USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: August 8, 2007

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

[ ] 2. Interim Report #____
[ ] Updating the initial funding request based on more accurate site data or design analysis
[ ] Status of accomplishments to date

[ ] 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Elk Complex

B. Fire Number: CA-KNF003176

C. State: CA

D. County: Siskiyou

E. Region: 05

F. Forest: Klamath N.F.

G. District: Happy Camp Ranger District

H. Fire Incident Job Code: P5DP21

I. Date Fire Started: July 10, 2007

J. Date Fire Contained: 90% on August 4, 2007

K. Suppression Cost: Approx. $18.5 million

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 32.1 (Dozer Line)
2. Fireline seeded (miles): N/A
3. Other (Hand Line): 53.4

M. Watershed Number: 1801020905, 1801020904, 1801020903

N. Total Acres Burned: 16,891
NFS Acres(16,746) Other Federal ( ) State ( ) Private (145)

O. Vegetation Types: Douglas-fir, sugar pine, tanoak, black oak, madrone, deerbrush, manzanita.

P. Dominant Soils: : (112)Clallam-Deadwood, (114) Clallam family Goldridge, (118) Deadwood-Clallam, (129) Gilligan-Goldridge.

Q. Geologic Types: Predominantly fractured metamorphic rock with small areas of granitic. Many dormant landslides and a few locations of active landslides within the burn perimeter.

R. Miles of Stream Channels by Order or Class: Perennial = 27.77 miles, Intermittent=51.4 miles.

S. Transportation System

Trails: 1.5 miles Roads: 46.5 miles

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 8,489 (unburned) 4,929 (low) 2,812 (moderate) 659 (high)

B. Water-Repellent Soil (acres): discontinuous shallow in areas of high (300)

C. Soil Erosion Hazard Rating (acres):
0 (low) 3,451 (moderate) 13,110 (high) 139 (very high)

D. Erosion Potential: .1 to 11 tons per acre, weighted average = 2.4 tons/acre
Note: 50% unburned, 29% low, 17% moderate, 4% high

E. Sediment Potential: 204 cubic yards / square mile
Note: Using KNF sediment potential formula =10% of low, 20% of moderate, and 30% of high burn severity areas. (Weighted average for each component cumulatively for entire complex.)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5

B. Design Chance of Success, (percent): 90

C. Equivalent Design Recurrence Interval, (years): 2

D. Design Storm Duration, (hours): 6

E. Design Storm Magnitude, (inches): 1.37

F. Design Flow, (cubic feet / second/ square mile):

Middle Elk (7th field)	**78 cfs**
Elk Creek (5th field)	1754 cfs
Titus Creek (7th field)	**160 cfs**
Oak Flat – Ukonom (5th field)	2557 cfs
Lower Indedpendance (7th field)	**38cfs**
Oak Flat-Ukonom (5th field)	2557cfs
Perkins-Happy Camp (7th field)	**63 cfs**
Indian Creek (5th field)	1250 cfs

G. Estimated Reduction in Infiltration, (percent): 7th field watershed 5%
5th field watershed 2%

H. Adjusted Design Flow, (cfs per square mile):

Middle Elk (7th field)	**82 cfs**
Elk Creek (5th field)	1789 cfs

Titus Creek (7th field)	**168 cfs**
Oak Flat-Ukonom (5th field)	2608 cfs
Lower Independence (7th field)	**40 cfs**
Oak Flat-Ukonom (5th field)	2608 cfs
Perkins-Happy Camp (7th field)	**66 cfs**
Indian Creek (5th field)	1277 cfs

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Table 1: Summary of Values at Risk

