

Spruce Beetle Hazard Mitigation Project

FY2020 Request: \$0
Reference No: 62772

AP/AL: Appropriation **Project Type:** Life / Health / Safety
Category: Natural Resources
Location: Matanuska Susitna Borough **House District:** Matsu Areawide (HD 7-12)
Impact House District: Matsu Areawide (HD 7-12) **Contact:** Fabienne Peter-Contesse
Estimated Project Dates: 05/01/2019 - 06/30/2023 **Contact Phone:** (907)500-8573

Brief Summary and Statement of Need:

Spruce Beetle Hazard Mitigation Project

Funding:	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	Total
1002 Fed Rcpts	\$2,000,000						\$2,000,000
Total:	\$2,000,000	\$0	\$0	\$0	\$0	\$0	\$2,000,000

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

Operating & Maintenance Costs:

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
Totals:	0	0

Prior Funding History / Additional Information:

Project Description/Justification:

The massive numbers of spruce trees now dead and dying throughout the Mat-Su Valley and on the northern Kenai Peninsula have created hazardous conditions for those residents because of the increased risk of wildland fire, and from dead trees falling and harming people and property. Communities are at risk because dead spruce trees littering a forest tend to increase the severity and danger of wildland fire and make access for fighting fires difficult. Additionally, windstorms periodically occur in this region, and dead and decaying trees will eventually fall, endangering people, vehicles, buildings, and powerlines (which can also start fires). **Rather than waiting for fire and windfall disasters to occur, we have an opportunity to be proactive in our response to this issue and avert a potentially costly and destructive disaster. We can create strategic fuel breaks in and around high-use areas that have a high probability of starting fires, such as campgrounds, and remove hazard trees that have the highest potential to cause damage to people and property.**

The Division of Forestry (DOF) has coordinated interagency/landowner groups to focus efforts across land ownerships in the affected areas. The groups include federal, state, borough and city agencies, Alaska Native organizations, and community groups and utility companies. On April 9th, the Mat-Su group will come together to sign a charter to form a Task Force. The informal group has already been working together to identify the highest priorities for creating fuel breaks and removing hazard trees, find ways to use commercial and personal use timber harvest to remove beetle-killed spruce, and share information about funding sources that could help agencies, private landowners, and communities mitigate impacts from spruce beetles. On the Kenai, the Kenai All-Lands

All-Hands group has provided a forum for discussions of high priority actions associated with the spruce beetle infestation.

Background

Populations of spruce beetle in the Mat-Su Valley and on the northern Kenai Peninsula have increased dramatically over the past three years. This infestation has killed most of the mature spruce trees in the Mat-Su Valley and is in the process of killing the remaining living mature trees as well as impacting immature spruce. On the northern Kenai Peninsula, extensive areas of spruce beetle-caused tree mortality have also been documented, mainly in areas that were not hit by the outbreak in the 1990s. Survey estimates suggest that nearly one million acres of forests in the region have been impacted since 2016, with about 557,000 acres of active spruce beetle damage documented in 2018.

Spruce beetle outbreaks are a natural cycle of forest growth in southcentral Alaska, so the long-term health of forests, fish and wildlife is not threatened, but the **immediate impacts on communities can be quite serious.**

- Fire danger increases in the first few years after the trees are killed. First, dead and fading spruce needles, while still attached to the tree, ignite quickly in a wildland fire and are easily blown from their branches to create spot fires at great distances from their original source. Second, easily-ignited tall grasses become more prevalent in gaps created by the dying spruce trees and can quickly carry a wildland fire through the forest.
- Beetle-killed trees are easily windthrown, especially as they decay over time. Falling trees create serious hazards to people, vehicles, buildings, powerlines, and other infrastructure. Trees falling on powerlines cause many wildland fires every year.
- As the beetle-killed spruce fall, they can create a jackstraw pattern of downed trees, making access to the forest difficult and hazardous for wildland firefighters.
- These fire behavior characteristics, fire suppression operations, and firefighter safety considerations are factors associated with spruce beetle related tree mortality that increase wildland fires' resistance to control; therefore, increasing the risks of catastrophic wildfires.

The Division of Forestry is actively working to attract a forest products company in the hopes of offering a salvage timber sale in the Mat-Su Valley. DOF staff are investigating the potential for wood certification via the Sustainable Forestry Initiative (SFI) to meet market requirements for fuel chips that would be the main product produced by the project.

