[ Please standby for realtime captions ] >> greetings. We would like to start off by thanking all of you for taking the time to participate here in our 1st public webinar for the development of the upcoming plan for Osan research in the coming decade. We want to leave a lot of time for discussion and provide feedback. Before we get to that portion we have prepared a brief overview of the plan to provide enough information to stimulate the following discussion. Before we get started a few introductions. I am Rick Murray and I and the director of Ocean sciences. I am one of 3 cochairs of the subcommittee on Ocean science and technology. That is abbreviated as SOST. There are 2 other cochairs, one is Richard Merrick who is the chief science advisory and he is on the line with us as well. In the 3rd cochair is the director of -- [ indiscernible ] . The 3 cochairs in addition to our SOST staff is here to provide you additional information about the plan. We are very well staffed at SOST. There are 3 cochairs and usually 3 staff members. There is a lot of work that we do. Since the 1st comprehension plan was published in 2007, there have been a lot of changes. The ocean community has made great progress in ocean technologies. They have observed and tracked unexpected environmental changes and in -- and answered questions about how the ocean works. There are unknowns and challenges

every day that we did not know was there before. So now is the time to understand ocean research, research, technology and innovation and what is needed to tackle global challenges that we face. Along those lines , SOST is initiating development of the ocean research in the next decade. They want to provide up-to-date, cohesive and strategic guidance for the federal ocean science and technology enterprise that is informed by and in alignment with the ocean science and technology community and science-based information needs of resource managers, policymakers, education that educators and stakeholders. The plan may address multifaceted topics that are relevant

to polar, terrestrial, best water,

atmospheric and social research in the context of the oceans. The focus is going to be on the ocean aspect of each topic included in the plan. We are considering the term ocean, and this is important, it is the open ocean, Kos, estuaries, coastal watersheds and the Great Lakes. Finally put this point here, the upcoming plan will supersede the original ocean research priorities plan that was stated in 2007. This is a new plan. If not just refresh of the existing plan. This plan will describe the most pressing research questions and promising areas of opportunity within the ocean science and technology enterprise and set the stage for actions across federal agencies and also nonfederal entities to address societal needs and issues of national importance. It will be guiding federal and ocean and other sectors as they online resources

to support the high priority research goals and activities described in the plan. In this sense the plan may also be useful to inform activities of nonfederal entities to support research. Especially those complementary to federal efforts. The key point here is when we look at topic matters, it will not be able to cover all ocean issues. As a research focused document, the plan is not going to be prescribing policies. That is not the point of the plan at all. We will emphasize research and related activities that will generate the information necessary to make sound decisions and promote effective policies. The target audience as listed there is an abbreviated listing . But it includes the public sector, scientist in the ocean, S and T related field, private and corporate -- for-profit sectors, in a mental environmental interest groups, ocean stakeholders international entities and the general public. Hopefully, you have seen the perspective that we released on October 28. This perspective outlines the purpose and intended uses of the plan. The proposed structure and content of the plan, how the plan will be developed and reviewed in terms of process and opportunities for community and stakeholder engagement. Such as this webinar. The document is intended to stimulate feedback from the public on the overall framing and content. We are not seeking out input on the perspective itself. But the perspective is intended to inform the public on the plant during the public input .. As laid out, we will walk through the proposed structure and broad outlines of potential outlines of the plan. So the proposed plan structure begins with a set of guiding principles. Aim to represent the qualities of the

ocean science and technology research enterprise. As you see on the sly, these principles could and glued areas such as education and workforce, inquiry and advancement, capabilities and capacity and other aspects shown they are. We also encourage any other comments you may have on the list. That is the point of this public comment period. These are ideas that the SOST have come up with. But we are seeking public engagement to see which of these most resonate with you folks and which ones may not resonate and what other one should be added to this list. We encourage any comments on it at any level. Moving into the opposed content of the plan. We are suggesting a set of societal themes that will provide a high-level impetus for ocean research topics included in the plan and answer the basic question, why conduct ocean research ? Similar to the wrist of guiding -- list of guiding principles, here is a list of proposed societal themes that include ensuring resource availability and sustainable use, conserving ocean ecosystems

