Joint Coordinator/Staffer and
Scientific, Technical Assessment and Reporting (STAR) Meeting
Theme: Social Science

Thursday, September 22, 2022
10:00 AM – 12:30 PM

Meeting Materials: Link
This meeting was recorded for internal use to assure the accuracy of meeting notes.

ACTIONS

- ✓ Contact Amy Handen (handen.amy@epa.gov) with any feedback regarding the efforts to integrate social science.
- ✓ Contact Amy Goldfischer (agoldfischer@chesapeakebay.net) with any feedback regarding the STAR newsletter.

MINUTES

10:00 AM **Welcome, Introductions & Announcements – Bill Dennison** (UMCES) and **Scott Phillips** (USGS)-STAR co-chairs, **Breck Sullivan** (USGS) STAR Coordinator, **Peter Tango** (USGS) CBP Monitoring Coordinator

Announcements

Communications Update - **Marisa Baldine (CRC)**

Marisa announced the Executive Council meeting on October 11th. Marisa also told the group about a nontidal water quality monitoring field trip to York, Pennsylvania that many Chesapeake Bay Program Office (CBPO) people attended on September 21st. Will Parsons will be publishing some photos from the trip, and Rachel Felver will be publishing an article about the trip.

Scott Phillips announced that last week the Communications Team put out a press release on all the water quality trends including the tidal trends, the river input trends and the watershed trends. Here is a link to the press release.

Update on STAR Newsletter and Request for Feedback – Amy Goldfischer (CRC)

Amy said the most recent STAR newsletter had great engagement and said if anyone has feedback for the newsletter or would like to suggest a new topic of section of the newsletter, you can email your suggestion to agoldfischer@chesapeakebay.net.

Bill Dennison (UMCES) announced that Mike Roman, the director of the Horn Point Laboratory at UMCES, has been the director for 20 years, and is stepping down as director and becoming a faculty member at UMCES. The new lab director will be Mike Sieracki, who has been at the National Science Foundation (NSF) for a few years, and before that at the Bigelow Lab in Maine. Mike's expertise is in phytoplankton, and he will start his position on November 14th.

Breck Sullivan (USGS) announced Jackie Specht as the new co-chair of the Climate Resiliency Workgroup (CRWG). Mark Bennett is the other CRWG co-chair. Jackie will be helping with the Adaptation Outcome. Jackie is the Resilient Coasts Program Director at the MD/DC Chapter of the The Nature Conservancy (TNC) and has been a member of the CRWG for the past two years.

Chris Guy (USFWS) announced that Mary Andrews with the Fish Passage Workgroup is stepping down after 12 years of being workgroup chair. It is the only Outcome in the Habitat Goal Implementation Team (GIT) on track for 2025. The Fish Passage Workgroup did not have co-chairs, so now there is no chair in that workgroup. The workgroup's acting chair is Jim Thompson, but they'll be sending out a solicitation for workgroup co-chairs.

Justin Shapiro (CRC) commented in the chat that Fisheries GIT had an in-person meeting over the summer to talk about blue crab, oysters, and connecting research and observations. Here is a link to the full summary for those interested.

Upcoming Conferences, Meetings, Workshops and Webinars

- Atlantic Estuarine Research Society (AERS): "Community and collaboration: the importance of shared research in a post-covid world" – October 13-15, 2022, Washington College, Chestertown, Maryland. Abstracts can be submitted here (no due date provided) and registration can be completed here (no due date provided).
- Chesapeake Watershed Forum - November 4-6, 2022. Shepherdstown, WV. Registration closes September 23.
- Coastal and Estuarine Summit – December 4-8, 2022. New Orleans, LA.
- A Community on Ecosystem Services - December 12-15, 2022. Washington, D.C. Metropolitan Area.
- National Water Quality Monitoring Council's 13th National Monitoring Conference - April 24-28, 2023. Virginia Beach, VA.
- Species on the Move – May 15-19, 2023. Everglades National Park, FL.
- CERF 2023 Conference: Resilience & Recovery – November 12-16, 2023, Portland, Oregon. Session and workshop proposals due September 19, 2022. Abstracts due May 10, 2023.

10:10 AM **Report out on sessions from University of Maryland Symposium on Environmental Justice and Health Disparities – Amy Goldfischer (CRC)**

A brief report out on some sessions of the Symposium and potential connections to STAR's work.

This year's University of Maryland Symposium on Environmental Justice and Health Disparities, the 8th such Symposium to be held, took place on August 11th-13th, 2022. The symposium is an intersection of academic, government, non-profit and environmental justice (EJ) community leaders. This year's sessions were recorded and are available on YouTube at this link.

