




MEMORANDUM

April 30, 2015

TO: TFW Policy Committee

FROM: Chris Hanlon-Meyer, Forest Practices Division Manager 

SUBJECT: DNR Response to TFW Policy Recommendations to Forest Practices Board on Unstable Slopes

This document outlines Washington Department of Natural Resources response (see bold text below each section) to recommendations from the Timber, Fish, & Wildlife Policy Committee (TFW Policy) to the Forest Practices Board's motions from their May 2014 meeting.

1. Board Motion

Dave Somers moved the Forest Practices Board direct the Adaptive Management Program to prioritize the mass wasting work as follows:

1. Complete the process review related recommendations resulting from the Mass Wasting Effectiveness study, including potential threats to public safety, and report to the Board at the August meeting.

1.2 Findings

A. A brief overview of previous work related to this motion:

1. In response to the Mass Wasting Effectiveness Monitoring Report, TFW Policy recommended to the Forest Practices Board (Board) in February 2014 that the Forest Practices Application (FPA) process be reviewed. The Department of Natural Resources (DNR) documented the FPA review process through:

- i. Presentations given to TFW stakeholders in August 2013 outlining DNR's screening process for FPAs containing potentially unstable slopes and how DNR's science team reviews FPAs with unstable slopes;
- ii. Flowcharts outlining DNR's process to review FPAs, posted at

<http://www.dnr.wa.gov/businesspermits/forestpractices/Pages/Home.aspx>, and a

- iii. Memo, dated June 13, 2014, from DNR's Forest Practices Division Manager outlining guidance related to DNR's process of reviewing FPAs.

2. In their May 2014 motion, the Board directed TFW Policy to finish the FPA process review steps that Policy had initially recommended be completed in its February recommendations to the Board;

B. TFW Policy reached agreement the level of documentation and transparency in the

process used to avoid harvest on unstable slopes could be improved by changes to the Forest Practices Application (FPA) form. DNR concurred, developed and implemented a new form titled, Slope Stability Information Form, to be completed by landowners and included with their FPAs;

- C. TFW Policy agrees the June 13, 2014 memo provides direction to DNR staff regarding: assuring landowner inclusion of the new form with their FPA, DNR ability to request additional geologic information, and how to identify public safety risks;
- D. At this point in time, TFW Policy has no additional comments on the FPA review process for DNR's consideration, with the exception of the ongoing Board Manual review topics;
- E. TFW Policy recognizes the need for adequate time to review DNR's revised Board Manual Section 16 and draft rule language, in the context of the FPA review process (DNR's flowchart); and
- F. TFW Policy sees value in caucuses providing input to DNR on development of Board Manual sections.

1.3 Outstanding Issues

- A. There are two remaining process concerns expressed by some caucuses that relate to both public safety and public resources. These include the delineation of ground water recharge areas associated with glacial deep seated landslides (GDSLs) and the evaluation of delivery potential associated with all landslide types. TFW Policy recognizes that DNR is in the process of a Board Manual revision that may address the concerns related to delineation. TFW Policy also recognizes that DNR intends to complete additional Board Manual revisions that may address the deliverability concerns. Until that work is completed, TFW Policy cannot agree that these changes will address all caucuses concerns.

DNR is holding BM 16 Stakeholder meetings over the late winter and spring of 2015 and will propose BM 16 approval at the August 2015 FPB meeting.

1.4 Recommendations

- A. With the exception of the remaining concerns related to the delineation of ground water recharge areas (GWRAs) related to GDSLs and deliverability, TFW Policy does not have any additional recommendations related to the FPA review process, beyond those already made and responded to resulting from the Mass Wasting Effectiveness study, including potential threats to public safety specific to the implementation of the Forest Practices rules.

There is no more for DNR to do in response to Policy's look at the Mass wasting Effectiveness Study and DNR's FPA review process.

- B. TFW Policy does not at this time know the Board's decision on the final rule or Board Manual Section 16. Based on individual caucuses' reviews of the rule and Board Manual, Policy could make recommendations on the FPA review process based on the revised rule

and Board Manual.

- C. When future rules are enacted that affect the FPA review process regarding unstable slopes and landforms, Policy recommends that DNR update the flowchart to reflect those changes.

While the rule change does pertain to unstable slopes review, it affects the determination of appropriate FPA class rather than full FPA review. The flow charts begin at the point in the process after the determination that the application is complete and a decision on the classification.

2.0 Board Motion

In addition, make recommendations related to:

- *Identification of potential gaps in information about location of glacial deep seated landslides and recommend measures to close gaps.*

2.1 Findings

- A. There is a wide range of information sources that can be used to help identify the location of GDSLs (Appendix A).
 1. The majority of the areas subject to GDSLs have adequate LiDAR coverage to help identify the location of GDSLs and have been identified on the 'Existing LiDAR Coverage and Mapping of Potential DSLs in Glacial Material' map (see attached map).
- B. The use and availability of these information sources varies widely.
- C. DNR also utilizes these information sources to ensure that landowners are identifying GDSLs when proposing a forest practice.
- D. Access to these information sources may be challenging for some landowners and external reviewers (specifically, historic aerial photos).
- E. Regional and project-specific mapping of glacial deep seated landslides is highly variable in terms of scope, accuracy, and precision, and varies widely in its accessibility.

