

FMU 008 GF/ FS/ Cascades

FMU Identifier: General Forest/ Forest Service/ Cascades

FMU Number: 008

General Risk Category: Moderate

Fire Behavior Indicator: Energy Release Component based on National Fire Danger Rating System (NDFRS³⁸) Fuel Model G

NFDRS Weather Station: Toketee, Pickett Butte

Acres: 407,993

Ecoregions: Level III – Cascades; Level IV – 4a Western Cascades Lowlands and Valleys; 4b Western Cascades Montane Highlands; 4e High Southern Cascades Montane Forest; 4f Umpqua Cascades; 4g Southern Cascades

Predominant Vegetation Type: White fir, western hemlock, Pacific silver fir, Douglas-fir and ponderosa pine.

Communities at Risk Within or Adjacent to this FMU: Ash Valley, Diamond Lake Campsite, Lemolo Lake Campsite and Idlewyld Park.

FMU Characteristics

FMU 008 is primarily National Forest System land within the matrix land allocation. There is a very small amount of private land inholdings, as well as designated Roadless, located within this FMU. There are no National Fire Plan communities within the FMU. The primary uses are forestry and recreation.

The level III Ecoregion is primarily Cascades (Umpqua Cascades subdivision) with a small portion to the southeast in the Southern Cascades subdivision. The eastern portion is High Southern Cascades Montane Forest, and the northern piece is Western Cascades Lowlands and Valleys, and Western Cascades Montane Highlands subdivision. The Umpqua Cascades subdivision can be characterized by its highly dissected mountains with a few small lakes, and high to medium gradient streams and rivers. It is a transitional zone between the lush moist forests of the Ecoregions to the north and the drier forests of the Southern Cascades and Klamath Mountains to the south. The elevation ranges from 1000 to 5300 feet.

Gently sloping mountains and broad valleys characterize the Southern Cascades subdivision with elevations ranging from 2600 to 5800 feet. The High Southern Cascades Montane Forest consists of an undulating, glaciated plateau punctuated by volcanic buttes and cones, with elevations ranging from 4000 to 8200 feet. The Western Cascades Lowlands and Valleys can be characterized by a network of steep ridges and narrow valleys ranging in elevation from 800 to 4000 feet. The Western Cascades Montane Highlands subdivision is composed of steep, glaciated mountains that have been dissected by high-gradient streams. Elevations range from 2800 to 5900 feet.

Natural vegetation within the consists of grand fir, white fir, western hemlock, Pacific silver fir, Douglas-fir, some Shasta red fir and mountain hemlock. The Western Cascades

³⁸ Refer to Table 12, NFDRS and Fire Behavior Fuel Models Relationships

Montane Highlands is higher in elevation and is snow-influenced. The High Southern Cascades differ in vegetation, and consists of mountain hemlock, lodge pole pine and Pacific silver fir.

Soils are very deep to moderately deep, clay loam, gravelly clay loam, gravelly silt loam, very gravelly loam, extremely gravelly loam, and cobbly loam in the north and southern designations portions of the Umpqua NF. Soils are very deep to moderately deep, fine sands and sandy loams to coarse sandy loams of volcanic origin in the eastern portion of the Umpqua NF. Volcanic soils associated with the eastern portion are especially sensitive to detrimental compaction from heavy equipment.

Summers in the Umpqua Cascades are warm and dry with temperatures reaching into the eighties. The climate in the Southern Cascades is drier than other subdivisions in the Cascades. The Western Cascades Lowlands has a wet, mild climate and the Western Cascades Montane Highlands has lower temperatures than the Lowlands, with a deep annual snow pack.

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.
- ▶ Protect high value resources through mechanical fuel treatments and prescribed fire.
- ▶ Increase the number of acres treated annually by prescribed fire and mechanical treatment to meet hazardous fuels reduction objectives.
- ▶ Encourage and participate in partnerships with citizens or community-centered approaches to manage fire risks and hazards in wildland/urban interface areas.
- ▶ Focus fire prevention activities in and around communities at risk.
- ▶ Assess the potential impact of wildland fire actions on spread of invasive species.
- ▶ Develop and maintain adequate water sources.