and contributing to the economy and social well-being. This list is not final. It is meant to encourage discussion and feedback. Drilling down into the hierarchy, the plan will continue to outline research goals and answer the question, what ocean research is needed to address those societal beings ? The goals described where integration -- inter-agency and intersection come together

and address critical areas of societal me. And it is starting to get more specific as we move down this list. As we have done on the previous slide we have a list of proposed research goals. These are suggested not only for topic but to give an idea of the sense of scale and scope. This list could include quantifying the role of the ocean and climate variability, changing ocean condition, informing societal responses under management options. This list is not final. We are seeking your input to inform what the eventual plan will end up with. Each research goal will be supported by more focused research activities. Some of which will be crosscutting and needed to achieve multiple research goals. Some examples are observing and modeling capabilities. Harnessing the data revolution and fostering ocean workforce development. Beef activities will parse the research goals into actionable topic areas. They will focus on understanding critical ocean processes and how that relates to health safety, security and overall national prosperity. Federal implementation of the plan is going to be based on and responsive to the research activities. This is a SOST endeavor made with federal agencies and will be used to guide federal agencies and their activities in this regard. Research activities will be identified once the societal themes that research goals are determined and will be determined that and will be revealed in the plan for public review. Input is encouraged to suggest the suggested research activities in support of the goals. To give you an example of these relationships, the societal beam could be to clarify the oceans role and atmospheric processes.

And then you may want to quantify the role of the ocean at the research activity to support that goal could be to advanced modeling capabilities. Our public input . Is now open until January 1. But we will continue to accept additional input throughout the plant development process. Were going to be developing the plant based on the input we have received of the public. Subject matter experts represented on the subcommittee on SOST will develop the draft and the final plan. We at SOST are crafting criteria to guide which societal themes and research goals and research activities are going to be included in this plan. MB authors from the federal agencies will be selected once the key sections of the plan have been identified. And that identification is going to be with your assistance. We will begin developing the draft plan in January and we will release it for public comment before ultimately policing a final plan later in the year. During this public comment. Now, we are identifying topics and brought structure. This is not the only public comment period. There will be additional public comment. Once the draft is put together. In terms of engagement, the SOST plan is to engage academia industry and for private that's my profit entities, nongovernmental organizations, stakeholders, public, international ocean related entities and other Federal and nonfederal sources. We ask your help in assisting us expand our network of people

and organizations so that they are aware of what's going on. The interested party will have multiple opportunities for input. The public comment period on the draft plan and participation in community engagement activities like conferences, webinars and meetings. Input from regional perspective is also important to assure alignment and complementarity between the national view and issues most pressing 2 localities, states and tribes. We received a number of comments from folks in the Great Lakes area. That is one of several types of regional perspectives that will be radical to include. Regional governance Accord 80 entities will be engaged to ensure this conductivity. We have confirmed town hall meetings at AG you . We will be giving public town halls very similar in structure and content to this webinar that we're doing right here. In addition, we will be hosting some in person meetings and other webinars and we will make sure to circulate the details as we finalize. As previously mentioned our public information. At this stage is open now until January 1. We are invited all interested parties to provide input relevant to this enterprise. Suggestions directed towards the plan should be structured in specific topic areas that should be considered for inclusion are particularly encouraged. Mechanically, we had a commenting website graciously worked on and provided to the US Global change research project. The link is provided on the slides. And you can choose to submit individual comments as individuals or for your institution or in a group. And you have the ability to attach a document as well. We also, here and the standard calendar block diagram have proposed a tentative schedule to give you an idea of our participated timeline. And you can see that there is only a little bit left in 2016. And a lot left in 2017. Our goal, we anticipate having this done in 2017. Once the public information. Closes in January, we're going to be finalizing our writing teams from the federal agencies. And we will develop the draft plan. As I said earlier we will have formal public comment. To address that trap. And a series of additional outreach together input to put into the final plan. Our last slide , we have created an information website about the plant that includes progress update, draft materials for your review, instructions on how you can provide input and other community engagement details. And that is the link as shown here. In addition, we have a general email account, it is the bottom one they are. That's they are. Were you can submit comments or questions at any time throughout the plant development process. That concludes where we are at this point. We hope this is enough of a background for you to begin asking questions are put forth some ideas on this plan. We thank you again for your time and we will open the floor to you. We look forward to hearing your input. I will also point out that Richard, and the other cochair is also available here with us as is many of our staff members. Do you have anything you would like to add Richard ? Sumac it might be useful to show the website again. When the website concludes it automatically sends everyone to the website.

