Weed Management and Research Needs Survey Summary

The Integrated Weed Management (IWM) committee of the Montana Weed Control Association (MWCA) recently conducted a survey of weed professionals. The survey was part of the IWM's "Building Bridges" goal of facilitating communication between researchers and managers. We hope the following results bridge on-the-ground weed management needs with current research by: providing direction to research programs in Montana, identifying conference and field tour topics, and updating the Montana Weed Management Plan. Thank you for participating in the survey.

We're happy to report that we received 201 responses to the survey, with public land managers and weed district personnel accounting for 114 of the responses (Figure 1). The survey was composed of 4 main questions looking at 1) which areas of invasive plant management are in the most need of new research, 2) which invasive species are the most difficult to control, 3) which ecosystems are the most difficult to manage for invasive species and 4) what research would help with improve management of those difficult areas and species.

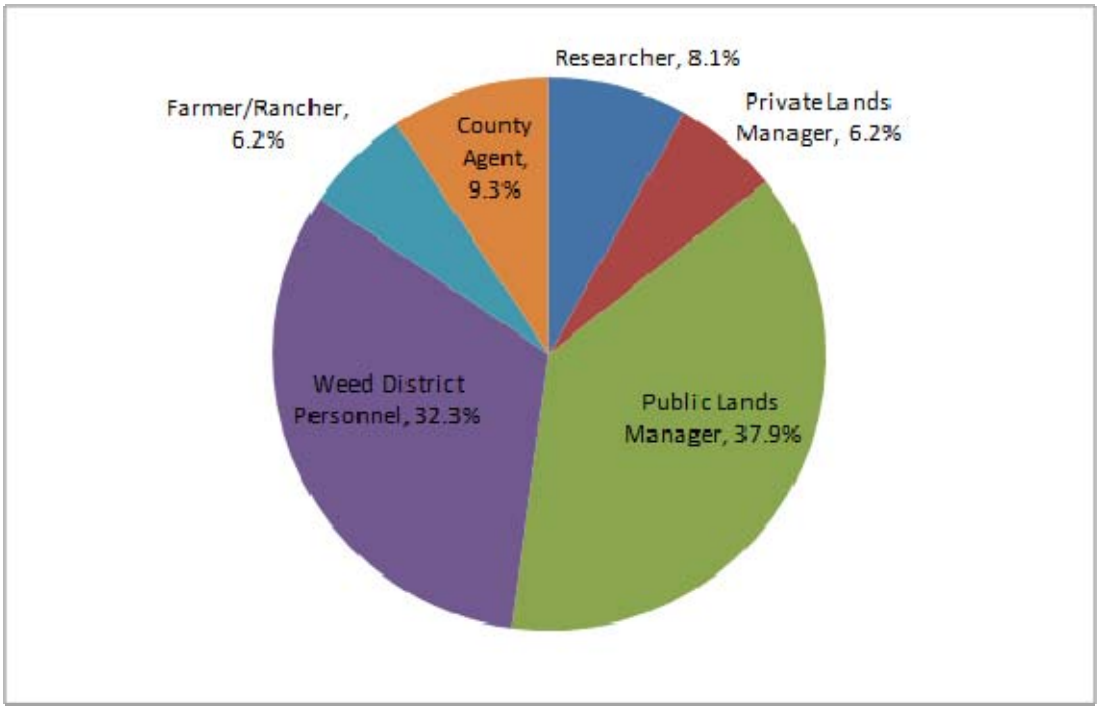

Figure 1. Occupation of survey participants.

The top 3 answers when asked, *What areas of invasive plant management are in the most need of new research* were: Restoration/Revegetation, Biological Control and Weed response to different land-use/habitat/management tools. All three answers ranked high with all participants, with Restoration/Revegetation ranking especially high for weed district personnel (Figure 2).

