Damaging Ecological Resources Protected by the 2005 Forest Plan: Recent Harvests on the OSU McDonald-Dunn Forest

Debora L. Johnson and K. Norman Johnson 9/25/20191

Summary

Between 2017 and 2019, ecological resources important for teaching, research, and demonstration, including an old-growth grove and areas of mature forest, were clearcut on the McDonald-Dunn Research Forest even though these resources were protected by the existing forest plan. When the old-growth harvest was discovered by a forest user, the Dean of the College of Forestry put in place interim guidance to protect old trees until a new forest plan is written. Given the College's inability to adhere to either the spirit or letter of the current plan, it is not clear how a new plan will help moderate the disregard for the protection of ecological resources that has been shown in the last few years. More immediate and fundamental changes are needed to bring the forest back into line with the primary mission of providing a biologically diverse and sustainable teaching, research, and demonstration forest with a management focus. Those changes include (1) adhering to the themes and guidance in the 2005 plan, including the protection for old trees, until a new plan is finished, (2) adding all of the candidate old-growth stands that were identified in 2004 to the reserves, and (3) having annual meetings and field trips to review recent and proposed harvests that highlight how the harvests meet the themes and guidance in the forest plan.

Introduction

The current controversy over management of the OSU McDonald-Dunn Forest began with a citizen publicizing the destruction of the Baker Creek old-growth stand. In response, Interim Dean Anthony Davis distributed a statement (7/12/19) that said the College of Forestry "made a mistake in carrying out this recent harvest" and also made the important commitment to protect trees over 160 years of age until the next plan is finished (Appendix 1). Dean Davis also said that the mistake occurred while they were "operating with the best of intentions and within the guidance of the 2005 Forest Plan" and that "The core themes identified in the 2005 Forest Plan still ring true today."

Certainly, no plan is perfectly implemented and mistakes do happen, even mistakes as egregious as cutting ancient trees. However, our review of recent harvests on the McDonald-Dunn Forest found a much broader problem: the 2017-2019 harvests documented in this report display a systematic violation of some of the fundamental themes and guidance in the 2005 Forest Plan intended to protect ecological resources. Whether these actions were precipitated by revenue pressures, or forest managers imposing their own idea of how forests should be managed, or for some other reason, we do not know. In some ways it does not matter--the key point is that ecological resources that the College committed to protect in the 2005 Plan have been damaged or destroyed.

To provide context for these findings, we first review the history of forest planning for the McDonald-Dunn Forest including the development of the 1994 and 2005 plans. Then we provide evidence that important ecological resources, including the Baker Creek old-growth stand, were damaged or destroyed in violation of the guidance and themes of the 2005 forest plan. Finally, we make recommendations to reduce the opportunity for these kinds of acts occurring in the future.

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Background

The First Forest Plan: 1994

As the amount of clearcutting increased on the McDonald-Dunn Forest in the late 1980s and early 1990s, complaints from neighbors and recreationists also increased, and many critical letters and articles appeared in the Corvallis Gazette Times. In 1993 Dean George Brown formed an interdisciplinary team of faculty from across the university and asked them to develop a long-term plan for the forest. The Dean told the team to develop a forest plan that would best advance McDonald-Dunn as a teaching, research, and demonstration forest. Once that was done, the Dean said that he and the Forestry Executive Committee (FEC) would look at the revenue that would be produced by the plan to see if adjustments were needed. Dean Brown wanted to be sure that he and the FEC knew the degree to which revenue production was influencing the achievement of core goals.

That planning team quickly settled on a mission statement: "Develop McDonald-Dunn Research Forest as a biologically diverse and sustainable teaching, demonstration, and research forest with a management focus" (OSU College of Forestry, 1994).

To accomplish this mission and associated goals, the team divided the McDonald-Dunn Forest into three zones (OSU College of Forestry 1994, page 10):

- 1) "The South Zone will be managed to contain large trees within a structurally complex forest pattern. The goal is to create structures similar to those of an older, mid- to late-successional forest.
- 2) The Central Zone will be managed to test techniques for creating and maintaining two-storied stands, that is stands containing trees of predominantly two distinct ages and sizes over part of the rotation. The stands will be slightly less complex than those in the south zone, but they will contain significant numbers of large trees.
- 3) The North Zone will be managed generally to achieve younger, structurally more uniform stands for comparison with those of the Central and South Zones."

