

## **FMU 011 W/ FS/ Cascades**

**FMU Identifier:** Wilderness/ Forest Service/ Cascades

**FMU Number:** 011

**General Risk Category:** Low

**Fire Behavior Indicator:** Energy Release Component based on National Fire Danger Rating System (NDFRS<sup>44</sup>) Fuel Model G

**NFDRS Weather Station:** Grandad, Cinnamon and Buckeye

**Acres:** 108,088

**Ecoregion:** Level III – Cascades; Level IV – 4e High Southern Cascades Montane Forest; 4f Umpqua Cascades; 4g Southern Cascades

**Predominant Vegetation Type:** Mountain hemlock, Pacific silver fir, white fir, Shasta red fir, Douglas-fir, ponderosa pine and western hemlock.

**Communities at Risk Within or Adjacent to this FMU:** Diamond and Lemolo Lake Campsites, Dry Creek, and Toketee

### ***FMU Characteristics***

This FMU is comprised of National Forest lands designated as Congressionally or Administratively Withdrawn in the Umpqua RMP. There are no National Fire Plan communities within this FMU. It consists of an undulating, glaciated plateau punctuated by volcanic buttes and cones. Primary uses are backcountry recreation, grazing and some forestry.

Soils are very deep to moderately deep, clay loam, gravelly clay loam, gravelly silt loam, very gravelly loam, extremely gravelly loam, and cobbly loam across the FMU. In the eastern portion, soils are very deep to moderately deep fine sands and sandy loams to coarse sandy loams of volcanic origin. Volcanic soils associated with this portion are especially sensitive to detrimental compaction from heavy equipment.

### **Boulder Creek**

The wilderness encompasses the Boulder Creek watershed and is characterized by moderate to steep slopes with some benches. Elevation ranges from 1600 to 5600 feet. Natural vegetation primarily consists of white fir, western hemlock in the drainages, Douglas-fir on the driest sites, and silver fir and mountain hemlock in the highest elevations. Soils are extremely variable. Shallow gravelly loams are the most common with shallow to deep clay loams and rock outcrops. Summers are warm with temperatures reaching into the eighties and nineties.

### **Mount Thielsen**

An undulating, glaciated plateau punctuated by volcanic buttes and cones characterize this wilderness. Elevation ranges from 4500 to 9200 feet. Natural vegetation includes mountain hemlock, lodge pole pine and Shasta red fir. Soils are very deep to deep, very gravelly and stony loam to gravelly loam and coarse sand. Summers are warm and moist with temperatures reaching into the seventies.

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<sup>44</sup> Refer to Table 12, NFDRS and Fire Behavior Fuel Models Relationships

### **Rogue Umpqua Divide**

The wilderness is characterized by a major ridge system and consists of a mosaic of conifers, mountain meadows and large rock outcrops. Elevation ranges from 3200 to 6400 feet. Natural vegetation includes mountain hemlock and silver fir in the highest elevations, white fir and Shasta red fir in the lower elevations, western hemlock in the drainages and Douglas-fir on the driest sites. Summers are warm with temperatures reaching into the eighties and nineties.

### ***Strategic and Measurable Management Objectives***

#### **Strategic Objectives**

- ✦ Human life, firefighter, and public safety are the highest priority and will drive all wildland fire and fuels treatment actions.
- ✦ Contain unwanted fires at the smallest possible size using appropriate suppression response.
- ✦ Ecosystems are restored and maintained consistent with land uses and historic fire regimes, prescribed fire and mechanical fuel treatments. Refer to the Umpqua RMP, Appendix D, for the Wilderness Management Plan.
- ✦ Protect high value resources through mechanical fuel treatments and prescribed fire.
- ✦ Assess the potential wildland fire action impacts to invasive species spread.
- ✦ Minimize the impacts of fire suppression tactics on the wilderness resource.
- ✦ Permit lightning caused fires to play, as nearly possible, their natural ecological role within the wilderness. (Ref. Umpqua RMP, section B-10 for Boulder Creek)

#### **Measurable Objectives**

- ✦ Wildfires are contained within wilderness boundaries.
- ✦ Create fuel breaks in the Illahee Facial priority one area (Ref. 2003 Watershed Restoration Business Plan) that borders the Boulder Wilderness.

### ***Management Constraints Affecting Operational Implementation***<sup>45</sup>

FMU 011 includes the following LRMP Management Areas (MA's) and the constraints specific to operational implementation. The following mitigation measures apply to all management areas:

- ✦ Live trees should not be cut unless it is determined that they will cause fire to spread across the fire line, or may present a hazard to workers.
- ✦ Include a qualified Resource Advisor as a position in the District initial attack organization. This person should be familiar with the area and its resource values, and have a thorough knowledge of the Standards and Guidelines of the Northwest Forest Plan.
- ✦ Wood should not be bucked or removed from stream channels.

