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Western Michigan University Senior Honors Thesis for the Lee Honors College and Honors in the Political Science Department:

The Northwest Forest Plan: Up to Our Neck in Owls? Encounters With Strix occidentalis caurina



Ashley N. Horvat
Faculty Advisor: Dr. Denise Keele
April 20, 2010

Dedication

I dedicate this to my family, especially Frank and his unwavering dedication to the brewing of way too many cups of coffee to count, and Dr. Denise Keele, without whom, I'd still be up to my neck in owls and out of my mind. Thanks for traveling along with me in my adventures with *Strix*.

Acknowledgements

This thesis reflects the efforts of a number of people, but I am especially appreciative for the indefatigable nature of Dr. Denise Keele, her persistent encouragement, and invaluable advice. Dr. Keele tirelessly dedicated herself to seeing this thesis through, assisting me with a broad range of tasks, such as researching sources, drafting the initial documents, setting up the interview recordings, organizing the content, editing, formatting, and all around motivating. Dr. Keele was incredibly generous with her time, her patience and follow through was extraordinary, keeping the entire process flowing. I have to thank her immensely for introducing me to the spotted owl "crisis in the woods." In her capacity as my mentor she facilitated the critical links between research, learning, and growth.

I am also very grateful to have had the opportunity to work with my other committee members, Dr. Lynne Heasley and Dr. Thomas Bailey. These two professors have provided such valuable direction over the course of my academic life and I am so thankful for having met them. Their support and dedication to seeing the thesis through to its end has been so encouraging. Dr. Heasley provided me with a direction for conducting research in oral history and with sources to employ in my studies. Dr. Bailey's humor, good nature, and care for our environment has never failed to make me laugh, make me smile, to remind me about the hope that exists and why I am so passionate about the subject of the thesis. I am so grateful for the financial support that the Lee Honors College provided with the Seibert Undergraduate Research and Creative Activities Award. Without this support, I would not have been able to dedicate as much time and effort. I also owe a great deal of gratitude to all of the policy community members who took time out of their busy schedules to inform my study and provide a view of the Northwest Forest Plan through each of their respective lens. What I discovered over the course of developing my thesis and receiving the network of support from family and mentors, is summed up by the biologist, E.O. Wilson: "There is no better high than discovery."

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I. Introduction

Traversing across the vast Pacific Northwest with the Northern spotted owl (Strix occidentalis caurina), one would experience a dynamic landscape that ranged from areas shrouded with ancient forests, mountains dotted with dense young forests, large swathes of empty habitat from clearcuts, and corridors filled with canopies and a plethora of life. The once vibrant forests that blanketed the Pacific Northwest in an abundance of life and sheltered these rare owls in their canopies were threatened by the removal of these primordial giants in these forests. The wild salmon that journey in record numbers through the cold rivers and streams that flow through these threatened forests were at times choked by sediment in the turbid waters. These forests were at the center of a debate among various groups, when following years of timber industries liquidating old growth trees, a paradigm shift occurred after environmentalists and others challenged these timber actions. This created a serious rift among those in the region. The newly elected President Clinton stepped onto the battlefield in an attempt to assuage and resolve this conflict. The Northwest Forest Plan emerged as Clinton's resolution, a pioneering ecosystem management approach that reversed course on federal lands decreasing logging in the area by 80 percent. I

The goal of this study is to frame the current status of this innovative policy, spearheaded by former President Clinton, the Northwest Forest Plan (NWFP), also called "the Plan." I will evaluate the implementation of the five core principles of the NWFP to determine if they are sufficient, need to be altered, or supplemented with current political and scientific information taken into consideration. Implemented in the nineties, the Plan has had time to develop, coalesce, and respond to ecological, societal, legal, and political shifts. This study will contribute to our understanding of how these principles have been transformed from paper and theory into real practice, while simultaneously operating under various paradigms and agencies. The study seeks to answer four research questions: 1) how ecologically viable is the NWFP, 2) how socioeconomically viable is the NWFP, 3) how legally viable is the NWFP, and 4) how politically viable is the NWFP. First, I will describe the background and origins of the NWFP in order to place the current research within a historical framework and context. After this, I will proffer the methods used to research this thesis, to compile legal data, and the way in which I conducted the interviews of policy community actors. Next, I will describe the technical structure of the plan and evaluate how well it meets ecological and socioeconomic goals. I will then compile and present the litigation history to determine the legal viability of the NWFP. After establishing the legal foundation, the study will focus on how the personnel charged with implementation and the policy community affected by the NWFP view its ecological, socioeconomic, legal, and political viability.

¹ Earthjustice, (n.d.). *The Northwest forest plan* . Retrieved on 12/22/09 from http://www.earthjustice.org/our_work/campaigns/nw_forest_plan.html

II. Historical Context: In the Beginning...

The northern spotted owl was the environmental symbol for the value of forest ecosystems and the importance of protecting these vital repositories of immense biological diversity in the early 1990s. The debate over old-growth forests of the Pacific Northwest ignited a flurry of political controversy as environmental groups called for more sustainable forest practices to mitigate the eradication of ancient forests. The timber industry and the local economies reliant on them feared for the loss of their livelihoods as the issue simmered. As divergent groups called for opposing forest use standards, the Forest Service (FS) had to reevaluate how it was equipped to manage the forests. Historically, the FS was largely concerned with harvesting timber resources, acting as the "custodian" of national forest lands, such as when they responded to the increasing demand for timber that occurred post-WWII to carpet the country with suburbs. The mentality of the FS allegiance to the "home builder" would soon have to be reconciled with the growing concern from the public, the groundswell of the environmental movement that called for protection of the rare northern spotted owl and its dwindling habitat, and those who wanted to continue logging the Pacific Northwest forests.²

As tensions began to mount between opposing ideologies and rationales for forest use, forest planning became so contentious in this region of the country that the two sides involved were embroiled in a battle that became widely known as the "owl wars," where forest planning "required an uneasy marriage of science, economics, history, public administration, abstract values, and the rule of law." As the friction mounted, the U.S. Fish and Wildlife Service (FWS) received two petitions to list the northern spotted owl as a threatened or endangered species, whereupon they denied these requests.

This decision to ignore the moribund northern spotted owls ignited a firestorm, representing, perhaps the most "prominent controversy ever to emerge under the [Endangered Species Act] ESA." Various environmental organizations brought legal action against the FWS in which the court remanded the FWS decision not to list the spotted owl due to it being "arbitrary and capricious or contrary to law." The court recognized the FWS decision as inadequate, ignoring scientific data at the time, effectively setting the tenor for the battle to be waged further on.

The landmark *Northern Spotted Owl v. Hodel* decision left a flood of controversy in its wake as its impact on public land management created a tangled milieu rife with political implications. After the decision was rendered, politicians utilized fear-mongering tactics in an attempt to stymie any progress to enact sweeping change that would protect these endangered

³ Cubbage, F.W., J. O'Loughlin and C.S. Bullock, III. 1993. Forest Resource Policy. New York, John Wiley and Sons.

² Tuchmann, E.T., Connaughton, K.P., Freedman, L.E., & Moriwaki, C.B. (1996). *The Northwest Forest Plan: A report to the President and Congress*. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

⁴ Coggins, G.C., Wilkinson, C.F., Leshy, J.D., & Fischman, R.L. (2007). Federal public land and resources law. New York, NY: Foundation Press.

⁵ Northern Spotted Owl v. Hodel, 716 F. Supp. 479 (W.D. Wash. 1988)

species. Images of the country immersed in a barrage of owls were conjured by then President George H.W. Bush when he postured, "we'll be up to our neck in owls, and out of work for every American." The loggers represented a human element that could not be ignored in an area so heavily dependent on the timber industry. A popular bumper sticker sentiment supporting these loggers ranged from "loggers are endangered species too," to, "hug a logger, you'll never go back to trees." These incitements as well as many other depictions of a choice between environmental protection and jobs for Americans created a divide and confusion amongst the populace. However, this is a false dichotomy, as drawing a line in the sand is not always so easy when there are complex issues. These issues brewed over after District Judge Dwyer set the stage for future political actions when he enjoined all timber sales on forest lands until a spotted owl conservation plan was put together that was compliant with environmental statutes. In reference to his injunction on FS timber sales in owl habitat, Judge Dwyer concluded "the argument that the mightiest economy on earth cannot afford to preserve old growth forests for a short time, while it reaches an overdue decision on how to manage them, is not convincing today."

The polarization incited by political scare tactics and the gaping aperture in policy for these forests as a result of Dwyer's injunction, stirred President Bill Clinton to develop a comprehensive policy that addressed this compounded issue. President Clinton convened the Forest Conference in 1993 in Portland, Oregon to address this growing political dilemma. A cadre of scientists, the Forest Ecosystem Management Assessment Team (FEMAT), was assembled to develop a direction and options for what would become the foundation of the NWFP. As a candidate, President Clinton's platform was centered on improving the economy and his running mate for vice-president, Al Gore, was an environmental leader. This political marriage represented the approach that would be taken with regards to combining economic considerations with environmental protection. While the previous administration disparaged the environmentalists as "owl people," the Clinton administration had to use its political capital to remedy the owl dispute through a compromise solution.⁸

The new administration forged on to design the NWFP with five guiding principles under an ecosystem-based approach. These included: 1) never forgetting the human and economic dimensions, 2) protect the long-term health of our forests, our wildlife, and our waterways, 3) be scientifically sound, ecologically credible, and legally responsible, 4) produce a predictable and sustainable level of timber sales and non-timber resources, and 5) to make the federal government work together and for you." The aim of the NWFP was to proffer policy direction for over 24 million acres of federal land within the 57 million acre range of the elusive, nocturnal, northern spotted owl and the marbled murrelet (*Brachyramphus marmoratus*), in California, Oregon, and Washington. The NWFP's ecosystem approach blends "species, reserve,

⁶ Niemi, E., Whitelaw, E., & Grossman, E. (2000). Bird of doom...or was it?. *The Amicus Journal*, 22(3), 19-25

⁷ Yaffee, S.L. (1994). *The Wisdom of the spotted owl: policy lessons for a new century.* Washington, D.C.: Island Press.

⁸ Supra note 7

⁹ Rapp, V. (2008, January). *Northwest forest plan- the first 10 years (1994–2003): First-decade results of the northwest forest plan*. Retrieved from http://www.fs.fed.us/pnw/publications/pnw_gtr720/pnw_gtr720a.pdf

and active management conservation strategies into an integrated and comprehensive forest management system," and this constitution allows for the fortitude required when being challenged by such strong opposition. ¹⁰ The 1994 Record of Decision (ROD), a legal document that legitimizes the Plan, is an amendment to existing management plans for 19 USDA National Forests and 7 USDI Bureau of Land Management (BLM) districts.

An important goal of the NWFP was to synthesize various agencies involved in the forest planning policy community into a cohesive and deliberative body that considers various components under the penumbra of an ecosystems-based approach. According to the 1994 ROD, "eight federal agencies -- the Forest Service, Bureau of Land Management, Fish and Wildlife Service, National Marine Fisheries Service, National Park Service, Environmental Protection Agency, National Biological Survey, and Bureau of Indian Affairs— [cooperated] to produce..." interagency standards and guidelines to protect the northern spotted owl and other old-growth species. In an effort to preserve these Pacific giants, and recognizing that the spotted owls and other old-growth forest dependent species do not recognize political boundaries, the interagency team shifted the forest planning to one "based on watersheds rather than agency boundaries." ¹¹

The multitude of agencies charged with the implementation and monitoring of this novel ecosystem-based forest plan, agreed to a set of policies to abide by in order to remain effective. They agreed to develop a cohesive vision and shared mission for the management of federal forest lands; improve their adaptability to changes in scientific understanding or societal constructs; develop trust and coordination among different agencies, within individual agencies, or between agencies and external stakeholders; address inconsistencies inherent in statutory mandates; maximize the application of agency budgets by improving integration among agencies; foster a community that shares information in order to capitalize on all technology and expertise; and coordinate ecosystem management activities among federal, state, and local programs for socioeconomic assistance. The Plan that materialized included the concept of an interconnected network of biological systems that includes all biota, even humans. Under the auspices of this philosophy, considerations for potential timber harvests will work within a utilitarian paradigm, deciding based on that which provides the greatest sustainable economic and social good for the region.

The evolution of the NWFP had its beginnings at a time when polarization regarding the issue of logging in old-growth forests was at an all time high. The disparate interest groups were at an impasse when the Clinton administration stepped into the fray to unite them into a cohesive direction for the future. Although the Plan was successful at instilling economic certainty for industry on federal lands, currently there is a lot of uncertainty that abounds regarding the state of the NWFP's protection of endangered species. It satiated the needs of the timber programs that kept afloat following the Plan through the Northwest Economic Adjustment Initiative, providing "assistance to individuals and communities who were hurt." Despite the unprecedented cooperation, litigation has continued to challenge the NWFP, stirring up various

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¹⁰ Supra note 2

¹¹ Pipkin, James. (1998, September). *The Northwest forest plan revisited*. Retrieved from http://www.reo.gov/library/reports/NFP revisited.htm

¹² Supra note 11

issues since Clinton broke up the logjam in the nineties. The debate that remains today continues to surround the determination of the purported "winners" and "losers" in policy decisions. Even with the numerous court rulings that have upheld the Plan, incisions have been inflicted upon the NWFP. The industries have continued to try and cut away at its scar tissue with its counterarguments and intentions to undermine the NWFP's penumbra of influence it casts over the ancient forests. Many timber industries have it in mind to erode the key provisions and the northern spotted owl and marbled murrelet ESA protections. The parties on either side argue that the economic aspects of the plan have not been fulfilled and the other side believes that the ecological aspects are still not receiving hefty enough considerations. The "economy v. environment" battle wages on.

III. Methodology

The ten-year reports and research synthesis, completed by the United States Department of Agriculture, served as the foundation for my research. ¹³ I utilized this information to update and reassess the viability of the Plan based on the current ecological, societal, legal, and political information, related to the current implementation, feasibility, and scientific trends. The existing research depicted the status at the time of its report, as having produced successes in the protection of old growth forests and related species, improving agency interaction, and increasing cooperation between science and management. It honed in on a few ecological and social problems that existed at the time, and the two themes that emerged were uncertainty and complexity about the Plan's implications. This research compiles these reports, along with a literature search that also captured external stakeholders' reports and analysis.

I searched the Westlaw database to capture any state and federal litigation related to the Northwest Forest Plan. The search produced 109 cases, which I then organized based on the agencies involved in the litigation, then into a thematic category related to the component of the Plan being challenged, and then categorized them into cases that agencies won or lost. This was completed in order to bring out representative trends or influential avenues of litigation over the course of the Plan's evolution. The majority of the cases that came up were suits filed by environmental groups against agencies, with only a small amount of timber industry suits challenging issues related to the Plan. The cases that were analyzed in my report were substantial in their implication and relation to the Plan's development. They were chosen based on their impact on all of the stakeholders involved. Out of the total cases that the search in Westlaw produced, 83 were actually Northwest Forest Plan related; the remaining 17 only had the Plan mentioned in the record as historical context.

