SALMON RIVER WEED MANAGEMENT AREA



INTRODUCTION

The Salmon River Weed Management Area (SRWMA) was created in 1994 to bring together those responsible for weed management within the Salmon River drainage; to develop common management objectives; facilitate effective treatment; integrate weed programs; and coordinate efforts along logical geographic boundaries with similar lands, use patterns, and problem weeds. This weed management area encompasses over 540,000 acres near the Idaho/Oregon border. Cooperating partners include private landowners, county government, state agencies, Nez Perce Biocontrol Center, federal land management agencies, and interested organizations and individuals. The steering committee of the SRWMA is listed on the following page.

The goals and mission of the SRWMA are for cooperators to work together in order to successfully:



- Establish control priorities
- Establish specific weed management objectives
- Create treatment zones within the Management Area
- Treat individual weed species/infestations
- Coordinate the use of resources and manpower
- Develop common inventory techniques and mapping
- Manage designated noxious weeds with an integrated approach
- Test the feasibility of new techniques and management strategies

The following goals guided the development of specific strategies, objectives, and priorities that were integrated into management activities in 2009:

- Prevent the introduction, reproduction and spread of designated noxious weeds and invasive exotic plants into and within the Salmon River Drainage.
- Reduce the extent and density of established noxious weeds to a point that natural resource damage is within acceptable limits.
- Maintain healthy rangeland and wildland habitat.
- Protect important or critical habitat from weed invasion, including areas that support the federally listed plant MacFarlane's fouro'clock.
- Rehabilitate infested habitats to reduce the susceptibility of reinvasion.
- Implement the most economical and effective weed control methods for the target weed.
- o Implement an integrated management system using all appropriate methods.



Several weeds listed as noxious in the state of Idaho are present in the SRWMA. The most problematic include: yellow starthistle, rush skeletonweed, spotted knapweed, Scotch thistle, and common crupina. These weeds have demonstrated their ability to spread rapidly in and along pastures, rangeland, forests and riverbanks where they decrease forage production for domestic livestock and native wildlife and disrupt natural ecosystems.

SRWMA STEERING COMMITTEE

| Name | Title | City | State |
|-----------------------|-----------------------|-------------|-------|
| Carl Crabtree | Chaiman | Grangeville | ID |
| Miles Benker | IDFG | Lewiston | ID |
| Doug & Sharron Boggan | Private Landowner | Riggins | ID |
| Lynn Burton | USFS | Grangeville | ID |
| Mike Cereghino | Private Landowner | Lucile | ID |
| Norm & Joyce Close | Private Landowner | Lucile | ID |
| Kelly Dahlquist | Private Landowner | White Bird | ID |
| Holly Endersby | Private Landowner | Pollock | ID |
| Don Heckman | Private Landowner | White Bird | ID |
| Ray Holes | Private Landowner | Grangeville | ID |
| Dean Huibregtse | BLM | Cottonwood | ID |
| Roger Inghram | Back Country Horseman | Grangeville | ID |
| John Nelson | IDFG | Lewiston | ID |
| Riki Osborn | ITD | Orofino | ID |
| Wayne Redenbaugh | Private Landowner | Pollock | ID |
| Ernie & Judy Robinson | Private Landowner | White Bird | ID |
| Don Sorenson | USFS Slate Creek | Grangeville | ID |
| Margie Wright | Private Landowner | White Bird | ID |
| Jim Rehder | Commissioner | Cottonwood | ID |
| Skipper Brandt | Commissioner | Kooskia | ID |
| Randy Doman | Commissioner | Grangeville | ID |

2009 ACCOMPLISHMENTS

The SRWMA partners have been very aggressive in the development of an integrated program that is implemented by all agencies, organizations, and landowners in the canyon. The accomplishments stated below are a result of the successful implementation of the Annual Operating Plan for this past calendar year (2009) and new management targets determined during the year via continued cooperation of SRWMA members. The majority of work conducted in the SRWMA during 2009 focused on inventory and treatment of new invaders. This is becoming an increasingly large problem, due to the improved inventory work over the years and the rugged terrain involved. Inventory work was conducted primarily by Idaho County Weed Management and contract workers. Control work was conducted by Idaho County leading all partners, and prevention work was conducted by Idaho County Weed Management with dependable input from CWMA partners. Accomplishments are presented according to the three main components of the SRWMA integrative approach to weed management, namely: Prevention, Inventory, and Treatment.

