



CITIZEN SCIENCE PROGRAM

STANDARD OPERATING POLICIES & PROCEDURES

January 2021

SAFMC Citizen Science Program Standard Operating Policies & Procedures

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I. Program Goals

Vision Statement:

Advancing science and increasing trust, one project at a time

Mission Statement:

To build and maintain a program that improves information for fisheries management through collaborative science

Program Goals & Objectives:

GOAL 1: Design, implement, and sustain a program framework to guide the development of projects that support fishery management decision making.

Objective 1.1: Establish organizational infrastructure to provide program administration and oversight.

Objective 1.2: Develop program procedures, policies, and tools.

Objective 1.3: Create a funding strategy that is adaptable to changing circumstances and needs.

GOAL 2: Facilitate development of individual projects to address specific research priorities.

Objective 2.1: Publish and broadly disseminate the SAFMC's citizen science research priorities.

Objective 2.2: Implement the SAFMC's Citizen Science Project Endorsement Program.

Objective 2.3: Provide project support resources (best practices, templates, etc.) and project development guidance.

Objective 2.4: Encourage collaboration by diverse teams of stakeholders (scientists, fishermen, managers, etc.) to develop projects.

GOAL 3: Ensure that data collected by projects are accessible, robust, and fit for purpose.

Objective 3.1: Implement program guidelines that address data management, standards, quality, and accessibility.

Objective 3.2: Review project results to determine if data meet project and/or Program needs.

Objective 3.3: Document the contribution of citizen science projects and data to specific SAFMC research priorities and science and management decision making.

GOAL 4: Foster mutual learning, collaboration, and program engagement.

Objective 4.1: Promote opportunities for learning among diverse constituents.

Objective 4.2: Foster existing partnerships and develop new partnerships to support both program and project goals.

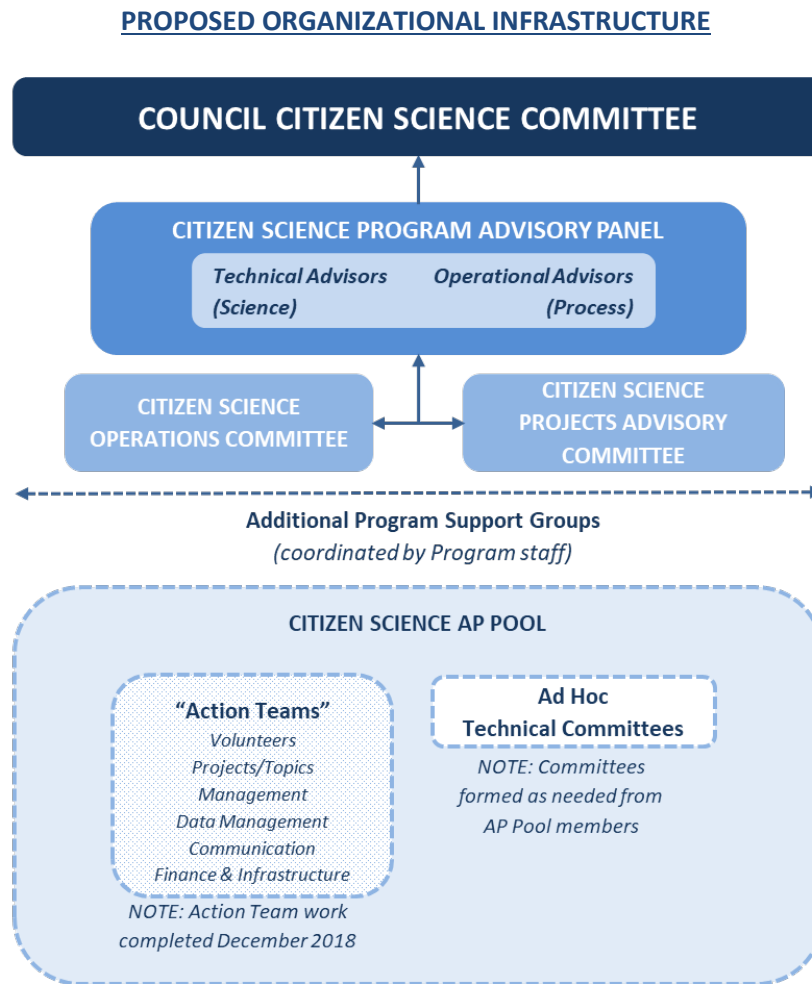
Objective 4.3: Strive to enhance trust among scientists, managers, and fishermen.

Objective 4.4: Engage new categories of stakeholders that are not typically involved in the Council process.

Objective 4.5: Develop Citizen Science Program volunteer engagement (recruitment, training,

retention) strategies, products, and activities using best practices outlined by the Citizen Science Action Teams.

II. Program Administration & Oversight



a. Program Personnel/Staff -

The following is a general description of primary Citizen Science Program staff and responsibilities.

