

The Theodore Roosevelt Genius Prize Advisory Council was convened for its first meeting at on October 4-6, 2022. The meeting was virtual and open to the public.

On October 4, 2022, from 11:00 am to 4 pm. At 11:00 am the meeting was started.

Council members present

Dr. Chuck Barger
Ms. Renee Callahan
Ms. Pam Fuller
Mr. Joshua Gaskamp
Dr. Meredith Gore
Ms. Shelly Grow
Mr. Jim Heffelfinger
Mr. Tom Moreland
Ms. Sara Parker-Pauley
Dr. Toni Piaggio
Dr. Terri Roth
Ms. Tchelet Segev
Ms. Suzanne Stone
Ms. Rachel Wolstenholme

Opening

Mr. Paul Rauch, Assistant Director, Wildlife and Sport Fish, U.S. Fish and Wildlife Service, provided opening remarks and thanked the Council for their continued work. Mr. Rauch also thanked the community of innovators for their participation in the prize competitions.

Mr. Steve Rader, Program Manager for the National Aeronautics and Space Administration (NASA) Center of Excellence for Collaborative Innovation and the NASA Tournament Lab, gave a presentation on The Power of Open Innovation.

Council business

The Council members adopted the agenda unanimously.
The Council Co-Chairs, Ms. Shelly Grow and Dr. Toni Piaggio, were announced.

Winner presentations

Nonlethal Human-Wildlife Conflict Management Subcommittee Chair, Ms. Tchelet Segev, provided background and context around this prize competition's problem statement. For many

wildlife species, conflict with people is a primary threat to their survival, direct or indirect lethal methods of control.

There are methods to help communities avoid or minimize conflicts but there are obstacles that prevent implementing them and chronic conflict, thus there is a need to identify solutions to these problems. The U.S. Fish and Wildlife Service contributes significant expertise to solving complex issues through partnering with nongovernmental organizations. As a board, we hope this solution to the prize competition will help the Fish & Wildlife Service advance in its work and identify alternatives to human and wildlife conflict.

Presentation from the winner- Hardshell Labs, Mr. Tim Shields, Mr. William Boarman, and Mr. Ryan Boarman on Creating a No-Fly Zone for Nuisance Bird. This innovation aims to improve laser repulsion of nuisance birds by using species-specific responses to different colored lasers and flash patterns. In addition, they are incorporating artificial intelligence and field-hardy mesh communication networks to allow semi-autonomous and autonomous laser operation to deter birds from treatment areas. Followed by a few minutes of question and answer with the Council members.

Management of Invasive Species Subcommittee Chair Dr. Chuck Barger provided background and context around this prize competition's problem statement. The Board decided that an innovation that would directly reduce the spread or impacts of invasive species would be the focus.

Presentation from the winner- Mr. Ben Stookey and Mr. Derek Yorks, co-founders of Wild Vision Systems. This innovation is a live-trapping system and data platform that utilizes artificial intelligence to identify and capture invasive snakes and lizards in a stationary robotic trap and avoid non-target species. Followed by a few minutes of question and answer with the Council members.

Prevention of Wildlife Poaching and Trafficking Subcommittee Chair Dr. Meredith Gore provided background and context around this prize competition's problem statement. This Board was motivated to help address the issue of wildlife trafficking in the U.S. and territories-- the source of transit and destination. Acknowledged lack of effective and efficient methods for detecting, rehabilitating, and releasing wild animals in the legal trade.

Presentation from the winner- Conservation X Labs and the Thylacine Biosciences Team developed the NABIT, a portable battery-powered system, to rapidly perform a simple and non-technical genetic test for up to 5 targets. This system is designed for use by enforcement officials to quickly test a sample suspected of being poached or part of illegal trade. Followed by a few minutes of question and answer with the Council members.

Public comment

The public was invited to speak at 3:00 pm. No one had signed up to speak, and no written comments were received. Mr. Tim Shields, one of the earlier presenters, asked if the contact information would be disturbed. An announcement was made that meeting minutes and copies of the presentations would be on the TR Genius Prize Advisory Council website.

Council Discussion

Discussion included sharing reactions and brainstorming ideas around the presentations. Additionally, the Council members were seeking clarity on their roles—advisory and operational.

ADJOURNMENT

October 4, 2022, meeting adjourned at 4:00 pm.

On October 5, 2022, from 12:00 pm to 4 pm. At 12:00 pm the meeting was started.

Council members present

Dr. Chuck Barger
Ms. Renee Callahan
Ms. Pam Fuller
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Ms. Shelly Grow
Mr. Jim Heffelfinger
Mr. Tom Moreland
Dr. Toni Piaggio
Dr. Terri Roth
Ms. Tchelet Segev
Ms. Suzanne Stone
Ms. Rachel Wolstenholme

Opening

Dr. Jarah Meador, Director of Open Innovation Programs, General Services Administration, spoke about how open innovations foster collaboration between government agencies and the public.

Winner presentations

Promotion of Wildlife Conservation Subcommittee Chair Dr. Terri Roth provided background and context around this prize competition's problem statement. This Board kept coming back to the fact that wildlife conservation means different things to different people, and we wanted a way to try and unite people in the United States in the cause of wildlife conservation without alienating any groups. We know if wildlife conservation is narrowly defined, sometimes you alienate cultures and lifestyles, and they can feel threatened, so we have to be careful about that. In the end, we challenged applicants to re-imagine what drives wildlife conservation in the 21st century.

