

## L. Natural Resource Ecology and Management (NREM) Research Productivity Summary including Academic Analytics

**L.1 ISU Library Digital Repository:** The NREM faculty members actively participate in the ISU Library's Digital Repository program. The [Digital Repository \(DR\) for NREM](#) contains 349 total papers including departmental publications, theses and dissertations and other reports, Iowa Coop Unit, and the North Central Regional Aquaculture Center. The top ten journal article downloads are listed in Table L.1 and top ten theses or dissertation downloads are listed in Table L.2. Library staff members receive permission from journals and other publishers to include pdf format reprints available for download worldwide increasing the accessibility of research and other publications. Some journals impose a one to two year moratorium on more recent publications. The 349 papers generated more than 12,000 downloads in the last year.

Table L.1 Top ten journal articles downloaded from ISU Library Digital Repository (DR), August 2015.					
Author(s) (NREM)	Title	Pub. date	Posted on DR	Downloads (NET)	DR Link
Wu, <b>Thompson</b> , Kolka, Franz, <b>Stewart</b>	Using the Storm Water Management Model to predict urban headwater stream hydrological response to climate and land cover change	2013	2014	369	<a href="http://lib.dr.iastate.edu/nrem_pubs/22">http://lib.dr.iastate.edu/nrem_pubs/22</a>
Atwell, <b>Schulte</b> , Westphal	Linking Resilience Theory and Diffusion of Innovations Theory to Understand the Potential for Perennials in the U.S. Corn Belt	2009	2013	226	<a href="http://lib.dr.iastate.edu/nrem_pubs/8">http://lib.dr.iastate.edu/nrem_pubs/8</a>
Widrechner, <b>Thompson</b> , Iles, Dixon	Models for Predicting the Risk of Naturalization of NonNative Woody Plants in Iowa	2004	2013	197	<a href="http://lib.dr.iastate.edu/nrem_pubs/7">http://lib.dr.iastate.edu/nrem_pubs/7</a>
Hirsh, Mabry, <b>Schulte</b> , Liebman	Diversifying Agricultural Catchments by Incorporating Tallgrass Prairie Buffer Strips	2013	2013	122	<a href="http://lib.dr.iastate.edu/nrem_pubs/19">http://lib.dr.iastate.edu/nrem_pubs/19</a>
Adriral, Patterson, Hulet... Schockey, Anderson, <b>Thompson</b>	Vegetative buffers for fan emissions from poultry farms: 2. ammonia, dust and foliar nitrogen	2008	2013	118	<a href="http://lib.dr.iastate.edu/nrem_pubs/5">http://lib.dr.iastate.edu/nrem_pubs/5</a>
<b>Thompson</b> , Elmendorf, McDough, Burban	Participation and Conflict: Lessons Learned From Community Forestry	2005	2013	114	<a href="http://lib.dr.iastate.edu/nrem_pubs/4">http://lib.dr.iastate.edu/nrem_pubs/4</a>
Kapler, Widrechner, Dixon, <b>Thompson</b>	Performance of Five Models to Predict the Naturalization of Non-Native Woody Plants in Iowa	2012	2013	108	<a href="http://lib.dr.iastate.edu/nrem_pubs/2">http://lib.dr.iastate.edu/nrem_pubs/2</a>
Atwell, <b>Schulte</b> , Westphal	How to build multifunctional agricultural landscapes in the U.S. Corn Belt: Add perennials and partnerships	2010	2013	108	<a href="http://lib.dr.iastate.edu/nrem_pubs/18">http://lib.dr.iastate.edu/nrem_pubs/18</a>
Randklev, Johnson, Tsakiris, ... <b>Roe</b> , et. al	False Spike, <i>Quadrula mitchelli</i> (Bivalvia: Unionidae), is Not Extinct: First Account of a Live Population in Over 30 Years	2012	2013	104	<a href="http://lib.dr.iastate.edu/nrem_pubs/1">http://lib.dr.iastate.edu/nrem_pubs/1</a>
<b>Dinsmore</b> and Dinsmore	Modeling Avian Nest Survival in Program MARK	2007	2015	100	<a href="http://lib.dr.iastate.edu/nrem_pubs/88">http://lib.dr.iastate.edu/nrem_pubs/88</a>

