2009 Inland Empire Cooperative Weed Management Area (IECWMA)

Cost-share Grant End-of-Year Report

Top, clockwise: Container recycling with CROP; West Season's Road Association Spray Day with private landowners; weed prevention with the US Forest Service; Scotch broom mechanical removal with IECWMA partners; US Forest Service renovation with harrow; leafy spurge bio-control release in the IECWMA.

DECEMBER 2009

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Scotch broom haul from Higgins Point Pulling Day

Acknowledgements

The Inland Empire Cooperative Weed Management Area (IECWMA) Executive Board wishes to thank the CWMA partners that contributed to the accomplishment of our 2009 goals:

- **Idaho State Department of Agriculture (ISDA)/Noxious Weed Program**
- **ISDA/GIS Mapping Division**
- **Idaho Departments of: Fish & Game, Lands, Parks & Recreation, Transportation**
- **US Department of Agriculture/US Forest Service (USFS) Forest Health Protection Division for Idaho Panhandle National Forest-Supervisor's Office, Coeur d'Alene River Ranger District, St. Joe River Ranger District**
- **Department of the Interior/Bureau of Land Management (BLM)/Weed Management**
- **University of Idaho/Plant, Soil & Entomological Sciences Dept., Moscow ID**
- **Coeur d'Alene Tribe/Recreation**
- **Coeur d'Alene Tribe/Wildlife Program**
- **North Idaho Resource Advisory Committee (RAC)**
- **Panhandle Lakes Resource Conservation and Development (RC&D)**
- **Board of County Commissioners for Benewah, Kootenai and Shoshone Counties**
- **Noxious Weed Control Departments: Benewah County, Shoshone County,and Kootenai County**
- **Kootenai County Highway Districts: East Side, Lakes, Post Falls and Worley**
- **Kootenai County Departments of Solid Waste, Fairgrounds, Parks & Waterways, Coeur d'Alene Airport, Building & Grounds, Sheriff's,**
- **City Street Departments for towns in Benewah, Kootenai and Shoshone Counties.**
- **Burlington Northern/Santa Fe Railroad (BNSF) and Rumble Spray Services**
- **Helena Chemical Company**
- **Wilbur/Ellis**
- **Coeur d'Alene Press, Nickel's Worth, Rathdrum Star, Shoshone News Press, Spokesman Review, St. Maries Gazette Record**
- **KWAL Radio, KVNI/KXLY Radio, KHQ-6 TV News**

And all of the private landowners who took on their responsibilities as caretakers by controlling noxious weeds on their lands.

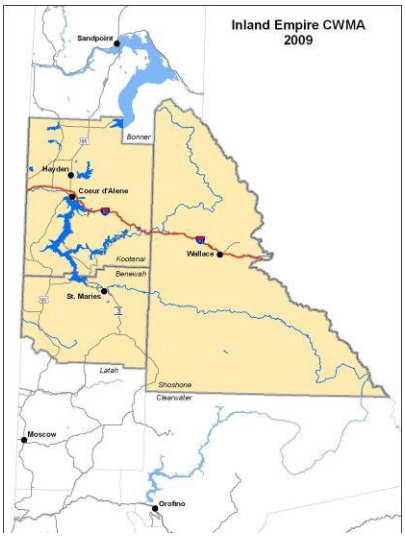
Earth Day exhibit

Introduction

The Inland Empire Cooperative Weed Management Area (IECWMA) is located in the central portion of the Idaho Panhandle, covering an area of 4,665 square miles in Benewah, Kootenai and Shoshone Counties..

Our goals are:

- Prevent the introduction, reproduction and spread of noxious weeds or invasive, exotic plants using early detection/rapid response (ED/RR).
- Reduce the density of established noxious weeds to manageable levels through the most economical and effect methods of treatment, using the integrated pest management model.
- Educate the landowner (whether public or private) about the importance of weed management, through presentations and programs, the media or internet.



Major weeds of importance are focused on through our weed control projects. Projects in the IECWMA range from

- Riparian plant control of viper's bugloss (blueweed) and Japanese and/or Bohemian knotweed in the Coeur d'Alene River Basin;
- Open-range and right-of-way weed control of spotted knapweed, hawkweeds, rush skeletonweed and Dalmatian toadflax;
- Mountainous, forested lands with weeds such as Canada thistle, tansy ragwort and hawkweeds
- Railways and non-cropland covered with leafy spurge.

The 2009 IECWMA Executive Board was:

- Chair-Nina Eckberg, Weed Supervisor-Kootenai County
- Vice Chair-Carrie Hugo, Idaho Fish & Game (since moved to BLM)
- Secretary-Doug Evans, Biological Technician-Bureau of Land Management
- Treasurer-Carol Randall, Forest Entomologist-US Forest Service
- Alternate-Dale Morlan, Weed Superintendent-Benewah County

Cooperators and stakeholders within the CWMA include private landowners, all levels of government agencies, tribal government and interested individuals and organizations.

2009 IECWMA Steering Committee

Chair	Name	Secretary
Nina Eckberg	Terry Silveus/Greg Rapp	Doug Evans
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Summary of 2009 Projects

Integrated Pest Management (IPM) is the philosophy of weed control practiced in the IECWMA. Our methods of noxious weed control include prevention, education (both public and professional), mapping and chemical treatment (to eradicate, contain and/or control), mechanical and cultural controls, plus restoration and/or renovation.

CWMA Meetings

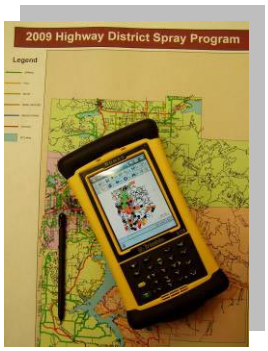
The meeting calendar for the IECWMA is based on the grant financial award, plus the reporting and grant development schedule for the Cost-share funds received from ISDA. For 2009, the meetings were as follows:

- 04/08 **Spring Cost-share and Eurasian Watermilfoil grant award meeting**. Revision of the AOP and set-up schedule for Priority 1 & 2 activities.
- 07/08 **1st quarter reporting for Cost-share**. Collect in-kind from partners.
- 09/23 **Fall Cost-share meeting.** Review of year's projects, 2 CEU's for educational program presentations from partners.
- 11/04 **2010 Cost-share grant planning meeting.** Submissions of project proposals, then discussion. Collection of early 2009 end-of-year (EOY) reports.
- 12/11 **2009 Cost-share grant EOY report collection.** All in-kind and EOY project reports in to chair for processing.