Measurable Objectives

- ▶ Suppress all unwanted fires at less than ten acres 90 percent of the time.
- ▶ Restore and rehabilitate 90 percent of severely burned areas within one year after fire events.

Management Constraints Affecting Operational Implementation³⁹

FMU 008 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.
- ▶ 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 1 Semi-primitive Unroaded Recreation (Rolling Grounds, Yellow Jacket, Clear Creek Camp, Three Lakes, Bailey, Junetta-Herman, and Sawtooth)

- ▶ Confine or contain wildfires. Utilize control strategy when appropriate.
- ▶ Prohibit off-road vehicle travel and fire line construction with tractors on wildfires, except through the WFSA process.
- ▶ On wildfires, use methods that minimize impacts on adjacent use areas, water bodies and travel routes.
- ▶ Prescribe fire on natural fuels permitted to the extent needed to meet Recreation Opportunity Spectrum objectives.

The Sawtooth area is within Layng Creek Municipal Watershed. Specific management practices are described in the Layng Creek Municipal Watershed Management Plan (1989). Use of fire retardant in the Sawtooth area is permitted when approved by the District Ranger.

MA 3 Mount Bailey Winter Sports

- ▶ Developed recreation sites, structures and improvement are a priority for wildfire suppression and an appropriate suppressions response will be utilized.
- ▶ Fire line construction with tractors is prohibited except through the WFSA process.
- ▶ Prescribed burning of natural fuels permitted to the extent needed to meet other resource objectives.
- ▶ Use wildfire suppression methods that minimize impacts on goals adjacent to use areas, water bodies and travel routes.

³⁹ *LRMP/ROD management area prescriptions, standards and guidelines*

MA 6 Special Interest (Emile Big Tree and Slide Creek Fossil Beds)

- Fire suppression is encouraged; special precautions may be addressed in the Wildland Fire Situation Analysis (WFSA).
- Machinery such as tractors should not be used to control fires unless addressed in the WFSA process.

MA 8 Experimental Forest (South Umpqua Experimental Forest)

Fire management activities should be consistent with Coyote Creek research objectives and the Umpqua RMP.

MA 9 Research Natural Area (RNA) (Squaw Flat)

- Fires endangering the boundaries of research natural areas should be suppressed while still outside the RNA using appropriate suppression responses.
- Wildfires within the area will be allowed to burn undisturbed, unless they threaten humans or property outside the area or the uniqueness of the RNA, as determined by a Wildland Fire Situation Analysis.

MA 10 Timber

- Appropriate suppression response will be used. Fire suppression is encouraged.
- Special precautions for recreation use need to be addressed in a WFSA.
- Minimize damage to riparian vegetation during wildfire and prescribed fire activities.
- Firelines should be constructed outside the riparian reserve.
- During slash disposal burning, protect riparian vegetation adjacent to streams.
- Minimize soil disturbance. Hand and machine fire lines should not be used to control fires within unique and mosaic habitat areas.
- Broadcast burning will be designed to prevent reduction in site productivity.
- Detection activities will be intensified during critical fire periods.
- Minimize delivery of chemical retardant, foam or additives to surface waters and riparian habitat.

MA 11 Big Game Winter Range

- All MA 10 constraints apply to MA11.
- Broadcast burning is the preferred slash disposal technique.

MA 14 Undeveloped Ecosystems

Wildfire suppression methods are to minimize the effect on the ecological values and result in the smallest practicable area burned.

Adaptive Management Area (Little River AMA)

Prescribe fire in natural fuels (within late seral areas prone to fire) are permitted to the extent needed to meet other resource goals.

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.

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 Minimum Impact Suppression Tactics (MIST) within late successional habitat.
- ✦ 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.

The steep, dissected terrain in many of the drainages of this FMU promotes a strong upslope wind in the afternoon at the head of many of the major drainages on the Tiller Ranger District.

During the Tiller Complex in 2002 the district experienced a strong inversion over most of the fire area that lasted for several days. The inversion would lift in mid-afternoon, creating extreme fire behavior across the fire area.

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.

Fragmentation of conifer stands due to timber harvest, the relatively densely planted stands of conifers, and past site preparation and pre-commercial thinning activities contribute to variations in the spread and effects of fire across the landscape.

