

2016 Weed Control Summary Report

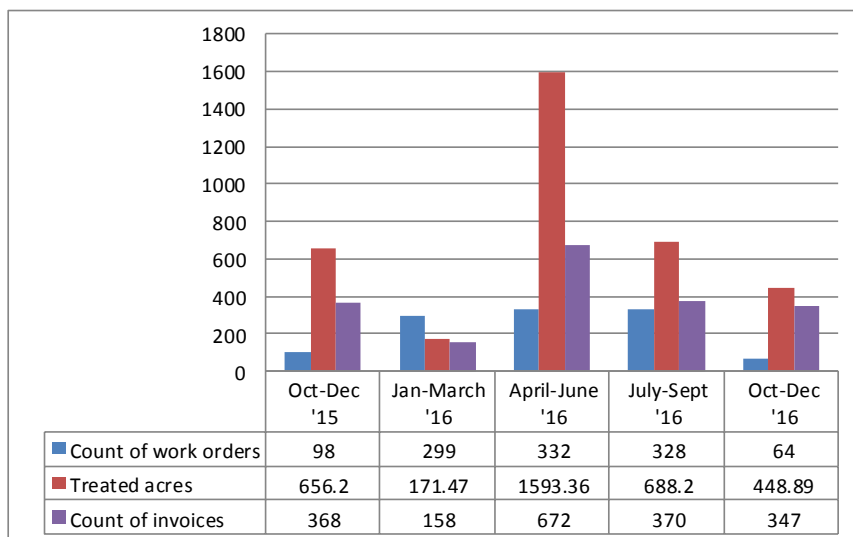
Ada County Weed Control Department

Overview

In fiscal year 2016 (October 2015-Sept 2016), Ada County Weed Control Department had a long season with many different work loads using varying integrated weed management control options depending on the noxious weeds found. In 2016, we worked on:

- Helped land owner control and manage noxious weeds on small to large acreage properties
- Responded to public complaints for noxious weeds when notified through enforcement actions
- Put out biocontrol insects in order to help manage large noxious weed infestations

- Worked with various public agencies to help control and reduce noxious weeds on public lands (i.e. BLM)
- Worked with Idaho Conservation Corp on mechanical removal of noxious weeds on public greenbelts/lands
- Completed 12 NWFFS inspection and certified **96 acres** for private landowners within Ada County as noxious weed free forage stray & hay
- Worked on ongoing projects for further research with IDFG (AC IT dept. and drones



- for imagery) for annual grass control on winter wildlife range habitat
- Purchased new updated application spray equipment and new software was created with Ada County IT Dept.
- Sent Supervisors to a Leadership Academy for further education/skill building and hired a new employee

Affiliations/ Memberships

- Idaho Association of Weed Control Superintendents (IAWCS)
- Idaho Southwest Weed Association (SWICA)
- Weed Science Society of America (WSSA)

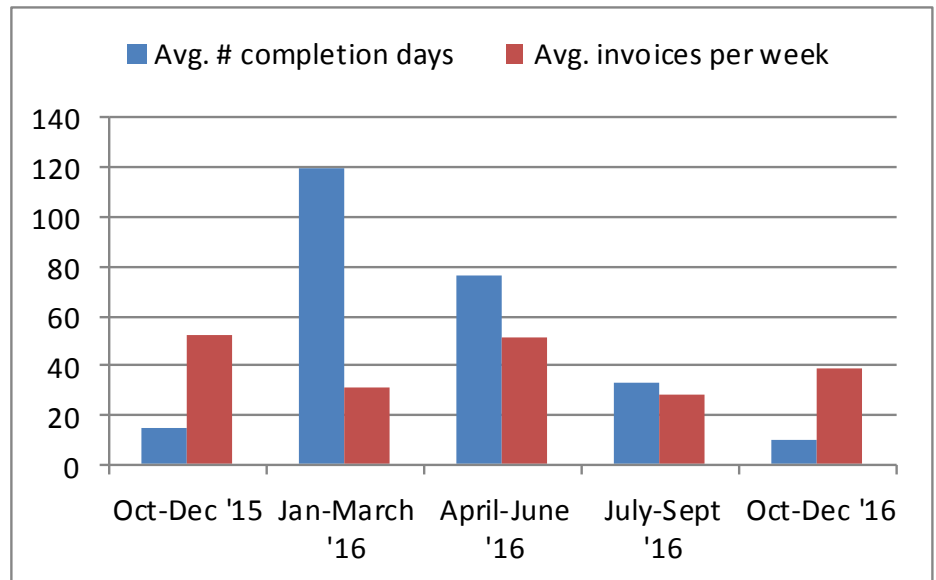
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Noxious Weed Control- Public Service Requests

