2019 Community Voting Results

The CDI sent out ballots for voting on November 30, 2018, with the voting open until December 14, 2018.
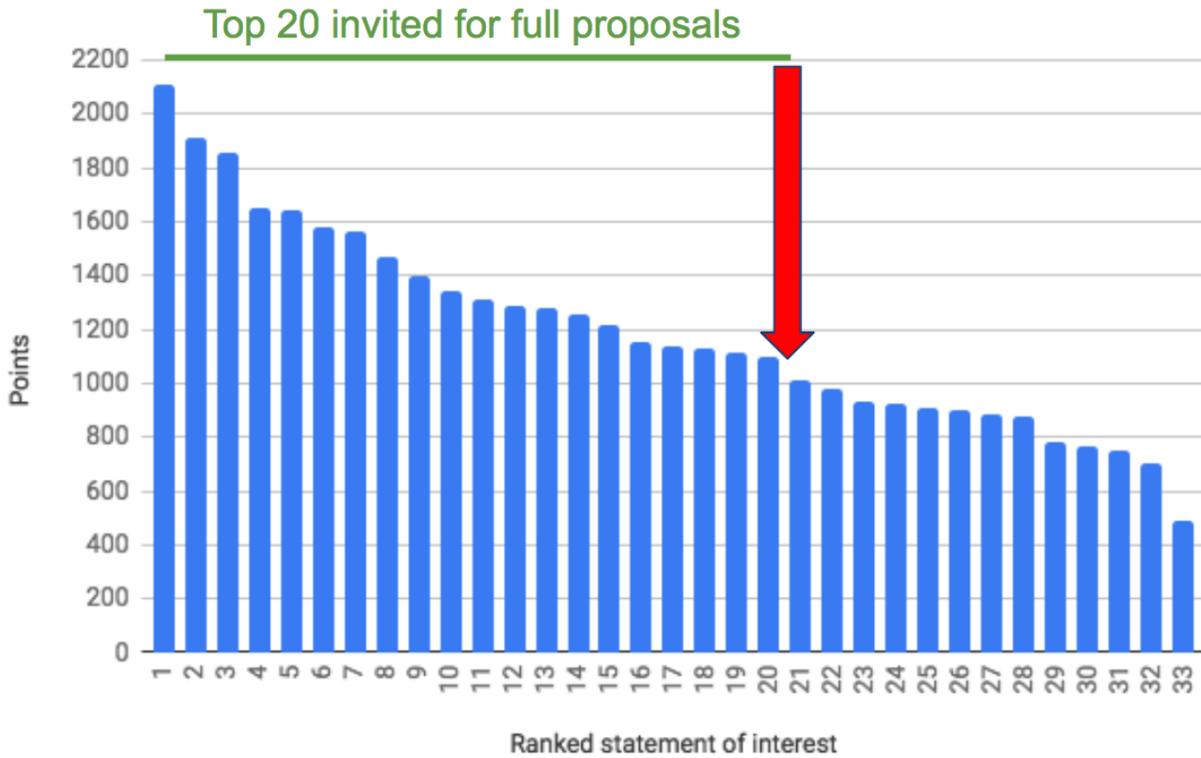
973 ballots were distributed and 140 ballots were returned.

Results

The top 20 ranked projects invited back for full proposals. They are listed here, alphabetically by PI last name.

