



# ***INVASIVE PLANT MANAGEMENT FOLLOWING THE 2003 OKANAGAN VALLEY WILDFIRES, BC***

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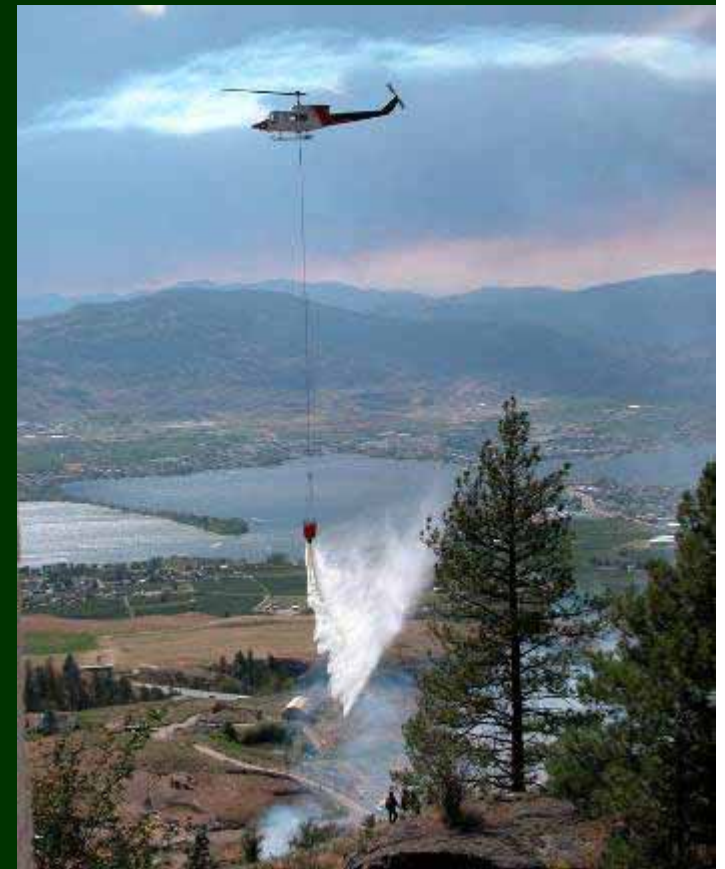
**September 19, 2006**