Potential Values at Risk	Assessment Findings	Emergency Determination
1. Life		
• Use of system trails and roads	Hazard trees were found along system roads and trails. Anticipated increased rockfall and debris onto road.	Emergency Exists
• Residents associated with private property downstream of burn	Parts of Happy Camp Community are located against Forest boundary downstream of burn. Due to the predominately low and unburned severity the potential for loss of life as a result of the fire has not been exacerbated.	Emergency Does Not Exist
2. Property		
• Private property (including infrastructure) downstream of burn	Private property and infrastructure is located below the burn, howerver primarily below unburned and low severity areas.	Emergency Does Not Exist
• Forest System Roads, Trails, and associated infrastructure	Forest System roads and trails throughtout the burn (specifically below high severity areas) have the potential for damage as result of culvert plugging, increased channeling and erosion.	Emergency Exists
3. Resources		
• Water Quality	Increased suspended sediment concentrations/turbidity will vary throughout the fire perimeter depending on severity and proximity to channel although due to low severity is expected to be minimal.	Emergency Does Not Exist
• Cultural Resources	Ceremonial trail within the burn area.	Emergency Does Not Exist
• Botanical Species	TES plant species are known from within the fire area, however should not be impacted due to amount of low severity. Noxious weed are known within the community of Happy Camp and within the fire area.	Emergency Exists
• Wildlife Species	Northern spotted owl, marbled murrelet, peregrine falcon, bald eagles, and pacific fischers are known to occur or have suitable habitat within the area that burned.	Emergency Does Not Exist
• Fisheries	Habitat for the following salmonid species are present downstream/downslope from areas that were burned in the Elk Complex fires	Emergency Does Not Exist

Threats to Life

Within the Elk Complex areas of high and moderate severity will have increased rockfall and debris onto system roads over the next 2-3 years. The BEAR team identified an increased threat to life as a result of hazard trees along system roads and trails within the burn areas. The area receives high hunting pressure in the fall making trail and road closure unrealistic to implement effectively.

Threats to Property

Private Property: Downstream effects to private property have not been exacerbated as a result of the fire due to predominately low and unburned areas above residences.

Forest Roads: Localized increased erosion and sediment occuring within the fire area may plug culverts on Forest system roads. Potential locations include the following locations:

1. Little Grider Fire Area
    a. 16N30 (section 9 below the plantation in Curly Jack Creek)
    b. 17N16 (section 9)
    Both locations have moderate to high burn severity above the road with low ground cover and high sediment routing potential.
2. Wingate/Titus/King Creek 2 Fire Area
    a. 15N10
    b. 15N12
    c. 15N33
    d. 16N06 Observed instability above Wilson Creek. Dry ravel and mass wasting is evident along this road. Any road treatments should ensure runoff is not directed to already unstable areas.

Forest Trails: Elk Creek Trail in sections 5 & 8 will experience increased erosion, runoff, and dry ravel from granitic soils. The effect of the erosion and increased runoff can adversely impact drainage structures on the trail and may require more frequent water bars. Potential loss of the trail from erosion and stream diversion can increase sediment delivery to Elk Creek.

High burn severity areas within the 7th field Middle Elk Creek watershed has an increased potential for erosion and sediment delivery to the unnamed tributary to Elk Creek. The trail crossing on the north side of Elk Creek may experience increased runoff and bedload and debris movement. The stream crossing profile should be lowered to reduce adverse impacts to the trail crossing. Anticipated watershed response may continue for one to two years until vegetative recovery becomes established in the upper watershed.

Threats to Resources

Soil and Water Quality Resouces: Soil and water quality resources will experience increased erosion from high burn severity areas. Where high severity burn areas are adjacent to stream channels and inner gorge locations the potential for increased sediment exists which may increase turbidity within Elk Creek, Klamath River, and Indian Creek.

Within the Wingate/Titus/King Creek 2 fire areas increased erosion and potential sediment routing is anticipated in high burn severity areas within the 7th field watersheds Dutch-Klamath and Lower Independence Creek. Lack of vegetative cover on steep inner gorge areas provide increased potential for sediment delivery from high burn severity areas. Increased erosion and sediment delivery to Independence Creek may increase turbidity and adversely affect water quality and aquatic habitat.