- Staff: The Program supports one FTE (Program Manager) that is supervised by the Deputy Director for Science & Statistics.
- Location: The staff position is housed at the Council office.
- Position Duties: The Program Manager position manages the overall operation of the Citizen Science Program to include supporting Program administrative groups,

partnership development (for Program support and project development), identifying and seeking funding for citizen science projects, and coordinating Program activities as they relate to Council priorities.

b. Council Citizen Science Committee -

- Purpose - The Citizen Science Committee was established as a Council-level committee in September 2016 to support the development and oversight of the Citizen Science Program.
- Roles & Responsibilities - The Committee serves as the liaison with the Council and the Program Advisory Panel to help provide guidance on programmatic level decision-making on the Program's activities, operation and adoption of the biennial Citizen Science Research Priorities (based on items in the Council's Research & Monitoring Plan). The Committee also coordinates approval of the Citizen Science Program budget in conjunction with the Council's Executive Finance Committee. As available, the Committee Chair/Vice Chair will attend webinars and in-person meetings of the other advisory committees and oversight board.
- Membership - The Citizen Science Committee is made up of Council members and is supported by the Citizen Science Program Manager as the staff lead.
- Meetings - The Committee meets as part of quarterly Council meetings, during at least two Council meetings per year.

c. Citizen Science Program Advisory Panel -

- Purpose – Advise on program policies related to scientific goals and integrity and operational processes.
- Structure – The Program Advisory Panel consists of two types of members – Technical Advisors and Operational Advisors – and operates as one panel. The Program Advisory Panel reports to the Council's Citizen Science Committee.
- Roles & Responsibilities - Technical advisors develop programmatic recommendations to ensure the Program maintains overall scientific integrity. Operational advisors develop programmatic recommendations related to fiscal support, legal issues, infrastructure, and governance. The Advisors review the SOPPs and the supporting materials and policies for carrying out the Program components as described in the SOPPs. The Program Advisory Panel is led by a Chair and Vice-Chair selected by the Panel from its members.
- Membership & Eligibility – Advisors (both Technical and Operational) may include representatives from: SEFSC or other Science Centers; NOAA Headquarters (chief scientist), Sea Grant (rotating), SAFMC (Council Citizen Science Committee Chair, Citizen Science Projects Advisory Committee Chair, and SSC Chair); conservation/environmental NGO; fishery stakeholders (private, for-hire, commercial fishermen or member of the public with an interest in fisheries and citizen science); ACCSP/ASMFC; State agency; legal

staff; citizen science expert; administrative executive.

- Appointments and Terms –
 - Council appointed: Fishery stakeholders (2); conservation/e-NGO (1); Sea Grant (1); Citizen Science expert (1); administrative executive (1)
 - Designees: SERO; SEFSC; NOAA Headquarters (S&T office); NOAA general counsel; ACCSP/ASMFC; Council Citizen Science Committee Chair ; Citizen Science Projects Advisory Committee Chair; SSC Chair
 - Named individuals may designate temporary or permanent proxies
 - Terms: 3-5 years, dependent on programmatic growth
 - Meetings: Single annual in-person meetings; additional meetings via conference call or webinar as needed.

- Coordination with other administrative groups of the Program – The Program Advisory Panel receives information from Program staff, the Operations Committee, and the Citizen Science Projects Advisory Committee and makes formal recommendations to the Council Citizen Science Committee.

d. Citizen Science Operations Committee -

- Purpose – Smaller group of advisors that develops program recommendations for the Program Advisory Panel to consider; specific tasks include reviewing policies, providing program direction/multi-partner support, and providing general advice.
- Roles & Responsibilities - Draft SOPPs and provide ongoing operational recommendations for Program Advisory Panel approval.
- Membership & Eligibility – Citizen Science Advisory Panel Pool members (5); member from SERO; member from SEFSC; member from the Council’s SSC. Supported by Program staff.
- Appointments and Terms – Appointed by the Council’s Citizen Science Committee; terms are 3-5 years, dependent on programmatic growth.
- Coordination with other administrative groups of the Program – The Citizen Science Operations Committee will liaise with the Citizen Science Projects Advisory Committee to modify the SOPPs and program components, as needed.

e. Citizen Science Projects Advisory Committee –

- Purpose – Serve as advisors similar to the Council's Advisory Panels; Work in conjunction with the Citizen Science Operations Committee to develop recommendations for the Program Advisory Panel
- Roles & Responsibilities - Identify citizen science research and data needs across all the FMPs the Council manages; Assist with developing volunteer engagement strategies for recruiting, training, retaining, and communicating with volunteers; serve as outreach

ambassadors for the Program.

- Membership & Eligibility – Chair or designee of the Council’s fishery Advisory Panels (Golden Crab, Shrimp/Deepwater Shrimp, Spiny Lobster, Mackerel Cobia, Snapper Grouper); Habitat & Ecosystem AP; and the Information & Education AP.
- Appointments and Terms – Determined by the existing Council’s AP policies; terms are 2-3 years, rotating, dependent on term of the AP chair for each AP or as assigned designee. The Citizen Science Projects Advisory Committee would meet via webinar or conference call two times per year.
- Coordination with other administrative groups of the Program – The Citizen Science Projects Advisory Committee coordinates as needed with the Citizen Science Operations Committee to modify SOPPs and program components.

f. Additional Program Support Groups: *Citizen Science Advisory Panel Pool*

Citizen Science Advisory Panel Pool – The Citizen Science Advisory Panel Pool is modeled after the SEDAR Advisory Panel Pool and workshop panel approach. Appointments to the Citizen Science Advisory Panel Pool (CSAP) will be handled by the Citizen Science Committee. The Committee will also appoint members to Action Teams and any other *ad hoc* Technical Committees from the CSAP (consistent with appointments for specific SEDAR workshop panels).