Title	Principal Investigator (PI)	PI Organization
Open-source and open-workflow Climate Scenarios Toolbox for adaptation planning	Aparna Bamzai	USGS North Central Climate Adaptation Science Center
Extending ScienceBase for Disaster Risk Reduction	Joe Bard	USGS Cascades Volcano Observatory
Transforming Biosurveillance by Standardizing and Serving 40 Years of Wildlife Disease Data	David Blehert	National Wildlife Health Center
Integrating short-term climate forecasts into a restoration management support tool	John Bradford	USGS Southwest Biological Science Center
National Public Screening Tool for Invasive and Non-native Aquatic Species Data	Wesley M. Daniel	USGS Wetland and Aquatic Research Center
High-Resolution, Interagency Biosurveillance of Threatened Surface Waters in the United States	Sara L Eldridge	USGS Wyoming-Montana Water Science Center
Develop Cloud Computing Capability at Streamgages using Amazon Web Services GreenGrass IoT Framework for Camera Image Velocity Gaging	Frank L. Engel	USGS Texas Water Science Center
Serving the U.S. Geological Survey's geochronological data	Amy Gilmer	USGS Geology and Environmental Change Science Center
Establishing standards and integrating environmental DNA (eDNA) data into the USGS Nonindigenous Aquatic Species database	Margaret Hunter	USGS Wetland and Aquatic Research Center
Subsidence Susceptibility Map for the Conterminous U.S.	Jeanne Jones	USGS Western Geographic Science Center
A generic web application to visualize and understand movements of tagged animals	Ben Letcher	Leetown Science Center
Building a Roadmap for Making Data FAIR in the U.S. Geological Survey	Fran Lightsom	USGS Woods Hole Coastal and Marine Science Center
Developing an Analytical Tool to Compare Hazard-related Crowdsourced and Citizen Science Data to Official Sources	Sophia B Liu	Science and Decisions Center
Coupling Hydrologic Models with Data Services in an Interoperable Modeling Framework	Richard McDonald	Water Mission Area - Model Support and Coordination Branch
Leveraging deep learning through use of the dl_tools software package to enhance wetland mapping capabilities of the NWI	David Millar	USGS Fort Collins Science Center
Implementing a Grassland Productivity Forecast for the U.S. Southwest	Sasha Reed	USGS Southwest Biological Science Center
Building web-service based forecasting tools for wildlife disease managers	Katie Richgels	USGS National Wildlife Health Center
Water Security in U.S. Megacities: Building Decision Frameworks Beyond Water Management	Sachin Shah	Texas Water Science Center
ExDetect: a cloud-based remote sensing and GIS tool to detect and monitor the spread of exotic annuals around energy development sites	Miguel Villarreal	Western Geographic Science Center

Image Analysis with Machine Learning: Tile-drain detection and delineation in agricultural landscapes	Tanja N Williamson	USGS Ohio-Kentucky-Indiana Water Science Center

Top 20 invited for full proposals

For details, see: CDI-FY19-SOI-Results.pdf

Distribution of number of statements ranked

Voters were asked to rank up to 15 statements of interest. The following chart shows that about half of voters ranked a full 15 statements. Smaller numbers of voters only ranked 1-14 statements and there were no trends in particular statements being voted on singularly.
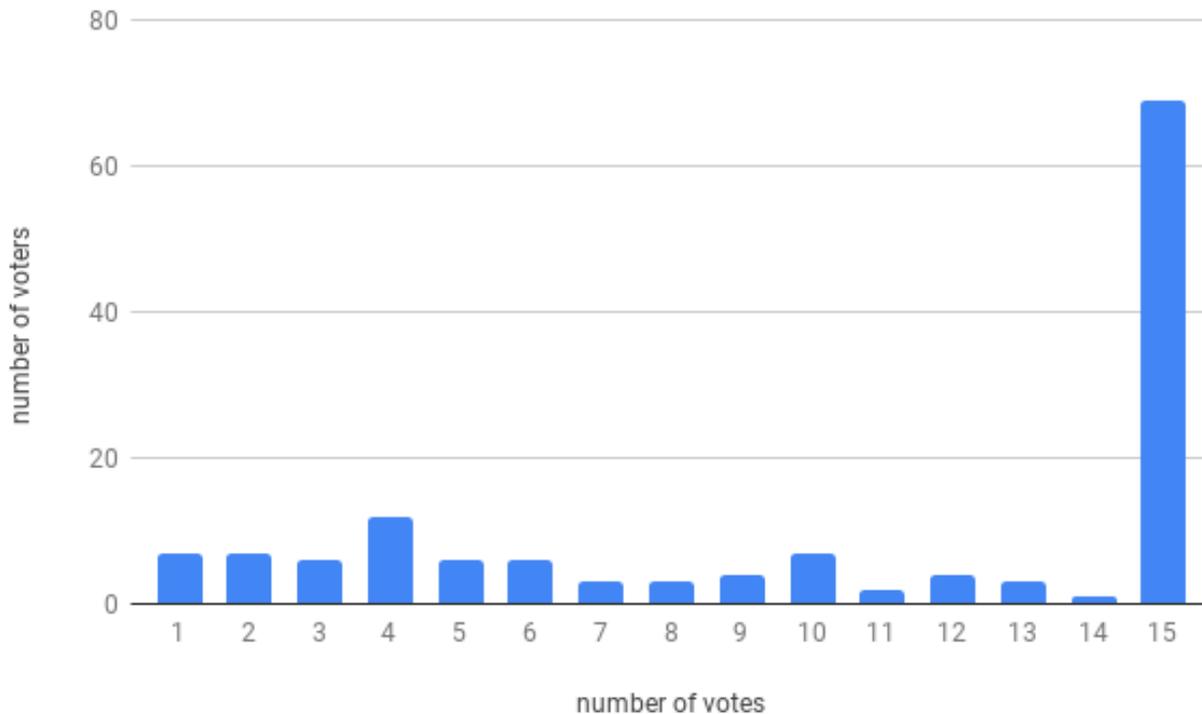
For details, see: CDI-FY19-SOI-Raw_Results.csv

Algorithm for points

The Borda Count method was used. We had N = 33 total statements. N (33) points were assigned for rank 1, N-1 (32) for rank 2, and so on down to N-14 for rank 15.