Ada County assists landowners in controlling noxious weeds on their property and this year was no exception. Early spring and summer are our busiest months for public service requests, but by the end of the summer we are able get to requests completed on avg. in less than 30 days. Some of these requests are asked in early summer for fall work and remain open until completion which can skew the completion days (which is figured based on the difference of the call in date, that is the month shown in chart to right, and the completion date).

We had a total of **1057 public service requests and completed 1568 invoices** (jobs worked with



herbicide, NWFFS certifications, and survey & mapping). We treated **3109.23 acres** within Ada County for noxious weed control and worked for 38

weeks in the field (72% of the year) which was dependent on climate, the season would have begun sooner if our computer software program was available.

Noxious Weed Mapping/Survey

Ada County Weed Control does regular survey and mapping work as a component of Integrated Weed Management. This allows for us to map new infestations of previously identified or unknown completely new weeds within the county and also allows us to monitor noxious weed distributions across the county over time and space. We also work with other public agencies in mapping noxious weed infestations in order to make better land management plans for the control or eradication of noxious weeds and help reduce the potential spread within

our county.

We mapped **311 new locations** of noxious weeds during the 2016 fiscal year, for a **total of 3229 noxious weeds mapped** currently in Ada County, 58% of these new points were created in response to our Idaho Conservation Corp project (see page 9).

This season we continued efforts for contain/EDRR strategies on **Yellow starthistle** in known locations within AC working heavily with landowners to try & eradicate this species. Compared to 2015 and pulling 250+ lbs. and

then spraying, we found only 8 plants in the location of concern in 2016, which we removed!

In 2016 we also found a new location of **Dalmatian toadflax** which we will treat in spring of 2017.



Noxious Weed Species (*not all locations are mapped due to so widespread in AC and totals here are historical and current)



5 Most Common in Ada County*:

Hoary cress (White top)

577 mapped locations



Poison hemlock

195 mapped locations



Canada thistle

287 mapped locations



Scotch thistle

862 mapped locations



Puncturevine

179 mapped locations

5 Most Wanted to contain in Ada County:

Knapweeds (Spotted, Diffuse, Russian, etc.)

