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Appendix A - Cumulative Activities

In addition to the activities stated above, there is approximately 3,020 acres of private land within the Tower Fire analysis area, which experience grazing and timber harvest. Bridge Creek Wildlife Area, a state managed winter range for approximately 1,500 elk, lies partially within the western edge of the Tower Fire analysis area. Lehman Hot Springs, a privately owned commercial spa and campground, lies to the immediate north outside the burn.

Past Activities That Are Still Evident

A number of activities have occurred in the past within the Tower Fire area that still have residual effects on area resources. Mining has occurred along the North Fork John Day River since the late 1800's. Most dredging took place as numerous small operations along both sides of the river from 1939 to 1942, with a lesser amount occurring from 1947 to 1950. There are still a lot of disturbances visible on the landscape from these past mining activities. From 1992 to the present, the Umatilla National Forest reclaimed tailing piles from historic dredge mining that were constricting the floodplain. Tailings along one mile of the North Fork John Day River (between Texas Bar and Big creeks) have been redistributed, recontoured, planted and seeded with native vegetation in order to allow the river a more natural flood plain.

The oldest source of Forest records indicate there was at least one road prior to 1883, and several main roads were built from 1890 to the 1930's. Louisiana-Pacific Corporation developed a road system in the late 50's/early 60's to log their private lands (most of the roads on private land were constructed at this time). The Forest Service later acquired these lands through a land exchange. The Forest Service built the current road system in the late 1960's and early 70's through timber sale contracts. Since 1975, there has been very little road construction in this area although several of the existing roads have been reconstructed. Most of the roads in this area were built to accommodate tractor logging and short cable systems, and as such, roads were built close together with many of them (both on private and National Forest lands) built in poor locations such as up creek bottoms or on highly erodible soils. Many roads were constructed on steep grades with very poor drainage, or on steep side hills in poor soil where the cuts and fills have not revegetated and continue to erode.

The Forest Service in recent years has had an active program to correct some of these road problems. In 1993, the North Fork John Day Ranger District implemented an Access and Travel Management Plan, closing about three quarters of the roads on the District, reducing the open road density from 2.41 miles per square mile to 0.94 miles per square mile. There are now about 278 miles of existing system roads within the analysis area, of which 111 miles are open for public use. Almost 14 miles of road have been obliterated by recontouring or ripping and many other closed roads have been subsoiled (to break up the compacted soils so vegetation can grow and water will pass through the soil), waterbarred (to stop erosion and lessen the concentration of water). On some closed roads that were not obliterated, culverts have been removed to restore the natural function of the stream channels.

Approximately 319 acres of hazard trees were harvested along roads after the Tower Fire and 2,739 acres were salvage harvested as part of the Overlook, Dragon, and Lone sales before the Court overturned the Big Tower Environmental Assessment decision. Prior to that, most harvest occurred in the 1970s (predominately using tractor systems). Earlier records of harvest are unreliable, but much of the analysis area has likely been harvested at some point in time. Private lands within the analysis area have

been extensively harvested, with an estimated 360 acres of harvest in response to the Tower Fire. Most harvested units have been artificially reforested, and pre-commercial thinning occurred in both managed and natural stands where overstocking was a concern. The Tower Fire killed most of the planting and thinning units, effectively erasing the effect these two activities have had in the forest. Post-fire treatments that have occurred to date include 2,679 acres of re-planting in old harvest units that burned, 3,907 acres of planting outside of harvest units, and 79 acres of pre-commercial thinning in areas relatively untouched by the fire.

In the early 1970's, a fuel break was maintained from the Cable Creek area east to Tower Mountain and south from Tower Mountain along the boundary between the Wallowa Whitman and Umatilla National Forests. Prescribed fire was applied to reduce fuel loads during the 1980s and 90s, with an estimated 500 acres burned in 1982 in the Oriental Creek area (probably between Forest roads 5507 and 5506), 800 to 1,000 acres burned in 1986 (east of Oriental Creek between the 5507 and 5506 roads), 1,000 to 1,200 acres burned in the fall of 1989 (along the east side of the Bridge Creek Wildlife Area), and 600 to 700 acres burned in the spring of 1991 (immediately north of the Texas Bar area). Multiple underburns (Oriental Juniper) from 1995 to present have been applied to approximately 7,500 acres to date, between the 5506 and 5507 roads from Texas Bar east to the 130 spur on the east side of Oriental Creek (including a large area west of Juniper Canyon and a large block on the east side of the Bridge Creek Wildlife Area). Multiple underburns have also been conducted immediately north of the Tower Fire area from 1994 to present, covering approximately 5,000 acres to date in the Camas area.

