Open Ocean Restoration Area Spring 2022 Meeting Script and Q&A Session

April 12, 2022 Webinar – Presentation Script

Slide 1: Open Ocean Restoration Area Spring Meeting

Speaker: None

Message in the chat: Welcome to the Open Ocean Trustee Implementation Group's webinar. We will begin shortly.

Slide 2: Webinar Participation

Speaker: Lena Flannery

Thank you everyone for joining today's Open Ocean Trustee Implementation Group webinar. I'm Lena Flannery, a contractor with the Department of the Interior. I'm helping facilitate the webinar today.

Before we begin the presentations, I'd like to quickly run through some webinar logistics. Hopefully everyone's logged in to the webinar by now. You should be able to see the control panel on the right-hand side of your screen – which is shown on this slide.

If you're using a phone for audio, you should be dialing in using the phone number provided by GoToWebinar – that's the number and access code listed under "Audio" in the control panel. Please note that only presenters will be heard during the webinar; attendees will be muted.

Please also take a look at the "Questions" box at the bottom of the control panel – where the green arrow is pointing. If you have questions about the presentation topics along the way, we encourage you to enter those in the "Questions" box at any time. You will also have an opportunity to submit questions at the end of the presentation, but if you plug them in early, it can help us organize them ahead of time.

After our presentation, we'll answer as many questions as we can in the time allotted.

We'll also post the presentation slides and a transcript of the webinar to the GulfSpillRestoration.noaa.gov website in a few days.

Now I'll turn it over to Gale Bonanno to go through our agenda for today.

Link provided in the chat: Open Ocean Restoration Area webpage: http://www.gulfspillrestoration.noaa.gov/restoration-areas/open-ocean/

Slide 3: Webinar Overview

Speaker: Gale Bonanno, EPA

Thank you Lena and thank you everyone for joining today's Open Ocean Trustee Implementation Group webinar. I'm Gale Bonanno with the U.S. Environmental Protection Agency.

We're happy to have over 100 people registered today. During today's webinar we'll provide updates about restoration for the Deepwater Horizon Open Ocean Restoration Area. You'll also hear more about our upcoming Restoration Plan 3 and the recently released Strategic Plan for Fish and Water Column Invertebrates restoration. We will save time to take your questions and conclude the meeting with an overview of additional public meetings this year and how you can access more information about our work.

Slide 4: Open Ocean Trustee Representatives

Speaker: Gale Bonanno, EPA

I'd like to introduce the members of the Open Ocean Trustee Implementation Group, which are shown on this slide. The Open Ocean Trustee Implementation Group, referred to as a TIG, is one of seven Gulf of Mexico Restoration Areas established to conduct restoration for the Deepwater Horizon Natural Resource Damage Assessment. The four federal natural resource trustees are the members of this TIG, and we work together to plan and implement restoration for migratory and wide-ranging oceanic resources injured during the BP oil spill. All of our work is consistent with the Programmatic Restoration Plan finalized by the Trustee Council in April 2016. The Open Ocean TIG also coordinates with the five Gulf state trustees, especially when restoration overlaps state jurisdictions. The Open Ocean Restoration Area was allocated approximately $1.2 billion for restoration. This includes approximately $868 million to restore birds, sturgeon, oceanic fish and invertebrates, sea turtles, marine mammals, and deep sea coral communities.

Slide 5: Open Ocean Restoration

Speaker: Gale Bonanno, EPA

The Open Ocean TIG has approved a total of 29 projects – 26 restoration projects and 3 monitoring and adaptive management activities – to help achieve our restoration goals. These projects commit over $335 million to implement restoration for all seven Open Ocean restoration types. Two of those projects to restore recreational uses on federal lands in Florida and Alabama were completed in 2019. As you can see from the map, projects are implemented throughout the Open Ocean Restoration Area in the Gulf of Mexico. Some projects are also implemented outside the Gulf region in areas where we can achieve the greatest restoration benefits for the injured species.

This summer, the Trustee Council will share our annual progress reports detailing project activities in 2021. We will highlight a few of our projects during today's webinar. We also hope you will have the opportunity to read the progress reports when they are published to learn more about our work.

Next, Laurie Rounds with NOAA will highlight some of our Open Ocean restoration activities and projects.

Slide 6: Open Ocean Restoration Highlights

Presenter: Laurie Rounds, NOAA

Thank you, Gale. I'm Laurie Rounds and I represent NOAA on the Open Ocean TIG. I'd like to highlight some recent activities by a few of our restoration projects.

The first project I'd like to talk about is the Oceanic Fish Restoration project, which is completing its final year of implementation. The Open Ocean Trustees began implementing this project in 2017 as part of the Early Restoration phase. NOAA leads implementation in partnership with the National Fish and Wildlife Foundation. We work closely with pelagic longline fishermen to voluntarily adjust their fishing practices to restore fish like tuna, swordfish and other species that were injured by the oil spill. This year we had the highest number of volunteer participants to date with 13 pelagic longline vessels – five from Florida and eight from Louisiana. We are also excited to see that based on our project monitoring, we are on track to meet our restoration goals, with more than 20,000 fish, that would otherwise have been caught, able to grow and reproduce in the Gulf of Mexico. You can learn more about the project's results in a summary monitoring report that was released last year. Final project monitoring and progress reports will also be shared as we complete this project.