Environmental justice is the right of all peoples to healthy, safe, productive, and sustainable environments. The current day environmental justice movement began in 1982 in Warren

County, North Carolina (NC). Afton, NC, a majority black and low-income community, was selected as the site for dumping of Polychlorinated Biphenyl (PCB) contaminated soil. This was already after several years of local industries making Afton their dumping ground for illegally dumped PCB waste, which contaminated the drinking water supply. Residents were joined by civil rights leaders and religious leaders in protesting this environmental racism and fighting for their right for drinkable water and breathable air. Unfortunately, their protests were not successful. However, their fight inspired many others and grew the movement fighting against environmental racism and for environmental justice. In 1991, the First National People of Color Environmental Leadership Summit was held in Washington, DC, building a national and international coalition of people of color fighting the destruction of their lands, communities, and environments. During this event the 17 principles of environmental justice were developed which would guide and define the EJ movement.

In the 1930s, the Federal Housing Administration wrote criteria for mortgages which systemically denied them to people of color, especially Black communities. Additionally, the Home Owners' Loan Corporation (HOLC) drew up maps that assigned areas a grade and color code, designating areas with higher minority and low-income populations as hazardous to investment. HOLC and other lenders refused these communities loans, insurance, and otherwise drove disinvestment, while selectively investing only in white and higher income areas. This racist practice of redlining led to systemic segregation, long-lasting inequality and failing infrastructure. Today, redlined areas and those that have been systemically disinvested from have much greater environmental risks and worse public health outcomes, including excessive heat, flooding risk, increased air pollution and more. The recent bacterial contamination of water in Baltimore, Maryland (MD) leading to a boil water advisory occurred in neighborhoods in West Baltimore which were redlined.

While redlining further baked in structural inequality, some communities have slipped off the map altogether, particularly those that are most impacted by environmental racism, environmental injustice, and public health issues. For example, areas that are not incorporated into a township or municipalities are often denied access to basic human rights. Sandbranch Texas, an unincorporated area near Dallas, has been without drinkable water since the 1980s. Homeless communities are similarly off the map, including people who are street homeless, in shelters, in cars, or staying with friends. Gentrification displaces entire communities out of land and housing they've been in for generations and may not be captured within some data sources. Another community off the map are people who are incarcerated.

Ufuoma Ovienmhada is a PhD student at Massachusetts Institute of Technology (MIT) in the Aeronautics and Astronautics Department whose research focuses on utilizing remote sensing and satellite imagery technology for environmental justice applications. Prior to her PhD work, Ufuoma did her Master's work focusing on applying remote sensing, low-cost sensors, drone data collection and community-centered design techniques to invasive plant species management in West Africa. Ufuoma's PhD dissertation asks: What does earth observation data

reveal about the scale of environmental injustice in carceral geographies? What are the opportunities, challenges, and limitations of applying satellite earth observation technologies to support EJ advocacy?

Ufuoma's research started in the fact that incarcerated people face a unique environmental risk. According to a 2016 report from Paige Williams there are 598 Federal and state prisons located within 3 miles of a superfund site, with 134 of them one mile away. Rikers Jail in New York is in the 95th percentile of national proximity to a hazardous waste site. During Hurricane Harvey in 2017, while most businesses and residents were evacuated, the Texas Department of Criminal Justice (TDCJ) did not evacuate 4 prisons with 8000 people. Accounts from people incarcerated at these prisons documented cells flooded with knee high water contaminated by sewage and waste. People were unable to flush toilets, take showers or change clothes for two weeks. However, the Texas department of criminal justice denied there was flooding at all when pressed. Ufuoma wanted to see if she could use satellite data to counter the TDCJ story. She looked at the Stiles Unit, a prison located in Beaumont Texas outside of Houston and one of the units that was not evacuated. Ufuoma used sentinel-1 satellite data and planetscope optical imager data in order to find out if she could build quantitative evidence of environmental injustice happening around prison facilities. She utilized normalized difference water index (NDWI) with planetscope data, and she used a process of change detection with the sentinel-1 satellite data to determine if inundation occurred from the hurricane.

Her analysis of the planetscope data showed significant increase in water presence at the Stiles unit after Hurricane Harvey. However, her analysis of sentinel-1 satellite imagery encountered a challenge in utilizing this data. The European Space Agency claimed that the satellite images everywhere on the earth, every 12 days. However, the flight path of the satellite missed capturing the Stiles unit during the peak flood dates, counter to this claim. Literally, the area was off the map. Nevertheless, Ufuoma was still able to analyze images before and after the peak flood dates and found evidence of the unit being inundated days after peak flooding. In the future, her work is going to go beyond inundation for other impacts of climate change, also looking at wildfires, extreme temperature, air pollution and more. Her ultimate goal is to show how satellite earth observation can support data informed EJ activism.

How are we accounting for the impacts of environmental racism and injustice in our work? What communities are we not considering currently as stakeholders to engage with, who could be key stakeholders to engage with as we work towards the CBP vision and the Watershed Agreement goals? How can we support the work of communities fighting for their rights who are most impacted by environmental injustices and public health disparities given our unique resources, expertise, and scientific capabilities as the Chesapeake Bay Program partnership?