Fisheries: Habitat for the following salmonid species are present downstream/downslope from areas that were burned in the Elk Complex fires:

- Threatened:Southern Oregon / Northern California Coasts (**SONCC**) ESU Coho Salmon (*Oncorhynchus kisutch*) including the species' CH and EFH
- Sensitive: Upper Klamath-Trinity Rivers **(UKTR**) Chinook salmon (*O. tshawytscha*) including the species' EFH

Klamath Mountains Province (KMP) steelhead trout (*O. mykiss*)

Threats to fishery resources from the Elk Complex fires are assessed in BAER Fisheries Report for the Elk Fire Complex and based on the following five factors: (1) pre-fire watershed condition based on CWE analysis, (2) pre-fire aquatic habitat condition gleamed from past stream surveys, (3) proportion of total watershed area burned, (4) intensity of the burns, and (5) proximity of the wildfire burned areas to stream reaches that provide fish habitat. Fisheries biologist (Jon Grunbaum) assessment determined there is no emergency threat to fishery resources resulting from the Elk Complex fires. The carrying capacity for salmonid species will be reduced in some of the affected streams but salmonid populations in these streams are not in jeopardy. Please reference the BAER Fisheries report for a detailed analysis supporting this determination.

Wildlife:
Northern Spotted Owl - There was a loss of approximately 375 acres of suitable nesting, roosting, foraging NSO habitat in areas that burned at high to moderate severity (Table 2). These acres are not expected to provide suitability due to loss of canopy, and understory. Suitable habitat areas that burned at low severity may have resulted in a reduction of ground cover, downed wood and snags but did not decrease in quality of habitat.

Table 2. Summary of post-fire acres of NSO nesting, roosting, and foraging habitat that occurred in areas mapped as high or moderate severity (BARC Classification) by fire.

Fire Name	Pre-Fire NRF acres	NRF Acres burned High/Moderate Severity	Post-Fire NRF Acres
Elk Fire	200 acres	10 acres	190 acres
Little Grider	1,000 acres	25 acres	975 acres
Wingate/ Titus/King	1,740 acres	340 acres	1,400 acres

Historic activity centers experienced some the influence of these wildfires. KL4209 (Perkins Gulch) was surrounded by low severity underburn of the Little Grider Fire. This activity center was surveyed to protocol in 2007 prior to the wildfire with no response. Recent surveys in 2005 and 2006 yielded a single owl each year. This area was apparently not active in 2007. There was no expected disturbance from the Little Grider Fire. Habitat should have remain intact in the vicinity of this activity center.

Activity center KL1220 (Independence) was not surveyed in 2007. Past records indicate that there has been reproduction at this site. The portion of the Wingate/Titus/King Fire burned at high/moderate severity within 0.25 miles of the activity center however the stand itself did not have any wildfire. There may have been displacement of this activity center but the stand should not be affected.

Activity center KL1218 (Titus) was surveyed to protocol in 2007 with one nighttime response recorded. No owls were located during daytime follow ups. This activity center experienced low to moderate severity fire. There may have been displacement of individuals and the stand may experience some degradation in habitat quality due to the moderate severity fire effect.

Marbled Murrelet and Peregrine Falcon - There was no expected affect to these species since there is a lack of habitat in the area of the Elk Fire Complex.

Bald Eagle - According to fire intensity map BARC Classification (August 4, 2007), the area of the nest tree burned in a mosaic of low severity and likely did not affect the nest structure. Young had already fledged the site before the Elk Fire Complex began. There may be some degradation of roosting opportunities along the Klamath River as a result of the Elk Fire Complex but most of the habitat burned in low severity.

There may have been the loss of two active osprey nests at Ferry Point and Buzzard Creek. Generally osprey have completed nesting by the end of July on the Klamath River. This loss may not have disrupted osprey nest activity for 2007.

Pacific Fisher - There are approximately 375 acres of potential denning habitat that may have been degraded with the fire. This may result in a loss of habitat and some short term displacement of individuals. General the wildfire provided enhancement of habitat character by creating a mosaic of vegetative conditions.

For all of the wildlife species listed above an emergency as a result for Elk Complex does not exist.

Botany: There is no emergency with respect to the recovery of the native plant communities that are not exposed to noxious weeds. The plant communities have developed over long periods of time and are adapted to the local fire regimes. The progression of early seral vegetation, and the re-sprouting of hardwoods and perennial forbs may even begin this growing season. Plant cover on slopes now barren could reach 100% within two years.

There is no emergency with respect to Sensitive Plants, although in the case of Eriogonum hirtellum, habitat degradation has occurred, and may continue to occur, depending on the pattern and intensity of rainfall that occurs from this date forward.

An emergency exits with respect to the spread of known noxious weeds into the fire perimeters and the possible introduction of new noxious weed species due to lack of weed prevention measures upon initial attack.

