Scientific, Technical Assessment and Reporting (STAR) Meeting

Thursday, February 25, 2021
10:00 AM – 12:30 PM

Join by Webinar:
Meeting Number: 120 172 0770
Password: STAR
Webinar*: https://umces.webex.com/umces/j.php?MTID=mdc2a73d4daddff074238398170f9af16

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Meeting Materials:
https://www.chesapeakebay.net/what/event/scientific_technical_assessment_and_reporting_star_team_meeting_februa2

This meeting will be recorded for internal use to assure the accuracy of meeting notes.

Action Items

- ✓ Bruce Vogt suggested having a presentation on the Mid Atlantic State of the Ecosystem Report because it is a good example of bringing multiple indicators together under management relevant ecosystem themes.

AGENDA

10:00 **Welcome, Introductions & Announcements – Bill Dennison** (UMCES) and **Scott Phillips** (USGS)- STAR Co-Chairs, **Peter Tango** (USGS) and **Emily Trentacoste** (EPA), STAR Co- Coordinator

Upcoming Conferences, Meetings, Workshops, & Webinars-

- The 31st Annual Environment Virginia Symposium - March 23-25, 2021 (Virtual)
- National Watershed & Stormwater Conference - April 13 – 16, 2021
- National Monitoring Conference - April 20 – 22, 2021 (Virtual)
- Chesapeake Bay Landscape Professional Winter Session - December - March (Virtual) (Arlington, Va.) (Lancaster, Pa.) (Annapolis, Md.) (Norfolk, Va.) (Fredericksburg, Md.) (Columbia, Md.)

10:05 **Chesapeake Bay Program (CBP) Communications Update – Marisa Baldine** (CRC)
March is Women's History Month so they will be having some feature articles on women around the Bay. Chris Guy was able to provide resources on the saltmarsh sparrow which will be their creature feature in March. The Bay

Barometer will also be released in early March along with an article informing the public about the release. In April, themes include Keep America Beautiful month and Earth Day. In May, CRC staffers Julianna Greenberg and Breck Sullivan are contributing blog posts about invasive species and climate change impacting wetland migration, respectively.
The Communications Team is looking for suggestions on creature features that they have every month. Annabelle Harvey stated STAC will have a workshop report coming out likely in late March on freshwater mussels that would be great for creature feature or another article. Peter Tango suggested consulting with Joe Wood (CBF) who just provided an update in a meeting on the STAC workshop on mussels in the watershed.
Chris Guy stated Fish and Wildlife Service has put together a list of At-Risk Species in the Northeast, 17 occurring within the Chesapeake Bay Watershed. These are proposed for threatened and endangered but may or may not be listed. A wealth of options for creature feature, and Chris Guy welcome the Communication Team reaching out to him to learn more.
Peter Tango stated a good climate change related creature might be snowshoe hare. It is not healthy to be a white creature in winter when there is no snow around. It makes owls very happy as easy dinner. Changes in snow cover relate to changes in distribution. Food for thought as a fun creature to tie into changes in climate in the high elevation habitats of the watershed.
Scott Phillips shared a recent overview of invasive species: Densmore, C.L., 2020, Aquatic invasive species in the Chesapeake Bay drainage—Research-based needs and priorities of U.S. Geological Survey partners and collaborators: U.S. Geological Survey Open-File Report 2020–1057, 23 p., https://doi.org/10.3133/ofr20201057.

