



## MEMORANDUM

August 25, 2014

TO: Forest Practices Board

FROM: Marc Engel, Forest Practices Assistant Division Manager,  
Policy and Services

A handwritten signature in blue ink, appearing to be 'ME', is placed over the name 'Marc Engel' in the 'FROM' field.

SUBJECT: Staff Update to the Forest Practices Board on May, 2014 Board Motions on Mass-Wasting

At your September 4<sup>th</sup>, 2014 meeting, the Department of Natural Resources (DNR) will present an update on the completion of the May 2014 Board Motions regarding rule making, Board Manual development, LiDAR; and the status of the Commissioner of Public Land's request for Attorney General Office legal opinion on the ability for the Forest Practices Board to impose a moratorium on forest practices on or near glacial deep-seated landslides or their associated groundwater recharge areas.

### **CR-101**

Staff has filed, in May, a CR-101 *Pre-proposal Statement of Inquiry* indicating the Board's intention for a rule making to amend DNR's authority to require information needed to appropriately classify a forest practices application (FPA) where the presence of a potentially unstable slope may threaten public safety.

### **Rule Language Development**

This rule making will provide DNR the ability to request landowners to provide additional information when needed to allow DNR to classify their FPA. Staff has initiated the preparation of all needed documents to present to the Board for rule making including the preparation of draft rule language, the gathering of information and drafting of the Cost Benefit Analysis and the Small Business Economic Impact Statement. Completion of these documents is necessary under the Administrative Procedures Act (Chapter 34.05 RCW) and the Regulatory Fairness Act (Chapter 19.85 RCW) for the Board to direct staff to file a CR-102 and initiate formal rule making.

### Full Review Process

DNR is not required to initiate an adaptive management program review for this administrative rule making to clarify DNR's authority to request additional information. By tradition, however, DNR plans on contacting the Policy Caucus leads to assemble and convene a stakeholder meeting in late September to review the draft rule language. This will add an additional time

commitment to stakeholders in meeting preparation for, and attendance of, at least one meeting. This will also require additional time for DNR staff to address potential questions regarding the draft rule language.

### Expedited Review Process

In order to reduce stakeholder time requirements and to expedite completion of other requested Mass-Wasting work, the Board may direct staff to omit the initial stakeholder review and complete and submit all required documents to the Board for their review and consideration to initiate formal rule making at their November meeting. This process provides stakeholder and public review of the proposed rules in a compressed timeframe occurring during the formal public comment period beginning 20-days after the publishing of the rule documents (the CR 102) in the Washington State Register and ending approximately one month before the Boards February 2015 meeting.

### **Board Manual Development**

DNR has initiated the following strategies to complete both phases of the Board's motion in an effort to prepare comprehensive guidance for both the field practitioner and Qualified Experts in their review of potential glacial deep-seated landslides and potential associated groundwater recharge areas. The motion requested board manual development in two phases, for the second phase, DNR will provide a full stakeholder review of the amended board manual guidance to assess the delivery potential of glacial deep seated landslides before presenting it to the Board for approval.

### First Phase

DNR staff has convened a panel of qualified experts to address the first phase of the Board's motion to review and amend guidance specific to the identification and delineation of ground water recharge areas in Board Manual Section 16, *Guidelines for Evaluating Potentially Unstable Slopes and Landforms*. The panel members include: Tom Badger, Washington Licensed Engineering Geologist, Washington Department of Transportation; Adam Booth, Ph.D., Professor, Portland State University; Jon Einarsen, Ph.D., Washington Licensed Engineering Geologist, Washington Qualified Expert, Zipper Geo Associates; Andy Gendaszek, Washington Licensed Geologist, U.S. Geological Survey; Dave Parks, Washington Licensed Engineering Geologist and Licensed Hydrogeologist, DNR Forest Practices Science Team; and, Susan Shaw, Ph.D., Washington Licensed Engineering Geologist, Washington Qualified Expert, Oregon Registered Geologist, Weyerhaeuser Company.

DNR asked the panel to take a multiple step approach to complete amended board manual guidance specific to the identification and delineation of ground water recharge areas associated with glacial deep seated landslides. First, the panel prepared a list of relevant scientific literature for inclusion in an unstable slopes board manual section glossary. The panel then rearranged the order and added additional parts to the existing board manual section into an outline framework to provide field practitioners and Qualified Experts a consistent process to identify, review and evaluate all potentially unstable slopes and landforms, see draft table of contents in Attachment 1.