I think we will turn it over to the Q&A session. One moment for your 1st question. I want to make sure we are all having active communications. We are not hearing any questions at this point here at headquarters.

Your 1st question comes from Beth. Thank you for putting together this webinar. A quick question at the very beginning you mentioned that this is not being viewed as a refresher of the 20s that my 2007 plan that was updated in 2013. Can you talk a little bit more about that ? Are we supposed to be looking at this wholly new or revisiting those to see if they should change in scope ? Sumac thank you for asking. When we said it's not a refresher, it was, as you noted revised in 2013. We wanted to be clear that this is not going to be a revision of that plan. And continuing with the same title and structure and content. I am sure or, I would anticipate that it's likely that some of those points that were identified as important back then are still important and remain important in the future. But, we will be talking about putting together a completely different plan. Among other things we anticipate , our goal is to have this plan be shorter. And to be restructured a little differently as we went through here. We were trying to draw a line bear. Making it clear that there is is not a revision of that document.

Thank you. Sumac the next question is from Paul. Sumac

you mentioned

that the SOST is in consultation with the federal agency will be putting together next plan. And what federal agencies are involved in this process ?

SOST is a committee that commit -- consists of federal agencies that have a significant ocean

SMT interest. Those of the federal agencies to which we are referring when we talk about federal agencies. SOST is composed entirely of those agencies. There are about 22 agencies and bureaus that are involved. I cannot do them all. [ multiple speakers ] the Mac I was just wondering if it was just in SF and NASA or with the National Park Service and USGS ? USGS is actively represented on SOST. Pretty much the agencies that you can come up with off of the top of your head plus USGS is actively represented on SOST. Pretty much the agencies that you can come up with off of the top of your head +10 more . The FDA is involved. Sumac if they haven't ocean science portfolio, you are supposed to be on the SOST. The most active members are the NSF, NOAA, NASA and the Navy.

>> If you are familiar with any of the interagency working group which focus on ocean related matters

those are all SOST based interagency working groups. So this is one of the same community in the federal family.

Okay, I will look that up.

If you want some guidance on that I will -- pop us a email and I can give you some guidance.

This question is from [ indiscernible ].

You mentioned earlier climate change. That is always going to be a big area of concern for many reasons. I wanted to also mention population pressure on the ocean or in the form of changes in coastal areas from human habitat development and resource consumption.

That is an excellent suggestion. And that is the sort of high level societal relevant type issues that we are hoping to capture in this plan. Thank you for making that comment. >> This is Paula with no well. Thank you for this webinar. I'm interested in the inclusion of international entities in this initiative. If you could speak to a potential approach to include international entities in this.

Richard would you like to start on that ? Sumac regal life that this is a US government initiative. So this will be a US document. We cannot do that without recognizing that we have representation internationally as well. With Europe and horizon

2020, we need to recognize that that is there.

And I will also add in, ocean observatories and ocean observing. There is a lot of international assets involved in what the US will plan to do. What we decide to do will not be in a vacuum. So we need to be aware and informed by that global community.

Thank you.

>> Your next question is from Robert.

Hello. I was wondering if Tran 1 was going to undertake any type of crosswalk of focal areas for different mission agencies engaged in ocean sciences and how that might develop into guidance for coordination.

