

## July 25<sup>th</sup> CMER Meeting Summary for Policy

Dr's Monica Moskal and Andrew Cooke provided a presentation on the ***Extensive Riparian Vegetation Report***. The main goal of this pilot project is to provide background information to serve as a basis for potentially developing a Washington State riparian forests status and trends monitoring protocol based on remote sensing methods. The specific objectives of the project included: the development of a field protocol and collection of necessary field data to perform analysis in the Mashel watershed; Use of direct and modeled methods for assessing 13 riparian metrics using remote sensing methods identified in the literature review; and a focused synthesis, per indicator, summarizing the analysis, methods, feasibilities as well as costs and recommendations for statewide analysis. The project provided the protocol, a geodatabase of modeled riparian metrics, and a report as deliverables. Recommendations and conclusions included: LiDAR is the most efficient tool for hydrological mapping compared to satellite and aerial imagery; LiDAR is most suitable for mapping height, basal area and DBH of riparian forests because it captures the structural characteristics; Additional research is needed to address the number of models and the spatiotemporal reusability of models in order to extrapolate these models to other forest types in the state; Focus research on hydrological mapping and validation, vegetation class and how these classes specifically translate to riparian functions; and explore and monitor new technologies, such as Structure from Motion from satellite or aerial imagery for its ability to provide monitoring capabilities. RSAG submitted this report for CMER review in June. Comments were addressed and incorporated. ***CMER approved this report at the meeting.*** RSAG will attempt to approve the Findings report and 6 questions for the project at their August meeting and subsequently submit to CMER for approval in August.

Lee Benda provided a presentation on the ***Wetland Intrinsic Potential: A Screening Tool for Detecting Wetlands in Forested and Non-forested Environments***. The tool uses NetMap's Virtual Watershed data structure designed to simulate numerous landforms and watershed processes, with multiple types of interactions and connectivity, including involving land uses. The 'Wetland Intrinsic Potential' (WIP) tool applies five hydro-geomorphic indicators: 1) stream/river - depth to water table, 2) lake/pond - depth to water table, 3) closed depressions, 4) depth to impermeable layer and 5) a climate-topographic wetness index. These indicators are used to indicate the likelihood of potential wetland development. This likelihood indicator was combined with a logistical model to ascertain the indicator's relative importance in wetland development. Satellite imagery was used to remove non-soil areas and other filters were applied to include removal of closed depressions not meeting a size threshold, pixels with channels based on a predicted channel width, channel adjacent pixels too narrow to qualify as a wetland of concern, and groups of pixels in non-channel areas that did not meet a size threshold. WIP was applied to two HUC 6<sup>th</sup> basins in the Puyallup River watershed as a demonstration. WIP predicts high index scores (> 0.6) indicating likely wetlands in several geomorphic settings, including: 1) adjacent to lakes and ponds, 2) within wide forested riverine corridors, 3) along wide, unconstrained valley floors, 4) at and near large tributary confluences and 5) along abandoned, historical river valleys; many of which were confirmed using imagery. In some areas, WIP identified wetlands that were not included in the National Wetland Inventory (NWI). In some cases, WIP identified wetland extent considerably larger than NWI polygons. NWI polygons comprised 1.6% of the 225 km<sup>2</sup> study watershed whereas high WIP scores covered 3.5%. A comparison of the overlap between clumps of high WIP scores (indicating likely wetland formation) and NWI polygons across the upper forested portion of the basin and the lower portion dominated by urban and semi-urban development, and farm fields, revealed good agreement.

However, there appears to be numerous NWI polygons in the lower basin that do not correspond to wetlands on the ground. Potential calibrations to the tool, limitations and availability of input data, as well as potential utility of the tool was discussed. CMER members noted that defining the size of the wetlands that they are interested in is critical in the tool's utilization. CMER participants can provide comments on the report through August 24<sup>th</sup>. Depending on the extent of comments, the report may be submitted for approval at the September CMER meeting.

**CMER approved the UPSAG request for approval of the Non-Glacial Deep-Seated Landslide Literature Synthesis.** UPSAG will attempt to approve the Findings report and 6 questions at its next meeting and forward to CMER for approval at the August meeting.

**CMER approved to send Type N Experimental Buffer Project Post-Harvest Amphibian Genetics Report to ISPR.**

**CMER approved the revisions to the Protocol and Standards Manual Chapter 7.** A subgroup of CMER will now begin to make revisions to Chapter 8 (ISPR).

CMER accepted comments on the **Fire Salvage Literature Review and Synthesis** through July 26<sup>th</sup>. The report will be revised based upon the comments received and potentially submitted for CMER approval at the August meeting. The findings report and 6 questions will then be completed.

Comments on the **Hardwood Conversion Report** are due August 4<sup>th</sup>. Depending on the extent of the comments, RSAG may submit a request to approve the report at the August meeting. RSAG is currently working on the Findings report and 6 questions.

Comments on the **BTO Add-on Report** are due July 28<sup>th</sup>. This is a concurrent review with SAGE and RSAG. Both RSAG and SAGE will attempt to approve the revisions at their next meeting and forward to CMER for a presentation and approval to send to ISPR.

Responses to ISPR comments on the **Buffer Shade** study have been received. LWAG will revise the report accordingly and then return it to ISPR for final approval.

Final CMER comments on the Executive Summary, summary and Discussion chapters of the **Type N Buffer Effectiveness Study in Basalt Lithologies** have been received. Commenters and authors are meeting on July 31<sup>st</sup> to work through those comments. Comments on Chapter 7 (Temperature and Cover) will be accepted through August 14<sup>th</sup>. Both chapters may potentially be submitted for final approval by CMER at its August meeting.

The **Forested Wetland Effectiveness** TWIG met in early July, focusing on the chronosequencing portion of the project. They will be meeting again in late August/early September to discuss the MCABI portion of the project. The TWIG anticipates having a draft study design for review in November.

The **Westside Type F Riparian Prescription Monitoring** study design is still at ISPR.

The **Unstable Slopes Criteria** TWIG is continuing to meet and has an internal draft of the study design.

The **Roads Prescription Scale Effectiveness Monitoring** study design is still at ISPR and comments are expected within the month. Equipment approved for purchase in FY17 has been delivered.

ISPR comments on the ***Eastside Type N Riparian Effectiveness*** project have been received. Comments were focused on site selection. Greg Stewart is working with landowners to collect the needed information to respond to those comments. TWIG members will also be meeting with the 'Dry study' TWIG members in August/September to discuss efficiency options.