Presentation from the winner- Mr. Jason Holmberg, Executive Director, Wild Me, and Dr. Seth Magle, Lincoln Park Zoo and Executive Director Urban Wildlife Information Network, on Harnessing Machine Learning to Connect Urban Residents to Wildlife Conservation through Social Media. This innovation facilitates a deeper connection to engage people in the United States, with potential to expand around the world, in conservation. Using proven artificial intelligence software to identify media content and social media posts about urban wildlife, the innovation aims to collect important ecological data and create dialogue between users and scientists via their social media posts. Followed by a few minutes of question and answer with the Council members.

Protecting Endangered Species Subcommittee Chair Mr. Josh Gaskamp, provided background and context around this prize competition's problem statement. The Board chose to focus on seeking innovations that can be adopted by species or ecosystem managers and that promote recruitment or increase the survival of one or more endangered species. We also wanted a technology that could be adopted relatively quickly with a clear path to implementation, also minimal impact on other native species, their habitats, or humans.

Presentation from the winner- Ms. Jenny Shrum on Expanding the Use of Photo Identification Technology to include Tine, Flying, and Ephemeral Species. This innovation aims to expand photo-identification technology to the individual insect level and use photo-identification to resolve information gaps for rare butterflies, such as the island marble butterfly (*Euchloe ausinodes insulanus*). Followed by a few minutes of question and answer with the Council members.

Reducing Human-Predator Conflict Subcommittee Chair, Ms. Suzanne Stone provided background and context around this prize competition's problem statement. This Board recognized that predators play a resilient role in ecosystem function. They help regulate prey populations and help restore damage to native ecosystems by providing support for biodiversity, but we also recognize that conflicts between people and wildlife can occur in a lot of different ways. We also recognized solutions that came from within the communities that were most affected by predator conflicts would be important.

Presentation from the winner- Mr. Cameron Krebs, on Cattle-producer designed Automated Mineral Bin. A family unit of five moving across the landscape would have, in theory, a lower risk of predation than a single cow/calf pair moving across the landscape or a single calf moving across the landscape. So, the idea behind the bin was to prove we could spatially congregate livestock and develop a network of bins to meet the variety of terrain that the U.S. has and its challenges. Followed by a few minutes of question and answer with the Council members.

Public comment

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Council Discussion

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Council Discussion

Co-Chairs discussed The Theodore Roosevelt Genius Prize Advisory Council, and Congress established boards with the passage of the John D. Dingell Jr. Conservation Management and Recreation Act which passed in March of 2019. Also, the Americas Conservation Enhancement Act from October 30, 2020, and Stephenson Wydler Technology Innovation Act of 1980, and the Council and boards are managed in accordance with the provisions of the Federal Advisory Committee Act. We had excellent training about FACA committees and their legal requirements on the first day, but I'd like to visit where these are once again.

From the GSA website, and after we heard from Dr. Meador about their work with advisory councils, and so this says, "With the expertise from advisory committee members, federal officials and the nation, have access to information and advice on a broad range of issues affecting federal policies and programs. The public, in return, is allowed to provide input into a process that may form the basis for government decisions, and that's why when we are in our chairs as councilmembers, we have the public also here. Advisory committees are used throughout the Federal Government. Members appointed to specific Councils often have both the expertise and the professional skills that parallel the program responsibilities of their sponsoring agencies." In our case, this is the U.S. Fish and Wildlife Service. "In balancing committee members, agencies are expected to consider a cross-section of those directly affected, interested, and qualified as appropriate to the nature and function of the advisory committee, so that may help you understand why you are here sitting on this committee. There must be a clearly defined purpose for the advisory committee. The legislation calls it a FACA Committee; in this case, we talk about FACA Council since that is how the enabling legislation refers to it. This Council will "advise the Secretary of the Interior regarding any opportunities for technological innovations" in the six focus areas. This could look like the development of recommendations, if we have any, for the Secretary of the Interior regarding any opportunities for technological innovation identified through the prize competition process.

The task of this Council is to provide these recommendations, if we have any, to the Secretary of the Interior, which is an honor, privilege, and responsibility. The next steps are that the subcommittees, which have the same makeup as the boards, but a different charge, meet to determine if they have draft recommendations. We will need that letter, the draft from your subcommittees ten days before we put it forward, and notice goes into the Federal Register along with the date for the next full council meeting, and it has to be in the Federal Register for 15 days before there can be that council meeting. At the next Council meeting, there will be agenda time to discuss draft actions and decide whether they will put them forward or not. FACA meetings are open to the public, and members of the public may comment during the comment period, as we have had in the past two days.

Public comment

The public was invited to speak at 3:00 pm. No one had signed up to speak, and no written comments were received.

Council Discussion

Council discussed a timeline, dates for the next meeting, and more about the process and how the subcommittees will report to the Council. February 2023 will be the next Council meeting; at that meeting, the six subcommittees will provide updates to the Council.

ADJOURNMENT

October 6, 2022, meeting adjourned at 3:30 pm.

These minutes will be formally considered by the Council at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.