"Teaching and research are preeminent and will be accommodated in each zone as needed."

A sustainable harvest schedule was then developed to implement this forest management strategy. It turned out that a harvest schedule consistent with zone themes produced sufficient revenue and did not need adjustment. The spatial location of the harvests for the first decade was worked out to the satisfaction of the FEC after some back and forth adjustment to reduce the amount of clearcutting.

A Forest Advisory Committee was set up that included "OSU faculty members from the College of Forestry and other departments, as well as people from the community." The plan gave "the Forestry Advisory Committee significant responsibility for interpreting, evaluating and, if necessary, revising the Plan. Interested community members will be included in these efforts" (OSU College of Forestry, 1994).

Meetings were held with community leaders to explain the plan and a brief, colorful pamphlet was written for broad distribution (OSU College of Forestry, 1994). Almost overnight, complaints about the McDonald-Dunn forest management in the Corvallis Gazette Times greatly declined, helped by the very favorable coverage of the plan by the newspaper. The spatial harvest schedule, applying silviculture appropriate to each zone, was then followed for the next decade, providing a myriad of teaching and research opportunities and producing significant revenues. *The McDonald-Dunn 1994 Forest Plan was the only public forest plan in the State of Oregon successfully implemented during the tumultuous years of 1994-2003!*

The Second Forest Plan: 2005

The 2005 Plan was a revision of the 1994 Forest Plan. It maintained the idea of zone themes with different emphases to illustrate a range of approaches to forest management strategies and practices for use in teaching, research, and demonstration. The 2005 Plan was put together by a smaller interdisciplinary team that was mostly from the College of Forestry and was headed by Rick Fletcher (Forestry Extension) and Becky Johnson (Associate Dean of Forestry). The team took their direction from the FEC.

Once again, the Team was told to develop the best teaching, research, and demonstration plan and estimate the revenue that would be produced. After the team made an estimate, they were asked by the FEC to increase the area devoted to intensive management to enable a slightly higher revenue flow. With that modification, the FEC recommended the forest plan to Dean Hal Salwasser who then approved it. (See Appendix 2 for the signature page by the members of the FEC and the Dean. Dean Salwasser wanted the entire leadership team to sign their approval, in part so they would know the limits on the revenue that they could expect from the forest.)

Four Themes in the 2005 Plan

"To achieve the mission and goals for the Forest, land is allocated to one of four themes (Figure 1). Each theme relates to different management characteristics and different target stand characteristics and represents a different set of management objectives for Oregon forestland owners and managers" (OSU College of Forestry, 2005, page 19).

Theme #1: Short rotation wood production with high return on investment (35- to 45-year rotations of even-aged Douglas-fir that end with clearcut harvest)

Theme #2: High quality, growth-maximizing timber production (60- to 90-year rotations of even-aged Douglas-fir that end with clearcut harvest)

Theme #3: Visually sensitive, even-aged management (70- to 90-year two-storied forests of primarily Douglas-fir that always retain some even-aged tree cover)

Theme #4: Structurally diverse complex forest for multiple resource outcomes. Multi-aged, mixed species forests of primarily Douglas-fir established and managed using groupselection harvests, while maintaining structural diversity and associated habitats within stands. (Note: **"regeneration will occur after small, one to four-acre group selection harvests"** [OSU College of Forestry, 2005, page 24].) This theme occupies much of the South Zone of the McDonald-Dunn Forest and is a focus of the discussion that follows.



Figure 1. Zones and themes in McDonald-Dunn Research Forest.

Additional Commitments in the 2005 Plan

"Layered on top of the themes are many special areas and special issues:

- Old growth reserve areas have been maintained
- Nesting, roosting, and foraging (NRF) habitat for the northern spotted owls will be maintained
- Oak savannas, prairies, and woodlands will be evaluated and restoration projects implemented
- An invasive species control and containment program will be developed with a major focus on false-brome
- A hardwood analysis and management strategy will be developed
- Snags and down wood will become the focus of an extensive research program"

"Management of cultural resources on the forest is enhanced in the new plan by a new Memorandum of Agreement between the College of Forestry and the Confederated Tribes of the Grand Ronde."

"The plan projects harvests for the next 100 years and indicates approximately 6 million board feet/year will be harvested over the next decade. The actual yearly harvest will vary up and down depending upon a number of factors. Overall revenue produced by the forest is estimated at approximately 50% of maximum cash flow for timber production only."

