STATE & PRIVATE FORESTRY

USDA

A Chance to Catch the Problem Early

Noxious and invasive plants are a problem in Alaska but land management agencies are working together to keep it from growing into an unmanageable one

Bird vetch (*Vicia cracca*) crawling up and over planted spruce along the Seward highway in Anchorage (*Photo by Michael Rasy*)

Biologists and land managers thought Alaska's remoteness offered protection from the introduction of noxious and invasive plants. However, the state now has well-established infestations of several invasives, including Canada thistle (*Cirsium arvense*), White sweetclover (*Melilotus alba*), Japanese knotweed (*Polygunum cuspidatum*), and bird vetch (*Vicia cracca*). These, along with other invasive species, now threaten to invade Alaska's forests, riparian areas, and its nonforested wetlands.

Invasive plants are aggressive nonnative plants that have been introduced without the insect predators and plant pathogens that help keep them in check in their native habitats. Noxious weeds are a subset of invasive plants legally defined by each state or province.

Cooperative Effort

Alaska is in a unique position to keep its invasive plant problem from growing into an ecological quagmire. The costs can be low if we quickly identify, control and/or eradicate infestations.

In 2000, six state agencies, eight federal agencies and many nongovernmental organizations in Alaska began working together to address the introduction of invasive and noxious plant species. Under a memorandum of understanding, the agencies developed a plan and laid the groundwork for cooperative surveys, education, prevention, control, and eradication of invasive plant species. The Forest Health Protection Program of State and Private Forestry has a new emphasis to help address invasive plants. The program has provided $100,000 to accelerate the excellent cooperative efforts already underway. The program focuses on the following five areas:

Inventory and Monitoring

The cooperating agencies are first focusing on inventory, using uniform field survey protocols and reporting. We are also determining how best to merge existing databases into a statewide Geographic Information System (GIS) invasive plant layer that will hold existing and future weed survey information. State and Private Forestry is providing seed money for the project. The Alaska Geospatial Data Clearinghouse, operated by the US Geological Survey, is also cooperating in the effort.

State and Private Forestry is also providing funding to the Integrated Pest Management Program, a part of the Alaska Cooperative Extension Service, for invasive species surveys.

The inventory effort in 2002 will be near Anchorage in south-central Alaska. Anchorage is the state's major population center and one of the primary locations for invasive plant introductions. Inventory work will also continue in the Delta Junction and Fairbanks areas, and within Alaska's national parks. Data from these new and continuing surveys will be added to the new "invasives" GIS layer. These inventories will help direct inventory dollars, guide eradication efforts and will serve as a principle monitoring tool.

Left. Japanese knotweed (*Polygunum cuspidatum*) found in an estuary on the Tongass National Forest in SE Alaska. (*Photo by Brad Krieckhaus*)

Above: White sweetclover (*Melilotus alba*) found along the road in Denali National Park. (photo by Roseann Densmore)

Above: Canada thistle (*Cirsium arvense*) in a Anchorage city park, most likely brought in with tree plantings (*Photo by Corlene Rose*)

Above: Flower of Bird vetch (*Vicia cracca*), the plant shown in the photo on the front of this story.

Education

Web-based and printed informational materials about specific invasive plants in Alaska are being developed. This information will help landowners recognize and work on controlling and eradicating invasive species. A web-based field guide to noxious and other weeds of Alaska will be created to assist the general public as well as those doing the inventories.

Coordination

State & Private Forestry funds are being used in support of an invasive plant species coordinator who will facilitate information exchange between agencies. A statewide steering committee may be set up to streamline decision making across agencies.

Research

Once the preliminary invasive plant inventory work has been completed, literature searches and research will begin to determine the best treatment options for these invasive plant species in Alaska.

Eradication and Control

Several eradication projects are already underway, including:

1) a Japanese knotweed eradication project on Baranof Island

2) a white sweetclover trial control project along the Stikine River, Wrangell District, Tongass National Forest

3) a cooperative project between Kenai Fjords National Park and the Seward Ranger District (Chugach National Forest) to control and eradicate invasives before they reach the recently deglaciated moraines of Exit Glacier

4) a roadside dandelion pulling project in Denali National Park

Further information on the Alaska invasive plant network is available online at www.invasivespecies.gov/geog/state/ak.shtml

Partners in this Project

- Forest Service, Alaska Region, State and Private Forestry
- Tongass & Chugach National Forests
- Cooperative Extension Service
- US Fish and Wildlife
- Alaska Division of Forestry
- Alaska Division of Agriculture
- Alaska Dept. of Fish & Game
- Alaska Dept. of Transportation
- US Geological Survey
- Bureau of Land Management
- National Park Service
- Natural Resources Conservation Service
- Soil and Water Conservation Districts
- U.S. Dept. of Defense

To Find Out More

Michael Shephard, Ecologist
Forest Service, Alaska Region
S&PF, Forest Health Protection
Phone: 907-743-9454
E-Mail: mshephard@fs.fed.us

644-3681

March, 2002

ALASKA Region
US DEPARTMENT OF AGRICULTURE • FOREST SERVICE

When is eradication of exotic pest plants a realistic goal?

M. Rejmánek[1] and M. J. Pitcairn[2]

[1]Section of Evolution and Ecology, University of California, Davis, CA 95616, USA.
[2]California Department of Food and Agriculture, Integrated Pest Control Branch, 3288 Meadowview Road, Sacramento, CA 95832, USA

Abstract Using a unique data set on eradication a' ıpts by the California Departme of Food and Agriculture on 18 species and 53 separate infestations targeted for e ation in the period 1972-2000, ı e show that r fessional eradication of exotic weed infestations smaller than o. ectare is usually possible. In addition, about f infestations between 1 ha and 100 ha and 1/4 of infestations between 101 and 1000 ha have been eradicated. ıo ever, costs of eradication projects increase dramatically. With a realistic amount of resources, it is very unlikely that infestations larger than 1000 ha can be eradicated. Early detection of the presence of an inva ive taxon can make the difference between being able to employ offensive strategies (eradication), and the necessity o. retreating to a defensive strategy that usually means an infinite financial comm itment. Nevertheless, depending on the potential impact of individual weedy species, even infestations larger than 1000 hectares should be targeted for eradication effort or, at least, substantial reduction and containment. If an exotic weed is already widespread, then species-specific biological control may be the only long-term effective method able to suppress its abundance over large areas.

Keywords Costs of eradication; early detection; eradication effort; exotic pests; initial infestation; invasive plants; noxious weeds.

INTRODUCTION

Many control methods and their combinations (usually involving mechanical, chemical, and biological means) are available to managers for containing, controlling, or eradicating harmful alien plants. However, sound management strategies demand an objective means for setting priorities. Undoubtedly, exotic taxa with large-scale environmental impacts ("transformers" – see Richardson *et al.* 2000; Rejmánek *et al.* 2002) should always be targets for control and eradication. But when is complete eradication a realistic goal? There are numerous examples where small infestations of invasive plant species have been eradicated. These include *Silybum marianum* on Santa Barbara Island and *Osteospermum fruticosum* on Santa Cruz Island, California (Junak *et al.* 1993; Junak pers. comm.), *Pueraria phaseoloides* in Galápagos (Soria *et al.* 2002), and nine species on Rangitoto Island (Wotherspoon and Wotherspoon 2002) . There are also several encouraging examples where widespread alien animals have been completely eradicated (Dahlsten and Garcia 1989; Chapuis and Barnaud 1995; Priddel *et al.* 2000; more examples are in this volume). Can equally widespread and difficult alien plants also be eradicated? We try to answer this question by using a unique data set on exotic weed eradication attempts by the California Department of Food and Agriculture.

The California Department of Food and Agriculture (CDFA) is actively involved in preventing the establishment and invasion of "noxious weeds." The Food and Agricultural Code of California defines a noxious weed as "any plant species which is, or is liable to be, detrimental or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate." Each noxious weed is given a pest rating (A, B, C, or Q) which indicates the most appropriate action to be taken against it (O'Connell 1999). An "A" rated weed is subject to action by the CDFA and County Agricultural Commissioner Offices including eradication, quarantine, containment, rejection of shipments, or other holding actions. A "B" rated weed is subject to State action only when found in a nursery; otherwise action is at the discretion of the local County Agricultural Commissioner. A "C" rated weed is not subject to State action other than to provide for general cleanliness in nurseries, otherwise action is at the discretion of the local County Agricultural Commissioner. Those weeds that are widespread and can no longer be eradicated are usually given a "C" rating. A weed is rated "Q" when it is newly detected and seems likely to significantly impact agriculture. These weeds are treated as "A" rated until they are fully evaluated. Currently, there are 128 plant species that are listed as "noxious" by CDFA: 45 are "A" rated, 55 are "B" rated, 24 are "C" rated, and 4 are "Q" rated.

Eradication and other actions directed at "A" rated weeds are performed by personnel in the Integrated Pest Control Branch of CDFA and the County Agricultural Commissioner Offices who work closely together to detect and eradicate exotic weeds state-wide. When a new infestation of an "A" rated weed is detected, the site is visited and size of the infestation is delimited. Two estimates of infestation size, net and gross, are obtained. Gross infestation size is the area over which the weed is distributed. Net infestation size is the area to which treatment is actually applied. Gross infestation size is the area that must be surveyed in return trips following control treatments.

Eradication efforts consist of a series of control treatments to the infestation over several years. Control treatments can include herbicide applications, cultivation, removal of infested soil, and mechanical removal. For large infestations, a crew of workers is required; for small infesta-

Pages 249-253 In Veitch, C. R. and Clout, M. N. (eds.). *Turning the tide: the eradication of invasive species*. IUCN SSC Invasive Species Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.

tions, only one individual may complete the work. Following initial treatment, the site is visited several times to examine the area for regrowth or seedling recruitment. This effort is repeated until no plants are found in subsequent visits. Eradication is considered successful when no plants are recovered from the initial infested area for three consecutive years.

To date, 14 exotic weeds have been successfully eradicated from California: whitestem distaff thistle (*Carthamus leucocaulos*), dudaim melon (*Cucumis melo* var. *dudaim*), giant dodder (*Cuscuta reflexa*), serrate spurge (*Euphorbia serrata*), Russian salttree (*Halimodendron halodendron*), blueweed (*Helianthus ciliaris*), tanglehead (*Heteropogon contortus*), creeping mesquite (*Prosopis strombulifera*), heartleaf nightshade (*Solanum cardiophyllum*), Torrey's nightshade (*Solanum dimidiatum*), Austrian peaweed (*Sphaerophysa salsula*), wild marigold (*Tagetes minuta*), Syrian beancaper (*Zygophyllum fabago*), and meadowsage (*Salvia virgata*) (O'Connell 1999). With the exception of *Cucumis* (16 and 32 ha), all gross infestations were smaller than 10 ha and most of them were smaller than one hectare when they were detected.

MATERIAL AND METHODS

Complete information on eradication effort was obtained for 53 infestations of 18 "A" rated species (Table 1) CDFA biologists assigned to the Detection and Eradication Districts for the State of California, CDFA, provided the data. For each weed infestation, the following information was obtained: (1) size of infestation after delimitation (both net and gross area), (2) date first found, (3) total number of visits to the site to date, (4) effort per infestation (number of person hours devoted to the site to date, including travel time to and from the site), and (5) current status of the infestation. The data are summarised in this contribution.

RESULTS

The relation between the mean eradication effort (work hours) and five initial gross infestation area categories is summarised in Table 2 and Fig. 1. The good news is that professional eradication of exotic weed infestations smaller than one hectare is usually possible. Furthermore, about 1/3 of all infestations between 1 ha and 100 ha and 1/4 of infestations between 101 and 1000 ha have been eradicated. Costs, however, increase dramatically. (An approximate estimate of direct costs in USD can be obtained by multiplying work hours in Fig. 1 and Table 2 by USD96; this includes salaries, cost of transportation, and cost of herbicides and equipment). With a realistic amount of resources, it is very unlikely that infestations larger than 1000 ha can be eradicated.

Interestingly, in the first four infestation-size categories, where at least some eradications were successful (Table 2), mean eradication effort per infestation is consistently greater for ongoing projects than for eradicated infestations. This indicates that, in general, completed eradications were not successful because of the greater effort.

Table 1 List of "A" rated weeds in California for which eradication information was obtained.

Scientific name	Common name	No. infestations	Eradicated/ongoing
Terrestrial species			
Alhagi pseudalhagi	camelthorn	5	1/4
Carduus nutans	musk thistle	1	0/1
Centaurea diffusa	diffuse knapweed	6	5/1
Centaurea iberica	Iberian thistle	3	1/2
Centaurea maculosa	spotted knapweed	3	2/1
Cirsium ochrocentrum	yellowspine thistle	3	1/2
Cucumis melo var. *dudaim*	dudaim melon	1	1/0
Cuscuta reflexa	giant dodder	1	1/0
Euphorbia esuia	leafy spurge	2	1/1
Halimodendron halodendron	Russian salt tree	1	1/0
Linaria angustifolia ssp. *dalmatica*	Dalmatian toadflax	1	1/0
Onopordum acanthium	Scotch thistle	13	6/7
Onopordum illyricum	Illyrian thistle	1	0/1
Peganum harmala	harmel	2	0/2
Physalis viscosa	ground cherry	1	1/0
Salsola dumascena	Damascus saltwort	1	0/1
Aquatic species			
Hydrilla verticilata	hydrilla	5	2/3
Alternanthera philoxeroides	alligatorweed	3	1/2

Another confounding factor could be a bias created by differences in species representing small and large infestations. This would be particularly serious if large infestations consisted of more persistent species than smaller infestations. However, the trend remains the same even within individual species (Fig. 2). Finally, while the eradication effort increases with the area of infestation, the effort per hectare decreases at the same time (Table 2). This suggests that even infestations of >1000 ha could be eradicated, but the eradication effort per hectare would have to be greater. It is important to point out that all three successful eradications of gross infestations >100 ha (Table 2) represented relatively-small net areas (*Linaria angustifolia*: 0.49 ha; *Onopordum acanthium*: 0.20 ha; *Physalis viscosa*: 0.92 ha).