Little historical information about livestock is available before European settlement. Cayuse Indians kept horses at their seasonal camps along streams of the Camas Watershed as early as the mid-1700s. Major exploitation of area rangelands occurred between 1850 and 1890 when thousands of cattle, sheep, and horses were trailed to the summer pastures as soon as the snow melted. This changed in 1895 with the passage of the Forest Reserve Act, which regulated use, but by this time the rangelands in this area were generally in poor condition. Grazing also altered the frequency and intensity of wildfires by removing fine and flashy fuels and changing vegetative compositions to more fire-intolerant species. By the late 1940s, most of the allotments had been partitioned, stocking rates had been cut in half, and grazing systems and improvements (such as water developments and extensive re-seeding) had been implemented to encourage vegetative recovery. Seeding also accompanied timber harvest to increase the amount of transitory range. By the 1970s, upland range condition had improved, but stock driveways and riparian areas remained in poor condition. New allotment management plans in the 1980s confirmed upward trends on upland range, and implemented better livestock management along streams and meadows. Three pastures in two different allotments were affected by the Tower Fire: the Pearson pasture of the Texas Bar Allotment which supported 508 cow/calf pairs for 45 days; the Texas Bar pasture of the Texas Bar Allotment which supported 508 cow/calf pairs for 20 days; and the Tower pasture of the Hidaway Allotment which in conjunction with the Dry pasture supported 565 cow/calf pairs for 51 days. (The Tower pasture has been rested since 1994. The decision to rest the pasture is made on an annual basis but is likely to remain in place for quite some time). Pastures that burned have been rested since the Tower Fire.

While livestock grazing declined over the last 60 years, grazing by elk has dramatically increased (Irwin et al., 1994). Elk populations were very low during the early part of the century due to over-hunting. In 1919, elk hunting was closed and intensive efforts were begun to rebuild herds. Today the Oregon Department of Fish and Wildlife management objective for the Ukiah Unit is 5,000 elk.

As much as 20 years ago, the District installed numerous instream log weir aquatic habitat structures in Winom Creek. Such structures were later installed on Hidaway and North Fork Cable creeks as well, and rock barbs and other structures were constructed on South Fork Cable Creek to stabilize the channel. A weir was also installed on Winom Creek where Forest Road 52 crosses to facilitate fish passage through the culvert. A side channel on the North Fork John Day River was constructed around the dredge tailing piles in the early 1980s to restore aquatic habitat, but the North Fork John Day Dredge Tailings Restoration Project obliterated this. Rock jetties were also constructed to stabilize streambanks around Dredge Camp on the North Fork John Day River. Riparian planting (shrubs and trees) has been done on portions of Texas Bar and Oriental Creeks and instream wood was manually placed in South Fork Cable Creek (at Round Meadows) after the Tower Fire.

Immediately after the fire and again in 1997, Burned Area Emergency Rehabilitation projects were completed to provide short-term mitigation of the fire's effects on soils and developed facilities through 700 acres of seeding; dead tree felling along the contour to trap eroding soil; resizing or removal of culverts and installation of drain dips on roads; and reinstallation of drainage controls, bridges, and log trailbed supports on 41 miles of trail. These measures were implemented on high risk areas within the fire perimeter (high burn intensity, steep slopes, and erodible soils) to reduce the likelihood of damage to life and property.

