Aquatic Resources Delineation Report (Appendix B).

4 Fiber Optic Line Installation

The project would involve the installation of an underground fiber optic network. Construction would primarily be performed using plowing or trenching. Alternatively, HDD would be used under water bodies, roads, or other areas that are necessary to avoid sensitive or protected biological or cultural resources. Note that for some water- or road-crossing locations, the conduit may be affixed to the side or underside of bridges. Appendix A Figure 2 shows a representation of how aquatic features will be avoided.

Ancillary equipment would be installed within regeneration huts at ILA sites. Along with these ILA sites, the project would install fiberglass vaults flush to the ground surface to provide maintenance access at splice locations. A summary of construction footprints assumed is shown in Table 2.



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Table 2. Summary of Construction Footprints Assumed

Construction Area	Footprint Assumptions
Set-up Areas (all would occur within the area of direct impact [ADI])	<ul style="list-style-type: none"> Standard setup area (up to 20 feet long by 20 feet wide): the standard setup area, representing temporary disturbance, would be 20 feet long by up to 20 feet wide and would be entirely contained within the ADI. Longer setup area (up to 60-feet long by 20-feet wide): the longer setup areas for longer bores, representing temporary disturbance, would be up to 60 feet long by 20 feet wide and would be entirely contained within the ADI.
Entry/Exit Pits (all would occur within the ADI)	<ul style="list-style-type: none"> Within the setup areas as described above, the temporary impact footprint of the entry and exit pits would be 4 feet long by 1 foot wide by 1 foot deep. Following the installation of the conduits, the bore pits would be filled and compacted or converted to vaults. If the bore pits are converted to vaults, the permanent impact footprint of each would be 30 inches long by 48 inches wide. The dimensions of each three-vault excavation area would be 15 feet long by 3 feet wide by 3 feet deep.
Bores (all would occur within the ADI)	<ul style="list-style-type: none"> Depth: Bores would be approximately 42 inches deep where no environmental resources are present. However, bores have the design capability to placed up to 30 feet deep as needed to avoid potential impacts to environmental resources; but the exact depth would vary based on the type of resource being avoided. Length: Bores would be approximately 750 feet long where no environmental resources are present. However, bores have the design capability to extend up to 2,500 feet long to avoid potential environmental resources without needing to be split into two bores. Bores greater than 2,500 feet would be split into two bores.

5 Aquatic Features

Aquatic resources, including wetlands and other waters, which are considered waters of the United States, waters of the State, or protected under Section 1602 of the Fish and Game Code are present within the study area described in the Aquatic Resources Delineation Report (Appendix B). Wetlands include riparian wetland, riparian fresh emergent wetland complex, fresh emergent wetland, seasonal wetland, wetland swale, and wetland seep spring. Other waters include perennial stream, intermittent stream, ephemeral stream, irrigation canal, vegetated ditch, non-vegetated ditch, and pond. All aquatic features will be avoided using the methods described above in Section 4. All measures in this plan apply to wetlands and other waters.

The boundaries and area of aquatic features occurring in the study area are illustrated in Appendix C (Figures 3-1 through 3-341). A total of 238.212 ac of aquatic features were delineated. A summary of the delineated features is presented in Table 3 below.



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Table 3: Potential Waters of the United States Summary

Potential Waters of the United States	Total Acres	Total Linear Feet	Cowardin Type ¹
Wetlands			
Riparian Wetland	14.249	N/A	PSS, PEM, PEM/PSS, PFO, PSS/PFO, R4SB, R5, R4UB, R3UB, R3SB
Riparian Fresh Emergent Wetland Complex	26.475	N/A	PEM, PEM/PSS, PSS
Fresh Emergent Wetland	67.223	N/A	PEM, PEM/PSS
Seasonal Wetland	94.700	N/A	PEM, PEM/PSS, PSS
Wetland Swale	1.402	N/A	PEM, PEM/PSS, PSS
Wetland Seep Spring	1.749	N/A	PEM, PEM/PSS
Other Waters			
Perennial Stream	12.753	3,120.569	R3SB, R2AB, R5UB, R3UB, RFT, R4SB, R2UB, R2AB, R4UB
Intermittent Stream	2.324	11,872.253	R4SB
Ephemeral Stream	3.758	34,588.139	R4SB, R4UB, R5, RFT, R5UB, R5SB
Irrigation Canal	3.816	5,148.898	R4UB, R4SB, R5UB, R3UB, R3SB, R5
Vegetated Ditch	0.016	191.428	R4UB
Non-Vegetation Ditch	0.123	2,105.88	R4SB, R4UB, R5UB
Pond	9.624	N/A	PUB, L1UB
Total Potential Waters of the United States	238.212	57,027.17	N/A