Noxious and invasive weeds pose a serious threat to ecosystems. The weed species of concern on the Klamath National Forest can be found on the attached weed list (appendix A). There are known weed locations within and adjacent to the Little Grider, and Wingate/Titus/King Creek 2 fire areas, the ICP, system roads that provided ingress and egress for fire equipment to access the fire area, and dozer lines. The wilderness areas affected by the fire have been presumed to be weed free as a result of interviews with District personnel who have worked in those areas recently. Known noxious weed species in the Happy Camp area that could have been transported by suppression actions and/or exacerbated by the fires include Scotch broom, yellow starthistle, meadow knapweed, leafy spurge, and Dyer's woad. All of these species have the potential for colonizing burned and disturbed areas within the Elk Complex.

Cultural Resources: The Elk Complex Wildland Fire is located within and adjacent to the spiritual area of Inam, a Traditional Cultural Property (TCP) significant to the cultural maintenance of the Karuk Tribe. In part, the Titus Ridge Trail is traversed yearly by a traditional practitioner and is an integral element of yearly tribal ceremonies along the Klamath River. Values at risk include an isolated setting free of forest hazards (ie. hazard trees). The fire has impacted ceremonial trail use by creating hazard trees.

Portions of the Titus Ridge trail which cross areas of high and moderate burn severity may have the potential for increased erosion from increased runoff from denuded contributing areas. Field review of portions of the trail indicates most of the trail to be stable especially where the overstory is in tact.

B. Emergency Treatment Objectives: Emergency treatment objectives focus on reducing threats to life by removal for hazard trees along system roads, trails and cultural sites, and posting public awarenss signs at key points of ingress into the fire areas. Reducing the likelihood of loss of infrastructure along forest roads and determining the need for noxious weed removal within the fire area and along dozer lines.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land **N/A** % Channel **N/A** % Roads/Trails **90** % Protection/Safety **90** %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70%	90%	100%

Channel	N/A	N/A	N/A
Roads/Trails	80%	100%	N/A
Protection/Safety	90%	100%	N/A

E. Cost of No-Action (Including Loss): **1,946,681**

F. Cost of Selected Alternative (Including Loss): **$233,400**

G. Skills Represented on Burned-Area Survey Team:

[ ] Hydrology	[X] Soils	[ ] Geology	[ ] Range	[ ]
[ ] Forestry	[X] Wildlife	[ ] Fire Mgmt.	[X] Engineering	[ ]
[ ] Contracting	[ ] Ecology	[X] Botany	[X] Archaeology	[ ]
[X] Fisheries	[ ] Research	[ ] Landscape Arch	[X] GIS	

Team Leader: Marc Stamer

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H. **Treatment Narrative:**

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments:

Noxiuos weed detection surveys will be conducted by a botanist and/or technicians. Road surveys will require two people: one to drive, one to look for target species, as it is unsafe for one person to both drive and look for roadside plants! Approximate timing for road surveys is three days per month, for two months (probably June and August to capture early and late bloomers). The intensity of effort on roads is due to the highest likelihood of introduction and spread occurring along roads. Some roads may need to be surveyed by ATV, some roads can be driven. Dozer line survey will take additional time, probably two days per month for two months. If weed populations are found that are too large to control on the spot, an additional funding request for treatment will be submitted.

V. Reporting

The Responsible official, the District Ranger, will provide a report to the Forest Supervisor by December 31st of each year, outlining areas surveyed, and the results of the survey. If new populations of weeds are discovered and treated, the locations will be mapped on 1:24,000 quad maps, flagged on the ground, and NRIS and Klamath survey and treatment forms will be filled out, and entered into the appropriate databases.

Estimated Cost of Survey/Treatment/Reporting

FY 2008

Labor	• (2) GS-5 Biotechs @$120/day x 10 days each (5 days each month) = 20 days	$2400.00
	• Reporting, supervision: GS-9 @$260, three days	$780.00
	• GIS support: GS-9, one day @ $260	$260.00
Vehicles	$0.52/mi x 2000 miles; FOR partial month@343/mo.	$1210.00

SUBTOTAL		**$4650.00**
Indirect Costs	Supplies	$465.00
TOTAL		**$5115.00**

Channel Treatments:
N/A

Roads and Trail Treatments:
Storm Proofing Forest Roads – Road manager on the BAER team identified approximately 203 culverts within the fire area that have potential for plugging and and failure due to increased localized erosion and plugging. Approaches to culverts will be cleaned of debris and material to to protect watershed efficiacy and system road infrastructure.