Priority #1-Mapping/Inventory/Treatment/Renovation Projects

Mapping

Trimble Nomad GPS



Kootenai County (Bill Hargrave): Noxious Weeds received cost-share monies to acquire a Trimble Nomad GPS. Collaboration with Kootenai County GIS Department made the transition and deployment of this technology trouble-free. With two similar PDA mapping devices in the office, more than one staff member can map in the field with this amazing technology. Having handheld units' helps immensely with mapping the hundreds of noxious weed sites we inventory and treat. Navigating to weed populations is much easier. **We monitored and mapped 1,215 acres of noxious weeds in 2009.** Our office also employed this GPS to acquire coordinate for a University of Idaho large knotweed species/genotypes project. New data and weed GPS latitude and longitude points can be uploaded into our GIS for permanent storage, later transferred to ISDA. The future of weed mapping in our office is to work more efficiently by having maps/mapping data in a PDA unit in the field. Our office has also incorporated the use of ArcMap to print weed map books for in office and field navigating with a scale of one square mile. Acquiring of this handheld data-processing GPS receiver has helped our office move from coloring weed populations on plat maps to an electronically transferable, digitized vector mapping system.

Mapping of Scotch thistle

2009 Species of Noxious Weeds Mapped in Kootenai County.

• Bohemian knotweed	• Oxeye daisy
• Bugloss	• Poison hemlock
• Canada thistle	• Puncture vine
• Dalmatian toadflax	• Purple loosestrife
• Diffuse knapweed	• Rush skeletonweed
• Giant knotweed	• Scotch broom
• Hawkweeds	• Scotch thistle
• Hoary alyssum	• Spotted knapweed
• Hoary cress (white top)	• Tansy ragwort
• Houndstongue	• Viper's bugloss
• Japanese knotweed	• Yellow starthistle
• Leafy spurge	• Yellow toadflax

Shoshone County (Terry Silveus) This year our weed crew mapped approximately **787 acres** of noxious weeds in Shoshone County. These seasonal employees **treated 439** of these acres. Viper's bugloss was again one of our prime targets for mapping, monitoring and treatment. Other targeted weeds were spotted knapweed, and houndstongue. See table below for details on species inventoried by the weed crew. Of these, approximately **7 acres** were found to be new sites.

Species	Acres
Viper's Bugloss	415.939
Other	330.411
Oxeye Daisy	15.406
Scotch Broom	14.191
Japanese Knotweed	7.272
Houndstongue	2.125
Spotted Knapweed	0.913
Yellow Hawkweed	0.572
Yellow Toadflax	0.022

USFS/Coeur d'Alene River Ranger District (Bonnie Thomson) Our project was to map and inventory priority invasive weeds in the Canfield Trails Recreation Area (adjacent to the city of Coeur d'Alene) to plan future treatments. With the GPS unit purchased through the grant District personnel **mapped and inventoried 55 acres of priority invasives** along the trails. Weed populations mapped were Dalmatian toadflax, yellow toadflax, and rush skeletonweed. Next season we will continue mapping invasive weed populations and treat additional areas within this popular trail system.

Herbicide Treatment

Benewah County (Dale Morlan): Herbicide treatment was applied to acreage of Scotch broom (**40 acres**), knotweeds (Japanese and Bohemian) (**60** acres), and tansy ragwort (**5** acres). **Right-of-way (R/W) control was done on 736 miles of road and airport ground, amounting to 1,364 acres for the season.**

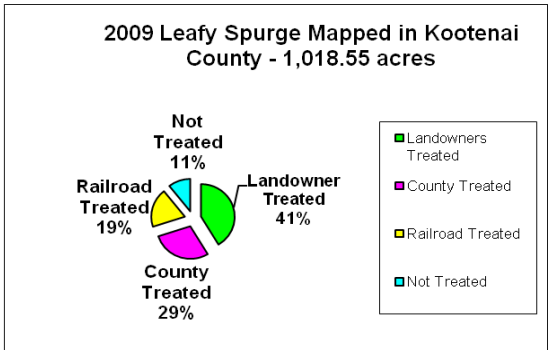
BLM (Doug Evans) the Bureau of Land Management completed **100 acres of treatments** with herbicides purchased with ISDA grant dollars. Outpost 22K (picloram) was used to treat spotted knapweed, meadow hawkweed, orange hawkweed, common tansy, and oxeye daisy in the Murray and surrounding areas. All treatment sites were documented with GPS units.

BLM & Kootenai County (Doug Evans/Nina Eckberg): In May, an infestation of small bugloss was identified on a new, 3-mile hiking/biking trail, the Prairie Trail. This trail connects to the North Idaho Centennial Trail which spans 24-miles from Wolf Lodge Bay (Lake Coeur d'Alene)

to the Washington State border. A mix of 2,4-D and diflufenzopyr was applied in June over one **(1) acre of trail right-of-way**. The infestation was mapped and will be monitored in the future.

Kootenai County (Nina Eckberg): Kootenai County contains four (4) highway districts and seven (7) major city street departments with separate road right-of-way (R/W) jurisdictions. In the past, each agency was responsible for their individual vegetation management (if it existed). In the mid-1990's, the weed supervisor formulated a program of noxious weed control by offering to pay for the application of herbicides from the County budget if the participating agency would purchase the herbicide and provide an employee during spraying activity (for quality control). **In 2009, a total of 1,324 R/W acres were treated, targeting spotted knapweed, Dalmatian toadflax, common tansy, rush skeletonweed, kochia and leafy spurge**.

Kootenai County owns a number of large properties through its many departments. Under the cost-share program in 2009, five (5) county departments partnered with NWC (for the 7th year) and had noxious weeds treated on their properties. **A total of 239 acres were treated**; **weeds found were spotted knapweed, leafy spurge, Dalmatian toadflax and Canada thistle.**



(Merry Ruth Dingman) Leafy spurge covers a large area of Kootenai County and NWC has an active program with private and public landowners to control this noxious weed. Our program consists of two (2) options for control: 1) the landowner controls the leafy spur on their own, using grazing, mowing or chemicals, to be reimbursed at the end of the season $25 per infested acre controlled or 2) permission is granted NWC to have a licensed, pesticide application contractor or staff member chemically control the spurge until it can be managed by the landowner.

