Card 34
Activity: Invasive Plant Treatments – Manual and Mechanical

Description: Control, contain and eradicate non-native, invasive plant populations with manual and/or mechanical treatments. Most of the known non-native, invasive plant infestations occur in developed areas, such as along roadsides, at administrative sites, rock pits, and recreation areas.

Objectives: These treatments are used to achieve the Forest-wide goal of maintaining ecosystems capable of supporting the full range of native and desired non-native species and ecological processes. Specifically, through the objective to manage the Forest in order to reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of non-native, invasive species.

Related Actions: Potential for seeding post-treatment.

Methods: Methods vary by species, infestation size, life-stage, and growing substrate but typically involve actions that physically remove and destroy portions of plants to cause mortality or reduce the reproductive potential. Hand pulling can effectively remove above- and below-ground portions of plants while limiting disturbance to the surrounding vegetation. Similar effects are achieved when using hand tools to dig invasive plants (*e.g.*, shovels, pulaski, weed fork), but the potential for soil disturbance and non-target vegetation damage increases. Weed torches destroy above ground portions of plants and may cause heat damage to nearby non-target vegetation. Ground tarping is achieved by covering the entire extent of smaller invasive plant infestations. Above ground portions of invasive plants can be removed via multiple methods including hand tools, string trimmer and chainsaws.

Equipment Used: Hand tools, weed torch, ground tarp, string trimmer, chainsaw, brush saw

What are the general guidelines constraining this activity?

General Project Design Features (PDF):

Prepare a specific treatment plan which includes the location, target species, and method of treatment (manual/mechanical).

Annually, a weed assessment review team will be assembled to review the planned treatments and to ensure PDFs are applied; integrated treatment methods will be determined by factors such as species and location of the site and based on priorities detailed in the annual treatment plan.

Forest Plan, Chapter 4 Forest-wide Standards and Guidelines, Invasive Species Control and Management: INV3

What are the resource-specific guidelines?

Silviculture

This activity does not require review by a Certified Silviculturist.

Timber

None

Transportation

Access to work sites is generally available on existing roads. Off-highway vehicles are commonly used when highway vehicle access is not available. Follow applicable travel regulations, and when necessary obtain permits to use the closed road system.

Wildlife

All applicable laws, BMPs, and Forest Plan direction must be followed.

The removal of invasive plants may improve the abundance and availability of native plants for subsistence users.

Fisheries

Direct mortality due to trampling: If any manual or mechanical treatments require working in the water, activities would be planned through timing to avoid impacts to redds or disturbance to spawning fish.

Apply erosion control (*e.g.*, silt fences) and revegetation (*e.g.*, mulching, native grass seeding, planting) measures for manual treatment where detrimental soil disturbance or de-vegetation may result in the delivery of sediments.

Hydrology

Specific project areas to be reviewed for hydrologic concerns once identified. Follow relevant BMPs spelled out in the R10 Soil and Water Conservation Handbook and the National Core BMP Technical Guide (FS-990a) to ensure water quality standards are met for nonpoint sources of pollution.

Upon implementation, the Hydrologist should consider all resource guidelines posed by Fisheries and Soils/Wetlands. Collaborate with the Fisheries Biologist and the Soil Scientist to address all relevant concerns.

Soils/Wetlands

Soil disturbance should be kept to a minimum. If an area greater than 100 square feet of mineral soil is exposed by pulling or burning, a Tongass Soil Scientist should be consulted to review and make mitigation recommendations. Avoid using a weed torch on dry days. Adhere to R10 Soil Quality Standards.

R10 BMPs: 12.5, 12.17, 14.8 and 14.25

National Core BMPs: AqEco-2 and Veg-2

Botany

Prior to implementation a qualified Botanist/Ecologist must conduct a site-specific review to determine if the activity location has the potential to support any Region 10 Sensitive Plants or Tongass National Forest Rare Plants. Based on the review, a botanical survey may be required during the appropriate growing season to identify individuals or supporting habitat. If a Region 10 Sensitive or a Tongass National Forest Rare plant population is affected by the activity, consider protections around the population that minimize impacts and meet the habitat needs of the species. If sensitive plants are found, the botanist will evaluate the survey results for consistency with the determination of effects in the EIS for any sensitive taxa found in the project area and document. Mitigation actions may be required to be consistent with the May Affect or No Affects determination for sensitive plants found in a project area (Forest Plan PLA1.II p. 4-39). If rare plants are found, the botanist will complete a resource report to analyze for effects of the activity on rare plants or their habitats. Mitigation actions may be required to protect populations (Forest Plan PLA1.III).

