

## MEMORANDUM FOR THE GOVERNOR

To: The Office of Governor Tony Evers  
FROM: Laura Borth, Samantha Anderson, and Andrew Garfoot, PhD  
Catalysts for Science Policy at UW-Madison  
DATE: March 1, 2019  
SUBJECT: FOUNDING A WISCONSIN SCIENCE POLICY FELLOWSHIP

### **Background**

Developing a state-level science policy fellowship would bring top scientific minds into the government to help with evidence-based policy decisions. The recent passing of the Foundations for Evidence-Based Policymaking Act, proposed by Representative Paul Ryan, shows the American public is committed to the incorporation of sound statistics and evidence into our legislation and governance. The American Association for the Advancement of Science (AAAS) established a national Science and Technology (S&T) Policy Fellowship (STPF) in 1973 to improve the incorporation of sound statistics and evidence into policy making. Bringing scientists into policy making at the state level has been limited, but California is leading the way with a state-level STPF and other states are now developing similar programs. In 2018, Wisconsin was ranked 25th in the State Technology and Science Rating by the Milken Institute, dropping from 22nd in 2016, demonstrating a need for more robust scientific enterprise. A STPF will help establish Wisconsin as a leader in S&T and retain a skilled workforce in our state.

### **National and State Approaches**

Fellows of the AAAS STPF range from students at academic institutions pursuing science-based degrees, to postdoctoral researchers, to scientists at private organizations outside of academia. The fellows serve a 1-2 year term as a AAAS fellow in congressional offices, on committees, or as scientific advisors in the executive or judicial branches. On average, half of the fellows (approximately 125) stay in government jobs after the program, while a quarter of them return to their previous positions in industry or academia. In this national program, AAAS administers the interview and selection process, but after placement the executive and judicial fellows are funded by their respective agencies while congressional fellows are funded by partner scientific societies.

The state of California established a program modeled from the AAAS national fellowship, which brings scientists from around the country to serve as fellows on the staff of state representatives or committees. The CA legislature founded and funds the California Council for Science and Technology (CCST) which serves as the agency that runs their STPF program. In contrast to AAAS, CCST funds its STPF through philanthropic donations with an annual budget of \$1.3 million, providing the stipends for fellows throughout their tenure. During the one year program, fellows learn policy making while providing valuable scientific expertise to the host office. The CA program selects ten individuals each year, many of whom find job placement in the government.

The success of the CA state fellowship encouraged CCST to grant seed money to nine other states to develop their own science policy programs. Similar to CA, NJ offers a one year fellowship to recent graduates of science based graduate programs. Fellows are housed in offices of NJ state legislators and executive branch officials. The financial support for this fellowship is provided by the Eagleton Institute of Politics at the University of Rutgers-New Brunswick, a university partially funded through the state of NJ.

The Alaska state STPF has utilized its Sea Grant program to provide recent graduates in science and wildlife programs, with policy experience. Similar to CA, the AK fellowship is one year, but the placement of fellows are in various departments specific to the mission of the Sea Grant, such as the Alaska Department of Fish and Game, NOAA Alaska Fisheries Science Center, or the

National Park Service. Other state fellowship programs are still in the early planning stages, but most plan to house PhD level scientists in various areas of state government

### **Government Position**

In political interviews leading up to the election, Governor Evers discussed “need(ing) scientists at the table” and wanting to “recruit individuals with science backgrounds and relationships with the research community to my administration.” His selection of Preston Cole to Secretary of the Wisconsin DNR and commitment to reinstating the DNR’s Bureau of Science services (providing science-based input to the DNR) shows his commitment to supporting evidence-based solutions.

Last year, national congressional offices requested nearly 100 AAAS STPF fellows, about triple the number available for the legislative branch. The White House’s 2017 National Security Strategy recommended increasing incentives for recruiting technical talent and create easier paths for scientists, engineers and technologists into and out of public service.

### **Benefits to Stakeholders**

#### *Wisconsin Public*

- **Help build a strong S&T enterprise for Wisconsin:** Given our low science and technology ratings, WI can improve in our S&T economy, workforce, and innovation. By creating this fellowship we can stay competitive with other states who are making strides in important science areas like climate change, forensic science reform, and technology based start-ups. As technology advances with respect to agriculture and protecting the natural resources of WI, our policy decisions need to remain science based to keep these areas sustainable.
- **Recruit and retain bright minds:** Many scientists come to WI for training, but leave for S&T opportunities in other states. WI is already benefiting from a similar scientific fellowship (AAAS Mass Media Fellowship) where scientists are placed in journalist positions in WI and have created a career here. Two recent examples are Eric Hamilton (2015 fellow) who now works as a science writer at University of Wisconsin-Madison and Anna Groves (2018 fellow), an assistant editor at Discover magazine in Milwaukee.

#### *Wisconsin Government*

- **Build relationships with the scientific community:** Some policymakers perceive the academia as being disconnected from the rest of the state and strengthening these connections will break down these barriers.
- **Diversity of ideas:** Teams composed of different perspectives lead to effective problem-solving. Bringing science and policy together will curate the best ideas.
- **Bring additional scientific expertise to policy making:** Many state policy issues are based on scientific research and can be addressed by science policy fellows. This includes agriculture, conservation, education, mental health, animal welfare, and disaster relief. These fellowships are flexible, short-term positions that can change as Wisconsin’s needs change.
- **Boost efficiency:** Trained scientists bring valuable skills applicable to policy-making by being able to collect and analyze dense information, quantify uncertainty, and create a collaborative environment.
- **Long term integration:** Many national and CA fellows acquire a permanent staff position in the government, and this can have a long-term impact on how science policy is handled in the state of Wisconsin. Even fellows who go back to work in the sciences continue to advocate for S&T issues.

#### *Scientific Community*

- **Build relationships with government:** Many scientists lack insight into how the government affects their work in academia or industry. These fellows help inform the scientific community of the importance of communicating their work to policy makers.
- **Gain hands-on policy experience:** Fellowships provide an opportunity for scientists to transition to new career paths.

### **Challenges and Criticisms**

The time, resources, and economic cost of these fellowships are the primary barriers. Starting a new program is time and resource intensive, as fellows will require policy training, and short, 1-2 year fellowships require frequent training. The time and resources could be spent elsewhere unless the fellows show an obvious benefit to the government and the public. State budgets are a matter of priorities, and until private funding is secured, public funding would need to be set aside and continually reapproved with each budget cycle. The private funding would need to be free from conflicts of interest to ensure non partisan fellows.

### **Recommendations**

We recommend Wisconsin sponsor a science technology policy fellowship modelled on the California and AAAS fellowships, providing a 1-2 year fellowship to PhD level scientists to train with the staff of state level representatives or executive branch members. Wisconsin should partner with a private company, such as the Wisconsin Technology council, to plan and administer the program. States with active programs can provide guidance on building the program. The standard annual stipend for postdoctoral scientist is approximately \$48,000 plus benefits, but partnering with other public or private entities, such as the Wisconsin Technology Council, will reduce public investment.

### **References**

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