PREVENTION

It is much more cost effective to prevent weeds from invading a site, than it is to treat weeds once they are established. Consequently, prevention is one of the first priorities of invasive weed management in the SRWMA. As stated in the SRWMA Invasive Weed Prevention Plan, prevention includes education, restoration, and revegetation. Key prevention activities carried out during FY 2009 are listed below.

- A New invader Workshop sponsored by the University of Idaho and Idaho County
- Maintenance of 15 road signs to inform the public about weed free hay requirements on Forest Service administered lands
- A weed display for the Idaho County Fair
- Weed awareness posters at campgrounds and trailheads
- Refurbishing of roadside signs at each end of Salmon River Canyon
- Contract requirement to wash off-road equipment as part of Forest Service contracts



- Prescriptive Grazing Services, University of Idaho, and USFS continued their collaborative efforts working towards integrating goat grazing into an overall restoration strategy for large, dominating infestations of yellow starthistle
- Application of certified weed free straw for fire restoration
- Certification of gravel pits and stock piles as weed free
- Development of local volunteer inspectors as part of the certification process for weed free hay and straw. The county certified approximately 1000 tons of forage
- Washing equipment during suppression actions on wildfire
- Completion of susceptibility models and weed risk assessments for ground disturbing projects on the Nez Perce National Forest
- Update of web page providing the public with invasive weed information and SRWMA plans and strategies (below)
- o Annual meetings with steering committee to develop AOP and distribute EOY report

In the 2009 SRWMA AOP, public contacts estimated to take place throughout 2009 were approximately 10,000. Through various weed education and control efforts undertaken by the SRWMA throughout 2009, 9,883 public contacts were made.

INVENTORY

Inventory, or mapping, is one of the most important elements of a successful weed management plan. It is imperative that the extent of a population is understood before control activities are implemented. It is also crucial that inventory data be collected and assembled in a format that allows information to be shared among all partners. Accurate and efficient inventory is a high priority in the SRWMA, and was one of the highest priority projects listed in our 2009 Annual Operating Plan.

2009 AOP Estimates for Early Detection System for Salmon River Canyon: (Priority 2 on 2009 AOP) Acres to be Inventoried: 10,000

This project successfully accomplished even more than originally estimated in the 2009 AOP. Interagency crews were trained in and utilized HP-IPAQs & Windows CE software to map invasive plants. Field information was downloaded from the IPAQs to laptop computers and then to a central database. The Inventory Data Base used was the United States Forest Service model, FACTS. Risk assessments and survey designs were coordinated with the University of Idaho. At the close of the 2009 growing season (just as in all years prior), SRWMA inventory data was cleaned and distributed among partners as well as sent to the Idaho Department of Agriculture so that it could be added to the statewide noxious weed database. As outlined in AOP for 2009, it was estimated that 10,000 acres would be surveyed. Through successful interagency cooperation and good resource management, far more acreage was surveyed than this- (approximately 61,500 acres total). The following table lists the invasive species found in 2009 inventories and the actual acreage they infested.