1. Cowardin et al. 1979
 L1UB = Lacustrine, Unconsolidated Bottom
 PEM = Palustrine Emergent
 PSS = Palustrine Scrub-Shrub
 PFO = Palustrine Forested
 PUB = Palustrine, Unconsolidated Bottom
 R2AB = Riverine Lower Perennial, Aquatic Bed
 R2UB = Riverine Lower Perennial, Unconsolidated Bottom

R3SB = Riverine Upper Perennial, Streambed
 R3UB = Riverine Upper Perennial, Unconsolidated Bottom
 R4 = Riverine Intermittent
 R4SB = Riverine Intermittent, Streambed
 R4UB = Riverine Intermittent, Unconsolidated Bottom
 R5 = Unknown Perennial
 R5UB = Unknown Perennial, Unconsolidated Bottom
 R5SB = Unknown Perennial, Streambed
 RFT = Riverine Flow-through



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6 Planning and Prevention

Only non-toxic bentonite-clay mixtures of drilling mud will be used so that if an IR occurs, it would not result in toxicity to aquatic life in the stream.

The contractor performing the HDD must have experienced personnel on-site who are familiar and experienced with the procedures for this type of operation. The Environmental Inspector (EI) must be present for all HDD activities. Before any HDD occurs, a safety meeting will take place; the IR contingency plan will be discussed; and any questions will be answered.

Prior to drilling, the work area(s) will be defined by flags to define the work limits. The work area will not exceed the allocated temporary work space for the proposed boring. Erosion and sediment controls (including silt fence, straw wattles, and temporary sediment trap) will be installed at the entrance/exit pits. Additional materials will be kept on-site at a designated location, and the presence of these materials will be verified prior to any drilling activities. These materials will be placed in a dedicated location and denoted as the IR containment response kit. The kit will include the following items:

- Silt fence
- Straw wattles
- Silt curtain (in-water work)
- Straw bales
- Submersible pumps
- Specialized filters
- Generator
- Appropriate hand tools
- Vacuum truck (available on call)
- Light towers for work at night
- Heavy equipment, such as backhoe or dozer, for containment and cleanup of drilling mud
- Boat for major waterbody crossings to allow for monitoring of releases to water

7 IR Monitoring Plan

Once HDD begins, constant monitoring shall take place for a potential IR. The bentonite mixture will be adjusted to match the conditions of the subsurface. The pressure levels will be set as low as possible, and they will be closely monitored so that the pressure on the drilling fluid is set to match the formation. The pressure should not exceed what is needed to penetrate the formation.

During drilling, the pressures will be closely watched and randomly checked by the EI. As the drilling progresses, the pressure will be inspected and documented. Any drop in the pressure could indicate a potential IR.



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The drill mud will also be monitored, inspected, and documented. A noticeable drop in the return of the drill mud could also indicate a potential IR.

7.1 Inadvertent Return Response

If the results of the monitoring indicate that an IR has occurred, the drilling will be stopped immediately, and the following procedures will be implemented:

1. Slowly pull the stem back to relieve pressure on the potential inadvertent return (IR).
2. Wait for the drill mud to settle.
3. Assess the situation to determine whether the IR has reached the surface.
 - a. If the IR has reached the surface, immediately implement containment and notifications, as discussed in the next subsection.
 - b. If the IR has not reached the surface and is not threatening sensitive areas, use a leak-stopping compound to correct the IR.
4. If the leak-stopping compound has been successful (i.e., 100 percent containment), continue with drilling.
5. If the leak-stopping compound has not been successful, redirect the drilling to an area where an IR has not occurred.
6. If the IR cannot be contained, abandon the drilled hole, as discussed in the next subsection.

7.2 Surface Inadvertent Return Containment and Response

Should an IR occur and result in release to the surface, drilling will halt immediately; and the severity of the release will be determined. If the release to the surface is minor, the following procedures will be implemented:

1. Identify the extent of the release.
2. Create a containment area with the use of a silt curtain, straw wattles, fiber rolls, and/or constructed earthen dikes.
 - a. If the inadvertent return (IR) release to the surface occurred upland or in riparian areas, allow the material to dry prior to excavation.
 - b. If the IR release to the surface occurred in a waterbody, immediately remove the material.
3. For minor releases that are not widespread, remove bentonite-contaminated material with the use of hand tools to a depth of 2 feet.



