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Dale L. Nolte

USDA-APHIS-Wildlife Services, Dale.L.Nolte@aphis.usda.gov

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Developing Strategies to Alleviate Wildlife Damage to Forest Resources

BY DALE L. NOLTE

Does the presence of wildlife always pose a problem when reforesting a site? Not necessarily. However, the potential impacts of wildlife need to be considered. The intensity or severity of impacts caused by wildlife will reflect the species and density of animals present, along with existing habitat conditions. Whether these impacts create a problem depends on the objectives of the producer and the resources available to achieve the original goal. Wildlife will not be a problem for projects with unlimited resources and time. The repeated plant and replant methods will ultimately lead to some form of success. However, wildlife can be devastating to projects with goals that require initial plantings to reach maturity. The most appropriate approach to reduce animal damage should reflect the overall objectives of the landowner, as well as conditions of the specific problem. All techniques are not feasible or appropriate for all situations. Several considerations need to be addressed. A producer should consider the following five steps before extending funds or implementing efforts. Although excessive time need not be devoted to each step, each should be given careful thought.

1. Assess the severity and potential for additional damage to occur if no action is taken. Assessing the potential for a problem is fairly simple if there is a history of similar projects in an area. Verifying past successes or reasons for failure will provide insight to the future. Projects being established in new areas will require some knowledge of the species and habitat present and how the project will alter dynamics of the current plant and animal interactions. Existing favorable habitat does not ensure that new plants will not be targeted by foraging wildlife. Foraging is relative and the desirability of planted species will dictate whether they are



PHOTO COURTESY OF NWRC OLYMPIA FIELD STATION

Before implementing a damage management program, a complete strategy should be developed.

ignored or become lunch.

Concurrently, identify the correct culprit or the target species of your anticipated program. Unfortunately, the culprit is rarely seen. Therefore, the offending species probably will need to be identified solely on the basis of the resultant damage. Girdling low on the stem generally indicates rodents. Tooth marks can help determine size, and other signs may suggest what species is in the area.

For example, voles commonly leave marked trails, mountain beavers create frequent and open burrows, and pocket gophers close their burrows and create mounds. Porcupines are likely to strip the entire sapling or forage near the top of larger trees. Small seedlings clipped at a 45-degree angle are likely damaged by rodents or lagomorphs (hares, rabbits and pikas). Deer and elk are more likely to take bites from the foliage or will leave stripped ends. Larger girdled trees with vertical tooth marks and stripped bark lying at their base are

indicators of bear activity. Girdling by mountain beaver can be readily distinguished from bear girdling because the damage is low on the bole and mountain beavers leave horizontal tooth marks and irregular claw marks. Conical shaped stumps with large wood chips at the base are classic signs of beaver damage. Beaver girdling of large conifers can be confused with bear damage, but stripped bark will not be lying at the base.

2. Evaluate the feasibility of available approaches to alleviate the problem. All techniques are not feasible or appropriate for all situations. No action may be the appropriate action if you decide the problem is relatively minor. A few preliminary considerations will increase the success, or at least minimize potential of creating other problems. Conduct a check on legal ramifications for any action selected and ascertain that the action will not be potentially hazardous to non-target species, particularly to endangered or threatened species. An effective approach will

require familiarity with the behavioral traits and biological attributes of the target species. Assess how existing environmental conditions of the sites will affect the selected method and the consequences of the action to the environment. Determine whether the selected methods will achieve an acceptable degree of protection and if the situation warrants the anticipated expense. Public and neighbors' attitudes toward potential methods also need to be considered when choosing an approach.

3. Develop a strategy to implement your efforts to reduce damage. Your strategy may incorporate several methods at once, or utilize one method to stop the damage and another to limit future problems. Inquire among experts within the field if you need additional information or are unsure of specific requirements. Identify and obtain any required equipment, personnel, resources and safety equipment for your program. When necessary, acquire training or expertise in handling equipment or chemicals.

4. Implement your program. Although it may require time and effort, implementing the program should be straightforward, provided the prior steps were thoroughly covered. However, unanticipated problems or concerns may necessitate you to modify or select an alternative strategy. In that case, repeat the decision process incorporating the new information.

5. Monitor consequences of your program. Continued monitoring of the program is a particularly important activity. Determine whether your desired goals are being achieved and whether there are any unexpected negative consequences. Continue to evaluate the program until the resource is no longer vulnerable or conditions warrant terminating the program. ♦

Dale L. Nolte is field station leader for the National Wildlife Research Center's Olympia Field Station in Olympia, Wash. He can be reached at 360-956-3793 or dale.l.nolte@aphis.usda.gov.

New Decayed Wood Planning Tool Available

DecAID Advisor, a new snag, down wood and wood decay management advisory system for forests in Washington and Oregon, is now available on the website as an interactive program at <http://www.notes.fs.fed.us:81/pnw/DecAID/DecAID.nsf>.

Decayed wood elements—snags, down wood, and decaying trees—are habitat for many organisms that live in terrestrial ecosystems and contribute to other aspects of ecosystem productivity and diversity. Maintaining an adequate level and mixture of these habitat elements is an important part of managing forest ecosystems, but can be a challenging task for any forest land manager.

DecAID Advisor is a product of several years' teamwork to synthesize wildlife data on species' use of decayed wood, inventory data on amounts of snags and down wood, and provide information on insects and pathogens associated with decayed wood.

The DecAID Advisor is a planning tool intended to help advise and guide managers as they conserve and manage snags, partially dead trees and down wood for biodiversity.

DecAID is organized around "vegetation conditions" that combine wildlife habitat type, vegetation alliance, structural condition (average tree size and canopy closure) and geographic location. It provides interpretation and advice on the roles of insects and pathogens in the creation and dynamics of dead wood, and the implications of snag and down wood management on ecosystem health, and offers mitigation considerations.

DecAID was developed for use across all land ownerships in Washington and Oregon. It is a collaborative product of USDA Forest Service and USDI Fish and Wildlife Service.

References on the DecAID Advisor are available at www.fs.fed.us/wildecology/decad/decad_background/decad_papers.htm.

For additional information, contact Bruce Marcot at bmarcot@fs.fed.us or 503-808-2010, or Janet Ohmann at johmann@fs.fed.us of the USDA Forest Service, Pacific Northwest Research Station. ♦

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