The white fir, western hemlock, Douglas-fir and ponderosa pine 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 008

Fire Regime	Area	% of total area
I	34,854	8.48
II	5,410	1.32
III	223,478	54.36
IV	20,229	4.92
NOVG	183	0.04
V	126,932	30.88
	Total: 411,086	

Control problems and dominant topographic features.

Potential control problems:

- Blocked/poor road access; roadless areas
- Moderate response time
- Slow response time in roadless areas
- Steep dissected terrain
- Extreme fire behavior
- Presence of logging slash
- Limited access to water for fire suppression

Dominant topographic features:

- Highly dissected mountains with medium gradient streams and rivers
- Prominent ridge system dividing the North and South 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.
- Developed campgrounds.
- High-use roads may become congested during suppression events.
- Steep, rocky terrain.

Fire prevention and education opportunities.

- Maintain fire prevention signing 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 at hosted campgrounds.

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 stream 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 impact 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 3/32nd 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.

Approximately 240 acres of burned stands have been treated since the 2002 fire season. The stands have been cut and piled. Burning will occur in the fall of 2004 if funding is available.

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

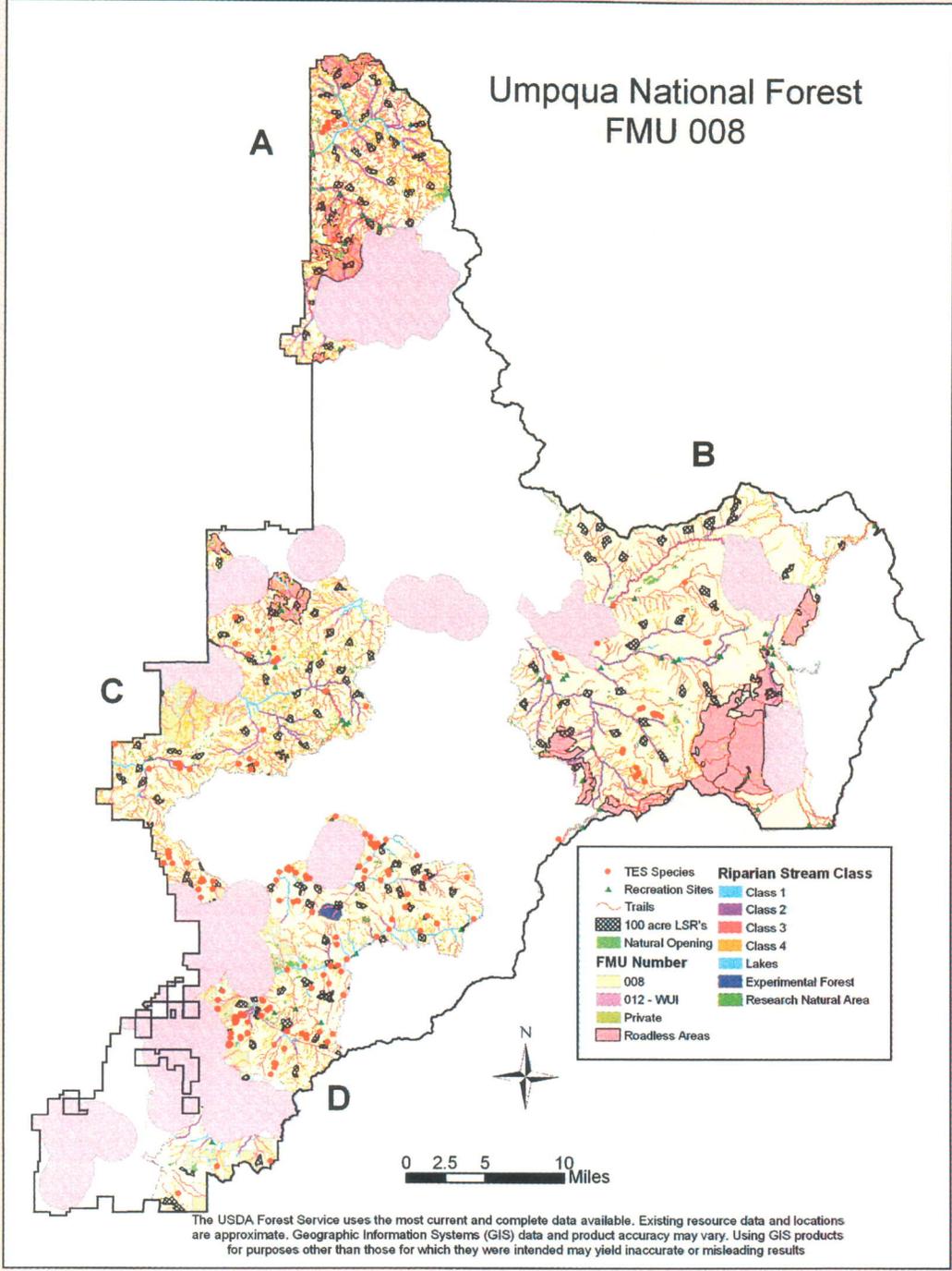
- ✦ Avoid or remove sources of weed seed and propagules to prevent new weed infestations and the spread of existing weeds
- ✦ Ensure that rental equipment is free of weed seed and propagules before the Contracting Officer's Representative accepts it.
- ✦ Maintain a network of airports, helibases, camps 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 008