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<sup>45</sup> *LRMP/ROD management area prescriptions, standards and guidelines*

- Locate incident bases, fire camps, helibases, staging areas and other facilities outside riparian areas.
- Initiate BAER Assessment on wildfires greater than 300 acres to protect life property or resources.

**MA 4 Wilderness (Rogue-Umpqua Divide, Boulder Creek, and Mt. Thielsen)**

- Provide timely and safe fire suppression in the wilderness commensurate with the risk.
- Minimize the impacts of fire suppression tactics on the wilderness resource.
- Only clear fugitive retardant or water will be used.
- Boulder Creek Wilderness is steep and rocky. Suitable landing zones for smoke jumpers are limited. Consider the location of the fire and potential landing zones prior to utilizing smoke jumpers in this wilderness area.
- Helicopters will not be used for personnel transport, rappelling, sling loads, bucket drops or other tactical purposes without approval of the Forest Supervisor.
- The use of power equipment, such as pumps or chainsaws, requires a formal waiver approved by the Forest Supervisor.
- The use of fire line explosives for line construction or snag falling requires the approval of the Forest Supervisor.
- The use of dozers requires the approval of the Regional Forester.
- Camps should be established outside of wilderness.
- The objective of post-suppression rehabilitation is to return the affected area to wilderness standards to the extent possible.
- Burned area emergency rehabilitation (BAER) will be utilized to protect life, prevent loss of wilderness characteristics, prevent loss of resources outside of wilderness areas, and to prevent loss of other resources such as property, facilities, roads, streams or endangered species habitat.
- Only native plant species shall be used for rehabilitation needs.
- Conduct all fire management activities within wilderness in a manner compatible with overall wilderness management objectives. Give preference to methods and equipment that cause the least need for subsequent restoration or mitigation.

**MA 5 Wilderness (Oregon Cascades Recreation Area)**

- Confine or contain wildfires. Utilize control strategy when appropriate.
- Use wildfire suppression methods that minimize impacts on recreational use areas, water bodies and travel routes.
- Prohibit off-road vehicles and fire line construction with tractors except through the WFSA process.

**MA 6 Special Interest Areas (Umpqua Rocks)**

Umpqua Rocks Geologic Special Interest Area is located within the Boulder Creek Wilderness boundary. Wilderness direction supersedes direction in Special Interest Areas where a conflict occurs.

### **MA 9 Research Natural Areas, established and potential (Cougar Butte)**

The proposed Cougar Butte Research Natural Area is located within the Rogue Umpqua Divide Wilderness boundary. Federal laws governing use and management of wilderness take precedence over regulations governing use and management of the proposed research natural area.

#### ***Management Constraints Related to Wildland Fire Suppression and Fuels Treatment***

- ✦ Before entering private land or affecting private facilities, and during suppression actions, work with private landowners to obtain permission to cross private land, cut fences or use privately owned facilities (i.e. ditches, water sources, etc.).
- ✦ Assign a qualified archeologist or resource specialist as a resource advisor to any wildland fires potentially or actually burning in areas with a high probability of heritage resource sites.
- ✦ Coordinate with resource specialist regarding management constraints for special status plants and animals and for wilderness regulations.
- ✦ Wildland Fire Use is currently not a tool available for this planning unit.
- ✦ Initiate emergency consultation for listed Threatened or Endangered Species.

#### ***Management Constraints Specific to Wildland Fire Use***

Wildland Fire Use is not a tool available for this planning unit, so will not be planned or implemented at this time.

#### ***Historic Fire Occurrence***

The southwest Oregon area experiences moderate fire activity, mainly associated with lightning ignitions during the summer months. Detailed statistics regarding historic fire activity may be found in Appendix C.

#### ***Fire Management Situation***

##### **Weather patterns influencing fire behavior and historical weather analysis.**

##### **Thielsen Wilderness, OCRA, Diamond Lake, Bailey, Garwood (wilderness, OCRA, WUI, Matrix)**

Summer afternoon thunderstorms are common and are typically accompanied by strong gusty winds, heavy but short periods of rain or hail, and lightning. Safety associated with these storms concern cold, wetting rain, lightning strikes and gusty winds that affect fire behavior or cause trees and snags to fall.

##### **Diamond Lake WUI**

(Specifically the north shore of Diamond Lake, south aspects)

Wind and sun off of Diamond Lake contribute to a significantly dry microclimate. Expect 1000-hour fuel moistures to be significantly lower than surrounding area, especially in the early spring and late fall. Humidity recovery is very poor.