The majority of leafy spurge infestations continue to be found in the northwest section of the County (Map0-Kooteanai County Leafy Spurge). **In 2009, of the 1,019 acres of leafy spurge previously mapped, 488 acres were controlled by the NWC or BNSF, while 422 acres were controlled by private landowners.**

(Linda Ely) Through the ISDA grant, **six (6) Weed Wrenches were purchased** and used for the first time for a Scotch Broom Pull Day on Higgins Point on Lake Coeur d'Alene which is owned by Idaho Parks and Recreation. Participating partner agencies included the U.S. Forest Service (St. Joe Region and Fernan Region), Bureau of Land Management, Idaho Dept. of Parks and Recreation and Kootenai County Noxious Weed Control. **A total of 10 people spent 2.5 hours removing mature Scotch broom plants from the 2 acre park.** All of the mature, flowering plants are now gone from this site and the IDPR staff will be able to control the seedlings which will emerge in future years.

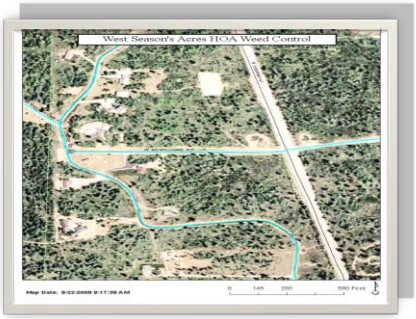
(Linda Ely) **New Invader**: in late spring 2009, a concerned citizen called to inform the Kootenai County Noxious Weed Control office of the **discovery of puncture vine** along a BNSF spur adjacent to the Idaho Veneer Plant in Post Falls, Idaho. On meeting with the citizen, no actively growing plants were found, but numerous seeds were discovered. This citizen received

permission from BNSF to spray glyphosate on any seedlings that he discovers during the weed season. This site will continue to be monitored for the next several years.

On September 9, 2009 puncture vine was discovered in a spearmint field off of Highway 41 in Kootenai County. The infestation is new and scattered lightly **throughout 10 acres** adjacent to the Union Pacific railroad tracks. The grower was immediately notified and chose to treat the area with 2,4-D/dicamba and glyphosate. This site will continue to be monitored for the next several years

(Jacob Cover/Merry Ruth Dingman) In 2009, the Burlington Northern-Santa Fe Railroad (BNSF**)** and Rumble Spray Services of WA **treated 799 acres of track area containing leafy spurge and other vegetation in Kootenai County**, using an assortment of pre and post-emergent chemicals. The treatment covered 30-feet R/W off of the actual railroad bed on both sides of the track. Residual herbicide application covered 603 acres, noxious weed control was 196 acres; this is the 5th year BNSF contacted us before spraying to co-ordinate noxious weed control.

(Bill Hargrave) Our office in the past had sponsored a county funded neighborhood cooperative noxious weed control program but it was not effective for many reasons. Fortunately, a percent of these older cooperative were road associations and we approached them for a spray day. Control of noxious weeds along private road association would greatly assist in critical transportation areas in the county. The equipment that our office employed for treatment in this project was ATV/Backpacks tank sprayers that we acquired with ISDA cost-share funds. The landowners assisted with individual ATVs and UTVs. We applied a 2,4-D herbicide to control broadleaf noxious weeds such as spotted knapweed. Aminopyralid was acquired to control noxious weeds in any sensitive areas, such as near grazing areas or standing water. Our office supplied chlorsulfuron for control of yellow and Dalmatian toadflax in the treatment area along with a surfactant. On June 3rd, with sponsorship of West Season's Acres Home and Road Association (10 families (6-7 Members) + 4- ATVs) the private road was sprayed; **total acres treated = 10 acres.**



Noxious weeds treated in this project were spotted knapweed, Canada thistle, hawkweeds, yellow and Dalmatian toadflax and common tansy.
Herbicide Information:

- 140 gallons applied by the group.
- Hardball-280.oz
- Milestone-420.ml
- Telar-5.oz

Shoshone County (Terry Silveus): This year we held **second annual** "Spray Days" program in Wallace and Smelterville. Our Spray Days provide education to landowners in addition to having licensed sprayers on-site to mix and hand out chemicals. Spray Day was a success with **58 participants** representing **72 parcels** and **113.23 acres** treated.

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Coeur d'Alene Tribe/Wildlife (Tom Prewitt) the following is a summary of work for our projects that utilized cost-share funds:

- Shoshone County-treated **8 acres** using the DR tow-behind **mower**; 25 hours of use (federal funds). Treated **10 acres** with aminopyralid **herbicide** (state funds).
- Benewah County-treated **27 acres** with aminopyralid **herbicide** (state funds).

Idaho Dept. of Fish & Game (Bryan Helmich/Aaron McKarley) The new boom sprayer was used this season for about 30 hours of **treatment on 20 acres** of State lands and the tractor trailer (purchased last year) was used for two (2) days on a **5 acre restoration** project.

USFS/Coeur d'Alene River Ranger District (Bonnie Thomson) Our project was to treat priority invasive weeds with herbicides purchased through the ISDA grant. In addition, we received funding for two backpack sprayers to do spot treatments, and a pressure washer to clean our spray equipment (to prevent weed spread). **Total acres of grant-funded herbicide treatment done over the season were 320.** Priority weeds treated included blueweed, houndstongue, rush skeletonweed, yellow toadflax, Dalmatian toadflax, spurge, Scotch broom, and poison hemlock. The newly acquired **pressure-washer** was used to clean vehicles and equipment after use.

USFS/St. Joe River Ranger District (Mike Tuel) In 2009, the weeds department on the St. Joe Ranger District of the Idaho Panhandle National Forest **treated 178 acres** for noxious weed control on range allotments. We also **treated another 407 acres** in campgrounds, trailheads, and road right of ways. To date, **382 of those acres have been monitored** for effectiveness. **Nine (9) acres** of backpack spraying on ripped roads targeting houndstongue was accomplished using a private contractor and a grant from ISDA. All weed treatments have been entered in the NRIS data base located in Kansas City which tracks noxious weed treatments nationwide, and also in the Forest Service database - FACTS, which tracks amount of active ingredient applied as well as acres accomplished.

