
Minutes

Board of Natural Resources Meeting

November 4, 2014
Natural Resources Building, Olympia, Washington

BOARD MEMBERS PRESENT

The Honorable Peter Goldmark, Washington State Commissioner of Public Lands

JT Austin, Designee for the Honorable Jay Inslee, Washington State Governor

The Honorable F. Lee Grose, Commissioner, Lewis County

Thomas H. DeLuca, Director, School of Environmental and Forest Sciences, University of Washington

Ron C. Mittelhammer, Interim Dean, College of Agricultural, Human, and Natural Resource Sciences,
Washington State University

The Honorable Randy Dorn, Superintendent of Public Instruction

1 CALL TO ORDER

2 Chair Goldmark called the meeting to order at 9:00 AM. All Board members introduced
3 themselves. Chair Goldmark noted there was a quorum for the meeting.

5 SAFETY REVIEW

6 Ms. Vansot gave a safety overview and instruction on evacuating the building in case of an
7 emergency.

9 APPROVAL OF MINUTES

10 Chair Goldmark called for approval of the minutes for the October 7, 2014 Regular Board of
11 Natural Resources Meeting.

13 MOTION: Dean Mittelhammer moved to approve the minutes.

15 SECOND: Director DeLuca seconded the motion.

17 ACTION: The motion was approved unanimously.

19 PUBLIC COMMENTS FOR TIMBER SALE ACTION ITEMS

20 No comments.

21
22
23

1 **TIMBER SALES (Action Item)**

2 **Proposed Timber Sales for December 2014| 3 handouts, including the presentation**

3 Tom Shay, Product Sales & Leasing Division

4
5 Mr. Shay presented the results of the October auctions to the Board. The Department offered 8
6 sales totaling 36.6 MMBF in October. All 8 sales sold totaling \$11.7 million for an average of
7 \$318 per MBF.

8
9 Mr. Shay noted that there was good interest from potential purchasers which produced good
10 prices.

11
12 The proposed December sales were then presented to the board.

13
14 Mr. Shay asked for approval of the proposed December sales.

15
16 **MOTION:** Commissioner Grose moved to approve the proposed December 2014 sales.

17
18 **SECOND:** Dean Mittelhammer seconded the motion.

19
20 **ACTION:** The motion was approved unanimously.

21
22 **PUBLIC COMMENTS FOR LAND TRANSACTION ACTION ITEMS**

23 No comments.

24
25 **LAND TRANSACTION (Action Items)**

26 **Crane Road Acquisition, File No. 08-091956, Resolution 1434**

27 Dave Gordon, Conservation, Recreation, and Transactions Division

28
29 Mr. Gordon presented the proposed acquisition for Crane Road in Thurston County. Crane Road
30 is 119.6 acres and is 1.5 miles South of Tenino. Edge-holding to South Puget Sound Region's
31 Crawford Mountain Landscape, retains forestland in timber production, and provides future
32 revenue for the Common School Trust.

33
34 Mr. Gordon stated that Crane Road is zoning RRR-5. It is largely Site Class II and 25-30 years
35 age class with a purchase price of \$450,000.

36
37 Mr. Gordon recommended approval of Resolution 1434.

38
39 **MOTION:** Commissioner Grose moved to approve Resolution 1434.

40
41 **SECOND:** Director DeLuca seconded the motion.

42
43 **ACTION:** The motion was approved unanimously.

44
45 **Green River 36 Trust Land Transfer, File No. 02-090365, Resolution 1435**

46 Bob Winslow, Property and Acquisition Specialist, Conservation, Recreation and Transactions
47 Division

1
2 Mr. Winslow presented the Green River 36 Trust Land Transfer (TLT) property located in King
3 County southeast of Auburn, Washington. This property is 77.56 acres in size, Common School
4 Trust and will be transferred to King County who owns the 922 acre Green River Natural Area
5 located immediately to the north of this parcel. The topography of this property is steep and over
6 75% of the property has slopes in excess of 35%.

7
8 Mr. Winslow explained that there is a trespass (barn) located in the southeast corner of the
9 property that King County is aware of and they are taking the property "As-Is" and working with
10 the adjacent landowner to resolve the trespass.

11
12 The total appraised value of this property is \$540,000 with the land valued at \$150,000
13 (\$1,934/acre) and the 1,451 MBF of timber valued at \$390,000. The timber value will be placed
14 into the Common School Construction Account and the land value will go into the Real Property
15 Replacement Account.

