

Invasive Species Blitz Impact Analysis

Christian Wood, Community Outreach Corpsmember,
Conservation Corps of Minnesota & Iowa
wood1145@umn.edu

Invasive Blitz Program Inquiry

Angela Gupta, U of M Extension Educator, Natural Resource Management & Utilization,
agupta@umn.edu

Abstract

Between 2013 and 2016, the Master Naturalist Invasive Blitz advanced training program engaged participants from across Minnesota on how to identify and manage invasive species in order to address the growing threat of invasives. An impact analysis of the program was performed using data self-reported to the Minnesota Master Naturalist website by Invasive Blitz participants. These data were summarized with descriptive statistics, including totals and averages. In addition, service event data were correlated with zip codes to determine the geographic impact of the program. Results of the data analysis suggest a broad program impact. Over the course of the program, 128 students participated in eleven trainings. After taking the training, these participants engaged in 434 service events across 30 Minnesota counties, totaling 1,197 service hours and impacting an estimated 9,582 acres of land. Based on the program budget of \$7,050 and the economic value of service performed by participants of \$27,614.79, the cost-benefit ratio of the program was 1:4. Data are limited due to the fact that 30% of Invasive Blitz participants did not report service. Nevertheless, this analysis suggests that the program succeeded in promoting invasive species education and intervention statewide. In terms of broader application, this analysis also provides evidence of the potential impact of invasive-species-related education for natural resource professionals to reference in their own work.

Conclusion

This analysis suggests that the Invasive Species Blitz program succeeded in promoting invasive species education and intervention statewide. In terms of broader application, this analysis offers evidence of the potential impact of invasive-species-related education for natural resource professionals to reference in their own work.

References

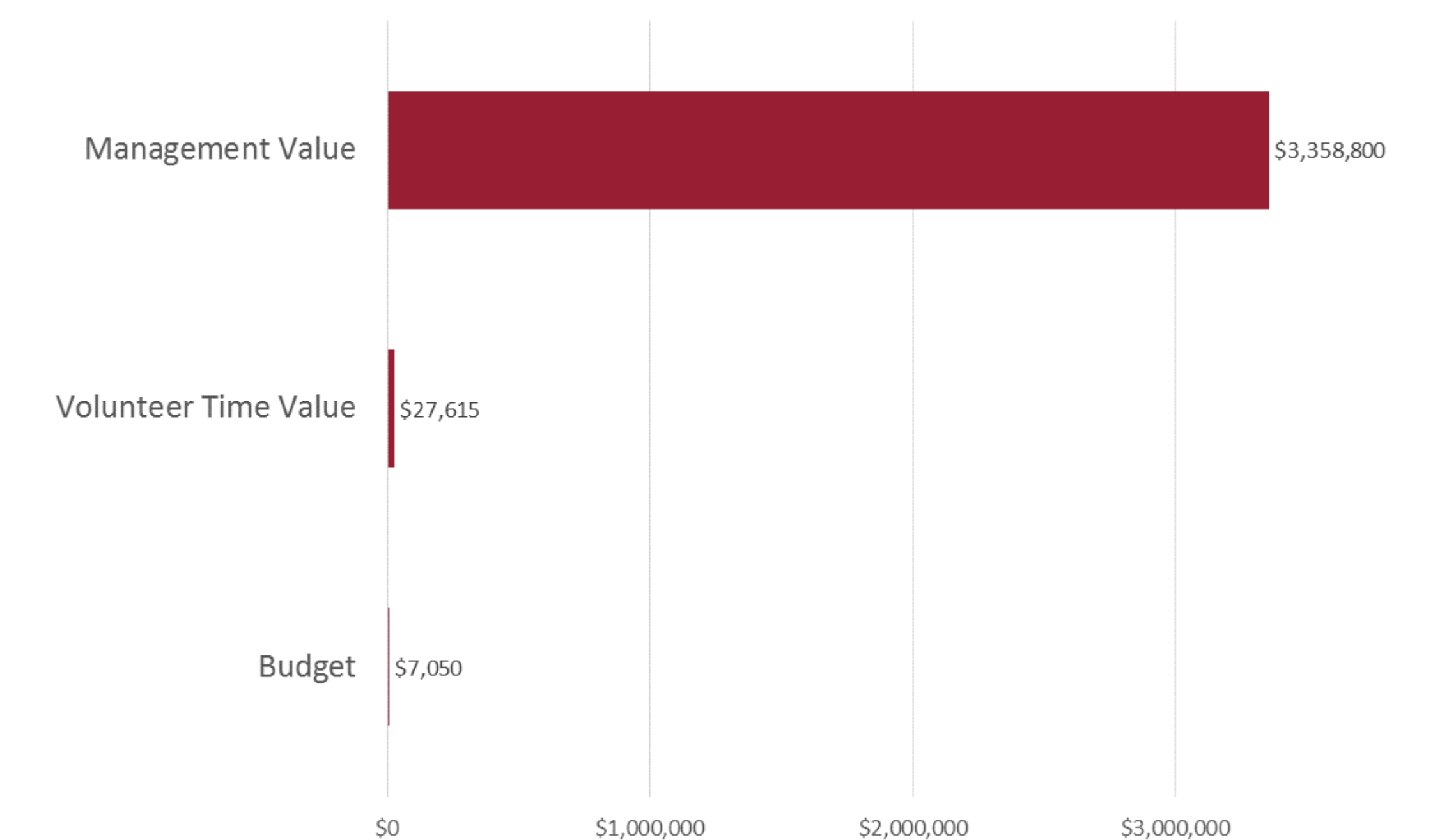
- Beck, K. G. (2009). Economics of invasive weed control: chemical, manual/physical/fire, biological, and doing nothing. *Invasive Plant Management Technical Webinar Series*.
- Brown, Eleanor. "Assessing the value of volunteer activity." *Nonprofit and voluntary sector quarterly* 28.1 (1999): 3-17.
- Independent Sector. *The Value of Volunteer Time*. (2015). Retrieved from http://www.independentsector.org/volunteer_time