Peter Tango thanked the Communications team for working with the Chesapeake Monitoring Cooperative (CMC) to release their report on their first 6 years. Caroline Donovan stated the CMC Achievement report is posted on the CMC Website and will be sent out via a variety of newsletters and social media posts starting in early March (next week).
https://www.chesapeakemonitoringcoop.org/news/the-cmc-reflects-on-its-first-six-years/

Bruce Michael provided a MD DNR Monitoring update. There has been a hard hiring freeze in MD, but he just received approval to hire all contractual and seasonal employees for the monitoring program. This will be 12 individuals. The Chesapeake mainstem monitoring is their priority and they have been able to complete it but having a full staff will be helpful when they start ramping up for shallow water monitoring in April. MD got a lot of snowfall in the upper part of the watershed they so looking at the flows on the Susquehanna River and Potomac River and what the impacts may be this year. Bruce Michael mentioned there was a high flow event in late December where multiple flood gates were

opened on the Conowingo Dam which may need to happen again now due to the snow.
Kristin Saunders asked Bruce Michael to share the hiring links with the CBP so the Diversity Workgroup can distribute them to a wide diverse audience.

Theme: Indicators

Today's meeting will showcase indicators within the CBPO and from partners in the watershed. Discussion will focus on the application of these indicators and understanding their utility to partners so they may help inform decisions.
Peter Tango will open the theme with reminders of the need to be selective for indicators and how they need to inform decision making, and the CBP indicators framework.

10:15 **Status and Trends Workgroup – Katheryn Barnhart (EPA)**

Materials: Status and Trends Workgroup Presentation

The Status and Trends Workgroup reconvened in November 2020 after a two-year hiatus that resulted from competing program priorities and staff turnover. It is led by the new indicators coordinator, Katheryn Barnhart. The Status and Trends Workgroup is the keeper of the Indicator Framework which provides a way to describe the CBP information needs as they relate to adaptively managing progress toward each outcome in the 2014 Chesapeake Bay Watershed Agreement.
Discussion for STAR: Katheryn will provide an overview of the workplan priorities for the newly convened workgroup, identify which needs are applicable to the Status and Trends Workgroups, and discuss which needs may need additional resources from STAR or other CBP workgroups.

One of the Status and Trends Workgroup (STWG) focuses has been trying to reestablish the workplan and new priorities for the workgroup based on new membership and possible changes within the CBP. Katheryn Barnhart provided an overview of the Status and Trends Workgroup, which is under the Scientific, Technical Assessment and Reporting Team. The past and present scope of work includes:

- Ensure Chesapeake Bay Program suite of indicators link directly to Agreement outcomes using the Indicators Framework.
- Work with Goal Implementation Teams (GITs) to change or redefine previously approved indicators to adhere to the Framework.
- Use the Indicators Framework:
    - To guide development of indicators. Develop clearly defined criteria to assist the GITs in developing and refining indicators and understanding the relationship between the information types in the Framework.

    - highlight commonalities among proposed indicators or identified needs across outcomes.
    - illustrate the different roles the same indicator can play in multiple outcomes or GITs.
- Offer guidance to GIT coordinators and staffers seeking to develop new indicators, as available and appropriate.
- Ensure appropriate management of indicators not connected to Agreement outcomes.
- Manage the process of sunsetting old indicators.

Katheryn Barnhart went over the general membership of the workgroup that was established in 2018, but it has shifted due to changes in structure at the CBPO and in the partnership.

STWG is readjusting the priorities items for 2021 still within their scope of work and mission. STWG met with workgroup members to gather suggestions for these items. She discussed two items that are core items that will move forward in the workplan which are:

- Continue to ensure all indicators are updated to Chesapeake Progress and continue to be relevant to the outcomes they inform,
- Continue working with Communications Team and other relevant teams (e.g. Local Engagement Team) to communicate indicator results/progress

She then discussed suggested workgroup items that fit within the scope of the STWG, but she would like to gather input from STAR on how they fit within the priority of the larger STAR team and which ones they should focus on initially. She broke the items into four categories:

- Updating Indicators to Chesapeake Progress
- Indicator Development streamlining process through information sharing
- Factor Influencing Indicators
- Involvement in SRS process as liaisons

STAR members participated in a menti to provide priorities for the categories based on the items listed in them available on the presentation. Menti results are available here, and they show the following ranking:

- Indicator Development streamlining process through information sharing
- Updating Indicators to Chesapeake Progress
- Factor Influencing Indicators
- Involvement in SRS process as liaisons

Bill Dennison commented UMCES is developing an Environmental Management Certificate Program and one course is on report cards. He would like to collaborate with Katheryn when they are developing the videos for the course. The course is available online starting next week. A link to the Professional Certificate program is available here.