16
17 Mr. Winslow asked for approval of Resolution 1435.

18
19 MOTION: Director DeLuca moved to approve Resolution 1435.

20
21 SECOND: Ms. Austin seconded the motion.

22
23 ACTION: The motion was approved unanimously.

24
25 **Trust Land Transfer Program 2015-2017 Proposal**

26 Dave Gordon, Conservation, Recreation, and Transactions Division

27
28 Mr. Gordon presented the criteria for the selection of properties recommended for inclusion in
29 the Trust Land Transfer (TLT) proposal for the 2015-2017 biennium to the Board. The proposal
30 includes Conservation, Public Interest and Revenue, and Manageability.

31
32 The legislature provides funding for the transfer of the properties to designated public recipients.
33 The timber value is distributed to the Common School Construction Account and the land value
34 is distributed to the Real Property Replacement Account for future purchase of replacement
35 Common School trust lands.

36
37 Mr. Gordon explained that total TLT program appropriations from 1989 to the present are \$855
38 million dollars, and 117,000 acres have been transferred into conservation status through this
39 program. The Department's request for the FY 2015-2017 biennium is for an appropriation of
40 \$37,746,000 which will conserve an additional 8,690 acres.

41
42 Eight projects make up the Department's proposed 2015-2017 TLT list including the Teanaway,
43 Morning Star, Lake Cushman, Preston Ridge, Olympic View, South Lake Ozette, Glenrose and
44 Lake Spokane Campground projects. The list will be forwarded for consideration in the
45 Governor's budget.

1 The Department will prepare and present the individual projects that are legislatively approved
2 and funded to the Board for their consideration, formally authorizing each transaction to take
3 place throughout the biennium.

4
5 Mr. Gordon asked for approval of the Trust Land Transfer 2015-2017 Proposal.

6
7 MOTION: Director DeLuca moved to approve the TLT 2015-2017 Proposal.

8
9 SECOND: Dean Mittelhammer seconded the motion.

10
11 ACTION: The motion was approved unanimously.

12
13 **PUBLIC COMMENTS FOR AQUATIC LANDS HABITAT CONSERVATION PLAN**

14 No comments.

15
16 **AQUATIC LANDS HABITAT CONSERVATION PLAN**

17 Kristin Swenddal, Aquatic Resources Division Manager

18 David Palazzi, Aquatic Planning Program Manager

19
20 Mr. Palazzi presented the Board with information describing the basis for developing an HCP,
21 how it meets the Department's management guidelines under RCW 79105.030, and how it is
22 consistent with the Department's 2014-17 Strategic Plan. He stated that staff provided
23 information on the planning area, emphasizing that most of the potential impacts addressed in the
24 HCP occur in the near shore areas. The four focus areas of potential effects from the Department
25 authorized activities that are addressed in the HCP: alteration of habitat forming processes,
26 impacts to water and sediment quality, loss of physical habitat, and disturbance or displacement
27 of species.

28
29 Mr. Palazzi remarked that the time frame (2002-2014) and overview of the work involved were
30 reviewed, followed by an overview of the HCP Operating Conservation Program, covered
31 activities and covered species. He concluded with a summary of the proposed schedule going
32 forward to completion.

33
34 Board members were interested in DNR's interactions with WDFW, the length of time spent
35 working on the development of the HCP, clarification on what an Incidental Take Permit
36 actually was, and reiterated the importance of working with stakeholders.

37
38 **PUBLIC COMMENTS FOR HCP AMENDMENT – MARBLED MURRELET LONG-**
39 **TERM CONSERVATION STRATEGY**

40 Wyatt Golding with the Washington Forest Law Center, representing the OFCO, the Sierra Club,
41 and Seattle Audubon, thanked the Board for moving forward with the strategy in a thoughtful
42 manner. He stated that the HCP commits DNR to contribute to the recovery of the species.

43
44 Carolyn Bowie, volunteer with the Marbled Murrelet Survival Project and resident of Bellevue
45 and Western Washington, stated that she advocates for establishing and protecting the habitat
46 and old-growth. Ms. Bowie asked the Board to support the methods of the Science Team and the
47 population of the marbled murrelets.