**Table L.2. Top Ten Graduate Theses and/or Dissertation downloads per month for Aug 28, 2014-Aug 28, 2015.**

Author	Award year	Degree	Advisor(s)	Title	months available	Downloads /month	URL
B Reiter-Marolf	2014	MS	Blanchong / Dinsmore	Lead in species of greatest conservation need: free-flying bald eagles as indicators	13.67	17.34	<a href="http://lib.dr.iastate.edu/etd/13743">http://lib.dr.iastate.edu/etd/13743</a>
J A Gutierrez Lopez	2014	MS	Asbojornsen / Helmers	Soil moisture patterns and hydraulic properties associated with alternative biomass cropping systems across a landscape gradient	10.90	13.94	<a href="http://lib.dr.iastate.edu/etd/14029">http://lib.dr.iastate.edu/etd/14029</a>
S R M O'Brien	2007	MS	Pease	Indications of environmental literacy: using a new survey instrument to measure awareness, knowledge, and attitudes of university-aged students	4.20	12.14	<a href="http://lib.dr.iastate.edu/rtd/15055">http://lib.dr.iastate.edu/rtd/15055</a>
E. D. Katzenmeyer	2010	MS	Pierce	Fish growth responses to a changing environment: effects of aquatic nuisance species and environmental conditions in a shallow, eutrophic lake	40.40	11.19	<a href="http://lib.dr.iastate.edu/etd/11827">http://lib.dr.iastate.edu/etd/11827</a>
RA Reeves	2014	MS	Pierce	Amphibian stress, survival, and habitat quality in restored agricultural wetlands in central Iowa	10.90	10.92	<a href="http://lib.dr.iastate.edu/etd/14042">http://lib.dr.iastate.edu/etd/14042</a>
K W Knight	2007	MS	Schultz / Isenhardt	Effectiveness of naturally-occurring riparian forest buffers and grass filter strips at buffering concentrated flow from row crop fields to streams in northeast Missouri	4.23	9.21	<a href="http://lib.dr.iastate.edu/rtd/14644">http://lib.dr.iastate.edu/rtd/14644</a>
C R Penne	2007	MS	Pierce	Radio telemetry study of common carp in Clear Lake, Iowa, to guide future management	4.23	8.74	<a href="http://lib.dr.iastate.edu/rtd/14810">http://lib.dr.iastate.edu/rtd/14810</a>
C D Johnson	2007	PhD	Stokke / Brown	Examination of lignocellulosic fibers for chemical, thermal, and separations properties: addressing thermo-chemical stability issues	4.10	8.54	<a href="http://lib.dr.iastate.edu/rtd/15571">http://lib.dr.iastate.edu/rtd/15571</a>
C M Chennault	2014	MS	Schultz / Tyndall	People in Ecosystems/Watershed Integration: Visualizing ecosystem services tradeoffs in agricultural landscapes	10.90	8.26	<a href="http://lib.dr.iastate.edu/etd/14024">http://lib.dr.iastate.edu/etd/14024</a>
R A Cooley	2014	MS	Wolter	Use of remote sensing to quantify forest response following a wildfire in northeast Minnesota	10.90	8.17	<a href="http://lib.dr.iastate.edu/etd/14015">http://lib.dr.iastate.edu/etd/14015</a>

M K Gillespie	2013	MS	Dinsmore	Bird and bat responses to wind energy development in Iowa	26.50	7.96	<a href="http://lib.dr.iastate.edu/etd/13128">http://lib.dr.iastate.edu/etd/13128</a>
J R Fischer	2012	PhD	Quist	Characterizing lentic fish assemblages and community-environment relationships: An evaluation of natural lakes and reservoirs in Iowa, USA	27.20	7.94	<a href="http://lib.dr.iastate.edu/etd/12854">http://lib.dr.iastate.edu/etd/12854</a>
J A Gutierrez Lopez	2012	MS	Asbojornsen / Helmers	Soil moisture dynamics in agriculturally-dominated landscapes after the introduction of native prairie vegetation	34.27	7.32	<a href="http://lib.dr.iastate.edu/etd/12337">http://lib.dr.iastate.edu/etd/12337</a>
J Wu	2013	PhD	Thompson	Landscape, hydrological and social factors affecting water quantity and quality in urban headwater streams of central Iowa	23.33	7.24	<a href="http://lib.dr.iastate.edu/etd/13289">http://lib.dr.iastate.edu/etd/13289</a>
T Kent	2009	MS	Morris	New investigations into golden shiner culture	40.40	7.18	<a href="http://lib.dr.iastate.edu/etd/12251">http://lib.dr.iastate.edu/etd/12251</a>
J Wamboldt	2013	MS	Morris	Hybrid striped bass: culture and use in Midwestern waters	26.50	7.17	<a href="http://lib.dr.iastate.edu/etd/13196">http://lib.dr.iastate.edu/etd/13196</a>
S M McKinney	2014	MS	Christoffel	Perceptions of zoo visitors about the suitability of Geochelone elegans as a pet based on exhibit design	13.67	6.95	<a href="http://lib.dr.iastate.edu/etd/13847">http://lib.dr.iastate.edu/etd/13847</a>
F C Pillsbury	2006	MS	Miller	Anuran community structure and wetland occupancy along an urban-rural gradient in central Iowa, USA	11.67	6.94	<a href="http://lib.dr.iastate.edu/rtd/1392">http://lib.dr.iastate.edu/rtd/1392</a>
M E Gerken Golay	2013	PhD	Thompson	Assessing the composition and function of hardwood forest herbaceous flora: implications and applications for forest restoration	26.50	6.72	<a href="http://lib.dr.iastate.edu/etd/13031">http://lib.dr.iastate.edu/etd/13031</a>
W Headlee	2012	PhD	Hall / Zalesny	Productivity and biometry of hybrid poplars with respect to establishment, regeneration, regional modeling, and utilization of bio-energy byproducts	27.20	6.69	<a href="http://lib.dr.iastate.edu/etd/12947">http://lib.dr.iastate.edu/etd/12947</a>