A tentative harvest schedule for the first decade was designed, consistent with the zone themes (OSU College of Forestry, 2005, page 38).

The Commitment to Maintain NRF Habitat in the 2005 Plan

Most of the stands at issue in this analysis were classified as nesting, roosting, and foraging (NRF) habitat for the northern spotted owl (NSO). Characteristics of suitable NRF habitat include large (>30 inches in diameter) conifer overstory trees, an understory of shade-tolerant conifers or hardwoods, a high level of canopy cover, large, live and/ or dead trees with suitable nesting platforms, and an understory that is open enough that owls can fly through it. A definition for NRF was crafted for the McDonald/Dunn Forest in 2000 using forest inventory and NSO telemetry data gathered in the South Zone (Figure 2) which was then used to delineate NRF stands. The classification generally covers the mature and old-growth stands in the South Zone (OSU College of Forestry, 2000).



Figure 2. Nesting, roosting and foraging (NRF) habitat for the northern spotted owl in the South Zone of the McDonald-Dunn Forest. (Source: Johnson, Johnson, & Hann 2007)

The 2005 plan states (page 29) that "management activities will maintain the current level of NRF in the South Zone (1585 acres) . . . Forest staff will develop thinning regimes that maintain NRF and the associated timber yields." Thus, the NRF stands are not available for clearcutting under the plan but may be available for thinning if silviculturists and owl biologists conclude that such actions would help maintain or improve NRF. Eventually (after a few to many decades), other stands in the South Zone could grow into NRF and then there could be a surplus of NRF acres available for harvest using the method appropriate to the zone theme they fell into.

Concerns about maintaining NRF were brought about by the presence of NSO in the South and a portion of the Central Zones of the McDonald-Dunn Forest. A breeding pair of NSO was first documented in this portion of the forest by Eric Forsman between 1970 and 1974. The pair nested twice but abandoned the site after timber harvest activities occurred in the area. Surveys that were done in 1994 detected a breeding pair in the Oak Creek drainage of the South Zone. Between 1994 and 2004 three different pairs of spotted owls occupied five different nest sites (Figure 3) (Johnson, Johnson & Hann, 2007). Some of these nest site changes were probably the result of pressure from barred owls (an aggressive encroaching competitor).



Figure 3. Historical home range circles for the northern spotted owl in the Mc-Donald-Dunn Research Forest. (Source: Johnson, Johnson & Hann 2007)

A key decision in the 2005 McDonald-Dunn Plan was to maintain the current level of NRF habitat for the NSO throughout the South Zone of the forest (OSU College of Forestry, 2005; Johnson, Johnson & Hann, 2007). Although the commitment to maintain NRF habitat in the South Zone was to ensure that NSO have suitable habitat across the Zone, regardless of where they move their nests or whether they are completely absent for some time, this commitment was also intended to ensure that some old, complex forest existed on the McDonald-Dunn Forest for teaching, research, and demonstration. How to actively manage these forests for the northern spotted owl while producing wood products was and is a significant forest management issue in Oregon. Maintaining the level of NRF habitat in the South Zone, while allowing treatments consistent with that goal, was intended to

provide a foundation for important teaching, research, and demonstration. The commitment to maintain NRF in the South Zone was not conditional on the presence of the northern spotted owl.

Implementation of the 2005 Forest Plan

Implementation of the plan began in 2005. Four complementary efforts were also completed: (1) a spatial harvest scheduling model built around a replicated set of treatments in the South Zone to help decision makers better evaluate the effect of different harvest strategies on northern spotted owls and revenue (Bettinger, Johnson & Johnson 2003), (2) a monitoring plan designed to drive an adaptive management process, (3) an invasive plant management plan that established priorities and detailed control prescriptions, and (4) a restoration plan for oak and prairie habitats (Legacy Oaks Task Force & Prairie Task Force, 2008).

This plan was implemented from 2005 to 2007. The Great Recession of 2008 caused the FEC to suspend timber harvest on all of the research forests beginning in 2009 because of the decline in log prices associated with the collapse of the housing market. Most of the forest staff were laid off.