203 mapped locations



Yellow starthistle
133 mapped locations



Black henbane
10 mapped locations



Perennial pepperweed
82 mapped locations



Dalmatian toadflax
16 mapped locations

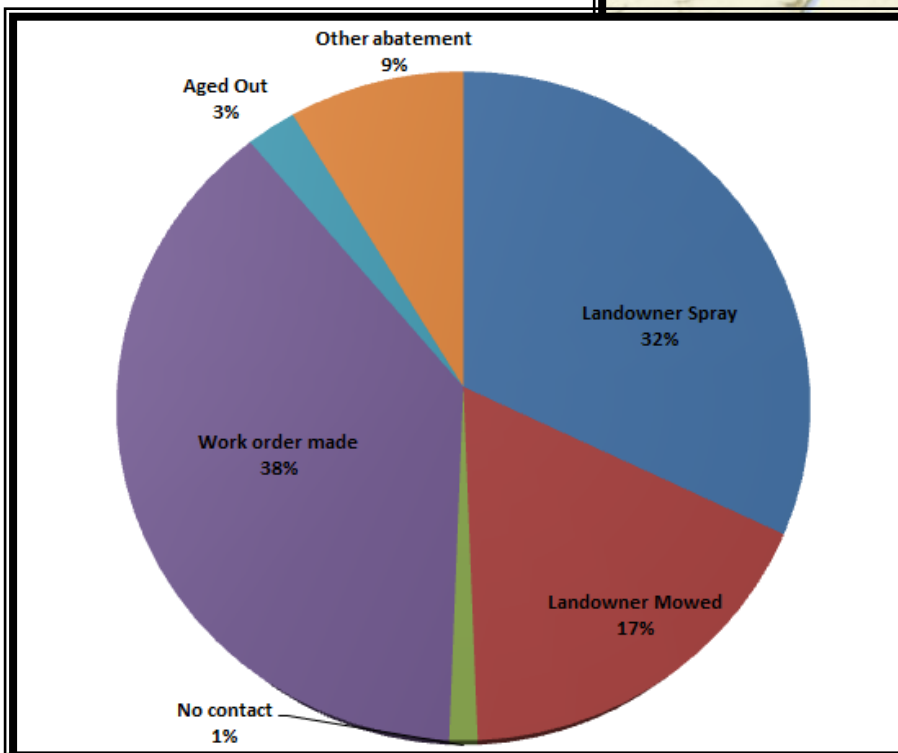
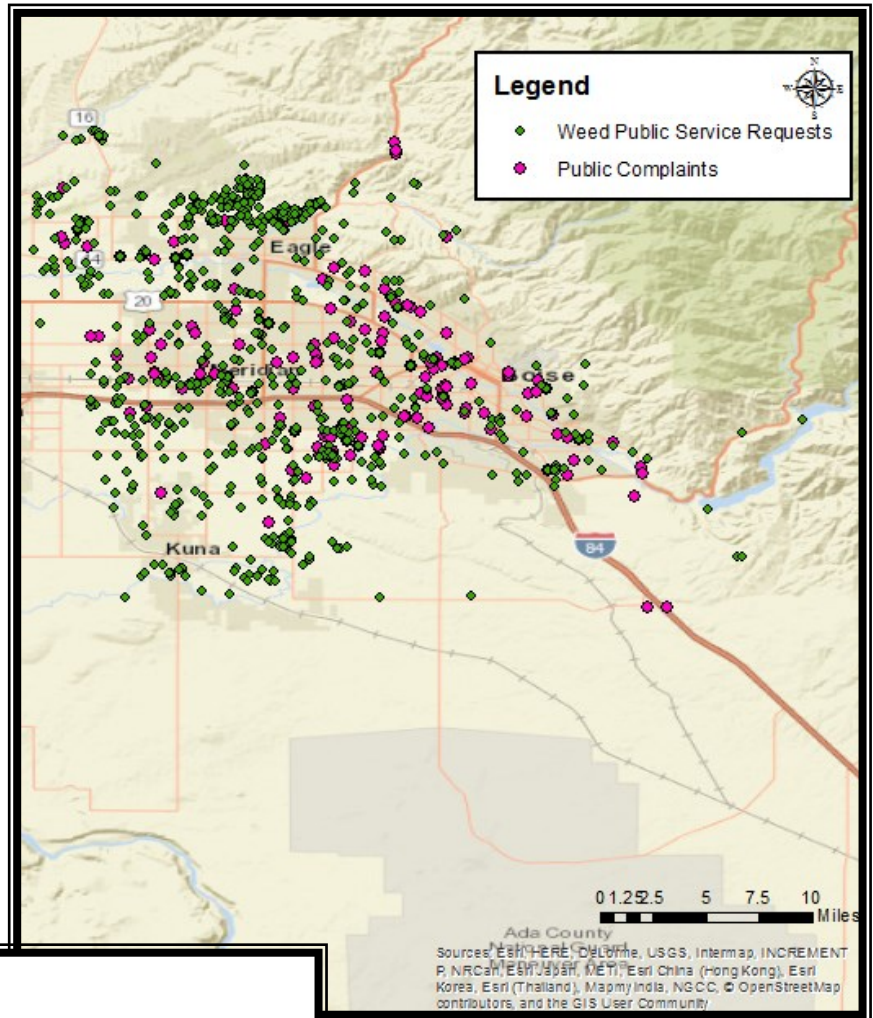