Discussion:

Bill Dennison commented that he appreciated the questions to put the CBP on the spot to think about the modeling, mapping, monitoring and all the science the CBP does and how the CBP

can use that science to better account for EJ impacts. The UMCES Environmental Report Card added economic, relative housing cost and income disparity indicators into the report card. He thinks there's a lot we can do, and that the Bay Program has not done too much to engage the communities mentioned in the presentation. Bill described Dr. Sacoby Wilson, the Symposium's organizer and founder, as a force and a national thought leader in EJ.

Breck Sullivan said she liked the second question of what communities are currently being considered. As STAR and the CBP moves forward with the monitoring recommendations through the Principals' Staff Committee (PSC) Monitoring Report, this is an opportunity to focus on this question and bring in communities not currently engaged with when expanding the areas sampled and building monitoring networks. Breck also commented those last two slides are a great reminder that communities are facing other challenges and have other priorities, so the question is how to connect the work on restoring the Bay to their priorities.

Chris Guy commented that as the CBP does the science there needs to be people utilizing the science. Chris said that it is important when working with marginalized communities to identify leadership and people to work with. He said if the Bay Program comes in and says "we're from the Bay Program" people are going to have a lot of distrust. They see people come in and ask what do they need but then leave. Chris advocated for infrastructure that can support actually following through on collaborations and work with marginalized communities. Chris also told the group about some pollinator garden programs that they're doing with incarcerated people in Baltimore. He said one of the challenges he found is that it's not allowed to directly deliver money for programs and resources; the money is required to go through an intermediary that is typically a nonprofit.

Bill said they're working with Potomac and Patuxent River Keepers to hold open hours on weekday and weekend hours for greater access, since the Monday-Friday 9-5 workweek isn't always the most accessible time. It's important to not assume what times people are able to show up and make a variety of times available. Compensation is also important. Chris said they had clean up days in the Masonville Cove area for the urban wildlife restoration up there, and they would schedule it for 8AM on Saturday but nobody would show up. They found it's best to schedule it for 2PM or 3PM in the afternoon for best turnout and to get people who are working night shifts. Greg Allen commented in the chat that the Budget and Finance Workgroup is starting a project with EPA's National Center for Environmental Economics (NCEE) to assess how the benefits of Bay restoration accrue in different communities including underserved.

10:25 AM **Enhancing Chesapeake Bay Partnership Activities by Integrating Social Science – Lisa Wainger (UMCES)** and **Dan Read (UMCES)**

This work explored opportunities to apply insights derived from social science research and from CBP partners who use or see needs for social science application. Methods included a review of the state-of-the-science of behavior change research and a questionnaire and interviews with members of the partnership. Findings were synthesized into short term and long term

recommended actions for advancing social science integration and emphasize collaborations with social scientists for adaptively managing aspects of the Bay restoration implementation.

This project was instigated by the Stewardship Workgroup to think about better integrating social science into the Chesapeake Bay partnership. The project managers were Amy Handen and Kacey Wetzel. The project put an emphasis on adaptive management. The project's advisory group provided high level input on methods and goals.

Why should we integrate social science? The problems that we're dealing with require social science. There is a lot of new data and techniques to assess peoples' behavior, preferences and values. The CBP is well positioned to bring in the science but hasn't been focused on social science disciplines. The project goals were to evaluate how social science is already used in the partnership, how people think it could be used, and what their vision is. They hope the project can increase understanding of social science and advance a dialogue about strategies to enhance CBP social science capacity. The methods were: review funded projects produced by the CBP, review literature on behavioral interventions (which make use of psychology and decision-making methods), a questionnaire and interviews with the partners, and a synthesis of findings. The project also looked at social science groups advising other institutions.

The questionnaire was responded by 150 people, and there was a 10% response rate. The respondents were spread across different areas within the partnership. 30 interviews were done; 20 were self-selected and 10 were selected as key informants by the project managers. The strengths of the CBP's existing social science application include that the governance structure embeds many recommended practices intended to promote successful collaborations. Partners said that their priorities were well aligned at their home institutions and the Bay program, and they're able to bring what they learn at the Bay program to their home institutions. Some people felt the Strategy Review System (SRS) was effective at focusing efforts in the GITs, and behavioral practitioners were generally using the best practices of groundwork. Groundwork is an intensive place-based work to understand peoples' values and priorities before implementing a full program (such as doing a pilot study).
The project's main findings and recommendations were:

- ✓ Finding 1: There is a lot of support in integrating social science, though not a complete understanding of all the ways it can address concerns.
    - Nonprofits and federal agency respondents, as opposed to local and state government respondents, were most likely to agree that lack of social science expertise in policymaking is a key reason many Bay agreement goals have not been met.
    - Many respondents who did not practice social science had the view that social science is only about behavior change. Those who do practice social science have a more nuanced view that social science is a way to guide implementation. You need to understand the problems that the public faces, and there could be capacity to improve how we're working with communities if we're willing to adapt.