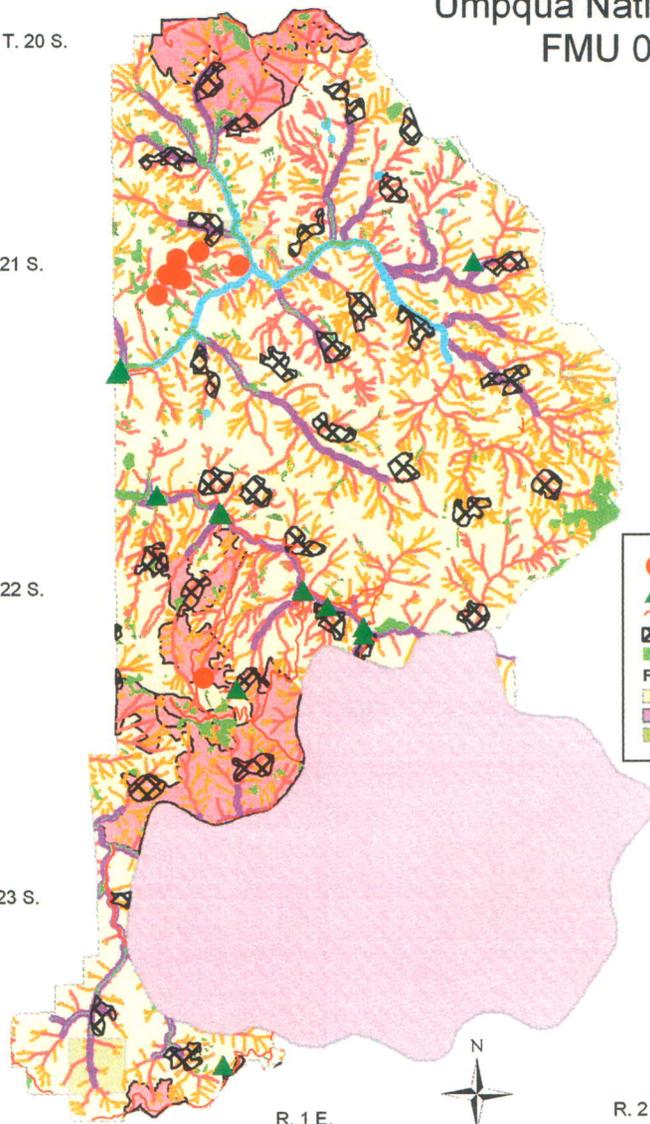
Umpqua National Forest FMU 008-A

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T. 21 S.

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T. 23 S.



