Chapter 3. Historical Overview

The term "original conditions" is often used to refer to the status of a landscape prior to European settlement. Understanding these conditions is helpful when managing for fish and wildlife resources since these animals have adapted to the original conditions over thousands of years. Wide departures from the original conditions can dislocate or reduce animal populations. Properly understood, original conditions are not a steady-state phenomenon; rather, they include natural cycles of both disturbance and recovery.

The purpose of this chapter is to provide a depiction of major natural disturbance events for the analysis area and to characterize management trends. This chapter will:

- Examine natural disturbance (floods and windstorms) and their impact on the aquatic ecosystem prior to and shortly after European settlement and through recent times.
- Characterize early human disturbance patterns by summarizing settlement patterns, impacts to aquatic habitat from splash dams, and cleaning wood from stream channels.
- Describe the establishment and early management history of the Elliott State Forest.

The descriptions of watershed conditions through time are based on evidence from written and first-hand accounts, reports, land survey records, resource inventories, maps, drawings, and photographs. The other chapters of this analysis cover the current issues and trends that affect the watershed.

NATURAL DISTURBANCES

Over time, natural disturbances have shaped the Forest and its aquatic systems. Chapter 2, *Watershed Analysis Area Overview*, provided a description of patterns of historical fires in the Forest. In this section, an overview of the role of floods and windstorms is provided.

Floods

Floods help shape aquatic habitat by impacting channel morphology, sediment transport and deposition, and adjacent stream vegetation. Habitat quality for fish and other aquatic organisms also is formed by the interaction of these elements. Streams in the Forest generally experience floods generated by high rainfall storm events.

The largest flood of record for western Oregon was the flood of 1861, which appeared to exceed a 100-year event (Taylor and Hatton 1999). In 1890, Oregon Coast Range streams again experienced a large flood, the second largest flood of record for the Rogue River. The floods of December and January 1955-1956 were the next recorded large floods for the streams in the region (Weyerhaeuser 1998). For many streams in the Coast Range, the floods of December 1964 were an extreme event, with record river levels on the Umpqua, Coquille, and Rogue Rivers (Taylor and Hatton 1999).

Windstorms

The Forest is in the direct path of large winter storms from the Pacific Ocean. These storms generate high winds, which in turn shape the region's forests by toppling trees, creating canopy opening, and changing vegetative succession. Extreme windstorms hit the Coast Range in 1880, in 1951 when 3.7 billion board feet of timber blew down, and in 1962 when about 3 billion board feet of timber blew down throughout the Coast Range (Ruth and Yoder 1953). Less severe windstorms also can blow down trees along the edges of clearcuts, including riparian buffer areas, which affect downed wood levels across the landscape and in stream channels. For the Coast Range, windstorms severe enough to cause substantial tree uprooting along clearcut edges have occurred in 1971, 1973, 1981, 1983, and February 2002 (Oregon Climate Service 2003).

Of all major windstorms, the Columbus Day storm of 1962 stands alone in its impact on the management of the Forest. The storm's high winds blew down an estimated 100 million board feet of timber (ODF 1993). Most of the downed trees were on the western half of the Forest where few roads were in place. Many miles of roads were quickly built to salvage the timber before it rotted. Nearly one-third of the 550 miles of forest roads were built to get to the downed timber (Phillips 1996).

HUMAN DISTURBANCE

The Coos Bay region is rich in regional histories that provide a good historic overview of the Forest and surrounding areas. Specifically focused on the Forest is past-District Forester Jerry Phillips' *Caulk Boots and Cheese Sandwiches* (1996), which is a primary source of information for this chapter. Additional sources include Dow Beckham's *Swift Flows the River* (1990); Lionel Youst's *Above the Falls: An Oral and Folk History of Upper Glenn Creek, Coos County, Oregon* (1992); Arthur Smyth's *Millicoma: Biography of a Pacific Northwestern Forest* (2000); and William Robbins' *Hard Times in Paradise: Coos Bay, Oregon, 1850-1986* (1988). A timeline of major historical events is shown in Table 3-1.