Year-to-year timber offerings often vary from planned annual activity schedules in response to market conditions. In order to weather market fluctuations and recessions, the College of Forestry, like many other entities that manage timber, maintain reserve funds. During past recessions, the reserves were used to fund staff and infrastructure; when markets came back, deferred harvests were then implemented according to plan and the reserves replenished. The 1994 McDonald-Dunn Forest Plan stayed close to the scheduled harvest target both for volume and treatment type for the years 1994-2003, even though there were large oscillations in year-to-year harvest levels as the forest staff coped with "changing conditions, surprises and markets" (Johnson, Johnson & Hann, 2007). During that 10-year period, the annual harvest ranged from 200,000 board feet to 9 million board feet with an average annual harvest of 4.1 million board feet (OSU College of Forestry, 2005, page 38). The 2005 update is a continuation of this same approach to planning and should be expected to function similarly.

Damage to Important Ecological Resources through Clearcutting: 2017-2019

The Forest Plan provided specific guidance for protecting NRF and creating structurally diverse, complex forest. These resources provide outstanding teaching, research, and demonstration opportunities, but many have been clearcut in the last three years counter to the zone themes and guidance in the 2005 Forest Plan, damaging or destroying precious ecological resources as a result. This analysis focuses on 13 harvests that occurred between 2017-2019 in the South Zone.

During the past three years, 13 clearcut harvests have been completed in the South Zone that are not compatible with the 2005 Forest Plan. We cover them in two groups:

1. **The Baker Creek Old-growth Clearcut**. Part of an old-growth stand near Sulphur Springs on the McDonald-Dunn Forest was clearcut in May of 2019. This clearcut elicited controversy and outrage after scores of old trees up to 420-years-old were cut. In addition to the loss of a magnificent old-growth forest and habitat for the northern spotted owl, the harvest ruins habitat for other late-successional species, such as tall bugbane (Cimicifuga elata), a rare plant which occurs within or near the Baker Creek old-growth clearcut based on past survey information.

This, and several other stands with old-growth characteristics were proposed to be included in the reserves, both in 1994 and 2005 (Figure 4), but there was not faculty consensus to include them. Although the Baker Creek stand was not put into the "old growth reserves", it was classified as NRF habitat for the NSO (Figure 5) and had one historical NSO nest site. Understory thinning might have been used if needed to maintain or improve NRF; however, clearcutting destroyed key forest structures (described above) that enabled the stand to function as NRF habitat.

Figure 4. This map (file dated 2/27/2004) was prepared for the 2005 plan revision. These stands (including the Baker Creek old growth) have old-growth characteristics and were proposed for inclusion in the old-growth reserves, but there was not faculty consensus to include them.





Figure 5. Almost all of the Baker Creek harvest area was within nesting, roosting, and foraging (NRF) habitat for the northern spotted owl. The justification for cutting the old-growth area was that "Based on recent evidence of a decline in stand health, this harvest was intended to regenerate the stand into a timber-generating future condition" (Appendix 1). From an ecological sense, though, the stand was healthy. Yes, occasional trees die in old-growth forests; that is part of a natural process and is ecologically beneficial, especially to improve their use as NRF habitat. We found no major peril to the future of this stand (see Figure 6).

Thus, clearcutting the Baker Creek old-growth stand (Figures 7 and 8) was not consistent with (and is not permitted under) the 2005 McDonald-Dunn Plan.

2. Recent Clearcuts in the Structurally Diverse Complex Forest Area. Clearcuts have been completed during the last three years in the portion of the South Zone devoted to "Structurally Diverse Complex Forest for Multi-resource Outcomes" (Figures 9 to 12). Approximately 166 of the 257 acres harvested were in NRF. The NRF acres might have been available for light understory thinning if that would maintain NRF, but not for clearcutting. The acres outside of NRF would be available for harvest that met the zone goal to maintain or develop structurally complex forest, but not for clearcutting because the plan calls for "one- to four-acre group-selection harvests" to achieve diverse complex forest for multi-resource outcomes.

Beyond the impact of the acreage of NRF habitat that was cut, placement of the harvest units has fragmented the remaining NRF habitat, potentially decreasing its usefulness for late-successional species.

Thus, the 12 recent clearcuts in the South Zone managed under Theme #4, both inside and outside of NRF, are not consistent with (and are not permitted under) the 2005 McDonald-Dunn Plan.

