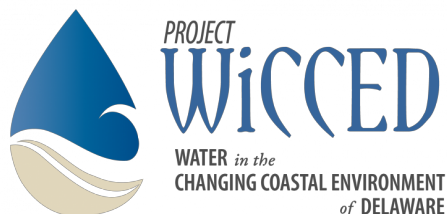




Accomplishments 2003–2019

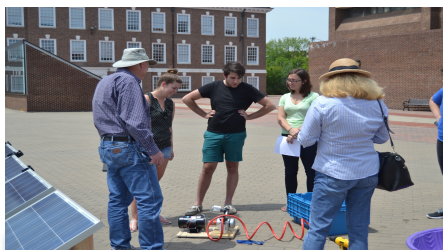
Research Themes & Network

In October 2018, we began research on Water in the Changing Coastal Environment of Delaware (WiCCED). Faculty and students are involved in research projects that seek to assess threats and develop solutions to mitigate the human and natural pressures threatening water security in Delaware's changing coastal environment. They will examine to what extent is DE's water security threatened by deterioration; 2) what effect does deterioration have on ecosystem health; 3) how can we mitigate effects; 4) and how can we design policies and programs to affect change in water quality.



Trak 2 & 4

In 2018, DE EPSCoR completed the second year of a four-year, \$6-million Track 2 project in cognitive neuroscience along with programs in Nebraska and Nevada and the first year of \$6-million Track 2 grant to probe how viruses impact other microbes critical to our lives, from producing oxygen to growing food, with programs in Nebraska, Hawaii, and Rhode Island.



Economic Development

Across the State, our Spin In® initiative enables undergraduate students to engage in an entrepreneurial, experiential learning program to solve real life business challenges faced by early stage Delaware startups. The real-life educational experience obtained by the students is invaluable and unique, and results in significant economic development and workforce training achievements including 8 new products, 4 new business starts, and over 140 students engaged in 25 projects.