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4. For larger releases, that are (or have the potential to be) widespread, mobilize the vacuum truck to remove the material. Place the submersible pumps within the release area to capture material until the vacuum truck arrives.
5. Place excavated material in an appropriate container.
6. Backfill with clean sand.
7. Dispose of material at an approved facility and as required by regulations.

After successful containment and removal of the released material and approval by the appropriate agencies, operations will be able to continue. All the activities associated with the IR response will be documented, and measures to prevent another release will be discussed. Before restarting drilling operations, the drilling will be redirected to an area that has not had an IR, or the drilled hole will be abandoned.

7.3 Inadvertent Return Notifications

In the event of an HDD drilling fluid release to water bodies, sensitive areas, or riparian areas, appropriate local, state, and federal agencies will be notified within 24 hours. The following information will be provided:

- Time of inadvertent return release
- Location of inadvertent release
- Quantity and type of material released and amount of recovered materials
- Containment and cleanup measures
- Location of sensitive areas near the inadvertent release

7.4 Borehole Abandonment

A borehole will need to be abandoned if an IR cannot be avoided, or if an IR has occurred that cannot be controlled. The borehole will be completely abandoned, and a new location determined. Any borehole abandonment locations will be documented and shown on any as-built documents.

The following steps will be implemented during abandonment of the borehole:

1. Determine the new location for the horizontal directional drilling crossing.
2. Insert casing, as necessary to remove the pilot string.
3. Pump a thick grout plug into the borehole to securely seal the abandoned borehole.



8 Applicable Proposed Measures

As discussed in the attached *Proponent's Environmental Assessment – Zayo Prineville – To – Reno Fiber Optic Project* (Appendix D), numerous proposed measures will be implemented to avoid and minimize impacts to sensitive resources, including aquatic features. Specific measures that apply to aquatic resources are shown below; however, a full list of applicable proposed measures (APMs) can be found in Appendix D.

8.1 APM BIO-5: Site Restoration

Ground disturbance and vegetation clearing will be limited to the minimum extent practicable. Open excavations will be backfilled and recompacted after installation of the conduit with native soils. At locations where the excavated material is not adequate to use for backfilling, construction crews will remove it from the project workspaces and dispose of it at a location that meets Caltrans' requirements. In areas where backfill material must be imported (e.g., areas where excavated material has high rock content), the applicant will obtain soils from weed-free, commercially available sources approved by Caltrans. After completion of project activities, all temporarily disturbed work areas will be restored to their pre-construction contours, and areas of exposed soils in natural habitats will either be stabilized or re-seeded with native seed mixes appropriate to the habitat type. Non-natural habitats, such as agricultural, urban, and barren areas, are maintained by landowners and will not be revegetated except as described in lease or access agreements.

In coordination with the Bureau of Land Management and U.S. Forest Service, the applicant will prepare and implement a Revegetation and Restoration Plan (RRP) with detailed specifications for restoring all temporarily disturbed native vegetation in accordance with project permits. The RRP will discuss mitigation and restoration methods where vegetation is temporarily or permanently impacted. The RRP will include plants and seed mixes that will be used for temporary and permanent revegetation, plant container sizes and appropriate planting methods, and maintenance requirements, including irrigation needs and design plans that will show the specific plant species and planting locations. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.2 APM BIO-6: Invasive Species

To prevent the introduction and spread of invasive plants during construction, the applicant will help ensure that all construction equipment and vehicles are cleaned inside and out prior to arrival onsite. Incoming vehicles and wheeled or tracked equipment will be inspected by a biological monitor prior to deployment onsite. If invasive plants are observed within a work area, vehicles, equipment, and personnel clothing and boots will be swept or cleaned prior to deployment to a different construction site. If application of herbicides is needed to control designated noxious weeds, only approved weed control contractors would apply herbicides in adherence with all state and manufacturer's guidelines. APMs shall be implemented during construction by the applicant or the applicant's designee.