If you see the *Most Wanted Weeds* listed here, call our office for assistance!

Noxious Weed Control- Public Complaints

In Ada County, the general public or landowners can call in and make a complaint on noxious weeds within Ada County. The Ada County Weed Control Department responds to these complaints and when verified or when we see an issue of noxious weeds on any lands in AC in accordance to our integrated weed management plan, a certified enforcement letter is sent to the landowner where the noxious weed is located because pursuant to Idaho Code 22:24-07, it is the landowner's responsibility to control noxious weeds on their own property.

In 2016, we received **168 public complaints** which resulted in **81 enforcement letters** sent out. The result of these letters are shown in the chart below:



Right: Dyer's woad (an EDRR weed in AC) complaint pre-control. We sprayed in 2016, previous fall (2015) removed seed heads to help reduce spread.



Noxious Weed Control- Biocontrols

During the 2016 fiscal year, Ada County Weed Control put out 14 noxious weed biocontrol releases for Rush skeletonweed (1), Purple loosestrife (8), Spotted knapweed (5) with 4 different insect species (2 different species for purple loosestrife). A **total of 2111 insects** were released in various locations in Ada County. All biocontrol insects go through years of rigorous testing and approved through APHIS before available for release in Idaho.



Galerucella californiensis, Black-margined loosestrife beetle, eating Purple loosestrife which creates characteristic "shothole" effect on leaves

Bradyrrhoa gilveolella, Rush skeletonweed root moth, a Rush skeletonweed biocontrol; photo credit Mark Schwarzlander, UofI



Hylobius transversovittatus, Loosetrife root weevil, was released to control Purple loosestrife

Cyphocleonus achates, Knapweed root weevil, a Spotted knapweed biocontrol released in 2016, photo credit Jennifer Andreas, WSU



Projects worked on in 2016

Hammerflats rangeland rehabilitation– In the late fall of 2015 the Ada County Weed Department sprayed test plots for annual grass control at the Hammer Flats Wildlife Management Area owned by the Idaho Department of Fish and Game (IDFG). The main objectives for these research test plots were:

- To find reasonable and cost effective ways to control annual grasses in a typical steppe rangeland setting
- To help reduce the amount of fuel for wild fires
- To help reduce annual grasses and create better forage in native grasses and forbs for wildlife and cattle

The test plot area prior to the

herbicide application was covered mainly in a dense mat with high thatch of *Taeniatherum caput-medusae* (Medusahead rye) and *Bromus tectorum* (Cheat grass). We sprayed 8 different plots with varied rates and combinations of Milestone, Plateau, and Oust. In November 2016, we spent time collecting line transects, two in each test plot and two outside of the test plots in a control area in an effort to determine the effectiveness of each treatment and quantify reduction or change in canopy coverage or species richness. We will continue to sample in the spring and again in the fall of 2017 to determine results of treatments.