**Meeting the Challenge Conference: Invasive Plants in PNW Ecosystems**



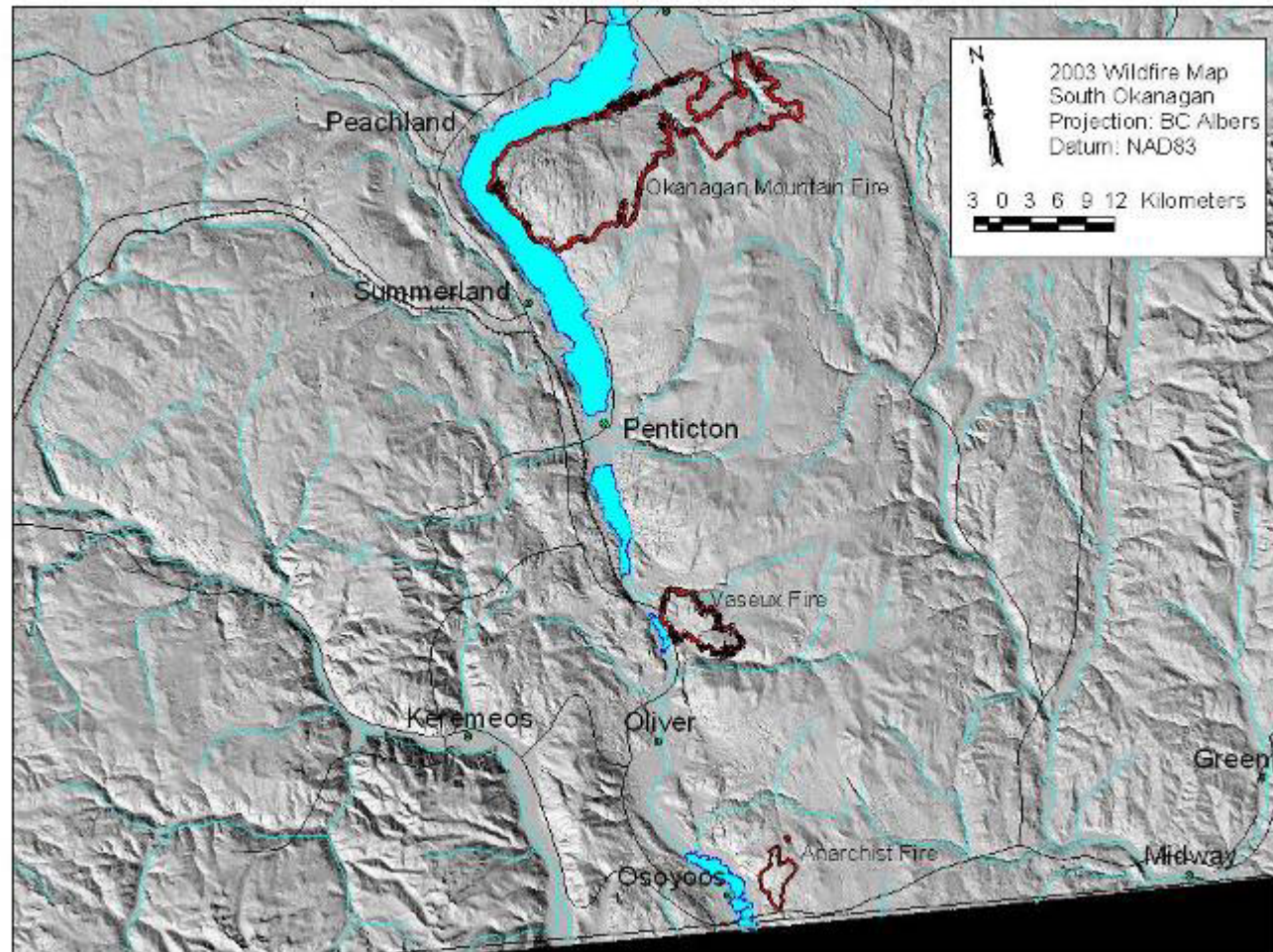
# *2003 was an unprecedented year for wildfires in BC*

- Abnormally hot, dry weather resulted in over 2,500 wildfire starts, mostly in the Interior
- Interface fires were at an all-time record high.
- The fires destroyed over 334 homes and many businesses
- Total cost for year estimated at \$700 million





# *Map of Okanagan showing three main fires*



# *Anarchist (Osoyoos) Fire*

1200 hectares of sagebrush  
shrub-steppe, Ponderosa pine  
and Douglas-fir forest