The research also entailed a component in which I recruited subjects to interview about the Northwest Forest Plan. The goal was to best represent the wide spectrum of participants in the entire process of the inception of the NWFP and its continued implementation. In doing so, the recruitment process focused on locating vital actors in the categories of federal and state government, as well as external stakeholders. This semi-structured qualitative study will employ the method of data collection, a "data collection circle," depicted by John W. Creswell, in Qualitative Inquiry and Research Design: Choosing Among Five Traditions. 14 I began by "locating the site or individual," which centered on deriving the important actors from the NWFP's charged committees. Their central importance was determined by the repeated research mentioning the potential participant and their level of leadership in the NWFP's policy community. The participant was chosen based upon their willingness to proffer valuable information and an innovative perspective for the issue being explored. The next step in the data collection circle, "gaining access and making rapport," was accomplished through initiating contact via email and developing a relationship through continued communication. During the next step, "purposefully sampling," I utilized the following types of sampling in my study, "criterion," (all cases that met the criterion addressed above based on political leadership and

¹³ Supra note 9

¹⁴ Creswell, J.W. (1998). *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: SAGE Publications, Inc.

expertise in order to ensure quality assurance), and "opportunistic," (if the subjects that were recruited weren't able to provide useful information for the study, we followed new leads, taking advantage of recommendations from those who were contacted and of the unexpected). In Creswell's next step, "collection data," I collected the data through emails and primarily phone interviews. Next, for the "recording information" step, we conducted a semi-structured interview, audio taped the interview, and transcribed the interview. During the next step, "resolving field issues," in order to preserve the authenticity of the material being analyzed the study aimed to prepare for potential field issues that arose, in order to respond effectively. During the final step, "storing data," we stored the data in the principal investigator's office, after the interviews were transcribed they were stored on her computer, erased from the audiotape, and the documentation is stored in a binder.

The nine different coordinating bodies that were chartered by the Plan served as recruitment resources for the federal and state subjects. These coordinating bodies included the Provincial Advisory Committees (PACs), the Regional Interagency Executive Committee (RIEC), including regional executives of the agencies involved, the Regional Ecosystem Office (REO), the Intergovernmental Advisory Committee (IAC), and the Provincial Interagency Executive Committees (PIECs). Based upon the NWFP committees, the subjects that were recruited derived from the agencies that represent the largest proportion of responsibility and focus of the plan. The Forest Service (FS), Bureau of Land Management (BLM), Environmental Protection Agency (EPA), and the Fish and Wildlife Service (FWS) are the primary federal agencies involved in most of the committees. Our choices for the state and local tribal contacts were made based on their level of leadership in past involvement in the development of the Plan, or their present involvement in its implementation. These states included Washington, Oregon, and California. Based upon a review of external stakeholders involved in court cases and lobbying, environmental groups and timber industry representatives were chosen as participants. The particular members were chosen based on their prominence in the organization or their relevant role in relation to the NWFP.

The subjects that were successfully recruited were all from the federal government, environmental groups, and other socioeconomic actors involved with the Plan. There was an attempt to include state government subjects and representatives from the timber industry, but the subjects recruited did not respond to my request for their participation. Please refer to Appendix A for a chart with the overview list of recruited subjects and their categories. The participants were interviewed by phone for around 60-90 minutes in which a series of questions were asked of them, which can be referenced in Appendix B. Western Michigan University's Human Subjects Institutional Review Board (HSIRB) reviewed my thesis and determined that it was exempt from approval. Please refer to Appendix C for the HSIRB exemption letter.

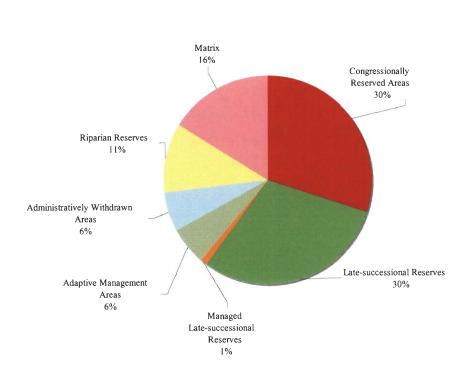
IV. Ecological Viability

A. Components of the Northwest Forest Plan

i. Land Use Designations

FEMAT, a coalition of scientists, came together to develop options for what would become the NWFP. Its integration of federal management, scientists, researchers, and regulatory agencies in the Pacific Northwest signaled a shift of great magnitude in its level of collaboration. The option that was ultimately chosen, "Option 9," materialized out of a process that synthesized various bodies of knowledge in its application of principles of conservation biology, forest science, and ecological science. The Plan reversed course from estimating timber volume first to long-term restoration of the forests and ensuring the Standards and Guidelines were met before timber volume was assessed, during the projected 100-year period of recovery. The area covered by the Plan includes 12 provinces, distinct in their "climate, vegetation, geology, and landforms," and within these, the NWFP mandated that the following land allocations occur:

Figure 1: Northwest Forest Plan Land Allocations



Northwest Forest Plan Land Allocations

¹⁵ Haynes, R.W., Bormann, B.T., Lee, D.C., & Jon, R. (2006). A Synthesis of monitoring and research results. Portland, OR: U.S. Department of Agriculture, Forest Service.

These land use allocations are associated with the Plan's Standards and Guidelines (S & G's) for management activities within each respective allocation. ¹⁶ Congressionally reserved areas include designated wilderness areas, and national parks. Late-Successional Reserves (LSRs) are managed for the old-growth dependent species to protect and improve habitat. The matrix areas, originally envisioned as a source of commodities, are all of those other lands that are external to the reserves and withdrawn areas available to timber harvests that have been scheduled. The riparian reserves are areas adjacent to unstable or potentially unstable rivers, streams, and they are managed for their value they provide to aquatic and other wildlife. The riparian areas are set aside to provide high quality water supply, and there are two key watershed designations that categorize certain watersheds, to be managed for their high caliber environment as well as sources of high-quality water. 17 These areas also supply high quality habitat for salmonid and dispersal areas for spotted owls and other related wildlife. The adaptive management areas (AMAs) are to be used for flexibility in utilizing or employing new and innovative forest management approaches and they are also available for scheduled timber harvest. The administratively withdrawn areas are lands that are prohibited from scheduled timber harvest such as aesthetically sensitive areas that contain special or rather sensitive species or recreation sites in which reforestation could not be safeguarded. The managed latesuccessional reserves are mapped to protect spotted owl populations where they are known to exist, as well as unmapped protection buffers, designed to protect rare and unknown species, and in these areas, managers of its forests are allowed to take action to prevent natural catastrophes. Finally, the Plan designates two different marbled murrelet zones that recognize the coastal forest required for its habitat.

ii. Late-Successional & Old Growth Forests

The first component of the NWFP, is that through a large system of reserves that contain virgin old growth, as well as areas where trees were previously felled that may regrow into a natural forest system in the future, logging is not generally allowed. The Plan established a network of "working forests" to conserve and maintain late-successional forests, dispersed across federal lands. The design was developed with the intention of conserving the northern spotted owl, the species of concern, by conserving the old-growth forests, protecting stream habitats, and connecting these reserves via passageways that maintain old-growth elements. Under the auspices of perpetuating biodiversity in old-growth forests, the Plan contained numerous provisions that called for protection of late-successional old-growth (LSOG) species. These species were to be protected through the designation of LSRs, which would be amenable to the spotted owl, marbled murrelets, and other LSOG species. If the LSOG were located outside of the confines of the protected reserves, the Plan called for the designation of what were termed LST3s in the Plan, but known colloquially as "mini" reserves. Only 42 percent of the LSRs are late-successional and old growth forests, the rest composed of recent clearcuts, plantations, brush

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¹⁶ Environmental Protection Information Center (2001). The Failure of the northwest forest plan to protect and restore the region. *epic*.

¹⁷ Supra note 9

¹⁸ Supra note 14

fields, and other younger stands. ¹⁹ Given the political climate surrounding the issue and scope of the Plan, semantics can even emerge as controversial. The way in which a forest is categorized as "old-growth" continues to be contentious. The 10-year review defined old growth "in three main categories by using tree diameter, canopy layering, canopy closure, and life form as defining attributes, rather than age."²⁰

iii. Northern Spotted Owl

The protection of the derelict species, the northern spotted owl, was a key component in the design of the Plan. The protection for the owl was afforded through the design in the way that it set up a well distributed range for the owl rather than confining it to a small portion, with multiple pairs of species. Blocks of habitat were designed to cover the range in close proximity to each other so that habitat would be less fragmented, and through a network of corridors that mirrored as closely as possible the species' suitable habitat.

iv. Marbled Murrelet

The Plan also implemented a strategy to protect the elusive marbled murrelet, a small seabird of the family Alcidae. Another late-successional old growth forest dependant species, the murrelet spends most of its life at sea, but nests in old growth forests along the coasts, sometimes traveling as much as 50 miles inland. The goal was to prevent any loss of occupied nesting habitat on the federal lands it traversed, which at the outset of the Plan was 2.55 million acres within the Congressionally reserved lands and LSRs, thought to have required nesting characteristics. Although nesting habitat is essential to the marbled murrelet's vitality, other factors can serve to vitiate its survival rates, such as ocean conditions, pollution, oil spills, and many other contributing factors.

v. Socioeconomic, Interagency Cooperation, Adaptive Management, & Monitoring

The Northwest Forest Plan aimed to incorporate these forest management and ecological principles in the region with the communities that surround it and depend on its resources. Among the goals of the Plan was the aim to provide for the communities by maintaining a predictable and sustainable supply of timber. The inclusion of social scientists and concerned citizens is reflected in the tenets and principles of the Plan that address the mitigation of socioeconomic effects as a result of decreased timber harvests. This was to be completed by economic development and diversification assistance as well as setting up a system to compel agencies to work together on these issues in forest management.

¹⁹ FSEIS. 1994. Final Supplemental Environmental Impact Statement on management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl. Portland, OR. USDA/USDI.

²⁰ Supra note 9

²¹ Supra note 9

In order to embody the ecosystem approach to management, the Plan incorporated various structural changes throughout the agencies to achieve a high level of interagency cooperation. The formal institutions were erected to facilitate communication pathways and new levels of agency directives in the same trajectory. In order to circumnavigate these new channels, there were formal institutions developed to maintain this unprecedented level of assimilation. These included the committees that promoted agency-citizen cohesion and opening of the lines of communication, the Provincial Advisory committees (PACs), and Adaptive Management Areas (AMAs). It also established committees such as the Regional Interagency Executive Committee (RIEC), the Provincial Interagency Executive Committee (PIEC), and the work group, Regional Ecosystem Office (REO), to maintain relations among leaders in each agency, further strengthening the pathways of the Plan to integrate various federal bodies towards cohesive management goals.

The Plan's premise centered around the fact that innovation and creativity would arise from these interagency relations, and the AMAs were created for the purpose of directing that flow of innovation into forest management in different geomorphologies. The aim was that the managers would test the boundaries through the Plan's strategies, monitor their results, and adapt the effective strategies as more learning took place.

The regional monitoring program was developed to work synergistically and support the idea of the AMAs. It was strongly institutionalized, with the heaviest investment of time, energy, and money by the agencies. The total sum of all agencies' spending on monitoring between the years of 1994-2005 was about \$50 million, about 12 percent of the total implementation costs of the plan. The monitoring would materialize into trends and status reports on forest vegetation, implementation, northern spotted owl populations, socioeconomic facets, and aquatic systems. The ROD charged the agencies with three different types of monitoring, which included implementation, effectiveness, and validation. The implementation monitoring was employed to validate that the standards and guidelines proffered are actually being followed. Effectiveness monitoring assesses whether the strategies or activities delineated were effective in accomplishing its desired goals. Finally, the validation monitoring attempts to determine if the methods and strategies employed exists in a cause and effect relationship with outcomes of managed indicators being measured.

B. Programs & Strategies of the Northwest Forest Plan

i. Aquatic Conservation Strategy

The methodology employed by the NWFP is one that protects the remaining ancient forests as well as a strategy for preservation of wild salmon and steelhead trout, through the Aquatic Conservation Strategy (ACS). The ACS protects fish through a system of streamside buffers in which logging and other forms of habitat destruction are sharply limited.²⁴ The ACS

²³ Supra note 14

²² Supra note 9

²⁴ Earthjustice, (2003). *Ancient forests: at risk again*. Retrieved on 12/22/09 from http://www.earthjustice.org/library/reports/NWFP 2003.pdf

and riparian reserves further buttressed late-successional and old growth (LSOG) species in its measures to protect the targeted Survey and Manage species.

The ACS is a regional strategy "designed to restore and maintain the processes that create and maintain conditions in aquatic ecosystems over time across the area inhabited by the northern spotted owl...to prevent further degradation of aquatic ecosystems and restore habitat and the ecological processes responsible for the creating of habitat over broad landscapes, as opposed to individual projects or small watersheds."25 The ACS contains four components to accomplish these sweeping management goals: 1) watershed analysis, 2) riparian reserves, 3) key watersheds, and 4) watershed restoration. These watersheds are the fundamental building blocks of the overall protection strategy. Watershed analysis, a process in which researchers obtain information that frames the conditions and features of these watersheds, are essential to the learning process of management, guiding direction on future strategies. The riparian reserves can serve as corridors that connect old-growth forests and enhance habitat for LSOG species, and they limit or prohibit activities that would stand in the way of ACS objectives being met.²⁶ The key watersheds are selected because of their conduciveness as habitat for the declining salmonid and other important fish species and for their quality of water, and require watershed analyses before resource management activities occur. The final component of the ACS is to restore the watersheds, in order to sustain economic and watershed health. The ROD declared that the focus of the restoration should be on restoring riparian vegetation and habitat complexity for anadromous fish.

ii. Survey and Manage

The final component of the Plan enacts a "Survey and Manage" (S & M) program to protect lesser-known old-growth species, which in many cases end up depending on forests that are outside of the Plan's allocated and protected reserves. Examples of these little known species that keep these ecosystems running are bryophytes, mollusks, lichens, and fungi, to name a few. To accommodate the fact that there is very little known about these vital species, the Plan incorporates a landscape-scale approach by requiring surveys for these species along with management recommendations. The S & M program of the NWFP requires (1) the protection of known sites of rare organisms; (2) surveys for the presence of rare organisms prior to ground-disturbing activities; (3) surveys to identify location and habitats of rare species; and (4) general regional surveys for rare species.²⁷ Mitigation measures were put forth in this program for about 400 of these rare and locally restricted species.

C. An Assessment: Ecological Processes, Progress, & Paradigm Shifts

The challenge in determining the ecological viability of the Plan is to be accomplished by delineating the basic ecological assumptions of the NWFP and to analyze, based on the current research, if the assumptions were correct. To begin with, the goals related to the conservation of wildlife and population viability will be assessed. The little things that run the world came out of

²⁵ Supra note 14

²⁶ Supra note 11

²⁷ Supra note 15

the current studies as the vital links in ecosystems, affirming the basic beliefs of FEMAT, because "information on the importance of the small, often obscure members of the ecological community has grown rapidly." The discovery of the importance of organisms, such as the mycorrhizal fungi, to the ecosystem composition and structure, highlights the first important shift that has occurred since the inception of the Plan. This is that the single-species focus of the NWFP does not account for the multitude of life and processes that occur within the forest ecosystem. There is very little known of the roles of all biotic community members, and the fear is that by employing this single-species approach, these potential keystone members of the ecosystem may be lost without knowing their role in the functioning of the forests. The expectation that protecting large reserves will also preserve these little known species has been proven incorrect, leading to the potential for them to slip through the cracks.