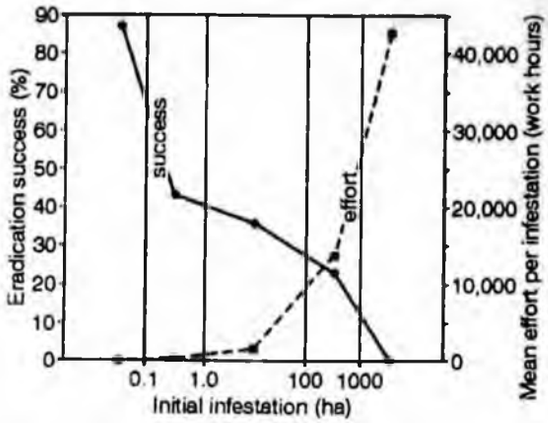


Fig. 1 The dependence of the eradication success (%) and the mean eradication effort per infestation (work hours) on the initial size of infestations. Based on the data for eradication projects of 18 noxious weed species and 53 independent infestations in California (see Table 1).

DISCUSSION

Obviously, a substantial increase in resources for exclusion and early detection of exotic weeds would be the most profitable investment. Without any data, or based on very limited data, others (Auld *et al.* 1987; Chippendale cited in Hobbs and Humphries 1995; Cook and Setterfield 1996; Braithwaite and Timmins 1999; Panetta 1999; Smith *et al.* 1999; Weiss 1999) already made this point. Surprisingly, however, practical implementations are still very rare. We suggest that in all concerned countries, teams of professional botanists should be created for rapid detection and assessment of new infestations of exotic plants. Early detection of the presence of an invasive and harmful taxon can make the difference between being able to employ feasible offensive strategies (eradication) and the necessity of retreating to a defensive strategy that usually means an infinite financial commitment.

Attempts to eradicate widespread invasive species, especially those that do not have any obvious environmental impacts (including suppression of rare native taxa), may be not only hopeless but also a waste of time and resources (Groening and Wolschke-Bulmahn 1992). Volunteers and donors, who would be otherwise willing to participate in eradication of serious pests, may be discouraged by such projects.

Nevertheless, depending on the potential impact of individual weedy species, even infestations larger than 1000 hectares should be targeted for eradication effort, or, at least, substantial reduction and containment. A notable example of a successful containment is the parasitic weed *Striga asiatica* in parts of North and South Carolina (Kaiser 1999). In the 45 years of the eradication programme, the initial gross infestation on 20 000 km² was reduced to 2800 ha of very light occurrences. The cost, however, was more than USD 250 million (R. E. Eplee, pers. comm.). Another exceptionally successful project is the practically complete eradication (98% of properties on which it is known to occur) of *Bassia* (*Kochia*) *scoparia* over the past eight years in Australia (3277 ha; 15,536 work hours; R. Randall, pers. comm.).

Table 2 Areas of initial gross infestations (at the beginning of eradication projects) of exotic weeds in California, numbers of eradicated infestations, numbers of ongoing projects, and mean eradication effort for five infestation area categories. The data include 18 species of noxious weedy species (two aquatic and 16 terrestrial) representing 53 separate infestations. NA – not applicable.

		Initial infestation (ha)				
		<0.1	0.1-1	1.1-100	101-1000	>1000
No. of eradicated infestations		13	3	5	3	0
No. of ongoing projects		2	4	9	10	4
Mean eradication effort per infestation (work hours)	Eradicated	63	180	1496	1845	-
	Ongoing	174	277	1577	17 194	42 751
Mean eradication effort per hectare (work hours)	Eradicated	NA	807	103	6	-
	Ongoing	NA	792	648	26	16

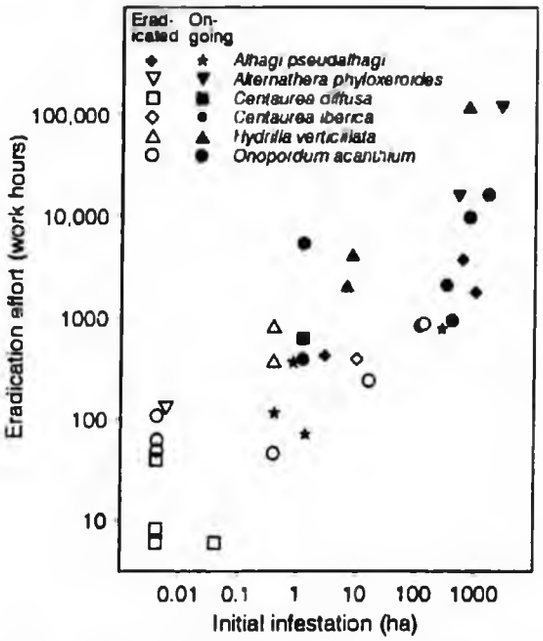


Fig. 2 The dependence of eradication effort on the size of initial infestations of six noxious weedy species in California. This diagram also indicates that eradication of aquatic weeds (*Alternathera* and *Hydrilla*) is more demanding.

In general, however, when an exotic weed is already widespread (>10 000 ha), species-specific biological control (if feasible) may be the only long-term effective way to suppress its abundance over the invaded area. Many successful weed biocontrol projects have been accomplished in Australia, California, South Africa, and other countries (Nechols 1995; Julien and Griffiths 1998; Olckers and Hill 1999; Pemberton 2000). Needless to say that as biological control agents are usually exotic taxa themselves, serious attention must be paid to their possible non-target effects (Louda *et al.* 1997; Wajnberg *et al.* 2001).

ACKNOWLEDGMENTS

We thank Nate Dechoretz, Ross O'Connell, Al Acosta, Robin Breckenridge, Ed Finley, Dennis Griffin, Fred Hrusa, Ron Eng, Rick Keck, Rod Kerr, Lester B. Kreps, Florence Maly, Tom Patrick, David Quimayousie, and Frank Zarate (California Department of Food and Agriculture) for kindly providing the data. We thank Elizabeth and John Rippey (University of Western Australia), Jennifer Randall and Rob Klinger (University of California), and John Randall (The Nature Conservancy) for useful discussions and comments on earlier versions of this paper.

REFERENCES

Auld, B. A.; Menz, K. M. and Tisdell, C. A. 1987. *Weed Control Economics*. London, Academic Press.

Braithwaite, H. and Timmins, S. M. 1999. Weed surveillance –catching 'em early. In Bishop, A. C.; Boersman, M. and Barnes, C. D. (eds.). Australian Weed Conference Papers and Proceedings, pp. 47-50.

Chapuis, J. L. and Barnauld, G. 1995. Rehabilitation of islands of Kerguelen archipelago by eradication of the rabbit (*Oryctolagus cuniculus*): Method applied to ile Verete. *Revue d'Ecologie (Terre et Vie) 50*: 377-390.

Cook, G. D.; Setterfield, S. A. and Maddison, J. P. 1996. Shrub invasion of a tropical wetland: Implications for weed management. *Ecological Applications 6*: 531-537.

Dahlsten, D. L. and Garcia, R. (eds.). 1989: *Eradication of Exotic Pests*. New Haven, Yale University Press.

Groening, G. and Wolschke-Bulmahn, J. 1992. Some notes on the mania for native plants in Germany. *Landscape Journal 11*: 116-126.

Hobbs, R.J. and Humphries, S. E. 1995. An integrated approach to the ecology and management of plant invasions. *Conservation Biology 9*: 761-770.

Julien, M. H. and Griffiths, M. W. (eds.). 1998. *Biological Control of Weeds*. 4th ed., Wallingford, CABI.

Junak, S.; Philbrick, R. and Drost, 1993. A Revised Flora of Santa Barbara Island. Santa Barbara, Santa Barbara Botanic Garden.

Kaiser, J. 1999. Stemming the tide of invading species. *Science 285*: 1836-1841.

Louda, S. M.; Kendall, D.; Connor, J. and Simberloff, D. 1997. Ecological effects of an insect introduced for the biological control of weeds. *Science 277*: 1088-1090.

Nechols, J. R. (ed.). 1995. Biological Control in the Western United States. Oakland, CA. University of California, Division of Agriculture and Natural resources, Publication 3361.

O'Connell, R. A. 1999. The state of California's noxious weed eradication programs. In Kelly, M.; Howe, M.; Neill, B. (eds.). Proceedings of the California Exotic Pest Plant Council Symposium. Vol. 5, pp. 26-30. Sacramento, California Exotic Pest Plant Council.

Olckers, T. and Hill, M. P. (eds.). 1999. Biological control of weeds in South Africa. *African Entomology Memoir 1*: 1-182.

Panetta, F. D. 1999. Can we afford to delay action against weeds in valued natural areas?. In Bishop, A. C.; Boersman, M. and Barnes, C. D. (eds.). Australian Weed Conference Papers and Proceedings, pp. 144-148.

Pemberton, R. W. 2000. Predictable risk to native plants in weed biological control. *Oecologia 125*: 489-494.

Priddel, D.; Carlile, N. and Wheeler, R. 2000. Eradication of European rabbits (*Oryctolagus cuniculus*) from Cabbage Tree Island, NSW, Australia, to protect the breeding habitat of Gould's petrel (*Pterodroma leucoptera leucoptera*) *Biological Conservation 94*: 115-125.

Rejmánek, M,; Richardson, D. M.; Higgins, S. I., Pitcairn, M. J. and Grotkopp, E. 2002. Ecology of invasive plants: State of the art. In Mooney, H. A.; McNeely, J. A., Neville, L.; Schei, P. J. and Waage, J. K. (eds.). Invasive Alien Species: Searching for Solutions. Washington, D.C., Island Press. (In press.)

Richardson, D. M.; Pysek, P.; Rejmánek, M; Barbour, M. G.; Panetta, F. D. and West, C. J. 2000. Naturalization and invasion of alien plants: concepts and definitions. *Diversity and distributions 6*: 93-107.

Smith, H. A.; Johnson, W. S.; Shonkwiler, J. S. and Swanson, S. R. 1999. The implications of variable or constant expansion rates in invasive weed infestations. *Weed Science 47*: 62-66.

Soria, M.; Gardener, M. R. and Tye, A. 2002: Eradication of potentially invasive plants with limited distributions in the Galápagos Islands. In Veitch, C. R. and Clout, M. N. (eds.). *Turning the tide: the eradication of invasive species*, pp. 287-292. IUCN SSC Invasive Species Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.

Wajnberg, E.; Scott, J. K. and Quimby, P. C. (eds.). 2001. Evaluating Indirect Ecological Effects of Biological Control. Wallingford, CAB Publishing.

Weiss, J. 1999. Contingency planning for new and emerging weeds in Victoria. *Plant Protection Quarterly 14*: 112-114.

Wotherspoon, S. H. and Wotherspoon, J. A. 2002: The evolution and execution of a plan for invasive weed eradication and control, Rangitoto Island, Hauraki Gulf, New Zealand. In Veitch, C. R. and Clout, M. N. (eds.). *Turning the tide: the eradication of invasive species.*, pp. 381-388. IUCN SSC Invasive Species Specialist Group. IUCN, Gland, Switzerland and Cambridge, UK.

UNIVERSITY OF NEVADA
•Reno

COOPERATIVE EXTENSION

Bringing the University to You

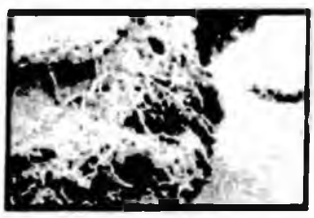
Special Publication-01-08

The Economic Costs of Delaying Invasive Weed Control: An Illustration based on Nevada's Tall Whitetop Initiative

Mark Eiswerth, Research Assistant Professor
Wayne Johnson, State Integrated Pest Management Specialist
Steve Lewis, Extension Educator
Larry Hughes, Douglas County Weed District Manager

1. Introduction

Tall whitetop (*Lepidium latifolium*), also known as perennial pepperweed, is an alien weed that is invading watersheds in Nevada and throughout the West. In Nevada, thousands of acres of tall whitetop infest the lower Truckee River, Lake Tahoe, the West and East Walker Rivers, and much of the riparian lands of the Carson and Humboldt watersheds. Invasions of tall whitetop began along streams and in wet meadows, but now tall whitetop is observed at significant distances away from the riparian areas in upland, dry sites and is spreading to other parts of the state.



Tall whitetop roots do not stabilize stream banks. When they are present, banks erode more easily, polluting streams with silt and debris.

Tall whitetop negatively impacts both the ecology and economy of an area, and eventually the entire state (Young et al., 1995; Donaldson and Johnson, 1999; Olson, 1999; USDA, 1999; Auton et al., 2000).

Tall whitetop out-competes natives, forming monocultures that exclude other plants and animals.