- ✓ Recommendation 1: Build social science literacy and capacity.
    - Share knowledge through webinars, short courses, workshops.
        - It's not just telling good stories; it's about how you tell the stories.
        - The Lancaster Farmland Trust success story used a behavioral theory – diffusion of innovation – to structure their intervention. They worked off previous work's success, and they did groundwork, enabling them to tailor the program to the community's values. Most importantly, they gained the community's trust.
    - Hire internal social science positions to promote informal learning and diffusion of ideas, and develop a community of practice to support internal social scientists.
- ✓ Finding 2: There's an uneven use of behavioral social science evidence and performance tracking.
    - Effect size tends to be small. Yet, there are cases of success. Case studies may work great in one setting but fail in a different setting. Context variables matter greatly.
    - What is working? 27% of projects reported success. No intervention type is consistently effective. Most interventions did not measure outcomes and were not learning from implementations. Most did not identify behavioral theory.
- ✓ Recommendation 2: Enhance the practice of behavior social science.
    - Evaluate opportunities for unused but promising techniques.
    - Expand the audience beyond homeowners and policy actors to increase impact.
    - Design interventions as experiments to improve effectiveness over time.
- ✓ Finding 3: Missed opportunities for using social science in adaptive management.
    - Support for social science ideas but not a lot of resources and capacity backing it.
    - Respondents share that CBP allows them to propose new programs and ideas but does not always provide assistance in developing new ideas. Social science isn't required, so it becomes a lower priority.
    - Social scientists in the partnership lack capacity to conduct the needed work.
    - Respondents indicated they did not have enough time and capacity to fully engage with the CBP while also accomplishing work for their main organization.
    - Thus, we need more social scientists and dedicated resources to conduct the work.
    - Underuse of social science knowledge as part of programmatic adaptive management.
        - There is a need for groundwork to understand how people engage with these programs and restoration activities and understand why they're working and why they're not.
        - Respondents said managers may assume what motivates people and there was a lack of critical, reflexive interrogation of peoples' assumptions.
        - Local level implementers responded that they got talked to a lot but not listened to from higher up in the partnership.
    - Underuse of social science knowledge as part of institutional adaptive

management.
    - Things that are required get prioritized at the expense of things that aren't mandatory, holding back social science.
    - The WIPs and TMDL take up so much energy it's hard to get the Management Board to do something about other outcomes.
    - Institutional social scientists could do research about the CBP itself to better understand institutional governance structures and mechanisms that could promote better adaptive management.
- ✓ Recommendation 3: Use social science in adaptive management.
    - Develop co-designed programs and processes with the communities affected by them.
    - Adapt institutional processes where barriers have been identified.
    - Use institutional science to better understand partnership function and facilitate iterative learning.
    - Improve incentives for goals other than water quality.
- ✓ Finding 4: Lack of strategic planning for social science application.
    - Effort tends to be opportunistic rather than strategic.
    - Random acts of restoration.
    - People don't want to pay for evaluation science.
- ✓ Lisa gave an example of insights from institutional science using the NOAA Regional Integrated Sciences and Assessments (RISA) as an example.
- ✓ Recommendation 4: foster institutions that strategically apply social science.
    - Develop a detailed strategic plan to enhance the impact of social science funding.
    - Create an organizational structure that can effectively implement the strategy.
    - Create a process to update and adapt the strategic plan.
- ✓ Some potential priorities:
    - Learning and strategic planning
    - Specific and evidence based advice for program design
    - Design interventions as experiments
    - Social science contribution to adaptive management
    - Co-development and groundwork and leveraging the networks

Discussion:

Jeremy Hanson commented in the chat, if someone is with a regional/local body (Metro Washington COG or a Regional Planning District in VA) they would respond or count as "local govt". There are a number of active people in the WQGIT and workgroups in that category so that may be a chunk of the responses. Dan said that 14% of respondents (21/151) reported working for a local government.

Bill Dennison said how could we think about these interventions as experiments, because ultimately the Total Maximum Daily Load (TMDL), nutrient reduction strategy is a giant experiment. How do you think we can get that thinking? Experiment can sound scary to non-scientists. People want to know things with exactness. Lisa responded that it is possible with the right partners and advisors. Lisa commented that in the fisheries realm, the stakeholder

engagement has not been the most functional. There is a strong regulatory arm there so the context is different than other things that don't have a regulatory driver.

Chris Guy said they need a lot of help in this area. The one he's working on is the action plan for the wetlands workshop. One of the things that came out of the wetlands workshop is the inconsistency in the approach to landowner and community stakeholder engagement. A lot of landowners don't trust the government or want to get involved with the bureaucracy. One idea is to develop peer to peer tools. The other one is for work in the urban area, to bring habitat restoration and bring habit back to where the people live. They need help with how to build trust. Chris said he thinks those aspects along with funding are the major barriers to their success. However, right now they have money through the Bipartisan Infrastructure Law (BIL). They need to figure out how to get these projects through the barriers of the local communities. Lisa responded that there was a quote they removed that said people don't allocate enough time to work with communities. Chris said at the wetlands workshop, boots on the ground work was emphasized. Those are often restoration biologists. They will engage with landowners, then get overwhelmed. The Nature Conservancy did this: they put out a survey, got 200 responses, then realized they were at capacity. They had to shift their people to implementation. Chris said there is a need for people who are specialists and can be paid as specialists and short-term internships are not a sustainable way to do this work. Katie Brownson agreed in the chat, saying that community engagement done wrong can potentially even do more harm than good.