"When you have seen one ant, one bird, one tree, you have not seen them all." E.O. Wilson

As the field of ecology has evolved, a paradigm shift has occurred from one that frames forest conditions as mostly static to one that understands them as highly dynamic with a number of uncertainties. ²⁹ In previous periods of time, management strategies have attempted to focus their efforts at maintaining an ecosystem at what can be perceived as its "climax" state. However, many studies have revealed the fact that species native to Pacific Northwest forest ecosystems have evolved in response to a series of disturbance conditions. Given the revelation that species have adapted successfully to a set of disturbance patterns, the glaring effect of disturbance processes on the overall forest ecology, and the variations across different parts of the region, it has become clear that the NWFP should reflect this in its management strategies. Research has demonstrated that there are significant amounts of variation within the NWFP area that are driven by differences in climate and physical geography. The management solutions for stimulating old-growth environments could be customized to be consistent with local disturbance regimes. New efforts at conservation should employ the dynamic model of forest environments as a framework.

As the Plan has had time to play out, issues have developed, including the permanency of the designated reserve boundaries and the salvage logging that has occurred in reserves. The criticism of reserve boundaries centers on the fact that these reserves are static human constructs that do not reflect the dynamic nature of forests. For example, after a stand-replacement wildfire, the reserves may no longer be relevant. Salvage logging has been proffered as a way to benefit economically and to diminish fuel loads. However, studies have shown that salvage logging actually has the potential to lead to soil compaction, erosion, or loss of unique early successional habitats. This displays the results of applying a simple prescription for a complex problem. Researchers have delineated salvage logging as a problem in that it decreases the quantity and magnitude of wood placed in stream channels, which could have serious implications for the

Diaz, N.M., Haynes, R.W. (2002). Highlights of science contributions to implementing the northwest forest plan-1994 to 1998. Gen. Tech. Rep. PNW-GTR-540. Portland, OR.:
 U.S. Department of Agriculture, Forest Service. Pacific Northwest Research Station. 22

²⁹ Supra note 14

³⁰ Supra note 14

health of these waterways in its effects on the nutrient intake and the physical habitats of the streams. Compounding this already intense disturbance are the activities that follow from salvage logging, such as the construction of roads or opening previously decommissioned roads. These activities could intensify erosion and other deleterious effects of construction in wild areas.

Although the Plan has made significant headway in its protection of the old growth forests, with an increase in total area of older forests, losses are significantly high in the fireprone provinces. If management strategies are not devised to mitigate the loss of precious habitat, the conservation strategy could fail. As the science evolved, studies have pointed to the need to integrate reducing fuels into management of owl habitat. Active management in the reserves is needed to reduce the potential for a massive loss of forest from high-severity fire.

In addition to the recognition that forests are highly dynamic systems and must be conserved as such, there has also been a growing consensus among scientists in the Pacific Northwest that there are immense amounts of variation across the region. This variation across the region is highly pronounced in the area of aquatic conservation. The ACS included the assumption that variations in stream systems existed across the landscape. However, this assumption has been further buttressed by the numerous studies that have spotlighted the high degree of variation and the idea that streams and riparian areas are very dynamic spatially and temporally. Thus, the management of forests should reflect this increase in degree by recognizing the existence of natural changes and its benefits to ecosystems over time. By incorporating this tenet in management practices, managers will avoid the tendency to try and control for these effects of change by protecting the streams, when the streams may have emerged biologically strengthened by the effects of change.

When developing aquatic conservation strategies, it is vital to understand the notion that there are distinct disparities between different riparian areas and they should be managed as such. The ecological distinctiveness of riparian areas was further substantiated by studies that validated "projections of microclimate effects within one tree height of the channel but found varying effects with increasing distance from the stream." The body of work in this field has continued to endorse the need to devise strategies for aquatic conservation that allow for fluctuations in standards for streams with different forms or relationships to the culvert. Science that has evolved since the development of the ACS has emphasized the increasing significance in biological abundance and ecological importance of the fishless headwater streams. They are teeming with a brew of nutrients that sustain large populations of native amphibians, and macroinvertebrates.

When the ACS was being framed, the knowledge of the integral role fire has on the aquatic ecosystems was not developed or recognized as an issue. Since its inception, however, studies have begun to frame the issue of fire and aquatic ecosystems with much further consideration, which must be explored in more depth. New studies are at loggerheads with existing paradigms in research, management, and agencies, in that they point to the need for recognition of variations in the disturbance dynamics of aquatic ecosystems and landscapes.

³¹ Supra note 27

The challenges to ecosystem management abound, and some studies, albeit there is debate as to the usefulness of its constructs, "suggest a key challenge to ecosystem management will be the identification of "keystone" features of landscapes (e.g., riparian corridors, prey populations, disturbance processes such as fire, or accumulations of coarse wood) that have a disproportionate influence on other landscape attributes, and development of management strategies that sustain them."³² As biological diversity emerges as more essential to the Plan's success, the difficulty of assigning value to biological diversity becomes much more pressing. Just as the owl wars fostered polarization among divergent interests, a polarization has transpired in the fight to protect "old-growth."

Forest age classes on public lands have seemed to digress onto opposite poles, either at the youngest end of the spectrum or the oldest, with little to no mid-seral in between. The assigning of values to old growth has neglected other age classes, which has resulted in a diminishing middle age class that could have provided for old growth later on. Late-successional and old growth forests on federal lands saw an increase from around 7.87 million acres in 1994 to around 9.12 million acres in 2003 (around 38 percent of the Plan area).³³ Research has been conducted on the owl in the southern part of its range, which suggests that instead of fostering predominantly old growth forests, a blend of "old and diverse early-successional forest" may prove to be more beneficial for native biodiversity.³⁴ The Blue River study (Cissel and others 1999) employed an alternative approach to achieving success under the auspices of the Plan, in that management specifically avoided the homogenizing of the landscape, by fostering a spatial distribution of age classes. A conservation method must be brought to bear that includes young and mature forest types in order to effectively conserve any one stage. If the Plan continues to only implement strategies that ignore the dynamism of these forests by conserving a single stage it will not succeed in the long-term preservation required.

With these findings and paradigmatic shifts of ecosystems in mind, the adaptive management approach component of the NWFP seems all the more essential. Due to the changing and dynamic nature of the region's forests, the importance of swift and methodical learning to sustainable ecosystem-based management is amplified. The AMAs are intended to maintain a support system for managers and scientists to converse and make well-grounded managerial decisions in response to changes in space and in time. Designed as a way for scientists to work in concert with managers to test the Plan's strategies, monitor its results, and adapt to this new data with revised strategies, it attempts to maintain a balanced approach. However, after the 10-year review was completed, this component of the Plan appeared to be flailing. Due to the nature of these opportunities to propose innovative strategies where there is a niche, or an unexplored option, the only experiments that take place are those on a stand scale, instead of on landscape-scale experiments. This is a serious problem that could hamper the future success of the Plan should it not be addressed.

³² Supra note 27 33 Supra note 9

³⁴ Supra note 14

The dynamic tendencies of ecosystems calls for a multiple-pathways approach, like the AMAs, that give managers the creative freedom to design studies that react to shifts in knowledge of the natural world, as opposed to the regular "top-down" guidance. The unintended consequences of affording latitude in public land management decisions have been that the AMAs have created an environment in which decision-makers avoid taking risks for fear of failure. When making decisions under the AMAs, they are magnified on such a large scale, with high visibility, and in an environment where obtaining agreement among disparate parties is difficult. Originally put forth as an area in which creativity would spark and facilitate innovation, AMAs have become a hotbed of tension where hesitation has hampered learning.

The plight of the northern spotted owl perpetuates as its numbers continue to decline, in spite of the lower than expected rate of habitat loss under the Plan. Spotted owl populations declined about 7.5 percent per year across their northern range, at the high end of the observed decline, and about 2 percent per year across their southern range. The catalysts for the development of a comprehensive Pacific Northwest forest policy were the disappearing owls, so it brings into question the ecological viability of the Plan to carry out its charge. The habitat has been protected through the series of reserves, but there are various factors that are contributing to the plummeting number of owls, such as the abiding effects of past indiscriminate logging practices, the lack of fire management in reserves, the continued removal of forests on nonfederal land, the encroaching non-native barred owl into spotted owl territory, and others such as the uncertain effects of climate change. These series of complex interactions between species, landscape, and other dimensions of the ecosystem further substantiate the need to reevaluate the Plan in light of current uncertainties in ecological science and other domains.

Although there was a slight increase in suitable habitat for the northern spotted owl, following the ten-year review of the Plan, the suitable habitat for the marbled murrelet declined to 1.9 million acres. Past timber harvesting practices are thought to contribute to the lingering effects on the marbled murrelet's potential survival. The large tracts of land reserved for owl and marbled murrelet habitat are necessary for the survival of the species and the prevention of their long-term eradication, but they are not exhaustive in terms of ways to prevent extirpation.

Federal lands cannot accomplish the long-term goals of the Plan in a changing environment without the integration of its goals with private timberlands. A holistic strategy has been suggested to account for this discrepancy, which attempts to sustain cooperative relationships with private landowners. The assumption that federal land can bear the burden of meeting all of the biodiversity needs affiliated with old-growth forests characteristics, has not withstood the test of time. Many key habitats for LSOG species such as Coho salmon, marbled murrelet, and red tree voles, remain primarily in nonfederal lands.³⁷ In an area where nonfederal land is adjacent within very short distances of federal protected land, the idea that activities conducted in these unprotected areas will not disturb the federal lands is not well established. About "42 percent of current owl habitat is on nonfederal land, over which the Plan has little

³⁵ Supra note 9

³⁶ Supra note 27

³⁷ Supra note 14

influence."³⁸ With the new developments in science that continue to paint the picture of an ecosystem as an intricate web of life that requires complexity, the idea that political boundaries can be maintained as they are does not appear to be grounded in the current science paradigm.

The ecological approach of the NWFP to forest management also must include humans in the assessment of its viability for the ecological health of the human ecosystem. Although "research has shown that socioeconomic effects resulting from changes in land management have primarily affected communities that rely directly on forest resources (both commodity and noncommodity) for their well being," there were still variations among communities affected. These patterns and process changes, both ecologically and economically speaking, are integrated in the landscape-scale approach towards a more inclusive assessment.

There has been quantifiable progress in achieving the ecological health and other principles put forth by President Clinton. The Plan protects the large swathes of late-successional forests from future logging, riparian forests, and species associated with such forests. Other notable successes include "active watershed restoration and decommissioning of roads, site-specific protection of sensitive species, improved watershed planning processes, increased understanding of the distribution and habitat needs of species of concern, and advancing silvicultural practices to accelerate old-growth development." Old-growth features have emerged following thinning, indicating that treatment could expedite the process.

³⁸ Supra note 14

³⁹ Supra note 27

⁴⁰ Supra note 14

V. Legal Viability

A. Background

The NWFP's origins are rooted in controversy over the protection of the northern spotted owl and these "owl battles" inevitably found their way into the courts. The Forest Service (FS) issued a regional guide in 1984 that included a strategy for protecting northern spotted owl habitat to provide guidance to forest planners in the Pacific Northwest region. After being challenged in court by the National Wildlife Federation, the FS furnished new spotted owl guidelines in 1988. 41 The new guidelines proved to be unpopular among environmentalists, scientists, and timber industry for different reasons. However, leading up to the production of these new guidelines, there was groundbreaking litigation taking place. After denying petitions to list the spotted owl as endangered, a number of environmental groups filed suit against the United States Fish and Wildlife Service (FWS) in Northern Spotted Owl v. Hodel. 42 The decision not to list the spotted owl was determined by the court to be "arbitrary and capricious and contrary to law."

The new spotted owl guidelines were challenged in court by timber industry and environmental groups in 1989, in which U.S. District Court Judge William Dwyer issued a preliminary injunction on timber sales in the region's spotted owl habitat. However, in October 1989, Congress passed an appropriations bill that included Section 318, which vacated Dwyer's injunction. Section 318 expired at the end of fiscal year 1990 and was not renewed by Congress. In 1990, the northern spotted owl was listed as a threatened species and as required by the Endangered Species Act (ESA), the Bureau of Land Management (BLM) consulted with FWS. The FWS directed the BLM to adopt the Interagency Scientific Committee's report ("ISC report") strategy, but the BLM adopted an alternative, known as the "Jamison Strategy," which provided for higher harvest rates than the ISC report. This decision was challenged in court by environmental groups for failure to consult with FWS and in 1991, U.S. District Court Judge Robert E. Jones "ruled that the [BLM] had violated the [ESA] but could continue to sell the timber while it consulted on the Jamison Strategy."43

In 1991, environmental groups brought suit against the FS requesting an injunction against any logging within the northern spotted owl habitat until it complied with the National Forest Management Act (NFMA). The NFMA has a "viability regulation," which required that "[f]ish and wildlife habitat ... be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area."44 A viable population is defined as "one which has the estimated numbers and distribution of reproductive individuals to ensure its continued existence is well distributed in the planning area." In order to accomplish this, forest

⁴⁴ 36 C.F.R. § 219.19 at 47 F.R. 43037, Sept. 30, 1982.

⁴¹ Supra note 2 ⁴² Supra note 6

⁴³ Supra note 2

⁴⁵ Department of Justice. (2009, October 30). Environment and natural resources division 100th anniversary: the spotted owl litigation. Retrieved on 04/05/10 from http://www.justice.gov/enrd/Anniversary/2504.htm

management was required to identify an indicator species to monitor the effect of habitat changes due to management actions. The plaintiffs in the case, *Seattle Audubon Society v. Evans*, utilized this "viability regulation" with success, when Judge Dwyer granted an injunction, enjoining the FS from granting any timber sales in spotted owl habitat until a plan was developed for the conservation of the spotted owl. 46

In response to this injunction, the FS adopted the ISC report, only to be challenged again in court by environmental groups who claimed that this strategy would not sufficiently maintain the owl's viability. In this 1992 case, *Seattle Audubon Society v. Moseley*, the court again enjoined timber sales in spotted owl habitat until revised standards and guidelines in compliance with NFMA and National Environmental Policy Act (NEPA) were in place. An important component to the Judge's decision was related to the failure on the part of BLM not to fully implement the ISC report. This injunction compounded with the political and economic instability in an unstable litigious environment, are all imputed to President Clinton's call for a resolution, convening the 1993 Portland Forest Conference. After a series of Environmental Impact Statements were produced, the final Record of Decision (ROD) for the NWFP was signed by Acting Secretary of Agriculture Richard Romminger and Secretary of Interior Bruce Babbitt, and submitted to the federal judges to lift their injunctions. In June 1994, Judge Jones lifted the BLM injunction and Judge Dwyer lifted the FS injunction, effectively releasing the cap on the boiled over tensions in the region.