It crowds out desired vegetation and tends to quickly form a monoculture, thereby reducing plant and animal biodiversity. Since it does not provide good habitat for wildlife, it reduces the diversity and numbers of animals such as deer, elk, waterfowl, and other birds. In addition, it does not provide good forage for livestock and imposes costs on farmers who must control its spread in croplands and pastures. Negative economic impacts occur in two distinct ways. First, property owners and land managers who must control tall whitetop are forced to

incur out-of-pocket expenditures, for example on labor, herbicides, and revegetation necessary for successful treatment of the weed. Second, until tall whitetop is controlled, its presence yields damages (in the form of foregone benefits) due to lost uses of the land (e.g., grazing, cropping, and outdoor recreation).

The flowers of tall whitetop are deceivingly beautiful. Do not let them go to seed.

This short manuscript illustrates how the costs of tall whitetop control rise as control actions are delayed and infestations grow. Essentially, how much will it cost me if I treat an infestation today compared to the cost if I wait, say, five years to treat it? Will delay be cost effective? These are important questions that deserve scrutiny by landowners, land managers, funding authorities, and other stakeholders faced with competing needs and scarce financial resources.

For our illustration we use cost data collected for one of the tall whitetop control projects recently commenced under Nevada's Tall Whitetop Initiative (Initiative) funded by the 1999 Nevada State Legislature. The Initiative was launched in 2000 by University of Nevada Cooperative Extension with the objective of quickly implementing a suite of tall whitetop management projects throughout the state. We focus on one Initiative project in particular, conducted in Douglas County, Nevada, because complete and detailed cost data were reported to us for that site. Data included labor and supply costs, as well as some limited information on capital equipment costs. However, we focus only on non-equipment costs since we lack good data on the link between infestation size and the need to buy more equipment. Consequently, costs are figured conservatively throughout. Our results are illustrative for a larger set of sites in Nevada and the West that either 1) are currently infested with tall whitetop or 2) may likely become infested in the future.

The next section briefly summarizes out-of-pocket costs in the first year (2000) of the project. To illustrate how costs would have increased if the project had been delayed, we concentrate on costs that vary in proportion to infestation size. Section 3 presents the impacts on costs that would have resulted from a delay in tall whitetop control. Section 4 offers concluding remarks.

2. Year One Project Costs

The control of tall whitetop is not a one-time proposition. Though control expenses may be highest at the outset of the effort, actions over time are necessary (follow-up spraying, revegetation, etc.). For example, the Douglas County project (Project) on which we focus is a planned ten-year effort. Of course, if control of tall whitetop at a particular site is postponed to the future, the infestation will grow and therefore the control costs will rise in every year of a multi-period management effort. *However, we illustrate solely the impacts of a delay on the first year of the Project, since cost data are currently available only for Year 1 (2000).* As well, estimated future costs are not adjusted for future inflation. Consequently, *the results are very conservative and represent an understatement of what may actually occur.*

In this analysis we focus on what are termed variable costs. We define variable costs as those that vary directly according to the size of the infestation. These include expenditures for labor, chemicals, and seed for revegetation. We intentionally exclude capital costs associated with purchase and maintenance of equipment such as trucks and sprayers necessary for chemical application, because these are fixed costs that would not increase in continuous

fashion if the infestation were to grow in size. Of course, were the infestation to grow sufficiently,

> Tall whitetop invasions negatively impact the economy as 1) costs of control and 2) damages—lost use of land for grazing, cropping, recreation and wildlife habitat.

it would be necessary to purchase additional capital equipment at some point. By excluding consideration of capital costs and any amortization associated with them, we simplify the analysis and also deliberately adopt a conservative approach. This underestimates the incremental costs of postponing weed control.

Variable project costs for Year 1 (2000) are summarized in Table 1. Labor costs, which include costs of labor for both control and revegetation ($7,325), constitute the largest cost category and account for over half the total variable costs ($12,647). Chemical costs ($3,635) are the second largest category and account for almost thirty percent of the total costs. Revegetation (seed) costs ($1,687) are a relatively small proportion of the total, but this can vary widely across different project sites and in some cases seed costs can be much higher.

Table 1. Variable costs for Year 1 (2000) of the Douglas County Tall Whitetop Control Project.

Cost category	Year 1 costs
Labor [a]	$7,325
Chemical costs	$3,635
Revegetation (seed purchase costs)	$1,687
Total Year 1 variable costs	**$12,647**

[a] Includes labor for chemical application, hand pulling, revegetation, mapping, supervision/administration, and volunteer labor. Since volunteer labor (which accounted for an estimated 40 hrs of labor in Year 1) does not impose out-of-pocket costs but nevertheless should be included in an economic accounting framework because it constitutes an opportunity cost, we apply a conservative shadow price of $10/hr (equal to about 25% of typical hourly applicator costs) to yield an estimated $400 in volunteer labor.

3. Cost Impacts of Delaying the Start of the Control Project

In this section we illustrate the impacts on Year 1 project costs that we would see if initiation of the tall whitetop control project were to be delayed for between two to ten years beyond 2000. It is reasonable to expect the Project costs to be affected because we know that tall whitetop infestations rapidly expand when left uncontrolled by humans. At what rate would we expect the infestation at the Project site to grow if control efforts had not been undertaken? While there is some uncertainty on this point and expansion rates vary according to site-specific conditions, the existing literature provides us with good information to characterize a range of likely rates.

As one recent reference point, Smith et al. (1999) examined the growth rates of a variety of different invasive weeds in diverse locations around the western United States. That study found an average expansion rate of approximately 24% per year, with relatively high rates in early years and lower growth rates as an infestation matures. This figure is close to the estimated annual average growth (27%) of spotted knapweed (*Centaurea maculosa*) in Montana since 1920 (Sheley et al., 1996). Smith et al. also note that their projected expansion rates for the early years of small infestations are in the range of the 60% growth rates found in the literature (e.g., Callihan and Evans, 1991; Roche et al., 1994).

Given these data, we estimate impacts on costs assuming three different annual average expansion rates: 10%, 20%, and 30%. These rates bracket the annual average rates found in the literature, but are well below the higher rates for small infestations noted above. Given the relatively small acreage of tall whitetop present at the Douglas County Project site (75 acres), it is reasonable to expect that 10%-30% is a conservative range of assumptions for the expansion rates and, if anything, may understate the rapid growth of which small infestations are capable.

Table 2 shows the impacts on Year 1 Project costs of delaying the Project's commencement by various numbers of years, with start dates ranging from 2000 to 2010. The second column in the table displays Year 1 costs by startup year assuming an annual average expansion rate for tall whitetop equal to 10%. The third and fourth columns display Year 1 costs for the higher expansion rates of 20% and 30%, respectively.

Table 2. Impact of delaying Douglas County Tall Whitetop Project startup on Year 1 variable costs, considering three annual infestation expansion rates. [a]

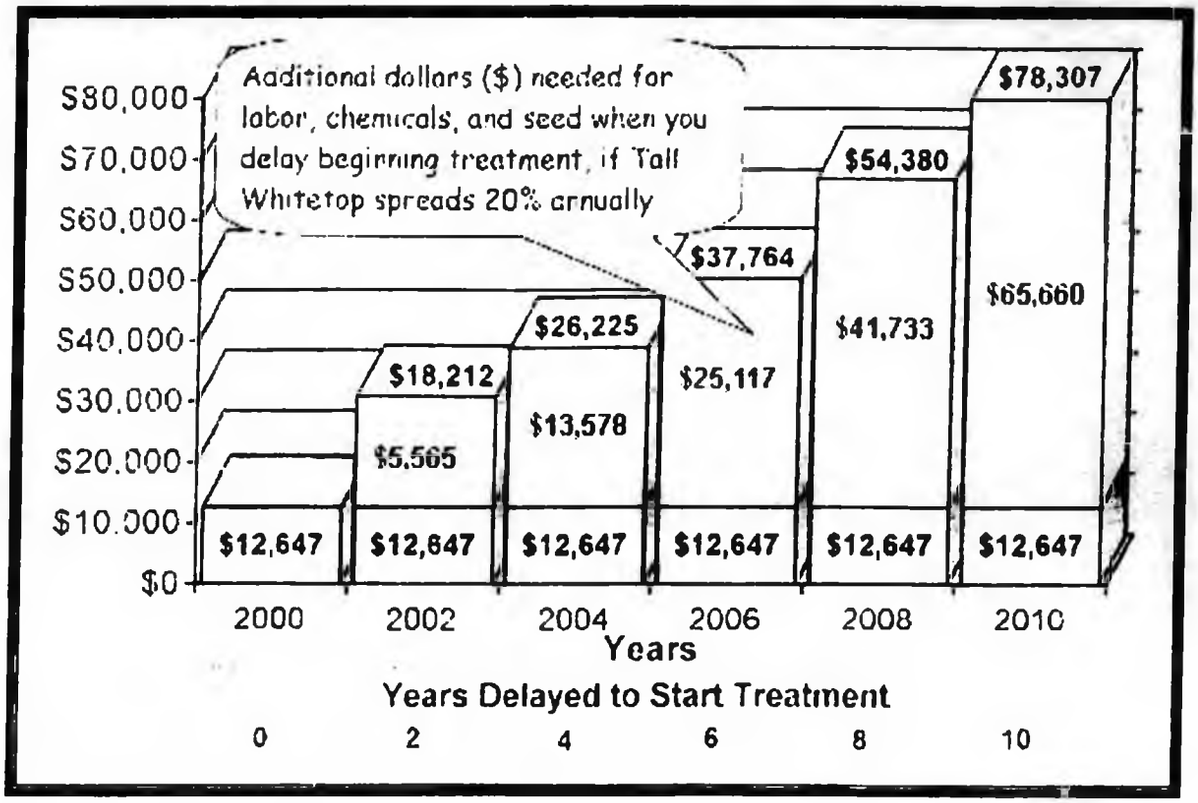
Project startup year	Year 1 Project costs, considering tall whitetop infestation annual expansion rates[b]		
	10%	20%	30%
2000	$12,647	$12,647	$12,647
2002	$15,303	$18,212	$21,373
2004	$18,516	$26,225	$36,121
2006	$22,405	$37,764	$61,045
2008	$27,110	$54,380	$103,165
2010	$32,803	$78,307	$174,350

[a] Costs are expressed in current (not present) value dollars (i.e., neither a discount rate nor a rate for anticipated inflation are applied to future costs as these may be offsetting adjustments).

[b] This table illustrates only how Year 1 Project costs would have increased in the event of delay in the Project commencement. Postponing control would also increase costs in each of the other nine years of this ten-year Project, but we do not assess the impacts in those years because the necessary data on costs and tall whitetop bounce back rates are not yet available. For this and other reasons mentioned in the text (conservative expansion rate scenarios, omission of capital costs for weed control and not allowing for inflation), the results shown here tend to underestimate the increase in costs that would result from a delay in the Project startup.

As demonstrated in Table 2, postponing tall whitetop control efforts has a significant impact on how much money is spent on control. Even under a modest expansion rate of 10%, delaying control by 6 years would cause Year 1 costs alone to almost double, rising from $12,647 in 2000 to $22,405 in 2006. If the expansion rate were double this amount (20%), postponing control efforts for six years would cause Year 1 costs to almost triple, rising from $12,647 in 2000 to $37,764 in 2006. An expansion rate of 30% would cause Year 1 costs (six years delayed) to rise to over $60,000. It is important to keep in mind that the highest expansion rate we model (30%) is actually quite close to the average annual rate observed for spotted knapweed in Montana over the last eight decades (27%). Many invasive species, including tall whitetop, have similar or greater expansion rates, particularly in the early years of an infestation. Figure 1 illustrates graphically the estimated rise in costs as tall whitetop control is delayed, assuming our "middle" scenario of a 20% expansion rate.

Figure 1.Year 1 variable costs for tall whitetop control by project start year at 20 percent annual expansion rate of weeds in Douglas County, NV.



4. Conclusions

Entities faced with demands to spend money on invasive weed control are often besieged by multiple, competing demands to devote resources to a number of other needs as well. This is the case for federal and state agencies and legislative bodies, counties, municipalities, weed districts, irrigation districts, watershed management authorities, and private producers and landowners. Competing demands for scarce funds often result in a delay in expending dollars and efforts on invasive weed management.

The results of our assessment show in a very conservative manner why it is important to adopt a dynamic perspective when deciding how and when to spend money on invasive weed control *instead of* other activities and programs. Because of the peculiar characteristics of the ecological problem posed by tall whitetop and other invaders (i.e., explosive growth), the costs of control multiply rapidly over time. Therefore a failure to devote resources to infestation problems today requires the decision maker to spend appreciably larger sums of money even a small number of years from now. At the highest expansion rate modeled in our assessment (which is well within the range of data observed for invasive weeds in the West), even a four-year delay in beginning a control program would cause the eventual Year 1 control costs to nearly triple. A ten-year delay would cause Year 1 costs to rise by more than a factor of ten.

Do not delay beginning treatment of tall whitetop. Every year you wait adds to the expense of managing this invasive weed.