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8.3 APM BIO-7: Biological Monitors

The applicant will appoint a Lead Biologist and one or more biological monitors. Biological monitors will be onsite daily during project activities to minimize incidental impacts to sensitive biological resources by conducting pre-construction surveys and sweeps, ensuring compliance with all avoidance and minimization measures, demarcating sensitive biological resource exclusion areas (e.g., active den or nest, special status plant occurrence, sensitive natural community, or wetland or waterway boundary) with flagging or signage, and ensuring that flagging and signage remain intact and that project activities remain outside of exclusion areas. If a special status species is encountered in the work areas, construction in the immediate vicinity will cease, and personnel will notify the biological monitors. Biological monitors will establish a buffer to restrict work near the species. If it is a wildlife species, a biological monitor will observe the behavioral responses of the species to the work occurring in proximity to them. The biological monitors will halt work if a wildlife species exhibits an adverse response to nearby project work activities. The species will be allowed to move offsite on their own. If the species is in danger of injury or does not leave the work area, the biological monitor will relocate the species to adjacent suitable habitat, if feasible, and with prior approval from the California Department of Fish and Wildlife (CDFW) and/or the U.S. Fish and Wildlife Service or will consult with agencies for further guidance. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.4 APM BIO-8: Protection of Botanical Resources

The locations of the special status plants will be marked as avoidance areas both in the field; using flagging, staking, fencing, or similar devices; and on construction plans. Locations shall be incorporated into project siting, design, avoidance, and management in accordance with APM BIO-7 and APM BIO-9. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.5 APM BIO-9: Special Status Plant Impacts

If additional special status plants are identified during pre-construction surveys and complete avoidance is not practicable, a conservation and restoration plan shall be implemented in coordination with a qualified biologist where the project would directly or indirectly affect more than 10 percent of a local occurrence by either number of plants or extent of occupied habitat. The conservation plan may consist of but is not limited to purchase of mitigation credits at a regional conservation bank; collection and subsequent planting of seed or incorporating seed from native nursery into seed mix used for revegetation efforts; stockpiling, storing, and replacing topsoil containing the local seed bank; or other measures determined to be practicable based on the species and site conditions. For some species and site conditions, conservation bank credits and seed may not be available, or conservation efforts may not have a reasonable probability of success or could result in detrimental effects on existing special status plant populations. In these cases, as determined by a qualified biologist, no conservation measures will be required. APMs shall be implemented during construction by the applicant or the applicant's designee.



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8.6 APM BIO-10: Work Timing

Construction activities will be restricted to daylight hours. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.7 APM BIO-11: Nesting Birds

Biological monitors will conduct pre-construction nesting bird surveys during the nesting season (February 1 to August 31) within 100 feet of the construction workspaces for non-raptors, and up to 0.5 mile for raptors depending upon the species. Pre-construction surveys for non-raptors would be valid for 1 week, and surveys for raptors would be valid for the full season if conducted after May 1. Biological monitors will establish exclusionary buffers in which no activity would be permitted around active nests, which would be 100 feet for non-raptors and 0.25 mile for raptors, increasing to 0.5 mile for bald eagles (*Haliaeetus leucocephalus*), golden eagles (*Aquila chrysaetos*), ferruginous hawks (*Buteo regalis*), Swainson's hawks (*Buteo swainsoni*), and prairie falcons (*Falco mexicanus*) when nests are in line-of-sight. In addition, no vegetation clearing will be permitted within 300 feet of an active non-raptor nest. Project activities will be prohibited within the exclusionary buffer until the nest fledged or failed. To the extent possible, work will be scheduled during the non-breeding season or in construction spreads that lack active nests. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.8 APM BIO-12: Greater Sage-grouse Leaks

The applicant will avoid construction activities within 4 miles of active or pending greater sage-grouse leaks from 6 PM to 9 AM between March 1 and May 15. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.9 APM BIO-13: Open Excavations

The applicant will backfill or cover open excavations at the end of each workday to avoid wildlife entrapment. When this is not possible, the applicant will install escape ramps overnight to allow wildlife to escape (2:1 slope ratio or less), and a biological monitor will inspect excavations that remained open overnight before construction activities begin each morning. APMs shall be implemented during construction by the applicant or the applicant's designee.

8.10 APM BIO-14: Minimum Bore Depth

The applicant will impose minimum bore depths when boring under sensitive natural communities and special status plant occurrences to prevent root damage and plant mortality. The minimum depths are 30 feet for tree-dominated, 23 feet for shrub-dominated, and 15 feet for herbaceous-dominated communities or occurrences. APMs shall be implemented during construction by the applicant or the applicant's designee.



Appendix A Figures



Appendix B Aquatic Resources Delineation Report



Appendix C Aquatic Resources Figures



**Appendix D Proponent's Environmental Assessment – Zayo
Prineville – To – Reno Fiber Optic Project**