Early European Settlement

Early settlers generally sought out farmlands in the lower river valleys on the periphery of the Forest. These farms occurred fairly early in the settlement process as immigrants spread out and up rivers. For example, a potato field in the South Fork Coos River bend just below Dellwood was identified in the first General Land Office survey in 1856. Early farms and settlements were also located in uplands in places with flat terrain and plentiful water. Upper Glenn Creek above Golden Falls was one of these; another was the Ash Valley area south of Loon Lake along Lake Creek.

There were only a few early settlements within the interior of the Forest. The Vaughn Ranch, located along the West Fork Millicoma River (T.24S, R.11W, sec 3 and 4) was an early settlement with a farm and sawmill. Further upstream on the West Fork is the Elkhorn Ranch (T.23S, R.11W, sec 26), originally homesteaded in 1910 and subsequently (with the exception of 5 acres) purchased by the ODF.

Table 3-1. Timeline of major historical events.

Year	Event
1850	Fire burns in the middle Coast Range and perhaps some areas within what was to become the Elliott State Forest.
1856	First public land survey.
1868	Some records indicate that a fire burned some areas within what was to become the Elliott State Forest.
1930	Elliott State Forest, formed by land exchanges with the US Forest Service, is officially dedicated.
1940	Coos County deeded 6,500 acres of tax-delinquent forestland adjacent to the Elliott State Forest to the Board of Forestry.
1960	The state acquired 7,700 acres of public domain lands that were added to the Elliott State Forest.
1962	Columbus Day windstorm blew down an estimated 100 million board feet of timber. A large number of roads were built in to salvage the timber.
1972	Passage of the Oregon Forest Practices Act. The Act has been amended several times since its passage.
1970s to 1980s	7,000 acres of Common School Forest Lands were added to the Elliott State Forest by land exchanges.
1990	Spotted owl listed as threatened under the federal Endangered Species Act.
1992	Marbled murrelet listed as threatened under the federal Endangered Species Act.
1995	Adoption of the Elliott State Forest Habitat Conservation Plan.
1998	Coho salmon listed as threatened under the federal Endangered Species Act.

The Cornell Place, located on Palouse Creek (T.23S, R.12W, sec 10), was purchased and added to the Forest after the 1982 flood deposited large amounts of debris onto its fields from upland lands in state ownership. Some other properties on Palouse Creek were purchased in 1983 for the same reason. Phillips (1996) provides a map and descriptions of these and other additions to the original Forest.

Splash Dams

Compared to many other areas on the south-central Oregon Coast, the Elliott State Forest had relatively little historic splash damming activity.

Methods

Information on splash damming was developed through conversations with Jerry Phillips, by review of *Swift Flows the River* (Beckham 1990), which contains a history of splash damming and logging in the Coos region, and reports by the Division of State Lands as part of their river navigability determinations for Mill Creek, West Fork Millicoma River, Marlow Creek, and the East Fork Millicoma River (Farnell 1979, 1981). Supplementary observations about splash damming were found in notes of stream surveys conducted by William O. Saltzman (Oregon Game Commission stream surveyor) in the Mill Creek – Camp Creek watershed (1960), Lower Umpqua tributaries (1961), and West Fork Millicoma River and Coos Bay tributaries (1959).

Results and Discussion

Although documentary history is sparse, only four splash dam sites in or adjacent to the Forest have been identified. Splash dams were outlawed in 1956, prior to the beginning of extensive timber harvests on the Forest. Although they were generally located outside the Forest, they may have impacted stream conditions within the Forest.

Two areas adjacent to the Forest were intensive sites for splash damming. The first area includes three dams located in the Mill Creek hydrologic unit code (HUC) 5th field watershed upstream from state ownership. One splash dam was on Mill Creek just below its confluence with Camp Creek (RM 6.05; T.22S, R.10W, sec 36), while two others were on Camp Creek (RM 3.11; T.22S, R.9W, sec 31 and RM 4.20; T.23S, R.9W, sec 4). According to William Saltzman, "The physical damage to the stream by this method of log transport appears to have been overcome with the passage of time" (1959, p. 33).