It is important to bear in mind that our assessment only examines, and very conservatively at that, the impacts on out-of-pocket costs in the first year of the tall whitetop Project. Of course, postponing control would also increase costs in each of the other nine years of this ten-year Project as well. For this and other reasons mentioned above (conservative expansion rate scenarios, omission of capital costs for weed control and not including rates of inflation), our results tend to be "conservative." That is, they underestimate the increase in control costs that would have resulted from a delay in commencement of this Tall Whitetop Initiative Project in Douglas County. In addition, our assessment does not deal with the rapid accumulation of economic damages from invasive weeds (foregone benefits such as grazing and recreation) that occur over time as control is postponed. These lost benefits certainly would escalate rapidly and may in fact constitute a greater economic loss to a community than the out-of-pocket costs demonstrated here.

References

Auton, A., M.E. Eiswerth, W.S. Johnson, and K. Kadrmas. 2000. "Invasive Weed Impacts on Habitat Carrying Capacity: Results of an Expert Judgment Survey." Abstract published in: Proceedings of the Second National Extension Natural Resources Conference. South Lake Tahoe, NV. May 2000. p. 63.

Callihan, R. and J. Evans. 1991. "Weed Dynamics on Rangeland. " In *Noxious Range Weeds*, Eds. James, Evans, Ralphs, and Child. Boulder, CO: Westview Press, 55-61.

Donaldson, S., and W.S Johnson. 1999. "The War Against Tall Whitetop." University of Nevada Cooperative Extension Fact Sheet 99-95. Reno, Nevada.

Olson, B.E. 1999. "Impacts of noxious weeds on ecologic and economic systems." *In* R.L. Sheley and J.K. Petroff (eds.). *Biology and Management of Noxious Rangeland Weeds*. Corvallis, OR: Oregon State University Press. pp. 4-18.

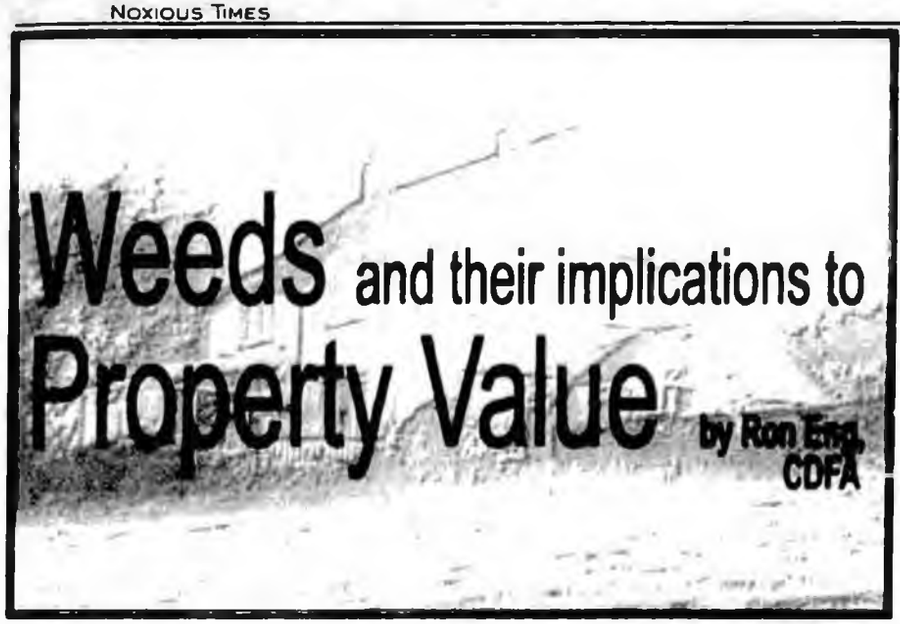
Roche, B., J. Lacey, T. Bedell, and K. Sanders. 1994. "Knapweed." Washington Interagency Knapweed Committee Newsletter, Washington State Cooperative Extension Service, Vol. 8, No. 1, May.

Sheley, R., M. Manoukian, and G. Marks. 1996. "Preventing Noxious Weed Invasion." *Rangelands* 18(3): 100-101.

Smith, H.A., W.S. Johnson, J.S. Shonkwiler, and S.R. Swanson. 1999. "The Implications of Variable or Constant Expansion Rates in Invasive Weed Infestations." *Weed Science* 47: 62-66.

U.S. Department of Agriculture. 1999. Proceedings of National Symposium on Tall Whitetop – 1999. Alamosa, Colorado, June 9-10, 1999.

Young, J.A., C.E. Turner, and L.F. James. 1995. "Perennial pepperweed." *Rangelands* 17(4): 121-123.



Weeds and their implications to Property Value

by Ron Eng, CDFA

Real estate is one of the largest purchases a person makes in her or his lifetime, often involving a loan with security based on the purchase property. With so much on the line, it is the seller's responsibility to represent the subject property accurately so that a potential buyers will know whats they are getting and what to expect after the close of escrow. Fraudulent misrepresentation or omissions place the property sellers and their agents in legal jeopardy. I will describe two short stories as examples of disclosure and the implications weed infestations have on a community.

In California in 1976, a seller used an agent to list his property for sale - a 3,000 square foot home on an acre of land, with a pool and guesthouse. Shortly after the new owner took occupancy, land subsidence caused sizable damage to the driveway. She then discovered that the floor of the guesthouse was not level and that the doorways were not square, which made closing doors difficult. The seller had needed to restabilize the soil on at least two occasions, which lead to speculation that this was what prompted the sale. The buyer learned that the property was built upon fill that was not properly engineered for stability and compaction. She brought suit against the seller and his agents for failure to disclose material defects prior to the time of sale. Despite a court appeal by the realtors, the law was upheld against them, and the seller became insolvent following the first judicial decision.

The case made it clear that disclosure requirements can have far-ranging implications, as they include anything that may impact the material value of residential property. In 1984, a California law was passed based on the case described that requires full disclosure of all defects materially affecting the value of residential property that are known or *should be known*, to be revealed to potential buyers before sale. Weeds can be a part of this. For example, if a property for sale is described as "for horses," the potential buyer should know of any weeds toxic to livestock or difficult to control that exist on the property so that they can determine if any weed elimination work is needed to make it suitable for horses. Realtors who represent buyers and sellers are responsible for providing due diligence to their clients so that transactions occur with understanding of all parties in mutual trust. Since realtors earn a percentage of the sales price in transactions, it is their fiduciary duty to provide protection to their clients and prevent unfair business advantage or fraud. California sellers are required by law to disclose any thing affecting the material value of the property to potential buyers prior to sale.

The immediate property [illegible] not the only land affected by the presence of weeds. In Montana, a film celebrity created conflict with the local community by refusing to use herbicides on his ranch. Although Seagal had filed a weed control plan with the County Agent, he did not take action to eliminate the weeds on his property. Adamantly

against using herbicides, the celebrity was at odds with long-time ranching neighbors who controlled their weeds. He blocked outside access to his weed-infested ranch, escalating tension and isolating himself from the irate local community. When a new owner bought the celebrity's ranch, the ranchers assumed that he would be just as resistant and difficult. The new owner received a cold welcome from the his neighbors, but responded by admitting he knew nothing about ranching and would support the locals by assisting with weed control. He conducted a fundraiser to buy new weed control equipment for shared community use. The new owners also kept their ranch open to welcome neighbors, and actively sought out their ranching advice. Slowly, the locals came to accept the new residents.

In Montana, weeds were the source of two distinct non-neighborly issues: a failure to follow through on weed control, and removing access to the property. Weeds are everyone's problem, especially in rangeland management, so if even just one ranch owner refuses to control weeds on his property, nearby ranchers have no chance of maintaining the control because of re-infestation at their borders.

It is true that infestation disclosure can potentially reduce sale value (although likely less the cost of being sued). A recreational land sale in Oregon lost some value due to weeds, devalued $200,000 off of the original $2 million price. Similarly, grazing land in Montana has lost sale value from $400 acre to about $200 acre due to invasive and difficult to control weeds. The value of grazing land is based upon the ability of livestock to find adequate forage and the land's ability to support grazing long term. Ranch land leases are often described in cow-calf units that represent the amount of feed available to support a cow and or calf on a given acreage of land. Land with high unit value, or, land that can support large numbers of livestock, has more value. Pristine grazing lands are prized, but are under continuous threat of invasion by noxious weeds. If no maintenance is done to prevent weed infestations, eventually desirable feed grasses are crowded out and there is less feed availability over time. Thus, unmaintained property is a costly nuisance for everyone.

Relatively benign pampas grass "swallows" a home in the background. Noxious weeds may create a real estate devaluation to the immediate landholders and their at risk neighbor.

While real estate transactions continue to occur without the disclosure of weed problems, it is uncertain if disclosure requirements will change and extend to existing weed vegetation problems. In any case, it is best to disclose all information about the property for sale that may cause a change in property value. A good buyer's agent will provide protection to their client's needs and concerns by examining the property and requiring a professional evaluation or inspection of such things, similar to a home inspection that is typical prior to sale. The real estate business is litigious because of the high value involved. An experienced and skilled real estate agent's service is well worth the commission they earn, both for the buyer's peace of mind and the seller's protection. ❖

Economic Effects on Invasive Weeds on Land Values (from an Agricultural Banker's Standpoint)

Charles Weiser

From: Exotic Pests of Eastern Forests, Conference Proceedings - April 8-10, 1997, Nashville, TN, Edited by: Kerry O. Britton, USDA Forest Service & TN Exotic Pest Plant Council

The year was 1954, four young 4-H members were traveling to a livestock judging workout. Ben Barrett, the county agent, stopped the car and escorted the young men to a weed patch located on the adjacent railroad right-of-way. **"Take a good look-this is leafy spurge. If you ever see it in your area, let me know. It is almost impossible to control."**

My next encounter with leafy spurge came in the spring of 1963. As Assistant Ward County Extension Agent, I became aware of leafy spurge infestation in Ward County. There were an estimated 2,000 acres in a seven-township area centering on the "Brooks Ranch" area. It was found in patches from 200 square feet to 10 acres in size. These patches were in road ditches, coulee bottoms, and fence lines.

The county agent and myself used square rod demonstration plots and personal contacts to try and convince landowners to organize a control program. We had very little success.

The excuses were many:

1. It's too expensive; the state should pay the bill;
2. It came in along the railroad; they should clean it up;
3. What's the problem-it's been here since the mid 30's and hasn't spread very fast.

A few individuals started control programs on their land, and those areas are relatively clean today.

By 1972 (10 years later), the acreage infested in Ward County had doubled to around 4,000 acres. There was now some spurge in all 57 townships in the county. The concern level of the landowners had increased, and the county began a limited control program along county roads, but control on private land was limited due to the high cost per acre of chemical control.

By 1982 (10 years later), the acreage doubled again to around 8,000 acres. The county commissioners were considering scrapping the control on roadsides; they had not seen very much done on the private land, and wondered why they were spending money on road ditches if the adjacent landowners didn't do anything. At the same time, the state legislators changed the weed laws, allowing counties to levy 3 mills of property tax to be used for weed control. In addition, the Legislature appropriated state funds which were divided among the counties which levied the 3 mills. The combination of county and state funds could be used to cost share spurge control on private lands.

This cost share approach on private lands was instituted in 1983. In my county and state, funds cover 70% of the cost. The landowner pays apprximately 30%.

The acreage of leafy spurge continued to increase to a high of around 12,000 acres in 1990.

After watching control results from 1983 to 1990, more and more farm operators took part. Estimated acreage infested in 1994 showed a drop to around 10,000 acres of which 8,000 had control measures applied.

Over the time frame of 1962 to 1992, the area of leafy spurge in North Dakota doubled every 10 years from 200,000 acres in 1962 to an estimated high of 1,000,000 acres in 1992.

In 1994, Agricultural Economists at North Dakota completed studies of the annual economic impacts of leafy spurge on grazing lands and wildlands in the four state area (North Dakota, South Dakota, Montana, and Wyoming).

The methods and detail of the studies are available from North Dakota State University (NDSU). In the interest of brevity, please allow me to summarize their findings for North Dakota.

Annual Grazing Land Impact in North Dakota

Grazing Acres	1,426,000
Infested Acres	625,900
% Infested	5.48%
Lost AUM's of Grazing	459,000
Value lost AUM's	6,876,000
Lost expenses & returns	17,317,000
Direct economic impacts	24,193,000
Secondary (economic impacts)	53,989,000
Combined economic impact	78,182,000

Annual Wildland Impacts in North Dakota

Wildland acres	4,899,000
Infested acres	350,300
% Infested	7.15%
Reduction soil water conservation	514,100
Reduction wildlife recreation	2,111,600
Direct economic impact	2,625,700
Secondary economic impact	5,291,000
Total economic impact	9,790,000

Annual impact on grazing	$78,182,000
Annual impact on wildlands	$9,790,000
Total:	**$87,972,000**

Take this annual loss over 10 years and the resulting combined loss is staggering!

Now, let's look at the effects of this weed on land values.

The basic value of any income producing investment is based on the projected income flow the investment will produce. This holds true for stocks, bonds, land, apartment buildings, etc.

If the income stream shrinks, so does the value (price) of the investment. Likewise, if income streams increase, so does the value of the investment.

Alien plants which invade native grazing lands, all affect carrying capacity negatively. They crowd out productive and usable forage plants lowering carrying capacity. As carrying capacity shrinks, so does the income stream. As income streams shrink, so does value of the asset.

Remember the Brooks Ranch? Leafy spurge acreage increased to the point where over 50% of the acres were infested. The owners decided to sell. Two brothers who were neighbors purchased the ranch in 1975, at full market value. Farm Credit Services financed the purchase. Within three years, they had deeded back most of the pasture land to Farm Credit Services and were financially distressed.