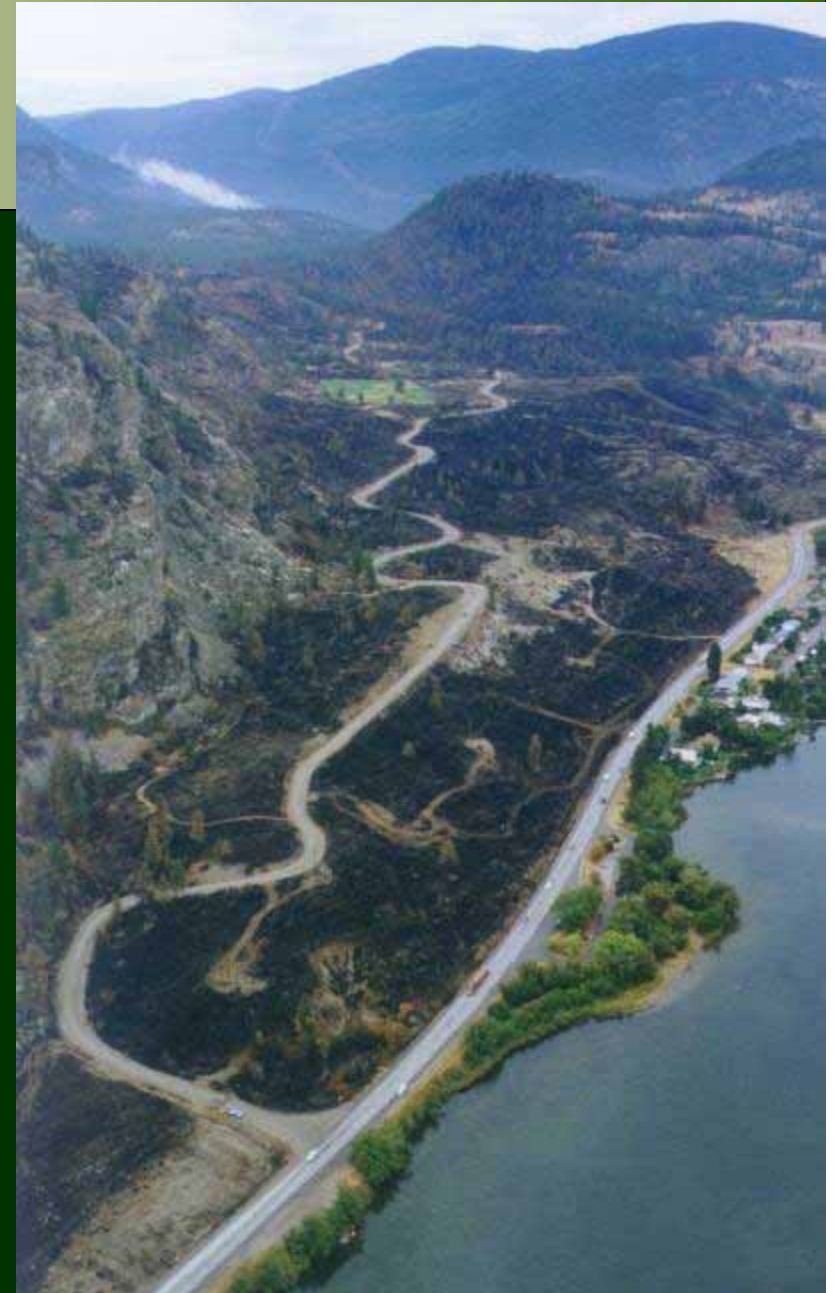
# *Okanagan Mountain Fire*

30,000 hectares of Ponderosa pine parkland, Douglas-fir forest, Engelmann spruce and other forested habitats



# *Vaseux Fire*

3300 hectares of antelope-brush  
shrub-steppe, Ponderosa pine  
and Douglas-fir forest





# *Invasive plants thrive in fire-impacted sites*



*“...weed management needs to be a part of the emergency response to fires...”, Roger Sheley, Montana State University*





# *Invasibility of fire-impacted sites*

- Pulse of nutrients
- Exposed ground surfaces
- Reduced shade
- Stimulation of seed germination through breakage of dormancy



Competitive advantage  
of non-native species





*While many native and desirable plants survive fires, their ability to re-establish, thrive, and re-seed is reduced by the presence of weeds that aggressively compete for water, light, and soil nutrients<sup>1</sup>.*

<sup>1</sup>Goodwin, K., R. Sheley, and J. Clark. 2002. *Integrated Noxious Weed Management After Wildfires*. Montana State University Extension Service: Bozeman, MT. Pub. EB-160.

# *Man-made soil disturbances*

- Creation of fire guards
- Salvage logging
- Mushroom picking
- Post-fire recreational activities such as off-road vehicle use





# *The impact of invasive plants*

- Agriculture
- Forestry
- Forage
- Land Values
- Tourism & Recreation
- Biodiversity
- Health
- First Nations





# *Target species*





# *Formation of Weed Task Teams*



Identify local invasive plant concerns and cooperatively generate solutions.

Coordinated effort = most effective results and most efficient use of limited funding.



# *Weed Task Teams = Partnerships*

*Government, NGOs, tenure holders, private landowners, First Nations, Utility companies*

- Biannual meetings, field trips
- Joint funding proposals to secure finances for inventory, treatment, research, monitoring, education
- Cooperative development of short and long-term plans