##### **North Umpqua River and Clearwater Inner Gorge (Wild and Scenic, WUI, Matrix)**

Up and down canyon wind channeling within the gorge is common; specific areas of concern exist from the Forest boundary to the west, to Stump Lake on the North Umpqua Highway/Clearwater River, to Milepost 65 near Stump Lake, and up the North Umpqua

River beyond Toketee Lake to Thorn Prairie/mountain meadows. Also, late summer and fall inversions within the North Umpqua drainage may extend to these same areas.

**Copeland Creek drainage.**

Expect strong up canyon afternoon winds. These winds affect the entire drainage, and are not limited to the river channel.

**Copeland Creek Drainage (DLRD)/Boulder Creek Drainage (DLRD)/Calf Creek Drainage (NURD) ---LSR and wilderness.**

Strong late summer and fall inversions are common in these locations.

Summer thunderstorms occurring on this portion of the district may be accompanied by little or no moisture.

**North slopes of Mt Baily. = Lost Creek Loop/lower Bear Creek = twnshp 27 s, rng 5 e.= south and east of hwy 138. (Baily Roadless Area, matrix,)**

Expect strong and sudden wind changes (upslope to downslope) to occur at any time, from late afternoon and throughout the night, as the upper slopes of Mt. Bailey become shaded. This is especially noticeable in the spring and early summer. The downslope flow will be consistent and lead to poor humidity recovery in the affected area.

**North slope of Trap Mountain (township27s range 4e section 11 ) Matix**

The mid-slope thermal belt effect is strong and noticeable along middle third of this north facing slope; expect poor humidity recovery.

**DLRD District in general**

Strong east winds typically occur a few days each spring, and a few weeks each fall. Areas with easterly aspects above 3000' are affected the most.

**Other areas not on DLRD**

The inner gorge of the north Umpqua River (Highway 138) between Wilson Creek and Steamboat is typically warmer and drier than adjacent areas. This is most noticeable in late winter and early spring, but can occur in summer as well.

**Fire season determination.**

Historical analysis has determined fires typically occur from early June through late October. Most fires occur in July, August and September, and are associated with lightning.

**Fuels conditions likely to influence fire behavior.**

The primary fuel type is closed canopy timber stands of short and long needle conifers or hardwoods. Slow burning ground fires with low flame heights are typical, with occasional flare-ups where heavy fuel concentrations are encountered.

The white fir, western hemlock and Douglas-fir plant association groups are at risk due to increased understory densities of shade tolerant species and an increase in mortality due to insect and disease infestation. Dead-down fuels include greater quantities of three-inch

or larger limb wood that creates a large load of dead material on the forest floor. Crowning, spotting and torching of individual trees occur more frequently.

**Fire Regime Current Condition for FMU 011**

<b>Fire Regime</b>	<b>Area</b>	<b>% of total area</b>
I	2,224	2.06
II	1,640	1.52
III	35,431	32.78
IV	9,756	9.03
NOVG	37	0.03
V	59,000	54.59
	Total: 108,088	

**Control problems and dominant topographic features.**

Potential control problems:

- Limited road access
- Extreme fire behavior
- Fuel model 10 fire behavior characteristics
- Slow response times
- Inadequate water sources
- Steep dissected terrain

Dominant topographic features:

- High, undulating plateau punctuated by volcanic peaks
- Highly dissected mountains with medium gradient streams and rivers in Boulder Wilderness
- Prominent ridge system dividing the Rogue and Umpqua drainages
- Elevations above 4100 feet influence fire behavior; fire activity decreases and spread slows

**Firefighter and public safety considerations.**

- Potential need for traffic control and possible evacuation coordination.
- Access in and out of area.
- Hazard tree safety.
- Minimal opportunities to utilize natural or created opening for safety zones.
- Steep, rocky terrain.
- Notification of wilderness users in remote locations.

**Fire prevention and education opportunities.**

- Maintain fire prevention signs at trail heads in accordance with agency prevention plan.
- During high use periods, visitor contacts are essential.
- Active dissemination of fire restriction information and forest user contacts.
- Fire prevention awareness activities with local schools each spring.
- Fire prevention awareness programs.

## Values to be protected (TES, Cultural, etc.)

### 100 Acre LSR's:

- During wildfire and prescribed fire activities, minimize damage to vegetation within 100-acre LSR's.
- Consider allowing trees and snags to burn out instead of falling them.
- Machinery such as tractors will only be used to control fires within the 100-acre LSR with appropriate line officer approval.

### Wildlife Mitigation Measures

There are several Forest sensitive aquatic amphibian species (Torrent Salamander, Foothill Yellow-legged Frog, Oregon Spotted Frog) that inhabit all streams classes, ponds and wet areas. Additionally the Western Toad, Tailed, Red-legged, and Cascade Frogs are state sensitive species. These species are strongly associated with the aquatic environment in all life stages. In winter months adults may disperse some distance from stream habitat. However, during hot dry summer months they may be found in close proximity to streams, ponds or wet areas. The use of chemical retardant and foam is known to have adverse effects on these species, and should be avoided in all riparian reserves.