Invasive Plants

A qualified Botanist/Ecologist will evaluate invasive plant populations to determine appropriate method and tool for control. Implementation of treatment methods will be coordinated to meet Forest Plan Objectives.

A qualified Botanist/Ecologist will conduct a site-specific risk assessment to determine the proximity of known infestations, potential vectors, and the habitat vulnerability to invasive species introduction and spread (WBMP 1). Additional site-specific design features may be recommended to reduce the spread and introduction of invasive plants.

See Introduction for additional WBMPs 1-6 that apply to all activities.

Geology/Karst

If on karst lands, all proposed sites would be reviewed by the Forest Geologist upon implementation.

Heritage

All Federal Undertakings, defined in 36 CFR 800.16(y), whether ground disturbing or non-ground disturbing, that have the potential to cause effects to historic properties, require compliance with procedures defined at 36 CFR 800 (see Heritage Intro). The Heritage Professional will be consulted during the planning phases of the project in order to identify the Area of Potential Effects, and to evaluate whether additional .information is required for the purposes of determining whether historic properties exist and/or will be adversely affected, and if so, establish the appropriate course of action whether avoidance or mitigation. Section 106 procedures must be concluded prior to project implementation. If unanticipated cultural resources, or the inadvertent discovery of human remains are found during project implementation all work shall stop in the immediate area and steps shall be taken to protect the site from further damage. The Heritage Professional will be contacted immediately and work will not proceed in the area until the Section 106 and/or NAGPRA process is concluded. The Forest Service shall protect known sensitive traditional tribal use areas.

Recreation

Activities should consider the Recreation Opportunity Spectrum (ROS) inventory of the activity area and how the actions may impact proposed and established recreation activities on the landscape. There is an association between ROS and land use

designation (LUD); therefore, reference should be made to the recreation and trails sections of Chapter 3, in addition to the Forest-wide Standards and Guidelines in Chapter 4, and Appendix I of the Forest Plan regarding the Standards and Guidelines for recreation and trails.

Recreation and non-recreation resource planners should consider opportunities to integrate their respective activities through coordinated planning. Planners should consider opportunities to enhance or develop recreation resources in conjunction with proposed activities, or identify substitutes for recreation resources that could be altered by non-recreation activities. Reference REC2 (II) in Chapter 4 of the Forest Plan regarding the Standards and Guidelines for integrated resource planning.

Scenery

SIOs for area must be met (Forest Plan, Chapters 3 and 4). SIOs depend on LUDs and distance from VPRs.

Wilderness

A Minimum Requirements Analysis has been completed and approved by the Regional Forester for manual and mechanical treatments in designated wilderness. The Minimum Requirements Analysis concludes the activity can only be conducted when the principle objective is to protect or restore the Wilderness resource. The means of treatment used will be a site-specific, professional judgement.

No motorized equipment or mechanical transport will be used.

Crew size will be kept to 12 people or fewer.

Crew camps, if needed, will be located in previously used campsites if available, and crews will follow Leave-No-Trace guidelines (www.lnt.org).

Review treatment plans with the District wilderness manager to ensure Wilderness objectives will be met.

Wild, Scenic and Recreational Rivers

Maintain or enhance the outstandingly remarkable values (ORVs), free-flowing condition, water quality, and classification of rivers designated or recommended for designation as components of the National Wild and Scenic Rivers System. Maintain Apply the High Scenic Integrity Objective (SIO) within wild river corridors and no less than Moderate SIO for any designated or recommended river with a Scenic ORV. Apply all applicable Forest Plan direction pertaining to Wild, Scenic and Recreational Rivers (Forest Plan, p. 3-76 to 3-96).

When would we implement this activity?