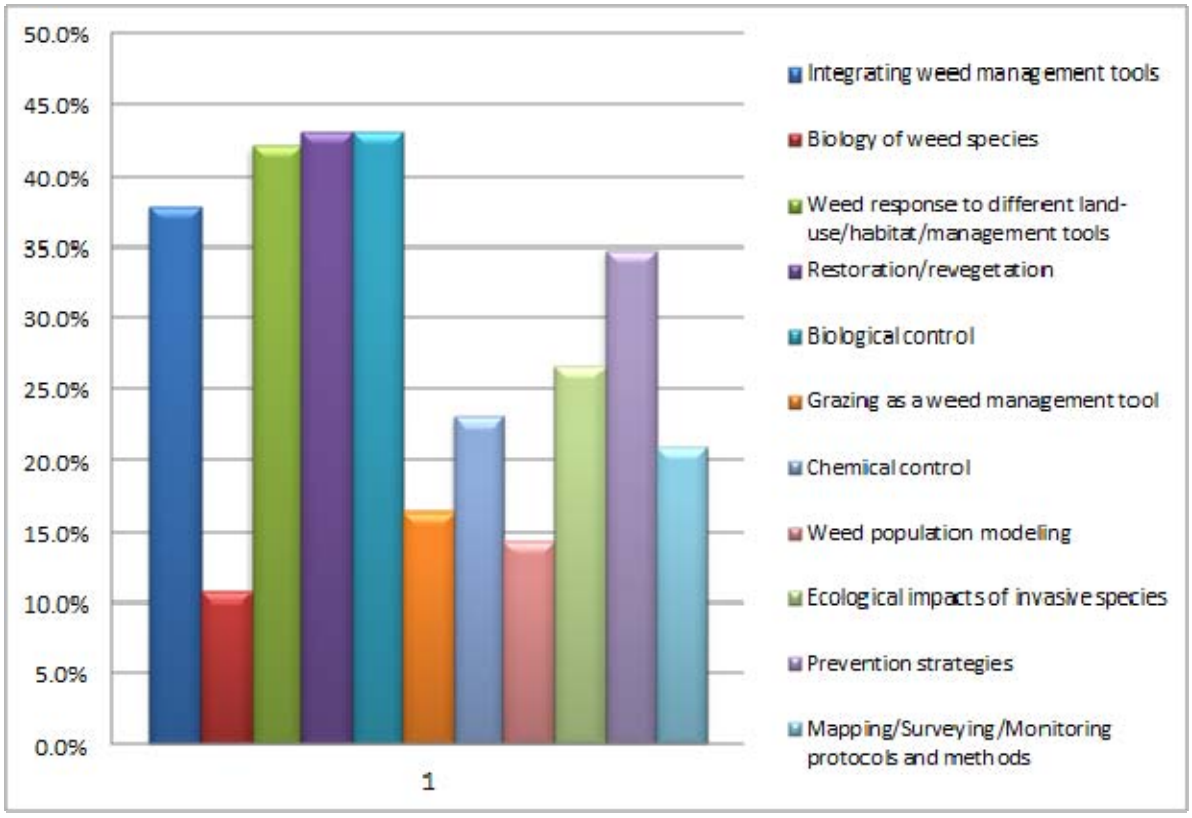

Figure 2. Summary of the invasive plant management topics in the most need of new research.

When asked, *Which invasive species are the most difficult for you to manage or are in the most need of additional research,* the highest ranking weed species were: cheatgrass *(Bromus tectorum)* with 103, leafy spurge *(Euphorbia esula)* with 87, houndstongue *(Cynoglossum officinale)* with 65 and Dalmatian toadflax *Linaria dalmatica)* with 54. While cheatgrass ranked high for everyone as a species that is difficult to control, there were differences between the other top weeds between researchers, weed district personnel and public lands managers. While weed district personnel and public land managers ranked leafy spurge Dalmatian toadflax and houndstongue as their other main species of concern; researchers who responded ranked Canada thistle *(Cirsium arvense)*, whitetop *(Cardaria draba)* and Russian olive *(Elaeagnus angustifolia)* as their main species of concern.

Concern over what to do when managing weeds in aquatic and riparian systems was made very evident among all respondents of the survey (Figure 3). Aquatic systems were a concern for over 60% of respondents, with riparian zones coming in as a close second. It's clear that managers and researchers alike would like more information on the management options for our aquatic noxious weeds.