Warm Springs Mesa rangeland annual grass control– We set out for an additional research test plot area similar to the Hammerflats test plot project, the main difference being that the Hammerflats test plots were covered in a thick carpet of annual grass thatch from the previous season, this can act as an organic matter & have the potential to tie up the herbicide and prevent it from reaching the ground and being the most effective, while the Warm Spring Mesa test plot was part of the Table Rock Fire that occurred in early July, 2016. Consequently, it had no thatch, but it did have some carbon residue from the fire still present at the time of herbicide application, this could have the potential to tie up the herbicide to be less effective than if no thatch and bare-ground. Ultimately though this will allow us to compare high thatch/fuel loads versus immediately after a fire annual grass treatments in similar habitats for herbicide effectiveness for future rangeland rehabilitation options. Ada County Noxious Weed Control sprayed the test plots on November 4th, 2016, with various



Above and below: Hammerflats test plots and line transect sampling.



..... Above: Warm Springs Mesa pre-application



Projects worked on in 2016 continued...

rates and combinations of Milestone, Plateau, and Oust (mostly replicated from Hammerlfats), in addition we added a separate plot of Matrix near test plots. The purpose of the test plots were:

- To help determine better and more cost effective methods to help rehabilitate recently fire damaged rangeland.
- To reduce the fuel load for potential rangeland fires and which herbicide application is most cost effective for post treatments.
- To help restore habitat for wildlife and cattle in rangeland settings by assisting in the rehabilitation of reducing the amount of annual grasses and to help establish native perennial grasses, plants, forbs, and shrubs to improve forage and cover for wildlife and cattle.
- To help learn more about products we use for annual grass control for public service requests in pasture settings, to help make more informed recommends.

We performed replicated line transects in the treated and untreated areas to get a picture of the type and amount of vegetation just prior to the herbicide treatment, and took photos and video of the area. We will return in the spring of 2017 to continue monitoring the test plots. In 2017 we will also be working with the Ada County IT department and their Unmanned Aerial Vehicle program (UAV). They received FAA approval and will be using their new multi spectral camera spring 2017 to help quantify the results of the test plots and determine vegetation abundance.

Training Opportunities and Continuing Education

Continuing education and training of staff is a primary objective of our program in order to use the best management practices available. The majority of training also contributes for recertification credits through the Idaho State Department of Agriculture to continue to carry a Professional Applicators license in the state of Idaho.

2016 Seminar/Conference/Training	People Sent	Hours	Total
INWC (Idaho Noxious Weed Conf.)	2	16	32
IAWCS Winter Superintendents Meeting	4	8	32
ACWC in house label seminars (ISDA)	8	4	32
Leadership Training Academy (AC)	3	40	120
SWIWCA Spring Workshop	3	8	24
Space Cushion Driving	8	4	32
SWIWCA Fall Weed Tour	8	8	64
New Employee Training	1	80+	80+
WPS training Seminar (ISDA)	8	2	16
SWIWCA Fall Seminar (Elks Lodge)	8	8	64

Total Hours in Training for 2016:

496



Measuring plant height & density in test plots.