A variety of recreation activities have occurred throughout the area (most are discussed as "Ongoing Activities"). Winom Campground was constructed in 1990. Off-Highway Vehicle (OHV) use has been popular in the area for more than 20 years. When the designation of the North Fork John Day Wilderness cut off access to over 100 miles of trail in 1984, the District began development of another OHV trail system. Initially, 33 miles of OHV trail were designated (with some construction) in 1986, with additional trails approved by the district Access and Travel Management Plan, establishing a network of trails referred to as the Winom-Frazier OHV Complex. Frazier Campground was later connected with the Winom Trail System through a series of loop trails (29.3 miles) approved in 1993 and 1995. The Pearson Recreation Residence tract, with a total of five summer homes on 65 acres, had its first home constructed in 1963. A big game hunting outfitter/guide held a special use permit for approximately 10 years and served 8-12 people per year. The guide did not renew this permit after the fire. In the early 1900s, the District and ODFW cooperated to rehabilitate several dispersed campsites along the North Fork of the John Day River. Sites were defined with boulders and signed to restrict vehicle access from streambanks and hardened by placing gravel on the worn area to reduce rutting and sediment.

Ongoing Activities

There are also a number of activities that continue to occur in and adjacent to the Tower Fire area regardless of the outcome of this decision. There are three active mining claims within the Tower EIS analysis area. The Camp Creek claim has operated for the last couple of years under an approved Plan Of Operation. The other two (Sheep Creek and Apache) have conducted some minor exploration with hand tools and a little suction dredging on the North Fork John Day River during the dredging season of July 15 to August 15. The North Fork John Day River is also a popular place for recreational suction dredges and panning which will probably continue as long as this kind of recreational activity is permitted.

Road maintenance is conducted annually and involves: reshaping road surfaces using a grader; removing encroaching brush; resurfacing roads with rock; removing and disposing of cut bank slough; removing sediment deposits from ditches, culverts, and cattleguards; replacing drainage structures which become plugged or no longer function; armoring ditches and cross drain outlets; stabilizing eroding banks; removing fallen trees which land on roads and trees which show potential for falling on a road; controlling noxious weeds; sign maintenance; dust reduction through water or lignin spray on roads; snow removal; and bridge repair. Road maintenance and construction also uses developed rockpits, rock stockpiles, and water sources (approved by the District hydrologist or fish biologist) within the analysis area.

Two hundred acres remain of the Oriental Juniper Underburn, and are planned for completion in the spring of 1999. Approximately 4,500 acres remain of the Camas Underburn, and are planned for ignition in the spring of 1999. Any remaining block in the Camas area will be completed by 2001.

In September 1998, an interdisciplinary team consisting of allotment permittees, the Forest hydrologist and botanist, and the District fish biologist, silviculturist, and range specialists reviewed the condition of the three burned pastures to assess resumption of grazing. They determined that grass had recovered sufficiently that grazing could resume with some fencing as mitigation.

Recreationists spend approximately 39,600 recreation visitor days within the Tower EIS analysis area, with hunting, mushroom gathering (commercial and personal use), and OHV use the most frequent activities. The Blue Mountain Scenic Byway bisects the fire, completing a loop between I-84 and the Elkhorn Scenic Byway. The North Fork John Day Wilderness lies within the southern boundary of the Tower analysis area and the North Fork John Day River which runs through the analysis area is a designated Wild and Scenic River. The Winom-Frazier OHV Complex provides approximately 97 miles of

4-wheel and motorcycle trail (49 miles within the fire) and 10 miles of ungroomed snowmobile trail over approximately 72,125 acres. Winom Campground/Trailhead serves as the southern staging area, while Frazier Campground/Trailhead accesses the northern end. These trails are also used for hiking and horseback riding. Maintenance on trails, bridges, and other structures within the entire trail system is completed annually between April and October and consists of: removing fallen logs, tread hardening, improving water bars and other erosion control work, bridge and cattleguard repair, sign repair, minor reroutes and switchback repair. Maintenance at trailheads includes repair of loading ramps, camping areas, bulletin boards, and signing. There are three developed campgrounds with trailheads in the area (Oriental, Winom, and Big Creek Meadows), three additional trailheads (3-Culverts, North/South Winom, and Round Meadow) and an estimated 200 dispersed campsites (randomly established by recreationists). A big game hunting outfitter/guide serves approximately 8-12 people per year. An annual mountain bike race with two to three courses at various skill levels and over 200 participants occurs near Frazier Campground and Lehman Hot Springs. Both of these special uses will not likely occur in 1999 as no Plan of Operations has been submitted for either activity. The Pearson Recreation Residence tract was burned over in the Tower Fire, with three homes, numerous outbuildings, and a fence consumed. Only one of the burned homes is being reconstructed.