Bill Dennison agreed the first priority should be Indicator Development because they still need to fill out the indicators especially for GITs that do not have any indicators.

Scott Phillips asked Katheryn Barnhart if she saw the workgroup being able to do a little work on all these categories. He asked what they have the capacity to complete. Katheryn said she wanted input to understand what to focus on first, but in the future, they can hopefully move forward with some of the other categories. Katheryn said the space for STWG is appropriate for indicator development and others have asked for support on this item.

Scott Phillips would like to consider how to have indicators that are more quantitative for the outcomes that are more qualitative. Katheryn Barnhart said the STWG is starting to have those discusses.

Bruce Vogt commented on updating indicators that there should be a review to make sure the indicator is still relevant and useful before updating. He also thinks they could do better synthesizing across outcomes and/or indicators to tell a story about what is changing (indicator) and add analysis as to why it matters. Katheryn said the Climate Resiliency Workgroup has also suggested this so they need to brainstorm how to visualize it for the public on ChesapeakeProgress.

Katheryn Barnhart continued with the presentation with suggestions from workgroup members that fell outside of the STWG resources and scope of work. These suggestions may fall within the larger STAR team or other GITs. She wanted to bring them in front of STAR to see if there are any current efforts for these suggestions or support from other STAR workgroups to move forward with these items.

Peter Tango stated Sean Corson is working to understand the status of the current indicators and their outcomes. Peter suggested holding a discussion on how to incorporate quantitative measures into the qualitative indicators and asked if this topic was a part of Sean's group discussion. Carin Bisland said this is not going to be the focus with Sean's group. They are focusing on targets that have measures the CBP can currently measure and understand if the program is on track or behind schedule. She agrees the quantitative measures would be a great discussion for others to consider.

Scott Phillips stated he was asked if the Toxic Contaminant Outcome going to be done by 2025. The answer is no because the outcome is to improve the knowledge of toxic contaminants. He stated there should be an option for making progress, but work need to be continued when assessing the indicators. Carin said it is not about being done in 2025, but it is about meeting the target in 2025 established in the Watershed Agreement.
Doreen Vetter agreed there is a need for a quantitative metric for indicators that are qualitative. She suggests working through that in the workgroups with the subject exports to understand what "increase, growth, improvement," means to that workgroup. They need to consider what are they trying to achieve, how are they are going to do it, and by how much. She endorses the idea of engaging in a discussion using the STWG as a space to hold it.

Bill Dennison said what they have found when working with other groups they are gathering information from that they are doing actionable items, but they need to quantify what they are doing. Sometimes they need an indicator group to help see that and understand the story for the indicators. Bill stated to focus on the outcomes and then use the indicators to address them. Sometimes focus is too much on the individual indicator, but they need to understand how they are interconnected to tell the story.

Bruce Vogt said a good example of bringing multiple indicators together under management relevant ecosystem themes is the Mid Atlantic State of the Ecosystem Report. He thinks a presentation on this report could be informative for STAR. NCBO has contributed the past two years. The 2021 report will be released soon: https://www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/state-ecosystem-reports-northeast-us-shelf

10:45 **Chesapeake Bay Watershed Report Card Indicators – Alexandra Fries (UMCES)**
Materials: CB Watershed Report Card Indicators Presentation
Alexandra will provide an update on the indicators for the Chesapeake Bay Watershed Report that they have made progress on with help from CBP staff and may be included in the 2020 Report Card.