B. Challenges to Initial Plan & Implementation

The NWFP was not insulated at this point from challenges on its justification and the way in which it was generated. Eight lawsuits were filed challenging the Plan for these reasons, and they were all consolidated into the case Seattle Audubon Society v. Lyons. Interests represented in court included timber industry members as well as environmental groups, in which they challenged the legality of the Plan. Environmental groups contended "that compliance with the environmental laws is still inadequate. They [sought] an order remanding the matter to the agencies for further analysis and explanation, with an injunction against all or nearly all timber sales in the meantime." Their general argument was that the "Option 9" that was chosen from the FEMAT report, would not adequately protect old-growth forests and related species. The timber groups, represented monolithically under the Northwest Forest Resource Council, contended that the interpretation of the viability regulation by the Plan ignored the multiple-use allocation as required by NFMA. These stakeholders held that the Plan overwhelmingly weighed environmental concerns over timber harvesting. However, Judge Dwyer upheld the 1994 Forest Plan against every legal challenge and the Ninth Circuit Court of Appeals affirmed his decision, signaling a watershed moment for forest management that would utilize an ecosystem management approach.

⁴⁶ Seattle Audubon Society v. Evans, 952 F. 2d 297 (9th Cir. 1991).

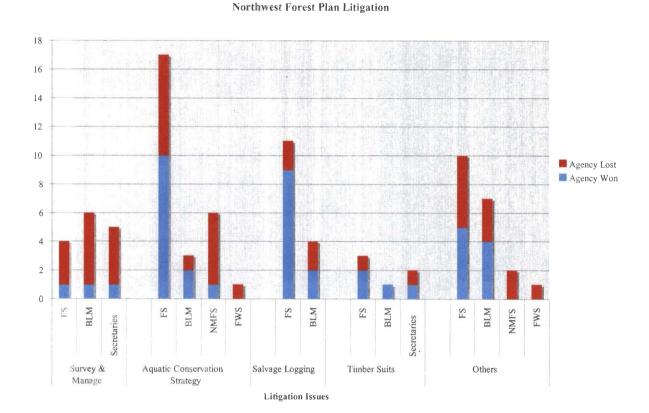
⁴⁸ Seattle Audubon Society v. Lyons, 871 F. Supp. 1291, 1305 (W.D. Wash. 1994) (Dwyer, J.), aff'd, 80 F. 3d 1401 (9th Cir. 1996).

In an aura of uncertainty, agencies moved forward to implement the strictures of this approach to forest management. The future was faced with unknowns, the policy community remained unsure as to how well the Plan would stand up in court, or how legally viable it would turn out to be. Its record thus far in the Ninth Circuit seemed to portend that the bones of the Plan would hold water in the judicial branch of government, its support within the Clinton administration signaled strong resolve on the part of the executive branch, yet there was still a lot of uncertainty in the legislative branch as to how political it would get after the Plan was allowed to function. The political stars had not aligned to pass a legislative version as was originally the intention, because varied interests halted any hope of that after lobbying with members of Congress. Throughout the course of the Plan, from its inception until today, there have been trends in the judicial system as to which parts of the Plan are being challenged in court. It has ebbed and flowed depending on many different variables, such as public perceptions and values, political administrations, as well as environmental and economic conditions. The primary issues that remained the focus over time included the Survey and Manage (S & M) program, the Aquatic Conservation Strategy (ACS), and salvage logging in late successional reserves (LSRs).

C. Litigation Trends

I completed a search in Westlaw for Northwest Forest Plan litigation, and 109 cases pulled up. Out of the 109 cases, 17 cases were only referencing the Plan and not related directly. Therefore, the remaining 83 Northwest Forest Plan cases were organized into thematic areas and by the agencies that were challenged (Figure 2). Several trends are depicted in Figure two, including the pattern of litigation surrounding the Survey and Manage program, in which the BLM and Secretaries are more likely to be challenged than the FS. The agencies are more likely to lose when being challenged on Survey and Manage. The magnitude of litigation on the Aquatic Conservation Strategy is significantly higher than any of the other issues. The FS received the majority of challenges under this particular strategy. The FS and BLM won over fifty percent of the time. Under the Aquatic Conservation Strategy, NMFS lost almost all of the cases and FWS lost all of their cases. The FS emerged from the court cases challenged on the grounds of the salvage logging issue quite successfully, winning the majority of the total challenges. However, BLM won half of the challenges under this issue. The agencies won most of the timber industry suits, albeit not very many were filed, that were issued against them except for two. The types of issues that are categorized as "others," include litigation based on violations of NEPA, APA, NFMS, FLMPA, ESA, the Monitoring program, and logging in Matrix areas. These issues didn't comport with the general thematic pattern, being more statutory based, thus their categorization into "others." Overall, the issues that received the most attention were the Aquatic Conservation Strategy and salvage logging. Throughout the next sections, I will delineate the major themes in litigation by highlighting the major cases in each theme, or issue, which include Survey and Manage, Aquatic Conservation Strategy, Salvage Logging, and Timber Suits.

Figure 2: Number of NWFP Lawsuits by Issue and Agency Success



i. Survey & Manage Litigation

In *Oregon Natural Resources Council Action v. U.S. Forest Service*, environmental groups brought suit against the FS under the Administrative Procedure Act (APA) seeking an injunction in regards to the management of certain federal forests. Their claim was that the FS authorized timber sales without conducting the required surveys for the species covered under the S & M program. The agencies were required by the ROD to conduct these surveys any time a ground-disturbing activity occurred that was implemented after September 30, 1996, or September 30, 1998, depending on the listed species in question. Should any of these species be found the agency is supposed to take measures to protect said species. The federal defendants claimed that the timber sales in question were exempt from these requirements if an EIS was already completed before the cut off dates. However, the court ruled that the defendants' actions were "arbitrary and capricious to the plain language of the ROD," which requires surveys before any ground-disturbing activities. Judge Dwyer goes on to categorize the requirements as "clear, plain, and unmistakable." Dwyer ruled in favor of the plaintiffs, issuing an injunction on these

⁴⁹ Oregon Natural Resources Council Action v. U.S. Forest Service (W.D. Wash., 1999)

timber sales, because the defendants illegally exempted "certain at-risk species and timber sales from the survey and manage requirements of the [NWFP]."50

In 2004, the new ROD, based on the new supplemental EIS, removed the Survey & Manage Program and a series of lawsuits followed. First, in *Northwest Ecosystem Alliance v*. Rey, a group of environmental stakeholders challenged the Departments of Agriculture and Interior ("the Agencies") on their "actions taken to eliminate from forest management plan" the Survey and Manage program. 51 The plaintiffs based this suit in the argument that the Agencies had violated NEPA, the FS had violated NFMA, the BLM violated FLPMA, and their actions in violating these statutes were arbitrary and capricious to law. The honorable Judge Marsha J. Pechman denied without prejudice the plaintiff's request for an injunction, but the Court held that it wouldn't enter a judgment until it ordered the appropriate injunctive relief. The Court found that in not complying with the National Environmental Policy Act (NEPA), the defendants didn't examine what the repercussions or impacts to the species would be if the S & M program was dismantled and they didn't conduct an exhaustive examination of their presumption that the LSRs would sufficiently protect these species that would have been protected under the auspices of the S & M program.

In the next case, Northwest Ecosystem Alliance v. Rey, the Court ordered injunctive relief for the case they heard in 2005, in which the plaintiffs wanted the Court to respond to their motion for relief. The Court ordered that the ROD from March 22, 2004, that eliminated the S & M Program, was to be set aside. Going forward, the defendants were not entitled to rely on it to make decisions or for implementation. The last legal document, the 2001-ROD, was therefore put back into effect, including the modifications instated as of March 21, 2004, and any projects or activity enjoined under this court case was not to occur. In April 2006, the defendants in that case brought a motion for reconsideration of the decision rendered in the previous case to "narrow the scope of the permanent injunction" and to "alter or amend the judgment," to which the Court denied both motions.⁵²

After years of trying to implement the S & M program, agencies became frustrated with the tenets and the standards and guidelines were proving hard to implement on the ground. The agencies charged with carrying the program out said that "Survey and Manage was presenting unanticipated difficulties in land management" because the requirements "were not clear, efficient, or practicable."53 Since then, they have been making great efforts to tinker with the program through modifications, have taken efforts to make it more efficient, and to eliminate it all together, all of which have led to years of engagement in litigation. In the previous case, where the judge found the agencies in violation of NEPA, the agencies responded by drafting a Supplemental EIS in 2006, to be reviewed by the public. Litigation again ensued in *Conservation* Northwest v. Rev over the Agencies' issuance of the 2007 Final SEIS to the 2004 SEIS, in which they again moved to remove the program altogether from the Plan. Environmental groups filed suit again, challenging this agency action, claiming agencies had violated NEPA. The Court

⁵⁰ Oregon Natural Resources Council Action v. U.S. Forest Service 293 F.Supp.2d 1200.

⁵¹ Northwest Ecosystem Alliance v. Rey (W.D. Wash., 2005).

⁵² Northwest Ecosystem Alliance v. Rev (W.D. Wash., January 2006).

⁵³ 2004 FSEIS at 18, AR 16299

found that the agencies had violated NEPA, and declined to issue a remedy at that time. The parties were instructed to discuss the appropriate management together in settlement, as opposed to Judge Coughenour issuing a permanent injunction.

ii. Aquatic Conservation Strategy Litigation

In the first series of what became known as the PCFFA cases, was the 1998 case heard by United States District Court Judge Barbara J. Rothstein, *Pacific Coast Federation of Fishermen's Ass'n, Inc. v. National Marine Fisheries Service*, also known as "*PCFFA I*." Plaintiffs, a coalition of environmental groups, charged the agency, NMFS, with being arbitrary and capricious when making a no jeopardy conclusion in the Programmatic Biological Opinion. This charge stated that NMFS failed to use the best available scientific information and based its conclusion on the assumption that action agencies would comply with ACS. The Court rejected both arguments.

In 1999, environmental groups sued the NMFS again in *PCFFA II*, challenging four biological opinions NMFS made on the impacts of 24 federal timber sales. Upon cross motions, the District Court held that "NMFS acted in an arbitrary and capricious manner in measuring [ACS] compliance only at the watershed level, rather than at the project or site level, in failing to evaluate the short term impacts, and failing to fully incorporate watershed recommendations into its ACS analysis." ⁵⁴ NMFS and intervening timber operators appealed this summary judgment, and the appeals court affirmed the district court's decision.

iii. Salvage Logging in Late-Successional Reserves Litigation

The Timbered Rock fire, ignited by lightning, burned primarily within a late-successional reserve (LSR) in Southern Oregon. The snag removal timber sales that followed ignited their own controversy as they were within an environmentally sensitive reserve. In *Oregon Natural Resources Council Fund v. Brong*, the plaintiffs charged the agency, BLM, with violating FLPMA by permitting such logging, as the NWFP and the Medford Resource Management Plan have very strict rules for when the agency can conduct salvage logging in LSRs. The district court ruled in favor of the environmental group's argument that the NWFP requires the retention of all snags that will persist until the next forest develops. The Court granted a permanent injunction, ruling that the agency's action was "arbitrary and capricious and not otherwise in accordance with law." After this judgment was rendered, BLM appealed and the Court of Appeals affirmed the decision of the lower court.

In a similar case, *Cascadia Wildlands Project v. Goodman*, environmental groups brought action against the FS in connection with the large Davis Fire, where approximately 56 percent occurred within a LSR. However, in contrast to the *Brong* decision, a strikingly similar issue, this Court did "not read the guidelines to require the Service to retain all snags likely to persist until the return of late-successional conditions and natural large snag recruitment." The

55 Oregon Natural Resources Council Fund v. Brong, 2004 WL 2554575 (D. Or. 2004).

⁵⁴ Pacific Coast Federation of Fishermen's Ass'n, Inc. v. National Marine Fisheries Service (1999)

Court pointed to the fact that "the Service does not plan to harvest all large snags, and the Court is deferential to the Service's considered scientific conclusion that its scheme will retain sufficient snags to accommodate wildlife needs until the return of natural large snag recruitment." Therefore, the Court ruled in favor and deference to the agency, stating that a preliminary injunction was not warranted.

In Forest Service Employees for Environmental Ethics v. U.S. Forest Service, the plaintiff filed a motion for a preliminary injunction on the Forest Service's intended logging of more than 100 acres of forest burned by the Sims Fire in Northern California. Out of these acres, approximately 120 acres were within a LSR and over 50 acres occurred within northern spotted owl critical habitat. The precedence of the *Brong* case seemed to support the plaintiffs argument on the merits, but even more so was the fact that the Six Rivers Late Successional Reserves Assessment (LSRA) "specifically requires-or at least appears to specifically require-that all such snags be retained." The defendant categorized this as a "typographical error" in the LSRA. The Court granted the plaintiffs their motion for a preliminary injunction on the basis that they demonstrated that the action would cause "irreparable harm" if not granted based on the trees' environmental value to the LSRs.

iv. Timber suits

Under the 1995 Rescissions Act, the Secretaries of Agriculture and Interior were mandated to release all of the timber contracts offered or awarded between October 1, 1990 and July 27, 1995. The National Forest Resource Council (NFRC) challenged the Secretaries of Agriculture and Interior, in the case, *Northwest Forest Council v. Glickman*, in which they called for the release of several years of timber sale contracts in federal land. This case concerned the section of the 1995 Rescissions Act that referred to the authorization to release timber sales "subject to 318," which covers the period between the fiscal years 1989 and 1990. However, the agencies contended that these timber contracts that NFRC wanted released were not subject to 318, because the remaining timber sales were not offered between the aforementioned years. The Court of Appeals ruled in favor of the NFRC, ordering the timber sales released.

Timber industry group, Blue Lake Forest Products, Inc., challenged the FS, claiming breach of their timber contracts in the case, *Blue Lake Forest Products, Inc. v. U.S.* ⁶⁰ The Court of Federal Claims Judge Williams ruled in favor of the defendants and the agency emerged out of this timber industry suit more successful.

⁵⁷ Forest Service Employees for Environmental Ethics v. U.S. Forest Service (N.D. Cal., 2005).

⁶⁰ Blue Lake Forest Products, Inc. v. U.S. (Fed. Cl., 2009).

⁵⁶ Cascadia Wildlands Project v. Goodman (D. Or., 2004).

⁵⁸ Emergency Supplemental Appropriations for Additional Disaster Assistance, for Antiterrorism Initiatives, for Assistance in the Recovery from the Tragedy that Occurred at Oklahoma City, and Rescissions Act, 1995, & 2001 (k) (1), 16 U.S.C.A. § 1611 note; Department of Interior and Related Agencies Appropriations Act, 1990, § 318, 103 Stat. 745.

⁵⁹ Northwest Forest Council v. Glickman (C.A. 9, Or., 1996).

D. An Assessment: Legal Trends and Viability

The NWFP was supposed to stabilize a paralyzed region suffering from the injunction issued by Judge Dwyer on timber sales in the spotted owl habitat. The crisis in the woods however morphed into a crisis in the hollow halls of the courtroom. Leading up to its development, the courts seemed to be on the spotted owl's side, charging agencies with the task of developing a sufficient conservation plan for these precipitously declining species. Following this charge, the Plan emerged as a solution to submit to the courts. At its genesis, the cases that were brought to challenge the Plan failed a good sign for the future of the Plan and its legal viability. The court's decision to uphold the Plan was unequivocal, initiating a long period of viability for the Plan. Over the years, it has remained unchallenged by groups in terms of the actual existence and legality of the Plan as a whole.