Northwest Pond Turtles inhabit class III, II and I streams and ponds. Impacts may occur from dipping or drafting water from ponds, especially when water levels become low and turtles are concentrated in a smaller area.

Protect known Northern Bald Eagle nest trees and roost sites. Disturbances adjacent to known American Peregrine Falcon nest sites may impacts nesting and rearing activities if those disturbance activities occur in the spring or early summer months. Protect 100 acre LSR's that are Northern Spotted Owl activity centers.

### Aquatic Mitigation Measures

The following measures may be implemented within Wilderness Areas with appropriate line officer approval.

Fireline construction/aerial retardant use:

- Dozer line limited to slopes < 35% and Resource Advisor approval
- Dozer line in inventoried roadless areas requires Forest Supervisor approval
- No dozer line in riparian reserves or on rocky ground.
- Rehabilitate dozer line
- Don't build lengthy hand line parallel to streams within riparian reserves); instead, use creek as fire line. Don't buck in-stream logs.
- If possible, allow fire to back toward creek rather than lighting burnouts from edge of stream.
- No aerial retardant delivered within 300 feet of streams.

Mop up/water use:

- Don't use firefighting foam within 30 feet of streams or in wetlands.
- Store extra gas cans at least 20 feet from stream, and on spill pans or absorbent pads.

- Place water pumps and gas cans in spill pans or on absorbent pads when operating in and near creeks.
- Minimize falling snags in riparian reserves. If falling is required for safety reasons, fall into stream if possible.
- All foot valves have to be screened with a 3/32<sup>nd</sup> inch screen mesh.
- Don't take more than 1/2 flow of streams when pumping from small streams; use the largest water source possible.
- Off-forest tenders and engines need to have their tanks flushed and sterilized prior to deployment on the line to reduce the risk of transmission of disease, exotic snails or mussels.

### Cultural Resources

Cultural resources on lands administered by the Federal Government are protected under federal mandate including the Archaeological Resources Protection Act of 1979, as amended, and the National Historic Preservation Act of 1966 (as amended 1990). Cultural resources affected by federally funded undertakings such as fire suppression activities require consultation with the Oregon State Historic Preservation Officer. Mitigation of the effects of suppression activities on cultural resources may be required. The archaeologist will treat wildland suppression activities as an undertaking as per section 106 of the National Historic Preservation Act (36 CFR 800.12(2)) and will follow the prescribed course of action.

Consultation with the appropriate American Indian Tribes and interested publics will be completed by the Forest Tribal Liaison. The Confederated Tribes of the Grand Ronde Reservation, Confederated Tribes of the Siletz Reservation, and the Cow Creek Band of Umpqua Tribe of Indians will be contacted through each tribe's established cultural committee as soon as possible after the extended attack phase has been established. Consultation will seek to establish the opportunities for comment, procedures for objection and resolution of the objections.

Cultural resources may be discovered or are recorded within this FMU. Recorded cultural resources include cultural peeled ponderosa pine trees, lithic scatter sites, cairn or vision quest sites and traditional use areas. The Umpqua National Forest archaeologist will provide specific guidance for avoidance of archaeological and historic resources, and the treatment of traditional resources in this FMU. The following guidelines will be followed during suppression and restoration activities:

- The resource advisor will have current information and GIS maps of all high probability locations for cultural resources and information pertaining to specific site locations.
- To ensure protection of sensitive site locations during the wildland fire briefings, specific locations for archaeological sites will be shared on a need-to-know basis. General locations will be provided during briefings.
- A qualified archaeologist shall be assigned as a resource advisor to any wildland fire with potential to impact areas with a high probability of archaeological resources.

- The Forest probability maps will be consulted and, if needed, proposed locations for fire lines, fire camps, helibases, staging areas, drop points, safety zones and all other similarly habitat-disturbing activities that have the potential to impact cultural resources will be inspected by an archaeologist prior to the activity. The archaeologist will seek opportunities to avoid or minimize impacts to archaeological sites.
- Archaeological sites should be avoided to the extent possible and the impacts to the sites should be minimized during fire suppression and restoration activities.
- Hand line construction and burning methods that minimally disturb the ground is preferred in high probability areas.
- Protection of historic structures may include wrapping structures with fire protective material, removing or clearing away flammable fuels, applying foam, installing sprinkler systems, constructing line and burning out, or using aerially delivered retardant or foam.
- Do not rehabilitate hand line or dozer line in or near lithic scatters or cairns without consulting the assigned archaeologist.
- If culturally peeled ponderosa have to be felled, the cut should be above or below the peeled scar.
- The resource advisor will be informed of all cultural resources located by field crews. Potential impacts will be recorded. This information will be made available to the Forest archaeologist as soon as possible.