It took Farm Credit Services until early 1991 to sell the property. I visited with Jeff Haugen, the appraiser for FCS regarding prices and value. He said his knowledge of sales indicated that this type of pasture should have sold for $100 to $125 per acre. Because of the lowered carrying capacity due to leafy spurge, the price dropped to $40/acre. Jeff, also related that he was surprised it was that high. By the time it was sold, much of the pasture was 100% covered by spurge.

This drop in value of 60% is a real loss in value.

Another documented case came from Klamath County, Oregon. In the year 1988, a 1,360 acre ranch was taken over by the county to cover unpaid taxes caused by unproductivity because of leafy spurge. Estimated value for similar clean land was $125 to $150/acre. ($170,000 to $204,000).

The county put the ranch up for sale with minimum bids set at $17,000 for taxes due. The first try at selling failed with bids below that level. Eventually, it was sold to a party who lives in California for $27,500, with the stipulation he had to control the spurge. In 1995, I called Francis Roberts, the county weed supervisor in Klamath County, to confirm the information. He indicated he had confirmed the prices with county officials and had called the current owner. The owner had spent close to $60,000 through 1994 (6 years) on control measures. The weed supervisor indicated he has a serious problem and has made little headway in control. This drop in value from $170,000 to $27,500 shows a loss of approximately 83% in value on this ranch.

As an agricultural lender, I am interested in the longterm values of my collateral. Most agricultural loans run for terms of over 10 years up to 20 to 30 years. If my collateral value declines due to invasive alien weeds, my loan may be in jeopardy. Likewise, reduced income due to alien invasive weeds lowers income from the land. This lower income will affect the borrower's ability to repay the loan.

Because of these effects on value and income, I am not interested in real estate loans where my collateral has invasive alien weeds.

All invasive weeds cause loss of native plants and changes in wildlife habitat. Losses of desirable habitat translates to losses of wildlife numbers. A case in point is the loss of elk habitat in Montana due to infestation of spotted knap weed. Another is wetland degradation due to purple loosestrife.

In some areas, noxious invasive weeds are an out-and-out eyesore. They cheat us of the surroundings we once found a pleasure to behold.

An unqualified impact of aliens and invasive weeds on less intensively managed wildlands is their potential to act as a nusery or seed bank from which to spread.

The bottom line is a devastating loss in incomes, land values, wildlife habitat, and the aesthetic value of wild places.

Our natural resource heritage depends on everyone's involvement.

You, as land managers, cannot stand by and let alien weeds continue to expand their range because it is "too" expensive to control them.

The highest cost you will ever pay is the lost income and drop in value as the alien plants take over.

The lowest cost is for early and continued control at first appearance. That first $1 spent on small patchs will save income, land values, and the extremely high costs of control later!

There is an old Indian proverb. "We don't inherit the land from our ancestors, we borrow it from our children."

Literature Cited

Leitch, Jay A., F. Lary Leistritz, and Dean A. Bangsund. 1994. Economic Effect of Leafy Spurge in the Upper Great Plains: Methods, Models, and Results. Agricultural Economics Rpt. No. 316. Fargo: North Dakota Agricultural Experiment Station.

Invasive.org is a joint project of The Bugwood Network, USDA Forest Service and US
The University of Georgia - Warnell School of Fore
College of Agricultural and Environmental Sciences - De
Last updated on Monday, March 18, 2
Questions and/or comments to the Bug

Volume 8, No. 2 and 3
Summer and Fall 2006

NOXIOUS TIMES

In This Issue

Eradication: Goal or Pipe dream?

BY ROBERT LEAVITT, CDFA

The concept of pest eradication in general, and weed eradication in particular, is controversial in that many believe that eradication is an impossible goal. However, the California Department of Food and Agriculture (CDFA) has experienced that weed eradication is indeed achievable, given the right approach. I will herein illustrate some of the principles of weed eradication and outline some characteristics of a successful eradication program.

What exactly does eradication mean? It means that every plant or plant part capable of reproduction is removed from a defined area - the county serving as the traditional CDFA area boundary. To contrast eradication with control, eradication is the removal of all plants or plant parts capable of reproduction, whereas control means the temporary suppression of plant germination, emergence, or growth sufficiently enough so that crop, forest, range production, highway safety, water movement, or other goals can be achieved for a season. Once eradication is accomplished, treatments can stop; with control, treatments must continue year after year.

Eradication *continued on page 3...*

Did you Know: Artichoke Thistle

BY ROBIN MARUSHIA AND JANET GARCIA, UC RIVERSIDE

Cardoon CDFA file photo *Artichoke Thistle*

The names artichoke thistle and cardoon have long been used interchangeably when discussing the invasive plant *Cynara cardunculus* in California. However, there is a biological basis for separating the two common names, even though they are taxonomically in the same species.

Cardoon, as some gardeners know, is actually an old-fashioned vegetable popular in Italy. In fact, cardoon is a horticultural intermediate between the wild type of *C. cardunculus* and its most domesticated form, the globe artichoke. Few people would mistake globe artichoke for its ancestor. Domestic artichokes are, in general, completely spineless (except

Thistle *continued on page 7...*

Eradication *continued from front page*

Principles of Weed Eradication and Characteristics of a Successful Eradication Program

Weed eradication programs are most effective at the "pioneer" stage of weed invasion. Non-native weeds can be thought of as invaders. A new weed can move from an alien situation (outside California's borders) into the state via various pathways. Man-made vectors include car and truck traffic, aircraft, boats and ships, pack animals, and hikers; natural vectors may bear alien plants on wind, rivers, streams, water fowl, and wild life. Once introduced, the new weed forms "pioneer" populations: populations that are relatively small and not yet a permanent feature of the plant community. Many weed infestations probably die out at this stage from natural causes, such as competition from native vegetation. However, a small number of new weeds have the biological and agronomic ability to adapt and grow well in their new home, and they begin to proliferate and overcome the native vegetation. This is the "colonization" stage. If nothing is done to stop the spread of the weed, it eventually becomes a part of the state's ecology in an "establishment" stage (see Figure 1).

CDFA file image

Roads are prime vectors for weed spread. Here, Scotch broom overhangs a mountain road.

The appropriate weed control strategy depends upon the stage of invasion of a new weed. When the weed is alien, outside California, prevention and exclusion strategies are appropriate and usually effective. These include the California Border Stations that intercept truck and trailer traffic, and in some locations passenger car traffic, to inspect for agricultural products that could bring unwanted insects, diseases, and weeds into the state. Once a weed has entered the pioneer stage of invasion, the most appropriate control strategy is eradication. It is at this stage, and the beginnings of the colonization stage, that eradication techniques have a reasonable chance of being successful. Once well into the colonization stage or beginning of the establishment stage of invasion, weed populations are too large and widespread for eradication, and control strategies must be adopted. (See Figure 1).

The smaller the original population, the greater the likelihood of eradication success. As the World Conservation Union states in its guidelines, "The best opportunities for eradicating or containing an invasive species are in the early stages of invasion, when populations are small and localized" (IUCN 2006). Rejmanek and Pitcairn (2002) studied the history of successful weed eradication projects by the CDFA (Table 1) and concluded that, "With the exception of *Cucumis* [dudaim melon] ... all gross infestations [that were successfully eradicated] were smaller than 10 ha and most of them were smaller than one hectare when they were detected" (Rejmanek and Pitcairn 2002).

In addition to the successfully completed eradication programs listed in Table 1, the CDFA also has many on-going weed eradication programs, including hydrilla, alligatorweed, wormleaf salsola, Scotch thistle, and camelthorn. Based on this experience, I believe that weed eradication programs can be divided into three phases, as follows: the "discovery" phase, the "control" phase, and the "eradication" phase.

The discovery phase starts with the first discovery of a new weed in California, and can usually be described by a population that is limited in area, but growing and spreading, with many pioneer populations around the main infestation. This phase usually requires treatment with a low cost weed control method that can be applied over a larger area. Herbicide use is the most common treatment for this situation, although some mechanical treatments may also be effective.

Figure 1: ***Stages of Invasion***

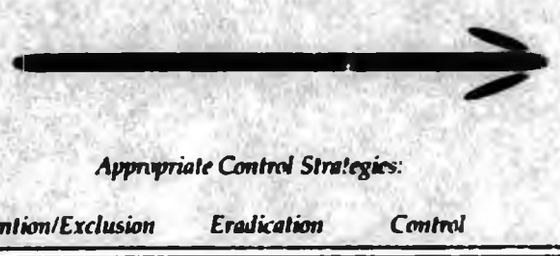


Table 1:
Weeds eradicated by CDFA in California:

Heartleaf nightshade	*Whitestem distaff thistle*
Dudaim melon	*Torrey's nightshade*
Giant dodder	*Austrian peaweed*
Serrate spurge	*Wild marigold*
Russian salttree	*Syrian beancaper*
Blueweed	*Meadowsage*
Tanglehead	*Creeping mesquite*

The control phase starts after weed control treatments begin and the initial population begins to decline. Small pioneer populations are controlled or eradicated. As the number of plants declines, weed control treatments need to become more directed. Spot sprays of herbicides and hand removal may become effective treatments. In the eradication phase, only isolated plants, zero plants or plant parts are found. This phase requires the use of highly directed treatments when these isolated plants are detected, making spot sprays of herbicides and hand removal of individual plants and underground plant parts the most commonly used techniques.

The eradication phase is also characterized by long term survey and monitoring of previous infested sites to ensure discovery of any new plants that emerge. The level of total effort may not decrease in the eradication phase, but the bulk of the work shifts from treatment of existing populations to survey and search for surviving plants or plant parts (seeds, tubers).

To be successful, weed eradication requires adequate government authority and support of the local community. In general, government authority is required to establish quarantine zones and support eradication programs. Quarantine zones are needed to prevent movement of a new weed into non-infested areas, but also to ensure that new introductions are not being made into an area with an active eradication program. Government support of eradication programs is generally necessary for two reasons: first, the complete removal of all plants or plant parts from even a small area often requires considerable costs, which individual landowners are usually not willing or able to make; and second, all infested properties in given area must cooperate with the eradication effort if it is going to succeed. It makes no sense to eradicate a given weed from one property only to allow it to grow and spread unimpeded across the fence.

The California Legislature has given the CDFA authority and responsibility to eradicate noxious weeds from California. The Legislature has specifically named two weeds in the Food and Agriculture Code to be eradicated, hydrilla and camelthorn (Food and Agriculture Code Sections 7303 and 6048, respectively.) The Legislature has given the CDFA authority to control or eradicate other weeds (Food and Agriculture Code Sections 403, 5004, 5021-5027) and those weeds are named by regulation (California Code of Regulations Title 3 Section 4500.) In addition, the CDFA acts on behalf of the United States Department of Agriculture in the control and eradication of federally listed noxious weeds within the state.

To carry out the responsibility to control and eradicate noxious weeds, the CDFA classifies weeds according the actions it intends to take (CDFA 2006). The CDFA considers all listed noxious weeds to be a threat to the ecology and/or economy of the state. The CDFA rates weeds in four classes: A, B, C, or Q. For A-rated weeds, the CDFA considers them, based on survey information available, limited in extent of infestation - roughly at the "pioneer" or early "colonization" stages of invasion. A-rated weeds are subject to statewide eradication and cannot be sold by plant nurseries or in other channels of trade. B-rated weeds are more widespread in distribution at the "colonization" or early "establishment" stages of invasion. B-rated weeds are subject to local eradication, at the discretion of the county Agricultural Commissioner, and cannot be sold by plant nurseries. C-rated weeds are generally widespread and subject to local control activities. The Q rating is a temporary rating and the CDFA treats these weeds as A-rated weeds until a full risk analysis can be completed. This rating system may be refined in the near future, but the essential goal of rating weeds according to the size of the infestation and potential risk/impacts to agriculture and the environment will remain.

The CDFA has found that local community support is vital to the success of an eradication program. Community groups include, but are not limited to, Native American tribes, environmental groups, fishing, hunting, boating and other outdoor recreational enthusiasts, and local city and county governments. The CDFA conducts extensive public education and outreach to explain its actions and the reasons for those actions, including the consequences of inaction. The CDFA has found that local communities can be very supportive of eradication programs once they understand the rationale behind them.

CDFA file image

Herbicide spraying aims to control and reduce a weed at a specific site

In addition to authority and local community support, a successful eradication effort needs an on-the-ground program. Based on the CDFA experience, I can define four components to such a program: early detection, rapid response, environmental compliance and monitoring, and long-term commitment. Early detection means finding a new weed as early in the "pioneer" stage of invasion as possible, which requires constant survey of high-risk areas (highways, airports, marinas, campgrounds) by as many eyes as possible, including help from the public to see and report a new weed. A botany laboratory must be maintained by CDFA to correctly identify any suspect new weed. Rapid response means that the CDFA and landowners bring all appropriate resources to bear against the new introduction in a timely manner, which may necessitate that plans, required permits, and funding sources be identified ahead of time. Appropriate control strategies must be implemented, usually including, but not limited to, herbicides and mechanical control. Environmental compliance means that the treatment program must be in compliance with all environmental laws, including the California Environmental Quality Act, and the federal Endangered Species Act. The CDFA has a policy of conducting an environmental monitoring program for all of its eradication programs, including monitoring foliage, soil, air, and water, depending upon the nature of the treatment program. Long-term commitment means that funds and manpower must be dedicated to follow up survey and treatment for several years after the last plants are detected to ensure that hidden seeds or tubers don't germinate, become established, and start a new introduction.