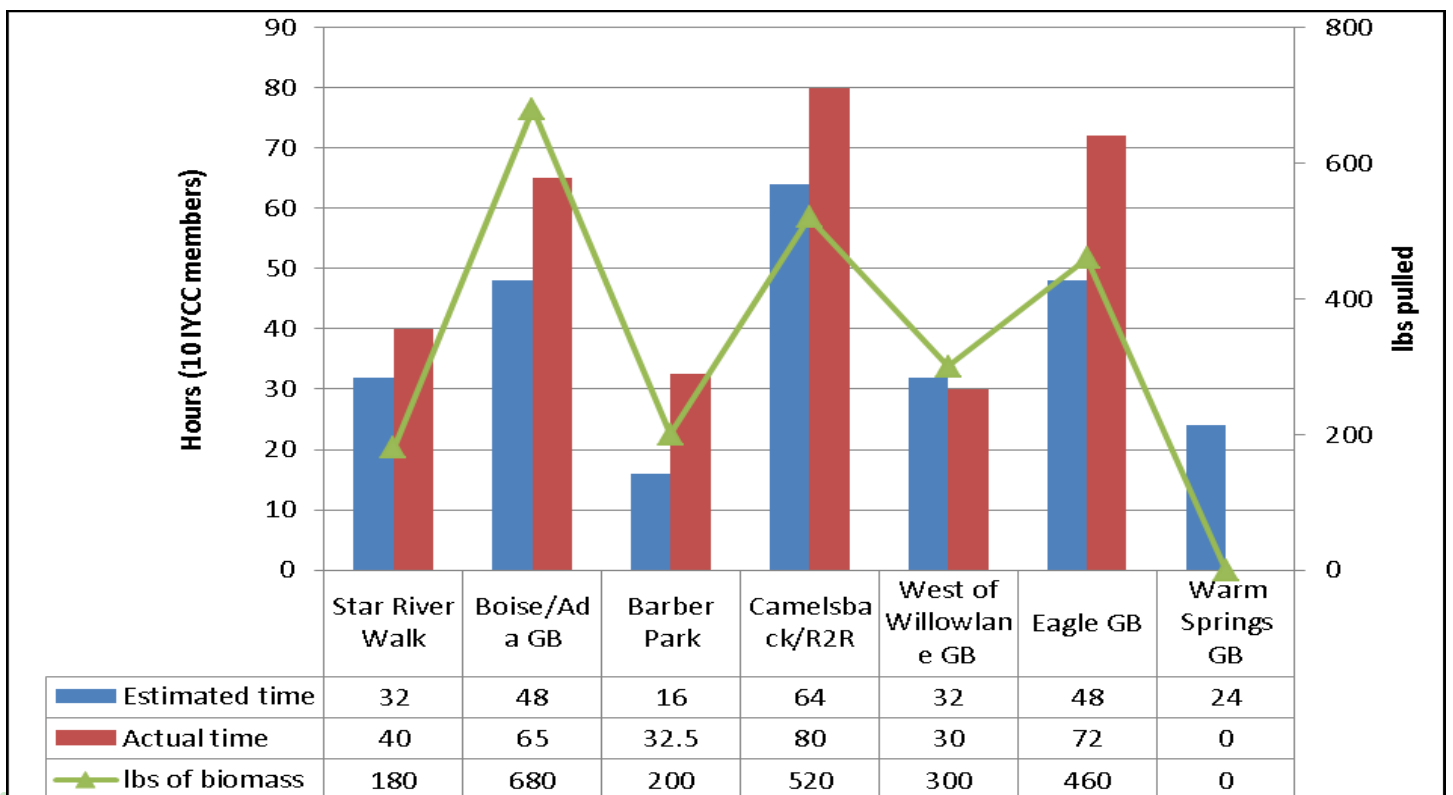
Special Project of 2016, Idaho Conservation Corp

In 2016, Ada County Weed Control Department brought in a youth group through the Idaho Conservation Corp for a week in order to survey, map and do mechanical removal of noxious weed and seed reduction along various greenbelt and public lands within Ada County. We chose the reduction and mapping of Scotch thistle, Houndstoungue, and Puncturevine due to their seed dispersal (wind or attaching to animals/people) or life cycles (annual/biannual).



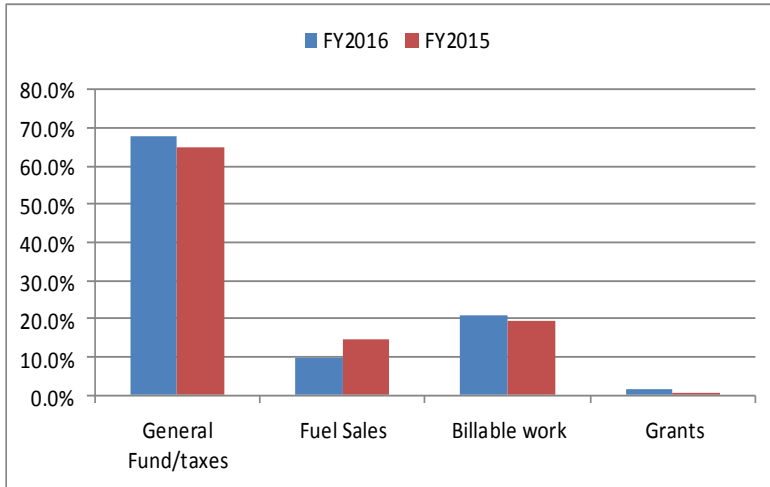
Below is a brief summary chart (a more comprehensive report can be attained by contacting Ada County Weed Department):