| Common Name ¹ | Scientific Name | Gross Infested Acres ² | % of Gross Acres Infested | Average Density (%) |
|--------------------------|------------------------|-----------------------------------|---------------------------|---------------------|
| babysbreath | Gypsophila paniculata | 3.161 | 100 | 1 |
| black henbane | Hyoscyamus niger | 0.576 | 100 | 1.146 |
| Canada thistle | Cirsium arvense | 3.618 | 100 | 6.909 |
| common crupina | Crupina vulgaris | 317.301 | 100 | 25.962 |
| common mullein | Verbascum thapsus | 1.332 | 100 | 3.372 |
| Dalmatian toadflax | Linaria dalmatica | 74.533 | 100 | 2.796 |
| diffuse knapweed | Centuarea diffusa | 152.316 | 100 | 5.776 |
| Japanese knotweed | Polygonum cuspidatum | 5.024 | 100 | 64.113 |
| leafy spurge | Euphorbia esula | 78.079 | 100 | 6.224 |
| mat sandbur | Cenchrus longispinus | 2.744 | 100 | 1 |
| matgrass | Nardus stricta | 3.512 | 100 | 2.978 |
| meadow hawkweed | Hiearacium caespitosum | 1.794 | 100 | 5.231 |
| orange hawkweed | Hieracium aurantiacum | 8.867 | 100 | 8.252 |
| perennial pea | Lathyrus latifolius | 1.644 | 100 | 15.216 |
| poison hemlock | Conium maculatum | 10.271 | 100 | 1 |

2009 GROSS INFESTED ACRES WITH INVENTORY DATA¹

| Common Name ¹ | Scientific Name | Gross Infested Acres ² | % of Gross Acres Infested | Average Density (%) |
|--------------------------|-------------------------|-----------------------------------|---------------------------|---------------------|
| rush skeletonweed | Chondrilla juncea | 2330.385 | 100 | 4.664 |
| Russian knapweed | Acroptilon repens | 25.492 | 100 | 12.946 |
| Scotch broom | Cytisus scoparius | 0.124 | 100 | 64.529 |
| Scotch thistle | Onopordum acanthium | 127.937 | 100 | 13.587 |
| spiny plumeless thistle | Carduus acanthoides | 0.118 | 100 | 1.146 |
| spotted knapweed | Centaurea stoebe | 1608.73 | 100 | 14.851 |
| sulfur cinquefoil | Potentilla recta | 52.627 | 100 | 1.315 |
| tall hawkweed | Hieracium piloselloides | 1.374 | 100 | 1 |
| toothed spurge | Euphorbia dentata | 0.032 | 100 | 15.138 |
| whitetop | Cardaria draba | 0.872 | 100 | 11.867 |
| yellow starthistle | Centaurea solstitialis | 3640.103 | 100 | 14.962 |
| yellow toadflax | Linaria vulgaris | 0.791 | 100 | 11.443 |
| TOTAL | | 8453.357 | | |

¹All weed species listed on the Idaho Noxious Weed List but not listed on this table are not present at this time within the boundaries of the SRWMA.

²The inventory acres listed in this table were polygons drawn with absolute certainty around exact weed infestation borders and not grossly inflated guesses. Consequently, the "percentage of gross infested acres" calculations explained in the Cost Share Handbook do not truly apply.

TREATMENT

To assist in the integration of weed management activities and to help coordinate yearly treatments, the SRWMA has identified objective and priority codes for each proposed weed project. Projects are given a code that relates to the planned management outcome and the relative importance of the treatment. Codes are derived from the SRWMA Strategic Plan. Objective and priority definitions stated in the following tables reflect an operational approach. This coding system provided guidance to field crews and landowners during the year, helping to determine where limited resources should be allocated to obtain the most effective long-term results.

| | Objectives | | | | | |
|------------------------------|--|--|--|--|--|--|
| 1 Eradicate | Weed is treated to the extent that no viable seed is produced over the entire infestation and all plants (above ground portions) have been eliminated during the current field season. | | | | | |
| 2 Eradicate Satellites | Weed is treated to the extent that no viable seed is produced over the specific outbreak. All plants are eliminated during the current field season. | | | | | |
| 3 Control | Portions of the infestation or outbreak are treated to the extent that overall infestation area diminishes because no viable seed is produced and/or plants have been eliminated. | | | | | |
| 4 Contain | Portions of the infestations are treated to the extent that the weed is not expanding beyond the established treatment zones. The main body of the infestations may be left untreated. | | | | | |
| 5 Reduce | Infestation is treated to the extent that densities and/or rate of spread are reduced to an acceptable level. | | | | | |

| | Priorities | | | | | | |
|-------------|--|--|--|--|--|--|--|
| H High | Highest priority for treatment because it is a new weed, in a new area, and a susceptible habitat. | | | | | | |
| M Medium | Intermediate priority for treatment associated with invasive weeds in boundary zones and transportation corridors. | | | | | | |
| L Low | Low priority for treatment because the weed is non-invasive or located in areas where weeds are endemic. May not warrant immediate (current year) attention. | | | | | | |

Successful eradication depends upon thorough detection and inventory via effective communication among all partners. In 2009, once infestations were identified and prioritized by SRWMA partners, they were methodically treated. In the 2009 AOP, Objectives 1 and 2 were given the highest priority.