In conclusion, I believe that weed eradication is an achievable goal. The CDFA has been conducting weed eradication projects for decades, with an impressive track record. The key is to detect new weed introductions as early as possible, especially in the "pioneer" phase, respond rapidly with appropriate weed control techniques, maintain environmental compliance, and follow up with surveys and treatments for the long-term. ❖

REFERENCES

CDFA 2006. The California Department of Food and Agriculture Action Oriented Pest Rating System, California Department of Food and Agriculture, Sacramento, CA 95814. www.cdfa.ca.gov/phpps/ipc/encyclopweedia/winfo_weedratings.htm

IUCN 2006. IUCN GUIDELINES FOR THE PREVENTION OF BIODIVERSITY LOSS CAUSED BY ALIEN INVASIVE SPECIES 6. Eradication and Control. IUCN SSC Invasive Species Specialist Group, Gland, Switzerland and Cambridge, UK. www.iucn.org/themes/ssc/pubs/policy/invasivesEng.htm

Rejmanek, M and M.J. Pitcairn 2002. When is eradication of exotic pest plants a realistic goal?, pages 249-253. In Veitch, C.R. and Clout, M.N. (eds.) Turning the Tide: the eradication of invasive species. IUCN SSC Invasive Species Specialist Group, Gland, Switzerland and Cambridge, UK. www.issg.org/Eradicat.html

Aquarium and Pond Plants of the World: An interactive identification and information guide

An upgrade from slower and often confusing paper keys, the CD-ROM Aquarium and Pond Plants of the World (2004) offers a computer-based guide to identify over 125 common aquatic plants by floral and vegetative characteristics. CDFA's Shaun L. Winterton, an insect biosystematist, created the program under the joint sponsorship between the USDA and APHIS.

The identification key runs on the Lucid3 player, easily downloaded during CD installation. The key is available online at www.lucidcentral.org. All plant profiles include color photographs and/or illustrations of a larger size and number than traditional paper keys can accommodate. While the online key offers immediate access, there is an advantage to ordering the CD. For one thing, internet connection is not required after downloading Lucid player, and the CD also runs an easy step-by-step tutorial on how to best use the key for first time users, which is lacking online. Furthermore, the CD contains information such as the Federal Noxious Weeds List, a glossary, a weed profile browsing section, and a list of some water-tolerant terrestrial plants commonly sold for aquariums.

Initially designed as a diagnostic tool for regulatory officials needing to quickly and accurately identify and screen aquarium plant imports, Aquarium and Pond Plants of the World is a useful tool for anyone interested in aquatic plants - including researchers, botanists, nursery managers and wholesalers.

Winterton and Lucid plan to expand and upgrade the second edition of the key with over 140 genera, which will be available online later this year at www.lucidcentral.org.

To request a CD copy of this product, fax Terrence Walters, Lucid Coordinator at (970) 482-0924, or write him at:
USDA APHIS PPQ CPHST
2301 Research Blvd., Suite 108, Fort Collins, CO 80526 ❖

Interested in more plant identification CD-ROMs? See also "Grass and Grass-Like Weeds of California" and "Broadleaf Weeds of California" at www.cal-ipc.org/resources/booksandcds/index.php.

scheduled
Potential
participants
for SRES hearing

Senate Resources
CS for HB 330

Testify

Off Net

Gino Graziano, Vice Chair, Alaska Committee for Noxious Weeds and Invasive Plants Management (CNIPM) – PowerPoint Presentation

Lori Zamseil, Cooperative Weed Management Area (CWMA) Anchorage

Michele Hebert, Chair, Land Resources Program Cooperative Extension – U of A Fairbanks

Eric Wade, Executive Director Alaska Association of Conservation Districts

In Room
LIO

Answer Questions

Off Net

Franci Havemeister, Director, Div of Ag.

Doug Warner, Development Specialist Plant Material Center, Palmer, Div of Ag.

Stoney Wright, Manager, Plant Material Center, Div of Ag, Palmer,

Mike Coffey, DOT

In Room

Tammy Davis, Fish Biologist, AK Dept Fish & Game
Marit Carlson Van Dort, AK Dept Environmental Conservation
Melanie Lesh, AK Dept of Natural Resources

LIO

Invasive weeds bill moves to Senate

http://community.adn.com/adn/node/119573 Posted by talkdirt Posted: March 17, 2008 10:39 pm

Cheryl writes: Weed warriors, there's good news from Juneau.

Lori and Troy Zaumseil report that HB 330 had its second and third reading on St. Patrick's Day on the floor of the House -- fitting, since it's such a good green bill -- and was put up for full vote. it passed unanimously.

This is the bill that would create a statewide weed coordinator as well as set up a program to organize efforts to fight invasive, noxious weeds in our state.

This would be the first step toward making Alaska eligible for federal funding and creating long-term strategies and defenses against the threat.

These aren't innocuous garden-variety weeds we're talking about but weeds like the river-clogging purple loosestrife that states Outside have spent tens of millions of tax dollars trying (mostly unsuccessfully) to eradicate. Or orange hawkweed, which crowds out and kills every forage plant around it. They and others like them threaten wildlife and salmon and have started showing up in Alaska.

But here, we still have a small window of time to stop them before they establish themselves.

Rep. Craig Johnson, R-Anchorage, spoke briefly on the bill's merits and Rep. Max Gruenberg, D-Anchorage, also spoke on its behalf.

Rep Gruenberg noted that he'd received a copy of the noxious weed pocket guide available for free at Cooperative Extension Service offices and passed it on to a Master Gardener friend. She assured him that these invaders are a serious problem and fighting them is worthy of his support, and he endorsed the bill prior to the vote.

The measure goes now to the Senate Resources and Finance Committees. If it's passed there, it will go to the full Senate for a vote, and if successful, on to Gov. Palin.

All this has to happen before the end of the session, so as Lori says, it's a race against time.

Daily News copy editor **Cheryl Chapman** is a gardener and friend to all who've watched 10 flats of pansies (on sale!) keel and die on the back porch because their bed wasn't ready. Contact her at **cchapman@adn.com**.

HB

370

SENATE COMMITTEE REPORT

DATE: 3/18/08

FURTHER:

DATE TURNED IN TO OFFICE: 4/1/08

Resources Committee considered CS FOR HOUSE BILL NO. 370(RES)

HB 370 PROTECTION OF FORESTED LAND

"An Act relating to forested land management and protection from wildland fire and other destructive agents; changing the term 'forest fire' to 'wildland fire' where it appears in the Alaska Statutes; and providing for an effective date."

and recommends:

[ ] be **replaced** with [ ] **SCS** or [ ] **CS** _____ (_____)

[ ] adopt **previous** [ ] **SCS** or [ ] **CS** _____ (_____)

[ ] attached amendment(s)

[ ] adopt _____Letter of Intent

[ ] further referral to _____Committee

SENATE BILL:
[ ] Same Title
[ ] New Title

HOUSE BILL:
[ ] Same Title
[ ] Technical Title Change
[ ] New Title w/ SCR #_____

NEW FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#

PREVIOUS FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#
LAW	2/27			✓	1
DNR	2/20			✓	2

[ ] **APPROPRIATION - no fiscal note**

SIGNATURES AND RECOMMENDATIONS:	PRINTED LAST NAME	DO PASS	DO NOT PASS	NO REC	AMEND
	WAGONER	✓			
	Wielechowski			✓	
	STEDMAN			✓	
	STEVENS			✓	
	Meloche			✓	
CHAIR:		✓			

HB 370 Protection of Forested Land

March 31, 2008

CSHB 370(RES)vs \E
HB 370 vs\C
Senate Referrals (1): Resources

1. **Fiscal Notes X 2**
2. **Sponsor Statement (Kelly)**
3. **Analyses & Briefing Paper**
   Sectional CSHG 370 (RES) 3/18/2008
   Changes to HB 370 in CSHB(RES) 3/3/08
4. **DNR Briefing Paper**
5. **Support**
   Mayor Jim Whitaker, Fairbanks N.Star Borough

HB 370 Protection of Forested Land

March 31, 2008

CSHB 370(RES)vs \E
HB 370 vs\C

Senate Referrals (1): Resources

1. **Fiscal Notes X 2**
2. **Sponsor Statement (Kelly)**
3. **Analyses & Briefing Paper**
   Sectional CSHG 370 (RES) 3/18/2008
   Changes to HB 370 in CSHB(RES) 3/3/08
4. **DNR Briefing Paper**
5. **Support**
   Mayor Jim Whitaker, Fairbanks N.Star Borough

ALASKA STATE LEGISLATURE

Sen. Charlie Huggins, Chair
Sen. Bert Stedman, Vice Chair
Sen. Lyda Green
Sen. Gary Stevens
Sen. Lesil McGuire
Sen Bill Wielechowski
Sen. Thomas Wagoner

State Capitol, Room 119
Juneau AK 99801-1182
907-465-3878
Fax: 907-465-3265
800-862-3878

Senate Resources Committee

Butrovich Room 205

Monday, March 31, 2008

3:30-5:30 p.m.

AGENDA

- **HJR 31 Oppose Federal Law Re: Aerial Hunting**
-

- **HB 370 Protection of Forested Land**

BPH/S

Teleconference

Testimony: Time Limit May Be Set

Senate Resources Committee 3:30-5:30 Monday March 31, 2008

1. **Gavel In & Call to order:**

Note time – and members present

- **2. HJR 31 Oppose Federal Law Re: Aerial Hunting**
  Representative Wes Keller
  Jim Pound, Staff to Rep. Keller

  Move vs CSHJR 31(RES) vs E with fiscal note to follow

- **HB 370 Protection of Forested Land**
  Representative Mike Kelly
  Derek Miller, Staff to Rep. Kelly

  Here to testify: Chris Maisch, Director Div. of Forestry, DNR
  Online to testify: Mr. Lynn Wilcock, Chief of Forestry

  Move vs CSHB 370 (RES) vs\E (two zero fiscal notes)

Reminder: Wednesday we'll conclude hearing the Governor's Board of Fisheries appointees

Meeting Adjourned @_____

HB 370 TALKING POINTS

- ALLOWS DNR TO INCLUDE CABINS, LODGES AND OTHER PRIVATELY OWNED STRUCTURES IN THEIR WILDLAND FIRE MANAGEMENT DECISIONS. – SOMETHING THEY'RE ALREADY DOING.

- EXISTING STATUTORY LANGUAGE IMPLIES THAT FIRE MANAGEMENT DECISIONS ARE BASED SOLEY ON THE VALUE OF THE NATURAL RESOURCES THAT ARE THREATENED BY WILDLAND FIRE AND NOT THE STRUCTURAL AND CULTURAL RESOURCE VALUES.

- HB 370 WOULD ALIGN STATUTE WITH THE **ALASKA INTERAGENCY WILDLAND FIRE MANAGEMEN PLAN (AIWFMP)**, IN EFFECT SINCE 1985, AND STATES THAT "ALL FIRE MANAGEMENT DECISIONS...WILL BE BASED ON VALUES WARRANTING PROTECTION." (INCLUDING CABINS, LODGES AND OTHER MAN-MADE STRUCTURES).

- THIS DOES NOT OBLIGATE TO PROTECT, IT JUST ALLOWS FOR MANAGEMENT TO INCLUDE STRUCTURES IN THEIR DECISION MAKING.

- CHANGES THE TERM 'FOREST FIRE' TO 'WILDLAND FIRE' THROUGHOUT STATUTE. WILDLAND FIRE IS THE TERM USED IN THE AIWFMP AND WITHIN THE DIVISION OF FORESTRY.

- ZERO FISCAL NOTE & THE DEPARTMENT OF LAW ASSURES US THAT THE STATE DOES NOT RISK TAKING ON ANY ADDITIONAL LIABILITY WITH PASSAGE OF THIS BILL.

25-LS1359\E

CS FOR HOUSE BILL NO. 370(RES)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FIFTH LEGISLATURE - SECOND SESSION

BY THE HOUSE RESOURCES COMMITTEE

Offered: 3/3/08
Referred: Rules

Sponsor(s): REPRESENTATIVES KELLY, Guttenberg, Gara

A BILL

FOR AN ACT ENTITLED

"An Act relating to forested land management and protection from wildland fire and other destructive agents; changing the term 'forest fire' to 'wildland fire' where it appears in the Alaska Statutes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 19.40.010(a) is amended to read:

(a) The legislature finds and declares that there is an immediate need for a public highway from the Yukon River to the Arctic Ocean and that this public highway should be constructed by the State of Alaska at this time because

(1) it will assist in the fulfillment of art. VIII, Sec. 1, Constitution of the State of Alaska, in which it is provided that it is the policy of the state to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest;

(2) it will provide the first year-round, overland route from north of the Yukon River to the Arctic Ocean, and will consequently result in the completion of a

highway from the Pacific Ocean to the Arctic Ocean;

(3) it is in conformity with the policy of 23 U.S.C. 101(b) (Federal-Aid Highway Act of 1956), in which it is declared to be in the national interest to accelerate the construction of certain highways which are of primary importance to the national defense;

(4) it will benefit local and interstate commerce because the area north of the Yukon River is rich in natural resources but is inaccessible at the present time because of the lack of roads and this inaccessibility prohibits the successful use of the natural resources of this area;

(5) it is consonant with art. VIII, Sec. 2, Constitution of the State of Alaska, in which it is provided that the legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and water, for the maximum benefit of its people, because the highway will benefit not only local and interstate commerce but will also augment the revenue of the state and result in conservation of natural resources, for example, by facilitating a system of **wildland** [FOREST] fire suppression.