Documented populations of Priority Invasive Species are targeted for treatment to reduce their population size and/or limit their spread using an integrated pest management approach. Manual and mechanical treatments will be selected at sites where Priority Invasive Species are known to occur and where the Invasive Plant Program Manager has determined they will achieve the desired level of control.

Integration Opportunities: Sites are often susceptible to invasive plant invasion following any ground disturbing activity. Post-implementation monitoring after these activities is useful to identify introduced invasive plant populations early and successfully control/eradicate before they become large infestations.

Card 35
Activity: Invasive Plant Treatments – Herbicidal

Description: Application of herbicides to eradicate, control or contain selected non-native, invasive plant populations. Most of the known non-native, invasive plant infestations occur in developed areas, such as along roadsides and at administrative sites, rock pits, and recreation areas.

Objectives: These treatments are used to achieve the Forest-wide goal of maintaining ecosystems capable of supporting the full range of native and desired non-native species and ecological processes. Specifically, through the objective to manage the Forest in order to reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of invasive species. The eradication or control of existing and new infestations of district priority Invasive Species protects non-infested areas from future introduction by reducing the spread of non-native, invasive plants from existing populations. Herbicide treatments will focus on invasive plant infestations where repeated manual/mechanical treatments have been ineffective or invasive plants species whose life history and biology make them difficult to control using only manual and mechanical treatment methods.

Related Actions: Potential for seeding post-treatment and temporary area closures following herbicide application.

Methods: Methods vary by species and infestation size. Three herbicides (glyphosate, aminopyralid, and imazapyr) are under consideration for use under this activity. To reduce the risks of environmental harm, only aquatically approved formulations of glyphosate and imazapyr are proposed for use; no aquatic formulation is currently available for aminopyralid. Only aquatically approved surfactants will be used as adjuvants. Herbicide use is proposed using ground-based methods, such as spot and selective hand spraying and broadcast methods that targets individuals and groups of plants. No aerial application would be used. Generally herbicide treatments are approved under an annual plan that can be reviewed by interested specialists (see Appendix B).

Equipment Used: Backpack sprayers, hand sprayers, stem injectors, sponge, paint brush, cloth wick, ATV and boom sprayer.

What are the general guidelines constraining this activity?

Federal, Alaskan State, and local standards and permits for herbicide use, herbicide label directions, risk assessment guidance, and implementing project design features developed by resource specialists (see resource specific guidelines below). The following project design features (PDF) are developed to reduce potential adverse impacts of herbicide application to all resources.

General PDFs:

Prepare a specific treatment plan for all sites where herbicide application is proposed. The plan should include the location, target species, herbicide, application method and rate.

Annually, a weed assessment review team will be assembled to review the planned treatments and to ensure PDFs and buffers are applied; integrated treatment methods will be determined by factors such as species and location of the site and based on priorities detailed in the annual treatment plan.

A Pesticide Use Proposal (PUP) will be prepared for herbicide use. The PUP should be reviewed annually to determine if changes are warranted due to changes in the project. If it is determined that substantive changes are warranted, a new PUP will be prepared, reviewed, and approved. If no changes are warranted, the original PUP is sufficient and does not need to be rewritten (Forest Service Handbook 2109.14).

Only applicators certified by the State of Alaska, or those under the direct supervision of a certified applicator, will be allowed to use restricted-use pesticides (Forest Service Manual (FSM) 2154.2, USDA Forest Service 1994b).

Prior to herbicide application, herbicide labels will be reviewed to ensure directions regarding herbicide selection, tank mixing, and use of adjuvants, surfactants and other activities, are followed.

Prior to herbicide application, calibrate sprayer to ensure herbicide is applied at the intended rate.

On saturated soils (including wetlands), and on sites with seasonally high water tables, use only aquatic formulations herbicides, where label restrictions allow.

The Herbicide Transportation, Handling, and Emergency Spill Response Plan and spill kit will be on-site when herbicide treatments occur. This Plan will include reporting procedures, project safety planning, accidental spill clean-up methods, and

information on the spill kit's contents and location as noted in FSM 2150 (USDA Forest Service 1994b) Pesticide-Use Management and Coordination and Handbook (FSH) 2109.14 (USDA Forest Service 1994a).

The maximum herbicide application rate will be restricted to the typical rate specified on the label.