A Climate-change Mitigation Strategy Would Protect NRF Forests

The harvest of NRF stands, especially the Baker Creek old-growth stand, also works against climate-change mitigation strategies advocated by former College of Forestry Dean Thomas Maness. Mature and old-growth forests in this region are world-renowned for their ability to store large amounts of carbon and their retention is the foundation of climate-change mitigation in forests. As Dean Maness argued in his 2009 article in the Journal of Forestry: "protection of the carbon stock in existing natural forest should be the central management objective related to carbon" (p. 119), "harvesting mature forests to replace them with fast growing stands is not a climate-change mitigation strategy" and "harvesting mature forests results in immediate large emissions that may take decades or even centuries to gain back" (p. 121).

In summary, the 13 clearcuts described here in the South Zone, which cover approximately 250 acres, damaged many important ecological resources, and work against climate-change mitigation. These clearcuts would not have occurred if the 2005 Forest Plan had been followed.



Figure 6. Orthophotographs of the Baker Creek clearcut area before harvest in 2008 and 2018. The 2018 image shows a few trees that died since 2008, but there is no evidence of wide-spread mortality. Dead trees (especially large ones) provide important wildlife habitat both while they are standing, and when they fall to the ground.



Figure 7. Baker Creek old-growth: Top and lower left: Old-growth trees in the remaining portion of the Baker Creek old-growth stand. Bottom right: the Baker Creek log aged 420-years-old ready to be loaded onto a log truck.



Figure 8. Baker Creek old-growth destruction.



Figure 9. Map of clearcuts completed between 2017 and 2019 in the South Zone that do not conform to the 2005 McDonald-Dunn Forest Plan. They include the Baker Creek old-growth harvest area, and stands within the structurally diverse, complex forest (within the green line) where harvest was limited to one- to four-acre group selection units. Under the 2005 Forest Plan, none of the stands should have been clearcut because either they were in NRF and/or structurally complex forest.



Figure 10. Orthophoto of clearcuts completed between 2017 and 2019 in the South Zone that do not conform to the 2005 McDonald-Dunn Forest Plan. (Note: some were clearcut after the orthophoto was taken.)



Figure 11. South Zone Harvest in stands designated as nesting, roosting, and foraging habitat for the northern spotted owl: Clearcutting is not allowed in these stands under the 2005 Forest Plan.



Figure 12. South Zone Harvest in stands designated as nesting, roosting, and foraging habitat for the northern spotted owl: Clearcutting is not allowed in these stands under the 2005 Forest Plan.

Discussion and Recommendations

Pressures for revenue from the College of Forestry's Research Forests are unrelenting. There is always a faculty member who needs seed money for some new research idea that will turn the scientific world on end, or needs funds to implement a new approach to teaching, or needs grant money for a trip around the world to visit other universities. Sometimes money is needed to fund a new building. Most monies that come into the College are restricted to certain uses. On the other hand, harvest revenues from the Research Forests are unrestricted--they can be used for any purpose that the Dean and the FEC think worthy. Thus, they are highly coveted. That will not change. Given the fiscal pressures, it is extremely important to have protective standards in forest plans to prevent the forests from being raided for revenue when the next crisis hits, and to have oversight and review to ensure that the standards are followed. Toward that end, we make a number of recommendations below.

The demand for funds should not jeopardize the integrity of the forest

"I realize that the College of Forestry needs the revenues from harvesting to support its teaching and research programs. The forest funds the College: that's the argument that we all keep hearing, over and over again. But there's a circularity to this repeated claim. The assumption seems to be that current teaching and research programs need to be funded at just the same rate forever—that all the research and teaching should be funded—that the purpose and value of these programs, as well as their quantity and cost, are simply given, unavailable for argument and review. As far as I'm concerned, everything is up for grabs. If we decide to fund fewer research projects, we can fund fewer research projects. Research shouldn't jeopardize the integrity of this forest. The revenue needed for programs shouldn't lead to harvesting that would undermine or compromise just those ecological values we ought to be teaching and researching."

-from Edge Effects by Chris Anderson, 1993.

The problems outlined in this report will not be solved by waiting for a new plan. Why wouldn't we expect the same disregard for a new plan, as we have seen in recent actions on the McDonald-Dunn Forest relative to the 2005 plan? The College first needs to prove that it can responsibly follow a forest plan--the one it has now.