We also have several projects beginning implementation this year. Beginning this month, NOAA and the Department of the Interior will conduct multiple at-sea

expeditions that support our work to restore deep sea habitat – totaling almost 200 days at sea across the north-central Gulf of Mexico. During these expeditions, we will map areas with important deep sea communities; assess habitat conditions by documenting species of coral, fish, and other organisms using these habitats; establish long-term monitoring sites; and collect coral samples to support lab-based studies to develop restoration techniques. We are collaborating with the Ocean Exploration Cooperative Institute, which brings additional experience and expertise to this work. The Cooperative Institute is made up of several partners including the University of Southern Mississippi, University of Rhode Island, Woods Hole Oceanographic Institute, University of New Hampshire, and Ocean Exploration Trust. We will share outcomes from the expeditions over the year through the Gulf Spill Restoration website. If you would like to learn more about the planned work, there is a link in the chat that will take you to a recent web story with more information.

Link provided in the chat: Mesophotic and Deep Benthic Expeditions web story: https://www.gulfspillrestoration.noaa.gov/2022/02/upcoming-sea-expeditions-will-support-deep-sea-habitat-restoration

Slide 7: Open Ocean Restoration Highlights

Presenter: Laurie Rounds, NOAA

I'd also like to highlight two of our Open Ocean projects that provide good examples of our adaptive management process in action.

In 2019 we approved a project to develop effective sea turtle observer methods with the menhaden purse seine fishery. This is an exciting project where NOAA is working with menhaden fishery partners to find innovative solutions to better observe and understand sea turtle interactions during fishing operations. With this information, voluntary methods can be developed to avoid and reduce those interactions which could result in bycatch or entanglement in nets. Last year, the project completed a conceptual phase that tested multiple combinations of observation methods. Based on field test results and discussions with industry partners, a combination of human observers and electronic monitoring methods using two vessel-mounted cameras were found to be the most effective observation methods. With this information, the project team designed a two-year pilot phase using human observers and electronic monitoring that will begin this year during the menhaden fishing season from April to November first. We shared a link in the chat where you can find a report recently released on the Gulf spill restoration website that describes the project's proof of concept phase.

The second project I'd like to highlight is also a good example of how we adaptively manage restoration and address information gaps for restoration. In 2019, the Trustees

began implementing a Gulf Sturgeon project to characterize spawning habitat in the Pearl and Pascagoula River systems. This project was selected to address key information needs about the removal of barriers to spawning, which has been a longstanding priority for Gulf Sturgeon restoration. The project will help us answer questions such as how to rank the relative importance of restoration designs and where adult fish would go to spawn once a barrier is removed. Therefore, identifying essential spawning habitat in the Pearl and Pascagoula River systems is important to help us wisely use our Gulf Sturgeon restoration funding. This project successfully established several partnerships and began field work in 2020. However, COVID-related restrictions on field crews resulted in substantial delays and limited opportunities to conduct the necessary field work that year during the short Sturgeon spawning season. Because of these delays, the Trustees approved an extension for the project for up to an additional year to ensure that sufficient data is collected and that we have the information needed for restoration planning. We will continue to monitor conditions and adjust our work to meet the project's goals over the remaining 3 years.

Next, Eric Weissberger will provide an update about Monitoring and Adaptive Management activities.

Link provided in the chat: Sea Turtle-Menhaden web story and Proof of Concept report: https://www.gulfspillrestoration.noaa.gov/2022/01/updates-open-ocean-sea-turtle-project-working-menhaden-purse-seine-fishery

Slide 8: Monitoring & Adaptive Management

Speaker: Eric Weissberger, NOAA

Thanks, Laurie. I am the Open Ocean TIG's monitoring and adaptive management coordinator, and I'd like to provide an update on some of our recent activities.

Resource experts for each restoration type continued their work identifying specific objectives for the broad restoration goals established in the Deepwater Horizon Programmatic Restoration Plan. We are also identifying objectives to help us consider the ecosystem-level injury caused by the oil spill. These more specific objectives will help the Trustees target future restoration efforts and select restoration activities. Later in this presentation we'll hear from Jamie Reinhardt who will tell us about the restoration objectives for fish and water column invertebrates.

We are also developing indicators for each restoration objective, identifying the information needed to evaluate progress toward reaching them. Possible indicators include abundance of focal species, metrics of productivity, and measures of habitat quality, as well as trends in these metrics.

The Open Ocean Trustees currently have three approved monitoring and adaptive management activities underway. One is determining the population status of gulf sturgeon, and another is investigating habitat use by juvenile gulf sturgeon. For the population status project, training was conducted for field sampling anticipated to take place this spring. A third activity is developing models to assess the cumulative effects of multiple stressors on whales and dolphins. A model for sperm whales was recently completed.