**Threatened, Endangered and Sensitive Plant Considerations**

Fire suppression activities should avoid known sites of threatened, endangered, and sensitive (TES) plants. Fire suppression resources will receive guidance from each individual Ranger District.

- The resource advisor should have current information and GIS maps of all TES plant sites.
- Fire camps, helibases, staging areas, drop points, safety zones and all other habitat-disturbing activities should not be located at TES plant sites.
- A strategic network of such sites should be pre-identified in order to minimize inadvertent damage to TES plant sites during initial attack.
- Fire control lines should avoid TES plants sites and, to the degree practical, TES plant habitat (these areas often represent unique habitats as well).
- Water drafting sites should not be located at TES plant locations.
- Prescribed burning or fuels treatments adjacent to TES plant locations should not adversely alter microclimatic conditions at the TES plant site.
- TES plants inadvertently damaged during fire suppression should be restored as appropriate during fire rehabilitation.
- Water should be avoided at sites of TES lichens and bryophytes if possible because they are more sensitive to heat when hydrated than when dormant. Retardant should be avoided at these sites as well since these organisms are extremely sensitive to environmental pollutants.

### **Recreation**

Forest recreation sites are depicted on the FMU maps. Maps of trails are available at Forest offices.

### **Proposed hazard fuels treatment or prescribed burns.**

This information is available from Ranger Districts on request.

### **Other elements of the fire environment affecting management (smoke management).**

Contribute to meeting National Ambient Air Quality Standards and Prevention of Significant Deterioration standards established under the federal clean Air Act (42 USC 7401 et seq.). Refer to the smoke management discussion in chapter four of this FMP.

### **Other special concern area.**

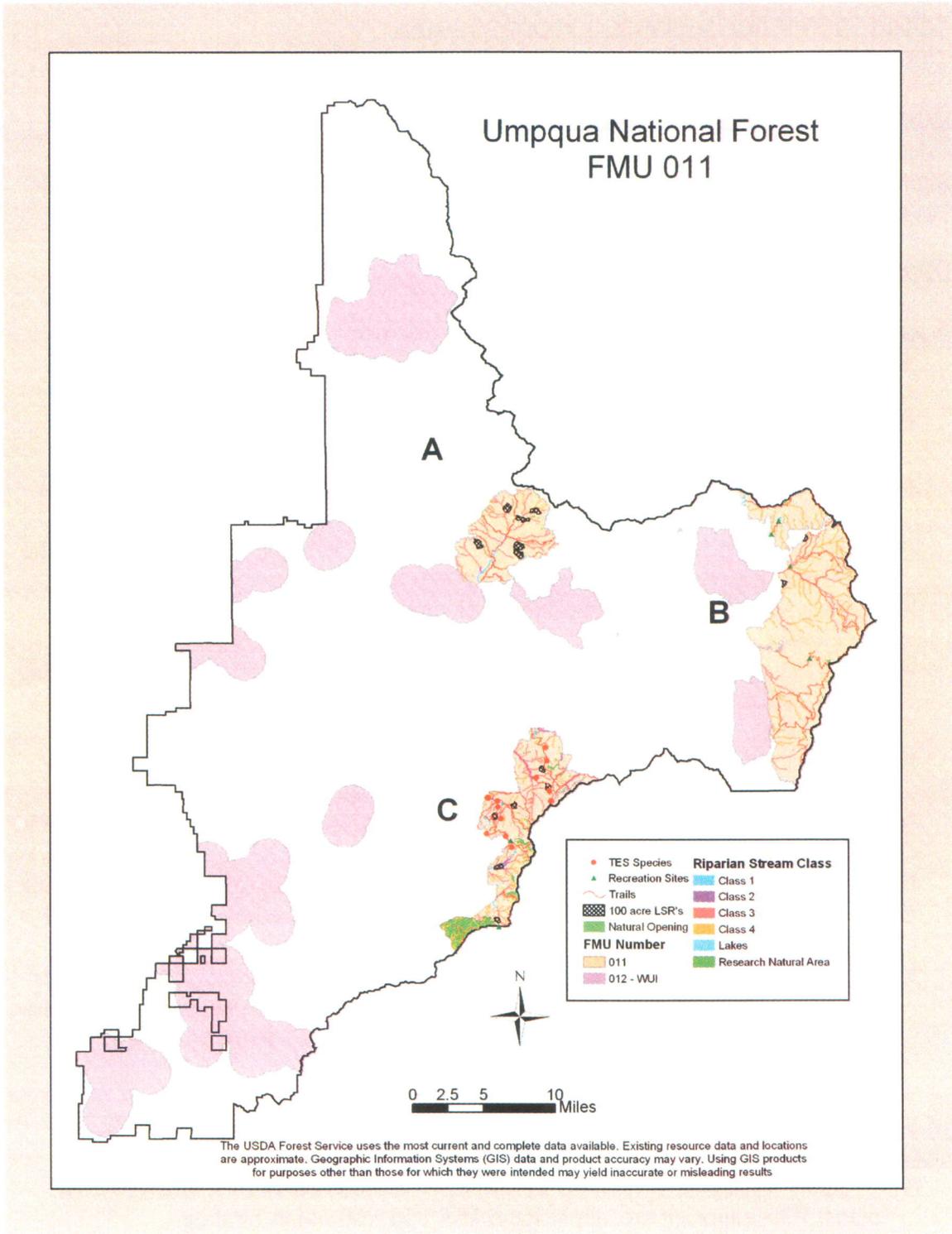
#### **Prevention Measures for Noxious Weeds**