In the next step, and due to the compressed timelines for completion of the manual section, each panel member was asked to prepare and submit text to DNR for specific parts of the manual. This assignment was completed on their time, within their fields of expertise, and using the

panel's assembled current science. DNR then incorporated the prepared materials into a draft document that the panel as a whole is editing and completing. To date, in addition to independent material preparation time, the panel has met for five full-day meetings to review, edit for clarity and approve prepared text to assure current science and best practices to identify, describe and classify glacial deep-seated landslides and methods to identify and delineate associated ground water recharge areas are incorporated into the Board Manual. It is anticipated the panel will complete their work after three additional full-day meetings ending in mid- September. DNR staff will present the amended section of the manual representing their work to the Board for review and approval at their November meeting.

### Second Phase

After the panel of qualified experts has concluded their work on phase one, DNR will share the amended section with the TFW Policy Committee (Policy) and DNR regional forest practices staff. DNR will then work the Policy leads to assemble qualified experts to allow DNR to initiate the second phase of board manual development. In this phase DNR will work with stakeholders to review and amend the board manual guidance to assess the delivery potential of glacial deep seated landslides.

### Full Review Process

By tradition, DNR presents to Policy, for approval and support, all board manual sections developed for forest practices rules designed to protect aquatic resources. This is in addition to inclusion of Policy caucus nominated participants in DNR assembled stakeholder groups to develop sections of the board manual.

DNR has, in accordance to the Board's motion, assembled qualified experts with expertise in ground water recharge on glacial deep-seated landslides in the development of the first phase of the manual. Because this group is preparing completed guidance specific to the identification and delineation of ground water recharge areas associated with glacial deep-seated landslides, DNR does not intend to initiate Policy review. DNR will submit the amended draft Section 16 of the Board Manual to the Board for review and approval at their November meeting.

DNR plans to contact the Policy Caucus leads, in mid-September, to assemble and convene a stakeholder group for preparation of guidance to assess the delivery potential of glacial deep seated landslides (phase two). The stakeholder group will need to closely work with the Policy Mass Wasting Technical group to complete this phase of the Board's motion and this amendment may take many months to accomplish.

DNR also plans to present the completed board manual section amendments to provide guidance to assess the delivery potential of glacial deep seated landslides to Policy for their approval prior to presenting it to the Board.

### Expedited Review Process

In order to expedite completion of the second phase of the Board Manual, the Board may direct DNR staff to omit the presentation of the completed board manual section amendments to Policy for their approval. This still provides for Policy input through their stakeholder participants in the group developing the Board manual guidance to assess the delivery potential of glacial deep seated landslides.

## **Obtaining Existing Bare Earth LiDAR**

DNR has determined the full extent of existing LiDAR coverage available through the LiDAR Consortium, see Current LiDAR Coverage map in Attachment 2. DNR has initiated discussions with representatives of WSPA about available bare earth LiDAR coverage. The results of these ongoing discussions will be reported to the Board at their November meeting.

## **Commissioners Request for Attorney General Review of Potential for Moratorium**

### FPB Request

Commissioner Goldmark sent a letter, dated 5/22/2014, requesting Attorney General Ferguson to receive a formal opinion on two legal questions: Does the Forest Practices Board have the authority to adopt a moratorium on the acceptance or approval of FPAs that pose a risk to public safety due to potential slope instability; and, If the Board cannot adopt a moratorium, can it accomplish a similar result by adopting an emergency rule, and if so, what procedural steps must the Board follow to adopt such emergency rule, see Attachment 3.

### Processing Requests for Attorney General Opinions

The Attorney General's Office (AGO) has determined an Attorney General Opinion is an appropriate form of response to these questions. On June 2, 2014 the AGO filed Opinion Request #14-05-02 with the Office of Code Reviser. This request was posted in the Washington State Register on June 18, 2014; it asked the public to notify the AGO of their interest to comment by June 25, 2014. The AGO has received and is reviewing public comments in their preparation of a formal opinion.

Formal opinions involve a lengthy process of research and review. Each formal opinion is carefully drafted by the assigned attorney, reviewed by the Opinions Editor, at least one other Assistant Attorney General and, finally, the Attorney General. During the process, the opinion may be revised several times.

All notice of pending formal opinion requests are published in the Washington State Register. Interested parties may submit information to the Attorney General's Office relating to pending opinion requests. If submitted in a timely manner, this material will be considered in preparing the opinion.

The goal of the AGO is to process each formal opinion within 90 days of the request, but the time varies depending on the complexity of the opinion and workload demands. Informal opinions are usually completed in 60 days or less.

To find out more on the AGO opinion process including the "who, what, and how" on AG Opinions go to: <http://atg.wa.gov/AGOOpinions/default.aspx>.

Please feel free to contact me at (360) 902.1390 or [marc.engel@dnr.wa.gov](mailto:marc.engel@dnr.wa.gov) if you have further questions.

MDE/

**Contents**

PART 1. INTRODUCTION..... Error! Bookmark not defined.

PART 2. OVERVIEW..... Error! Bookmark not defined.