The 2020 Report card will come out in spring, and today Alexandra Fries is talking about the watershed indicators and not the tidal indicators. The Protected Lands indicator is complete, and the threshold for it is based on protection of 30% area, which is the Chesapeake Conservation Partnership (CCP) 2030 goal.
Renee Thompson suggested different messaging. The CCP dataset gathers everything that is valuable land, and the areas with the highest score had the most overlays with the protected land dataset. The data separates them by higher and other values, but they are all valuable lands. The grade is how much is protected within those valued lands. Alex said the actual methodology of the

indicator will be available on the website. She will reach out to Renee to make sure their communication is correct on the website. Renee said the indicator shows they are doing great work with protected lands, but there needs to be improvement with the lofty goals.
Peter Tango said he thinks the beauty of this is there are many interests at county level, but it provides a watershed-wide overview according to major watersheds people associate with, people can relate to, and recognize. He assumes folks for their individual purposes can drill down or sum up the information, but the indicator uses major basins to communicate and portray the results.
Carin Bisland asked if the 30% by 2030 CCP goal differentiated value for different reasons. The Executive Order is related to climate resiliency, but some of the valuable lands may not best address resiliency (e.g. it could be ball fields vs wetlands). Kristin Saunders stated the 30% is an overall percentage of landscape level resiliency. It was not specific to climate, or DEIJ or any category of value. Carin said it is important to consider what it is valuable for because it will help target which groups to reach out to that care about those values.
Alexandra Fries said Carin's suggestion is getting more towards recommendations compared to the status that is represented in the indicator. They hope the indicators and report are one tool to help bring this information together in an easily digestible manner that leads to action.

The Stewardship indicator was developed by the Stewardship Workgroup and Opinion Works based on a 2017 baseline citizen stewardship survey. The index uses behavior, volunteerism, and civic engagement. The indicator is currently in draft form because they do not have final approval, but it is recreated using the same methodology as the survey. The question is can they expect citizens to do 100% of everything they should be doing all the time. As a result, they need to consider making the best score a 75% vs a 100%. Otherwise known as grading on a curve. The graph shown in the presentation includes the curve because without the curve, the entire watershed would be dark orange and red. They need to consider what do they want to communicate with the indicator. They can communicate that they are not doing well at all which is realistic, but they know from social science the public needs something positive to hold onto for continued effort.
Peter Tango asked if there is a repetitive cycle for collecting the survey data for the indicator. Amy Handen said they are in the process of developing the information collection request so they can collect another round of data. They are hoping in the next year or two to repeat the survey. They did not intend the survey to be repeated every year or every other year because there will not be much variability in the data each year. Alexandra Fries said they can also communicate more data is needed, but they should do something with the data available now. Indicators are also supposed to be updated, so they can learn more once the survey is completed again and incorporate it into the indicator.

Renee Thompson commented scale is relative to the watershed area. Renee does this a lot with GIS topics. An example is the Cross-GIT mapping effort. A high value score in PA is not the same as a high value score in MD. This allows users to see "best" or "worst" for them. She does not find the "curving" problematic, but it needs to be communicated. Amy Handen said she would like to loop Renee into future discussions on this indicator to share her perspective on curving.