All Project zones	Estimate of time to spend on proposal (hrs. x count of people)	Actual time spent (9-10 people)	Miles surveyed	Weight of Weeds pulled	Count of mapped weed points*	Still need to survey, estimate pathway in miles
6/20/16-6/24/16	264 hrs.	319.5 hrs.	17.90 miles	2340 lbs.	135+	11.11 miles



Budget totals

Revenue comparison for the last 2 years for Weed Control below.

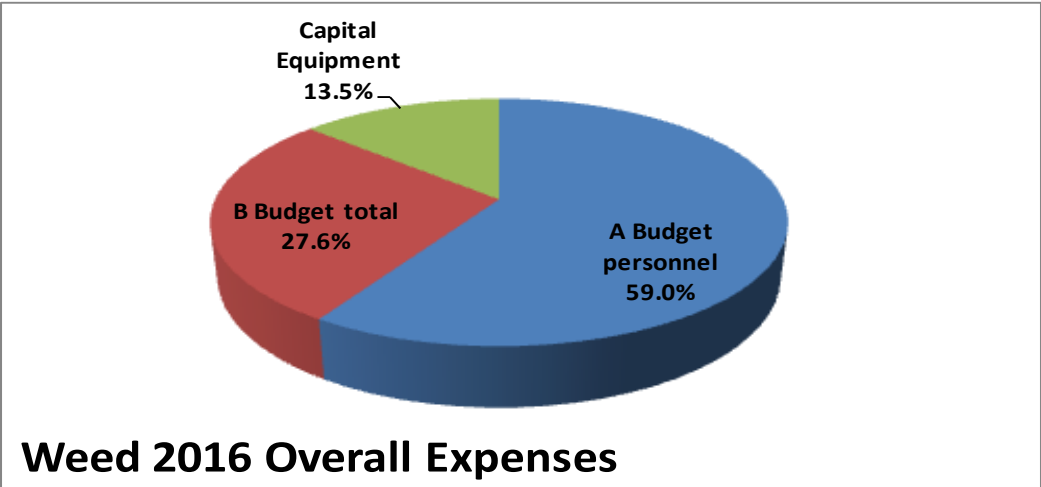


FY15-16 Dept. Revenues
Total \$802,390

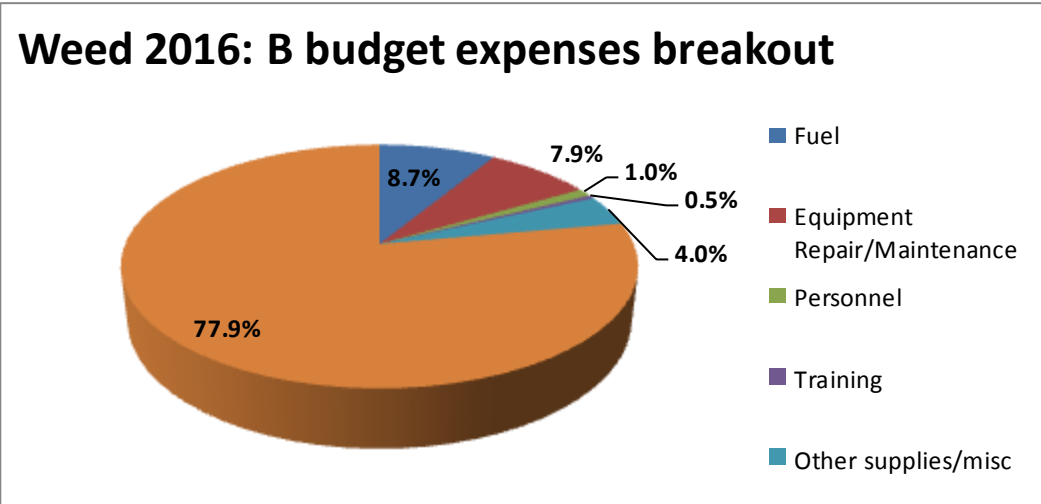
FY15-16 Dept. Expenditures
Total \$764,403