No more than daily use quantities of herbicides will be transported to the project site. The exception is for crews staging at remote locations. Under these circumstances, crews can bring sufficient quantities of herbicides for the planned duration of the field work (*i.e.*, multiple days).

Herbicides and equipment used for application of herbicides will be transported in a leak-proof container, and will be secured to prevent tipping during transport.

To reduce the potential for spills, impervious material, such as a bucket or plastic, will be placed beneath mixing areas to contain any spills associated with mixing or refilling.

Follow herbicide label directions regarding the maximum daytime temperature permitted when applying (some types of herbicides volatilize in hot temperatures).

Herbicide spray equipment will be washed or rinsed a minimum of 150 feet from any waterbody, stream channel, or roadside ditch with flowing water or standing water present (or as far as possible from the waterbody where local site conditions do not allow a 150-foot setback). All herbicide containers and rinse water will be disposed of in a timely manner that will not cause exceeding the threshold of concern for aquatic systems (see Aquatic and Hydrology Herbicide Resource Report).

This project will use only aquatically approved surfactants. This feature will eliminate potential impacts from surfactants that have high levels of polyoxyethyleneamine (POEA), which, at high levels, can have adverse effects to aquatic species.

Marker dyes will be used to mark where herbicides have been applied to avoid over spraying.

To reduce potential spray drift, herbicides will not be applied when average wind speeds exceed the maximum wind speed stated on the product label. If a maximum average wind speed is not stated, herbicide application will be limited to times when wind speeds is less than 10 miles per hour.

Wind and other weather data will be monitored and reported for all pesticide applicator reports.

Herbicides will not be applied immediately prior to, during, or immediately after a rain event at the treatment site.

Avoid or minimize drift by using appropriate application equipment (for instance, nozzles that produce 200 to 800 micron diameter droplets, which are less prone to drift), adding drift reduction agents or adjusting equipment settings, such as nozzle pressure.

What are the resource-specific guidelines?

Silviculture

Review treatment plans with the District Silviculturist to determine if mitigations are necessary to avoid damage to non-target trees or vegetation.

Timber

None

Transportation

Access to work sites is generally available on existing roads. Off-highway vehicles are commonly used when highway vehicle access is not available and as a tool for broadcast spraying when needed. Follow applicable travel regulations, and when necessary obtain permits to use the closed road system.

Wildlife

All applicable laws, BMPs, and Forest Plan direction must be followed. Review treatment plans with District Wildlife Biologist.

The removal of invasive plant species may increase the abundance and availability of native plants for subsistence users.

TES: If any threatened, endangered candidate or Forest Service sensitive wildlife species are present in the treatment area, protective measures may include, but are not limited to, the following: 1) avoiding sensitive areas, 2) seasonal restrictions, or 3) treatment methods designed to avoid adverse impacts.

Heron/Raptor: If there are active rookeries and raptor nesting habitat, disturbance during the active nesting season (generally March 1 through July 31) will not occur or will be postponed. Local biologist will be consulted to determine appropriate distances and timing prior to implementation.

Ground nesting birds: Ground nesting birds shall be considered when planning for all treatment types. If ground nests are discovered, a wildlife biologist will be consulted to determine any mitigation measures. Generally, treatment should be postponed near ground nests until after the nesting and fledgling season (approximately mid-July).

In the event of a wildlife species status changing to Threatened, Endangered, or Sensitive, additional analysis will be completed to determine potential impacts.

Bald Eagles: Bald eagle habitat will be managed in accordance with interagency agreement established with United States Fish and Wildlife Service (USFWS) to maintain habitat to support the long-term nesting, perching, and wintering roosting capability for bald eagles.

If project activities are visible or can be heard from a nest, weed treatment specialist will stay at least 330 feet (100 meters) from the nest, unless the eagles have demonstrated tolerance for similar activities (USFWS Guidelines).

Black Bears: During implementation, weed treatment specialist will seek to reduce human-bear conflicts. Areas of concentrated bear activity will be avoided, especially during the fall.

During annual project planning, the need for additional protection for important bear foraging sites (*e.g.*, fishing sites) will be evaluated in addition to the Forest Plan Chapter 4 Standards and Guidelines for Riparian (Forest Plan, pp. 4-48 through 4-52) and Beach and Estuary Fringe (pp. 4-4 and 4-5).