Over the next year, the TIG will develop additional monitoring and adaptive management activities focusing on the priorities identified in our strategy. We will consider a range of activities to advance restoration planning, implementation, and evaluation. These activities may include compiling and evaluating data for selected indicators, assessing key data gaps, or conducting monitoring activities to address data gaps.

We will share updates on our work through future webinars and on the Gulf Spill Restoration website.

Slide 9: Restoration Plan 3

Speaker Eric Weissberger, NOAA

And now here's Ashley Mills from the Department of the Interior who will provide information on our third Open Ocean restoration plan.

Slide 10: Restoration Plan 3

Speaker: Ashley Mills, DOI

Thank you, Eric, and hello everyone. I'm Ashley Mills. I serve as DOI's Representative on the Open Ocean TIG and I'm happy to provide an update on the TIG's planning activities for our third restoration plan.

The restoration planning process shown in blue on this slide involves multiple steps that result in Trustee evaluation and selection of projects for implementation.

We began planning for our third restoration plan last spring when we posted a call for Bird and Sturgeon restoration project ideas.

For birds, we requested project ideas that would help to address the injury to bird species that are unlikely to be addressed by other TIGs. Some seabird species in particular were heavily impacted in the open water, but these species rarely spend time

in the Gulf states. For sturgeon, we were interested to learn of any new restoration ideas or changes to previously submitted ideas.

76 project ideas were submitted or updated in response to our call for project ideas. About 60 of those ideas were focused on birds and include activities to reduce predation on nesting seabirds, to re-establish breeding colonies, and to reduce bird mortality from threats such as fisheries bycatch. Geographic areas for project ideas range from Northeastern Canada and the U.S. to the Caribbean and South Atlantic.

About 10 project ideas were provided for Sturgeon. Project ideas focused on restoring access to spawning habitat by removing in-stream barriers and projects that proposed additional monitoring and tracking of sturgeon throughout their range.

We screened project ideas for birds and sturgeon and decided not to include sturgeon projects in this upcoming draft restoration plan. We decided that it is important to complete the ongoing Open Ocean sturgeon projects before proceeding with additional Sturgeon restoration. These current projects are making important progress in providing information needed to identify restoration that will provide the greatest benefits with the remaining restoration allocation.

Slide 11: Restoration Plan 3 Next Steps

Speaker: Ashley Mills, DOI

We're currently working to develop the draft restoration plan. We'll release the draft plan for public review and comment, and we'll hold a public meeting during the comment period to present the range of projects in the draft plan and provide opportunities for public comment. We are anticipating that we'll have a Draft Restoration Plan out for public review this fall.

After considering all public comments we receive, we'll finalize the plan and then project implementation can begin.

During and after implementation, the outcomes and progress of the restoration projects will be monitored and reported publicly.

Slide 12: Bird Connections to Gulf Habitats

Speaker: Ashley Mills, DOI

In the Open Ocean Restoration Area, we target restoration of wide-ranging migratory species at important points throughout their life cycles and vast geographic ranges. Some Open Ocean species use habitats thousands of miles apart within the course of a

year. For these species, the most effective restoration benefit may focus on habitats outside of the Gulf of Mexico.

Over 50,000 individual birds of 93 species were identified as having been injured by the oil spill. Of the 93 species, more than 40 breed outside of the northern Gulf of Mexico but use Gulf habitats for other important parts of their life cycle, such as during migration and wintering. This graphic shows the connections between the Gulf of Mexico and breeding areas for a number of injured bird species.

Slide 13: Bird Connections to Gulf Habitats

Speaker: Ashley Mills, DOI

This is the same graphic, zoomed in so that we can look more closely at North America and the Gulf of Mexico.

Initial bird restoration efforts, developed during the first Open Ocean Restoration Plan and currently underway, focused on Black Terns in the Dakotas and Common Loons in Minnesota. Both of these species depend on Gulf of Mexico habitats during migration and wintering periods but migrate north to breed in the spring and summer: Black Terns to the prairie potholes and Common Loons to the upper Midwest.

Slide 14: Bird Connections to Gulf Habitats

Speaker: Ashley Mills, DOI

For our third restoration plan, we are targeting restoration projects that will benefit many seabird species injured by the oil spill. The Northern Gulf is both regionally and globally important for seabirds. Like other bird taxa such as shorebirds and waterfowl, seabirds breed away from the northern Gulf of Mexico but rely on Gulf habitats during other important phases of their life cycle. Most spend the majority of their lives away from land, foraging over the open seas, returning to specific terrestrial habitats to breed.

Northern Gannets and Audubon's Shearwater are two such examples, shown on this slide. Northern Gannets breed in northeast Canada and Audubon's Shearwaters breed on islands throughout the Caribbean. As you can see, breeding areas where restoration activities may be most effective are located outside of the Gulf of Mexico.