Fish Community indicator is at the beginning stages of development, but it may be able to be incorporated into the 2020 report card. Benthic (BIBI) data is already in the report card, so they wanted to incorporate fish community data. They collected and organized data from the states and local counties and calculated the Simpson's Diversity Index by reporting region and species richness. Alexandra Fries is planning to calculate the Shannon Weaver index too. She would like input if fish diversity should be included as an indicator and input on the data timeline. It does not need to be a report of data every year. They could consider a rolling year result. She noted the Elizabeth region is not on the table. They have recently sent her data, but they have not been monitoring since 2014. They are starting their monitoring now.
Bill Dennison asked a clarifying question that the table is showing diversity and richness and not actual counts of fish. Alexandra Fries said correct. The diversity calculation has abundance in it, but they are not looking at abundance for the indicator.
Bill Dennison asked how they set the threshold for the Simpson's Diversity calculation. Alexandra Fries said the diversity calculation is on a 0 to 1 scale. They took the inverse and changed the scale to 0 – 100.
Bruce Vogt suggested meeting with him and few other fish scientists in MD and VA. Scott Phillips suggested talking with Kelly Maloney USGS who is working with freshwater fish data. Kathy Boomer said it is important to look at composition particularly with regard to invasive species. Alexandra Fries commented for another project she did a ratio of the invasive and native species which might be interesting to look at with the fish community data.
Bruce Vogt said they could consider mainstem as well with ChesMMAP but for now focus on this data. He asked if Alexandra Fries was aware of the meta data inventory which has a list of fish data. Bruce Vogt stated AK Leight is the contact. Carin Bisland commented native vs nonnative species would be good. She also suggested wild vs stocked.

There are multiple Diversity Indicators they are exploring which they presented to the Diversity Workgroup in fall 2020. The first one is walkability to a park in 10 minutes. It is a Public Access indicator but based on walkability. The indicator includes two measures, one for total population and one for diverse groups. Alexandra Fries asked for input on what labels should be used for the diverse groups. The indicator on the slide shows the total population results.

Renee Thompson asked about the underlying data set they used, and if this data could be shared with the CBP. The data is for each park and overlaying it with the watershed regions. Each park has data for the percent of people that can walk there which is broken out by multiple demographics. They first separated the parks by percentage in case a park is in two regions, and then they looked at the park range verses the population. They are happy to share the data, methods, and R code.
Kristin Saunders stated she needs to make sure Alexandra Fries is connected to the GIT funded project about to be awarded that will help define metrics for diversity and access (beyond walkability).

They recently began working on the Diversity Heat Vulnerability Indicator, so Alexandra Fries did not have any results to show. The data is from NASA and Groundworks, and it creates a heat vulnerability index based on four categories - tree canopy, impervious surface, land surface temperature, and percent households in poverty. They want to repeat the methodology for the watershed and show the results to the Diversity Workgroup.
Peter Tango said he appreciates Alexandra Fries is adapting an existing indicator that is out in the world to create a larger regional use of it and not trying to create something new from the ground up.
Julie Reichert-Nguyen commented she sees a connection with the heat vulnerability with the change in extreme temperature climate change indicator on Chesapeake Progress. They are planning to have discussions with the Forestry Workgroup around targeting tree canopy resilience projects in relation to the extreme temperature indicator.
Katherine Brownson said there could also be some interesting connections with ongoing conversations around tree equity. Below is a link to a new tool being developed by American Forests to calculate tree equity scores:
https://www.americanforests.org/our-work/tree-equity-score/?gclid=Cj0KCQiAst2BBhDJARIsAGo2ldXnz_8pXSwd-MtJX6bUhgQfwXPghFphJXKGHLDWyWLCw7MWMC2pkCEaArcEEALw_wcB
Sally Claggett commented DC and VA have also developed similar mapping data. She requested they check with the Forestry Workgroup and, not just Diversity Workgroup.

They are also working to develop economic indicators. They are working with CouncilFire, and they are going to focus on economy strength. Five sub indicators they are looking at includes economic activity, equality, local ownership, diversification, and entrepreneurship.
Bruce Vogt said Scott Knoche at Morgan State PEARL might be interested as he is an economist. Bruce can help make connection.

11:30 **CBP Climate Change Indicators – Julie Reichert-Nguyen (NOAA) & All**

Materials: Climate Change Indicators – Cross Outcome Utility Presentation

During the Climate Change and Resiliency Cohort Quarterly Progress Meeting, the Climate Monitoring & Assessment and Climate Adaptation Outcome leads asked the Management Board to identify utility behind climate indicators being selected for development and updating on Chesapeake Progress. The Management Board in return asked the leads to come back to a future meeting with a list of climate change indicators for consideration. Julie will present the short list of climate change indicators that the Climate Resiliency Workgroup (CRWG) is currently advising on that have cross-outcome utility and cross-workgroup support.