1
2 Kara Whittaker, Staff Scientist and Policy Analyst with Washington Forest Law Center, stated
3 that the conservation community remains deeply concerned about the continuing decline of the
4 marbled murrelet populations and time is of the essence. She expressed that while recognizing
5 the importance of minimizing and mitigating for the incidental take of murrelets, this approach is
6 insufficient to meet the HCP objective of making a significant contribution to maintaining and
7 protecting marbled murrelet populations. Ms. Whittaker urged DNR and USFWS to evaluate an
8 alternative equivalent in principle and scope with alternative 4 proposed by the Conservation
9 Groups with regards to trust obligations.

10
11 Kim Brown read a letter from Marcy Golde with the Olympic Forest Coalition, expressing that
12 much of the habitat available to the murrelet is in the riparian management zone (RMZ). The
13 riparian buffers are long and narrow with lots of edge, inviting predation from crows, jays and
14 ravens; and many streams have buffers on both sides, and many more do not.

15
16 Kevin Schmelzlen, with the Marbled Murrelet Survival Program and small forest landowner in
17 Mason County, stated that he appreciates that action is being taken to implement a long term
18 conservation strategy for the marbled murrelet. The strategy is critical to the survival and
19 recovery of the marbled murrelet. Mr. Schmelzlen remarked that he believes that the state can
20 have a thriving timber industry while supporting the restoration forest ecosystems. He urged the
21 Board to use the recommendations of the Science Team Report in 2008.

22
23 Art Wang and Lloyd Feiterly with the Tahoma Audubon Society spoke next. Mr. Wang stated
24 that the trust has a responsibility to protect, preserve, and restore the habitat for the marbled
25 murrelet to avoid the decline. Mr. Feiterly added that he urged the Board to do the right thing
26 and be candid that this may cost money over time. The Common School Fund is extremely
27 important, but it has to be dealt with in connection with species recovery.

28
29 Susan North, Conservation Manager for the Seattle Audubon Society, thanked the Board for
30 making forward progress in the long-term conservation strategy. It is important to note that the
31 HCP commits DNR to minimize and mitigate for negative effects associated with incidental take,
32 and to contribute to the recovery of the marbled murrelet. Any long-term conservation strategy
33 framework considered must include mitigation for past mismanagement and lack of compliance
34 with the HCP. She expressed that the Seattle Audubon strongly supports the Science Team
35 Report in 2008.

36
37 Lois Ward, native Washingtonian, urged the Board to listen to all the experts and make decisions
38 that will preserve Washington State.

39
40 Peter Goldman, Director of the WFLC and Council for the Sierra Club, Seattle Audubon, and
41 OFCO, thanked DNR for developing the framework document for the long-term conservation
42 strategy for marbled murrelet. DNR's framework will hopefully provide a useful tool to measure
43 the potential conservation gains and cost of different long-term strategy alternatives. The
44 development of this framework does not include how the Board and DNR must develop the
45 various alternatives for the LTCS. Mr. Goldman urged the Board to develop a long-term
46 conservation strategy that reflects the 2008 Science Team Report, and not to dilute the
47 conservation strategy with fiduciary duties.

1
2 Linda Murtfeldt, citizen and volunteer with the Seattle Audubon, stated that the significant
3 contribution to maintaining and protecting marbled murrelet population requires forest
4 management that enhances population stability. The marbled murrelet management areas are
5 critical to the bird's recovery and should be preserved. The state needs to develop alternative
6 means for funding public education, and also compensate trust beneficiaries by working with
7 them to develop opportunities for income not tied to our state forest. The marbled murrelet
8 habitat comprises the old-growth forests of today and tomorrow.
9

10 Maria Ruth, author of a non-fiction Marbled Murrelet book, remarked her concerns for the
11 depredation of the marbled murrelet habitat and the forest buffers that protect them. The buffers,
12 when not called buffers, lose the ability to do their work. The analytical framework reduces the
13 ability of the buffers to buffer to protect the marbled murrelet habitat. DNR should mitigate for
14 every acre taken of marbled murrelet habitat. Ms. Ruth stated that this plan sets out to reduce
15 and minimize DNR's responsibility and ability to mitigate the take, and urged the board to
16 protect the buffer.
17