The second area for intensive splash damming was on the East Fork Millicoma River and its tributaries, Glenn and Marlow Creeks. According to the Weyerhaeuser Corporation's *East Fork Millicoma River Watershed Analysis* (1995):

> "At least six splash dams were in operation on the East Fork Millicoma between its confluence with Marlow Creek near Allegany and Milepost 26. Other dams existed on the lower Marlow, lower Glenn, and lower Matson Creeks. Many dams were out of service by 1935, and most were burned or removed by 1957."

In addition, at least two splash dams were located on the West Fork Millicoma River system. One was on a tributary stream entering the West Fork just below Pidgeon Falls (T.24S, R.11W, sec 19) and one was below Stulls (Stahls) Falls (T.24S, R.11W, sec 4) at the Vaughn Ranch. No splash dams are known from the Tenmile and Scholfield Creek drainages. Most of the pre-road log transport in these systems (as well as upper Marlow Creek) was done by logging railroad.

Stream Cleaning

Damage caused to streams and rivers by early logging operations (splash dams, slash disposal in streams, log drives, etc.) often resulted in substantial logjams. In some cases, these jams could be a mile or more in length, and undoubtedly prevented or impeded anadromous fish passage. Largely as a result of these spectacular cases, in the 1930s the Oregon Game Commission began to require loggers to prevent woody debris from entering streams. This effort gained more emphasis and a "scientific" veneer after WW II, which coincided with the time when caterpillar tractors became available for use in logging. There is documentary evidence of stream cleaning in the Forest beginning in 1956, and it probably extended into the mid-1980s before being terminated.

Methods

Three sources of information were used to develop this discussion on stream cleaning and its effects. The first is a set of stream surveys that were conducted under the direction of William Saltzman over the study area from 1958-1963. These early surveys were conducted because Saltzman recognized that the areas would undergo significant changes as logging moved throughout the watershed. A second set of stream surveys covered the entire West Fork Millicoma River watershed, and were conducted by a joint effort of the Oregon Fish Commission and the Oregon Game Commission to collect baseline stream information for a proposed dam located just below the confluence with Trout Creek. The Saltzman surveys and the 1963 West Fork Millicoma survey mapped out stream substrate, identified fish species present, and provided detailed information on the location and extent of "obstructions" to fish passage, generally logjams.

Information from the historic stream surveys was placed into a geo-referenced Access database. Information included survey date, location of any logjams (distance upstream from start of survey), size (length upstream, height and width), type of obstruction, bankfull channel width, and any comments found in the original survey notes. Point locations and gravel bed lengths were transferred from the original survey maps (on onion skin paper) by overlaying onto a computer display and on-screen digitizing. Because the original survey maps were drawn at a four-time enlargement of U.S. Geological Survey (USGS) 1:24,000 quadrangle sheets, the survey maps and the digital raster graph site locations corresponded well. Latitude and longitude coordinates for points and start/end locations were identified from the digital raster graphs and transferred to the Access database.

Also, a third set of surveys was available to identify streams cleaned and relative amounts of material removed. They were the work reporting forms prepared by Bob Guyman of the Oregon Game Commission, Fishery Division and were monthly "Form 237 – Stream Clearance Activities" and "Form 350 – Lake and Stream Improvement Record" reports, as well as annual narrative reports by basins (for example, the West Fork Millicoma River) and by partnership (for example, Cooperative Stream Clearance Project with BLM and Menasha, 1973). Guyman's and reports by others cover the period 1965-1975. Additional information in the form of memos and data forms were obtained from files in the ODFW Charleston and Roseburg offices. This information covers the period from 1957-1975.

Results and Discussion

These early stream surveys provide critical information on the amount of large wood in streams prior to the advent of extensive stream cleaning. Since these surveys were conducted before large-scale timber harvests and road building occurred, they present a pre-management baseline for the Forest. Of particular interest is the relationship between logjams and spawning gravel deposition, and survey notations containing descriptions of landslides and debris torrents, falls, and other stream features. Map 3.1, located in the map section, shows the extent of logjams identified in these surveys.