* **Sec. 2.** AS 33.30.191(g) is amended to read:

(g) In this section, "productively employed" includes the following kinds of employment:

(1) routine maintenance and support services essential to the operation of a correctional facility;

(2) education, including both academic and vocational;

(3) public conservation projects, including **wildland** [FOREST] fire prevention and control, forest and watershed enhancement, recreational area development, construction and maintenance of trails and campsites, fish and game enhancement, soil conservation, and forest watershed revegetation;

(4) renovation, repair, or alteration of existing correctional facilities as permitted by law; and

(5) other work performed inside or outside of a correctional facility under (b) of this section.

* **Sec. 3.** AS 41.15.010 is amended to read:

Sec. 41.15.010. Intent. It is the intent of AS 41.15.010 - 41.15.170 to provide protection **from wildland fire and other destructive agents**, commensurate with the **values** [VALUE OF THE RESOURCES] at risk, [FOR THE NATURAL RESOURCES AND WATERSHEDS] on land that is owned privately, by the state, or by a municipality.

*** Sec. 4.** AS 41.15.040 is amended to read:

Sec. 41.15.040. Right of entry to control and suppress fires. Upon approval by the commissioner or an authorized agent, **an employee** [EMPLOYEES] of the division of lands, or of any organization authorized to prevent, control, or suppress **a fire** [FIRES] or **a** destructive **agent** [AGENTS], and others assisting in the control or suppression of **a fire** [FIRES] upon request of an officer or employee of the United States or the state may at any time enter upon any land, whether publicly or privately owned, for the purpose of preventing, suppressing, or controlling **a wildland fire or a** [FOREST FIRES AND] destructive **agent** [AGENTS].

*** Sec. 5.** AS 41.15.170 is amended to read:

Sec. 41.15.170. Definitions. In AS 41.15.010 - 41.15.170,

(1) "damages" includes costs incurred in suppressing, controlling, or extinguishing a fire;

(2) **"destructive agent" means an insect, pathogen, or other environmental agent that causes damage to a forest resource;**

(3) "forested land" includes all land on which grass, brush, timber, and other natural vegetative material grows;

(4) [(3)] "**wildland** [FOREST] fire" includes the uncontrolled burning of grass, brush, timber, and other natural vegetative material.

*** Sec. 6.** This Act takes effect immediately under AS 01.10.070(c).

25-LS1359\C

HOUSE BILL NO. 370

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FIFTH LEGISLATURE - SECOND SESSION

BY REPRESENTATIVES KELLY, Guttenberg

Introduced: 2/19/08
Referred: Resources

A BILL

FOR AN ACT ENTITLED

"An Act relating to forested land management and protection from wildland fire and other destructive agents; changing the term 'forest fire' to 'wildland fire' where it appears in the Alaska Statutes; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*** Section 1.** AS 19.40.010(a) is amended to read:

(a) The legislature finds and declares that there is an immediate need for a public highway from the Yukon River to the Arctic Ocean and that this public highway should be constructed by the State of Alaska at this time because

(1) it will assist in the fulfillment of art. VIII, Sec. 1, Constitution of the State of Alaska, in which it is provided that it is the policy of the state to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest;

(2) it will provide the first year-round, overland route from north of the Yukon River to the Arctic Ocean, and will consequently result in the completion of a

highway from the Pacific Ocean to the Arctic Ocean;

(3) it is in conformity with the policy of 23 U.S.C. 101(b) (Federal-Aid Highway Act of 1956), in which it is declared to be in the national interest to accelerate the construction of certain highways which are of primary importance to the national defense;

(4) it will benefit local and interstate commerce because the area north of the Yukon River is rich in natural resources but is inaccessible at the present time because of the lack of roads and this inaccessibility prohibits the successful use of the natural resources of this area;

(5) it is consonant with art. VIII, Sec. 2, Constitution of the State of Alaska, in which it is provided that the legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the state, including land and water, for the maximum benefit of its people, because the highway will benefit not only local and interstate commerce but will also augment the revenue of the state and result in conservation of natural resources, for example, by facilitating a system of **wildland** [FOREST] fire suppression.

*** Sec. 2.** AS 33.30.191(g) is amended to read:

(g) In this section, "productively employed" includes the following kinds of employment:

(1) routine maintenance and support services essential to the operation of a correctional facility;

(2) education, including both academic and vocational;

(3) public conservation projects, including **wildland** [FOREST] fire prevention and control, forest and watershed enhancement, recreational area development, construction and maintenance of trails and campsites, fish and game enhancement, soil conservation, and forest watershed revegetation;

(4) renovation, repair, or alteration of existing correctional facilities as permitted by law; and

(5) other work performed inside or outside of a correctional facility under (b) of this section.

*** Sec. 3.** AS 41.15.010 is amended to read:

Sec. 41.15.010. Intent. It is the intent of AS 41.15.010 - 41.15.170 to provide protection **from wildland fire and other destructive agents**, commensurate with the **values** [VALUE OF THE RESOURCES] at risk, [FOR THE NATURAL RESOURCES AND WATERSHEDS] on land that is owned privately, by the state, or by a municipality.

*** Sec. 4.** AS 41.15.040 is amended to read:

Sec. 41.15.040. Right of entry to control and suppress fires. Upon approval by the commissioner or an authorized agent, **an employee** [EMPLOYEES] of the division of lands, or of any organization authorized to prevent, control, or suppress **a fire** [FIRES] or **a** destructiv **gent** [AGENTS], and others assisting in the control or suppression of **a fire** [FIRES] upon request of an officer or employee of the United States or the state may at any time enter upon any land, whether publicly or privately owned, for the purpose of preventing, suppressing, or controlling **a wildland fire** [FOREST FIRES] and **a** destructive **agent** [AGENTS].

*** Sec. 5.** AS 41.15.170 is amended to read:

Sec. 41.15.170. Definitions. In AS 41.15.010 - 41.15.170,

(1) "damages" includes costs incurred in suppressing, controlling, or extinguishing a fire;

(2) "forested land" includes all land on which grass, brush, timber, and other natural vegetative material grows;

(3) "**wildland** [FOREST] fire" includes the uncontrolled burning of grass, brush, timber, and other natural vegetative material.

*** Sec. 6.** This Act takes effect immediately under AS 01.10.070(c).

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: CSHB 370(RES)
(H) Publish Date: 3/3/08

Identifier (file name):
Dept. Affected: LAW
Title: An Act relating to "wildland" fires.
RDU: Civil
Component: Natural Resources
Sponsor: REPRESENTATIVE(s) KELLY
Requester: HOUSE RESOURCES
Component Number:

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2009**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Travel							
Contractual							
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES							
CHANGE IN REVENUES ( )							

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2008) cost: 0.0

POSITIONS

Full-time							
Part-time							
Temporary							

ANALYSIS: *(Attach a separate page if necessary)*

HB 370 changes the term "forest fire" to "wildland fire" in applicable statutes to more closely reflect the reality that Alaska also has tundra fires. Second, it allows DNR to consider the value of all resources at risk when engaging in fire prevention and response planning, rather than being limited to considering only natural resources.

The department does not expect a significant fiscal impact as a result of this bill.

Prepared by: Robert Meiners, Administrative Services Manager
Phone: 907-465-5427
Division: Administrative Services Division
Date/Time: 2/27/08 1:55 PM
Approved by: Talis Colberg, Attorney General
Department of Law
Date: 2/27/2008

(Revised 11/19/2007 OMB)

FISCAL NOTE

STATE OF ALASKA
2008 LEGISLATIVE SESSION

Fiscal Note Number:
Bill Version: **HB370**
() Publish Date:

Identifier (file name): HB370-DNR-FirePrep-02-20-08
Dept. Affected: Natural Resources
Title: Protection of Forested Land
RDU: Statewide Fire Suppression
Component: Fire Suppression Preparedness
Sponsor: Representative Kelly
Requester: H RES
Component Number: 2705

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

	Appropriation Required	Information					
OPERATING EXPENDITURES	**FY 2009**	**FY 2009**	**FY 2010**	**FY 2011**	**FY 2012**	**FY 2013**	**FY 2014**
Personal Services							
Travel							
Contractual							
Supplies							
Equipment							
Land & Structures							
Grants & Claims							
Miscellaneous							
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CHANGE IN REVENUES ( )	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts							
1003 GF Match							
1004 GF							
1005 GF/Program Receipts							
1037 GF/Mental Health							
Other Interagency Receipts							
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2008) cost: 0.0

POSITIONS

Full-time	0	0	0	0	0	0	0
Part-time	0	0	0	0	0	0	0
Temporary	0	0	0	0	0	0	0

ANALYSIS: *(Attach a separate page if necessary)*

This bill will revise Alaska Statute to allow for consideration of other values in addition to those of the natural resources when making fire management decisions. Since its inception in the mid 1980s, the Alaska Interagency Wildland Fire Management Plan (AIWFMP) has guided the Division of Forestry in identifying land where aggressive fire suppression will lead to the protection of life and property, as well as natural resource values. This statute will align DNR authority with these pre-planned suppression actions under the AIWFMP and allow wildland fire managers to consider all values, both natural and man made, when making wildland fire management decisions. Since the AIWFMP is already in place and identifies where fires will be suppressed to protect life and property, this statutory authority revision/clarification will not result any additional fiscal responsibility on the Department of Natural Resources.

Prepared by: Lynn Wilcock
Phone (907) 451-2675
Division: Forestry
Date/Time: February 20, 2008
Approved by: Tom Irwin, Commissioner
Date: February 20, 2008
Natural Resources

(Revised 11/19/2007 OMB)

Alaska State Legislature

Juneau
State Capitol Bldg., Rm. 513
Juneau, AK 99801-1182
Phone (907) 465-4976
Fax (907) 465-3883
Toll Free 866-465-4976

Fairbanks
1292 Sadler Way, Ste 323
Fairbanks, AK 99701
Phone (907) 452-6084
Fax (907) 452-6096

Member
House Finance Committee
Legislative Budget & Audit

Representative Mike Kelly

House District 7

SPONSOR STATEMENT CSHB 370 (RES)

HB 370 allows the Department of Natural Resources (DNR) to include cabins, lodges and other structures owned privately, by the state or by a municipality in their wildland fire management decisions. Under existing statute, DNR is mandated to "provide protection, commensurate with the value of the resources at risk, for the natural resources and watersheds on land that is owned privately, by the state, or by a municipality." This language implies that fire management decisions and appropriate fire management response will be based soley on the value of the natural resources that are threatened by wildland fire and not the structural and cultural resource values.

HB 370 would align statute with the Alaska Interagency Wildland Fire Management Plan (AIWFMP), which has been in effect since 1985, and states that "all fire management decisions by land manager/owner(s) will be based on values warranting protection, protection capabilities, firefighter safety and/or land and resource management needs." The AIWFMP provides a means to categorize and prioritize fires in order to maximize efficient use of fire suppression resources.

It is clear that the AIWFMP intends that fire managers consider all values at risk from wildland fire in their management decision making. Since implementation of the AIFMP, DNR has made decisions on the level of suppression response based on the existence of cultural or man-made values, in addition to the value of natural resources. This would appear to be in conflict with the intent language in AS 41.15.010. State of Alaska fire managers have considered all values in categorizing State, private, and municipal land within the context of the AIWFMP. This statute revision would align the statute with the AIWFMP to allow for a comprehensive direction for fire managers to make decisions about protection levels to more accurately incorporate all that the State of Alaska and its residents value, including natural resources.

Alaska State Legislature

Juneau
State Capitol Bldg., Rm. 513
Juneau, AK 99801-1182
Phone (907) 465-4976
Fax (907) 465-3883
Toll Free 866-465-4976

Fairbanks
1292 Sadler Way, Ste 323
Fairbanks, AK 99701
Phone (907) 452-6084
Fax (907) 452-6096

Member
House Finance Committee
Legislative Budget & Audit

Representative Mike Kelly
House District 7

Sectional Analysis – CSHB 370 (RES)

"Relating to forested land management and protection from wildland fires; changing the term 'forest fire' to wildland fire' where it appears in statute."

Section 1: Amends AS 19.40.010, regarding public highways, to refer to 'wildland fire' rather than 'forest fire'.

Section 2: Amends AS 33.30.191, regarding employment of prison inmates, to refer to 'wildland fire' rather than 'forest fire'.

Section 3: Clarifies the intent in AS 41.15.010, to allow for the protection of all values at risk – from wildland fires and other destructive agents – when making wildland fire management decisions. Deletes the more narrow terms 'value of the resources' and 'natural resources and watersheds,' and broadens the protection safety net.

Section 4: Amends language in AS 41.15.040, right of entry to control and suppress fires, including changing the term 'forest fires' to 'wildland fire.'

Section 5: Changes the term under definitions in AS 41.15.170, from 'forest fire' to 'wildland fire' leaving the definition unchanged and adds a definition for 'destructive agent'.

Section 6: The bill has an immediate effect date.