Comments that came in through the ballots

1) It would be great to have all the project summaries on one page in the future as currently they are very difficult to access quickly.

Thanks for the suggestion for next time.

2) It is not clear how the themes of emphasis in the RFP are integrated into the selection/voting process.

That is something we can improve on explaining - the themes help us to recruit ideas that may be USGS priorities or that the CDI executive sponsors have a current interest in supporting. We want all of the statements to be looked at with consideration of the evaluation criteria and guiding principles, whether they are under a theme or not. When voting and review panel results are presented to our sponsors, they make the final selections based both on the ranking by the community or review panel, in combination with their interest in supporting specific themes.

3) Perhaps subcategories should be considered to better represent the diversity of projects. Four major categories seem to be 1) end user data portals/DBs/decision tools 2) software toolkits: algorithm/workflow development 3) field technologies 4) actual synthesis projects.

Subcategories are an idea we can consider, though in the past (FY13) this was part of the process and the CDI decided to do away with the categories in favor of evaluating the ideas in one group, in order to see best met the principles of the CDI. Point taken that it could help people to rank and organize in their heads though.

4) It is difficult to judge whether various data serving proposals are helping or hindering the advent of interoperable/redeployable software. More development dollars on unsustainable or ultimately incompatible approaches are a poor use of CDI funds, but impossible for the average voter to judge. SAS (Science Analytics and Synthesis, the group that CDI sits under) and other groups should weigh in on best practices for portal development (maybe they have?).

Another good point. What we have available is seed funding, which is not useful for sustainability and maintenance. The ideal case is that a new innovative idea is demonstrated so that it can be taken under the wing of an existing program. This is not always possible. The second ideal case is that there is adequate description and documentation of the project so that the community can learn lessons from its execution, whether a sustainable tool is developed or not. We will continue to search for ways to help projects with their sustainability.

Some things that may inform us as a community:

- Resources from the Science Gateways Community Institute (I checked that their resources and consulting services are open to Federal employees.)
- Facilitate help in reviewing code so it can be made robust and public (even if provisional) and may built upon in the future
- Some past projects have tried to look at common tech stacks that we could try to promote in the USGS, such as the TerriaJS project. Look for more information on this in early 2019.

5) Was surprised to have to rank from 1 to 15 versus placing number 1 votes or simply votes received. Much harder to figure out nuances to accomplish a ranking.

It was more challenging than I expected to rank my top 15. It was definitely easier to be able to weight similar proposals the same. That being said, this voting tool was easy to use.

We moved away from custom-designed software this year, so had limited options on how votes could be distributed, and we settled on ranking up to 15 as the best option in what was available. We will continue searching to see if there is a way to do distribution of votes in the future, since it does allow more flexibility. That being said, the distribution of votes across projects does not look too different, qualitatively, from past years.

6) I thought the proposals generally seemed pretty weak in covering the experience and the timeline this year. Also, the hardest factor to judge was the idea of Best Practice. There were some proposals that I would have probably proposed a quite different solution - but I am not an expert in their field. Maybe CDI should propose a few questions related to each of the guiding principles to prompt them…

We hope that the community will ask questions of the PIs or make suggestions if they have different solutions! I know this is difficult as I am a little shy myself to comment too much, but we'd like to foster a place where honest questions and suggestions can be discussed. Maybe in future years we could place some guiding principle-related questions on the forum (or as a format to the lightning talks?) to get the discussion started for all statements.

7) I don't approve of this method of selection. The problem is, some critical but domain specific developments may receive very little attention compared to others that are more generic and therefore understandable by all CDI participants.

CDI is a very diverse community and so it is true that domain-specific developments will be hard to get supported unless framed in a way that may benefit a wider audience. Traditionally we have focused on this notion of funding ideas that have the potential for USGS-wide benefit, and thus have a tendency to support ideas that are collaborative across mission areas, and as stated, understandable to a larger audience. That being said, this is a good opportunity to learn more about important topics.

Further comments are invited in the comments to this page (you must be logged in to the wiki to see that option) or sent to us at cdi@usgs.gov.