2.1 Landslide Types and Effects ..... Error! Bookmark not defined.

2.2 Washington Landslide Provinces..... Error! Bookmark not defined.

PART 3. MEASUREMENT OF SLOPE ANGLES..... Error! Bookmark not defined.

3.1 Degrees..... Error! Bookmark not defined.

3.2 Percent..... Error! Bookmark not defined.

3.3 Relationship of Degrees to Percent ..... Error! Bookmark not defined.

PART 4. SLOPE FORM..... Error! Bookmark not defined.

PART 5. IDENTIFICATION, CHARACTERIZATION, AND ANALYSIS OF UNSTABLE AND POTENTIALLY UNSTABLE LANDFORMS AND PROCESSES..... Error! Bookmark not defined.

5.1 Potentially Unstable Landforms ..... Error! Bookmark not defined.

5.2 Bedrock Hollows, Convergent Headwalls, Inner Gorges..... Error! Bookmark not defined.

5.3 Groundwater Recharge Areas of (Glacial) Deep-Seated Landslides..... Error! Bookmark not defined.

5.4 Toes of Deep-Seated Landslides..... Error! Bookmark not defined.

5.5 Outer Edges of Meander Bends..... Error! Bookmark not defined.

5.6 Other Indicators of Slope Instability or Active Movement..... Error! Bookmark not defined.

PART 6 OVERVIEW OF ASSESSMENT (OFFICE AND FIELD REVIEW FOR LANDFORM IDENTIFICATION) ..... Error! Bookmark not defined.

6.1 Office Review Process ..... Error! Bookmark not defined.

6.2 Field Review Process ..... Error! Bookmark not defined.

6.3 Office and Field Assessment for Groundwater Recharge Areas and DSL..... Error! Bookmark not defined.

PART 7 LANDSLIDE ACTIVITY ASSESSMENT ..... Error! Bookmark not defined.

7.1 Landslide activity..... Error! Bookmark not defined.

7.2 Deliverability assessment..... Error! Bookmark not defined.

7.3 Slope stability modeling..... Error! Bookmark not defined.

7.4 Stability sensitivity ..... Error! Bookmark not defined.

PART 8. POTENTIALLY UNSTABLE LANDFORMS AND MATERIALS-REGIONAL LISTS ..... **Error! Bookmark not defined.**

PART 9. DELIVERY ..... **Error! Bookmark not defined.**

PART 10. GEOTECHNICAL REPORTS..... **Error! Bookmark not defined.**

10.1 Guidelines for Geo-Technical Reports..... **Error! Bookmark not defined.**

GLOSSARY..... **Error! Bookmark not defined.**

REFERENCES..... **Error! Bookmark not defined.**

Appendix A Maps and Surveys..... **Error! Bookmark not defined.**

Appendix B Earth Imagery and Photogrammetry ..... **Error! Bookmark not defined.**

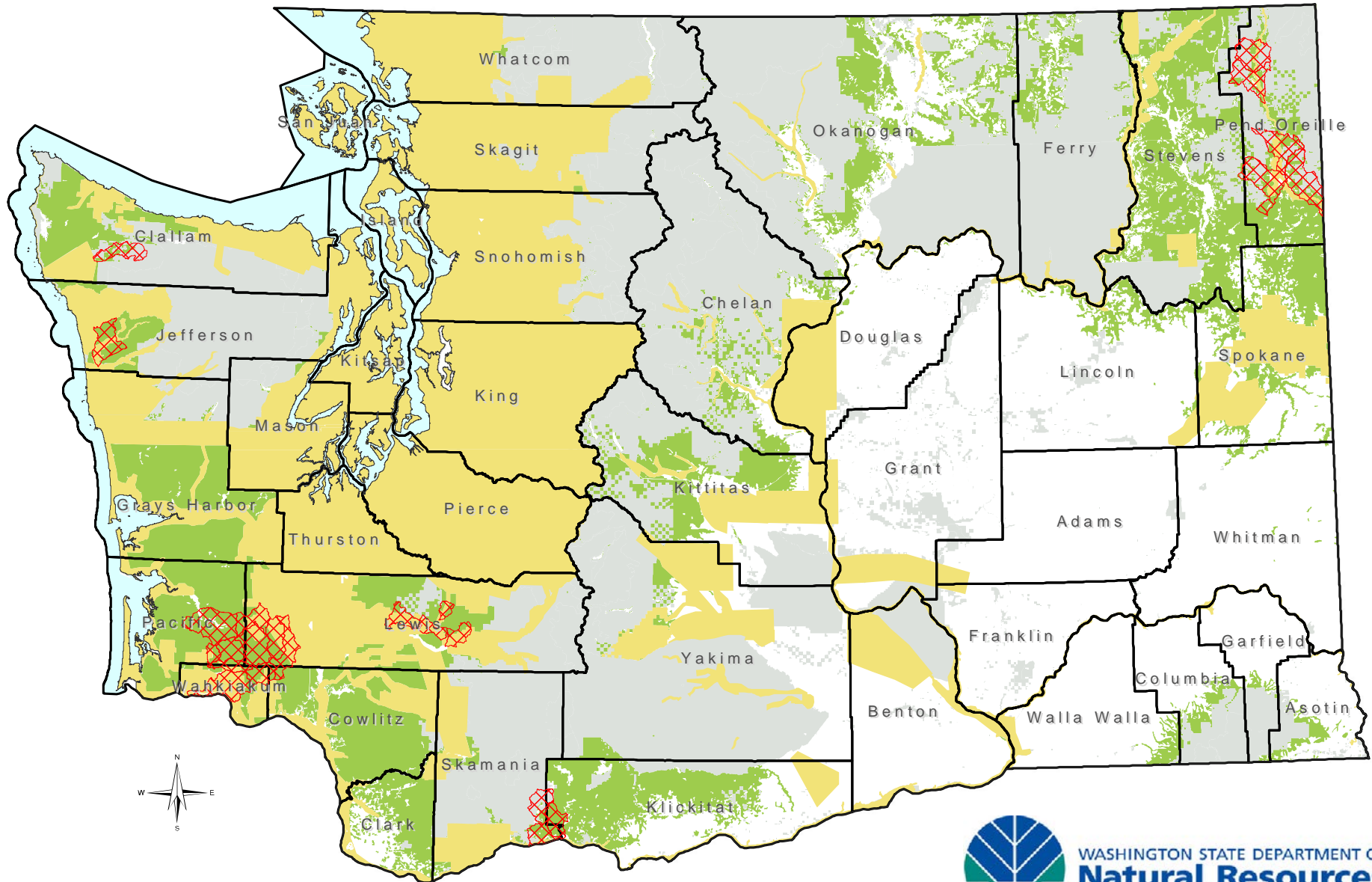
Appendix C Sources for LiDAR Data..... **Error! Bookmark not defined.**