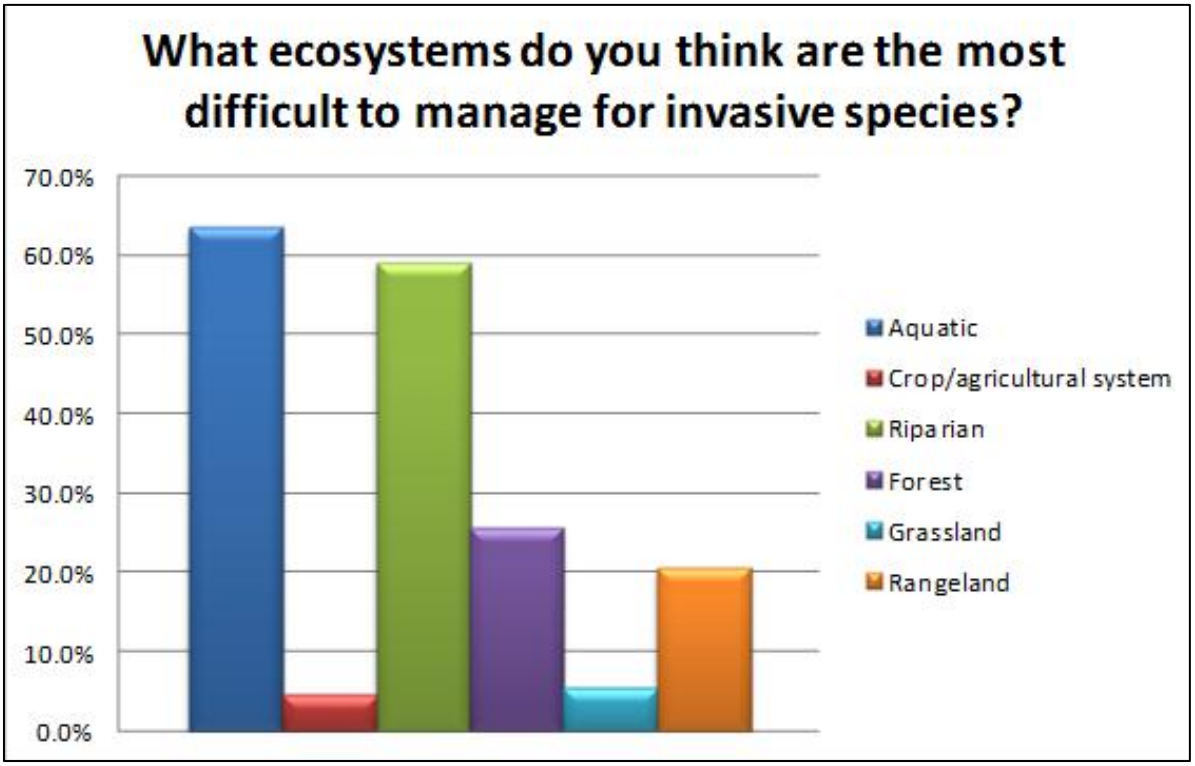

Figure 3. Ecosystems that are difficult to manage for invasive species.

When asked the question, *what research would improve your control efforts for those species,* the highest ranking answer was *Plant community response to control,* with almost 50% of respondents choosing that answer (Figure 4). Other answers ranking high with weed district respondents were *risk assessment of invasion and spread* and *the environmental, ecological and economic impacts of the target species.*

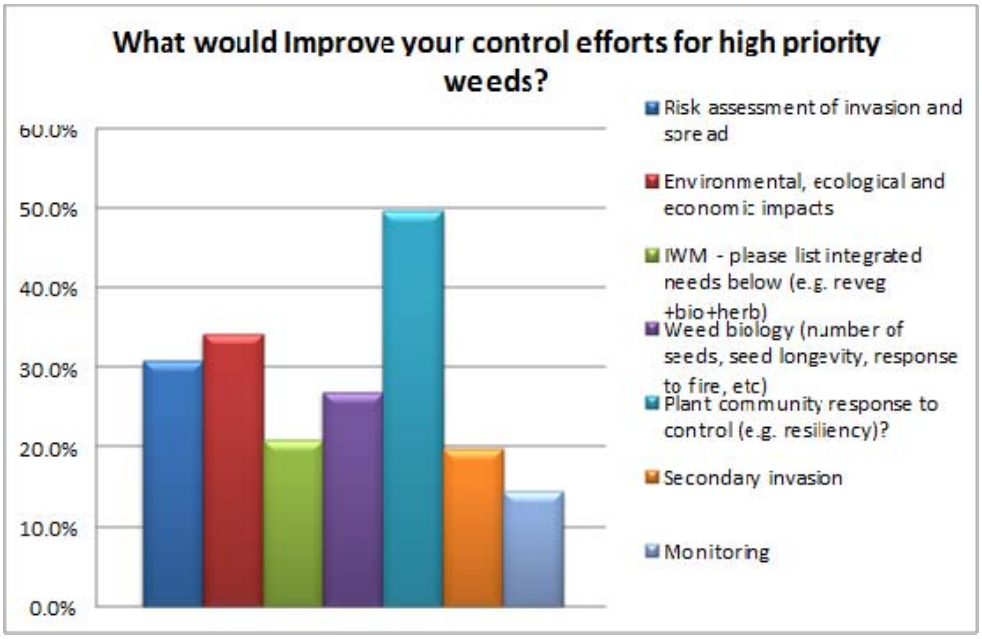

Figure 4. Research needed to improve control efforts for high priority weed species.

Thanks again to all that participated in this survey. If you would like more information, or would like to view the full results, contact the MWCA IWM chair, Monica Pokorny at: monicapokorny@gmail.com.