18 Shawn Cartwell, Regional Director for Defender of Wildlife in Washington State, stated that it is
19 important that the Board be actively involved and understand the process. Mr. Cartwell
20 expressed that this process is to meet the obligation of the Board on behalf of the state, to ensure
21 contribution to maintaining and protecting the marbled murrelet population. Mr. Cartwell
22 encouraged the Board to keep in mind their fiduciary responsibility. This process does not start
23 there, but starts with what is best for maintaining the population of marbled murrelet on state
24 trust lands.
25

26 Chair Goldmark called for a break and reconvened the Board of Natural Resources Meeting at
27 10:25 AM.
28

29 **HCP AMENDMENT – MARBLED MURRELET LONG-TERM CONSERVATION** 30 **STRATEGY**

31 Kyle Blum, Deputy Supervisor for State Uplands
32 Angus Brodie, Forest Resources Division Manager
33

34 Mr. Blum introduced the presentation, stating the purpose is to begin a series of presentations
35 that will lead up to a draft staff proposal from the DNR and US Fish and Wildlife Service which
36 will propose a set of alternatives. He reviewed the Need, Purpose and set of Objectives, as well
37 as the USFWS issuance criteria and requirements for habitat conservation plans.
38

39 Mr. Blum stated that the presentation provides information on the analytical framework that is a
40 tool the department proposes to use to analyze and develop alternatives. The analytical
41 framework is comprised of a set of assumptions that will be consistent across alternatives, and
42 will be used to quantify take and mitigation.
43

44 Mr. Blum explained that one of the first components in the analytical framework is the analysis
45 area, which will identify the state trust lands that will be included in the alternatives for the
46 conservation strategy. The analysis area includes DNR-managed lands within 55 miles of all
47 marine waters in western Washington (See map on slide 7). These lands are within the inland

1 range of the marbled murrelet for Washington State identified in the Northwest Forest Plan:
2 Status and Trend of Nesting Habitat for the Marbled Murrelet (2011).

3
4 Mr. Brodie gave an overview of a tool used to identify habitat, called “p-stage”. Determining a
5 tool to identify marbled murrelet habitat on state trust lands represents a second component to
6 the analytical framework. Habitat removal negatively impacts the marbled murrelet because it
7 removes places for murrelets to nest, and therefore is considered “take” under the Endangered
8 Species Act. In order to measure “take” on DNR-managed lands, DNR and USFWS needed a
9 method to measure marbled murrelet habitat. In addition, the agencies need a tool to identify
10 habitat beyond the places that have already been surveyed, as well as one to help identify places
11 to mitigate.

12
13 Mr. Brodie further remarked that DNR and USFWS elected to use “p-stage”, a habitat model that
14 uses stand characteristics, including platforms per acre, canopy layers, stand origin (naturally
15 regenerated vs. planted forest), forest type, to classify stands as non-habitat or as one of a series
16 of habitat-quality classes. Both agencies developed this habitat model as a part of the “Science
17 Team”, an interagency team that produced the report entitled, *Recommendations and Supporting
18 Analysis of Conservation Opportunities for the Marbled Murrelet Long-Term Conservation
19 Strategy* (Raphael, et al., 2008). The p-stage habitat model was chosen because unlike other
20 models, p-stage was peer reviewed as a part of the Science Team Report, projects habitat
21 development into the future, summarizes habitat down to the stand level, effectively utilizes
22 DNR’s forest inventory data and can be applied across all DNR-managed lands within the
23 analysis area.

24
25 Director DeLuca asked at what age range stands that are not habitat or p-stage 0.0 move into a p-
26 stage value of 0.25; and in the next 100 years will those stands become murrelet habitat without
27 some sort of a windthrow or disturbance event in the stand. Mr. Brodie explained that when
28 naturally regenerated stands of western hemlock and Sitka spruce reach the culmination of their
29 annual increment, somewhere in the 70-80 years of age, and for Douglas fir forests about 100-
30 120 years of age, they will be assigned a p-stage value of 0.25. We are not assigning p-stage
31 value to plantations, just stands that have naturally regenerated. Mr. Blum stated that within the
32 life of the HCP, you won’t see a stand that progresses from a p-stage value of 0.0 out to one of
33 the higher p-stage values like 0.89 because it takes more than 60 years (remained of the HCP) for
34 stands to progress through the p-stage classes. He added that because we know the forested
35 stands within occupied sites are occupied, the agencies decided to assign a value of 1.0 to all
36 occupied sites.