Slide 15: Restoration Plan 3

Speaker: Ashley Mills, DOI

RP3 will include a number of species that are particular priorities because they were heavily impacted by the oil spill. These species include Northern Gannet, Great Shearwater, and Common Tern, shown here.

Major threats to these seabirds include loss or degradation of breeding habitat, mortality and disturbance from humans and invasive species at breeding locations, and mortality to foraging seabirds from fisheries bycatch.

We received project ideas to address these threats through invasive predator management at colonies, improving and enhancing breeding habitat though debris removal and human disturbance reduction, re-establishing breeding colonies in locations where threats are reduced, and working collaboratively with the fishing industry to identify, develop, and implement strategies to reduce seabird bycatch.

Slide 16: Restoration Plan 3

Speaker: Ashley Mills, DOI

Caribbean nesting seabird species that were injured in the spill include Audubon's shearwater, Sooty Tern, Brown Noddy, Bridled Tern, Brown and Masked Boobies, Red-billed and White-tailed Tropicbirds, and Magnificent Frigatebird all shown here.

We received project ideas for Caribbean-nesting seabirds that focus on reducing threats to breeding birds from invasive species. These seabirds nest on islands throughout the Caribbean, and many tropical islands are now inhospitable to breeding seabirds due to introduced predators, including rats, mice, pigs, goats, and even cats and dogs. These animals disturb and sometimes kill nesting adults, and prey on eggs and chicks. Efforts to eradicate invasive predators from nesting islands have been important steps toward restoring seabirds.

We also received project ideas that include techniques to re-establish colonies in locations where threats are reduced, including what is known as social attraction. Because seabirds often prefer to nest in close proximity to other individuals of the same species, this technique involves jump-starting re-establishment by placing decoys in suitable habitat and broadcasting recordings of the sounds of active breeding colonies.

In order to maintain the benefits of restoration efforts for seabirds on Caribbean islands, monitoring and adaptive management aimed at preventing re-introduction of invasive species is important.

So, that is a little bit about our planning efforts for our third restoration plan, in development.

Slide 17: Fish and Water Column Invertebrates Strategic Plan

Speaker: Ashley Mills, DOI

Next, Jamie Reinhardt with NOAA will provide updates on the Fish and Water Column Invertebrates Strategic Plan. Jamie?

Link provided in the chat: Fish and Water Column Strategic Plan web story: https://www.gulfspillrestoration.noaa.gov/2022/04/open-ocean-trustees-release-restoration-strategy-fish-water-column-invertebrates

Slide 18: Fish and Water Column Invertebrates Strategic Plan

Speaker: Jamie Reinhardt, NOAA

Many thanks for the opportunity to present to you all on the progress of the Open Ocean Trustees have made in establishing priorities and objectives to help guide restoration planning for fish and water column invertebrates.

A year ago, the planning team sought input on factors that we should consider during our strategic planning process. We also sought input from stakeholders at a number of venues. I am a quite grateful for the input that we received from fisheries management, commercial folks, and recreational anglers, as well as the academic and the NGO communities. Today I want to provide an overview of the process that we undertook over the past year and provide you with the outcomes of the process.

I hope that the strategy can serve as a basis of communication amongst stakeholders as we plan for how we can use the remaining funds for Fish and Water Column Invertebrates, about $320 million, to best restore the injured resources.

Slide 19: Overview of the Strategic Plan

Speaker: Jamie Reinhardt, NOAA

Here is what my presentation today will look like. First, I'll provide a little background including going over key features of the injury, goals from our programmatic plan, and some of our current projects; then, I'll spend a few minutes reviewing what the purpose of the plan is. Then I'll get into what we did and the process we used to develop our objectives, including how we engaged stakeholders, considered threats, and prioritized

species. I will then speak about the objectives. We will have a question-and-answer session after the presentation.

Slide 20: Fish and Water Column Injury

Speaker: Jamie Reinhardt, NOAA

I know some of you are already familiar with the injury to larval fish and to the invertebrates that occupy the water column, but to help set the scene I will provide a little reminder.

Many hundreds of species of fish and invertebrates were exposed to oil and were injured from the oil spill. Red snapper, bluefin tuna, and spotted seatrout are among species with known effects from the oil. Fish were killed in offshore surface, deep oceanic, and estuarine waters. Generally, if a species was present in the northern Gulf at the time of the spill, there was likely some exposure to the oil.

In addition to the acute and fatal toxicity due to exposure to oil, there were non-lethal injuries including impaired reproduction and reduced growth. There were also changes to the number and type of fish species living on the reefs, and to the overall food web of the reefs.

Slide 21: Restoration Goals

Speaker: Jamie Reinhardt, NOAA

Following the Deepwater Horizon settlement with BP, the trustees released a programmatic damage assessment and restoration plan which lays out general approaches and goals for restoring the Gulf of Mexico ecosystem in response to the injuries caused by the spill. To restore the multi-faceted and massive injuries to fish and water column invertebrates, the trustees set goals for reducing direct sources of mortality to fish and water column invertebrates and increasing the health of fisheries by providing communities the tools to reduce unnecessary impacts to fisheries resources.