Previous effort to look at climate change indicators at the CBP includes a GIT-Funding project by Eastern Research Group (ERG) to conceptualize, select, and partially develop a suite of indicators. They identified over 210 topics as potential indicators and then used criteria for choosing possible indicator development which narrowed the list to 21 topics. Data and metrics were available immediately for 10 topics with three being existing indicators from other CBP workgroups and 7 as new climate change indicators to be posted to Chesapeake Progress.

Even though the CRWG currently has indicators, they have come across some challenges. Majority of outcomes in the Chesapeake Bay Watershed Agreement are affected by climate change which means there are a lot of topics that could be used as indicator, but the CRWG wants to make sure there is utility in the indicator. Some of the current climate change indicators are not being used, and management purposes for those and new indicators need to be defined. Also, maintaining and developing indicators is very time-intensive, but the CRWG has limited resources and capacity from climate change indicator work. They are looking for partners to provide the data, develop the indicators, and provide continuous maintenance.

As a result of all these challenges, The CRWG created guiding principles to move forward with climate change indicators. The climate change indicators they focus on will have a clearly defined management purpose to inform decision-making for the CBP outcomes. Indicators will also require a respective workgroup other than the CRWG to lead coordination in updating indicators related to their outcome and review metadata documentation. Finally, there needs to be an agency/organization committed to being the indicator developer.

The CRWG role with the climate change indicators is to assist workgroups in identifying management purposes, potential data, and indicator developers. The CRWG may collaborate on GIT-Funded projects aimed to develop or update

climate change indicators and can advise on updating metadata documentation and result summaries for Chesapeake Progress.

Julie Reichert-Nguyen summarized the CRWG-proposed climate change indicators decisions. The Average Air Temperature Increase and Total Annual Precipitation Change indicators are currently on Chesapeake Progress and they will leave these methods as is for the indicator. Indicators that also currently exist on Chesapeake Progress but may need revision to better connect with CBP outcomes includes Stream Temperature Change, Relative Sea Level Rise, and Change in High Temperature Extreme indicators. The CRWG is proposing to archive the current River Flood Frequency and River Flood Magnitude indicators. They are also exploring data and methods to create a Tidal Bay Water Temperature Change indicator.

Julie Reichert-Nguyen then went into more detail for each indicator above to describe the utility or lack of utility, possible collaborative workgroups, data source, status, and potential timeframe. The Stream Temperature Change has a possible method revision to connect more to identifying and protecting resilient brook trout habitat. The existing Sea Level Rise indicator shows six tidal gauges and showing change over time. This may not be useful by a spatial and temporal scale to assess wetland loss and migration. The potential new indicator may not represent a bay-wide indicator more location based to assess the most vulnerable areas for marsh migration and wetland restoration based on sea level rise projections. Tuana Phillips commented sea level rise impacts relating to lowland communities at risk of being flooded is an important DEIJ issue connection. They have seen island communities disappear in the bay, moving people to other areas. It was also commented that nuisance flooding is leading to critical infrastructure change issues for the future which is an important piece to add to future of the Sea Level Rise indicator. Bill Dennison said he likes the idea of connecting Sea Level Rise to direct human impacts--like the heat vulnerability index that Alexandra Fries presented. Putting a human face on these indicators is powerful. He suggested reaching out to Ming Li (UMCES faculty) who is the lead on a national coastal inundation project. The current High Temperature Extreme indicator may not be structured in a way for it to be useful for informing management purposes so the CRWG is looking to connect it with vulnerable underserved communities to inform tree canopy resilience projects. The new indicator they want to pursue is the Tidal Bay Water Temperature Change indicator and connecting it to water quality and living resources. There is a current Scientifical Technical Advisory Committee (STAC) proposal to explore the ecological implications and management responses for this indicator to help identify management purposes. Peter Tango said the sentinel site network has continuous monitoring data. These sites should be dependable for assessing change in frequency of temperature threshold

exceedance and duration each year above critical thresholds as a measure to track tidal bay water temperature conditions.