37
38 Mr. Blum noted that “areas of long-term forest cover” (LTFC), another component to the
39 analytical framework, includes places that DNR already sets aside for conservation objectives
40 within the range of the marbled murrelet. LTFC areas builds upon the concept of a multispecies
41 HCP by recognizing that many of the lands that are already set aside to fulfill one or more of the
42 strategies in the 1997 Trust Lands Habitat Conservation Plan (HCP) also provide forest
43 structures capable of supporting marbled murrelets (either currently or before 2067, the
44 expiration of the HCP). Examples of these areas include marbled murrelet occupied sites,
45 riparian management zones, natural area preserves and natural resource conservation areas.
46 Under this analytical framework, DNR will maintain these areas in a long-term forest cover
47 condition to benefit marbled murrelets, as well as other species covered by the HCP.

1
2 In contrast, DNR will conduct harvesting and other forest management activities in “managed
3 forest areas” located outside the LTFC areas. Harvesting often creates forest edges with altered
4 microclimates as well as increased potential for windthrow and nest predation. These edge
5 effects can degrade the quality of marbled murrelet habitat. To analyze the impact of these edges
6 and their effects on murrelet habitat in LTFC areas, LTFC areas are divided into three zones,
7 including: outer edge (0-50 meters adjacent to an edge), inner edge (51 to 100 meters adjacent to
8 an edge), and interior forest (forested stand greater than 100 meters from an edge).
9

10 Mr. Blum went on to speak about the next component of the analytical framework which is to
11 identify types of take. He summarized the definitions for “take” and “incidental take” under the
12 Endangered Species Act. The agencies have identified three categories: harvest take, edge
13 influenced take, and disturbance take. Of the three types of take, harvesting has the most
14 significant impact on marbled murrelets. Some areas within the managed forest have a p-stage
15 value, and therefore value as habitat. In order to estimate the total impact to marbled murrelets
16 that will occur from harvesting activities, we will multiply the total acres of managed forest in a
17 particular p-stage by their p-stage value. The result will be an acreage that accounts for the
18 variation in the quality of marbled murrelet habitat and will provide the total acres of harvest
19 take (See Slide 25).
20

21 Mr. Blum stated that edge influenced take is the second category of take. The analytical
22 framework quantifies the effect of managed-forest edges on habitat in the inner and outer edges
23 of LTFC areas. These edge effects can degrade the quality of marbled murrelet habitat by
24 changing microclimate within habitat, increasing nest predation and increasing windthrow
25 potential. These effects diminish over time as those harvested areas regenerate. In order to
26 account for changes in edge contrast over time, USFWS and DNR grouped edges into three
27 types: hard, soft and no edge.
28

- 29 - Hard edge is defined as a managed forest area with tree heights less than 40 feet adjacent
30 to LTFC areas. In hard edge conditions all of the edge effects, including altered
31 microclimate and increased potential for windthrow and predation, are present.
32
- 33 - Soft edge forests represent forests with tree heights between 40 to 80 feet. With soft edge
34 there is no understory; therefore there will be minimal to no predation. Microclimate and
35 windthrow effects are diminished, but still present.
36
- 37 - No edge forests refer to stands with tree heights at least 80 feet tall in a managed
38 environment adjacent to LTFC areas. There is no take assessed for predation,
39 microclimate and windthrow effects in a no edge environment.
40

41 Mr. Blum went on to describe the distribution of DNR-managed lands across edge types. The
42 department conducted a preliminary analysis, subject to change, on the edge conditions of forests
43 adjacent to LTFC areas. The analysis shows the distribution of DNR managed lands across each
44 edge type within the range of the analysis area. This analysis showed that 26% of DNR managed
45 lands are hard edge forests, 36% are soft edge forests, and 38% are no edge forests.
46

1 Mr. Blum stated since DNR will conduct harvests and other forest management activities
2 adjacent to LTFC areas, USFWS and DNR developed a calculation to recognize the decrease in
3 habitat function that will occur in habitat adjacent to hard edge forests due to changes in
4 microclimate conditions and an increase windthrow potential. Mr. Blum added that to determine
5 that decrease the agencies developed a discount based on research in the paper *Relating*
6 *Microclimate to Epiphyte Availability: Edge Effects on Nesting Habitat Availability for the*
7 *Marbled Murrelet* (Van Rooyen, et al. 2011), which provides the best source for estimating
8 microclimate effects on murrelet habitat. The study found reduced platform tree density in
9 habitat within 50 m of hard edges relative to interior forest at least 150 m from the edge. In fact,
10 Van Rooyen et al., found platform tree densities of 3.76 per hectare in habitat adjacent to hard
11 edge vs. 15.70 in habitat within interior forests.