Appendix D Technical Reports ..... **Error! Bookmark not defined.**

Appendix E Physical Databases..... **Error! Bookmark not defined.**

Attachment 2

**Current LIDAR Coverage for Washington State and Forest Practices Program's Aquisition Priority Areas - August 2014**



- |  |                                       |   |                                |
|--|---------------------------------------|---|--------------------------------|
|  | Forest Practices' Lidar Priority WAUs |  | Major Federal and Tribal Lands |
|  | Current Available LIDAR Coverage      |  | Non-Forest Lands               |
|  | FP HCP Lands with No LIDAR Coverage   |   |                                |



**WASHINGTON STATE DEPARTMENT OF Natural Resources**  
**FP Division, August 13, 2014**

*Extreme care was used during compilation of this map to insure accuracy. However, due to reliance on outside sources of information not under it's control, the Department of Natural Resources cannot accept responsibility for errors or omissions. Therefore, there are no warranties which accompany this material*



**Peter Goldmark**  
Washington State  
Commissioner of Public Lands

May 22, 2014

The Honorable Bob Ferguson  
Attorney General of the State of Washington  
1125 Washington Street SE, P.O. Box 40100  
Olympia, WA 98504-0100

Subject: Request for Formal Attorney General Opinion

Dear Attorney General Ferguson:

I write to request a formal opinion on the following specific legal questions:

- (1) Does the Washington State Forest Practices Board (Board) have the authority to adopt a moratorium on the acceptance or approval of Forest Practices Applications (FPAs) that pose a threat to public safety due to potential slope instability?**
- (2) If the Board cannot adopt a moratorium, can it accomplish a similar result by adopting an emergency rule, and if so, what procedural steps must the Board follow to adopt an emergency rule concerning unstable slopes?**

I request this opinion on behalf of the Board, which by statute is chaired by me or my designee. RCW 76.09.030(2). The Board has been examining mass wasting and unstable slopes and evaluating whether any changes should be made to the Forest Practices Rules in WAC Title 222. In the aftermath of the SR 530 Mudslide on March 22, 2014, a moratorium on the acceptance or approval of certain FPAs is among the actions that the Board has been urged to consider.

Given the public safety nature of this important topic, I am requesting that you assign this matter a high priority so that the Board has clear knowledge of its authority, and can chart a course forward at the earliest possible time.

Thank you in advance for the thoughtful consideration that you and your staff will give to this request.

Sincerely,

Peter Goldmark  
Commissioner of Public Lands

c: Aaron Everett, Deputy Supervisor for Forest Practices & Federal Relations, and Chair  
of the Washington State Forest Practices Board  
Washington State Forest Practices Board

Department of Natural Resources  
1111 Washington ST SE  
MS 47001  
Olympia, Washington 98504-7001  
(360) 902-1000