IECWMA (Nina Eckberg): the IECWMA has participated actively in herbicide container recycling, the ISDA/CROP, since 2003, keeping copious amounts of plastic from clogging our landfills and reducing contamination of the environment. In 2009, 30-gallon drums and 2.5-gallon containers were collected from throughout the IECWMA and shredded in June, August and September**. A total of 3,028 herbicide containers were shredded**; herbicide boxes were recycled at the local transfer station. **Container recycling from 2003 through 2009 has kept 10,808 plastic containers out of our landfills!**

Renovation

Coeur d'Alene Tribe/Recreation (Jason Brown): The Plummer Trailhead Park Expansion Project completed its Phase II goals: weed control on Phase I , adding fill, grading and hydro-seeding an approximate area of **one (1) acre** around the terminus of the Trail of the Coeur d'Alenes.

Mapping	Acres	Treatment	Acres	Grant Funds (1)	Match Activity (2)
		.70	.70	$4,786.10	$12,022.00

(information about Phase I can be found in our 2008 IECWMA End-of-Year report at www.iecwma.org, click 'Projects'.

In September 2009, the Program again retained a contractor to grade imported soil from another Tribal project, the Tensed-Desmet Trail Construction Project. Approximately 1347 yd^3 of topsoil was removed in preparation for the construction of a non-motorized trail to link the communities of Tensed and Desmet, ID. This topsoil along with 1440 yd^3 was imported and grading to specifications in the previously developed engineered grading plan. Topsoil was initially submitted in the Tribe's 2009 CWMA grant request, upon receiving topsoil at no cost, the Tribe submitted a budget amendment request to convert those funds set aside for topsoil to assist in covering the cost of importing fill material. The request was generously approved on September 29, 2009. Due to the early moisture received in the area the sprinkler system will not be expanded into Phase II until early Spring 2010. However hydro-seeding was still completed on November 4, 2009. Following completion an additional approximately .7 acres of usable park area was created as well as elimination of the equivalent area of weed infested field. Future project objectives include signage recognizing the CWMA for their gracious contributions towards the project, additional picnic tables and park benches.

Plummer Trailhead (9/16/09)

Plummer Trailhead (11/4/09)

Kootenai County (Merry Ruth Dingman): our second year of providing loan-out spreaders for **fertilizer and seed** resulted in 12 hours of labor and $349 of product purchased to **renovate a total of 9.5 acres by local landowners**.

USFS/Coeur d'Alene River Ranger District (Bonnie Thomson) Our project was to renovate some disturbed recreation sites adjacent to riparian areas. Some of these places have had either partial herbicide treatments, or no herbicide treatments due to proximity to surface water. Instead, the latter have had manual treatments. One of the areas had previously been seeded with native grasses. Since the long-term goal is to reduce/eliminate herbicide use and stimulate native re-vegetation, fertilizing was the best management choice. Fertilizer for the project was provided through the grant. Three sites renovated were on the North Fork of the Coeur d'Alene River (or tributaries) at President Flats,

Bumblebee Meadows, and Magee Historic Site. The fourth site was at Burton Meadows along the Marie Creek Trail. **Total acres fertilized were 25.**

USFS/St. Joe River Ranger District (Mike Tuel): 45 acres have been seeded and mulched in (2) 2008 wildfire sites. 3.5 acres have been harrowed and seeded in admin sites and campgrounds in the St. Joe River corridor. **Six and a half (6.5) acres** of native grasses from 2008 plantings have been **fertilized** in campgrounds in the St. Joe River corridor.

Priority #2 –Biological Control/Neighborhood Cooperatives
Biological Control

BLM (Doug Evans) *Cyphocleonas achates* (spotted knapweed root boring weevil) was released upstream from Murray along Placer Creek. This area has been heavily disturbed by past mining activities and has been infested with spotted knapweed. By combining chemical and biological treatments in adjacent areas the BLM hopes to reduce the noxious weed populations in the Murray area.

IECWMA: *Statewide Permanent Bio-monitoring sites* (Carol Randall) Observations continued in 2009 at the permanent bio-monitoring sites in the IECWMA. Spearheaded by the ISDA, USFS, BLM and University of Idaho, the following sites were visited in Kootenai and Shoshone Counties:

Adult *Oberea*

- Canyon Elementary, Cataldo ID-June/July, **7 acres** monitored for Larinus species and other spotted knapweed bio-controls
- BNSF Railroad R/W, Rathdrum ID-June, **3 acres** monitored for *Aphthona* species and *Oberia erythrocephalia* (APSP/OBER) on leafy spurge.
- Greensferry and Hwy 53, Rathdrum ID-June, 5 acres monitored for APSP/OBER.
- Farragut State Park water tower, Athol ID-May, **10 acres** monitored for *Mecinus janthinus* on Dalmatian toadflax.
- Lone Mountain Tree Improvement Area, Rathdrum ID-May, 2 acres monitored for *Mecinus janthinus.*
- Hayden Ave at McGuire Road, Rathdrum ID-May, 5 acres monitored for *Mecinus janthinus.*
- Pine Creek (BLM), Pinehurst ID-June, 1 acre monitored for *Mecinus janthinus.*

Greensferry and Hwy 53, *Aphthona* species, left is 2008; right is 2009

IECWMA:*Biological control releases* (Nina Eckberg): The USDA/APHIS office in Spokane, WA delivered **12,000 leafy spurge flea beetles** (*Aphthona* sp.) to Kootenai County NWC in July 2009. The bio-agents were released in two (2) locations, in the BNSF Railroad R/W and near a church property that borders the tracks.