12
13 Mr. Blum explained how to calculate the microclimate and windthrow effect discount. We
14 divide 3.76/15.70 to get 25%; i.e., platform trees in hard edges were 25% as dense as in interior
15 forests. Therefore we assume that platform abundance for DNR-managed lands in the outer
16 edges of LTFC, adjacent to hard edge forests, is reduced by 75%.

17
18 Mr. Blum stated for the predation effect discount the agencies again followed assumptions of the
19 Science Team. These were based on a comprehensive literature review (McShane et al. 2004)
20 that proposed rates of “low” and “high” nest success to reflect: 1) observations of reduced
21 murrelet nest success adjacent to hard edge forests relative to nests further into the interior, 2)
22 observations of actual predation on murrelet nests by edge-associated predators, and 3) artificial
23 nest studies that found a consistent pattern of edge-associated predation. This pattern appears due
24 to the attraction of generalist predators to the abundant berries and insects in young, regenerating
25 forests that create hard edges, and the consequent increase in incidental predation on murrelet
26 nests.

27
28 To calculate predation effect discount we divide 38%/55% = 69%. Therefore we assume that
29 platform abundance for DNR-managed lands in the outer edges of LTFC, adjacent to hard edges,
30 is reduced by 69% due to increased predation effects.

31
32 To compound these effects together (microclimate and windthrow with predation), we multiply
33 25% (microclimate and windthrow discount) by 69% (predation discount) to equal 17%. DNR
34 and USFWS estimate that habitat quality, in DNR-managed lands in the outer edges of LTFC,
35 adjacent to hard edges, is reduced by 83% due to microclimate changes, windthrow risk and
36 increase predation, due to the effects created by hard edge forests.

37
38 Mr. Blum remarked that over time, harvested forest stands adjacent to areas of LTFC will
39 develop into soft edge forests. Soft edge forests continue to degrade adjacent murrelet habitat
40 due to microclimate and windthrow effects, not predation. This is because as the hard edge
41 forests grow into soft edge forests, the initial growth of berries and insects that attracted
42 predators dies out as the canopy of the developing soft edge forest closes. Malt and Lank (2007,
43 2009) found less predation on artificial nests near soft edges than in interior forests.

44
45 To estimate the decrease in habitat quality adjacent to soft edge forests, both agencies looked
46 again to Van Rooyen et al. This study reports 16.02 platform tree densities for habitat adjacent
47 to soft edges forest vs. 26.80 platform tree densities for habitat in interior forest conditions. To

1 calculate the microclimate and windthrow effect on habitat adjacent to soft edge forests, we
2 divide 16.02/26.80 to get 60%. Platform trees in soft edges were 60% as dense as in interior
3 forests. Therefore DNR and USFWS estimate that platform abundance, and thereby habitat
4 quality in DNR-managed lands in the outer edges of LTFC adjacent to soft edges, is reduced by
5 40% due to microclimate changes and windthrow risk.

6
7 He stated there is no discount incorporated into the analytical framework for DNR-managed
8 lands within the outer edges of LTFC that are adjacent to “no-edge” forests - those that are at
9 least 80’ tall that do not create edge effects.

10
11 Incorporating the proportion of DNR lands in the three forest edge type categories with their
12 respective discounts for microclimate, windthrow and predation, the agencies assume that DNR-
13 managed lands in the outer edges of LTFC areas will receive a 36% discount due to edge effects
14 (see slides 42 and 43 for examples).

15
16 Mr. Blum stated that DNR and USFWS assume that the edge effects that impact the outer edges
17 of LTFC areas extend further into the forests and established the inner edge zone in order to
18 quantify that reduction in habitat function. To calculate the discount, the agencies assumed that
19 the nest success and platform abundance in the inner edge of LTFC areas would be half of the
20 values that were applied in the outer edge. Therefore DNR and USFWS estimate that habitat
21 quality in DNR-managed lands in the inner edges adjacent to hard edge forests is reduced by
22 41.5%, and the habitat quality for those lands in the inner edges adjacent to soft edge forests is
23 reduced by 20%.