Slide 22: Open Ocean Restoration Projects

Speaker: Jamie Reinhardt, NOAA

What restoration have we already started?

- We have started implementing five restoration projects for Fish and Water Column Invertebrates that focus on decreasing bycatch and fishing mortality in various fisheries by partnering with the fishing community, which has already put substantial effort into reducing bycatch in the Gulf of Mexico.
- All of the restoration projects for Fish and Water Column Invertebrates depend on the active participation of commercial and recreational fishermen.
- Outreach and engagement with fishermen are very important to us and to the success of the restoration projects, and as I'll mention again are being built into our strategy.
- The project teams include fishermen and other industry stakeholders throughout the project – from soliciting ideas to project development and implementation – to make sure that fishing communities are on board with the project and to ensure that fishing communities benefit from the projects as well.
- All the projects are non-regulatory and voluntary for their duration, enabling fishermen to choose to participate or not.

Slide 23: Other Restoration Types to Address Water Column Injury

Speaker: Jamie Reinhardt, NOAA

While the fish and water column invertebrates restoration type is focused on addressing direct sources of mortality, there are many restoration types that are likely to provide benefits to fish. For example:

- Across the Gulf there are substantial investments in restoring coastal habitats, such as salt marshes, which serve as important nursery habitat to many juvenile fish and invertebrates.
- Restoration for fish and invertebrates will happen with our mesophotic and deep benthic community restoration type. This restoration type will focus on habitat-based restoration for important deep sea coral communities like those in the Alabama Alps and the deepest areas of the Gulf.
- Coastal nutrient reduction projects, that have worked with farmers to implement voluntary actions to reduce nutrient runoff from grazing and crop lands, will benefit water quality and the species that inhabit those coastal areas.
- Additionally, other projects taking place on federal lands, such as living shorelines work and SAV and oyster restoration, create important habitat for fish.

The point of this slide is to show that restoration of fish and water column invertebrates is not occurring in just one way, rather, a broad suite of activities will help restore the injury.

Slide 24: Overview and Purpose

Speaker: Jamie Reinhardt, NOAA

Despite all the ongoing activities both in the Fish and Water Column Invertebrate Restoration Type and among other restoration types, the massive scale of the injury means that there is still lots of restoration to do.

This Strategic plan has allowed us to step back and give a thorough reassessment and evaluation on where best to focus our planning efforts. We undertook this prioritization so that restoration planners could focus our efforts on a targeted number of species.

However, we expect that restoration for one species can have spillover effects and might benefit other species as well, like the umbrella species concept taken in the context of restoration.

When developing the strategic plan, we conducted a threats analysis, and we used this analysis to do a cross-walk with the priority species to identify strategic restoration objectives. While we were conducting our prioritization and analysis, we also used the opportunity to identify some specific data needs. Filling these gaps might help us conduct restoration planning and to evaluate our success.

Let me dig in a little more to our process and the steps that we took.

Slide 25: Engagement

Speaker: Jamie Reinhardt, NOAA

Engaging in a remote context, we held multiple meetings last winter and spring in coordination with Fisheries management groups such as the Gulf commission and Council, including broad industry representation. We have also sought input from academic and non-governmental organizations.

We asked stakeholders, “what is important for us to consider,” what threats are important, and what criteria should we use to prioritize. Additionally, we heard from stakeholders about strategies to communicate and develop opportunities for collaborations.

Slide 26: Steps in Species Prioritization Process

Speaker: Jamie Reinhardt, NOAA

Stakeholders mentioned the need to address injury across the ecosystem – and to have priority species that represented the diversity of fish and invertebrates that were injured in the spill. In order to address these interests, we used species groupings (based on taxonomy and ecology). You will see the groupings that were used in a following slide.

After determining this grouping, we used the stakeholder input to determine what type of criteria we should use to prioritizes species within each group. Those criteria included the amount of injury, commercial and recreational importance, species vulnerability, and conservation status. Of course, we then collected the data, and used a structured ranking process to rank species within each one of our species groups. Our group of experts then reviewed species that were ranked at the top of each group to make sure we considered other factors that might not have been explicitly included in the ranking process.

Slide 27: Priority Species Selections by Group

Speaker: Jamie Reinhardt, NOAA

This slide shows both the species groups and the priority species that were selected for each group. We then ranked each group into high or low priority groups. The asterisk indicates high priority groups. Those high priority groups are:

- Billfish* - Blue marlin (*Makaira nigricans*)
- Drums and seatrout* - Spotted seatrout (*Cynoscion nebulosus*)
- Jacks* - Greater amberjack (*Seriola dumerili*)
- Forage fish* - Mullets (*Mugil cephalus and curema*) and Gulf menhaden (*Brevoortia patronus*)
- Sea basses/Groupers* - Red grouper (*Epinephelus morio*)
- Snappers* - Red snapper (*Lutjanus campechanus*) and Vermilion snapper (*Rhomboplites aurorubens*)
- Tunas/mackerels* - Yellowfin tuna (*Thunnus albacares*) and King mackerel (*Scomberomorus cavalla*)

What does high priority mean here? High priority is an indicator of where we might spend some of our near-term energy exploring restoration options, working with stakeholders to come up with restoration projects. This does not shut the door on other species groups, we can consider good ideas on an opportunistic basis.