- ✦ Avoid or remove sources of weed seed and propagules to prevent new weed infestations and the spread of existing weeds
- ✦ Ensure that rental equipment is free of weed seed and propagules before the Contracting Officer's Representative accepts it.
- ✦ Maintain a network of airports, helibases, camps and staging areas in a noxious weed-free condition.
- ✦ Vehicles and heavy equipment should be cleaned, with particular attention to the tires and undercarriage, before moving onto the Forest.
- ✦ Inspect and treat weeds that establish at equipment cleaning sites after fire incidents.
- ✦ Fuels management activities should avoid opening the canopy over, or disturbing the soil adjacent to, existing weed-infested areas unless the weed site is being managed.
- ✦ Roadside noxious weeds along major travel routes should be treated as long as weed treatment doesn't unnecessarily delay fire suppression activities.
- ✦ Avoid parking vehicles or machinery on weed infestations by flagging sites off as soon as practical.
- ✦ Avoid creating soil conditions that promote weed germination and establishment.
- ✦ Use suppression tactics that minimize suppression-induced disturbances to soil and vegetation.
- ✦ Avoid moving water buckets from weed-infested lakes or ponds to water bodies that are not infested until buckets can be cleaned of seeds and propagules. (There is no hazard associated with using waters infested with aquatic weeds on terrestrial sites).

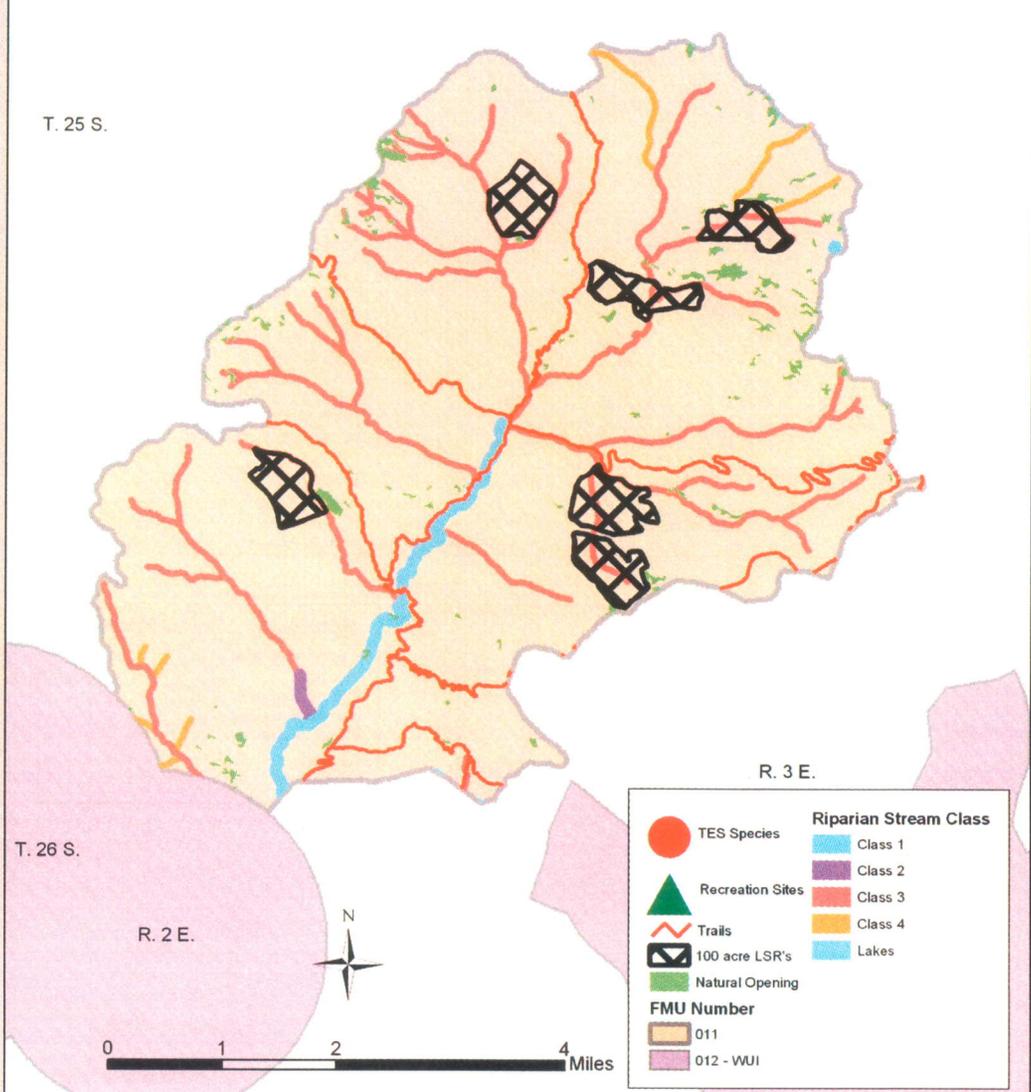
#### **Incorporate weed prevention practices into fire rehabilitation project design and implementation**