24
25 In incorporating the proportion of DNR lands in each of the three forest edge type categories
26 with their respective discounts for microclimate, windthrow and predation, the agencies assume
27 that DNR-managed lands in the inner edges of LTFC areas will receive an 18% discount due to
28 edge effects (see slides 45 and 46 for examples).

29
30 Mr. Blum explained that the third major category of take is disturbance take. Disturbance take
31 can be defined as effects to murrelets that may occur from actions that generate loud noises and
32 activity in close proximity to nesting murrelets, resulting in a potential disruption of murrelet
33 breeding and nesting behaviors. These activities are classified by the type of disturbance
34 according to USFWS methods: ground-based visual and noise, aircraft, and impulsive noise. The
35 calculations for disturbance take are still underway and will be presented at a future presentation.

36
37 Mr. Blum ended the presentation with the last piece of the analytical framework that addresses
38 mitigation. The agencies calculate the value of mitigation by using the p-stage model to project
39 habitat development into the future. Mitigation credit is determined as the difference between
40 future habitat value and the baseline acres, or today’s value. We also had to factor in when the
41 habitat come online. The time it takes for forested stands to become habitat matters because
42 habitat that is available in the first decade will provide habitat to the marbled murrelet for the rest
43 of the life of the HCP. However, when habitat comes online in the fourth or fifth decade it only
44 provides habitat to the murrelet for 10-20 years. The mitigation is then weighted to give more
45 value to habitat in the earlier decades.

1 Dean Mittelhammer stated that he was thinking back about some of the comments that were
2 made before we had this presentation, and at a high level he would like to summarize a few
3 things about the comments. Dean Mittelhammer stated that there was a comment made to let us
4 know to pay attention to differential impacts and the fact that not all habitat is created equal.
5 Dean Mittelhammer stated we are doing exactly that. Another comment was made that we
6 should have a baseline to make adjustments from to find out what the effects are. Dean
7 Mittelhammer stated we are doing that. There was a comment made that wanted to make sure the
8 department was grounding the MMLTCS in science. Dean Mittelhammer stated we are doing
9 that. He also said that the process the department has undertaken to develop this framework is
10 one that is very thorough and rigorous. The department has grounded the assumptions that were
11 made in scientific work, and has referenced that work.

12
13 JT Austin stated that she appreciates the folks that have contacted her office with questions and
14 concerns, and shared how helpful DNR staff has been to respond and help the conversation
15 evolve.

16
17 Commissioner Goldmark stated that he appreciates the time and effort that staff has put into
18 developing this rigorous analytical framework to help the Board make a science based decision.

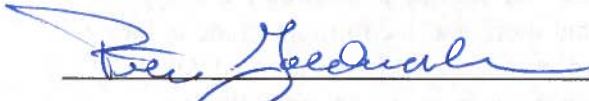
19
20 Mr. Blum remarked at an upcoming board meeting more information will be provided about the
21 analytical framework on disturbance take, biological consequences and baseline acres. Following
22 the analytical framework will be a draft staff proposal from the DNR and US Fish and Wildlife
23 Service proposing a set of alternatives.

24
25 **PUBLIC COMMENTS FOR GENERAL ITEMS OF INTEREST**

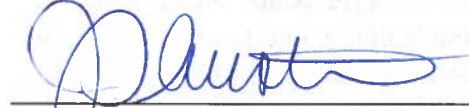
26 Gordon Baxter with the Washington Harvesters Association commented on the draft Geoduck
27 License Rule. Mr. Baxter stated that he would like to see a resolution that we can all get behind,
28 and added that they do not support the report as written.

29
30
31 Meeting adjourned at 11:54 AM

Approved this 2nd day of December, 2014



Peter Goldmark, Washington State Commissioner of Public Lands



JT Austin, Designee for Governor Jay Inslee



Randy Dorn, Superintendent of Public Instruction



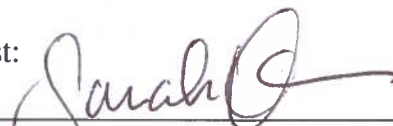
F. Lee Grose, Commissioner, Lewis County

absent

Ron Mittelhammer, Interim Dean, College of Agricultural, Human, and Natural Resource Sciences,
Washington State University



Thomas H. DeLuca, Director, School of Environmental and Forest Sciences,
University of Washington

Attest: 

Sarah Vansot, Board Coordinator