Greg Allen commented there is lot of potential with Toxic Contaminants. One example of a completed piece of work was the Fish Contamination Advisory Graphic. There's a GIT funding project in this year's mix that would be a social science based campaign for 3 topics and the fish consumption advisory infographic is one of the topics targeted in that project. For coming work, the place where they're focusing on underserved communities is PCBs in buildings built before 1980s with a focus in schools. Sophie Waterman commented that right now they're developing the Healthy Watersheds tool 2.0, and they're trying to understand what stakeholders want rather than assuming. Britt Slattery commented that it's difficult when they can't focus on one topic area. She said she's looking forward to talking more with each of the GITs and fleshing out these things. Amy Handen said that this presentation was in preparation for their presentation to the Management Board (MB) in November, and to email her with any comments and suggestions. The team will be working over the next few months to finalize the report.

11:22 AM is when they started presenting (below)

11:15 AM **Connecting the SPARROW Model to Social Science – Andrew Sekellick (USGS), Tristan Mohs (USGS), Lean Staub (USGS)**

An increase in environmental impacts on vulnerable communities may be expected due to enduring historical influences, present-day challenges, and anticipated future effects from climate change. An initial analysis of an existing SPAtially Referenced Regression On Watershed attributes (SPARROW) water

quality model and the Centers for Disease Control social vulnerability index (SVI) suggest a possible relationship between predicted in-stream nutrient loads and SVI risk factors. This work demonstrates that the USGS can use existing tools and data to address environmental justice issues. The presenters will discuss this work.

This project started as a conversation in the USGS Maryland, Delaware, D.C. Center's Justice, Equity and Diversity Committee about connecting the science they do to human impacts, specifically impacts on marginalized communities.

They defined a vulnerable community as a community disproportionately affected by environmental hazards due to a history of neglect and marginalization, and identified by specific factors such as poverty, minority status, and housing status. These factors and others can intensify human suffering and loss during an environmental disaster or environmental hazard. Vulnerable communities are also less likely to receive sufficient aid for environmental disasters and issues. This USGS project utilized the StoryMap created by Chesapeake Bay Program intern. An example of unequal aid is the Ellicott City flooding in 2016 and 2018. Low income neighborhoods in Baltimore City where also affected by flooding; however, they weren't covered in the news and received less aid than Ellicott City.

This project could fall under three initiatives run by the Biden administration, America the Beautiful, Justice40 Initiative, and Executive Order 1400, focused respectively on conservation, environmental justice, and climate. This project uses the Centers for Disease Control's (CDC) Social Vulnerability Index (SVI), created with 15 vulnerability metrics and calculated at the census tract level. They will flag communities in the top 10% of SVI and give summary statistics for overall categories. This project looked at minority status and speaks English "less than well" for their data set. SPARROW is a regression model that relates landscape characteristics and inputs to observed data to make predictions of water quality in unmonitored locations. This application used estimates of local nitrogen, phosphorous and sediment yields from a model published in 2019. The team shared results from phosphorous but found similar results from nitrogen and sediment. The method could also be done with CAST data, or spatial layers of pesticides or toxic contaminants or something like that.

The team compared SPARROW water quality model predictions for predicted local phosphorous yields with SVI theme 3 flags (minority status and speaks English less than well). They found a positive correlation; in other words, higher yields of phosphorous were found in communities with those flags (higher with 2 flags, and even higher with 3 flags). Excessive nutrients in streams can lead to harmful algal blooms, drinking water treatment issues, and negative health effects. The team also related the theme flags to HD+ catchments and mapped them. In addition to expected areas such as Baltimore City lighting up, they also noted areas in more rural locations with high phosphorous output, high predicted phosphorous yield and a high number of flags. These rural areas may have a large number of seasonal agricultural workers, protein processing plants, etc. For example, the Lower Eastern Shore and Shenandoah Valley, and parts of PA as well, are farmworker communities located next to protein processing plants.

The team also did gauge analysis with the SVI. They did this with land use in the past to compare how densely monitored different kinds of land use are. This is especially useful for funding changes necessitating adding or taking away a gauge. The gauge analysis with the SVI is to examine which communities are having their water monitored. This can be another dimension considered when funding monitoring. The team is working on a formal proposal to continue this work. Next steps are to look at more SVI factors and more water quality parameters, do more advanced spatial analysis, and do a gauge network analysis to identify a range of social conditions represented in the USGS monitoring network. They did run a Kruskal-Wallis test on the data showed before and found strong evidence of correlation between higher phosphorous yields and those two flags. This type of work is a priority for USGS, DOI and their partners. Showing that they're willing and able to do this work will help make connections with local partners.