However, environmental groups did employ litigation as a tool to mitigate agency actions and timber sales that either did not adhere to the Plan or actions that removed key components of the Plan. The environmental groups were the plaintiffs in the majority of the cases related to the NWFP, with timber representing a very slim minority. This indicates a lack of initiative on the part of the timber industry to challenge the status quo. Given the overall legal success rate of the agencies and the strong likelihood of deference to the agencies by the courts, timber industries may not see litigation as a strong economic option. This trend towards deference is evident with the Forest Service, in that they have won 57.6 percent of land management cases from 1989 to 2002, a strong showing to say the least.⁶¹

The themes highlighted some very interesting aspects of the Plan itself, in that the issues that came up the most were the programs and strategies, not the entire purview of the Plan, or the indicator species and their habitat. The Survey and Manage program became an issue when environmental groups challenged agency actions to authorize timber sales without fully implementing the surveying. The issue has climaxed over time to what it is today, after years of wrangling back and forth between agencies that claimed to be hampered down by the strictures of the program, and the inherent difficulty with implementing such a program. After the Bush administration removed the program, the litigation shifted from challenges of effective implementation to the legality of removing the program altogether. The courts originally upheld the decision to remove the program entirely, choosing to defer to the agencies, only to later continue to maintain that the program should be implemented. The overall legal shift moved towards one that indicates longevity of this program and in turn viability of the Plan itself.

Along with the Survey and Manage program, the Aquatic Conservation Strategy (ACS) was also a hot button issue in the courtroom. The series of PCFFA cases also mirror the overall course of the Survey and Manage litigation, originally deference on the part of the courts towards the agencies, and after a series of successive suits, the courts rule in favor of the environmental groups. Parallel to the spike in science calling attention to the issue of salvage logging in reserves, is the growing debate in the courts between camps that differ in the idea of whether it is beneficial or harmful to the forest. Environmental groups have continued to sue agencies for

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⁶¹ Keele, D.M., Malmsheimer, R.W., Floyd, D.W., & Perez, J.E. (2006). Forest service land management litigation 1989-2002. *Journal of Forestry*, 104(4), 196-202.

logging in reserves following disturbances, claiming that the agencies are only to do so if it can be proven to benefit the ecology of the forests. The Courts have so far been unclear, as there has been a divergence in the opinions rendered on the interpretations of the standards and guidelines for salvage logging in reserves. It appears that with regards to this issue, the agencies have received the highest success rate, and environmental groups have not found a productive avenue to use for protections.

Timber suits have proven somewhat fragmented and disjointed, with no apparent pattern that emerged from the data that I analyzed. Nevertheless, the agencies have proven successful for the most part when these industry litigants have challenged their decisions. Also, just because the agencies win a case, it doesn't necessarily indicate that there will be "non-protection." Overall, the environmental groups' use of litigation as a tool for protections has proven to prolong the old growth debate, and in turn has led to greater protections for the forests and its species under the penumbra of the NWFP.

VI. Policy Community Interviews: Then & Now

Sixteen years after the record of decision (ROD) was signed, members of the NWFP policy community took the opportunity to reflect on the ecological, societal, legal, and political viability of the Plan. Paying homage to the adaptive learning intrinsic to the Plan, various stakeholders have made an effort to determine what actions taken have worked, what actions have failed, and assessed the various components of the Plan in light of new scientific, societal, legal, and political information. Political actors from the federal level, charged with implementation of the NWFP, and the external stakeholders have provided insight into how they view its political and ecological status. This insight was obtained by conducting eight interviews with participants from the categories of federal actors and external stakeholders, which included socioeconomic and environmental actors. These participants, or subjects, were asked to reflect on a series of questions related to their involvement in the Plan, the process, the implementation, their evaluation of the Plan itself, future direction, and big picture (both past and current) issues. In order to reframe the issues in light of the historical context of the Plan, its evolution up until present day, and its future direction, policy community members have proffered a snapshot of the Plan through each of their respective pairs of lenses.

A. Origins

Prior to the Plan's incorporation of collaboration among agencies, the interagency relations were on rocky ground with regards to the owl crisis. A federal representative involved in the God Squad in 1992, a cabinet-level body that deliberates on whether a federal action can be exempted from having to comply with the ESA if it is decided to be in the national interest, characterized the experience as one in which decisions that were made were incongruent. In what became a controversial decision made by the God Squad, timber sales were exempt from compliance with the ESA. These exemptions catalyzed litigation that led to an injunction issued by Federal District Judge William Dwyer, which effectively scotched federal timber sales in nine national forests.

The NWFP rose out of this uncertain and fluctuating environment and the federal agencies involved were immersed in this while making planning decisions surrounding our nation's forests. When the Plan was put forward, it was a completely new concept for the agencies involved. In the beginning, the various actors were faced with a slew of questions to answer, based upon immense amounts of data that needed to be compiled, while at the same time having to implement a completely novel ecosystem-based approach. Along with the scores of information to work through, the agencies had to come to the proverbial table, each framed by their differing and often times conflicting paradigms to interpret this data. Armed with this new approach to managing, the agencies spent time conversing and had to learn how to apply these theoretical and scientific concepts to their daily activities.

Environmental groups involved in the Plan, felt that when the Clinton administration chose "Option 9," from the FEMAT report, in what would eventually be known as the NWFP, they weren't sure how to approach it. They saw it as a huge improvement on what existed prior to, but still did not feel that there were enough protections. However, after the ROD was signed, the groups have maintained activities to monitor the Plan and have taken it upon their

organizations to watchdog all of the proposed actions. The monitoring was done in order to ensure that the projects were in compliance with the S & G, to encourage better projects, or to stop projects that they didn't like. Some external actors viewed the process as an exercise of political clout, in which those elites who met in the "tower of power," the building in which administrators met to conduct the planning process, dominated the conversation. However, most external actors saw the Plan as a step in the right direction, but weren't happy with particular aspects that emerged over time.

B. Communication & Organization

According to a federal actor, the communication between agencies and executives started off rocky. The struggle came to a head as all the agencies involved brought their individual ideas to the fore on how best to implement the Plan's directives. This hashing out of ideas and a clash of values continued until the agencies reached a point where they eventually eased into a good working and comfortable relationship. Decisions were eventually made on consensus, with the executives working together in such a way that if the decision makers could not come to an agreement, a project simply had no chance of making its way past the review stage. The communication evolved so strongly that the agency members were able to get to a place where making decisions on projects became much easier, in that immediately most members could tell if the project in question would pass muster with the NWFP.

With the cooperation among agencies starting to strengthen, the organization of interagency communications and hierarchical structure was essential to effectively implementing this new management approach. The Pacific Northwest Research Station served as the research arm of all of the agencies, conducting studies across the region. According to a federal actor, the Regional Interagency Executive Committee (RIEC) was forced to work together and eventually they ended up making decisions based on mutual consideration, whereas prior to the Plan, agencies were suing each other. The Regional Ecosystem Office (REO) really helped to coordinate the agencies in this effort at collaboration in implementation. Each member of the REO was charged with a topical area and in turn reviewed various projects to ensure compliance with the Plan's standards and guidelines (S & G). However, according to a federal actor, this group is no longer around as they were in the beginning, after having outlasted their usefulness. The agencies have at this point institutionalized the Plan's constructs making the REO less necessary and the need for oversight no longer as pressing. Others in the agencies depict the REO as a "virtual REO," in which there is still a representative from each agency but they do not meet at any regularly scheduled time.

Agency representatives often found it took a long time to make decisions because they had to gather large quantities of data, but they did think the amount of available data was very good. However, not only are there different interpretations of the data when making decisions, they are also dealing with a lot of political clout being thrown around behind certain groups, and all of the "science in the world couldn't help make a decision" in that case. Another federal actor does not see the interpretations of the data as much of the problem, so much so as the use of the data. It was designed so that the data was utilized to support management, but this is not being analyzed, synthesized, and used for decisions as much as it was originally intended to do.

The executives from the various agencies have continued to utilize the ROD-mandated structural organization, the RIEC, but have found another meeting format to be more conducive, the Senior Managers Group (SMG). During this regional administrator-level group's meetings, leaders go over policy, budget, and any other decisions that are pending. This group will be around for a while and has been much more effective than the RIEC, according to a federal actor. Should a Forest Service proposal come forth that is not consistent with the S & G, it would require RIEC coordination. The NWFP has taken a group of disparate agencies and combined their efforts, and the agencies in the Pacific Northwest region even share the same office building in Portland. This has led to an even greater degree of efficiency and collaboration, taking agencies that had not been working together on issues and bringing them together.

The Provincial Advisory Committees (PACs), another chartered ROD group, are essential communicatory bodies that relay information in adaptive management areas (AMAs). The ROD calls for 29 varying interests to be represented on each PAC. According to a federal actor, in the nineties, after the inception of the Plan, these groups were racked full with participation. With this intense level of participation from a diverse group of interests, came a "cross-pollination" of great ideas to proffer on to the agencies. According to this federal actor, around six or seven years ago officials met to determine the fate of the groups, and whether or not the leaders of the twelve PACs felt they had achieved the goals set forth, so as to end their respective group on top. Seven PACs were let go, leaving five viable PACs. They felt that these PACs had run their course and the Forest Service could implement the Plan in these regions without their assistance. The five PACs report their findings to the Provincial Interagency Executive Committee (PIEC), which serves as an informational and deliberative body.

Federal actors are overall very pleased with the level of communications that have been maintained over the years across multiple agencies. There were even times where members would be out in the field with various stakeholders and when each representative was talking, you could not distinguish which agency they were from. The agencies' agendas overlapped and assimilated into a shared set of objectives and goals, despite their different management directives in their origins. This is one of the glaring accomplishments of the NWFP that actors across the board continued to reiterate, the level of cooperation, collaboration, and respect that has developed between various agencies. The ethos of the NWFP has been successfully integrated into agencies, adopted as part of their overall directive.

Environmental groups were organized in such a way, that they could respond to and communicate their views on projects at times through litigation. They were concerned with defending the Plan at times and enforcing it during others.

C. Issues: Political, Socioeconomic, Ecological, & Legal Viability

i. Political Viability

One of the biggest uncertainties that existed at the outset of the Plan was how politically viable it would be with its broad-sweeping changes across agencies and the scope of the Plan's coverage in the region. Federal actors involved in the Plan have expressed varying degrees of perspectives as to this very question. At times the perspective is one of contentment, but at times

it is one of frustration with the constraints. Such is the case with the S & G, as federal actors have delineated their frustrations with what they believe to be contradictions in the ROD directives. Agencies have had to discuss amongst themselves how best to adhere to these directives while still accomplishing their intended management goals effectively. In some cases, actors feel that the S & G should have been policy recommendations, rather than directives that are not feasible to implement. They see these as time consuming and the rigorous process that it entails is not used in management decisions anyways.

A federal actor described the difficulty with taking actions such as restoration because they are constrained by the guidelines and no longer able to do treatments in riparian areas. In some cases, actors were involved in developing the Plan itself, and were then charged with having to implement it, where they recognized some of the struggles inherent in such a planning scheme. Therefore, there are still members of the policy community who are charged with upholding the Plan's directives, dealing with uncertainties that abound as to how best to adhere to the objectives, leaving the political viability strong in some respects and shaky in others related to issues like the S & G disparities.

The experience of the other members of the policy community, the environmental groups, has been that the S & G were a new set of parameters that the agencies had to get used to. They think that the members of the agencies that have adjusted well tend to be those who focus on thinning young stands, as opposed to those who focus on logging old growth forests at a smaller scale, who tend to have a hard time packaging their actions as "restoration" or as "good for the forest," and continue to face opposition.

Throughout the initial course of the Plan, an external actor felt it had been working well, until the Salvage Rider was pushed through in 1995, 62 which allowed 7,000 acres to be logged, in what was supposed to be protected areas within the reserves. Some of this logging went right across streams and reverted back to the old school days of clearcut logging for a period of eighteen months. What made these highly unpopular amongst various stakeholders who discussed this issue was the sense of broken promises right after the Plan had been put forward. This salvage rider insulated all timber sales under the NWFP from any public review, administrative repeals, or lawsuits. It has been a tug of war since, according to an environmental group, stating that there hasn't been a rider since and now when they win a lawsuit there isn't a lot of backlash from Congress, largely because the 1995 salvage rider created a public uproar and a lot of bad press. When the rider was slipped into a must pass bill that was commemorating people killed in the Oklahoma City bombing, there was a direct reprisal with charges of political maneuverings and backdoor deals that didn't sit well with the public.

An issue that threaded its way through the discussions with every single stakeholder was the Bureau of Land Management (BLM) initiative, the Western Oregon Plan Revision (WOPR, colloquially pronounced "whopper"). WOPR was a BLM proposal to replace the existing

⁶² Emergency Supplemental Appropriations for Additional Disaster Assistance, for Antiterrorism Initiatives, for Assistance in the Recovery from the Tragedy that Occurred at Oklahoma City, and Rescissions Act, 1995, & 2001 (k) (1), 16 U.S.C.A. § 1611 note; Department of Interior and Related Agencies Appropriations Act, 1990, § 318, 103 Stat. 745.

Northwest Forest Plan land use allocations and management direction, opening up over 2.5 million acres of federal public forest in Oregon. BLM's justification was that it had not been "achieving the timber harvest levels directed by the existing plans, and the BLM now has more detailed and accurate information than was available in 1995 on the effects of sustained yield management on other resources, there is an opportunity to coordinate the BLM management plans with new recovery plans and re-designations of critical habitat currently under development and the BLM has re-focused the goal for management of the BLMadministered lands to the objectives of its statutory mandate to utilize the principles of sustained yield management on the timber lands covered under the O&C Act of contributing to the economic stability of local communities and industries, and other benefits from such management to watersheds, stream flows, and recreation."63 This politically salient issue has proven to be a divisive matter that tore at the fabric of cooperation among agencies and stakeholders. While most agencies and stakeholders think the contrary, one federal actor framed WOPR as an agency imperative to adhere to the Oregon & California Land Act, ⁶⁴ which they interpret as compelling them to harvest. According to this federal actor, WOPR was an innovative way to try and adhere to what many have deemed the unmet principle of producing a predictable and sustainable harvest of timber. Another federal actor's perspective tends to diverge from that of the former, in that WOPR is seen as a reason for BLM falling dramatically short on timber sales, due to the deviation from the NWFP with its passage.

According to this federal actor, the WOPR process was one of the "worst cooperative efforts I'd ever been involved with." It was not a good idea to take the approach that they did, in that it wasn't based on sound science, it increased public distrust, and dramatically diminished the sustained level of trust that the agencies had amongst each other. By introducing WOPR, the federal actor feels that they opened the door to more scrutiny and distrust, making it more complicated to make sound regulatory decisions. WOPR essentially challenged the relatively calm period where the Plan was allowed to work, creating a friction between different agencies in other areas of decision-making. WOPR has since been rescinded by the Obama administration, when Secretary of the Interior, Salazar, eliminated it, saying that it would never hold up in court.