The short answer to that is, yes. And that is part of the process of having the federal agencies themselves be SOST themselves and being the writers. The federal plan that will result will be consistent with the missions of the different various agencies. So the short answer is yes. Sumac thank you and thank you for putting this together.

We have a question that came in online. We will read it out loud and then respond. Sumac containing nearly 20% of the quit water the great lakes is the fresh that's not the largest freshwater system in the world. What is the percentage of finding that currently goes to support science and the great lakes. And how will the new plan and best in new [ indiscernible ].

I do not know off at the top of my head. I do not know the percent of funding that currently goes to support great lakes science. I do know that we have supported various workshops and we do find great lakes science. Please reach out to me off-line and I can get you that number. Regarding how will the new ocean research plan and best in the great lakes, the answer there is that remains to be determined. We are in the process of developing this plan. In answering that question will be an important component of this plan. And it would be a great help if you and your colleagues were able to provide some well articulated input regarding that question. So thank you for that. As I did mention earlier I have had some conversation with folks from the great Lake in the process of this plan development and I look forward to receiving still more input. We specifically does not explicitly state our definition of what the ocean means in the prospectus as well is in our outreach including the ocean open that ocean, coastal estuaries and the great lakes. We are aware of this overall sensitivity. Sumac your next question is from John.

My question is, to what extent will this plan look to leverage some existing plans ? Specifically I am thinking of the American shore and Beech Association to develop a nearshore research plan. I think great minds think alike and it seems that the timing needs to be coincident. And at what point will these types of existing plans be incorporated or will they. Or do we have to go back and comment on individual things ? Sumac there are other plans that are being developed. But not all of them we are aware of. The goal would be that we should be incorporating into this plan that we are developing. For example. The National Academy of Sciences provided a very helpful plan. And that was directly to in SF ocean sciences division. There are a lot of focused plan as you just stated. As another example, the Consortium for Ocean leadership. We do not want to develop -- to develop hours independently. So we welcome alternative input into this from other plans.

Please let us know about which plans are out there. We have a good list but we may not have them all. Sumac okay thank you.

>> One of the points that you made earlier, this is a long engagement.. And there are times where people can engage. The goal is to draw out all of these other issues that we could miss. So if there is this initial engagement. Through the end of this calendar year that does not close out the engagement.. We will have this through the spring. We want this to be inclusive.

>> I was wondering if you could tell us more about these townhome meetings coming up.

Our town hall meetings is on Thursday at 615 at 6:15 PM . Room number 2002. I will be present as will Jack K from NASA. We will give a brief talk and have a question and answer session similar to this. Again, it is reaching out to that particular segment of the community. We will also be at several other conferences. Not just science conferences. We are reaching out to others as well.

Will you be accepting comments on the draft plan ? Or is it just more informational that the plan is there and please comment on it ?

We absolutely want your comments. I reiterate that what is on the website as a perspectives is a straw man to help stimulate conversation. And there is no draft plan written yet. This is the point of trying to engage everyone. To help guide us as to what will and will not be in the plan and its overall structure. We are just starting off this engagement. To help us know what is going to go into the plan. This is the 1st webinar that we have done. We are finding this a fascinating process even from our side. Thank you. The Mac we do encourage folks if they have comments to enter them onto the website. That's a whole lot easier for us to deal with.

Are there more questions ?

We have a question from Sarah. With the current political changes, how will that affect general support and

funding for the priority areas of the research.

We cannot answer that. There is no change in administration yet. And as a federal agency, we are dedicated to our mission. And we will be moving ahead as we can. In fact, this process , from the SOST perspective started 9 or 10 months ago before there was any outcome that was known. And it is essentially independent of that. The federal agencies have their missions that they are mandated to do. So we cannot get into that at this point and time.

Also recognize that part of the strategy for the timing is that we wanted to be able to measure the interest in the research community. And what was important for Ocean priority so we can carry that into the new administration and tell them, what scientists and academics partners and stakeholders feel is important for the research in the coming decade.