Discussion:
Bill Dennison asked has the team thought about digging into some of the specific places they identified and the specific indicators? The team responded that yes, they have. They started by looking at just the minority status category. They're trying to get funding for this project to be able to do more. Bill said that in a graduate class on EJ they asked what do you call minority status. Andrew Sekellik responded that categorization changes by each census. All the data the team used was from a 2012 SPARROW model and a 2014 SVI. The project also uses American Community Survey Data. Andrew added that they're not sure how the index will be consistent through time given those changes. Bill commented that the granularity of these two datasets is unique. Andrew mentioned the CBP web mapper, EJ Screen, that includes a layer for SVI for the Chesapeake Bay Watershed – it's a dataset that is utilized. John Wolf commented that he hasn't looked at individual components of the SVI like this project does. Scott Phillips commented that if they apply for USGS funding sources the CBP would be happy to provide a letter of support. Amy Goldfischer asked what the process of redesigning objectives of the USGS gauge network is? Scott responded that it depends on who is willing to pay for a gauge. This kind of analysis can identify places, and USGS has cooperative funding where they can match funding from a state or local entity to establish or maintain a gauge. Andrew said looking to identify gaps in the network was one application of this work. Breck added that this work could be helpful to the nontidal network monitoring and expanding the nontidal network. Jeremy Hanson commented in the chat that studies and analyses like these are very much needed as a DEIJ component for the whole Clean Water cohort of outcomes.

11:40 AM **Next steps on updating Logic and Action Plan for the Water-Quality Standards Attainment and Monitoring (WQSAM) outcome**

- Feedback on the WQSAM Outcome from Management Board SRS Progress Meeting – Breck Sullivan, Peter Tango, Scott Phillips
- **Discussion: Incorporating the considerations of today's talks into the next WQSAM Logic & Action Plan and STAR's future work –** All

Breck summarized the presentation given to the MB. Breck also went over the new system for

summarizing MB response to asks/filling the gap from the Outcomes. Garrett Stewart commented that the response options for the MB isn't a true "vote"; it's more of a tool to quickly identify which direction the MB is leaning. Afterwards, the MB deliberates to identify specific actions via consensus.

The first ask requested of the MB by the WQSAM Outcome was using the Strategic Science and Research Framework (SSRF) when applicable for federal and jurisdictional grants, proposals and strategic planning; the MB responded they would handle this request. The second ask was address remaining funding gaps for priority needs from the PSC Monitoring Review, commit staff to attend a monitoring report kick off meeting and identify potential resources; the MB responded they would handle this request. The third ask was apply monitoring results and analysis to accelerate progress in the 2025 WIP; the MB responded they would handle this request, but this will be an ongoing effort requiring further collaboration between the MB, STAR and the WQGIT.

Discussion Questions:

- How can we better incorporate social science into the Strategic Science and Research Framework?
- How can the monitoring products of the WQSAM help inform social science?
- What actions can STAR take responsibility of in the upcoming 2-years to bring a closer alignment of WQSAM to social science?
- How can STAR provide science support for application of social science?

Breck also highlighted the Strategic Engagement Team and their new role in the SRS process to work with Outcomes after their Quarterly Progress Meetings (QPMs) to identify engagement, communications and DEIJ needs and work on strategically addressing those.

Bill suggested doing a completely social science focused STAR meeting once a year.

Jamboard:

Image Description: How can the monitoring products of the WQSAM help inform social science? Responses:

- Example: USGS work on SPARROW.
- Engaging the public with monitoring stations so they understand how they work and how that translates into benefits for them (+1)
- Expand sparrow vs SVI analysis approach to include land use assessments, buried streams
- Results from monitoring stations can be used in social science communications and products to connect audiences with what's going on in their waters and lands to help them understand the impacts
- Consulting with local leaders on ideas/ways to communicate scientific results that work for their communities
- It may be very useful for the assessment of where benefits accrue undertaken by Budget and Finance Workgroup
- Think about the reverse question – how can social science inform the monitoring products of WQSAM? (+1)