Toward that end, the College should immediately take the following steps:

- Commit to following the 2005 McDonald-Dunn Forest Plan until a new plan is completed, including zone themes and guidance in that plan, augmented by the Dean Davis's important commitment in his 8/12/19 statement to protect trees over 160 years of age during this period.
- Add all of the candidate old-growth stands that were identified in 2004 to the reserves (see Figure 4).
- Create a working group to quickly develop guidelines for identifying trees over 160 years of age on the McDonald-Dunn, including Douglas-fir, grand fir, oak, madrone, maple, and yew. Test those guidelines over the next year as timber sales are developed and harvested; report on the performance of those guides.
- Hold a public meeting each year to describe the proposed forest management activities for the year and how they will meet the themes and guidance in the plan and the Dean's commitments. Also, put this information out on the McDonald-Dunn website and hold a public tour for those who wish to see the sites and discuss the proposed actions.
- Summarize and make public each year the actions that were undertaken over the previous year and how they reflect the themes and guidance in the forest plan. Hold a public tour each year to show people what has been accomplished.

In addition, the College needs to make sure that its managers and staff are committed to understanding and implementing the protection and restoration of the key ecological resources identified in the 2005 plan and the Dean's statement on 8/12/19. Forestry succeeds when managers have the flexibility to tailor their prescriptions to

the infinite variety of sites they encounter in the forest. However, that only works if the managers identify with the goals, themes, and guidance in the plan designed to achieve the mission set for the forest they manage.

The mission for the McDonald-Dunn Forest set 25-years ago still rings true today: to provide a biologically diverse and sustainable teaching, research and demonstration forest with a management focus. If managers of the McDonald-Dunn Forest see trees only as board feet, create tree farms whenever they harvest, and view old-growth conifers and hardwoods solely as obstacles to timber production, that mission will not be successful. Until Research Forest managers demonstrate they understand that the many ecological resources of the McDonald-Dunn Forest have value too, and manage forests in ways that reflect this perspective, the College of Forestry will not regain public trust.

Literature Cited

Anderson, C. 1993. Edge effects: Notes from an Oregon forest. University of Iowa Press, Iowa City. 185 pages.
Bettinger, P., D.L. Johnson, K.N. Johnson. 2003. Spatial forest plan development with ecological and economic goals. Ecological Modelling 169, 215-236.

- Davis, R. July 26, 2019. 'Majestic' Douglas fir stood for 420 years. Then Oregon State University foresters cut it down. The Oregonian.
- Johnson, D.L., K. N. Johnson, D.W. Hann. 2007. The importance of forest stand-level inventory to sustain multiple forest values in the presence of endangered species, in K.M. Reynolds, A.J. Thompson, M. Köhl, M.A. Shannon, D. Ray & K. Rennolls (Eds.) Sustainable forestry: from monitoring and modelling to knowledge management & policy science (pp. 238-256). Oxfordshire, UK: CABI.
- Legacy Oaks Task Force & Prairie Task Force. 2008. Restoring Oregon white oak and native prairie habitats in McDonald-Dunn forest. Available online at: https://cf.forestry.oregonstate.edu/sites/default/files/Oak-Prairie_recommendations_Mar3-2008.pdf 45 pages.
- Maness, T.C. 2019. Forest management and climate change mitigation: Good policy requires careful thought. Journal of Forestry (107)3, 119-124.
- OSU College of Forestry. 1994. McDonald-Dunn Research Forest plan: Guiding tomorrow's forestry through research, teaching, and demonstration. Pamphlet published by the College of Forestry and distributed to the public. 12 pages.
- OSU College of Forestry, 2000. McDonald Forest: South Zone habitat conservation plan, Draft. 41 pages.
- OSU College of Forestry, 2005. McDonald-Dunn Forest plan. Available online at: https://cf.forestry.oregonstate. edu/our-forests/mcdonald-dunn-forest-plan. 68 pages.



Tall bugbane (*Cimicifuga elata*) is a rare plant on the McDonald-Dunn Forest associated with old, moist forests. It is considered endangered by the Washington Natural Heritage Program (1997) and the Oregon Natural Heritage Information Center (ONHP 2001), and is a Species of Concern with the US Fish and Wildlife Service.



Baker Creek old-growth logs.

Appendix 1: Letter from Interim Dean Anthony Davis



Office of the Dean Oregon State University 109 Richardson Hall Corvallis, Oregon 97331

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7/12/2019

Dear College of Forestry Community,

The College of Forestry has significantly benefitted from the multiple-value management of the Oregon State University Research Forests. In addition to timber revenue, which has supported College faculty, staff, students and facilities, these research forests have been home to countless teaching, extension, research and community activities across many generations.