**L.2. Academic Analytics:** The Academic Analytics Database (AAD) provides another method of assessing research productivity matched to department and faculty member. However, comparisons with other natural resource departments may not align disciplinarily because of the diverse makeup of natural resource departments nationally. The Academic Analytics database uses discrete time periods and defined categories as the basis of comparison; for the current year, faculty members for 2013-2014, journal articles (2010-2013), citations (2009-2013), grants (2009-2013), and awards (no time limit). The peer reviewed journals considered by AAD include over 27,000 journals. The grant data base is restricted to 13 federal and two non-federal agencies. In AAD analysis the ISU NREM faculty compare well with 54 other U.S. natural resource departments, generally averaging at or above the mean for citations, grants and articles (Fig L.1). NREM faculty members tied for first rank in percentage of faculty with an article and percentage of faculty with a citation (Fig L.2 and L.3).

Individual NREM faculty members career progress follows the national trends for (Fig L.4) publications and citations; early career to mid-career article publications show increasing and in several cases,exceeding peers publication rates for years since terminal degree. Citations tend to be lower that colleagues nationally though it is hoped that active participation in the Digital Repository will make published work more accessible globally and improve citation rates.

Figure L.1. ISU NREM national percentile rank with 54 U.S. departments, Academic Analytics, 2009-2012.