(Nina Eckberg): In 2009, the CWMA continued to support the efforts of researchers in their quest to provide bio-control agents to land managers throughout Idaho. IECWMA contributed to Dr. Jim Story's (Montana State University) research and requested procurement of *Cyphocleonus* to CWMA members. The IECWMA received **9,100** *Cyphocleonus achates* bio-agents from MSU and distributed them over federal, state county and private lands. *The final bio-release report for 2009 will be available from the Nez Perce Tribe Bio-control Center in Lapwai ID in the early part of 2010.*

(Jim Story) A program has been underway since 1976 at Montana State University's Western Agricultural Research Center in Corvallis, MT, to biologically control spotted knapweed by introducing Eurasian-collected insects proven to be host-specific to the plant. The focus of our research is on the biology, behavior, life history, population increase, dispersal, cold hardiness, and impact of the introduced insects; inter-specific insect competition; insect predation; insect rearing and redistribution; and compatibility of bio-control with other control methods. **Twelve insect species have been introduced into Montana and the western region for biological control of spotted knapweed.** Of these, six species are having a measurable impact on spotted knapweed in Montana (and Idaho-NE). Five species of seed head insects are significantly reducing seed production which, in turn, is resulting in a reduction in the knapweed seed bank and subsequent seedling recruitment. Of the seed head insects, the fly, *Urophora* affinis, and the weevils, *Larinus* spp., are having the greatest impact on knapweed seed production.

The most effective agent is the root weevil, *Cyphocleonus achates*. In addition to reducing spotted knapweed biomass, the weevil is causing dramatic declines in knapweed density at sites where the weevil exists in high numbers. *Cyphocleonus* does not fly and has a slow reproductive rate, so, we have been mass-rearing the weevil in an outdoor facility at Corvallis since the early 1990's to hasten the weevil's distribution throughout the knapweed-infested areas of the state. Most of the *Cyphocleonus* released/redistributed in the U.S. were either produced at Corvallis or are the progeny of weevils produced at the Corvallis facility. Given the size of the knapweed infestation in Montana (4 million acres) and western U.S. (7.5 million acres) and the proven effectiveness of this agent, rearing and distribution efforts with *Cyphocleonus* will continue well into the foreseeable future if funding allows.

The insect rearing program and much of the research is funded solely by funds received from government agencies. Assuming that agency support continues, future plans include increased research on assessment of bio-control agent impact and changes in plant community dynamics in areas where knapweed is in decline.

Shoshone County (Terry Silveus): The County participated in **two** biological releases throughout the county to control spotted knapweed using the agent "Cyphocleonus achates." The **300 insects** we released were provided through the IECWMA by Western Research Center at Montana State University. The release sites have been mapped and will continue to be monitored.

Neighborhood Cooperatives

Benewah County (Dale Morlan): total cooperatives in Benewah County were **16** with landowners controlling weeds on **829 acres**. Major noxious weeds controlled were spotted knapweed, hawkweeds, Scotch broom, Canada thistle and others.

Shoshone County (Terry Silveus): The County had **9 CoOps** and a total of **28 landowners** who participated this year. This represents **35 parcels and** approximately 633 acres of which **581.23 acres** were treated.

Kootenai County (Merry Ruth Dingman): The NWC equipment loan-out program has replaced the co-op program, providing equipment for use to landowners, bought though the NWC budget and ISDA cost-share grant. In 2009, private landowners borrowed 3-gallon backpack sprayers and/or 15 to 25-gallon ATV tank sprayers, treating **444 total acres in 620 hours.**

Our second year of providing loan-out spreaders for fertilizer and seed resulted in 12 hours of labor and $349 of product purchased to **renovate a total of 9.5 acres by local landowners**. This year a small harrow was purchased and loaned to landowners with small parcels (5 acres or less) who would do reseeding on their properties.

As a result of the success' in the program, we are beginning to see a shift from a major focus on identification and chemical weed treatment to less herbicide and more restoration using fertilizers and desirable plant seed. While there are still reimbursement requests for herbicide from new participants, there is an increase in reimbursement requests for seed and fertilizer as past participators realizes success and move forward in the program.

Priority #3- Educational Awareness

Kootenai County (Linda Ely): print media, website, public programs and publications make up the educational efforts in the County. News articles in the Rathdrum Star (**eight (8) columns**) and Nickel's Worth (**twelve (12) articles**) addressed noxious weeds, toxic plants, weed free forage, noxious weed in bird seed and pre-emergence herbicides. The County website, www.kcweeds.com, recorded **4,716 hits**. The Weed-of-the-Month page and the Eurasian watermilfoil project page attact the most attention. Public programs conducted for civic groups, government agencies and schools amounted to **13 presentations**. Some highlights:

- The Canyon Elementary project, which was started in the fall of 2006, has evolved into the establishment of a permanent monitoring site for spotted knapweed and the Larinus spp. Each year the 4th and 5th grade science students gather seed heads in the early spring and put them in Ziploc bags to hang in the window of their classroom. When the insects emerge, NWC and USFS meet with the students to discuss what type of insects have emerged and have them determine what type of data they want to collect for their project. Monitoring of the spotted knapweed site is conducted in early summer utilizing the students, their parents and siblings and anyone interested in their project.

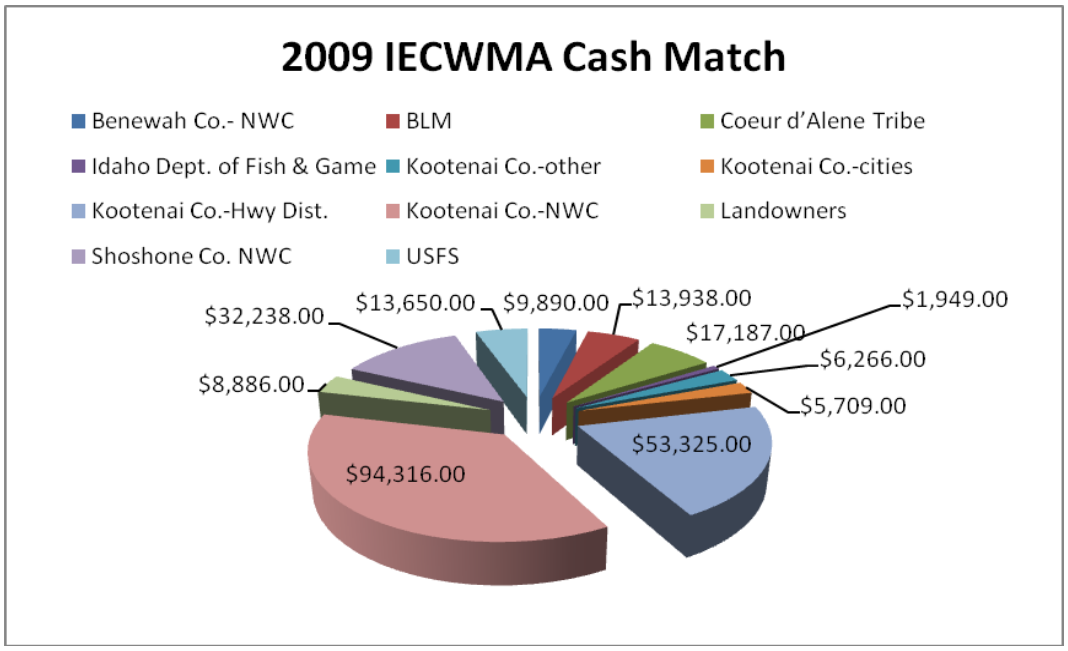
- The five-day North Idaho Fair & Rodeo is every August and because we do weed control on the Fair grounds, we are given a space to exhibit each year. Offering publications and advice on noxious weed related topics, we distributed **2,027 publications** in 2009.
- The NWC staff developed and printed a black and white **'Weed Control Calendar'** in 2007, which was so popular that a color, reprint was done in 2008! Merry Ruth Dingman-administrative assistant and weed specialist, Linda Ely-noxious weeds assistant and Bill Hargrave-weed specialist, all worked to have a weed control calendar **revised and publish 500 color copies** by August of 2009, just in time for the North Idaho Fair. The calendar was so popular another **150 copies** were added.