● TES Species	■ Stream Class
▲ Recreation Sites	■ Class 2
Trails	■ Class 3
100 acre LSR's	■ Class 4
■ Natural Opening	■ Lakes
FMU Number	■ Roadless Areas
 008	
 012 - WUI	
 Private	

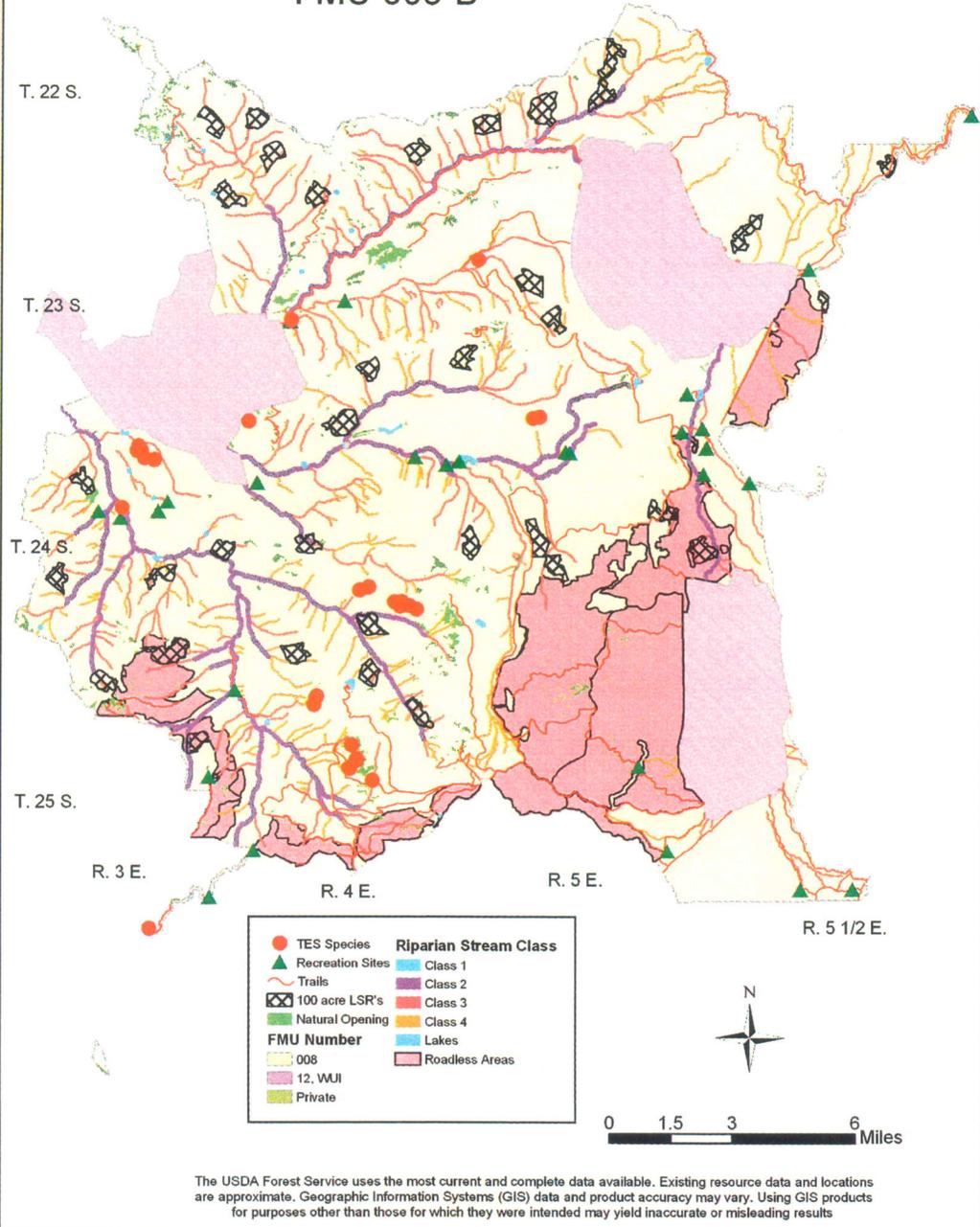
R. 1 E.