See Herbicide Biological Assessment/Biological Evaluation for more information.

Fisheries

Review treatment plans with District Fisheries Biologist and implement, as appropriate the following BMPs:

R10 BMPs: 12.4, 12.6, 12.6a, 12.8, 12.9, 12.17, 15.1, 15.2, 15.4, 15.5

National Core BMPs: AqEco2, AqEco-3, Chem-1, Chem-2, Chem-3

Buffers and Spray Distance to Water (BMP 15.5; Chem-3):

Aquatic-based formulations of glyphosate and imazapyr may be applied up to water's edge and for emergent vegetation that grows within the water column using hand application (*e.g.*, wicking or wiping, stem injection) or spot spraying techniques.

No broadcast spraying within 100 feet of the water's edge or within the water column for any chemical.

In the marine environment, aquatic-based formulations of glyphosate and imazapyr can be applied down to the mean high tide line during low or outgoing tides with spot-spray and hand application methods.

Begin application of pesticide products nearest the aquatic habitat boundary and proceed away from the aquatic habitat; do not apply towards a waterbody.

Hydrology

Review treatment plans with the District Hydrologist. Use only aquatically approved pesticides in the proximity of waterbodies (glyphosate and imazapyr).

Follow relevant BMPs spelled out in the R10 Soil and Water Conservation Handbook and the National Core BMP Technical Guide (FS-990a) to ensure water quality standards are met for nonpoint sources of pollution.

National Core BMPs: AqEco-2, Chem-3, Chem-4

R10 BMP: 15.5

Upon implementation, the Hydrologist should consider all resource guidelines posed by Fisheries and Soils/Wetlands. Collaborate with the Fisheries Biologist and the Soil Scientist to address all relevant concerns.

Erosion Control (BMP 12.17; AqEco-2; Forest Plan 4-61):

Apply erosion control measures (*e.g.*, silt fences) and native revegetation (*e.g.*, mulching, native grass seeding, planting) for manual treatment where detrimental soil disturbance or de-vegetation may result in the delivery of measurable levels of fine sediment.

Buffers and Spray Distance to Water (BMP 15.5; Chem-3):

Aquatic-based formulations of all herbicides may be applied up to water's edge using hand application or spot spraying techniques. Aquatic-based formulations of glyphosate and imazapyr may also be used to treat emergent vegetation directly over water.

Herbicide spray equipment would not be washed or rinsed within 150 feet of any waterbody, stream channel, or roadside ditch with flowing or standing water present (or as far as possible from the waterbody where local site conditions do not allow a 150 foot setback). All herbicide containers and rinse water will be disposed of in a manner that would not cause contamination of waters.

The mixing and loading of herbicide(s) would take place a minimum of 150 feet from any waterbody, stream channel, or roadside ditch with flowing or standing water present (or as far as possible from the waterbody where local site conditions do not allow a 150 foot setback).

Public Water Sources (PWS) and Supplies (BMP 15.5; Chem-3):

Before authorizing herbicide use within public water system source watersheds, consult with Alaska Department of Environmental Conservation (ADEC), the affected municipality, and/or the owner or operator of the water system.

Review the completed Source Water Assessment for the PWS watershed, available from ADEC prior to authorizing weed management activities in these watersheds.

Herbicide use within 1,000 feet of domestic wells or public water supplies will be coordinated with the water user, manager, or local Municipal Water board.

Minimum distance to surface waters is 200 feet for herbicide application within municipal watersheds.

All herbicide application, storage, chemical mixing, refilling and post-application equipment cleaning is completed at least 200 feet from domestic wells or public water sources, and in accordance to label guidance relative to water contamination (BMP Chem-5).

All known unclassified (private) water sources will receive the same consultation given to public systems, as outlined above, prior to herbicide application if located within a PWS source watershed. If located outside a PWS source watershed, consultation will occur if herbicide application is proposed within 1,000 feet of surface waters of known unclassified water sources.

Identify Riparian Areas (BMP 15.5; Chem-3):

Forest Service personnel will identify riparian areas according to methods outlined in the Tongass Riparian Management Area standards and guidelines prior to implementation of herbicide application. Forest Service specialists will work closely with herbicide applicators to ensure project design features are implemented.