FY15-16 Capital Expenses
Total \$116,627

We are a partly self-revenue based department and partly taxes and grants: 67.9% of our revenue budget comes from general funds/taxes, 20.8% of our budget is based on billable work, 9.9% from fuel sales (to other participating public agencies), and 1.4% federal grants (as seen above in the chart).



Our expenses were below the annual budget amount for FY16, and similar to expenses in FY2015 with only a slight increase of 0.45%. We did however make a larger capital purchase for replacement of spray equipment in FY16.

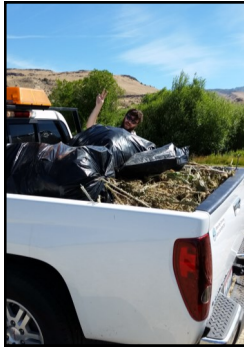




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Getting ready to haul off 100's of lbs. of Scotch thistle to the dump after mechanical removal on greenbelts in Boise.

Department Mission:

Ada County Weed Controls mission is to manage and control noxious weeds throughout Ada County, pursuant to Idaho Code Title 22, Chapter 24. Our strategic priorities are to provide public safety, security and health services and to provide excellent public services and public education.

Noxious Weed Control Efforts:

Ada County Weed Control has a comprehensive and coordinated integrated weed management program for the prevention, eradication and management of noxious weeds. Along with an aggressive plan for controlling and eliminating noxious weeds, the division also works to control vectors, or methods by which a noxious weed can be spread throughout the county. Examples of vectors include contaminated feed, seed or packing materials; motorized and non-motorized vehicles including ATVs, motorcycles, bicycles or trailers that could be carrying seeds; soil, sand or gravel contaminated with noxious weed seeds; boats, personal watercraft, watercraft trailers that carry noxious weeds or other noxious aquatic species.

Goals from 2016

The staff learned a lot from 2015 and looked at ways to improve our program for the 2016 season. One of the main priorities for our department to start this season was to train and learn to use new spray equipment and software for applications. The winter between 2015-2016 resulted in a lot planning, management, and teamwork which resulted in a successful weed control year.

1. Learn new software for application records and new spray controllers for trucks- **Goal met- the equipment was up and ready for use in early spring but we were held back by some software development delays in early spring while the bugs were worked out, and did not have a functioning compliance program until mid year (May 2016). After a rocky start, by the end of the season the program worked effectively. Some improvements to make it more efficient will be important in the future.**
2. Work on research test plots for better ideas of control in rangeland and annual grasses.-**Goal met and will continue into 2017.**
3. Continue to work with Public Education Specialist to increase education and public outreach: **Assisted in the fair and parades**
4. Increase in billable revenues from FY 2015: **Goal met, had an increase of 9.42% in FY 2016, total budget revenues increased 3.77%.**

Goals for 2017

1. Complete more than 1500 billable invoices and increase billed revenues.
2. Monitor research & test plots projects.
3. Continue to work with Public Education Specialist to increase education and public outreach
4. Improve training program for start of year and mid year training of seasonal staff in conjunction with Weed Apprentice Program
5. Pursue eradication of all EDRR weeds in AC