The Center for Water Sciences (CWS) began in 2005 and is funded by Michigan State University as a Center of Excellence. CWS research addresses a variety of water science topics including waterborne pathogens, non-point source pollution, aquatic ecosystem assessment, and land-water-climate interactions. CWS draws on the expertise of 83 faculty members from 8 colleges and 21 departments across campus, from Anthropology to Zoology. Our mission is to advance scientific research and knowledge for understanding, protecting, and restoring water resources and their sustainable use by humans and ecosystems.

An Investment that Pays Back
Over the past five years, MSU has invested approximately $2.5 million in the Center. CWS has used those funds to advance water science at MSU through grant, research and outreach programs. Our accomplishments include:

Generating External Funding
The Center, through its own research projects and internal funding programs, has generated approximately $24.7 million dollars in external research funds, a return of approximately $10 for each dollar MSU has invested in the Center. Funding sources include the United States Environmental Protection Agency, the Department of Homeland Security, the National Oceanic and Atmospheric Administration, the National Science Foundation, and the United States Geological Survey.

Producing High-Impact Scholarship
CWS research is published in top journals and presented at professional meetings across the globe. CWS and its grantees have published 80 papers in top journals such as the Proceedings of the National Academy of Sciences, Functional Ecology, Limnology and Oceanography, Oikos, and Water Research. CWS and its grantees have also given 157 presentations at national and international meetings since 2005.

The Center awarded its first grants in 2006. Since that time, outputs from the Center and our grantees have increased. The graph at right shows the number of publications and presentations given each year by CWS and our grantees. Numbers have steadily increased, particularly as our post-doctoral grant recipients have completed their projects. The data for 2010, which only includes information for the first four months of the year, show that we are poised to continue the trend of increasing productivity each year.

* 2010 only includes January-April data
Gaining National and International Recognition
The diversity of grants awarded to CWS and its members shows that CWS research is recognized at the national, regional and state levels. In addition, CWS Co-director Joan Rose was honored by the government of Singapore with a Public Service Medal for her service and contributions over the past 10 years. She also recently received the International Water Association’s Hei-jin Woo Award which honors achievements of women in the water profession. Co-director Jan Stevenson was elected President of the North American Benthological Society, a professional society of nearly 2000 members that study aquatic ecosystems.

Creating Collaborations & Critical Mass
Our internal grant programs require collaboration and give preference to new collaborations - a requirement that encourages new partnerships and new ideas. Our grant programs provide resources needed for faculty to move their research to the next level. The Center also provides grant facilitation services to assist members in submitting grant proposals. In addition, our newsletters, seminars and outreach programs all promote connections among people working on water on campus, in Michigan, and across the region.

With the generous support of a CWS Venture Grant, we began work on a new research project in three Indian cities. In addition to meeting some great people and discovering leads on available data, we had the opportunity to see the fishery in action at the North Chennai landing site. Armed with this information, we have already built on our Venture Grant experience, submitting a proposal (along with fellow CWS member Dan Kramer) to the US National Science Foundation for future funding.

-Mark Axelrod & Brian Roth, CWS Grantees

CWS funding has allowed us to take on work that would be difficult to do under normal grant funding, which tends to gravitate towards “low-risk” studies that use established methods approaches. Successful proposals in my field usually require pilot studies and data, which are difficult to obtain before you have funding! Our CWS work has already led to a new NSF grant and several publications...and I expect that we will seek further extramural funding.

-Steve Hamilton, CWS Grantee

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