According to documents in their files, in 1956 the Oregon Game Commission became involved in stream cleaning. A memorandum from James W. Vaughn, Supervisor for Southwest Oregon, dated December 5, 1957, provides the regulatory authority to require the removal of debris in streams from logging operations:

> "I have just received from Roy C. Atchison, Assistant Attorney General, the enclosed copy of ORS 164.820 [this law was repealed in 1971], which I feel that we can use in stream cleanup."

The attached statute says:

> "Any person who willfully, wantonly or negligently cuts, falls, throws, or places in any running stream, irrigation ditch, or draining ditch in this state, any tree, brush, log or drift, without forthwith removing the same, shall be punished upon conviction by a fine not less than $50 or more than $500. This section does not apply to saw logs placed in any stream for driving or rafting. Justices' courts shall have jurisdiction of all offenses committed under this section."

While the early stream surveys often called for clearing debris, its removal was effected in two ways. First, the Oregon Game Commission employed a "stream improvement" crew that drove throughout the region identifying "obstructions" and contacting land managers about their removal. This program lasted for 20 years, from about 1956-1976 according to ODFW files. The second tactic was to include stream cleaning, and specifically logging debris removal, in timber sale contracts. While the watershed analysis team has been unable to determine exactly when this practice was initiated, the first note of stream clearance requirements in some sale contracts was in 1962, and it appears to have continued until at least the mid-1980s.

Both kinds of stream cleaning were often done by running bulldozers up and down the stream (this technique also applied to log yarding from the 1950s into the 1970s). Notations on the Form 370's that the ODFW improvement crew produced often identified the number of Cat D6 or D8 hours required for each job (although this also included winching logs out of streams). Without a doubt, stream cleaning had a widespread impact on aquatic habitat and the effects are still seen today in the amounts and distribution of wood in stream channels. Chapter 7, *Riparian Vegetation and Large Wood*, provides an evaluation of the historical and current wood volumes in streams.

EARLY HISTORY OF THE ELLIOTT STATE FOREST

Phillips (1996) provides the definitive history of the Elliott State Forest. This section is based on his work, supplemented by other information from ODF and ODFW files.

Management through Time

Management of the Forest can be characterized by four phases. The first, from the initial establishment of the Forest in 1929 until World War II, was basically custodial in nature.

The boundaries of the Forest were surveyed and blazed, initial timber inventories were conducted, fire towers were built (and trails or jeep roads to reach them), and the first "truck roads" were constructed by the Civilian Conservation Corps (CCC). The second phase, covering from after World War II (little happened during the war years) until the Columbus Day windstorm in October 1962 saw the rise of forest management on the Forest, including the beginning of its timber sale program and the concomitant rise in road construction. The Columbus Day windstorm initiated the third phase of management, accelerating the timber sale program to salvage blowdown from the storm, and accelerated (and essentially completed) the road-building program to accomplish these sales. The fourth phase began with the listing of the northern spotted owl as a threatened species under the federal ESA in 1990 and the development of the 1995 HCP.

Harvest Programs

The history of harvest programs in the Forest reflects the four management phases described above. The first timber sale was in 1945 in the Ash Valley and Mill Creek areas. Sales during the initial post-World War II period were set up adjacent to existing roads and in proximity to lumber mills. Beginning in 1955, timber sales accelerated when the Oregon Legislature directed that active management of the Forest begin, and the ODF established a local office in Coos Bay. With the beginning of active forest management, the Board of Forestry established a set of priorities for management activities. These priorities were: (1) salvage insect-killed, fire-killed, or blowdown timber; (2) sell over-mature timber generally more than 170 years of age; (3) sell mature stands of between 90-170 years old; and (4) conduct thinnings of immature stands. Accompanying the timber sale prioritization was the requirement that any road building would be done by timber sale purchasers and would be directly related to the sale (see discussion in next section). This policy resulted in a slow increase in timber sales throughout the late 1950s until 1962. Timber harvests (and the Allowable Annual Cut) during this period started at 36 million board feet (MMBF) and were raised to 44.6 MMBF in 1960.