ERADICATION OF NEW INVASIVE WEEDS (OBJECTIVE 1)

Infestations assigned to an eradication objective had the highest priority for treatment because they were new species, in a new area, or in a susceptible habitat.

2009 AOP Estimates for Eradication (Rapid Response) of New Invasive Weeds with Follow Up Monitoring: (Priority 1 on 2009 AOP) Acres planned for treatment: 500

Following the step-by-step cooperative eradication procedure outlined in the 2009 AOP, this project resulted in the successful eradication of targeted new invasive weeds from the SRWMA. The project was considered successful only after no viable seeds were produced (or vegetative spreads) for the entire growing season; 100% of the known plants were eliminated from the site; treatment prescriptions were analyzed for success; all sites were visited a minimum of three times per season to ensure treatment of missed plants, regrowth, germinates, and late developing plants; and all resulting information was communicated in a timely manner to all cooperators of the effort. Sixteen weeds were to be targeted for eradication of new infestation efforts (as per the 2009 AOP). Actual weeds treated (22 species) per this objective are listed in the following table, along with the acreage and number of infestations.

| Objective/Priority | Common Name | Scientific Name | # of Sites | Acres |
|---------------------------|---------------------------|-------------------------|------------|----------|
| 1H | black henbane | Hyoscyamus niger | 4 | 20.5 |
| 1H | Dalmatian toadflax | Linaria dalmatica | 5 | 17.2776 |
| 1H | diffuse knapweed | Centuarea diffusa | 12 | 146.0626 |
| 1H | dyer's woad | Isatis tinctoria | 2 | 2.7837 |
| 1H | Italian plumeless thistle | Carduus pycnocephalus | 2 | 1.8819 |
| 1H | Japanese knotweed | Polygonum cuspidatum | 3 | 0.1313 |
| 1H | leafy spurge | Euphorbia esula | 9 | 06.4988 |
| 1H | matgrass | Nardus stricta | 13 | 13.2115 |
| 1H | meadow hawkweed | Hieracium caespitosum | 2 | 2.7314 |
| 1H | musk thistle | Carduus nutans | 24 | 4.673 |
| 1H | myrtle spurge | Euphorbia myrsinites | 3 | 2.1 |
| 1H | orange hawkweed | Hieracium aurantiacum | 11 | 29.5038 |
| 1H | perennial pea | Lathyrus latifolius | 1 | 0.0629 |
| 1H | rush skeletonweed | Chondrilla juncea | 49 | 96.851 |
| 1H | Russian knapweed | Acroptilon repens | 27 | 290.414 |
| 1H | Scotch broom | Cytisus scoparius | 1 | 0.294 |
| 1H | spotted knapweed | Centaurea stoebe | 46 | 17.9947 |
| 1H | tall hawkweed | Hieracium piloselloides | 5 | 1.3738 |
| 1H | toothed spurge | Euphorbia dentata | 14 | 97.3934 |
| 1H | whitetop | Cardaria draba | 1 | 0.2 |
| 1H | yellow starthistle | Centaurea solstitialis | 16 | 6.3999 |
| 1H | yellow toadflax | Linaria vulgaris | 6 | 9.4565 |
| Total: | | | | 767.7958 |

ERADICATION OF SATELLITE INFESTATIONS OF INVASIVE WEEDS (OBJECTIVE 2)

Infestations were assigned to this objective because they comprised small populations that had the potential to increase, but also because their smaller size made them more manageable than widespread monocultures.