Treatment Cost:

- **203 Culverts at $14.00/culvert** **Total: $2842.00**

Trail Stabilization – install additional water bars, and outslope trail in site specific areas along the 1.5 miles of the Elk trail within the Elk Fire.

Treatment Cost:

1 – GS-09 @ 260/day for 3 days		$ 780
Vehicle @ $.51/mile for 200 miles		$ 102
1 – Type 2 Crew @ $3600/day for 2 days		$ 7,200
	Total:	**$ 8,082**

Storm Inspection/Response – keep culverts functional by removing debris and sediment from the inlet between and duing storm events where access is required. Keep road tread clear of rocks and debris between and during storm events where access is required.

Treatment Cost:

1-GS-07 @ 220/day for 15 days		$3,300
Vehicle @ F.O.R for ½ month @ $150		$ 150
Front End Loader @ $720/day for 5 days		$3,600
Grader @ $720/day for 5 days		$3,600
	Total:	**$10,650**

Protection/Safety Treatments:
Warning Signs: Install warning signs to inform public of potential hazards created by the fire including flooding, falling rock and debris.

Treatment Cost:

1-GS-07 @ 220/day for 4 days		$ 880
20 – 12”x24” aluminum warning signs @ $32/sign		$ 640
Posts – per road engineer district has posts on hand		
	Total:	**$1520**

Hazard Tree Removal: Removal of hazard trees in areas of high and moderate severity along system roads (approx. 11 miles) and trails (approx. 12 miles including Titus Ridge Trail) to reduce the threat to life from hazard trees. Removal of hazard trees along the Titus Ridge Trail to allow for the safe continuation of yearly tribal spiritual practices and ceremonies.

Treatment Cost:

1-GS-09 @ $260/day for 5 days	$1300

1 Faller @ $680/day for 6 days		$4080
1 Swamper/Operator @ $480/day for 6 days		$2880
1 966 Front End Loader @ $480/day for 3 days		$1440
	Total:	**$9700**

Implementation Team Leader:
Salary for implementation team leader to oversee implementation of proposed treatment, track spending of BAER funds, coordinate and prepare interim report.

Treatment Cost:

1-GS-09 @ $260/day for 14 days	**Total:**	**$3640**

I. **Monitoring Narrative:**

Part VI – Emergency Stabilization Treatments and Source of Funds **Interim #**

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$	units	$	Units	$	$
A. Land Treatments										
Noxious Weed Detection Surveys	unit	5115	1	$5,115	$0		$0		$0	$5,115
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$5,115	$0		$0		$0	$5,115
B. Channel Treatments										
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Storm Proofing	ea	14	203	$2,842	$0		$0		$0	$2,842
Trail Stabilization	mi	5388	1.5	$8,082	$0		$0		$0	$8,082
Storm Inspection/Response	mi	968.18	11	$10,650						
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$21,574	$0		$0		$0	$10,924
D. Protection/Safety										
Warning Signs	ea	76	20	$1,520	$0		$0		$0	$1,520
Hazard Tree Removal	mi	421.74	23	$9,700	$0		$0		$0	$9,700
Implementation Team Leader	days	260	14	$3,640	$0		$0		$0	$3,640
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$14,860	$0		$0		$0	$14,860
E. BAER Evaluation										
Salary	days	2205.5	11	$24,260						
Vehicle	unit	1692	1	$1,692						
Per Diem	unit	3257	1	$3,257						
Supplies	ea	57	2	$114			$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$29,323	$0		$0		$0	$0
F. Monitoring										
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				$41,549	$0		**$0**		**$0**	**$30,899**
Previously approved										
Total for this request				**$41,549**						