R. 2 E.



The USDA Forest Service uses the most current and complete data available. Existing resource data and locations are approximate. Geographic Information Systems (GIS) data and product accuracy may vary. Using GIS products for purposes other than those for which they were intended may yield inaccurate or misleading results

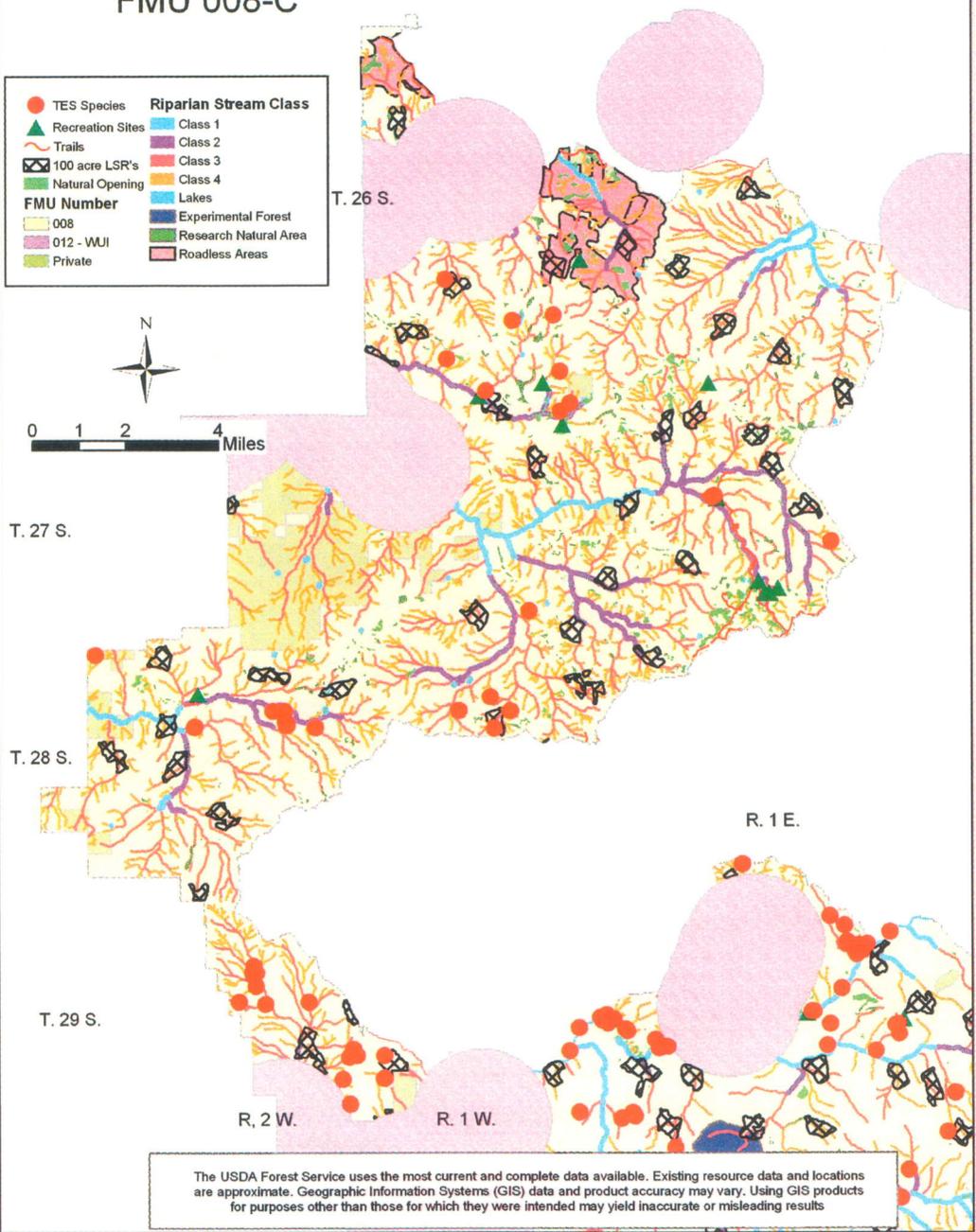
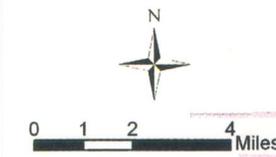
Umpqua National Forest FMU 008-B



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Umpqua National Forest FMU 008-C

● TES Species	Riparian Stream Class
▲ Recreation Sites	Class 1
~ Trails	Class 2
⊠ 100 acre LSR's	Class 3
■ Natural Opening	Class 4
FMU Number	Lakes
008	Experimental Forest
012 - WUI	Research Natural Area
Private	Roadless Areas



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Umpqua National Forest FMU 008-D