# *SOSIPS Partners*

**The Interministry Invasive Plant  
Committee of the B.C. government**



**Habitat Stewardship Program**



**Ministry of Agriculture and Lands**



**Ministry of Forests**



**Ministry of Environment**

**Ministry of Transportation**



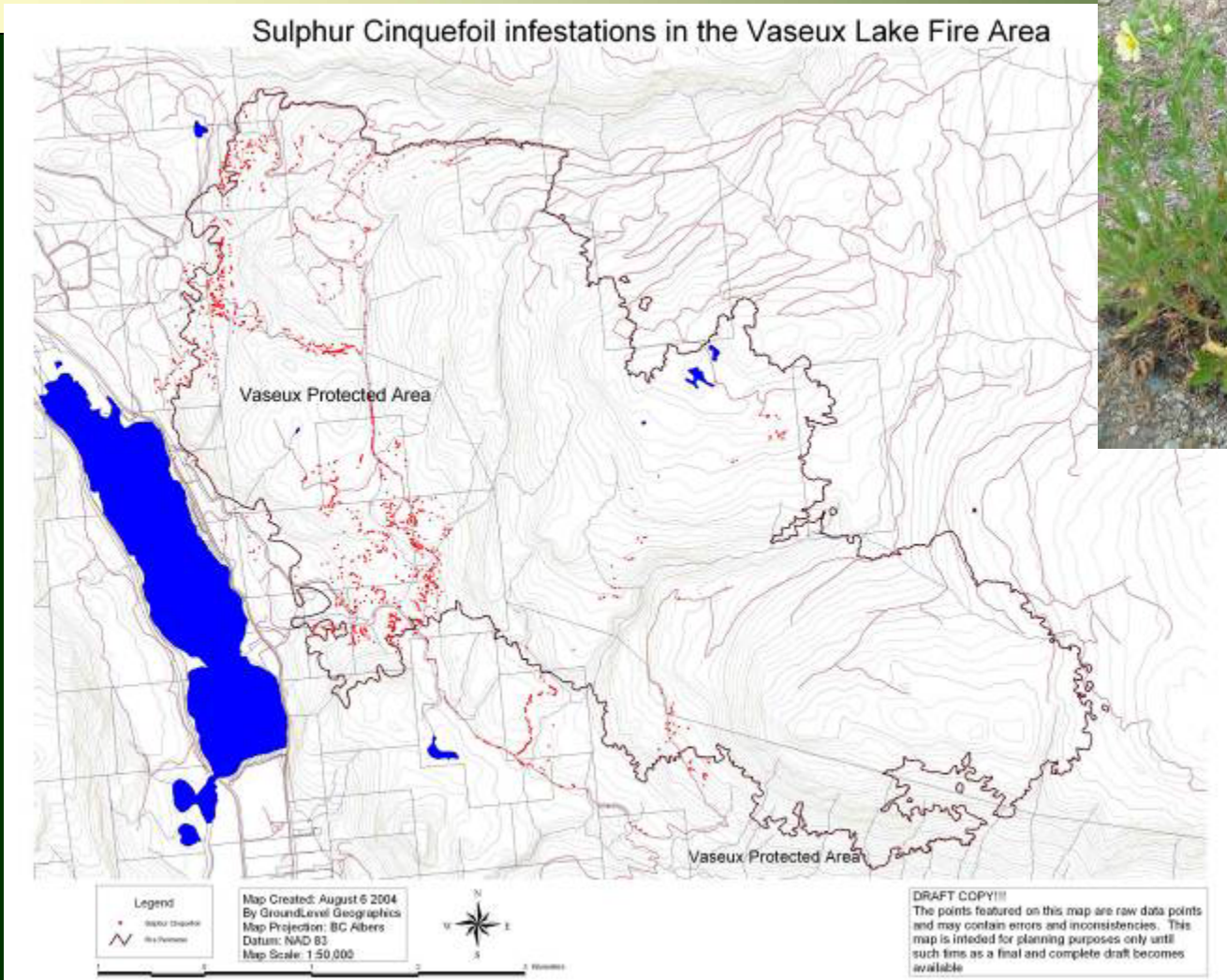
# *Inventory and mapping*



- A differential GPS (Trimble PRO-XRS) was used to log field data
- Data was logged as point features with an associated distribution code