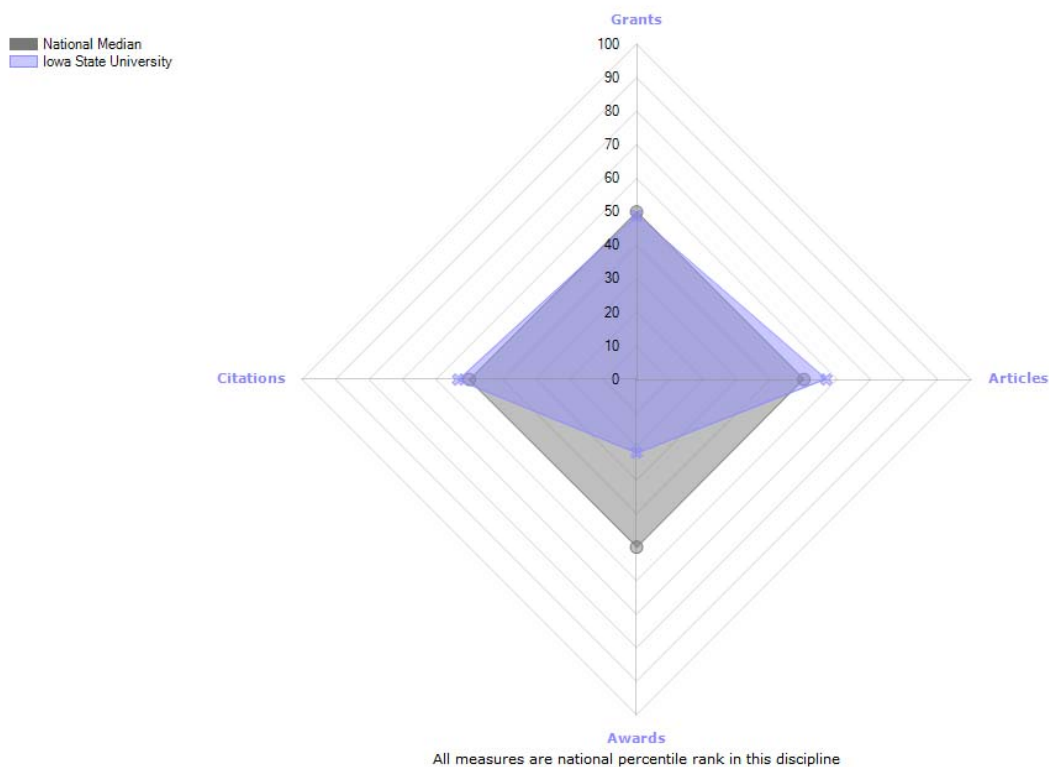


Figure L-2. ISU NREM national percentile rank with 54 U.S. departments, Academic Analytics, 2009-2012.

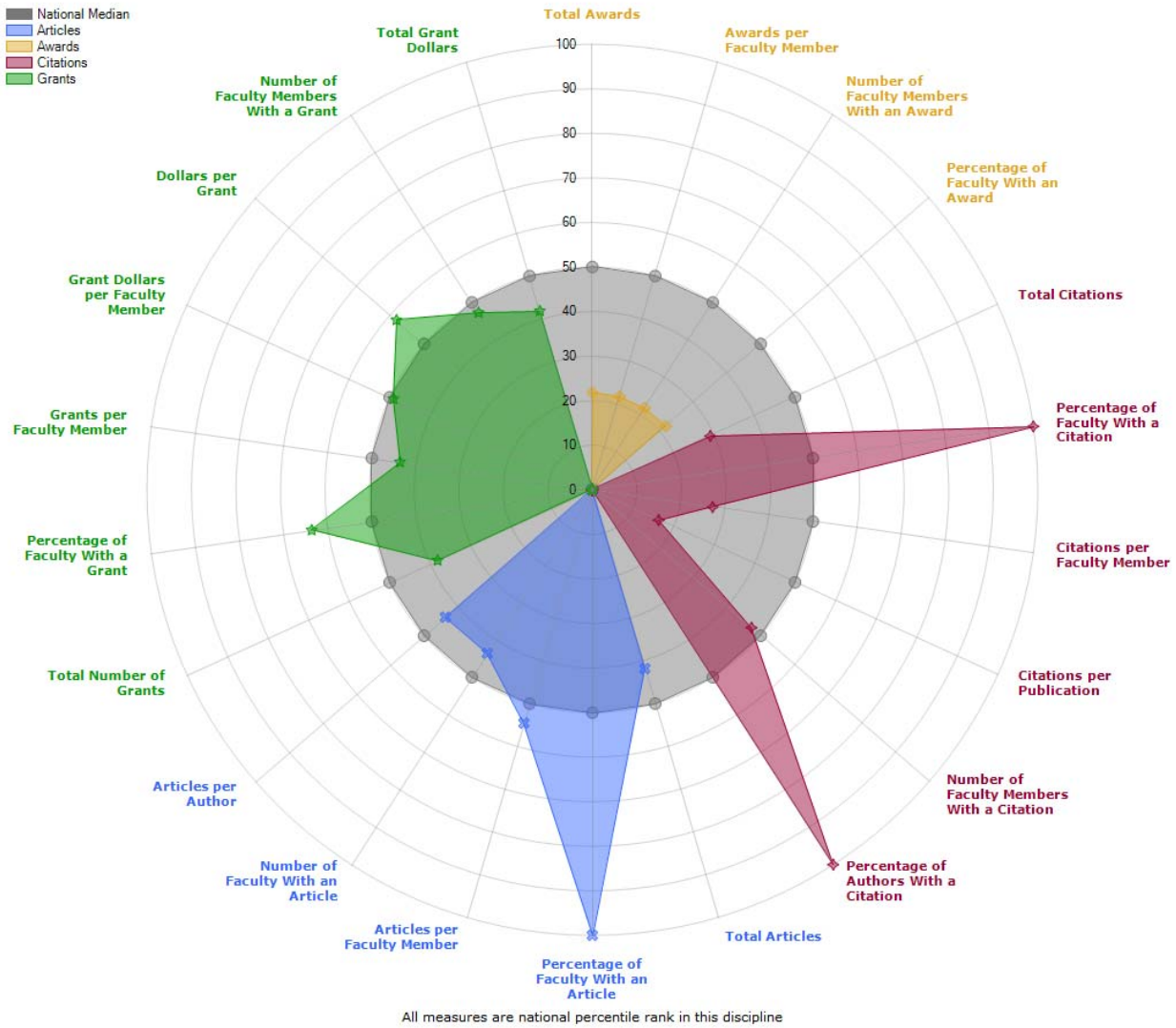
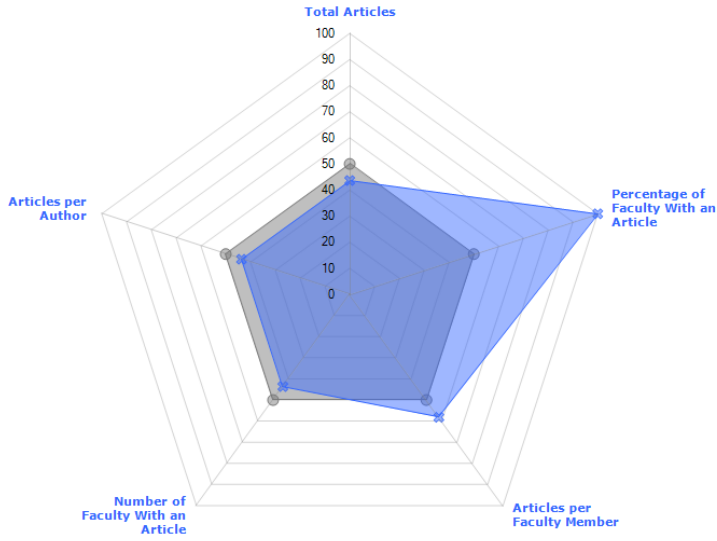
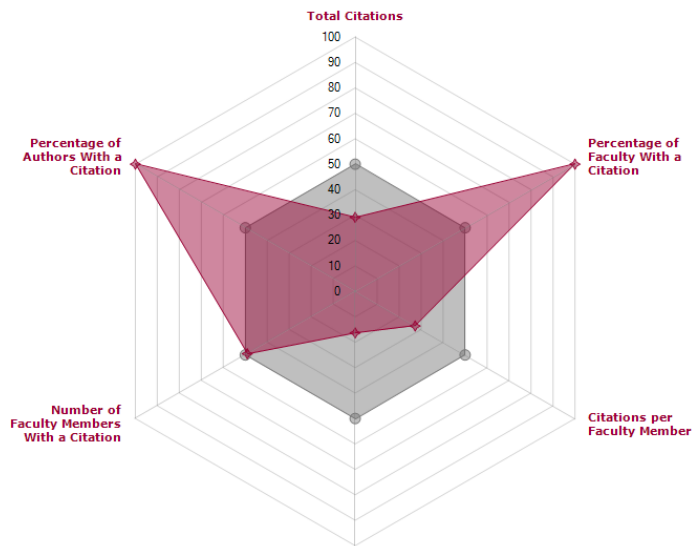