Environmental groups fear that if WOPR would not have been thrown out by the current administration, it could have undone the NWFP's ecosystem management approach. After it was withdrawn, environmental groups "breathed a huge sigh of relief," but they still worry about talks of a "Whopper Jr." on the horizon. They are concerned that if the current funding for the economically depressed communities discontinues, calls for a recoupling of timber receipts will ensue. They think this could result in a purported "WOPR, JR.," should politicians heed the call for recoupling, and "appease more timber-dependent communities."

During the Bush administration, the NWFP sustained some political maneuverings, or as some have termed "attacks." The policy community has projected the time period under the Bush

⁶³ DEIS, 2007. Draft Environmental Impact Statement: For the Revision of the Resource Management Plans of the Western Oregon Bureau of Land Management Districts. Portland, OR. USDI/BLM.

⁶⁴ Oregon and California land-grant fund of 1938, 43 U.S.C. § 1181f.

administration as one wrought with certain complications and changes to the implementation of the Plan. Although there were actions taken that many consider a detriment to the Plan functioning as it was intended to, a federal actor pointed out that when Bush was in office it almost didn't matter what the policy was, as long as it came from the Bush administration, it was pegged right off of the bat as anti-environmental. When in fact, the federal actor pointed out that the Healthy Forest Restoration Act⁶⁵ and stewardship contracting, both Bush administration initiatives, were examples of initiatives that may have aided agencies in doing their job. A lot of the reason for this the federal actor determined, is that the perception and lack of trust among different stakeholders is a large hurdle to overcome.

Another federal actor, however, felt that in regards to the communication among agencies, there were differences under the Bush administration. During the Plan, under Clinton, there was a lot of communication and agreement on issues, but under Bush the communication become relatively fragmented and difficult as the administration made changes to the Plan, shaking up what was beginning to be a strong foundation. This federal actor had a problem with the actions taken under the Bush presidency, mainly the push to get rid of the Survey & Manage program and modifications to the Aquatic Conservation Strategy. At a science level there were some problems with that and it created tension among different agencies.

Other external stakeholders were concerned with what they saw as a concerted series of attacks on the part of the Bush administration. These attacks included undermining the requirements of the Plan, such as the ACS and getting rid of the S & M program. Thus, environmental groups spent a lot of time on just defending the basic framework of the Plan. Also one of these groups' major concerns resides with the attempt by the administration to reduce critical owl habitat, which was albeit designated under the ESA, but there is more critical habitat then late-successional reserves under the NWFP, so there wouldn't be redundancy. Reducing the amount of critical habitat would effectively open up more matrix land to logging than would've been in the past. They think that Bush's argument that the critical habitat designated was too broad is entirely wrong.

When the Plan came to be, the political climate was intensely polarized and stakeholders were at odds over the management of federal forests. The question remains if this level of intensity and debate was sustained over the sixteen years since its inception. According to one federal actor, given the current downturn in the economy, environmental issues have taken a back seat to jobs and healthcare in the region. According to this actor, the political rhetoric has substantially tamed down and phrases like, "do you like your owl fried?" aren't heard. The political landscape is now such that any issue related to old growth is a lightning rod, sparking a general nerve in the region that makes it hard to push through anything that may have a negative impact on the health of the forests.

Depending on the ecology of the landscape, either on the east side of the Cascades, fire-prone areas, or on the west side, the "wet side," can determine the public values and perspectives on the Plan's implications. On the east side, those who adamantly opposed any logging, and had pushed to continue the fire suppression that had gone on for a hundred years, shifted to a less

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⁶⁵ Healthy Forests Restoration Act of 2003 (Public Law 108-148).

radical stance. According to an external stakeholder, these people are now working with the Forest Service to help plan logging. Conversely, those on the "wet side" tend to think that there isn't enough logging. This actor thinks that although there is still a certain amount of disagreement on the management of forests, for the most part the tension has been released.

Another stakeholder discussed that the idea that old growth trees have been deemed as something sacred, or special as something that has to be preserved has been institutionalized, and as a result policy makers have turned their attention away from the rural communities. However, the general consensus amongst external stakeholders reviewed, is that people have realized in the region that "the sky didn't fall" when old growth logging stopped. People in the region continue to enjoy prosperity by living in an area with amenities for different interests. According to a stakeholder, those people value the existence of being able to enjoy these environments and if "Joe Sidewalk" was asked whether an old growth tree should be logged, he would probably say no.

Environmental actors believe that the Plan's political accomplishments have been good, barring a few of the mentioned wrenches thrown into it, and that it has gained traction and support in the political world. Its viability is dependent on the agencies that implement the Plan. Therefore, these environmental actors think that within the agencies there are forces within them that are as bad as they ever were and forces within them that are moving forward and acting progressively, essentially a "microcosm of society."

ii. Socioeconomic Viability

In terms of how the policy community has assessed the socioeconomic status when measured against the goals set forward by the Plan, the results have been pretty polarized. On one pole amongst federal and state actors, the Plan has for the most part not met the expectations of those involved. On the other pole, some external stakeholders have assessed the goals by different measures and have come to a different result. In terms of socioeconomic programs that have come from the Plan's charter to help maintain the long term stability of programs, one federal actor has indicated that the communities that have functional, widely represented groups, where you see loggers and environmental representatives working hand in hand, those are the places that have seen results. This actor also said that in some ways the numbers and complaints that have been put out there by the timber industries and other actors in the region, that the levels of timber harvests have not been met, are mischaracterizing the facts. The actor pointed to the report from American Forest Resources Council that gave the Forest Service kudos for meeting their fiscal year 2008 and 2009 timber targets while reducing the unit costs of laying out sales.

In order for the communities to emerge out of these changes that occurred across their region, many actors pointed out factors that contributed to either the success or lack of success in doing so. One federal actor has pointed out one striking example in which the agencies failed to take action to assist tribal members. As compared to a program in Washington State, Forest & Fish (F & F), the NWFP did not maintain the same level of involving tribal members in its plan development. The tribal members involved in the F & F state plan, felt ownership over the results, because of the fact that they had a seat at the decision-making table. The actor regrets the lack of initiative during the development of the NWFP to incorporate these vital stakeholders,

who may have felt more of a vested interest in the success of the NWFP, had they been more included. This failure may have contributed to certain remote areas where the level of support may not be as high due to a lack of integration.

Other factors that have been highlighted throughout the policy community is the fact that there were key factors to communities that came out on top after the Plan was put forth related to the framework in place beforehand. The communities that had a strong network of leadership and diversification were able to withstand a decrease in timber sales. Those who didn't, were far off of the grid, and without Internet connection tended to suffer more. Also, a federal actor spotlighted the idea that before the Plan and spotted owls in general came on the public radar, there was a parallel decline in the housing market and timber harvests. Prior to the NWFP there were thousands of jobs lost to mill automation and shifts to logging in the eastern side of the country. The actor indicated that the way in which the "owls" were singled out, as the factor that caused all of the economic downfalls is "a little specious." In other words, the compounding of all of the factors of a drop in need for timber to erect houses, and the other mentioned variables, all lead the fact that when the communities are using all of the natural capital, they can't go back to an economy based solely on natural capital.

An environmental actor said that one of the biggest issues in this respect is that counties have historically depended on timber receipts for funding. In the previous paradigm that slashed and burned, clearcutting large swathes of old growth, counties benefited immensely from these sales. This immense influx of cash built huge road systems, which are now beginning to show significant deterioration. This stream of money would in fact prove to not last forever, leaving the counties to rely entirely on safety nets through legislation, particularly the Secure Rural Schools Act. 66 However, with this about to expire, environmental groups worry that if the legislation isn't renewed there is the chance that the counties will begin to demand funds tied to timber sales. Their concern is that counties may demand a check from the government in the form of trees cut from public lands, where they will get a windfall profit. Federal finances have been decoupled from the counties for twenty years and if they become recoupled, this environmental actor thinks it will be an extreme problem, in that it will tie the counties again to logging instead of forest conservation. Their hope is to have the counties be "cheerleaders for forest conservation" and develop an economic strategy that takes advantage of the region's high quality of life. They believe that there is a lot of work to do out there as a byproduct of restoration, which can keep agencies going for twenty to thirty years without causing destruction to the ecosystems.

Another theme that emerged from the discussions was that the amount of timber that was "promised" under the Plan wasn't met. An environmental actor pointed out that the promise touted by the timber industry about sustainable and predictable harvest being met, was not a promise, but a goal. The actor stated that according to the Plan, it was only to be met so long as it could be done in an ecologically responsible manner and didn't impact the whole ecosystem. According to one external stakeholder, the result of the lack of initiative to meet the timber harvests that was projected under the S & G was a sudden collapse in communities. A domino

⁶⁶ Secure Rural Schools and Community Self-Determination Act of 2000, reauthorized as part of Public Law 110-343.

effect resounded throughout all timber-dependent communities, forcing younger families to move out in search of jobs and older people to go into early retirement. Schools, the glue in the rural communities, closed and community structures fell apart, in what this actor called a "devolving of communities." Initiatives such as the "Jobs in the Woods" program spurred some changes and movement toward a "greener" workforce, where a restoration of the forests took over in the economy. This was a good idea in theory, but it didn't prove to be substantial enough to replace the amount of jobs lost in the timber industry. The hope was that this program would kick start private industries in this sector, but that hope for investment has not manifested itself as of yet.

The decoupling of timber receipts wasn't the only aspect that the communities had to deal with after the NWFP. The migration away from these areas led to a sharp decrease in the tax base, and in an area where most of the lands are federal, the communities argued that they had very little to begin with. However, the external actor conversely stated that these communities that lost a large source of revenue were not able to come up with another source of revenue because they are not willing to tax themselves, and furthermore were too dependent on timber receipts anyways. Also, some of the communities, colloquially called "company towns," which saw the worst downturn, were actually communities erected in the 1930s at the peak of slash down logging for the sole purpose of supporting one industry. The actor stated that developing sustainable communities that can survive a shift in their economy takes time and that people simply can't expect it to change overnight. There has been a shift in the region on a macroscopic level towards a successful end, but on a microscopic level pain has occurred in places like the "timber towns," or company towns," where they were going to inevitably take a hit when they ran out of trees.

There have been accomplishments to recognize in adhering to the socioeconomic principles that were put forward by the Clinton administration. For example, Coos Bay, a heavily timber dependent area of Oregon, has been thriving in the new diverse economy that includes tourism, tribal casinos, and retirement communities. Stevenson, Washington, an area once tied directly to timber sales, ended up emerging as a place that evolved into a successful tourism and recreation hub. They did this by community members merging together to develop a plan for the future with the initial funds that poured in at the outset of the NWFP.

iii. Ecological Viability

A lot can change in ecosystems over a time period of sixteen years, and the policy community proffered their own assessment of how well the NWFP has responded to any changes in science, as well as how well the scientific principles that grounded their decisions were validated. A federal actor described the NWFP as the best landscape-scale approach they'd ever seen. However, the actor does regret a point in which at a fork in the road, at the beginning of the NWFP's development, they took the wrong turn, by not putting the harvesting of any old growth at all off limits. Scientists tried to design the best conservation biology network as possible, but did not set up full protections for all old growth. This actor thinks that the philosophical and societal preference is overwhelmingly that it's not acceptable to cut old growth anywhere and the Plan should probably reflect that.

Conversely, one federal actor regrets ever using the term "reserves," because now they have to work within that constraint, whereas originally they regarded these areas as in flux and to be managed as such. In direct contrast to this, a federal actor involved in the development of the Plan, said that they did expect there to be disturbance, loss of habitat, and all other conditions that are part of the natural process, when they were designing the late-successional reserve network and riparian areas. The reserve network, according to this actor, is designed to reflect these natural dynamic processes. Another actor thinks that an obstacle to the NWFP is that there is always a need for more information, and there is still ambiguity in science in terms of how we manage riparian buffer widths, if it's ecologically advisable to thin in riparian buffers, and agencies all differ in this regard. So, scientific agreement on the ecological management remains an obstacle. However, this actor thinks that overall the NWFP is still viable for the protection of Northwest forests.

Environmental groups think that adaptive management areas haven't functioned as they intended, for places to conduct experimental activity, because there is still a lot to learn about restoration. If this experimental activity involves logging old growth, it will be controversial. Another external actor has said that people will argue incessantly that the best thing to do for the forest is to cut down old growth, so that a lot of new growth can crop up. But, they do not consider that there is new science supporting the idea that old growth continues to grow much more productively than new growth.

According to a federal actor, there is no question that the late-successional old growth, and thereby the amount of suitable habitat for the northern spotted owl and the marbled murrelet, has increased since the implementation of the NWFP. In turn, the ecosystem management approach has worked by improving water quality and the watershed conditions. An issue that has been a question of ecological viability has focused on the population decline of the northern spotted owl, despite these habitat improvements. The FEMAT report, using the best science at the time, wanted to find large blocks of habitat where up to twenty pairs or more could interact in space across the landscape so owls could fly between them and disperse randomly from reserves. According to a federal actor, there was an expectation that there would be an initial drop in owl numbers, then it would slow and steadily climb, but there have been extraneous circumstances that have added complications to their original projections. Environmental groups contend that there is a complication with saying habitat has increased, because a lot of trees were posited to increase in diameter to be considered "late-successional reserve," but these 90 year old younger stands are not as complex and rich habitats as the 350 year old stands.

The barred owl is one of these major concerns, and agencies are currently developing plans to mitigate this species' encroachment on spotted owl critical habitat. The FWS has put forward a controversial plan to get rid of barred owls due to the assessment that the spotted owls are clearly doing better in the southern latitude, whereas the barred owls are sweeping in from Canada in the north. Moving north to south, the barred owl is undoubtedly impacting northern spotted owl populations, as they are antagonistic and there is an overlap in prey. There are also other factors that play into the ecological viability of the Plan to protect the species, in that the northern spotted owl is a long-lived species with a longer generational time, and thereby their decline has also been attributed to the fact that we are now seeing the effects of long term habitat removal from the sixties and seventies. Northern spotted owls have low fertility rates and need

larger territories, whereas barred owls are fairly prolific and require smaller territories. An environmental actor indicated that the reserves must be increased to make up for the loss of spotted owl habitat, and in this case, the more habitat the more likely the two species can coexist.

The Aquatic Conservation Strategy (ACS) laid out objectives to achieve its goals, receiving mixed responses among actors in the policy community as to how ecologically feasible and viable the ACS is under the NWFP. On one end of the spectrum, a federal actor thinks that its objectives are too stringent in regards to how to implement treatments. Another federal actor stated that although the ACS strategy has been extremely successful at maintaining a good quality of water in national forests and is a significant contributor to providing a good water supply, it's next to impossible to meet every single objective.

Environmental actors think that although the owl was at the center of the debate at the time of the origination of the NWFP, they believe that the ACS is even more important. It embodies the NWFP because it came about at a time when it was clear that there would be problems with salmon and bull trout populations and the agencies took a precautionary approach in setting up a comprehensive outlook strategy. They think that the objectives of the ACS reflect the dynamism of the stream processes, and in turn the ecosystems, becoming very important in making sure that timber harvests have done as little harm as possible.