# *Inventory and mapping*



# *Mapping of exposed soils*



Impacted during fire  
suppression or logging  
activities

Or areas of high  
burn severity





# *Integrated approach to treatment*





# *Seeding as a preventative tool*



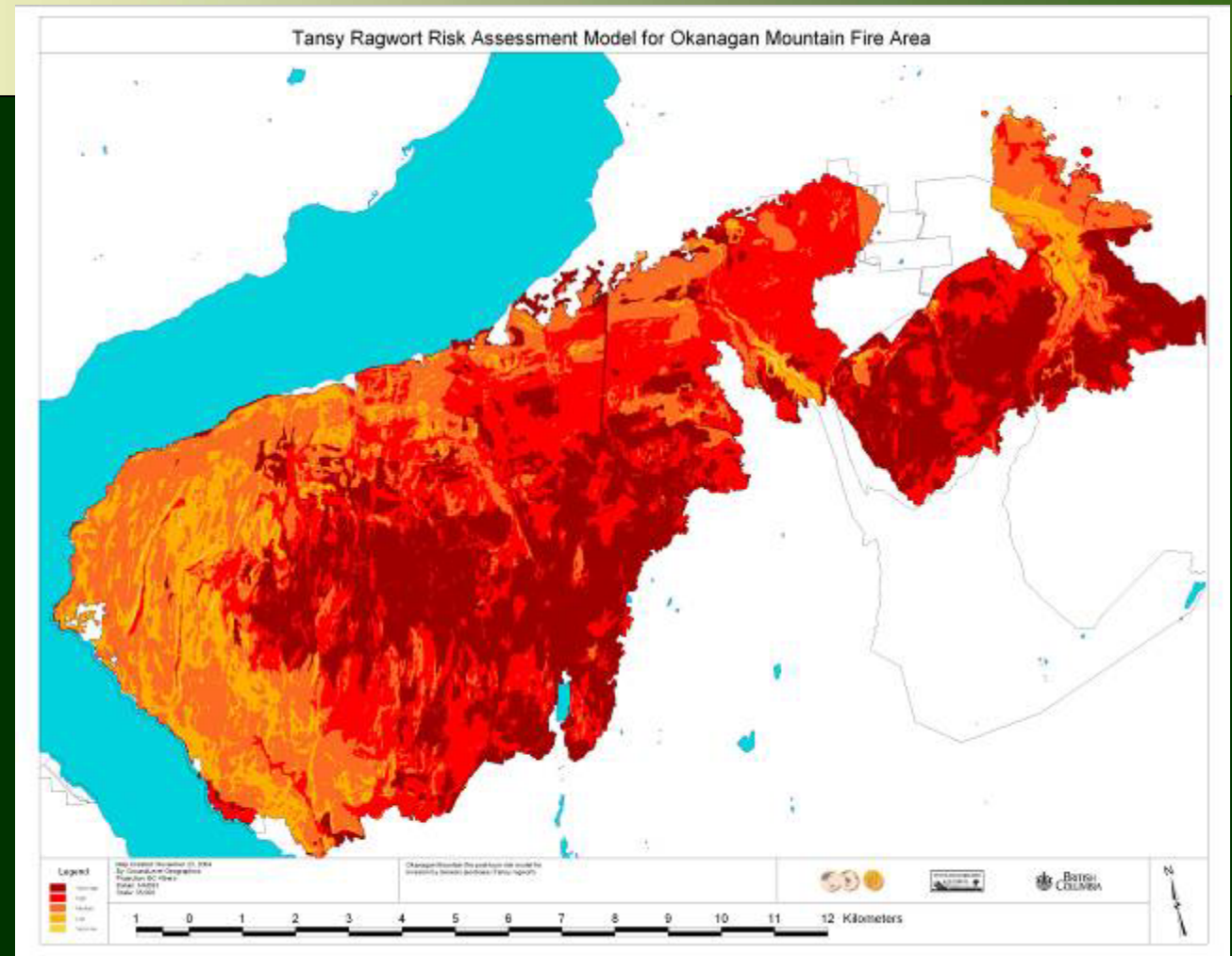


# *Predictive modeling*

Model

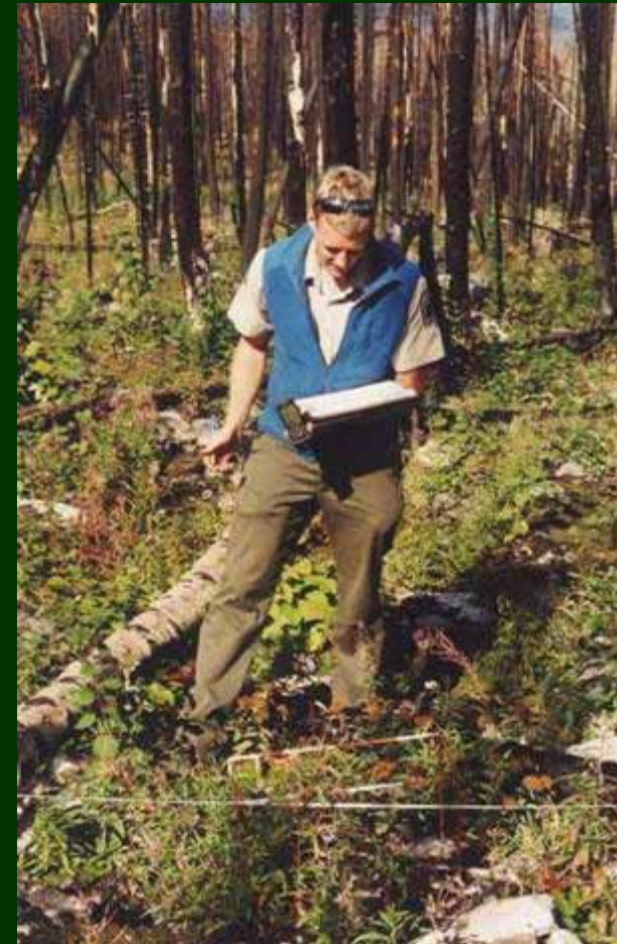
Variables:

