

Strategic Science & Research Framework (SSRF) – Local Action Cohort Science Needs



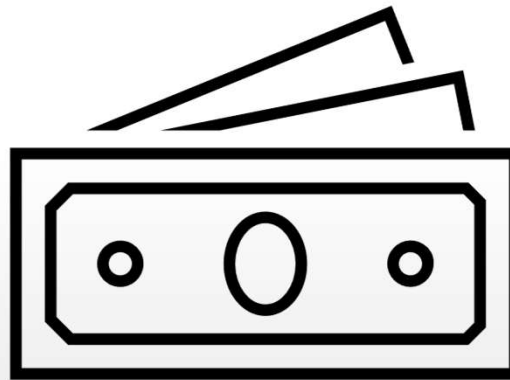
**Breck Sullivan, STAR Coordinator (USGS), Peter
Claggett (USGS), Julie Mawhorter (FS), Katie
Brownson (USFS)**

STAC Quarterly Meeting
6/13/2023

Policy



Finance



Science



SSRF

← Strategy Review System (SRS) →

A vast amount of science is required to achieve the goals and outcomes.

*The Strategic Science & Research Framework was developed to increase the
amount of science for the CBP*



Photo Credit: William
Parsons (Alliance for the CB)

SSRF provides a strategic approach to:

- 1.) **Gather, track, and maintain** science needs for each outcome
- 2.) Focus **existing resources** to help address the science needs
 - 3.) Identify priorities for **new resources**
- 4). **Expand CBP science capacity** through more partnerships

Local Action Cohort



Feedback requested from STAC to expand science capacity:

- Do you or any of your colleagues have interest in contributing to addressing one of these needs?
- Do you or any of your colleagues know of existing efforts to support one of these needs?
- Do you want more information to come back to STAC from any groups on specific needs/projects?
- Are these needs appropriate? Do you see something missing?

STAR Science Needs Meeting: Tree Canopy

Julie Mawhorter, USDA Forest Service (Tree Canopy Outcome Coordinator)



Chesapeake Bay Program
Science. Restoration. Partnership.

Status of the resource

- Full resources
- **Partial resources**
- No resources

Ongoing/In Progress Science Needs

- **Need:** Monitor forest and tree cover change in developed areas using hi-rez data
- **Why Need:** Monitoring is crucial for the outcome's indicator. This need is a cross outcome need.
- **Status of Need:** In progress
- **Engaged Resources:** GIS team
- **What actions are being done and what resources are being used to address it?**
 - Community Tree Canopy indicator developed
 - State of Chesapeake Forests 2.0 initiated
 - **New integrated science need: Monitor forest buffer, forest and tree cover status and change watershed-wide using the new hi-rez data**

New and Emerging Science Needs – High Priority

Need: Share models / best practices for effective incentive-based and regulatory approaches to protect urban tree canopy.

- A need identified from the Tree Canopy Funding & Policy Roundtable GIT project
- Needed to help promote urban tree canopy
- Opportunity to work with Local Leadership

Status of the resource

- Full resources
- **Partial resources**
- No resources

New and Emerging Science Needs – High Priority

Need: Develop and share data, tools and best practices for advancing tree equity

- Build on prior work of the CBP Environmental Justice and Equity Dashboard
- Synthesize and disseminate environmental justice and climate resilience-related datasets, tools and resources that can best support local tree equity initiatives
- Explore opportunities with the CRWG and Diversity WG

Status of the resource

- Full resources
- **Partial resources**
- No resources

Status of the resource

- Full resources
- **Partial resources**
- No resources

New and Emerging Science Needs - High Priority

Need: Develop a Trees & Climate Resilience best practices technical guide with analysis on which tree species are thriving or struggling in the face of climate change.

- Incentivize resilient species in nursery stock and track seed sources
- There is a need for guidance and standards/best practices for tree planting and maintenance to improve long-term survival
- New GIT Funding project focused on Scaling up Regional Tree Supply will complement this work, related to nursery supply needs

Status of the resource

- Full resources
- **Partial resources**
- No resources

New and Emerging Science Needs - Medium Priority

Need: Develop suite of Tree Canopy outreach materials for local governments, non-profits, and other community organizations to aid in public outreach work.

- OpinionWorks completed a study (report forthcoming) to evaluate public outreach and engagement for tree planting and maintenance
- Report recommends additional audience research to better understand the motivations of new audiences
- Completion of the Tree Cover Status and Change Fact Sheets

Status of the resource

- Full resources
- **Partial resources**
- No resources

New and Emerging Science Needs – Medium Priority

Need: Understanding the key drivers of tree canopy loss in different parts of the watershed

- We know now how much loss and gain is occurring where, but local partners want more detailed analysis of what is driving the losses in their area to target the right solutions; this involves taking a deeper dive into the existing high rez change data to understand trends at local scales

Status of the resource

- Full resources
- Partial resources
- **No resources**

Science Needs for Riparian Forest Buffers



STAC June 13th

Katie Brownson, USFS, Forestry Workgroup Coordinator

Status of the resource

- **Partial resources**

Ongoing/In Progress Science Needs- High priority

New integrated science need: Monitor forest buffer, forest and tree cover status and change watershed-wide using the new hi-rez data

- Monitor forest buffer cover change using hi-rez data
 - Initiated work on a State of Chesapeake Forests 2.0 Storymap in collaboration with the CBPO GIS team
 - Proposed modification: Expand to include evaluating current (2017/18) forest cover in the riparian area using the high-resolution LU dataset and the hyper-resolution hydrography data when available
- Monitor forest and tree cover change in developed areas using hi-rez data
 - Community Tree Canopy indicator in development
 - State of Chesapeake Forests 2.0 initiated
 - Proposed modification: Integrate with forest buffer cover change science need, expand to include monitoring forest and tree cover change watershed-wide

- **Partial resources**

Ongoing/In Progress Science Needs- High priority

Modified need: Identify landowners with the greatest amount of bufferable acreage to target for buffer outreach

- Expanded beyond original focus on agricultural landowners to capture state-owned land or other rural landowners
- Some progress in certain states, for example:
 - DE's identifying agricultural landowners with >1 acre of bufferable space

- **No resources**

New and Emerging Science Needs - High Priority

Evaluate potential for additional forest buffers to cool streams, especially in high-priority coldwater watersheds

- Science need identified by the STAC Rising Water Temperature workshop
- No currently engaged resources or dedicated funding
- First need to map riparian areas and evaluate current riparian tree cover

Status of the resource

- **Partial resources**

New and Emerging Science Needs - Medium Priority

Use new high-res LU data to improve watershed-wide maps of priority riparian habitat to restore.

- Identify potentially plantable riparian areas, determine key priorities, map where plantable areas intersect with priority areas
- Could help determine where investments in riparian buffer restoration could generate the greatest benefits
- Some states/sub-watersheds have done their own prioritizations already
- Need additional resources for a watershed-wide analysis

Strategic Science and Research Framework



May STAR Meeting: Expanding Science Capacity through Academia

- CRC Roundtable discussion
- Emphasis of RFPs to include students and address science needs
- Reconsider sequencing of developing these science needs
- Co-development of needs
 - Workshops held at various institutions to develop science needs and discuss resources for them
 - Provides junior faculty members and graduate students networking opportunities
 - Keeps GITs leads involved

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Questions?

STAC Quarterly Meeting
9/13/2022