Shoshone County (Terry Silveus): Our **website** continues to provide a vast amount of information to the public. It continues to receive hits. There have been 1,275 since June 2007. Our form for reporting weeds is still available on the site in addition to other forms to aid in landowner participation of various programs offered including Neighborhood CoOps and our equipment loan program.

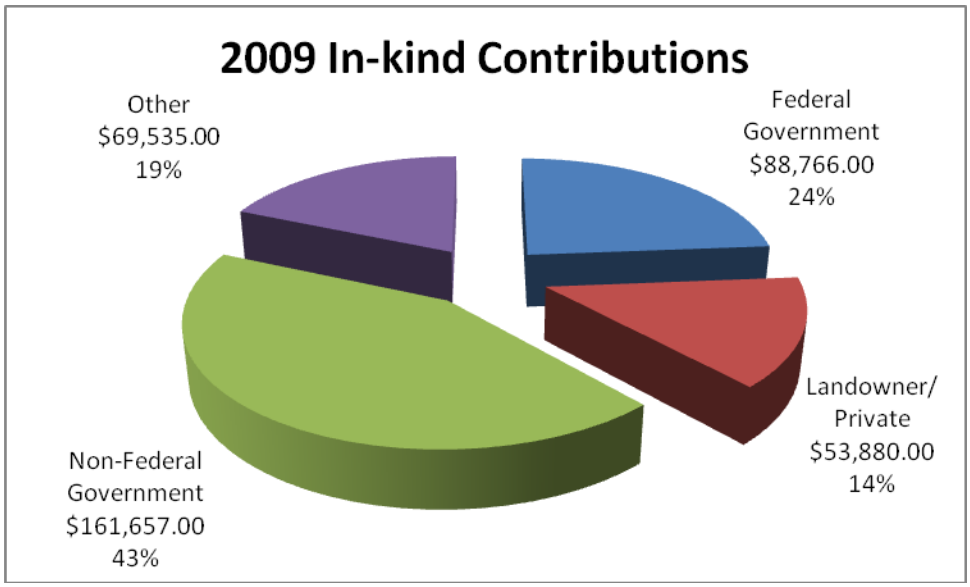
In addition to mapping, inventory, and treatment, our weed crew had a two-day **training** session on GPS best practices. They also were able to spend time in the spring handing out flyers to landowners. These same flyers are also available at courthouse.

IECWMA Contributions and Expenditures

The following pie chart shows a break down of all cash contributions obtained for the Inland Empire CWMA in the 2009 season. A total of **$257,354** dollars was contributed.



The following pie chart shows a percent break down of all in-kind contributions (cash, labor, equipment/supplies) for the Inland Empire CWMA that was contributed by agency or group**. The combined total expenditure is $418,957 for the 2009 season.**



IECWMA Plan for 2010

- Monitoring of infested acres being controlled with herbicides, mechanical mowing and bio-control.
- Continue management efforts toward the suppression of Scotch broom, Japanese/Bohemian knotweed, rush skeleton weed, toadflax, houndstongue and leafy spurge.
- Increase public awareness by offering programs concentrating on control and renovation of infested acreage.
- Continued efforts to control noxious weeds along roadsides, in public parks and campgrounds with the use of herbicides and mowing.
- Monitoring bio-control releases for spotted knapweed, leafy spurge and Dalmatian toadflax.
- Maintain assistance to landowners thru cooperative spray days and reimbursement of neighborhood co-ops and equipment loan-out programs.
- Replace warn-out equipment for loan-out programs and encourage more landowner control of noxious weeds.
- Development of education materials for distribution to the public and schools.
- Continue teaching opportunities in the schools, presentations to interested groups and through continued development of county websites.

List of Tables and Appendices

Table 1 IECWMA Educational Programming

Date	Group	Program	Location	Attendees
03-11	Feed and Farm	Equine Weeds/WFF	Coeur d'Alene ID	40
03-24	IECWMA	Weed-Free Forage Inspector	Wallace ID	9
03-30	Kootenai Co. MG	Soils and Fertility	Coeur d'Alene ID	42
04-07	Benewah Co. MG	Weed Id & Management	St. Maries ID	37
04-25	Public	Earth Day Celebration (exhibit)	Coeur d'Alene ID	200
05-16	Methodist Men's Fellowship	Basic Weed Id & Control Method	Coeur d'Alene ID	18
05-26	Coeur d'Alene H.S.	Weeds: Environmental Impact	Coeur d'Alene ID	45
06-06	Public	Spray Day	Wallace ID	20
06-09	Public	Spray Day	Wallace ID	20
06-10	Weed Managers	GPS Training	Wallace ID	7
06-13	Public	Spray Day	Wallace ID	18
06-24	Idaho Teachers	Bio-control Workshop	Coeur d'Alene ID	11
08-26	Public	N ID Fair & Rodeo (exhibit)	Coeur d'Alene ID	2027
08-18	Public	Bio-control Workshop	St. Maries ID	8
10-06	Weed Managers	Weed Economics Workshop	Missoula MT	21
			Total	**2,323**