Soils/Wetlands

Review treatment plans with the District/SO Soil Scientist.

Determine the suitability of the soil and wetlands for each type of herbicide prior to implementation. Use only aquatic formulations in wetlands.

Where elimination of an invasive plant population presents a soil erosion risk, consider erosion control measures appropriate for the site. Adhere to R10 Soil Quality Standards.

Revegetation will follow current Tongass National Forest standards for seed mix outlined in the Guidance for Invasive Plant Management Program (USDA 2017c).

R10 BMPs: 12.4, 12.5, 12.9, 15.1, 15.2, 15.4, and 15.5

National Core BMPs: AqEco-2, Chem-1, Chem-2, Chem-3, Chem-4, Chem-5, Chem-6, Fac-6, and Veg-8

Botany

Review treatment plans with the District/SO Botanist or Ecologist.

Prior to implementation a qualified Botanist/Ecologist must conduct a site-specific review to determine if the activity location has the potential to support any Region 10 Sensitive Plants or Tongass National Forest Rare Plants. Based on the review, a botanical survey may be required during the appropriate growing season to identify individuals or supporting habitat. If a Region

10 Sensitive or a Tongass National Forest Rare plant population is affected by the activity, consider protections around the population that minimize impacts and meet the habitat needs of the species. If sensitive plants are found, the botanist will evaluate the survey results for consistency with the determination of effects in the EIS for any sensitive taxa found in the project area and document. Mitigation actions may be required to be consistent with the May Affect or No Effect determination for sensitive plants found in a project area (Forest Plan PLA1.II p. 4-39). If rare plants are found, the botanist will complete a resource report to analyze for effects of the activity on rare plants or their habitats. Mitigation actions may be required to protect populations (Forest Plan PLA1.III).

Broadcast spraying will not occur within 100 feet of a known sensitive or rare plant occurrence for Glyphosate and aminopyralid, and 900 feet when using imazapyr.

No herbicides may be used within 60 feet of rare or sensitive plants; however the District Ranger may allow use of herbicides within 60 feet of a sensitive or rare plant occurrence (per Forest Plan direction) if deemed necessary to control an infestation that may pose a threat to that occurrence.

Herbicide treatments will be scheduled as practicable to reduce adverse impacts to nearby sensitive and rare plants. For example, herbicides should be applied to an infestation of a late-growing weed species after sensitive or rare plants in the vicinity have entered dormancy, to minimize potential impacts due to spray drift or run-off.

To reduce potential spray drift or run-off, herbicides will not be applied when average wind speeds exceed 10 miles per hour if no maximum wind speed is stated in the labeling.

Invasive Plants

A qualified Botanist/Ecologist will conduct a site-specific risk assessment to determine the proximity of known infestations, potential vectors, and the habitat vulnerability to invasive species introduction and spread (WBMP 1). Additional site-specific design features may be recommended to reduce the spread and introduction of invasive plants.

A Pesticide Use Proposal must be completed and reviewed by the Regional Pesticide Use Coordinator, and approved by the Regional Forester or delegated official prior to implementation. The District Invasive Plant Program Manager will evaluate invasive plant populations and prepare a treatment plan detailing the locations and types of herbicides to be used. This plan will be available for review by resource specialists to ensure appropriate project design features and BMPs are included. The decision maker must review the treatment plan to ensure the proposed treatments are within the scope of the effects analyzed prior to approving the plan for implementation. Treatment plans will be made available to the public.

See Introduction for additional WBMPs that apply to all activities.

Geology/Karst

Review treatment plans with the District/SO Geologist or Karst Specialist. A karst vulnerability assessment will be completed prior to any surface management practice, including application of herbicide in karst terrain.

All hydrology and fisheries project design features will be applied to high and moderate vulnerability karst systems for both surface and subsurface aquatic systems.