- crown closure
- dominant tree species
- slope



A spatial model that predicts those areas most vulnerable to the rapid re-establishment and spread of target species

# *Establishment of permanent vegetation plots and photo points*





# *Monitoring – results of seeding*



**June 2004**



**June 2005**

# *Monitoring – results of chemical treatment*



**September 2004**



**September 2005**



# *Monitoring – results of hand-pulling*



**Before**

**After**

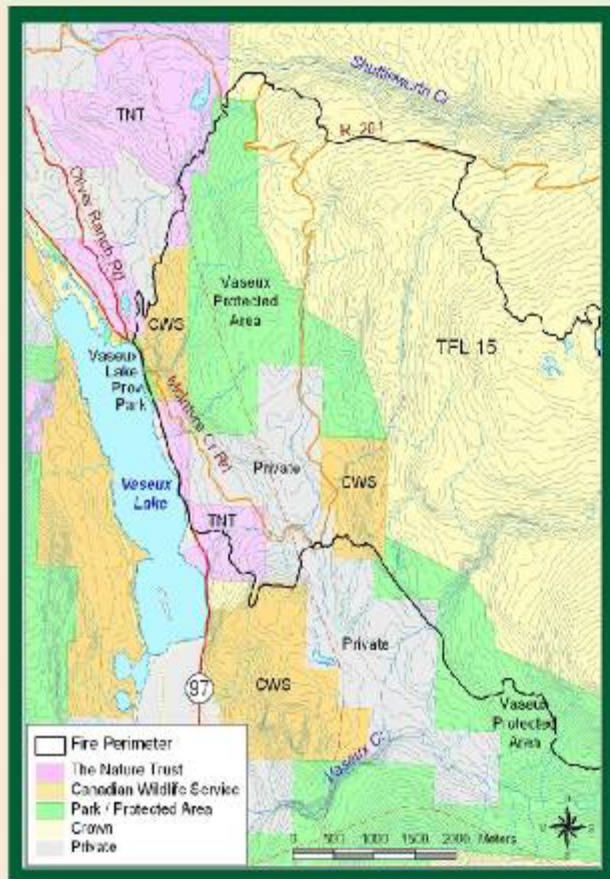
# *Education / outreach*

- Field days, workshops
- Community stewardship events





# VASEUX POST-FIRE RECOVERY and MONITORING PROJECT



The grasslands and coniferous forests within the Vaseux Lake area provide important habitat for wildlife and livestock. However, these landscapes are sensitive to soil disturbance and invasion from noxious weeds, particularly following the August 2003 wildfire.

Members of the South Okanagan-Similkameen Weed Committee are closely monitoring the post-fire recovery of the east Vaseux area and are working cooperatively to control invasive plants and rehabilitate these ecosystems.

Please respect the natural environment and stay on existing roads and trails.

Partners...



Aquila



## *Outlook / direction*

- Continue to work closely with partners to achieve ongoing collaboration
- Carry on with long-term effort to control, contain and reduce infestations of priority invasive species
- Persist with monitoring and evaluation regime to determine efficacy of treatments and adjust management practices as required
- Continue education/outreach/stewardship program with land owners / managers, tenure holders & recreation groups
- Seek opportunities for partnerships with educational institutions to conduct research



# *Acknowledgements*

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- Phil Maranda / Don McPhail  
(<http://castanet.firewatch.net/firepics2/firepics2/>)

