

Executive Summary

The storm that struck the Pacific Northwest on December 2 and 3, of 2007 caused significant wind and flood damage along coastal Oregon and Washington. As damage reports came in, and statewide mobilization of emergency services coalesced, the Governor requested that the Oregon Department of Forestry (ODF) become integrated into the Office of Emergency Management and the Emergency Operation Centers (EOCs) of affected counties. As a result, the scope of ODF's involvement expanded from assessment of forest lands to a need for a coordinated effort to support and assist the counties in recovery and assessment.

In response to the request by the Governor and the three counties, ODF assembled a Forest and Debris Recovery Incident Management Team (IMT) to assist the counties in assessing damages to forest lands and natural resources attributed to the storm. The IMT established a command center at ODF's Astoria District office on December 10, 2007, and three branch operation centers in Astoria, Columbia City and Tillamook. The team spent eight days assessing and surveying damage. Assessment efforts were conducted in coordination with the county EOCs, multiple state and federal agencies, and private forest landowners.

The primary objectives of ODF in support of the three counties were to:

- Develop an assessment of storm damage related to forest roads, downed timber, and forest debris where there are concerns about risk to public safety, roads and infrastructure and natural resources.
- Facilitate solutions related to the salvage of applicable material, debris removal, debris jams and critical urban forest concerns.
- Provide status reports and information related to damage and assessment/coordination efforts.
- Identify any potential legal, regulatory, and/or economic barriers to local recovery efforts and forward to policy makers and/or groups for consideration.

Results of the assessment have been summarized in the attached report. A draft of this document was provided to the counties in late December to solicit feedback. Comments received from the counties were built into this final report. It is an assessment of the heaviest of the storm damage on the north Oregon Coast. **It is not a comprehensive assessment. It is aimed at identifying the most significant damage and immediate concerns. It does not address damages to municipalities; nor federal, state, and county roads.** At this time, other affected Coast Range counties, such as Lincoln, Polk, Washington, and Yamhill are not included in this assessment.

The majority of the wind damage was limited to areas within a 20-mile band along the coastal margin. It is estimated that roughly over 370 million board feet of timber is estimated to have blown down in Clatsop County alone. About 25 million board feet is estimated to be down on the Clatsop State Forest. Tillamook County is estimated to have roughly 20 million board feet of

wind-thrown timber; about 15 million is on State Forest lands. Forest wind damage in Columbia County by comparison is negligible. Wind damage to family forest and small non-industrial owners is also substantial but as yet un-quantified. Wind damage to trees in nearly every public park and municipality along the coast is also significant.

Surveys were conducted where there was significant flood damage to forest roads, where landslides had occurred, and where large accumulations of woody debris were deposited. Special assessments were conducted on certain sites where there was an immediate concern. The majority of significant flood related damage that was encountered was in eastern Clatsop County, western Columbia County, and northeastern Tillamook County. Not all flood-related damage on forest land has been assessed, and some land owners have only provided limited information. On State Forest lands in the three counties, the initial amount estimated to repair forest roads is nearly 3 million dollars. Estimates to repair roads on private forest lands is unknown.

The assessment report is a summary of the findings. Details of surveyed sites are contained in Appendix 1 of the report.

As a result of the assessment, a variety of issues and concerns were identified. They can be loosely categorized as: 1) public safety, 2) recovery from damage, 3) natural resources, and 4) economics. Regarding public safety, there are people living in areas that are at risk from landslides and flooding simply by the location of dwellings or infrastructure in relation to slide-prone areas. Leaning and partially standing wind damaged trees also remain a hazard. Better tools are needed to identify where hazards are the greatest, particularly for landslide and debris flow-prone zones to prevent further development in high risk areas. Small municipal and domestic water systems with intakes in slide-prone areas are also a concern, and many were damaged and need to be inspected and repaired.

The amount of downed wood, slide debris, and road damage poses issues regarding obstructions which hamper current forest operations and recovery opportunities. There are also concerns related to large accumulations of woody debris in streams which may pose a threat to property and infrastructure downstream. Further evaluation is needed and a process that identifies where actions should occur and what treatments are considered acceptable. A coordinated process is needed to remove a variety of debris including large wood and sediment across jurisdictional and landowner boundaries. Many small non-industrial forest landowners do not have the resources to address and treat damage repair and debris removal.

Natural resource issues and concerns include inadequate road drainage and stream crossing structures on legacy forest roads and relic railroad grades. Further assessment is also needed to determine the magnitude of damage to aquatic, riparian and terrestrial habitat, particularly for threatened and endangered species. Forest health and fire hazards are concerns as well. The amount of downed wood has the potential for contributing to insect infestations, and poses a wildfire threat that will exist with and without salvage efforts. Damage to urban forest resources is extensive, and management programs for treating and restoring damage, as well as providing for future management needs should be better defined and supported.

Economic issues related to the amount of salvageable material are of particular concern, especially at a time when the market is in a slump and domestic log prices are low. Higher logging costs associated with the difficulties of salvaging wind damaged timber, a depressed market, and lower material value (smaller, un-preferred lengths, less recoverable volume) could compromise profit margins and prevent some forest land owners to abandon salvage opportunities. It is estimated that wind damage to trees also generated an in excess of 100 million board feet of non-sawlog material (i.e., breakage, broken tops and large limbs, short log pieces, etc.), which further reduces the potential for recoverable saw-log volume. Local capacity and infrastructure to process this material is not believed to be adequate, and alternative solutions for capturing its value is needed.

Family Forest Owners and other small landowners may experience difficulties in both finding markets and operators to deal with small volumes of material. This could be a disincentive to pursue removal and recovery of forest damage on their lands, leading to forest health and wildfire concerns.

Another significant concern is the severe damage sustained to the Port of Tillamook Bay Railroad line, particularly in the Salmonberry River Canyon. Many local mills and industries rely on this relatively inexpensive means of transporting raw materials and finished products between markets. Disruption of rail service equates to a reliance on truck transport which will increase transportation costs and affect related commerce and dependent businesses and trades.

The next step is to further clarify issues, prioritize them, identify the resources and cooperators, and develop a course of further needed actions and timelines. ODF assistance to forest landowners in support of the counties will remain a high priority across all Department programs. Interagency coordination and partnerships should be developed to determine where, and which priorities need cooperative and collaborative solutions to support affected forest land owners.