Alaska State Legislature

Juneau
State Capitol Bldg., Rm. 513
Juneau, AK 99801-1182
Phone (907) 465-4976
Fax (907) 465-3883
Toll Free 866-465-4976

Fairbanks
1292 Sadler Way, Ste 323
Fairbanks, AK 99701
Phone (907) 452-6084
Fax (907) 452-6096

Member
House Finance Committee
Legislative Budget & Audit

Representative Mike Kelly

House District 7

MEMORANDUM

DATE: March 3, 2008

TO: Representative Mike Kelly

FROM: Derek Miller

RE: Changes to HB 370 in CSHB 370(RES) (25-LS1359\E)

The CS for HB 370 (RES) includes new language defining the term 'destructive agent' and makes a conforming amendment in section 4 of the bill.

The definition for 'destructive agent' was added in the definition section of the bill to address the concern raised by members of the Resources committee that the term was too broad as it applied to fire suppression services within the division of forestry. Language in the CS for HB 370 (RES) narrows the decision-making authority within the department to fire suppression and destructive agents – in the form of pests and diseases that cause damage to forests.

Changes:

Sections 1, 2 and 3: No changes

Section 4: Changes 'and' to 'or' on line 14 to allow the department to protect against a wildland fire or a destructive agent.

Section 5: Adds a definition for the term 'destructive agent'

Section 6: No change

Alaska Department of NATURAL RESOURCES

Briefing:

Fire Statute Authority Clarification

September 2007

DEPARTMENT OF NATURAL RESOURCES -- DIVISION OF FORESTRY

Background. Under existing statute, the Department of Natural Resources (DNR) is mandated to "provide protection, commensurate with the value of the resources at risk, for the natural resources and watersheds on land that is owned privately, by the state, or by a municipality." This language implies that fire management decisions and appropriate fire management response will be based on the value of the natural resources that are threatened by wildland fire.

The Attorney General's (AG) office examined the Division of Forestry's (DOF) statutory responsibility for fire protection. In his response, the AG affirmed that "DNR's decision-making focuses on the risk to natural resources, rather than to cabins, etc." This response goes further to say that "it would take new statutory language for DNR to address the complaints that areas with cabins and lodges are ... slated for 'limited protection,' because to do so, DNR would need to incorporate the value of developed private property into its decision-making."

Recommendation for Statute Revision: Amend AS 41.15.010

This proposal would revise AS 41.15.010 to allow for consideration of all resource values, both natural and cultural, when making wildland fire management decisions on state, private, or municipal lands.

Current Statute: *It is the intent of AS 41.15.010 - 41.15.170 to provide protection, commensurate with the value of the resources at risk, for the natural resources and watersheds on land that is owned privately, by the state, or by a municipality.*

Proposed Revised Statute: *It is the intent of AS 41.15.010 – 41.15.170 to provide protection* ***from wildland fire and other destructive agents****, commensurate with the value**s** [OF THE RESOURCES] at risk, [FOR THE NATURAL RESOURCES AND WATERSHEDS] on land that is owned privately, by the state, or by a municipality.*[1]

The updated language would also align statute with the Alaska Interagency Wildland Fire Management Plan (AIWFMP), which has been in effect since 1985, and states that "all fire management decisions by land manager/owner(s) (will be) based on values warranting protection, protection capabilities, firefighter safety and/or land and resource management needs." The AIWFMP provides a means to categorize and prioritize fires in order to maximize efficient use of fire suppression resources. It also states "this categorization and ensuing prioritization ensures that: (1) human life, private property, and identified resources receive an appropriate level of protection with available firefighting resources, (2) the cost of the suppression effort is commensurate with values identified for protection, and (3) the ability of land manager/owner(s) to achieve their individual management objectives is optimized."

---

[1] ***new text underline and bold.*** *[DELETED TEXT BRACKETED AND CAPITALIZED]*

It is clear that the AIWFMP intends that fire managers consider all values at risk from wildland fire in their management decision making. Since implementation of the AIFMP, DNR has made decisions on the level of suppression response based on the existence of cultural or man-made values, in addition to the value of natural resources. This would appear to be in conflict with the intent language in AS 41.15.010. State of Alaska fire managers have considered all values in categorizing State, private, and municipal land within the context of the AIWFMP. This statute revision would align the statute with the AIWFMP to allow for a comprehensive direction for fire managers to make decisions about protection levels to more accurately incorporate all that the State of Alaska and its residents value, including natural resources.

Additionally, there is conflict between the State's wildland fire statutory authority for wildland fire management and public safety policy for protection from fire as defined in Public Safety Statute. This statute reads:

Sec. 18.70.320. Policy.

It is the policy of the state to protect its residents and their property from the ravages of fire...The legislature finds that fire is a constant threat and that homes, places of employment, modes of transportation, and our natural resources need a system of fire protection that is based on the most current, practical standards and educational principles.

This revisi n of 41.15 the Natural Resource Statute, would allow for fire management decisions to include property protection as a consideration and would align wildland fire management statutory authority with other State law.

Contact Information:

	Work	Home	Cell
Chris Maisch, State Forester	451-2666	455-6359	590-3190
Dean Brown, Deputy State Forester	269-8476	376-2895	440-4052
Lynn Wilcock, Chief of Fire and Aviation	451-2675	488-7173	590-3686
Tom Kurth, Fire Operations Forester	356-5850	479-2919	590-3184

February 25, 2008

House Resource Committee
State Capitol
Juneau, Alaska

Dear Members of the House Resource Committee:

This letter is to ***thank Representative Mike Kelly for the sponsorship of HB 370*** - PROTECTION OF FORESTED LAND, and ask your ***support for passage*** of this legislation.

HB 370 allows the Alaska Division of Forestry to better serve the residents of our State and aligns the mission of the Division with the functional expectations of the communities it serves by ***allowing for fire management decisions to include property protection as a consideration.***

Wildland fire management statutory authority must be aligned with other State law. The Fairbanks North Star Borough can attest to the necessity of this revision following the past several fire seasons, most notably the 2004 Boundary Fire. ***Our Borough depends on the cooperative efforts of the Division of Forestry in the most serious instances of life and safety.***

Please do not hesitate to contact our Legislative Liaison staff, Jennifer Yuhas, regarding our support of this legislation. She may be reached at (907) 459-1302 or jyuhas@co.fairbanks.ak.us.

Sincerely,

Jim Whitaker, Mayor

JW:jy-csm

HJR

4

SENATE COMMITTEE REPORT

DATE: 4/30/07

FURTHER:

DATE TURNED IN TO OFFICE: 5/7/07

Resources Committee considered CS FOR HOUSE JOINT RESOLUTION NO. 4(RLS)

HJR 4 KENAI/KASILOF SUBSISTENCE PRIORITY

Requesting the Federal Subsistence Board to rescind its decisions regarding the subsistence fishery priority given to Ninilchik, Happy Valley, Hope, and Cooper Landing residents.

and recommends:

[✓] be **replaced** with [✓] **SCS** or [ ] **CS** CSHJR 4 (RES)

[ ] adopt **previous** [ ] **SCS** or [ ] **CS** SCS. Forthcoming

[ ] attached amendment(s)

[ ] adopt _____ Letter of Intent

[ ] further referral to _____ Committee

SENATE BILL:
[ ] Same Title
[ ] New Title

HOUSE BILL:
[ ] Same Title
[ ] Technical Title Change
[ ] New Title w/ SCR #_____

NEW FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#

PREVIOUS FISCAL NOTE(S):

Department	Date	Fiscal	Indet.	Zero	FN#
H. FSH	3/2			✓	1

[ ] **APPROPRIATION - no fiscal note**

SIGNATURES AND RECOMMENDATIONS	PRINTED LAST NAME	DO PASS	DO NOT PASS	NO REC	AMEND
	Wielechowski			✓	
	Wagoner	✓			
	Stevens			X	
	McGuire	✓			
Lyda Green	Green	✓			
CHAIR:	Huggins	✓			

FISCAL NOTE

STATE OF ALASKA
2007 LEGISLATIVE SESSION

Fiscal Note Number: 1
Bill Version: CSHJR 4(FSH)
(H) Publish Date: 3/5/2007

Revision Date/Time (Note if correction):
Dept. Affected:
Title: Kenai/Kasilof Subsistence Priority
RDU
Component
Sponsor: Rep. Olson
Requester
Component No.

Expenditures/Revenues (Thousands of Dollars)

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Personal Services						
Travel						
Contractual						
Supplies						
Equipment						
Land & Structures						
Grants & Claims						
Miscellaneous						
TOTAL OPERATING	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
CAPITAL EXPENDITURES						
CHANGE IN REVENUES ( )						

FUND SOURCE (Thousands of Dollars)

1002 Federal Receipts						
1003 GF Match						
1004 GF						
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type--Do not abbreviate)						
TOTAL	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

Estimate of any current year (FY2007) cost: 0.0
Mark this box (X) if funding for this bill is included in the Governor's FY 2008 budget proposal:

POSITIONS

Full-time						
Part-time						
Temporary						

ANALYSIS: *(Attach a separate page if necessary)*

Prepared by: House Fisheries Committee Staff
Phone 465-3923
Division
Date/Time
Approved by: Rep. Seaton, Chairman
Date 3/2/2007
Agency: Legislature

(Revised 9/18/2006 OMB)

ALASKA STATE LEGISLATURE

REPRESENTATIVE KURT OLSON

- Chair, Labor and Commerce
- Vice-Chair, Oil and Gas
- Member, Community and Regional Affairs

Session: January – May
State Capitol
Juneau, AK 99801-1182
Phone: 907-465-2693
Fax: 907-465-3835

Interim: May – December
145 Main Street Loop, Ste 221
Kenai, AK 99611
Phone: 907-283-2690
Fax: 907-283-2763

Official Business

TO: Senator Charlie Huggins, Chair
Senate Resources Committee

FROM: Representative Kurt Olson

DATE: April 30, 2007

RE: Hearing on CSHJR 4(RLS)

I respectfully request a hearing in the Senate Resources Committee on HJR 4, Requesting the Federal Subsistence Board rescind its decision regarding the subsistence fishery priority given to Ninilchik, Hope and Cooper Landing residents, at your earliest convenience.

Attached please find a bill packet list and the described information.

If you need any further information, please contact my staff, Konrad Jackson.

Thank you for your attention to this request.

Email: Representative_Kurt_Olson@legis.state.ak.us

AMENDMENT

OFFERED IN THE SENATE BY SENATOR HUGGINS

TO: CSHJR 4(RLS)

Page 1, line 15, following "priority;":

Insert "and

WHEREAS the United States Congress determined that, unlike purposes of other federal refuges established or expanded by the Alaska National Interest Lands Conservation Act, the rural subsistence priority was not an appropriate purpose of the Kenai National Wildlife Refuge, and, therefore, purposefully omitted "continued subsistence uses by local rural residents" from the list of purposes of the Kenai National Wildlife Refuge; and

WHEREAS, unlike its determination of purposes for other federal refuges, the United States Congress chose to make fish- and wildlife-oriented recreational opportunities a purpose of the Kenai National Wildlife Refuge;"

SENATE CS FOR CS FOR HOUSE JOINT RESOLUTION NO. 4(RES)

IN THE LEGISLATURE OF THE STATE OF ALASKA

TWENTY-FIFTH LEGISLATURE - FIRST SESSION

BY THE SENATE RESOURCES COMMITTEE

Offered:
Referred:

Sponsor(s): REPRESENTATIVES OLSON, Fairclough, Seaton

SENATORS Wagoner, Bunde, Therriault, McGuire, Wilken, Huggins

A RESOLUTION

Requesting the Federal Subsistence Board to rescind its decisions regarding the subsistence fishery priority given to Ninilchik, Happy Valley, Hope, and Cooper Landing residents.

BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF ALASKA:

WHEREAS the communities of Ninilchik and Happy Valley have not exhibited a long-term and traditional fishing history in the Upper Kenai or Kasilof drainage waters on federal land; and

WHEREAS, in making the customary and traditional use determination for the communities of Hope and Cooper Landing, the Federal Subsistence Board failed to follow its own regulatory criteria for making that decision; and

WHEREAS a survey by the Alaska Department of Fish and Game did not support these communities' receiving a subsistence priority; and

WHEREAS the residents of these communities fall short of meeting the eight factors the Federal Subsistence Board considers when determining if an area has a subsistence priority; and

WHEREAS the United States Congress determined that, unlike purposes of other federal refuges established or expanded by the Alaska National Interest Lands Conservation Act, the rural subsistence priority was not an appropriate purpose of the Kenai National Wildlife Refuge, and, therefore, purposefully omitted "continued subsistence uses by local rural residents" from the list of purposes of the Kenai National Wildlife Refuge; and

WHEREAS, unlike its determination of purposes for other federal refuges, the United States Congress chose to make fish- and wildlife-oriented recreational opportunities a purpose of the Kenai National Wildlife Refuge;

BE IT RESOLVED by the Alaska State Legislature that the Federal Subsistence Board is requested to rescind its decisions granting Ninilchik, Happy Valley, Hope, and Cooper Landing residents a subsistence fishery priority.

COPIES of this resolution shall be sent by electronic transmission and by mail to the Honorable Dirk Kempthorne, United States Secretary of the Interior; the Honorable Mike Johanns, United States Secretary of Agriculture; the members of the Federal Subsistence Board; the Office of Subsistence Management, United States Department of the Interior; and the Honorable Ted Stevens and the Honorable Lisa Murkowski, U.S. Senators, and the Honorable Don Young, U.S. Representative, members of the Alaska delegation in Congress.