Bill Dennison commented on the new indicator of Tidal Bay Water Temperature Change and connecting it to thresholds for Submerged Aquatic Vegetation (SAV). He said there is already information on temperature thresholds for SAV habitat from Virginia Institute of Marine Science (VIMs). Julie said they are interested in knowing who could be potential provide data sources and structure the indicator for development. Peter Tango said he is interested in the frequency of the temperature changing from average to extreme events because it is this change that will really impact species.
Kathy Boomer is concerned about dropping the river flood indicators. Climate change is going to impact the duration and frequency of flooding and implications for discharge. Mark Bennett said it is key to find a group that wants to restructure the indicator to connect to their goals and outcomes. When the CRWG initially created the flood indicators, it was based on what data was available, but they want to now structure them, so they are useful to other GITs and their outcomes. The next step is about finding someone with the time to develop the indicator. Kathy said dropping it makes it seems that the issue is not important. Julie said there is not a data stream to update them currently so maybe there is another organization that could partner with the CRWG to provide the information. Based on discussion, The CRWG will not remove the flooding indicators, but they will not be updated until another data source is identified.
Kristin Saunders aske Bill if it is possible this last issue Kathy Boomer raised could in any way be folded into the STAC gaps analysis.
Bill said Kathy is a key member of the estuaries team, so yes, they can be sure to fold it in.

Julie Reichert-Nguyen moved to Menti questions to get feedback from STAR on key management applications that would connect each indicator to their workgroup. She also asked for potential timeframes to update each indicator. Menti results can be found here.

Julie Reichert-Nguyen said a common theme based on the Menti results is that knowing the extremes is more helpful than knowing the averages.

Bill Dennison said he saw the theme as the evolution. He said the workgroup started with what data was available to develop indicators and now it is time to transition to being more strategic and find the connections with the other outcomes. Bill suggested incorporating some of the applications gained from the STAR meeting into the presentation for the Management Board.

Discussion Questions for STAR:

- Does STAR agree with the selected climate change indicators that CRWG is focusing on?
- Are there any other indicators that STAR would like to see included? If so, what is the climate resilience utility of the indicator(s) related to the Watershed Agreement outcomes?
- Are there resources to support the development and updates for proposed climate change indicators?
- For the list of climate change indicators, are there agencies/workgroups that have the capacity to take responsibility for developing and updating them?
- Is there utility and importance in the other climate indicators for STAR to assist finding additional resources to support it?
    - Would another workgroup be interested in supporting it?

12:30 Adjourn

Next Meeting Dates: March 25, 2021 (Local Action Cohort Science Needs; Discussion prior to the Biennial Meeting on the status of the Strategic Science and Research Framework and look ahead on ways to improve the process.)

Participants: Peter Tango, Scott Phillips, Breck Sullivan, Tom Butler, Marisa Baldine, Katheryn Barnhart, Alexandra Fries, Julie Reichert-Nguyen, Mark Bennett, Chris Guy, Garrett Stewart, Annabelle Harvey, Jackie Pickford, Kristin Saunders, Julianna Greenberg, Amy, Jennifer Starr, Bill Dennison, Kathy Boomer, Ken Hyer, Nora Jackson, Bruce Michael, Bill Ball, Caroline Donovan, Annie Carew, Doreen Vetter, Joseph Edgerton, Katie Brownson, Mandy Bromilow, Mark Nardi, Megan Ossmann, Renee Thompson, Sally Claggett, Justin Shapiro, Joseph Edgerton, Lee McDonnell, Andy Fitch, Bruce Vogt, Carin Bisland