Slide 28: Threats

Speaker: Jamie Reinhardt, NOAA

Once we came up with our priority species, we did a review of existing sources to determine what are primary threats for priority species. This table is illustrative of what that cross-walk looks like, I could not fit the whole table in the slide so this is just to show you what it looks like. Across the top you see two species, blue marlin and greater amberjack. In the full document you will see a table with all the priority species listed.

This threats matrix helped us look at threats that we might focus on, to develop restoration projects, or interventions that would be good for our priority species. Based on this table we created restoration objectives, which are more explicit statements on how we might address the injury to fish and water column invertebrates.

Slide 29: Restoration Objectives

Speaker: Jamie Reinhardt, NOAA

Here are the objectives that we developed for the FWCI strategic plan:

- Reduce negative effects or risks of:
    - bycatch
    - illegal, unregulated, and unreported fishing
    - marine debris to FWCI resources
    - post-release mortality
    - invasive species
    - marine pollution
    - energy production
    - harmful algal blooms (HABs)
- Develop tools and techniques to reduce uncertainty in restoration and provide best practices to stakeholders and fishing communities
- Improve pelagic and sargassum habitat

We went through a ranking process with the objectives. This ranking process was conducted by our team of experts. Those objectives that are in bold represent our priority objectives. Our priority objectives were selected based on where our experts

determined we can best conduct restoration in the short term, considering the prevalence of the threats and the ability to create restoration interventions.

Earlier, we shared a link to the Strategic Plan in the chat box. Again, I hope that the strategy can serve as a basis of communication amongst and with stakeholders about how to best use the remaining funds for Fish and Water Column Invertebrates, about $320 million, to restore the injured resources.

Slide 30: Questions

Speaker: Jamie Reinhardt, NOAA

Next, Lena Flannery will lead us for the Q&A session.

Slide 31: Questions

Speaker: Lena Flannery

Ok. We've been collecting your questions along the way and we're going to paraphrase some of them, or combine similar themes to try to answer as many questions as possible.

Remember, if you still have a question at this point, you can plug it into the "Questions" box at the bottom of the GoToWebinar control panel (where the green arrow is pointing on this slide).

We'll take a few moments to give you time to enter any additional questions before we begin. Next, we'll pass them on to someone on our team that can best respond. We may not get to all of the questions, but we'll try to get to as many as possible.

[See Summary of Questions and Answers for the Q&A portion of the webinar]

Next: Ben Battle with the U.S. Department of Agriculture will talk about how you can access information about the Open Ocean TIG's projects and activities.

Slide 32: Upcoming Open Ocean Public Meetings

Speaker: Ben Battle, USDA

Hello, my name is Ben Battle. I represent the U.S. Department of Agriculture for the Open Ocean TIG. Thank you for joining today's webinar.

There will be additional opportunities to hear about Open Ocean restoration activities throughout the year. We will provide an update during the annual Trustee Council meeting, which will be held virtually early this summer.

Then, after we release the draft restoration plan 3, we will hold a public meeting to provide information about the proposed restoration projects and hear public comments. We anticipate this will also be a virtual meeting.

And towards the end of the year, the Open Ocean Trustees will hold our annual meeting where we will provide additional updates on our work. Please watch for announcements for these meetings on our Gulf Spill Restoration website.

Slide 33: How to Access Open Ocean Project Information

Speaker: Ben Battle, USDA

Next, I'd like to go over some of the features of the Gulf Spill Restoration website and how you can get more information about the great restoration projects you heard about today.

From the home page, in the "Projects Near You" box you can click the "View Project Details" button, shown here with the purple arrow.

Explore our interactive map to see details on restoration projects, using the link in the chat.

This tool provides a map of all the projects approved by the Trustees and allows you to search by Restoration Area and open or download project data. Once you locate a project you would like to read more about, you can select it to easily access project-specific information.

Project records include progress reports, budgets, and monitoring and adaptive management plans.

Finally, if you're not signed up for our email blasts, please consider signing up. Aside from visiting the website, it's the best way to stay up to date on all of the Deepwater Horizon NRDA restoration activities. You can easily do that on our home page by scrolling down to the green boxes and clicking the "Sign Up Now" button.

Next, I'll hand it back to Gale.

Link provided in the chat: For reference you can find information about our projects here: https://www.habitat.noaa.gov/storymap/dwh/?openOcean

Slide 34: Thank you

Speaker: Gale Bonanno, EPA

Thank you, Ben. And we'd like to thank everyone for joining today's Spring webinar.