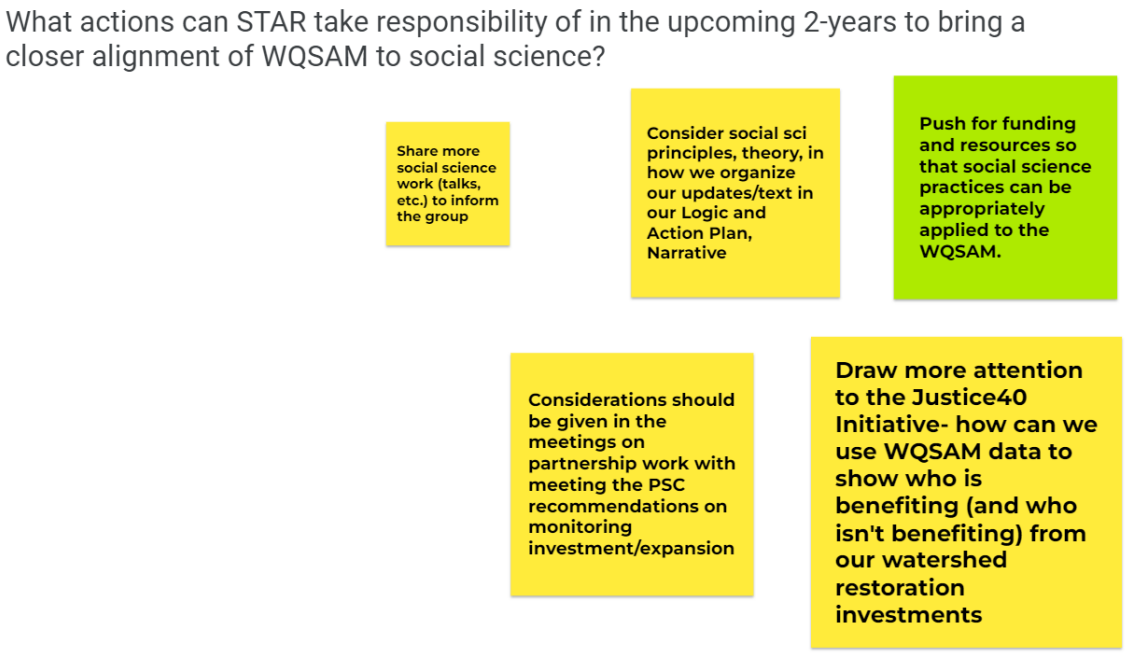

Image Description: What actions can STAR take responsibility of in the upcoming 2 years to bring a closer alignment of WQSAM to social science? Responses:

- Share more social science work (talks, etc.) to inform the group
- Consider social science principles, theory, in how we organize or updates/ text in our Logic and Action Plan, Narrative
- Push for funding and resources so that social science practices can be appropriately applied to the WQSAM
- Considerations should be given in the meetings on partnership work with meeting the PSC recommendations on monitoring investment/expansion
- Draw more attention to the Justice40 Initiative – how can we use WQSAM data to show who is benefiting (and who isn’t benefiting) from our watershed restoration investments

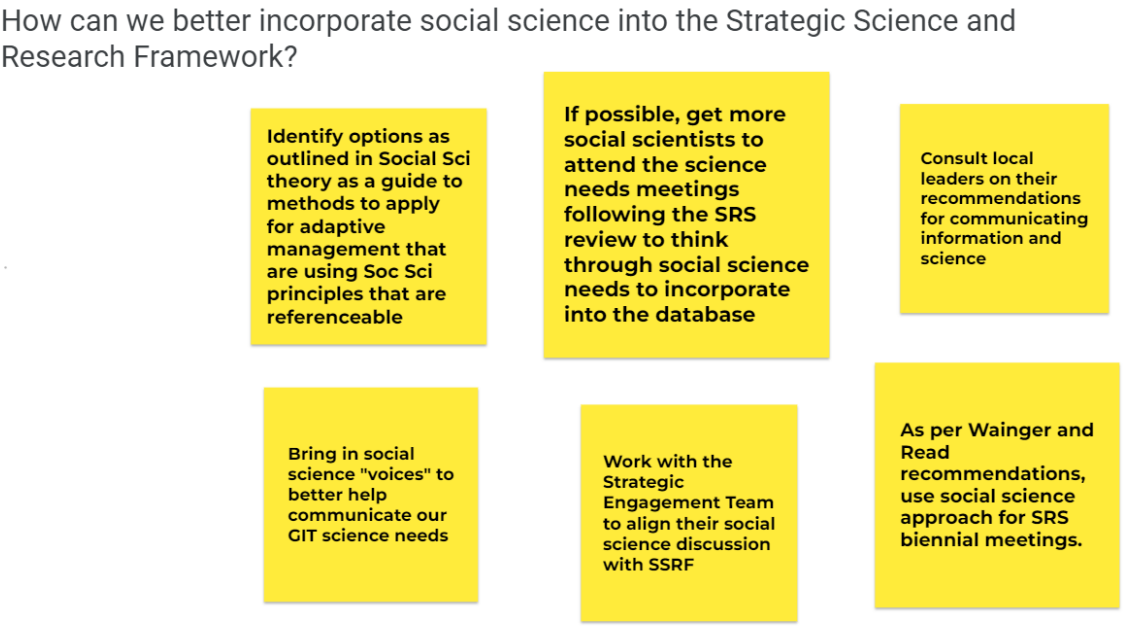

Image Description: How can we better incorporate social science into the Strategic Science and Research Framework? Responses:

- Identify options as outlined in Social Sci theory as a guide to methods to apply for adaptive management that are using the Soci Sci principles that are referenceable
- Bring in social science “voices” to better help communicate our GIT science needs
- If possible, get more social scientists to attend the science needs meetings following the SRS review to think through social science needs to incorporate into the database
- Work with Strategic Engagement Team to align their social science discussion with SSRF
- Consult local leaders on their recommendations for communicating information and science
- As per Wainger and Read recommendations, use social science approach for SRS biennial meetings