The Survey and Manage (S &M) program has been a hot button issue among all actors in the policy community and is a very important piece to the ecological viability puzzle. One federal actor stated that the program is good because it helps them understand the entire picture of the forest, but at times it is just an overload of useless information. Another federal actor opined that the S & M program is great in theory, but to implement it is very complicated. The "look before you log" approach entailed that any time there was a ground-disturbing activity the area had to be surveyed and management measures had to be developed to protect findings.

However, there have been problems, such as a lack of experts who knew how to locate these rare or unknown species. Therefore, the actions that they came up with were rife with uncertainty as to how well it would protect this species once implemented. The S & M program was put in place in order to continue the conservation biology approach that included the consideration of multiple species, so the program filled this niche where the reserves couldn't protect these species. The federal actor believes that this type of program that seeks to maintain diversity across the landscape cannot be physically done. Another federal actor feels very different about the program, categorizing it as useful and saying that it has served its purpose. The purpose being to seek species that may be rare out of a pool of around 400, assuming that they don't know, and then after investigation, removing any that were found to not be rare.

Environmental groups see the S & M program as an essential part of the ecosystem management-based approach. When there is concern over a species, the entire ecosystem must be looked at to determine why a species is declining so quickly, recognizing that the habitat is not just for the spotted owl, but also old growth-dependent species. These species are building blocks of the ecosystem and the S & M program is a really smart part of the NWFP, according to an environmental actor.

An important matter that has emerged from the current debate over the NWFP centers on the ability of the agencies to manage forests in fire-prone regions. Thinning in fire-prone areas is one of the actions that are hard for a federal actor to do, because the public perceives it as being a negative environmental action. According to this actor, the NWFP focused on traditional coastal rainforest late-successional old growth systems. When they try to propose things like thinning in riparian areas, it becomes an issue of ecological viability. The S & G did not reflect the disturbance prone areas to the extent that they should have. The federal actor said, "as an overall plan it is good," but that initially they envisioned that there would be some amendments at a province scale on snags and thinning to account for this, but it never came to be.

Although the environmental actors recognize the fact that ecosystems are dynamic, they still think that even in disturbed areas there must be protection of habitat. According to this actor, after fires, young complex forests are most likely to become old complex forests. They state that there is a "fire phobia" going on right now making people want to log forests that should in fact be protected.

As stated by a federal actor, not everybody is behind thinning and there has "not been a robust discussion on what is appropriate thinning, in what kinds of conditions is it acceptable to thin in, or about what would a post-thinning forest look like." There needs to be a focused effort so that everyone can come to an agreement or a general consensus on some truths and perceptions. The actor mentioned that it is more expensive to thin and there are some tradeoffs to thinning and completely saying no to any clearcutting. You have to maintain an extensive road network, enter stands much more frequently, and conduct repeated entries into watersheds. However, as an environmental actor pointed out, there are also alternate tradeoffs to thinning. There are ecological benefits to leaving trees and more ecological harm by taking them. According to this actor, "people look at fire as if it's an absolute devastation, when in reality fire burns in a mosaic across the landscape." They question the concept of salvage logging entirely, in that there is harm to the soil and natural regeneration has been shown time and again, that in a cost benefit analysis, it outweighs the economical value of timber being removed.

An environmental actor thinks that the overarching vision of protecting areas that are intact and restoring degraded areas in terms of streams and forests has been upheld, for the most part. Although there were a few broken promises in the 1995 salvage rider and the weakening during the Bush administration to the S & M and ACS program, the ecosystem approach has worked relatively well. Another environmental actor stated that they were very happy with the independent science group (FEMAT) that did what was necessary on a biological basis and it has turned out well in that agencies have made scientifically driven decisions.

iv. Legal Viability

The NWFP has evolved since its inception while litigation surrounded the management plans under its purview. A federal actor pointed to the massive amount of litigation for the reason that timber levels have not been met. Also, another federal actor stated that it is sometimes hard to do their job when dealing with possible litigation, where every word that is included in a plan of action is up for scrutiny. For example, there was much discussion in the mid-nineties as to the different interpretation of what "implement" means. According to this

actor, a court will defer to agencies when it comes to scientific interpretation, but where they always lose is on process. The Plan itself however has always been looked at by the courts as adequate for the federal contribution for recovery of the spotted owl. This federal actor thinks that this should actually be reassessed as to just how adequate the reserve system is at recovery.

In terms of issues such as the salvage rider passed in 1995, the environmental actors have said that they did as much as they could to challenge this weakening of the NWFP's afforded protections. However, these groups who stated that the court had confirmed "their worst fears by setting aside all environmental laws," lost the litigation under the salvage rider. From the adoption of the Plan up until present day, environmental groups say that the avenues they have taken for litigation have focused on whether individual projects are compliant. They have focused on the ACS, if the agencies are following the S & G, salvage logging, and others. In terms of salvage logging, these groups have challenged unsuccessfully the argument that once there is a fire in a late-successional reserve, the large salvage projects that come afterwards should only be completed if they fit under the exception to improve the ecological health of the forests. In terms of the deference to the agency, they think that the court ruled in favor of the agency for the Biscuit fire because of it being such a large fire. In another case where they were successful on this same challenge, the court ruled that the projects still have to meet the ecological benefit exception.

One of the issues that have come up among the actors often was the S & M program. A federal actor stated, "the S & M measures are not [able to be implemented] in a litigious environment." In the most recent case, a judge determined that the S & M program, which had been eliminated under the Bush administration, should be implemented again. According to a federal actor, they are still in settlement negotiations as to the future implementation of the program, but for now they reverted back to the previous iteration of the program prior to its elimination. According to a federal actor, the program has become very hard to carry out without enough funding and staff.

D. Future Direction

Since the NWFP, actors in the policy community have had to take on a landscape view and now there is the question of what the future direction of the Plan will be according to stakeholders. A federal actor stated that they are trying to "grapple with the implications of that new ecological perspective." Although there have been numerous issues that have been deliberated on and analyzed, a federal actor stated that if they were asked what their biggest concern in forestry today is, the NWFP would be the last place to look. There is a sound infrastructure in place and the objectives of the Plan have been institutionalized among most agencies.

One shift occurring in the Forest Service is that they are trying to change their budget from getting money for timber sales to funding for treatments. Suffering from line item restrictions, this would help collapse the line items into one integrated resource restoration account. By doing this, the agency hopes for more flexibility to do restoration, since they would not be limited on what the money could be used for.

Some federal actors have also proclaimed support for possibly codifying the NWFP, such as the proposed Wyden Old Growth bill, but warn that it may have some unintended consequences. Such as, it could sound good conceptually, but again the implementation may prove difficult, as well as the question of how it will be funded. A federal actor also signaled what they think should be accomplished in the near future when they said, "there ought to be a way to go through a collaborative process that we all felt outcomes would be positive or neutral to come to agreement with...and stop spending so much time debating on a project by project basis...to find more areas between the poles."

Other major federal actors' contributions to what should be considered for the future were related to the ever-changing modern world and the need for the Plan to reflect the changes that have occurred over the 16 years since the ROD was signed. The Plan needs to reflect the question of climate change, the new information on the northern spotted owl's condition, carbon sequestration in forest sinks, and many others. However, this actor thinks that the "goals of the NWFP are laudable and should go forward." There has also been a slight paradigm shift within the group of federal actors with minor exceptions, towards a paradigm that avoids proposing any old growth harvests. This is largely due to the fact that when they do, these projects get appealed and litigated, and even if the agencies prevail in the end, it could be three to five years down the road until its over, which isn't worth the effort. They are moving towards working more and more with stakeholders to collaborate and come up with timber sales that everyone can agree to. However, overall this federal actor thinks that the NWFP is both ecologically and politically viable.

An environmental actor expressed that the entire forest under the NWFP should be treated as a reserve, and then federal actors can figure out what kind of management plan is appropriate or consistent with species. The actor offers an option for timber harvests that they would approve, which is to log in the areas that were clear cut from the sixties to the eighties, which are densely stocked with one species of tree. By thinning in these areas, they could make better habitat and provide jobs. For now however, this actor thinks that those on the west side still see valuable timber, and industry will not accept the idea that they can only thin because they still want to log old growth forests. Therefore, according to this actor, there will be "more battles in the future, I'm afraid."

In regards to the new Obama administration and their policy on the NWFP, the actor says there is still a learning curve and they are trying to educate them as best as possible. Right now the environmental actors are waiting to see what revisions are made to NFMA regulations, because the latest iteration was thrown out in court in 2008. This is outside of the NWFP, but it will impact it and it will also show the groups the administration's stamp that shows its way of doing things. They also think that there should be a focused effort to fund rural communities to do good things for the forest instead of funding to destroy. Along with this, monitoring should receive higher funding because everyone talks about it as being a smart idea, but there is never enough allocated to the program at the level it needs. With this, there will need to be a political commitment that makes these issues an important part of their agenda. Also, an issue that spells impending doom for this actor is the possibility of another WOPR, or "WOPR, Jr." In general, environmental groups support putting a policy in place that permanently protects old growth forests, so that the focus can be redirected to other things that need to be done, by taking

controversial issues off the table. This actor doesn't "have any old growth litigation going on right now for the first time in a long time...now we may go through a period of time where it may actually work."

VII. Discussion

It is important to remember that the Northwest Forest Plan transpired after the decline of a species halted logging in the Pacific Northwest and it was framed in such a way that the new management strategies would eventually stabilize the plummeting spotted owl population. In my assessment I will analyze the principles put forth at the outset of this solution, and then discuss whether this species' current status reflects the success or failure of the Plan as a whole. President Clinton delineated five core principles of the Plan and the first was to never forget the human and economic dimensions, which has been the principle that most parties have determined has not been upheld. The genesis of this issue seems to lie in the way that the initiatives to support this principle were put forth. Given the divisiveness and disagreement over the Plan's ecosystem approach, it was decided that the Northwest Economic Adjustment Initiative would operate parallel to the Plan, yet at the same time insulated from the political battle, due to its broad popularity across divergent parties.

The Community Economic Revitalization Teams (CERTS) were charged with coordinating the operations of worker assistance program within communities. CERTS was a derivation of the economic initiative, coordinating loans and grants, and acting as facilitators for programs like "Jobs in the Woods," which aimed to enrich communities by connecting them to the woods in new ways. By not incorporating this thread into the fabric of the other side to the NWFP, which in turn ended up incorporating the other principles fairly successfully, the economic initiative was in a way set aside politically when there were not any mechanisms in place to ensure its sustainability. In the existing literature, the data pointed to a lack of funding and support for this socioeconomic principle and this sentiment was also an important aspect during the policy community interviews. Many involved feel like this is an aspect that was neglected, but others point to the success of a lot of previously timber-dependent communities in reinventing themselves as tourism and recreation centers.

I recommend that not only should the economic initiative be further integrated into the other components of the Plan, I also contend that this economic component should be further buttressed in order to make the vital connections within communities to their land. This should be done so that the social fabric of these communities can withstand changes, such as times of instability, or times of growth, to further enrich and strengthen the Plan's reach and success. However, the communities should remain decoupled from the federal timber largesse that turned timber cutting into an exercise in political theatre, with immense economic pressures exerted, instead of a well thought out plan based in science. Also, although the economic initiative does in fact need to be revitalized, it is clear that the communities did not fall apart as it was originally forecasted.

The communities' potential for economic instability was also mitigated in part by a rapid increase in population in the region, increases in educational attainment, and decreasing poverty. ⁶⁸ It is important to note that "in the Plan area, 36 percent of communities enjoyed

⁶⁷ Supra note 11

⁶⁸ Supra note 14

increases in well-being and 37 percent experienced decreases. The rest of the communities remained constant."⁶⁹

Places such as Stevenson, Washington and Coos Bay, Oregon have revitalized their communities in response to this shift in the region's focus, coming out stronger and more sustainable. Even when the loss of jobs in the region is calculated, the socioeconomic ramifications were still significantly less than the drafters of the Plan anticipated. The policy community discussions further substantiate this need to move to the middle, in which most have proffered the assessment that communities must have strong leadership and social networks to survive significant upheavals and come out stronger. Federal lands encompass less then ten percent of the logging in Oregon and Washington, and there are less than 3 percent of all jobs in the northwest that are timber industry jobs. The timber industry has shifted its gears to focus on second-growth forest logging on nonfederal land, retooling their mills to accommodate this shift. The centripetal force of integrating ecological value into human values will establish a stronger foundation for forest conservation.

The second principle set forth in the Plan aimed to protect the long-term health of our forests, our wildlife, and our waterways. The literature that was utilized in this research clearly pointed to the current science paradigm that points to the importance of the "little things that run the world," and the Survey and Manage Program embodies this principle. Not only did the literature express this growing shift in employing the precautionary principle of surveying before any actions, but also the debates in the court reflect the importance of the program. Clearly a contentious issue, the program was eliminated and later reinstated after years of fierce courtroom battles between agencies and environmental groups. In the discussion this battle transpired when certain federal actors highlighted the difficulties inherent in implementing such a program, rife with uncertainties. Other federal actors proffered a perspective that was reiterated in a lot of agency publications, that although difficulties are intrinsic, the program is vital for an ecosystem management-based approach. Environmental groups' positions in the court were mirrored throughout the literature they published and the current debate over upholding the program through the courts, when they expressed strong support for it.

The spotted owl does not operate on human time, but rather it has survived and thrived in a complex series of environments and biological dynamism. As a species with a long life span, it depends on the ability of the forest to heal after wounds have been inflicted to its complex web of ecology. The interesting dynamic that transpired during my research was the paradox of the spotted owl. Throughout the literature, it was laid out that the habitat of the spotted owls

Niemi, E., Whitelaw E., & Johnston, A. 1999. The sky did not fall: the Pacific Northwest's response to logging reductions. ECONorthwest. Eugene, OR. http://www.econw.com/pdf/SkyDidNotFall.pdf

⁶⁹ Charnley, S., Donoghue, E.M., Stuart, C., Dillingham, C., Buttolph, L.P., Kay, W., McLain, R.J., Moseley, C.; Phillips, R.H., Tobe, L. 2006b. Socioeconomic monitoring results. Volume III: Rural communities and economies. In: Charnley, S., tech. ed. Northwest Forest Plan-the first 10 years (1994-2003): socioeconomic monitoring results. Gen. Tech. Rep. PNW-GTR-649. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 206 p.

increased and the owl population decreased. We did not see any litigation regarding the owl specifically, but the policy community discussion undoubtedly reinforced the notion that the spotted owl's future remains unknown. The factors attributed to their decline emerged in the agency literature, but even more so in the current reports from external stakeholders and through the interviews. The barred owls' encroachment, habitat loss on nonfederal lands, past logging effects now being seen, climate change, and others are all factors contributing to the spotted owl population losses. I think that there should be a future direction that acknowledges these variables in the decision-making process. Based on what I gleaned from the interviews, it appears that agencies are taking strides in discussing potential plans to mitigate or alleviate the burden of some of these detriments to the proliferation of the spotted owl.