Foreseeable Future Activities

There are a number of other activities being planned within the Tower Fire analysis area in addition to those proposed in this EIS. In 1998, the mine claimants of Camp Creek #1 & #2 joined together and filed on an old historic claim - "New Hope" - to combine all three claims into the Camp Creek Placers. The operators have submitted a new Plan Of Operation and intend to start working on this new plan (once it is approved) in the spring of 1999. Under the new Plan Of Operation the claimants would: construct a road to the present site that is being worked under a Plan Of Operation for Camp Creek #1 and use an excavator to remove the deposits for processing on site. In addition, once this claim is recovered, the operators plan to mine the other old claims - "Camp Creek #2" and then "New Hope". Under the new plan, operators would reclaim the site as they progress.

Pre-commercial thinning is planned for 1,158 acres within and immediately adjacent to the Tower fire, to be accomplished between the years 1999 and 2003. This thinning was included as part of past harvest projects and is dependent upon availability of trust funds. These funds have been gradually declining each year, so it is unclear whether the projects will actually occur or continue to be pushed back until funding becomes available.

The Camas Restoration Environmental Assessment (scheduled for Fiscal Year 2001, immediately north of the Tower Fire) proposes harvest of insect-damaged dead and dying trees, precommercial and commercial thinning of overstocked stands, and road decommissioning to address recommendations made in the Camas Ecosystem Analysis. Two more commercial thinnings (Farley Diggins, Retex) are being planned within the analysis area for fiscal year 2001 to reduce overstocking and move species composition toward a more natural mix. Both of these projects would also involve use of prescribed fire and salvage of dead trees.

Salvage harvest associated with the Bull and Summit fires (named Upper Desolation) is planned for Fiscal Year 2000 approximately 17 miles south of the Tower Fire to reduce fuel loads and roadside hazards, and restore stand structure, density, and species compositions to historic levels. Activities would involve: salvage of dead trees from approximately 1,100 acres, 450 acres of commercial thinning outside of the burned areas, harvest of diseased and dead trees around the Olive Lake Campground construction and later obliteration of about four miles of temporary road, and removal of roadside hazard trees from 3 miles of road. Another salvage harvest (Falls) is planned in Fiscal Year 2000 along the Western Route on the west side of the analysis area. This project would salvage trees that are diseased or insect infested and thin overstocked stands to reduce future mortality.

The Bureau of Land Management also began implementing the Cable Creek Forest Health/Salvage Project on its lands to the west the National Forest just prior to the Tower Fire. Their project included 519 acres of precommercial thinning, 179 acres of salvage, 15 acres of riparian planting along 2 miles of stream, and 4.85 miles of decommissioning of existing roads.

Appendix A

A second underburn entry is anticipated in the Oriental Juniper area as early as the fall of 2000. This burn could include up to 7,000 acres to the south and west of the Tower Fire area. Once the entire Camas area has been burned, a second burn entry is planned as well, possibly as early as 2001. This burn could include up to 15,000 acres to the north of the Tower Fire area. A planning area named "Retex" (immediately west of the Tower Fire area) will likely include underburning, with up to 5,000 acres available for treatment. The District also plans to underburn approximately 10,000 to 15,000 acres within the North Fork John Day Wilderness. This project would treat the fuels east from Oriental Creek to the confluence of Granite Creek, on the north side of the North Fork John Day River.

Plans are under way with the Oregon Parks and Recreation Department and the La Grande, Baker, and Unity Ranger Districts on the Wallowa-Whitman National Forest to develop a trail that will connect the Winom-Frazier OHV complex with existing trails on the Unity Ranger District (this trail would be outside the burned area). There are also plans to designate 90 miles of existing open roads (42 miles within the analysis area) as part of the Oregon Back Country Discovery Route, which would connect with similar routes in California and Washington. Implementation would only involve installation of signs on Forest roads 5505, 5506, 5506-130, 5507, 52, and 5226 (the proposed route through the District).