We have another question that says, how does SOST and in SF intend to coordinate with tribal codes in treaty areas ? Let me think about that. >> Tribal groups should be incorporated into the plan. And how do federal agencies implement that is another question. And that will vary with certain

agencies and by regions. For Noel, we will have a fair amount of Arctic research that will come back from these Alaskan groups. That will be passed back to Noah and that will be an important part of the research program that we anticipate for the future over the next decade. Know what will take this seriously.

>> What is the mechanism by which funding will be allocated to specific research areas ? The 1st part of that question, to what degree to we think this will direct that allocation of science funding ? That will depend on every agency. This is a trying to identify commonalities and identifying overarching societal goals, activities and so on. Certainly it will influence where resources are placed. But the wording will direct the allocation of science funding. It is going to be left up to each different agency as part of their federal budget building and internal decision making processes. So that is somewhat the answer to the 2nd part of the question which is what is the mechanism that funding will be allocated ? That will be different from agency to agency. There are mission specific obligations. Certainly within NSF our core mission is research, technology and education and the ocean areas. So our mechanism will be quite different . The overall arching goal of the plan is to identify and give some context and help to inform the agencies as they are developing their own internal budgetary and strategic planning.

My vision is that this will help shape the president's budget request over subsequent years. It will affect the budget in 2 ways. It will provide guidance to ocean agencies as to what the White House thinks are important science priorities. And secondly, as far as OMD, you budget submissions to the agencies and it gives them an opportunity to see what are the high priority science items. And how the hill will view this as totally separate. This will be a White House document. Hopefully the hill will also read it and take this into consideration as they develop appropriations. We are always talking about 2 parts to the budgeting process. One is the president's omission and how the hill response to that appropriation. But this will document where the science needs are for Ocean S and T over the next decade. So hopefully it provides guidance.

We have an additional question that says are there any request for basic research ? Is there any emphasis on fieldwork ?

Yes. That is exactly the sort of basic research and technology and so on. Fieldwork, modeling laboratory studies. We are looking for the science questions and what are the different scales of science questions and how we can answer the science questions. Whether it's fieldwork modeling or a lab study approach or a degree of integration or what have you. We expect that the meat of the plan,

certainly two thirds of the plan will be structured around research priorities and activities oriented around the basic and applied research.

Keep in mind, this is not a budget request. This is not going to say, we need $100 million to build another ship. But it will identify what the research, societal themes and goals and activities are that the US government needs to support over the next decade.

>> And the site there is another question on your list. The question is from Robert. >> Hello I am representing the Midshipman-Atlantic regional planning body. We want to thank everyone for this webinar and opportunity. And I know that the that we are feeling the same way. We are looking forward to submitting a regional approach to overall high-level research areas. I'm wondering what is the best way to do that ? Is there a specific format or should we write a paper ? What is the best way to do that ? >> My answer is whatever works for you in terms of simplicity and structure. I would think that if you go to the website, there is the ability to attach documents there. And there are also -- and there are also comments through the website that will enable us to sort them easily. But the highest priority is to make sure that you feel that you can accurately convey your message.

So, whatever works best for you and your team. And there are different ways to do it. And if you have lessons about that you can follow up with us.

And this is a nuance. The SOST also provides scientific advice to the national Ocean Council. And the planning body that was just

discussed here from the Midshipman-Atlantic also aligns with the national Ocean Council. It's great that we will get comments from them. We are right now within active conversation in NOAA and how to provide scientific support to scientists in need.

We do not have any further questions that are showing up. One last call for a last question. >> Nikki asked what is the idea submission ?

Brief and to the point. If you want to provide a 3 or 4 page white paper, that is okay as well. But we really want the comment.

Thank you again everyone for your time. As a reminder, this is our 1st one. We will see you in conferences and we can take your input through the web, email, through future public comment period after this one when we get to the plant itself. But we just need you to be engaged and involved we greatly appreciate the time you're putting into it. Therefore, this is an important thing for all of us. Thank you very much and we will sign off at this point. Have a good day everyone.

[ Event concluded ]