Multiple-value management plans have guided the operations of these forests for years. For example, the McDonald and Dunn Forests use the 2005 Forest Plan (which was developed by an interdisciplinary team within the College) as the basis for decision-making, although the plan was informally suspended in 2009 during the economic downturn. A new plan is under development, beginning with a comprehensive forestry inventory and a consultant-driven strategic process that incorporates all of the College's forests.

Recently, the College harvested a 15.6-acre unit within the McDonald Forest. The predominantly Douglas-fir stand had an origin date of 1759 with pre-harvest estimates indicating tree ages between 80 and 260 years. Based on recent evidence of a decline in stand health, this harvest was intended to regenerate the stand into a timber-generating future condition and included the retention of approximately six legacy trees per acre for habitat purposes.

While operating with the best of intentions and within the guidance of the 2005 Forest Plan, we made a mistake in carrying out this recent harvest. The harvest included trees with ages close to the origin of the stand and one that has been determined to be approximately 420 years old. Although harvest revenue supports critical College of Forestry operations, the future research and ecological benefit of these older trees should have been considered before the harvest was scheduled.

This harvest identifies a serious shortcoming in the College's current forest management practices. While the College maintains around 350 acres of mature reserves within its own forests that are intended to provide older stands for conservation, growth, study, monitoring change and aesthetics, we do not have guidelines for forest age class distributions outside of those reserve tracts.

The College will begin to address these matters immediately by enacting a preliminary suite of measures until the new comprehensive forest plan can address such matters more fully. This includes ceasing harvest of trees older than 160 years, an age identified as significant in the 2005 Forest Plan in the designation of reserve units.

On its own, this action is not enough to build an enduring, diverse, suite of tree age classes. As a result, I am directing the College's Research Forests team to immediately begin to develop actionable strategies to retain individual older trees and continue to broaden the age class distribution within the McDonald and Dunn forests. This increases the potential for these forests to grow large trees that are several centuries old. By doing so, we will expand our capacity for research across a more extensive array of age classes into the distant future.

With these changes, the College of Forestry will emerge with a management process that fosters the protection of current older trees and stands, as well as a plan to grow future old trees and forests. It is our responsibility to pass along to future generations a legacy of age classes that have been stewarded

effectively to date. This will lead to a diverse forest structure that will benefit the College's teaching, research, and extension missions, while also serving as a source of habitat, recreation and other non-timber uses embedded as part of a working forest landscape that also provides revenue to support the College.

This action will result in a reduction in timber revenue, however, it will also demonstrate our College's values and the balance we seek to achieve between timber revenue and the non-timber value of older trees and stands. To support this transition, we will begin a process that will explore the establishment of conservation easements to support the expansion of the College's forest reserve tracts. Adding non-timber revenue can be an essential source of funds that will allow us to continue to deliver transformative education, lifelong learning and informative research programs.

As I mentioned, our team already has been -- and will continue to work on -- updating the College's forest plan. This work will result in long-term guidance and an investment in operations that will continue to build on the College's already strong principles of transparency and engagement. To be clear, the immediate and unequivocal measures described here are preliminary, and will be in effect until a new forest plan is complete. This planning process will allow for appropriate consultation and engagement across varied expertise and stakeholder sectors. We also must continually assess and engage in dialogue around how our forests support the College's mission and research, teaching, extension activity, facilities and general financial support.

The core themes identified in the <u>2005 Forest Plan</u> still ring true today. Going forward, while aided by that plan, we have been presented with an opportunity to update our management practices to better align with our core values as we seek to continue to define the practice of contemporary sustainable forestry.

The research forests wide range of age classes across trees, stands and forests is a testament to past and present management practices. The deliberate articulation of our objectives for future forest conditions will only strengthen the College's ability to conduct vital research, transformative teaching, and effective outreach into the future.

In summary, I and the College's Research Forests team agree that harvesting this stand did not align with the College's values. Moving forward, we have learned from this matter. Within the College, OSU and the state of Oregon, we are fortunate to work and collaborate in an environment that promotes dialogue, listening, learning and progress. We embrace continuous improvement, and we are often able to do so by willingly assessing our impact and questioning the 'why' of our actions.

You can expect regular updates on next steps. As always, I am available for your questions and input.

Sincerely,

Anthony S. Davis, PhD

Interim Dean Oregon State University

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Forestry Executive Committee Signature Page

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Electative Assistant to the Dean

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