



Forest
Service

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File Code: 3410

Date: March 12, 2019

Route To:

Subject: Monitoring Douglas-fir Tussock Moth Outbreak Populations across Southern Idaho in 2018: BFO-PR-2019-01

To: Forest Supervisor, Boise, Payette, Salmon-Challis, Sawtooth NFs, BLM Forestry Program Lead, Superintendent of Craters of the Moon National Monument

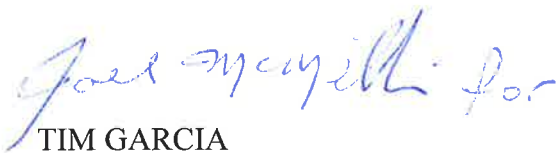
Enclosed is Forest Health Protection (FHP) project report, BFO-PR-2019-01, that summarizes 2018 field evaluations coordinated by Laura Lowrey, FHP entomologist, to assess Douglas-fir tussock moth (DFTM) caused damage in year three of an expected four year outbreak, and to predict 2019 defoliation levels.

Survey and recommendation highlights:

- Trapping and egg mass survey results suggest the DFTM outbreak has collapsed on the Payette, Salmon-Challis, Sawtooth NFs, Owyhee Mountains and Craters of the Moon NM with no observable or low level defoliation anticipated in 2019.
- Surveys indicate one more year of heavy defoliation in certain areas across the Boise NF. High defoliation is predicted to occur in 2019 across the Sage Hen Analysis Area north to Cascade Reservoir and from Scriver Creek to East Mountain east of Highway 55.
- A total of 27 locations were sampled in October 2018 across the Sage Hen Analysis Area to document defoliation and Douglas-fir and grand fir mortality levels to better inform management decisions on the Boise NF.
- Tree survival rates decrease significantly when DFTM defoliation levels exceed 79% for Douglas-fir and 89% for grand fir. Estimations based on the 2018 surveys indicate about 6% of Douglas-fir and 9% of grand fir fall in these categories, and are likely to increase following one more year of defoliation in 2019. Historically in Idaho, 19% of Douglas-fir and less than 5% of grand fir survived defoliation levels over >90%.
- Trees weakened by heavy defoliation are at risk to subsequent bark beetle attack. Nearly 30% of Douglas-fir and 50% of grand fir are in the high risk category within the Sage Hen Analysis Area. We expect Douglas-fir beetle and fir engraver outbreaks across the Sage Hen Analysis Area, Packer John and Scriver watersheds within the next four years, especially in droughty, poor snowpack years. Up to 34% of host basal area may be killed from the combined effects from DFTM defoliation and resultant bark beetle activity based on historic outbreaks.



- FHP will continue to cooperate with the Pacific Northwest Research Station to assess DFTM populations in 2019.
- Additional information about DFTM and human health concerns associated with tussockosis can be made available to the public.
 - Recommend posting information on human health risks associated with tussockosis on Federal Recreation Reservation and Boise NF websites.
 - Provide information sheet on how to tell if a tree is dead from DFTM.
 - Our FHP staff can assist in the development of educational materials.
- Due to the increased risk of Douglas-fir beetle outbreak at Craters of the Moon NM, we recommend using anti-aggregant MCH capsules to treat two heavily defoliated stands before mid-May 2019. This pheromone treatment is used to prevent the attack of large diameter Douglas-fir trees by Douglas-fir beetle.



TIM GARCIA

Director, State and Private Forestry

Enclosure

cc: Richard Newton, Jake Strohmeier, John Riling, Frank Gonzalez, Deb Lozinski, Robin Wennberg, Paul Klasner, Charlie Munden, Gilbert Moreno, Scott Wagner, John Pine, Nelson Mills, Bill Baer, Nathan Eby, Laura L Lowrey, Jason Neumann, Angel Saavedra, Carl L Jorgensen, Joel McMillin, Tim Garcia, John Shannon, Wade Vagias (Wade_Vagias@nps.gov), Joe Adamski (jadamski@blm.gov), Tom Eckberg (Teckberg@idl.idaho.gov), Carlos Polivka