The forests in the matrix areas must be allowed to regrow to develop into the complex, structurally diverse, 350 year old stands that provide prime habitat for late-successional and old growth dependent species. The streams and waterways that are protected by the Plan depend on a steady supply of forest dynamics such as organic material supply and shade. A source of heavy litigation, the Aquatic Conservation Strategy (ACS) has objectives in place to meet the goals of maintaining healthy waterways, which has been accomplished in many ways. Not only an emergent theme in the litigation, but across most of the literature I utilized, the ACS receives praise for contributing to the health of the forests, ten years after the inception of the Plan. However, agencies were challenged in court under the broad strokes of the ACS strategy and it is telling that this was the case, because the agencies depicted in the interviews that the ACS is almost impossible to implement with all of its objectives. Environmental groups enthusiastically support what they deem an extremely smart and comprehensive strategy. Thus, the trend in the heavy proportion of legal battles related to the ACS indicates that this may have been an avenue utilized by environmental groups as a tool to ensure further compliance and protection, possibly due to a lack of effective implementation by agencies.

Clinton's third principle was to be scientifically sound, ecologically credible, and legally responsible. It is clear that the science, ecology, and legal environment in the region have changed. Managers have tried to integrate these aspects into their decisions, but there still remains a lot of work to be done to further institutionalize changes in these areas, to remain relevant in their work and effective. The Plan was designed out of the best available science, which is still the case today. However, healthy discourse remains as to adjustments in scientific paradigms related to ecosystems and the need to act upon these natural processes. Issues such as the salvage logging debate underlines the debate in science, related to ecosystems and natural processes. Throughout the literature, disturbance prone regimes received great significance as fires damaged large patches of forest, and different paradigms proffered divergent prescriptions. Certain paradigms called for the proscription of salvage logging in reserve areas due to the environmental benefit that deadwood confers onto the forests. This argument weaved its way throughout the litigation, becoming more prominent in recent years, with the courts still differing in its direction for this issue. Within the policy community discussion, the conflict remains somewhat fresh, as federal actors charged with managing the forests are concerned with managing forests in fire-prone areas, and environmental groups are crying foul, framing these agency concerns as a "fire phobia."

The Plan's structure and Standards and Guidelines are very scientifically sound and ecology credible, but its implementations have not always instilled this same level of consistency. This landmark approach abandoned the antiquated system of liquidating old growth forest to an approach that is more environmentally and socioeconomically sound. The legal responsibility of the Plan has been moderate. The Court upheld the basic framework of the Plan, but over the course of time as changes to the strategies and programs have occurred, the legal responsibility has decreased. The components of the Plan, the S & M and the ACS gave the ecosystem management approach real teeth, and cutting away at these only served to diminish the efficacy of such a construct. The congressional riders and WOPR undermined the basic tenets and future of the Plan, diminishing trust and responsibility. Although the implementation of such an intense management plan may seem insurmountable, it was set in place at a time when the FEMAT team converged with managers and policymakers to develop components of the Plan that upheld all of the principles. These may get lost in the daily routine and seem impossible to carry out, but so long as the policy community and legal community are around to converge on values and policy preferences, the Plan will be up for scrutiny.

The principle that called for a production of a predictable and sustainable level of timber sales and nontimber resources is very contentious and its assessments are very discordant. The question comes down to whether you prefer your trees standing upright, or horizontal on a truck out of the forest. There is a clash of values and an assignment of ecological and human value that occurs in these divergent assessments. However, the goal of the Plan was to create a predictable market for timber on federal lands but with a greater deal of protection afforded to the ecosystem, in order to serve as a buffer to the logging on nonfederal lands. It is important to consider the timber harvests in the context of the period leading up to the Plan. A recession in the early 1980s created a mass of timber contracts not yet cut because of price fluctuations and timber buyback in the mid 1980s of uncut contracts, which paid unrecoverable prices at the market conditions at the time. Dwyer's injunction merely contributed to this steady decline in timber harvests. So, the Plan accommodates for this change, by providing a predictable supply that differs in its lower rates.

The agencies have met their probable sale quantities up until now fairly consistently, but the debate always centers on the amount the Plan "promised," not being met. However, this designated amount was clearly a ceiling and not a floor. The agency and some external literature pointed very strongly towards the need to reassess the fact that agencies haven't met these "promised" sale quantities, along with some of the federal and socioeconomic actors who agreed with this direction during the interviews. However, this is where the divergence in the literature comes to a head with the actual numbers on the economy and the timber sales delineated above, and the perspective of several in all areas of the policy community, federal and external actors. Again, a clash of values seems to have seeped its way into the debate here, where the region seems to be in an identity crisis, as to whether it supports preserving old growth forests for economic gain through quality of life or for economic gain in the form of trees heading out of town on a truck bound for the mills. After my analysis, the need to instill a tree preservation economy for the communities to harness the forests' ecological bounties is essential. Programs like "Jobs in the Woods," need to be resuscitated to work for more people, with the hope of developing a private market in this field.

The final principle in the Plan is to make the federal government work together and for you. Agencies were charged with defining the future of forest management while simultaneously struggling between different natural resource disciplines. This principle has arisen as a conspicuous success amongst all of the delineated principles. The general consensus across the policy community has indicated the levels of interagency cooperation as unprecedented, and a very vital part to the continued success of the Plan. This human effort has led to a strong component that will help to facilitate greater integration of the other principles, in that their focus can be diverted from interagency disputes to other pressing issues. The change in agency culture is glaring upon assessing the past cultural frameworks and decision-making in comparison to that under the Plan. Although trust broke down at certain junctures, such as upon the attempt to implement WOPR, agencies have retained a level of cooperation that allows for successful planning. I think the area for improvement appears to be the need to further infuse the monitoring and research into agency actions. It is not a problem across the board, but it is an important aspect that has not been accomplished to as great a degree as it should be. Also, based on my research, the active use of the scientific information will lead to better results across all spectrums, which is not easy when infusing various disciplines across space and time, but the agencies are equipped to handle this after years of the Plan's evolution.

This ecology-based forest management scheme was slightly Machiavellian in that the mitigation of the demise of the northern spotted owl was in many ways a means to an end to halt the logging of old-growth forests. But it was also bigger than merely the protection of the owls after Clinton defined the problem as "how to protect a broad range of environmental values within the old-growth ecosystem while dealing humanely within a regional economy that was undergoing a normal process of transformation." The bird was upheld politically and ecologically as a barometer for the forests' health, and whether or not it was the be all end all goal, it still ended up as the Plan's poster child. If the Plan is assessed by its ability to revive the spotted owl's population, it will not be rated successfully given the fact that the spotted owl population is still suffering losses, its numbers declining about 7.5 percent per year across their northern range, at the high end of the observed decline, and about 2 percent per year across their southern range. This population decline has occurred despite the fact that spotted owl habitat has increased from around 7.87 million acres in 1994 to around 9.12 million acres in 2003. Thus, the political wrangling at the outset of the Plan that presaged certain doom for the Pacific Northwest following a deluge of spotted owls has proven spurious.

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⁷¹ Supra note 7

⁷² Supra note 9

VII. Conclusion

For some, the spotted owl was like William Wordsworth's favorite "bird of doom," a harbinger of a downfall. Yet, for others, the owls symbolized barometers of forest health, their decline essentially augured the forests' decline. The wisdom of the Greek Goddess Athena's owl, teaches us that these complex forests are vulnerable biological treasure chests. Logging could mean the collapse of an entire world, filled with wandering salamanders who never left one tree's protection, their very own piece of forest real estate in the sky, bryophytes that carpeted the trees' appendages in emerald, ferns that starred its limbs, and the red tree voles who nestled within its embrace, all highlighting the intrinsic fragility of the threads of nature.

Although the debate has contracted, there are still significant discourse and policy judgments proffered about the correct distribution of weight that should be placed on economy and ecology. In the courts, battles have been waged as to how well the implementation has adhered to the Plan. After years of court battles and political maneuvering, the lamentations that the sky would fall if the timber industry were to subside, and that we would be "up to our neck in owls and out of work for every American" have been scotched. Many think that there should be policy measures taken to extend the protections that the Northwest Forest Plan affords, yet some believe that the implementation process should be made more flexible for managers to work more efficiently. The gravity of shoring up the weaker components of the Plan is important in order to shoulder it from future administrations trying to diminish the protections it provides to the forests that contain ancient, giant trees, some of which were around when Leif Ericson arrived in the Americas. These timeworn towers that anchor the forests, covering the Pacific Northwest in a mat of abundant life, symbolize a paradox of abundance. The paradox of abundance is that there are those who wish to harness the abundance of the forests horizontally for economic gain, and those that value the abundance of these trees vertically for the unparalleled quality of life and biodiversity they afford to the region.

The ecological viability is clearly still debated among different actors, but for the most part I think it is still one of the best landscape management plans out there. The policy community's focus has often times been in the courtroom as various stakeholders resolve the issues surrounding the Plan's implementation through litigation. The Courts will generally defer to agencies when it comes to scientific interpretation, but where they always lose is on process. The Plan itself however has always been looked at by the courts as adequate for the federal contribution for recovery of the spotted owl. Many think that this should actually be reassessed as to just how adequate the reserve system is at recovery. The crisis in the woods came to a pinnacle after the Northwest Forest Plan swept over the Pacific Northwest Forests in one fell swoop, breaking up a political and ecological stalemate in the region. Its incorporation of ecology, society, the courts, and politics is unprecedented in its scope and depth. The cornerstones of the Plan, Clinton's five principles, have continued to define its past, present and future.

One of the linchpins of the Plan was to restore and maintain biodiversity, which was to be carried out through the employment of an ecosystem-based approach. The Survey & Manage program accommodated this goal through the land allocations and system of reserves designed to maintain and restore habitat for late-successional and old growth related species. This program

went through a series of trials and eliminations and with the program back in place, although a challenge to implement, the Plan will have time to work and reflect this principle of protection. It remains questionable just how protected the forests have been in that timber harvest can occur in any land allocation other than the congressionally withdrawn areas, leaving over 13 million acres vulnerable to commercial harvesting. Tontinued harvesting in matrix areas threatens to undermine the tenets of the establishment of intervening forests to provide for the owl's dispersal across different reserves.

"The one process now going on that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us." **E.O. Wilson**

The northern spotted owl is still crippled and its continued vitality is highly dependent on this series of reserves. Yet, its habitat remains fragmented and an interplay of variables has contributed to its uncertain future. In the historical sense, the owl was the "whipping bird" for industry and enemies of the "owl" alike. It was lambasted that the spotted owl would take down a whole economy, leaving endangered loggers in its wake as owls became prolific. These histrionics can now be unequivocally discredited as hyperbole and at times pure fabrication. We are not up to our neck in owls, in fact, we now understand that the spotted owl numbers have declined at a rate that has been higher than the Plan's developers predicted, and that rate of decline is being attributed to numerous variables that contribute even greater uncertainty and complexity.

Furthermore, the crux of the Northwest Forest Plan is that it signaled a shift in policy direction that reflected a solution to what the public had defined as a problem, the need to protect fragile ecosystems and human communities. The Plan shifted the debate and became a microcosm of the people in the region, reflecting a compromise between maintaining the forests' health and the human communities' health. It was a formidable strategy that recognized the pressing need to protect the spotted owl's habitat, crippled by years of fragmentation, and it is anticipated to revive the landscape and its biota over the next hundred years. The northern spotted owl, marbled murrelet, and other old growth forest species, are still under the shadow of the chainsaw across federal and nonfederal lands, only swiftly escaping after litigation halted certain projects. If policymakers decide to carry on with the paradigm shift that the Plan catalyzed, they must balance short-term goals of harnessing these giant monuments to history for a short-term economic gain against the need to protect these ecosystems and the declining symbol of the Plan, the spotted owl, before they eclipse. Should these decision makers decide to ignore the plight of the spotted owl and it leads to their eventual collapse, they may go the way of Samuel Coleridge's "Ancient Mariner," but instead of wearing an albatross around their necks as a burden for their misdeeds, they may be made to wear the spotted owl around their necks as a reminder of their contribution to the spotted owls' extirpation.

⁷³ Estimate includes LSRs (7,430,800 ac.), Managed LSRs (102,200 ac.), AMAs (1,521,800 ac.) and Matrix (3,975,300 ac.), totaling 13,030,100 acres (FSEIS, pp. 2-60-2-62).

Appendix A: Policy Community Interview Subjects Recruited

Research Category	Representation	Interviewed
Federal	PIEC	X
Federal	REO	
Federal	RIEC	
Federal	RIEC	X
Federal	RIEC	
Federal	RIEC	
Federal	RIEC	
Federal	REO & PIEC	
Federal	RIEC	X
Federal	RIEC	X
State	IAC	
State	IAC	
State	IAC	
Tribal	IAC	
Federal	REO	
External Stakeholder	Socioeconomic Actor	X
External Stakeholder	Environmental Group	X
External Stakeholder	Environmental Group	X
External Stakeholder	Socioeconomic Actor	X
External	Timber Group	
Stakeholder External Stakeholder	Timber Group	

Appendix B: Interview Questions

Part I: Involvement/Process

- 1. How long have you been involved in the NWFP and what is your role in it?
- 2. How is communication between others involved in the process? In other words, how are decisions made given what your position entails? Has this method of communication been effective in accomplishing your role in the process?
- 3. When decisions needed to be made how adequate was the available data? How were differences amongst other decision-makers resolved regarding the available data?
- 4. On a scale of 1 to 5, how satisfied are you with your involvement and the overall process?
- 5. What were the biggest obstacles or limiting factors to the Process (i.e. time, money, skills, data, and expertise)? How can these be mitigated?

Part II: Implementation/Evaluation

- 1. What is/are the goal(s) of the NWFP?
- 2. How well have the 5 principles from the original plan been met on a scale of 1 to 5 for each respective principle? (Never forget the human and economic dimensions, protect the long-term health of our forests, our wildlife, and our waterways, be scientifically sound, ecologically credible, and legally responsible, produce a predictable and sustainable level of timber sales and nontimber resources, and make government work for you)
- 3. Based upon response, which principles are still relevant and/or should remain in the overall goal of the NWFP?
- 4. How well has the ecosystem management approach worked?
- 5. How satisfied were you with the implementation process?
- 6. What were the biggest obstacles or limiting factors to Implementation (i.e. access to resources, time, money, skills, data, and expertise)?
- 7. If applicable, how satisfied are you with the evaluation and monitoring components (i.e. Survey & manage)?
- 8. What are the biggest obstacles or limiting factors to monitoring/evaluation?

Part III: Future Direction/Big Picture

- 1. On a scale of 1 to 5 how ecologically viable is the NWFP?
- 2. On a scale of 1 to 5 how politically viable is the NWFP?
- 3. Were there legal, policy, or institutional factors that facilitated the process and implementation of the plan?
- 4. Conversely, were there legal, policy, or institutional factors that constrained the process and implementation of the plan?
- 5. What are your specific recommendations to improve either process or implementation of the Plan?
- 6. Is there anything else you would like to share that I have not specifically asked you about? What do you think the future direction of the Plan should be?

Appendix C: HSIRB Exempt Letter

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: February 26, 2010

To: Denise Keele, Principal Investigator

Lynne Heasley, Co-Principal Investigator Ashley Horvat, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair XMW NULLY

Re: Approval not needed for HSIRB Protocol 10-02-32

This letter will serve as confirmation that your project "The Northwest Forest Plan: Up to our neck in Owls?" has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because you are studying the Plan and are not collecting personal information about individuals. Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.