Table 2 IECWMA Educational News Articles, Radio and Television

Media (circulation or audience #'s)		Potential Audience	No. of articles, broadcasts
Nickel's Worth	(40,000)	480,000	12
Idaho Spokesman Review	(15,870)	15,870	1
Shoshone News Press	(5,000)	10,000	2
Rathdrum Star	(10,100)	80,800	8
KXLY/KVNI Talk Radio AM	(22,000)	22,000	1
	Totals	**608,670**	**24**

Table 3 IECWMA Total Public Contacts

Audience	Totals
Kootenai County NWC/ office contacts†	24,889
Shoshone County NWC/ office contacts†	511
Benewah County NWC/coop contacts	16
CWMA partners/reported contacts†	507
IECWMA Educational programs	2,323
Total actual contacts	**28,446**

† The IECWMA contact numbers come from letters of correspondence, email, website hits, office walk-ins, phone calls, publication requests, and site visits.

Table 4 IECWMA Total acres treated, mapped, monitored and re-vegetated

Treated‡	Mapped	Monitored§	Re-vegetated
10,414	**968**	**2,082**	**47**

§ Monitored acres are previously mapped areas re-visited during the season.
‡ Combined chemical, mechanical and biological treatments.

NOTE: The 2009 IECWMA Cost-share Estimated AOP Summary was

Treated Acres-Chemical	4,000	**Actual**	**9,950**
Treated Acres-Mechanical	500	**Actual**	**256**
Treated Acres-BioControl	200	**Actual**	**608**
Map/Inventory Acres	6,000	**Actual**	**968**
Renovated Acres	300	**Actual**	**47**
ED/RR Acres	50	**Actual**	**10**
Public contacts	20,000	**Actual**	**28,446**

Table 5 IECWMA Remaining chemical from grant funds

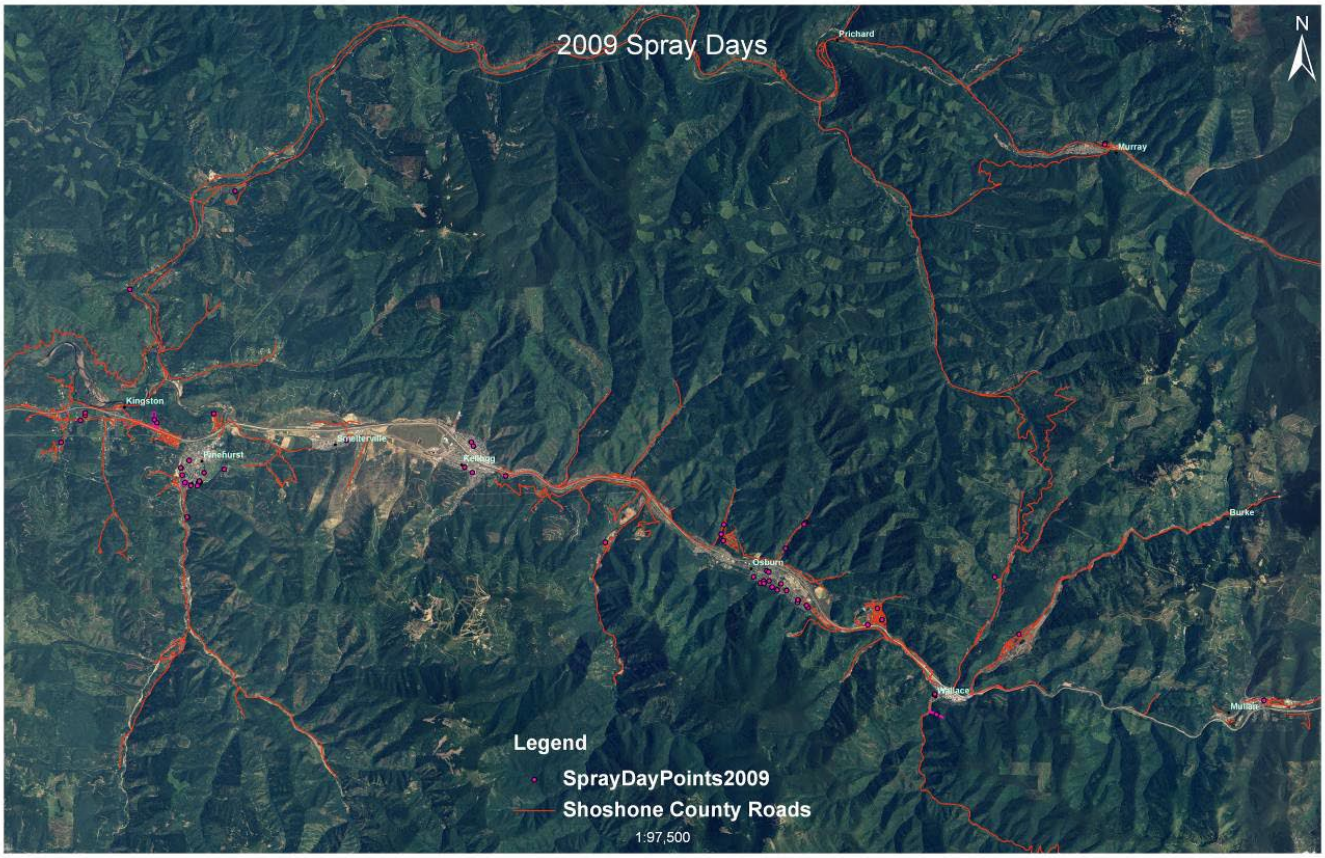
Chemical/Description	Quantity (gallon)	Purpose
triclopyr/Redeem, Garlon 3A, Element 3A	28.0	broadleaf weed control
clopyralid/Transline, Stinger	4.0	broadleaf weed control
surfactant/Liberate, Phase, R-11, Agridex, Dyne-Amic	33.0	adjuvant/spreader-sticker
methylated seed oil/ Grounded, In-Place, Stayput	27.0	anti-drift
2,4-D/Hardball, HiDep, Weedar 64	55.5	broadleaf weed control
glyphosate/Glystar, Glyphomate 41, AquaNeat	63.0	bare ground control
picloram/Outpost 22K, Tordon 22K	14.0	broadleaf weed control (residual/restricted)
urea, ammonium sulfate/Cayuse Plus	2.5	fertilizer
aminopyralid/Milestone	5.0	broadleaf weed control
imazapyr/Polaris	15.0	broadleaf weed control
aminopyralid + 2,4-D/ForeFront	5.0	broadleaf weed control
triclopyr + clopyralid/Confront	1.0	broadleaf weed control
dicamba + 2,4-D/Vengence	7.5	broadleaf weed control
methylated seed oil/Hasten	8.0	adjuvant/spreader-sticker
ethoxylated alcohols/R-900	4.0	penetrator/adjuvant
Ounces		
metsulfuron/Spyder, Escort	28.0	broadleaf weed control
chlorsulfuron/Telar	240.0	broadleaf weed control
2,4-D/Savage	48.0	broadleaf weed control