2.2 Recommendations

- A. TFW Policy recommends that the following be included in the Board Manual revision:
 1. Listing existing information sources that can be helpful in identifying glacial deep seated landslides and their associated groundwater recharge areas (i.e., list of information sources (Appendix A)),

DNR will incorporate in BM 16; UPSAG's expanded literature review as well as their identification and assessment of current tools and approaches used in the field, may further inform BM 16 work.

2. Guidance to landowners on the need for soliciting advice from Qualified Experts

DNR will incorporate in BM 16

3. Outlining the DNR review process for ensuring that GDSLs are identified so that landowners and external reviewers clearly understand the process and the expectations for exchange of information.

As approved, the current Board Manual Section 16 provides a description of how glacial deep seated landslides are to be identified.

- B. TFW Policy recommends that the quantity and quality of LiDAR coverage in areas that have potential GDSLs be considered when prioritizing acquisition of LiDAR coverage.

When/If DNR is appropriated funds to collect additional LiDAR data, this consideration will be included during prioritization of acquisition however risk to people will be the highest priority.

- C. TFW Policy recommends that DNR track data from new FPAs that disclose how features are being identified and report back to TFW Policy and the Forest Practices Board after a year of implementation.

Features are being identified per WAC 222-16-050(1)(d) - the informational form will collect what type of features the landowner has identified. DNR is unsure of the value or purpose of this recommendation given the diversion that it would create away from normal core work. FPARS reviewers can screen for this information through their user profiles.

- D. TFW Policy recommends that policies regarding access of stereo air photos from state agencies be reviewed to accommodate agency, landowner, and public needs to access these resources to assist in identifying glacial deep seated landslides and their history.

Our Aerial Photography is no longer available through the WA State Department of Transportation. For more information and instructions about ordering our Aerial Photos, please visit our Resource Aerial Photography Page:

http://www.dnr.wa.gov/BusinessPermits/Topics/Maps/Pages/resource_aerial_photography.aspx

This DNR site offers aerial photos (allowing stereo viewing).

- E. TFW Policy recommends the following related to mapping of GDSLs:
 - 1. DNR's Division of Geology and Earth Resources (DGER) identify the existing sources of mapping of glacial deep seated landslides and also identify how they can be accessed and provide a concise summary of how they were identified and their relative precision and accuracy, and provide to TFW Policy.

Assessing the type, quality, accuracy and organization of geologic data provided by DNR's geology data portal is a planned result of the DNR's Landslide Hazard and LiDAR budget request. DNR is proposing to map landslides systematically and consistently rather than just compiling existing data.

- 2. Following this first step, UPSAG make recommendations to TFW Policy regarding how this information may be aggregated and by whom.

This is a recommendation to UPSAG rather than DNR.

- 3. After these have been completed, TFW Policy may use this information to help prioritize any additional mapping needs and make recommendations as to the process for completing that mapping.
- F. TFW Policy recommends that the Board encourage the Legislature to adequately fund the small forest landowner office.
- G. Additional training.
 - 1. Qualified experts have historically self-convened to hold informal training and dialogue sessions with their peers on relevant topics related to forest practices. It is recommended that DNR convene a more structured training and dialogue session with Qualified Experts to review the revised Board Manual 16 and other

appropriate topics.

DNR assembled and trained Qualified Experts in mid-February 2015.

2. In addition to providing an opportunity for the Qualified Experts to get together, DNR should continue to convene training for both landowners and forest practice foresters related to the Board Manual revisions and GDSLs/GWRAs. In addition to DNR science team staff, TFW Policy recommends including a range of qualified experts or others as presenters.

Once Board Manual Section 16 is updated, DNR will redevelop and continue to offer unstable slopes training twice per year. DNR geologists will develop and present an overview of the Board Manual Section 16 updates to the TFW Stakeholder meetings once the update is completed. In addition, DNR will reinitiate annual QE round-ups to allow QEs to discuss current issues, practices and new science.

- H. TFW Policy recommends that DNR host a central repository for unstable slopes information sources (i.e., DGER).

Depending on the scope of this recommendation, DNR would need additional funding and FTEs in order to maintain a system that captures all data pertinent to unstable slope assessment. Scanning reports and documents submitted to DNR and making them available in a systematic way would require additional funding. A system that reflects the data and findings would require a substantial effort. DNR will consider asking for funding to scan GT reports associated with approved FPAs and entering them into the DGER database.

1. TFW Policy further recommends to the Board that this information should be shared with local, state, tribal, and federal governments for future policy decisions.

DNR would provide this information via the DNR external website.

- I. TFW Policy recommends the processes and responsibility for updating information sources should be done or assigned by DNR.

The DNR Landslide Hazard/LiDAR budget request will fund a review of the current information and develop more accurate inventory and hazard assessment information.