We'll post the presentation and written transcript from today's webinar to the Trustees' website. To find the meeting materials, please go to gulfspillrestoration.noaa.gov, the link we provided in the chat earlier, and click on the Open Ocean icon, which is shown in the upper right of this slide. If you would like to contact the Open Ocean Trustees, you can use the email address shown on the slide.

We'll now conclude our webinar. Thank you all very much for participating.

Summary of Questions and Answers

Question: Do your programs and projects get to other parts of the world? Specifically where there is little or no awareness.

Response [from Ashley Mills, DOI]: In the Open Ocean Restoration Area, we target restoration of wide-ranging migratory species at important points throughout their life cycles and vast geographic ranges. So there's flexibility in our work, to conduct restoration where the restoration benefits would be the greatest. We haven't implemented any projects outside the U.S. though we have received ideas for bird restoration projects that would take place outside the U.S. An example is for some seabirds that nest on very remote islands far out in the ocean. For any work that we do, it's important that we work in partnership with others and engage local communities where restoration could take place. For our current restoration plan, wherever we propose restoration work we will engage local communities and partners to provide information and hear from them. If needed to help local communities participate, we can also translate informational materials to other languages.

Also, through our website, we try to reach a broad public that is interested in restoration. You can stay informed about Open Ocean restoration news and all our activities through the Open Ocean Restoration Area webpage on the gulfspillrestoration.noaa.gov website. There, you can find links to our restoration plans, projects, and recent news stories. There's also an option to sign up for email notifications any time we post something new to the website.

We do know that our information is getting to others outside of the U.S. because we see interest from around the world. We have an email list of over 16,000, and we know that when we have conducted webinars in the past we've had participants from many other countries, including Mexico, Canada, China, and European countries. Thank you for your question.

Question: What is the timeline for hearing from the TIG on LOIs (letters of intent) submitted in April 2021?

Response [from Ashley Mills, DOI]: Thank you for submitting a project idea to the Open Ocean TIG. We began planning for our third restoration plan when we posted a call for project ideas last spring. The TIG considered and discussed over 70 project ideas that were submitted or updated in response to our call. We're currently working to develop the draft restoration plan, where we will describe the range of projects. We will welcome public comment on the draft plan once we release it; we are anticipating release this fall. Individual Trustee agencies will be designated as Implementing Trustees for selected restoration projects. The individual Trustee agency is responsible for all implementation tasks such as contracting to complete implementation phases, conducting project-specific monitoring and adaptive management, and maintaining projects in the long term. The Implementing Trustee will consider the most efficient and effective means to implement each phase of a project; however, they must follow requirements established in their respective contracting and grant regulations. The Trustee will ensure that projects are implemented cost-effectively and in partnership with or contracted to the most suitable entities on a project-specific basis. Thank you for your question.

Question: Do you believe that spotted seatrout populations are more affected by fishing pressure or environmental stressors?

Response [from Jamie Reinhardt, NOAA]: While I am not smart enough to answer the question of whether seatrout populations are more affected by fishing or environmental stressors, I will say that populations are impacted by a complex interaction of anthropogenic and natural factors. Our restoration strategy allows us to focus on restoration interventions that will likely result in positive results for fish populations. Our threats assessment found that spotted seatrout are impacted by a range of stressors including climate change, fishing impacts, marine debris, water quality including coastal pollutions, and also habitat loss. In the case of spotted seatrout and with support from our threats analysis, I anticipate restoration actions that support better habitat and less impactful fishing practices may benefit these populations. Thank you for your question.

Question: What types of innovative (new) equipment are being used for restorations?

Response [from Jamie Reinhardt, NOAA]: Restoration planners are always looking for ways to incorporate better and more efficient technology. Earlier in our presentation, we described the innovative approaches to observing methods using technology that are being piloted with the menhaden fishery for the Sea Turtle restoration project. In addition, a number of restoration projects such as the Oceanic Fish Restoration Project and the Better Bycatch Reduction Devices (BRD) project are looking at innovations in fishing gear that may reduce bycatch. The Better

BRD project is examining innovations in BRD design and will be testing designs such as the "toms fisheye" and the "flapless TEDS" (turtle excluder devices). Other innovations in reporting and communications technology which may allow for more fishing efficiency and reduce bycatch are being tried in Phase 1 of the communications networks and mapping tools project approved in 2019. The rapid advancement of technologies across the board offers opportunities to help restore resources and make it easier for fishing communities to contribute to restoration. Thank you for your question.

Question: Is there anything new on the Powderhorn Management Area? I am curious if any more oyster reefs are planned such as Half Moon.