Figure L.3 ISU NREM national percentile rank with 54 U.S. departments for articles (2010-2013), citations (2009-2013), grants (2009-2013), Academic Analytics, 2009-2012.

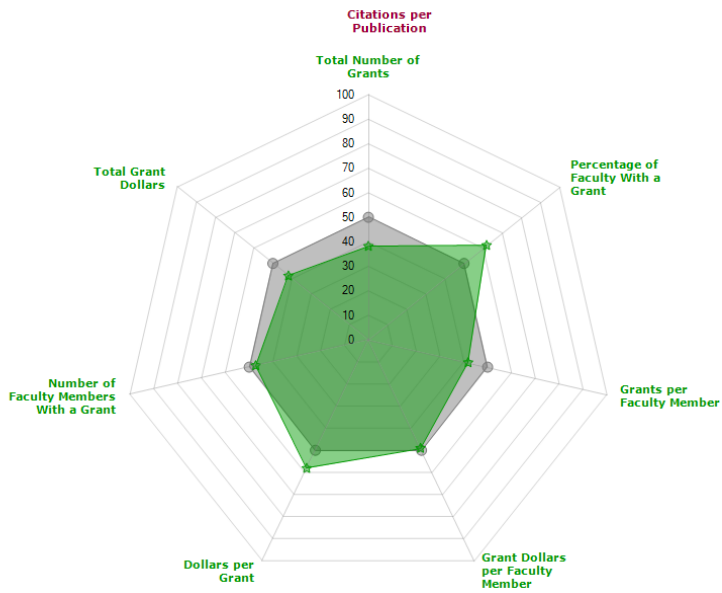
■ National Median  
■ Iowa State University



■ National Median  
■ Iowa State University



■ National Median  
■ Iowa State University



L.4. Department Faculty (2013-2014) career progress in articles (2010-2013), citations (2009-2013), grants (2009-2013), and grant dollars by faculty rank and years since terminal degree, 2009-2013.