Cost:Benefit of Program

1:428

Cost Benefit of the Invasive Species Blitz program comparing the initial budget to the management value of volunteer activity. Post-training.

The service and management performed by Invasive Blitz participants produced more value than the initial budget allocation.



Service & Impact Data

1708

Total Service Hours by Invasive Blitz Participants

434

Total Reported Invasive Species Service Events

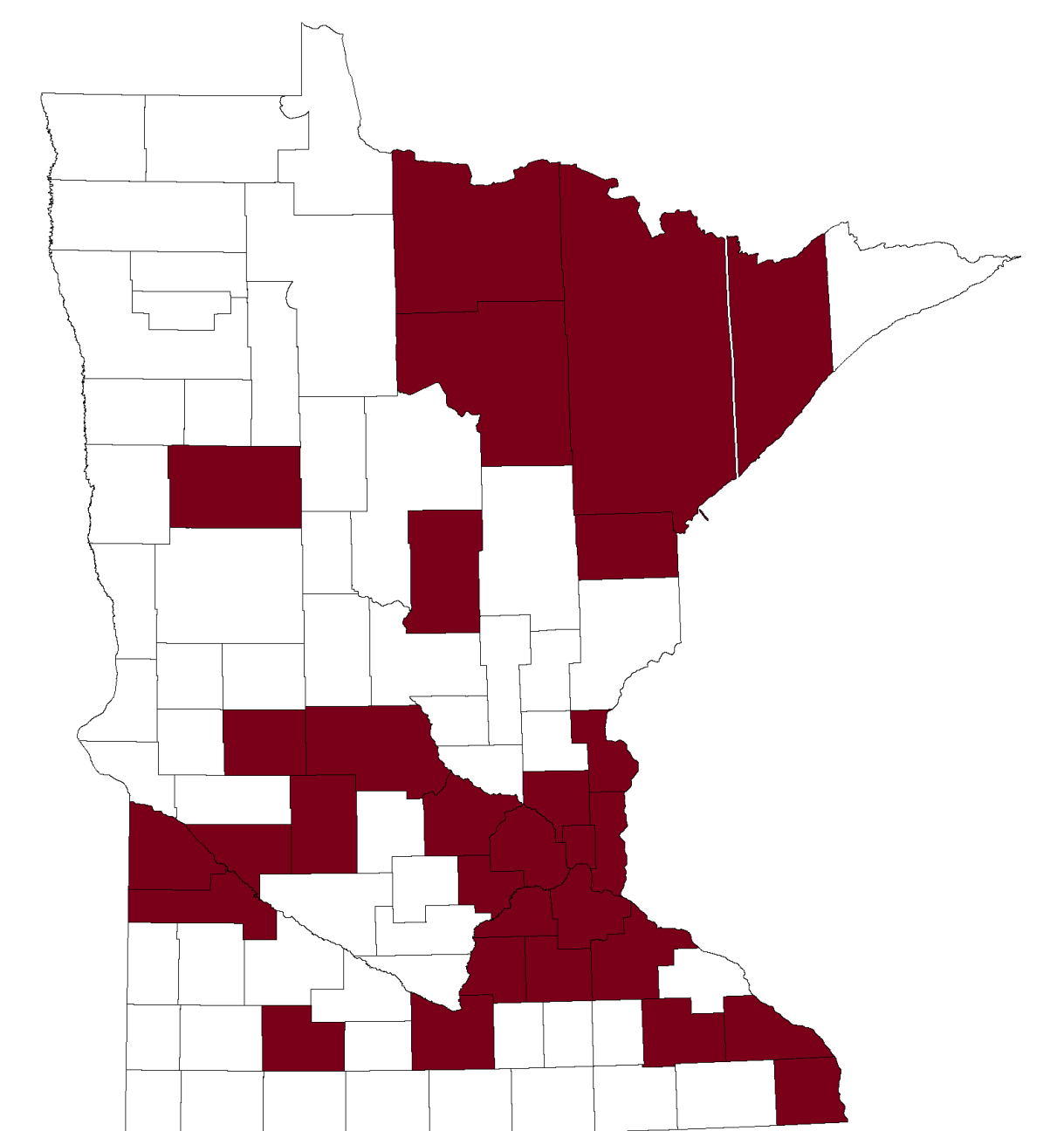
9582

Estimated Acreage of Invasive Species Management



Impacted Counties

Invasive Blitz participants reported service in 30 Minnesota counties, including Anoka, Becker, Blue Earth, Carlton, Carver, Chippewa, Chisago, Cottonwood, Crow Wing, Dakota, Goodhue, Hennepin, Houston, Itasca, Kandiyohi, Koochiching, Lac Qui Parle, Lake, Le Sueur, Olmsted, Pope, Ramsey, Rice, Scott, St Louis, Stearns, Washington, Winona, Wright, Yellow Medicine



Volunteer Time Value

\$27,615

To calculate the value of volunteer time, the service hour total was multiplied by \$23.07, the hourly value of volunteer service according to Independent Sector. The result was \$27,614.79. Stated this way, comparing the Invasive Blitz budget to the value of the time participants volunteered, the cost-to-benefit ratio of the program was 1:4.

Management Value

\$3,358,800

The management value estimates the value of participant's management activity impact, rather than the value of their volunteer time. Specifically, it multiplies the acreage on which volunteers performed management by a conservative estimate of the cost of professional management. Although management costs vary due to site conditions, goals, the type of work (Paul Kortebein, personal communication, June 8, 2016), plant growth stage, chemical requirements (Beck, 2009, Table 3), and other factors, sometimes into the thousands of dollars per acre (Beck, 2009, Table 3), \$400 per acre was determined to be a useful, conservative estimate for professional cost after consultation with a forestry manager (Paul Kortebein, personal communication, June 8, 2016) and literature (Beck, 2009).