The 1962 Columbus Day windstorm brought with it 100 million feet of blowdown on the Forest. To salvage this blowdown, another 200 million feet of green timber had to be logged. Salvage continued until 1966 and along with the green trees, constituted an annual sale volume of about 100 MMBF. Beginning in 1958, the ODF initiated its first "stand management" or thinning program of partial cuts instead of its usual clearcuts. The objective in these harvests was to remove the slower-growing conifers, defective trees, and any alders in 75- to 125-year-old stands by "thinning from below," leaving the larger, residual trees for harvest at the end (rather than the beginning) of their rotation age. This program lasted until 1978 and covered 15,000 acres of the Forest. In 1968, the basis for the Annual Allowable Cut was changed from "volume control with an acreage limit" to "acreage control with a volume limit." The initial annual target was set at 1,300 acres per year, even though the desired rotation age was 100 years (90 years during the late 1950s to accelerate road building). The timber harvest program became more complex in the 1970s and early 1980s as additional scenic restrictions, high landslide risk assessments, and wildlife clearances for northern spotted owls and marbled murrelets were required.

In 1990, the listing of the northern spotted owl as a federally threatened species initiated the current period of forest management. Timber sales dropped from their annual level of 40 to 50 MMBF to the point where *no* sales were held in 1991. The ODF spent the next 4 years developing the 1995 HCP for spotted owls and marbled murrelets that allowed for incidental take of these species (murrelets only until 2001) to occur during forest management operations. In exchange, the Forest was zoned into long-rotation basins of 160 or more years and short-rotation basins of 80+ and 135+ years. In addition, Habitat Conservancy Areas (HCAs) constituting the best northern spotted owl habitat were established, as were Marbled Murrelet Management Areas (MMMAs) to protect this species. The specifics of these management allocations are discussed in more detail in Chapter 9, *Terrestrial Wildlife*. In terms of the timber management program, the effect was to reduce the annual clearcut sales target to 460 acres with an expected volume of 22 to 25 MMBF. The thinning target is 500 acres per year with an expected volume of 3 MMBF.

Road Building

The early road network in the Forest is shown on Map 3.2. Road building in the Forest fits well into the four management phases described earlier in this section. The first, from the initial establishment of the Forest in 1929 until World War II, was basically custodial in nature with the first "truck roads" constructed by the CCC. After World War II, the second phase saw a rise in road construction concomitant with beginning forest management. The 1962 Columbus Day windstorm initiated the third phase by accelerating the road-building program to accomplish timber salvage harvests. The fourth and "modern" phase began in about 1975 after completion of roads to access windstorm salvage and continues in the present. It involves completing roads into areas where salvage was not conducted, extending spur roads to access individual timber harvest sites, and upgrading roads and culverts to improve their performance.

Methods

The primary source used for historical information on road building was Jerry Phillip's *Caulk Boots and Cheese Sandwiches* (1996). Additional information was obtained through discussions with James McIntosh, District Engineer. Forest staff is currently compiling a road atlas that includes the construction year for all Forest roads. This information was not available to incorporate into this analysis.

Results and Discussion

During the custodial period from 1929-1941, the only roads built were ones constructed by the CCC (Map 3.2). The primary one was the Scholfield Ridge (5000) and Umpcoos Road (7000). This road began from the county road that went from Scottsburg over to Glenn Creek and then down to Allegany. In 1933, the CCC began road construction from the vicinity of Lake Creek in Ash Valley (T.23S, R.10W, sec 27). The next year, the CCC camp was moved to Scholfield Creek (Camp Walker) where construction began from that end. The Scholfield/Umpcoos Road was tied together in 1935. Another CCC road, heading south at the junction of the 5000 and 2000 Roads towards Trail Butte, was built in 1935 and extended 5.5 miles along what is now the 2000 Road. The final road built by the CCC was

the upper portion of the Elk Ridge Road (1000), extending only about 0.5 miles from that portion of the Umpcoos Road. The primary purpose of these roads was to access fire towers at Dean Mountain, Cougar Pass, Elk Peak, and Trail Butte.