- J. TFW Policy recommends DNR collect and track data improvements to the dataset and information on where GDSLs/GWRAs are and what techniques are used to identify the features, which would be done at the time of the re-development of FPARS.

The DNR Division of Geology and Earth Resources budget request will create the capacity to identify and maintain updates on the location of GDSL's/GWRAs. Board Manual Section 16 provides a list of and guidance on techniques used to identify features. DNR Forest Practices will continue to pursue funding to complete the updates to FPARS.

3.0 Board Motion

- *Evaluation of existing mitigation measures under current rule pertaining to groundwater recharge areas associated with glacial deep seated landslides.*

3.1 Findings

- A. Site-specific mitigation measures are not specifically outlined in rule; however there is a process in the rule that leads to development of mitigation measures, often referred to as prescriptions.

1. Under current rule, if forest practice activities (e.g., construction or harvest) are proposed on a potentially unstable slope that has the potential to deliver to a public resources or threaten public safety and meets the definition of WAC 222-16-050(1)(d), it requires an analysis to be completed from WAC 222-10-030(1) and (2). Any mitigation must meet WAC 222-10-030(4).
 2. WAC 222-10-030(4) requires that “specific mitigation measures or conditions must be designed to avoid accelerating rates and magnitudes of mass wasting that could deliver sediment or debris to a public resource or could deliver sediment or debris in a manner that would threaten public safety.”
- B. Policy reviewed 42 FPAs to evaluate specific mitigation measures (see Appendix B for detailed breakdowns).
1. Twelve of these avoided any activity on the GWRA and associated GDSL.
 2. For 6, the geologist determined that the feature was not a GDSL.
 3. Twenty-four of these identified specific prescriptions for operations.
 - i. Thirteen limited regeneration harvests spatially or temporally.
 - ii. 6 limited to partial harvests.
 - iii. 2 were limited to salvage operations¹.
 - iv. 3 contained other site specific mitigations.
- C. Of the 42 FPAs reviewed by the technical subgroup of TFW Policy, 4 identified specific public safety risks. 2 All Class IV Special FPAs require a SEPA analysis that includes an evaluation of public safety risk.³
- D. The rationales provided in the mitigation measures applied for the 24 FPAs are summarized below (does not equal 24 since multiple rationales were identified in many cases):
1. Slide activity (inactive, relic, ancient, and dormant) for 18 FPAs.
 2. Small size of feature or small scale activity for 13 FPAs.
 3. Some form of hydrological analysis for 11 FPAs.
- E. Summary of Watershed Analysis prescriptions:
1. Few Washington prescriptions target GDSLs or GWRA.
 2. All focus on mitigating increases in water input.
 3. Generally, no harvest or roads allowed on active landslides.
 4. In parts of Washington, harvest was limited to part of GWRA.
 5. Road drainage diversion in GWRA commonly addressed.
- F. TFW Policy found that there was a range of field interpretation between GDSLs and deep-seated landslides in glacial sediment that had to be worked out in the review process.
- G. Findings unrelated to specific Board Motions that were highlighted during TFW Policy deliberations on this topic:
1. DNR currently convenes trainings for implementing the unstable slopes rules and Board Manual.
 2. TFW Policy recommended in the outcome of the Mass Wasting Effectiveness Monitoring Report that forest practices associated with unstable slopes be

incorporated into the formal compliance monitoring program.

DNR is considering including a special emphasis sample in the 2016-17 compliance monitoring program plan.

3. This analysis identified a range of prescriptions and justifications and provided some general trends in the approaches used. While TFW Policy could not evaluate the level of justification relative to the specific site conditions and associated prescriptions, these FPAs went through the DNR review, classification, and ultimately approval.

3.2 Outstanding Issues

1. The analysis did not include an evaluation of the effectiveness of the mitigations nor the strength of the scientific rationale for the prescriptions.
2. The mitigation measures analysis did not include review of documentation regarding decisions by DNR about how they made approvals, nor did it include SEPA documents.
3. During the FPA analysis, questions were raised about distinguishing between glacial deep-seated landslides and deep-seated landslides in glacial materials.

3.3 Recommendations

1. TFW Policy recommends that UPSAG/CMER consider doing a periodic retrospective review of FPAs associated with GDSDLs and associated GWRAs.
2. Within FPARS, have accessible the FPA, related SEPA documentation for any Class IV Special, and DNR documentation of the FPA and SEPA decisions. When DNR re-develops the online Forest Practices Application Review System (FPARS), TFW Policy recommends that DNR consider the file capacity so more data can be electronically stored for each FPA. Currently, all SEPA information is available upon request if not already electronically available in FPARS.

DNR maintains a SEPA Center webpage which provides all SEPA documents for all current SEPA project actions (for FPAs, the SEPA documents are indexed using the FPA number. Forest Practices will add a DNR SEPA Center page link to the FPARS page. The FPARS function that is proposed above would be duplicative to that provided by the DNR SEPA Center. The process to provide SEPA documents is best conducted by the SEPA Center while FPA documents and processing is best conducted by the forest practices program.