- ✦ Evaluate weed status and risks in Burned Area Emergency Response (BAER) plans. When appropriate, apply for BAER and restoration funding.
- ✦ Seed and straw mulch to be used for burn rehabilitation should be free of weed seed. All seed should be noxious weed-free certified.

- Re-vegetation of disturbed sites, using locally adapted native species, should be considered if site-specific conditions suggest there is a high-risk of establishment or movement of noxious weeds.

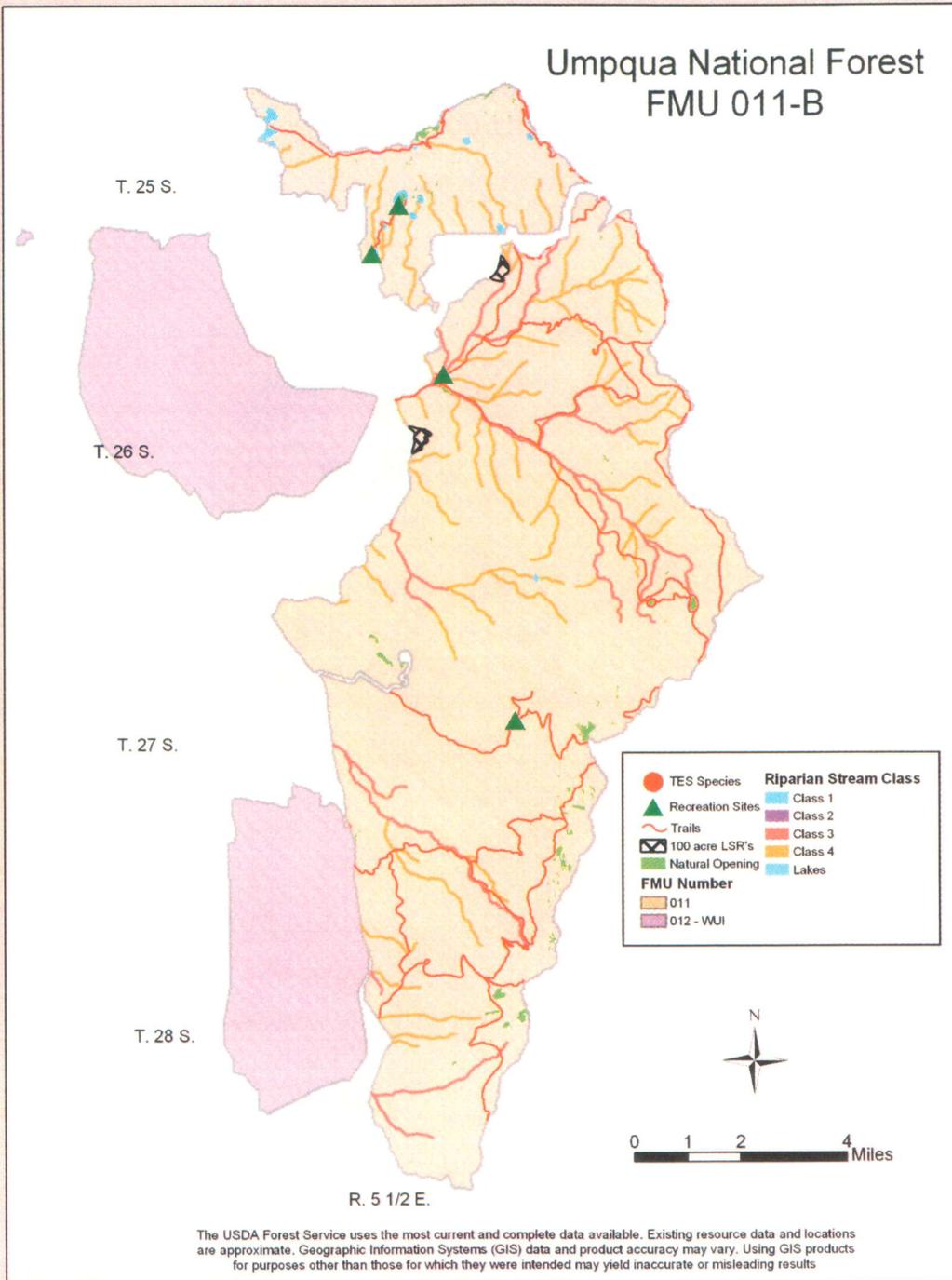