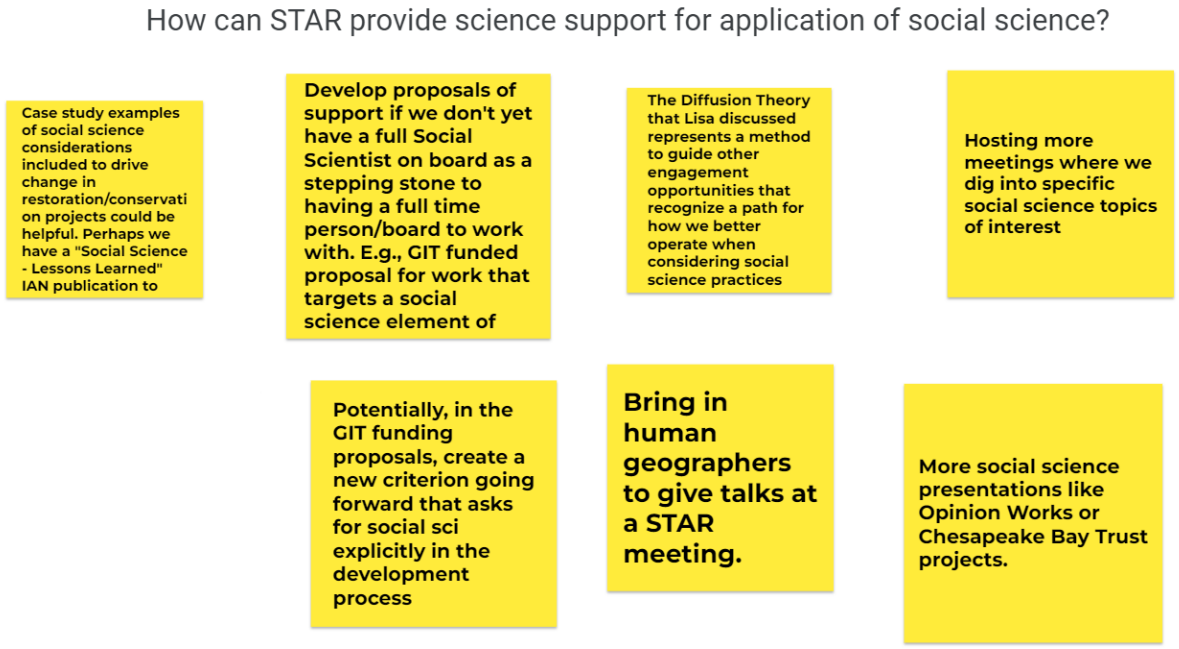

Image Description: How can STAR provide science support for application of social science? Responses:

- Case study examples of social science considerations included to drive change in restoration/conservation projects could be helpful. Perhaps we have a "Social Science – Lessons Learned" IAN publication
- Develop proposals of support if we don't yet have a full social scientist on board as a stepping stone to having a full time person/board to work with. E.g., GIT funded proposal for work that targets a social science element
- Potentially, in the GIT funding proposals, create a new criterion going forward that asks for social sci explicitly in the development process
- Bring in human geographers to give talks at a STAR meeting
- More social science presentations like Opinion Works or Chesapeake Bay Trust projects
- The Diffusion Theory that Lisa discussed represents a method to guide other engagement opportunities that recognize a path for how we better operate when considering social science practices
- Hosting more meetings where we dig into specific social science topics of interest

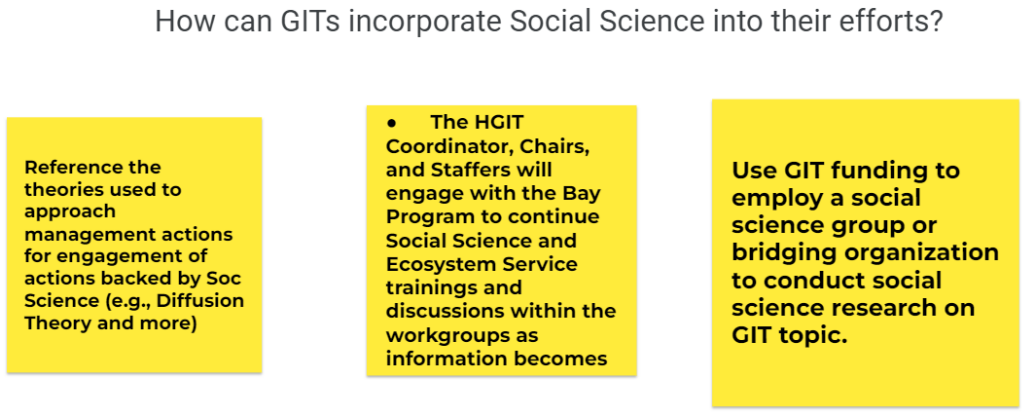

Image Description: How can GITs incorporate Social Science into their efforts? Responses:

- Reference the theories used to approach management actions for engagement of actions backed by Soci Science (e.g., Diffusion Theory and more)
- The HGIT Coordinator, Chairs and Staffers will engage with the Bay Program to continue Social Science and Ecosystem Service trainings and discussions within the workgroups as information becomes (cut off)
- Use GIT funding to employ a social science group or bridging organization to conduct social science research on GIT topic

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