Student Success

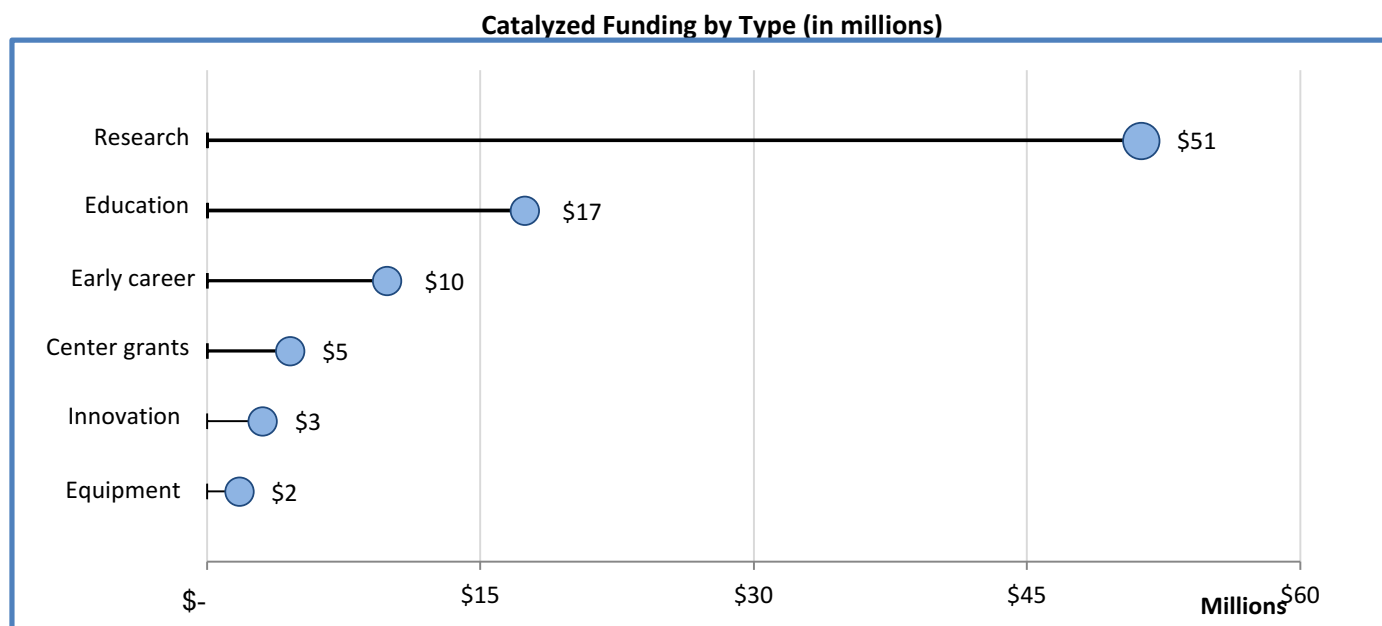
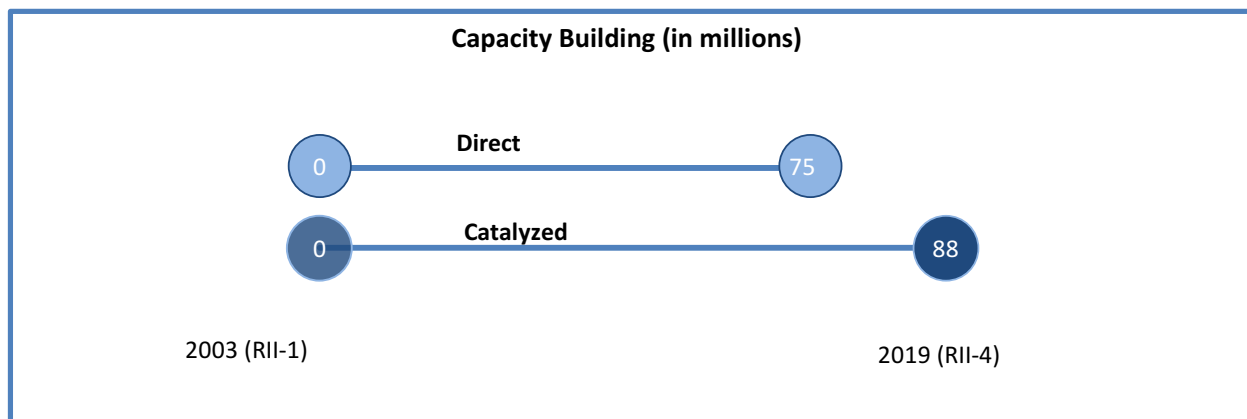
Our students are successful! Since 2007, DE EPSCoR has supported more than 350 summer undergraduate researchers. As of 2017, 96% of those students have completed an undergraduate degree or are actively enrolled in an undergraduate degree program. About half of our students go on to pursue graduate or professional degrees, as well. New programs include "Brain Camp" for budding neuroscientists! DE EPSCoR engages a diverse cohort of students, including 50% women and 25% under-represented minorities, in research projects across the state.

Sea Level Rise Impacts

Contaminated soils along the world's coasts are at risk as global temperatures continue to increase and sea levels subsequently rise. As increased urbanization along the coastline continues, it is becoming more important to understand the effects of sea level rise (SLR) on local hydrology, chemistry, and the fate and transport of sorbed contaminants in soils. In Delaware, soils contain large quantities of arsenic (As) that originated from industrial operations. These soils lie along water bodies that are susceptible to increased flooding and SLR. Laboratory studies and investigations at National Laboratory synchrotron facilities evaluated the impacts of salinity and flooding on As cycling with salinity inhibiting As release and flooding enhancing As release. Studies showed that in both saline and non-saline water, flooded conditions increased the amount of arsenic released. But under sea water conditions, the amount of arsenic released was less which is attributed to the high levels of sulphate in the sea water.



Total Funding to Delaware 2003-2019*



*as of January 28, 2019

Overall Funding Since 2003: \$163 Million

The NASA/NSF EPSCoR programs and the State of Delaware have provided \$75 million in direct EPSCoR funding to Delaware to support capacity building. The support has resulted in an additional \$88 million in funding for 225 awards to the EPSCoR faculty, including \$51M for 151 research awards, \$17M for 31 education awards, \$10M for 25 CAREER awards, \$3K for 4 center awards, \$5M for 9 innovation awards, and \$2M for 5 equipment awards.