2009 AOP Estimates for Eradication of Satellite Infestations of Invasive Weeds:
(Priority 3 on 2009 AOP)Acres planned for treatment:5,000Acres to be inventoried 15,000

During 2009, the goals for this objective were achieved by following the proposed action laid out in the 2009 AOP. Aggressive treatment strategies were planned for rush skeletonweed in the North Zone of the SRWMA, and yellow starthistle, spotted knapweed, whitetop, and Japanese knotweed in the South Zone of the SRWMA. Zoning of these weeds by aerial application has proven to be very successful in protecting land south of Slate Creek from yellow starthistle invasion, and protecting the northern section of the CWMA from rush skeleton weed invasion. The broad-scale strategy was to eradicate satellite outbreaks of these priority invasive weeds and to reduce the extent of the main advancing fronts. The project included both aerial and ground-based treatment of the priority weeds found in isolated patches in the steep and rugged Salmon River Canyon. Idaho County, working with private landowners, surveyed and monitored target areas spanning 61,500 acres. Outbreaks of Objective 2 species occurring beyond the designed battle lines were documented, entered into a special database, and flagged on the ground for application efficiency. Treatments were followed by additional monitoring to ensure that populations were eradicated such that no viable seed was produced over the entire infestation and all plants (above ground portions) were eliminated during the field season.

| Objective/ Priority | Common Name | Scientific Name | # of Sites | Acres |
|----------------------------|-------------------------|------------------------|------------|-----------|
| 2H | Dalmatian toadflax | Linaria dalmatica | 1 | 24 |
| 2H | Japanese knotweed | Polygonum cuspidatum | 6 | 1.179 |
| 2H | leafy spurge | Euphorbia esula | 4 | 97.0066 |
| 2H | meadow hawkweed | Hieracium caespitosum | 1 | 1.86 |
| 2H | orange hawkweed | Hieracium aurantiacum | 2 | 8.6991 |
| 2H | rush skeletonweed | Chondrilla juncea | 44 | 3169.8545 |
| 2H | Russian knapweed | Acroptilon repens | 2 | 392.9 |
| 2H | spiny plumeless thistle | Carduus acanthoides | 2 | 6.1 |
| 2H | spotted knapweed | Centaurea stoebe | 45 | 108.2553 |
| 2H | whitetop | Cardaria draba | 1 | 0.548 |
| 2H | yellow starthistle | Centaurea solstitialis | 51 | 1190.708 |
| Total: | | | | 5001.1105 |

Chemicals purchased with ISDA grant funds are listed in the following table.

| Chemical Description | Quantity | Purpose |
|----------------------|------------|--------------|
| Alecto | 2.5 gal | Weed Control |
| AquaMaster | 5 gal | Weed Control |
| Blue Dye | 7.125 gal | Adjuvant |
| Cim Max | 14 gal | Weed Control |
| Clopyralid 3 | 6.66 gal | Weed Control |
| Crop M | 10 gal | Adjuvant |
| Destiny | 2.5 gal | Weed Control |
| Exit | 5 gal | Adjuvant |
| Formula 40 | 130 gal | Adjuvant |
| Interloc | 20 gal | Adjuvant |
| M-90 | 155 gal | Adjuvant |
| MSM 60 DF | 276 oz | Weed Control |
| Picloram | 593.32 gal | Weed Control |
| Placement | 105 gal | Adjuvant |
| Prescott | 3.33 gal | Weed Control |
| Syl-tac | 15 gal | Weed Control |

ADDITIONAL TREATMENTS (IN EXCESS OF GOALS OUTLINED ON 2009 AOP)

In addition to the three projects accomplished above as part of fulfilling the 2009 AOP, the SRWMA also inventoried, monitored, and treated numerous other weed infestations with chemical and biological control methods. These additional projects are part of the overall Strategic Plan for successful weed management in the SRWMA.