Heritage

All Federal Undertakings, defined in 36 CFR 800.16(y), whether ground disturbing or non-ground disturbing, that have the potential to cause effects to historic properties, require compliance with procedures defined at 36 CFR 800 (see Heritage Intro). The Heritage Professional will be consulted during the planning phases of the project in order to identify the Area of Potential Effects, and to evaluate whether additional .information is required for the purposes of determining whether historic properties exist and/or will be adversely affected, and if so, establish the appropriate course of action whether avoidance or mitigation. Section 106 procedures must be concluded prior to project implementation. If unanticipated cultural resources, or the inadvertent discovery of human remains are found during project implementation all work shall stop in the immediate area and steps shall be taken to protect the site from further damage. The Heritage Professional will be contacted immediately and work will not proceed in the area until the Section 106 and/or NAGPRA process is concluded. The Forest Service shall protect known sensitive traditional tribal use areas.

Recreation

Review treatment plans with the District Recreation Specialist.

Activities should consider the Recreation Opportunity Spectrum (ROS) inventory of the activity area and how the actions may impact proposed and established recreation activities on the landscape. Buffers could be provided in areas where resource activities may disrupt the integrity of the recreation experience, or may adversely impact the value of a recreation resource. There is an association between ROS and land use designation (LUD); therefore, reference should be made to the recreation and trails sections of Chapter 3, in addition to the Forest-wide Standards and Guidelines in Chapter 4, and Appendix I of the Forest Plan regarding the Standards and Guidelines for recreation and trails.

Immediately prior to initiating an herbicide application in developed recreation sites and areas of concentrated public use, such as picnic areas located along road systems, or popular berry picking sites, written notice will be posted. The notice will include date and time of application when the area can be re-entered, and the name and phone number of the Forest Service contact. Additional means of notification, such as public service announcements, may also be used at the discretion of the District Ranger.

Within areas of concentrated public use and developed recreation sites, implementation of this project should be limited to weekdays and non-holidays and avoid heavy use periods.

Temporary public use closures are allowed in areas where the public and workers co-mingle and public safety is compromised because of operating equipment, hand tools, and/or the herbicide label requires it. Time treatments to limit temporary closures.

Scenery

SIOs for area must be met (Forest Plan, Chapters 3 and 4). SIOs depend on LUDs and distance from VPRs.

Wilderness

Review treatment plans with the District Wilderness Manager to ensure Wilderness objectives will be met.

A Minimum Requirements Analysis has been completed and approved by the Regional Forester for herbicide treatment activities taking place within designated Wilderness areas. The Minimum Requirements Analysis concludes the activity can only be conducted when the principle objective is to protect or restore the Wilderness resource. The means of treatment used will be a site-specific, professional judgement.

Any use of herbicides within Wilderness areas must be approved by the Regional Forester [FSM 2323.04c (USDA Forest Service 2007)] through a Pesticide Use Proposal.

No motorized equipment or mechanical transport will be used.

Crew size will be kept to 12 people or fewer.

Crew camps, if needed, will be located in previously used campsites if available, and crews will follow Leave-No-Trace guidelines (www.lnt.org).

Wild, Scenic and Recreational Rivers

Maintain or enhance the outstandingly remarkable values (ORVs), free-flowing condition, water quality, and classification of rivers designated or recommended for designation as components of the National Wild and Scenic Rivers System. Apply the High Scenic Integrity Objective (SIO) within wild river corridors and no less than Moderate SIO for any designated or recommended river with a Scenic ORV. Apply all applicable Forest Plan direction pertaining to Wild, Scenic and Recreational Rivers (Forest Plan, p. 3-76 to 3-96).

When would we implement this activity?

Documented populations of district priority Invasive Species are targeted for treatment to reduce their population size and/or limit their spread using an integrated pest management approach. New infestations would be treated in Early Detection and Rapid Response efforts using an integrated pest management approach. Herbicide treatments would be selected when the targeted invasive species is resistant to manual/mechanical methods due to its biology or the infestation site characteristics. Rhizomatous invasive plants such as Canada thistle and Japanese knotweed can reproduce from small root fragments and may be spread by manual treatments. Areas with soil prone to erosion may be selected for herbicide to reduce the disturbance that may occur from removing roots of invasive plants by tool or hand pulling.

Integration Opportunities: Sites are often susceptible to invasive plant infestation following any ground disturbing activity. Post-implementation monitoring after these activities is useful to identify introduced invasive plant populations early and successfully control/eradicate before they become large infestations.