The second phase of road building began after World War II and initially focused on accessing the first timber sales on the eastern edge of the Forest in Ash Valley and along Mill Creek. Small amounts of road building occurred in 1945 along the 1000 Road from Ash Valley to its junction with the 1850 Road, and along the lower part of the 7700 Road up from Mill Creek. As discussed previously, the first large increase in road building occurred in concert with timber sales beginning in 1955. The Unit Forester at the time, Bob Mounteer, determined that the only strategy to road the Forest for management purposes was to have timber purchasers pay for the roads, per Board of Forestry policy. This strategy led to identifying timber sales that would meet the priority scheme, while at the same time extending the existing road network.

As a result, during this period virtually no road building was conducted in the western half of the Forest where stands were about 70 years of age (in 1955). Roads were generally extended from existing ones and accessed old-growth timber. Tie roads also were built in the interest of providing transport to different purchasing areas, such as Reedsport for the Dean Mountain Road, Lakeside for the Benson Ridge Road (built in 1963), and Coos Bay for the Trail Butte Road. The Cougar Pass Road (7700) initially started in 1945 was finally completed in 1956. The Footlog Creek Road (7500) initially started in 1954 as a result of an Indian allotment sale, and then was extended in 1959 for the Footlog Creek No. 1 timber sale. The Elk Ridge Road (1000) was the first joint road development project (with Weyerhaeuser) that started in 1957 and was completed in 1960. The Trout Creek/Beaver Creek Road (2300) was completed in 1961 to tie together the Trail Butte (3000) and Elk Ridge (1000) roads. Finally in 1961, 3 miles of the Elk Creek Road (9000) was started, beginning at the south end junction with the 1000 Road. During the 7-year period from the start of Forest management until the Columbus Day windstorm, about 65 miles of standard (16-foot width) road and 78 miles of lower standard (14-foot width) road were built, with almost 104 miles built from 1960-1962.

The Columbus Day windstorm, and the resulting timber salvage harvesting, accelerated the extent of road building in the Forest and changed its nature as well. An estimated 150 miles of new roads were needed to access the sale areas. These roads were called “wood construction” and generally were below prior standards, with little engineering. Only the center lines and culvert locations were flagged. Construction involved a lot of side-cast, no surfacing or ditches, and a minimal 14-foot width.

In 1966, the policy of only building roads into timber sales was relaxed. This allowed the Forest to begin upgrading some of the roads built earlier, especially during the salvage program. This involved surfacing the road, building ditches, and upgrading bridges from log stringers to concrete. Although the first concrete bridge on the Forest was built over the West Fork Millicoma River for the 2300 Road, since 1966 concrete bridges (or abutments) were used more commonly and included three on the 8000 Road from the mouth of Joe’s Creek to Elk Creek. By 1968, with the surfacing of the upper portion of the West Fork

Millicoma Road (2000), the all-weather road system on the Forest was essentially completed. Although the building of spur roads to reach individual sales continued and existing roads were either upgraded or maintained, the era of new road construction on the Forest essentially ended. The year 1968 also was significant because the Forest began a single road maintenance contract instead of having each purchaser perform maintenance on the Forest roads they used. This system continues to this day.

Other Management and Policy Changes

Beginning in 1963, the first riparian buffer strips were left in timber harvest areas, initially only on one side of the stream. In 1968, buffer strips were left on both sides of the stream, which averaged about 8-10 thousand board feet of commercial sized fir if the stand was 70-80 years of age. The first sale with a 100-foot riparian buffer strip on both sides of a stream was on the Alder Fork of Big Creek, a tributary to North Tenmile Lake. The ODFW requested the 100-foot riparian buffer strip.

A "Land Use Zoning and Classification" system began on the Forest in 1970. Lands were zoned as *scenic* corridors (State Highway 38, Loon Lake, Mill Creek County Road), *limited* production (above domestic water supplies), and *regular* production. Stream classification mapping and testing also began in 1970. This mapping was terminated in a few years when the ODFW determined there were no problems in the Forest's streams (Phillips 1996). By 1984, "high risk" areas with the potential for landslides were being identified in timber sale areas.