CONTROL (OBJECTIVE 3)

Infestations in the following table were assigned and treated according to a Control Objective. These infestations consisted of widespread, established weeds and/or were along transportation corridors. These had a mixture of high

and medium priority where the goals were to treat these infestations in order to reduce the amount of viable seed that was produced over the entire infestation and to eliminate at least portions of the population throughout the course of the growing season.

| Objective/ Priority | Common Name | Scientific Name | # of Sites | Acres |
|----------------------------|--------------------|------------------------|------------|----------|
| 3H | common mullein | Verbascum thapsus | 1 | 1 |
| 3H | Dalmatian toadflax | Linaria dalmatica | 3 | 236 |
| 3H | mat sandbur | Cenchrus longispinus | 1 | 5.6 |
| 3H | rush skeletonweed | Chondrilla juncea | 3 | 11.971 |
| 3H | spotted knapweed | Centaurea stoebe | 15 | 146.042 |
| 3H | whitetop | Cardaria draba | 1 | 270.1 |
| 3H | yellow starthistle | Centaurea solstitialis | 7 | 1215.5 |
| Total: | | | | 1886.213 |

CONTAIN AND REDUCE (OBJECTIVE 4&5)

The infestations listed in the following table were assigned the Objectives of Containment or Reduction given the widespread nature of their infestation and establishment. The goal in their treatment was to reduce the spread of well-established populations by decreasing seed production and/or clonal advance along perimeters.

| Objective/ Priority | Common Name | Scientific Name | # of Sites | Acres |
|----------------------------|--------------------|------------------------|------------|-----------|
| 4H | Dalmatian toadflax | Linaria dalmatica | 1 | 30 |
| 4H | Scotch thistle | Onopordum acanthium | 5 | 13.9243 |
| 4H | spotted knapweed | Centaurea stoebe | 44 | 1301.8445 |
| 4H | sulphur cinquefoil | Potentilla recta | 1 | 49.2 |
| 4H | yellow starthistle | Centaurea solstitialis | 3 | 1077.8256 |
| 5H | Canada thistle | Cirsium arvense | 3 | 167.1662 |
| 5H | common crupina | Crupina vulgaris | 4 | 969.0763 |
| 5H | common mullein | Verbascum thapsus | 3 | 92.8 |
| 5H | common tansy | Tanacetum vulgare | 2 | 0.1525 |
| 5H | dog rose | Rosa canina | 3 | 199.258 |
| 5H | rush skeletonweed | Chondrilla juncea | 1 | 491.5 |
| 5H | Scotch thistle | Onopordum acanthium | 1 | 80.4 |
| 5H | spotted knapweed | Centaurea stoebe | 6 | 1223.2728 |
| 5H | sulphur cinquefoil | Potentilla recta | 1 | 0.098 |
| 5H | yellow starthistle | Centaurea solstitialis | 2 | 834.5019 |
| Total: | | | | 6531.0201 |

The SRWMA has always been very active in exploring partnerships with private companies to identify new and alternative methods of treating weeds. During 2009, SRWMA partners worked with DuPont chemical representatives to perform trials with new formulations on various weed infestations. Results of this effort demonstrated to regional land managers what new and previously existing options were for treating weed patches chemically, and the advantages to each.

In addition to chemical treatment options, in 2009 the SRWMA continued experimentation with new grazing techniques for the control of yellow starthistle (at right). This was done in conjunction with Prescriptive Livestock Services, US Forest Service, and the University



Goat exclosure grazing trials on yellow starthistle.

of Idaho. This is a multi-year study that will continue over the next few years. Results of this study will be shared with SRWMA partners and all interested land managers impacted by yellow starthistle.

REVEGETATION

For more than a decade, land managers and landowners in the SRWMA have taken a proactive approach to determining the best management practices for grazing land, especially following disturbance events. Idaho County

Weed Control, in conjunction with the US Forest Service and local land managers/owners, have conducted a number of trials testing seeding rates in conjunction with seed trampling with and without herbicide applications to determine the most effective revegetation program for various parcels of land within the WMA. In the summer of 2009, Idaho County Weed Control, with contractors and with funding from the USDI BLM, revisited five of these experimental sites to determine the effectiveness of past revegetation efforts (see below for map summaries of the work conducted). The results of these studies were written up formally in a separate report and are beyond the scope of this document. However, the findings of these SRWMA revegetation studies are directly related to integrated weed management throughout the state of Idaho and the entire Northwest. Consequently, the useful results produced in these studies will be made available to all land managers faced with the same land management issues encountered on these parcels.