Response [from Laurie Rounds, NOAA]: Oysters are an important Gulf resource that were injured by the oil spill. Oyster restoration is conducted in the state Restoration Areas and the Regionwide Restoration Area, but not in the Open Ocean Restoration Area, which is responsible for restoring migratory and wide-ranging oceanic resources injured during the spill. I'm not aware of any current restoration projects funded by the Natural Resource Damage Assessment program on the Powderhorn Wildlife Management Area in Texas. However, you may be interested in the Galveston Bay oyster restoration project proposed by the Texas Trustee Implementation Group in their second restoration plan. The public comment period for that draft plan recently closed, but you can access the plan through the Gulf Spill Restoration website. The Gulf Environmental Benefit Fund, or GEBF, has provided funding for the Powderhorn Wildlife Management Area. GEBF is a program funded by two plea agreements that resolved certain criminal cases against BP and Transocean which arose from the 2010 Deepwater Horizon explosion and oil spill. Although we coordinate with GEBF, this is a separate program, and you can learn more about their work for the Powderhorn Wildlife Management Area through their website. You can stay informed of additional oyster restoration work through the Trustees website. Thank you for your question.

Question: What studies have there been on tracking Rice's whales?

Response [from Laurie Rounds, NOAA]: The Deepwater Horizon NRDA program has not funded studies on tracking Rice's whales. However, the RESTORE Science Program has funded a Gulf of Mexico Rice's Whale Trophic Ecology Project that included data collection and surveys to develop an ecological understanding of the endangered Rice's whale. You can find more information about their project on the RESTORE Science Program's website (https://restoreactscienceprogram.noaa.gov/). Thank you for your question.

Question: Has there been an evaluation of oil waste pits on migrating birds?

Response [from Dave Hewitt, DOI – Fish and Wildlife Biologist with the US Fish and Wildlife Service Gulf Restoration Office]: Thank you for your question. Activities associated with the extraction of petroleum produce fluids, often referred to as waste, that are a mix of water and other potentially harmful byproducts. When stored in open pits, waste fluids may be accessible to birds and other wildlife. Migrating birds have been documented to mistake these pits for open water and become trapped in them, and some birds have died as a result. While more research is needed, agencies and universities have undertaken studies to better understand both short- and longer-term effects of these pits on birds, and some regulatory efforts are in place to reduce their impacts. However, these efforts are outside of the scope of DWH NRDA restoration. Thanks again for your question.

Question: This is about a NOAA project mapping the coral reefs on the west coast of Puerto Rico by crew of Nancy Foster. How can we find the result?

Response [from Laurie Rounds, NOAA]: NOAA conducts several mapping expeditions through various programs, such as our Ocean Exploration program, that are not part of the NRDA program. You can find more information about these expeditions on their website (oceanexplorer.noaa.gov). Thank you for your question.

Question: What use of DWH settlement funds have been applied to test/assess wind/tidal/geothermal alternatives?

Response [from Gale Bonanno, EPA]: Specifically with regard to the Natural Resource Damage Assessment (NRDA) portion of the DWH settlement funds, I am not aware that these funds have been used to test or assess alternative energy sources such as wind, tidal, and geothermal. The NRDA funds must be used to restore natural resources and the services provided by those resources that were injured as a result of the DWH oil spill. More information about the types of restoration that are being funded using DWH NRDA funds can be found in the Final Programmatic Damage Assessment and Restoration Plan at https://www.gulfspillrestoration.noaa.gov/planning and the previous OO TIG restoration plans at the Open Ocean web page on the Gulf Spill Restoration site. Thank you for your question.

Question: For Jamie Reinhardt: any idea to address excessive sargassum deposition on mangroves and other coastal habitats? Not sure if that was intended on your last slide. Is there an increase in sargassum biomass in the Sargasso Sea and Gulf like we are seeing in the Atlantic off the coast of South America, the Caribbean and Yucatan? Do you know if that is resulting in a

net positive or negative in Gulf open ocean habitat? Can you provide a brief overview of sargassum improvement work you mentioned?

Response [from Jamie Reinhardt, NOAA]: There was substantial documented injury to sargassum as a result of the spill, and we know that sargassum is an important pelagic habitat for many juvenile fish. We also understand that sargassum can be a nuisance and a problem on our coasts. We don't have any ideas for restoration of sargassum, but I think it is important to continue to develop our knowledge of sargassum and perhaps in the future we may be able to find ways to restore the resource and manage the negative impacts from sargassum. Thank you for your question.

Question: When will a call for proposals go out?

Response [from Ben Battle, USDA]: Thank you for your question. The Open Ocean TIG is currently developing our third restoration plan, as you heard today. We are also working to implement projects selected in our first two restoration plans. Therefore, we have not set a date to start planning for additional restoration plans. However, please sign up for email updates. Any calls for project ideas will be posted to our website (and the portal is always open, so project ideas can be submitted at any time).

Question: In the various efforts conducted so far, was any additional damage resulting from the BP spill identified, and will that be used to capture funds from the settlement set aside for such late-identified damage?

Response [from Gale Bonanno, EPA]: It is too early to determine that with certainty at this time, but the Trustees will turn their attention to Unknown Conditions in the coming years. Settlement funds for that purpose will be available to Trustees beginning in 2026. The Open Ocean TIG is working together to plan and implement restoration for migratory and wide-ranging oceanic resources injured during the BP oil spill, including to restore birds, sturgeon, oceanic fish and invertebrates, sea turtles, marine mammals, and deep sea coral communities. Thank you for the question.