# Umpqua National Forest FMU 011-A



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# Umpqua National Forest FMU 011-B



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# Umpqua National Forest FMU 011-C

T. 28 S.

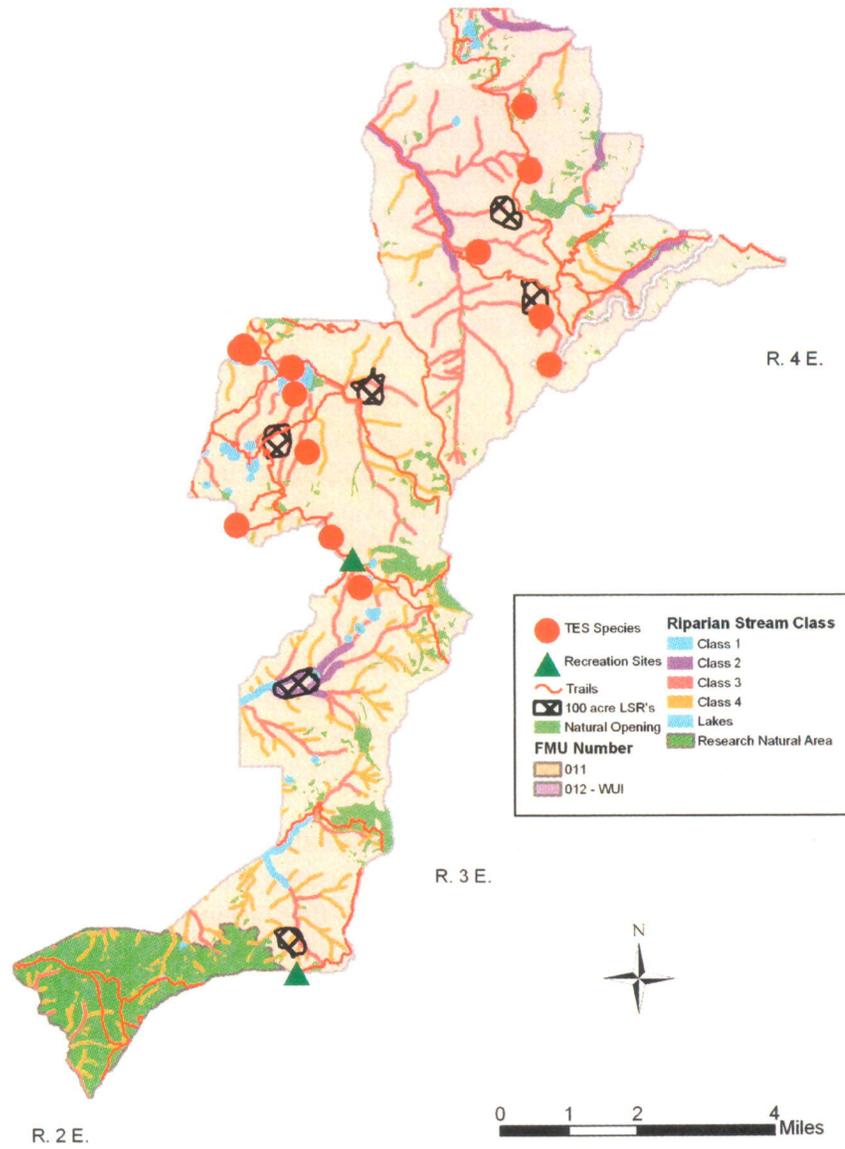
T. 29 S.

T. 30 S.

R. 4 E.

R. 3 E.

R. 2 E.



	TES Species		Riparian Stream Class
	Recreation Sites		Class 2
	Trails		Class 3
	100 acre LSR's		Class 4
	Natural Opening		Lakes
	FMU Number		Research Natural Area
	011		
	012 - WUI		



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