The Division of Forestry has made several areas available for personal use firewood harvest along forestry roads through DOF-managed forestry lands, which has created some small benefits of reducing fuel for wildland fire and removing trees that could compromise those roads. These small sales, though, do not do much to mitigate fire and windthrown hazards in and near populated and high public use areas, since forestry lands do not support a high population of users, especially users building fires.

Highest priorities

Public use areas, such as campgrounds and public use areas, carry a two-fold risk. First, people light campfires in campgrounds and picnic areas, and campfires in beetle-killed spruce forests have the potential to escape and cause wildfires in surrounding forests because of the increased growth of tall grasses, the presence of dry spruce needles on newly-dead trees, and increased fuel loading over time. Second, windthrown trees in high use areas can damage property and endanger facilities and can even cause fires by striking powerlines when they fall. If a fire escapes a campground and moves to the wildland, communities across the Mat-Su and the northern Kenai are at risk, especially because fallen dead trees make access to the fire difficult and dangerous for firefighters. Fires

established in beetle killed fuels are difficult to catch, require the use of heavy equipment for success, and are dangerous for ground firefighters due to snags and potential of falling trees. Risk associated with fires in this fuel type increase as the trees degrade over time.

The Mat-Su Valley has the fastest growing population in Alaska, but most residential areas are characterized by forests, not by lawns and open woodlands. The risk of wildland fire running quickly through backyards and houses is as high as many forested areas. Northern Kenai residences are likewise spread through forested landscapes. Strategically placed landscape area treatments, such as hazardous fuels reduction treatments and fuel breaks, can help firefighters safely contain wildland fires and protect values at risk.

Division of Forestry asked DNR’s Division of Parks & Recreation (DPOR) and the Department of Fish & Game (ADF&G) to identify public use areas that most need fuel breaks and hazard tree removal. State campgrounds and river access sites are used by many recreating Alaskans as well as tourists from outside the state, and until fuel breaks are created and hazard trees are removed, these sites will need to be closed to keep the public safe. The campgrounds provide a large part of State Parks’ budget, as well as high quality experiences for its visitors. Just two of DPOR’s most popular campgrounds, South Rolly Lake and Byers Lake, provide opportunities for approximately 7,000 overnight visits each summer. The economic impact of closing these campgrounds for the time it would take DPOR staff to mitigate the problems without outside assistance from DOF (three seasons and two seasons, respectively) would be a minimum of \$342,000. Of even more concern is the fire risk associated with campground closures. If a campground is closed, campers will look for and find unimproved areas in which to camp, without fire rings and dedicated campsites, increasing the likelihood of escaped campfires.

The Division of Forestry used a combination of field surveys and GIS analysis to estimate the cost to create fuel breaks and remove hazard trees in each of these high-use areas. Since many of the trees reach 100 feet in height, an estimate for removing all dead and dying trees within 100 feet of the developed areas was utilized. Because campgrounds and public use sites contain high-value infrastructure (outhouses, cabins, picnic tables, boat launches, etc.), heavy mechanized forestry equipment might not be feasible in all areas. A combination of hand crews felling trees directionally with some mechanized equipment is likely to be necessary to complete this work safely and efficiently while minimizing disturbance to the forest. The Division of Forestry’s 22-person wildland fire crews working off-season would be an excellent fit, having vast experience in this type of work and having produced excellent results in many State campgrounds over the years. However, mechanized treatments will be a priority so salvage and use of the dead trees can be maximized for community benefits.

Fuel Break Projects

Additional high-priority fuel treatment projects, for example, hazardous fuels reduction around communities, may be solicited from the Mat-Su Spruce Beetle Task Force, which will form

Urgency

Funding to create strategically placed fuel breaks, to reduce hazardous fuels, and to remove beetle-killed hazard trees in these public use areas is needed now. The work needs to be done as soon as possible if campgrounds and access areas are to be opened this summer. In addition, fire crews are only available to do this work outside of the fire season when they are not otherwise obligated with firefighting duties.

Line Items:

Personal Services \$ 500,000

Travel \$ 200,000

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**\$0
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Contractual	\$1,200,000
Commodities	\$ 100,000
Total	\$2,000,000