PART VII - APPROVALS

1. /s/ Margaret J. Boland — 08/08/2007
Forest Supervisor (signature) — Date

2. /s/ Beth G. Pendleton (for) — 08/10/2007
Regional Forester (signature) — Date

Appendix A

KLAMATH NATIONAL FOREST NOXIOUS WEED LIST
HIGH PRIORITY SPECIES

Scientific Name (Jepson, 1993)	**PLANTS Code**	**Common Name(s)**	**CDFA Rating**	**Cal-IPC Rating**	**Family**
Acroptilon repens (L.) DC.	ACRE3	Russian knapweed	B	Moderate	Asteraceae
Cardaria draba (L.) Desv.	CADR	Heart-podded hoary cress, Whitetop	B	Moderate	Brassicaceae
Cardaria chalapensis (L.) Hand.-Maz	CACH10	Lens-podded Whitetop	B	Moderate ♦	Brassicaceae
Carduus nutans L.	CANU4	Musk thistle	A	Moderate	Asteraceae
Carduus pycnocephalus L.	CAPY2	Italian thistle Plumeless Italian thistle	C	Moderate	Asteraceae
Centaurea diffusa Lam.	CEDI3	Diffuse knapweed, white knapweed	A	Moderate	Asteraceae
Centaurea maculosa Lam.	CEMA4	Spotted knapweed	A	High	Asteraceae
Centaurea x pratensis Thuill.	CEPR2	Meadow knapweed	A	Moderate ♦	Asteraceae
Centaurea solstitialis L.	CESO3	Yellow starthistle	C	High	Asteraceae
Centaurea squarrosa Wild.	CESQ	Squarrose knapweed	A	Moderate	Asteraceae
Chondrilla juncea L.	CHJU	Rush skeleton weed, hogbite	A	Moderate	Asteraceae
Cirsium arvense (L.) Scop.	CIAR4	Canada thistle	B	Moderate	Asteraceae
Cynoglossum officinale L..	CYOF	Houndstongue	Q	Moderate	Boraginaceae
Cytisus scoparius (L.) Link.	CYSC4	Scotch broom	C	High	Fabaceae
Euphorbia esula L.	EUES	Leafy spurge	A	High ♦	Euphorbiaceae
Genista monspessulana (L.) L. Johnson	GEMO2	French broom	C	High	Fabaceae
Hypericum perforatum L.	HYPE	Klamath weed, St. John's wort	C	Moderate	Hypericaceae
Isatis tinctoria L.	ISTI	Dyer's woad, Marlahan mustard	B	Moderate	Brassicaceae
Lepidium latifolium L.	LELA2	Perenn. pepperweed, tall whitetop	B	High	Brassicaceae
Linaria dalmatica (L.) P. Mill ssp. dalmatica	LIDAD	Dalmation toadflax	A	Moderate	Schropulariaceae
Lythrum salicaria L.	LYSA2	Purple Loosestrife	B	High	Lythraceae
Onopordum acanthium L.	ONAC	Scotch thistle, Cottonthistle	A	High	Asteraceae
Onopordum tauricum Willd.	ONTA	Taurian thistle, Bull cottonthistle	A	None	Asteraceae
Salvia aethiopis L.	SAAE	Mediterranean sage	B	Limited	Lamiaceae

Pest Ratings:

California Dept. of Food and Agriculture (CDFA):

A: Eradication, containment, rejection, or other holding action at State-County level. Quarantine interceptions to be rejected or treated at any point in the State.

B: Species more widespread. Eradication, containment, control, or other holding action at the discretion of the County Ag. Commissioner.

C: Species very widespread. State endorsed holding action and eradication only when found in a nursery; action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in a crop seed for planting or at the discretion of the County Ag. Commissioner.

Q: Temporary "A" action outside of nurseries at the state-county level pending determination of a permanent rating. Species on List 2, "Federal Noxious Weed Regulation" are given an automatic "Q" rating when evaluated in California.

California Invasive Plant Council (Cal-IPC):

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

♦ = Alert

References:

California Department of Food and Ag; Pest Ratings of Noxious Weed Species, 2004. from Website: <http://www.cdfa.ca.gov/phpps/ipc/weedinfo/winfo_list-pestrating.htm

Cal-IPC; California Invasive Plant Inventory, February, 2006.

The Jepson Manual, 1993; University of California Press, James Hickman, Editor