Stowers Project (150+ acres private land) 21 20-m transects following 2008 post-fire revegetation efforts.

Dahlquist Project (2 acres private land) following 1996 experiment with different seeding, trampling, and chemical application rates.



Vavra Project. (1 acre private land) Eight 20-m monitoring transects following yr 2000 revegation with differing herbicide rates



Tom Jones Project. (17 acres private land) Five 100-m monitoring transects following 1999 revegation and chemical applications.



Doumecq Grade Project. (134 acres private land) 16 100-m transects following revegetation with chemicals and trampling. Gray area had greatest trampling, Red stripes denote additional Plateau application.

BIOLOGICAL CONTROL

The infestations mentioned above in the 2009 treatment tables pertain to sites treated with herbicides. Integrated control methods are utilized wherever feasible at various weed infestations throughout the SRWMA. In several weed infestations where patches have extensive coverage, biocontrol agents have been released over the years. The following table lists the agents released throughout the SRWMA in 2009.

| Agent | Target Weed | Releases | Numbers |
|------------------------|------------------------------|----------|---------|
| Mecinus janthinus | Dalmatian toadflax | 4 | 1200 |
| Bradyrrhoa gilveolella | Rush skeletonweed | 5 | 4148 |
| Eriophyes chondrillae | Rusk skeletonweed | 3 | ~15000 |
| Cyphocleonus achates | Spotted knapweed | 15 | 1040 |
| Larinus minutus | Spotted and diffuse knapweed | 12 | 4500 |

Numerous cooperators in the SRWMA and many other WMA's across the state have historically been very good at releasing hundreds and thousands of biocontrol agents against invasive weeds. However, very few agencies have taken the time to go back and revisit earlier releases to determine which agents, sites, and/or conditions were successful or not. In order to learn from past successes or failures and in order to know for certain if resources spent on biocontrol programs are effective uses of funds, post-release monitoring must be conducted. The SRWMA in



22 Biocontrol monitoring sites in SRWMA. Yellow: yellow starthistle; green: Dalmatian toadflax; pink: spotted knapweed.

2009 took part in a regional biological control program aiming to establish permanent biocontrol monitoring sites throughout three WMA's to ascertain the effects of past efforts.

With funding and cooperation from Idaho County, BLM, US Forest Service, and local contractors, 22 permanent biocontrol monitoring sites were placed throughout the SRWMA (at left). These included 12 for Dalmatian toadflax, 1 for spotted knapweed, and 9 for yellow starthistle. All sites were monitored following the state-wide protocol developed jointly by the ISDA, BLM, Forest Service, University of Idaho, and Nez Perce Biocontrol Center. All sites capitalized any earlier release or monitoring photos if such information was available in order to be as inclusive as possible. Though not funded by ISDA grants, the results of this program are directly in line with ISDA and Idaho weed control programs. All resulting data were cleaned and submitted to the ISDA/BLM biocontrol program manager to add to the statewide biocontrol monitoring effort.