Table 6 IECWMA Gross infested acres

Common Name	Scientific Name	Gross Acres	Percent Gross Acres infested	Average Density (%)
Example				
1. Black Henbane	*Hyoscyamus niger*	10,000	40%	60%
1. Black Henbane	*Hyoscyamus niger*			
2. Bohemian Knotweed	*Polygonum bohemicum*	1,005,710	4,900 / 0.005%	50.00%
3. Brazilian Elodea	*Egeria densa P.*			
4. Buffalobur	*Solanum rostratum*			
5. Canada Thistle	*Cirsium arvense*	1,099,110	5,615 / 0.005%	20.00%
6. Common Crupina	*Crupina vulgaris*			
7. Dalmatian Toadflax	*Linaria genistifolia ssp. dalmatica*	1,090,210	14,490 / 0.013%	30.00%
8. Diffuse Knapweed	*Centaurea diffusa*	15,000	4,500 / 0.300%	20.00%
9. Dyer's Woad	*Isatis tinctoria*			
10. Eurasian Watermilfoil	*Myriophyllum spicatum*	44,000	1,100 / 0.025%	50.00%
11. Field Bindweed	*Convolvulus arvensis*	568,173	1,450 / 0.003%	15.00%
12. Giant Hogweed	*Heracleum mantegazzianum*			
13. Giant Knotweed	*Polygonum sachalinense*	499,073	3,300 / 0.007%	80.00%
14. Hoary Alyssum	*Berteroa incana*			
15. Houndstongue	*Cynoglossum officinale*	588,123	32,860 / 0.060%	15.00%

Common Name	Scientific Name	Gross Acres	Percent Gross Acres infested	Average Density (%)
16. Hydrilla	*Hydrilla verticillata*			
17. Japanese Knotweed	*Polygonum cuspidatum*	1,005,730	4,930 / 0.005%	15.00%
18. Johnsongrass	*Sorghum halepense*	20,000	4,000 / 0.200%	30.00%
19. Jointed Goatgrass	*Aegilops cylindrica*	10,000	2,000 / 0.200%	20.00%
20. Leafy Spurge	*Euphorbia esula*	1,092,710	6,135 / 0.006%	15.00%
21. Matgrass	*Nardus stricta*			
22. Meadow Knapweed	*Centaurea pratensis*			
23. Mediterranean Sage	*Salvia aethiopis*			
24. Milium	*Milium vernale*			
25. Musk Thistle	*Carduus nutans*			
26. Orange Hawkweed	*Hieracium aurantiacum*	1,112,220	648,150 / 0.580%	30.00%
27. Oxeye Daisy	*Chrysanthemum leucanthemum*	1,055,710	63,070 / 0.060%	25.00%
28. Parrotfeather Milfoil	*Myriophyllum aquaticum*			
29. Perennial Pepperweed	*Lepidium latifolium*	508,637	<1 / 0.000002%	10.00%
30. Perennial Sowthistle	*Sonchus arvensis*	483,073	<1 / 0.000002%	90.00%
31. Plumeless Thistle	*Carduus acanthoides*			
32. Poison Hemlock	*Conium maculatum*	6,000	1,200 / 0.200%	10.00%
33. Policeman's Helmet	*Impatiens glandulifera*			
34. Puncturevine	*Tribulus terrestris*	6,000	1,200 / 0.200%	10.00%
35. Purple Loosestrife	*Lythrum salicaria*	600	250 / 0.420%	25.00%
36. Rush Skeletonweed	*Chondrilla juncea*	568,473	1,145 / 0.002%	20.00%
37. Russian Knapweed	*Acroptilon repens*			
38. Saltcedar	*Tamarix*			
39. Scotch Broom	*Cytisus scoparius*	1,077,511	3,780 / 0.004%	25.00%
40. Scotch Thistle	*Onopordum acanthium*	508,637	<1 / 0.000002%	10.00%
41. Silverleaf Nightshade	*Solanum elaeagnifolium*			
42. Skeletonleaf Bursage	*Ambrosia tomentosa*			
43. Small Bugloss	*Anchusa arvensis*	508,637	4 / 0.000008%	15.00%
44. Spotted Knapweed	*Centaurea maculosa*	1,138,220	101,820 / 0.090%	30.00%
45. Squarrose Knapweed	*Centaurea squarrosa*			
46. Syrian Beancaper	*Zygophyllum fabago*			
47. Tall Hawkweed	*Hieracium piloselloides*			
48. Tansy Ragwort	*Senecio jacobaea*	1,077,511	1,090 / 0.001%	20.00%
49. Toothed Spurge	*Euphorbia dentata*			
50. Vipers Bugloss	*Echium vulgare*	1,076,810	110,588 / 0.100%	25.00%
51. Water Hyacinth	*Eichhornia crassipes M.*			
52. White Bryony	*Bryonia alba*			
53. Whitetop	*Cardaria draba*	508,707	15 / 0.00003%	25.00%
54. Yellow Devil Hawkweed	*Hieracium glomeratum*			
55. Yellow Hawkweed	*Hieracium caespitosum*	1,116,720	54,800 / 0.049%	30.00%
56. Yellow Starthistle	*Centaurea solstitialis*	508,637	<1 / 0.000002%	10.00%
57. Yellow Toadflax	*Linaria vulgaris*	1,091,810	6,670 / 0.006%	15.00%

Appendix I – Spray Day Map/Shoshone County NWC



Appendix II – Weed Map/Kootenai County NWC 2009