2009 SUMMARY OF ACCOMPLISHMENTS

| Weed | Scientific | Acres Treated | | Biocontrol | Acres | Acres | Acres | Public | |
|-------------------------|-------------------------|---------------|------------|------------|-----------|--------------------------|-------------|-------------------|----------|
| Species ¹ | Name | Chemical | Mechanical | Grazing | Releases | Inventoried ² | Revegetated | EDRR ³ | Contacts |
| black henbane | Hyoscyamus niger | 20.5 | 1 | | | 0.576 | | | |
| Canada thistle | Cirsium arvense | 167.1662 | | | | 3.618 | | | |
| common crupina | Crupina vulgaris | 969.0763 | | | | 317.301 | | | |
| Dalmatian toadflax | Linaria dalmatica | 307.2776 | | | 4 (1200) | 74.533 | | | |
| diffuse knapweed | Centuarea diffusa | 146.0626 | 2.7 | | | 152.316 | | | |
| dyer's woad | Isatis tinctoria | 2.7837 | 1.7837 | | | | | | |
| Japanese knotweed | Polygonum cuspidatum | 1.3103 | | | | 5.024 | | | |
| leafy spurge | Euphorbia esula | 103.5054 | | | | 78.079 | | | |
| matgrass | Nardus stricta | 13.2115 | | | | 3.512 | | | |
| meadow hawkweed | Hiearacium caespitosum | 4.5914 | | | | 1.794 | | | |
| musk thistle | Carduus nutans | 4.673 | | | | | | | |
| orange hawkweed | Hieracium aurantiacum | 38.2029 | | | | 8.867 | | | |
| poison hemlock | Conium maculatum | | | | | 10.271 | | | |
| rush skeletonweed | Chondrilla juncea | 3770.1765 | | | 8 (19148) | 2330.385 | | | |
| Russian knapweed | Acroptilon repens | 683.314 | | | | 25.492 | | | |
| Scotch broom | Cytisus scoparius | 0.294 | | | | 0.124 | | | |
| Scotch thistle | Onopordum acanthium | 94.3243 | | | | 127.937 | | | |
| spiny plumeless thistle | Carduus acanthoides | 6.1 | | | | 0.118 | | | |
| spotted knapweed | Centaurea stoebe | 2797.4093 | 27.8675 | | 27 (5540) | 1608.73 | | | |
| tall hawkweed | Hieracium piloselloides | 1.3738 | | | | 1.374 | | 1.378 | |
| toothed spurge | Euphorbia dentata | 97.3934 | 67.4 | | | 0.032 | | | |
| whitetop | Cardaria draba | 270.848 | | | | 0.872 | | | |
| yellow starthistle | Centaurea solstitialis | 4324.9354 | 2.1 | 1000 | | 3640.103 | | | |
| yellow toadflax | Linaria vulgaris | 9.4565 | | | | 0.791 | | | |
| General Weeds | | 352.1533 | | | | 61.508 | | | |
| Multiple Weeds | | | | | | | | | 9,883 |
| Total | | 14186.1394 | 102.8512 | 1000 | 0 | 8453.357 | 300 | 0 | 9883 |

¹All weed species listed on the Idaho Noxious Weed List but not listed on this table are not present at this time within the boundaries of the SRWMA.

²The numbers listed in this column represent acreage inventoried during the 2009 season only. The number of acreas treated sometimes surpasses the number of acreage inventoried because treatments are often made utilizing present and past years' inventory data. The inventoried acreage should not be confused with surveyed acreage. 61,500 acres of the SRWMA were surveyed for weeds; inventory data simply refers to all specific data collected for confirmed infestations.

³Please note that while the EDRR column is mostly blank on this table, this is because only one species listed as EDRR on the Idaho Noxious Weed List is present in the SRWMA. However, significant EDRR action *does* take place within this WMA and is a high priority for SRWMA members. Those species which are new to the WMA or occur in susceptible areas are given the highest priority and treated and eradicated immediately. In this manner, EDRR certainly does take place in this region.

FINANCIAL BREAKDOWN

For 2009, direct contributions toward all SRWMA programs and projects totaled \$875,611.

These funds went towards contractors, equipment, supplies, and services that were used to accomplish the management elements outlined in the Annual Operating Plan for FY2009. The following pie chart displays the general percentages of the year's contributions.



2009 SRWMA Financial Breakdown (%)

2010 GOALS

In 2010, partners plan to stay on track with strategic objectives, including education, prevention, monitoring, and treatment. Elements of treatment, in order of priority of effort will include EDRR, treatment of new invaders, treatment of satellite populations of existing invaders, along with transportation corridors, followed by control of existing large populations of weeds. One of the most difficult tasks of weed management is to keep these fundamental goals in sight at all times, and not allow for distraction.

In addition, SRWMA members will continue to monitor the success of various herbicide, grazing, and biological control methods in order to ensure all cooperators are aware of the most up-to-date and successful weed management tactics available.