- i. Citizen Science Action Teams** - Citizen Science Action Teams, as described in the Blueprint, were appointed to begin developing specific, program recommendations. A-Teams used Terms of Reference to guide the development of recommendations for the Program in five topical areas (Volunteers, Data Management, Projects/Topics Management, Communication/Outreach/Education, and Finance & Infrastructure). Functionally, the Action Teams were considered Advisory Panels and members were all appointed to the CSAP. Action Teams were not standing committees or standing APs, and only existed for the time it took to develop the Citizen Science Program as specified in the Blueprint.

Once the initial Terms of Reference for program development were addressed by each A-Team, the A-Teams were dissolved. Members are retained in the CSAP. Members of the CSAP may be called upon to serve on any additional Ad Hoc Technical Committees that may be needed for the Program. [See Appendix A](#) for additional details about the CSAP and Action Teams and the process by which they developed program recommendations in 2017-2018.

ii. *ad hoc* Citizen Science Technical Committees

- Purpose – To support areas of the program related to projects.
- Roles & Responsibilities - Members of technical committees will serve in a review capacity for process-oriented components of the Program. For example, once the

Project Endorsement Program is implemented, the Program will need an *ad hoc* Technical Committee to review applications for projects that are submitted for endorsement. Additional *ad hoc* Technical Committees may be needed for various types of Program activities that arise.

- Appointments and Terms – Members are appointed by the Council Citizen Science Committee from the CSAP. Terms are contingent on the nature of the technical committee, but are not to exceed one-year unless an alternative term is specifically designated at the time of appointment

III. Program Components

a. Citizen Science Program Research Prioritization Process -

[\(See Appendices B and C\)](#)

This process is a mechanism for establishing research priorities for the Program and determining how often they are reviewed and evaluated.

The three-step process involves:

Step 1: Reviewing and providing input on the Council’s biennial Research & Monitoring Plan.

Mechanism – Program staff will review and provide feedback on the plan and identify items that could be addressed using the Citizen Science Program. In addition, the Plan will receive input from the Council’s SSC, SEDAR process, AP discussions and the FMP development process.

Step 2: Developing a Citizen Science Program Research Priorities document.

Mechanism - Program staff will work with the Citizen Science Projects Advisory Committee, Operations Committee, and the Program Advisory Panel to develop a separate Citizen Science Program Research Priorities document that is informed by the Council’s Research & Monitoring Plan. The draft document will be reviewed by the Council’s APs and SSC.

Timing – The Citizen Science Research Priorities document will be reviewed biennially, in coordination with reviews of the Council’s Research & Monitoring Plan;

Review & Adoption – Council reviews and adopts biennial research priorities.

Step 3: Citizen Science Project Idea Portal

Mechanism – Develop an online form hosted on the Council’s Citizen Science webpage where stakeholders can submit citizen science project ideas that may be considered under the biennial Citizen Science Research Priorities. The online form will provide a series of questions focused on topics related to the Citizen Science Program Research Priorities. The portal will be monitored by staff, and include a feedback mechanism to provide comments within one month to the person submitting an idea and to help connect them with potential collaborators. Information received via the form will be compiled and considered during the next review of research priorities.

Timeframe – open year-round

b. Project Endorsement Program -

[\(See Appendix D\)](#)

In the absence of internal funding for projects, the Council's Citizen Science Program (Program) will encourage development of externally funded citizen science projects in partnership with stakeholders to support the goals of the Program. However, external projects pursued in partnership with the Council's Program need to have a mechanism in place that assures the project is designed appropriately and has the resources necessary for project success. To support development of robustly designed projects that produce data that can be considered for use in management by the Council, the Program will develop a project endorsement program that includes specific criteria that must be met, and an application and review process that must be followed, in order to receive endorsement.

Project Endorsement Criteria

Projects must meet the following criteria to be endorsed by the Council's Citizen Science Program:

- Meets the goals/objectives of the SAFMC Citizen Science Program
- Addresses one or more of the priority topics in the SAFMC Citizen Science Research Needs
- Outlines the Project Development Plan for the project
- Outlines the Data Management Plan for the project
- Outlines the Communication Plan for the project, including volunteer recruitment, sharing project results (approaches and products)
- Outlines the Volunteer Training Plan for the project
- Outlines methods for evaluating the project for the duration of the project

Application Process

Stakeholders interested in receiving endorsement for their citizen science project by the Program will engage in a two-step application process, 1) Pre-application and 2) Full application. Applications will be accepted (at any time) and reviewed quarterly.

Project Review Process

- Pre-application – Program staff will review the pre-application. All pre-applications will receive feedback on the extent to which they meet the project endorsement criteria. If minimum criteria are met, the applicant will be invited to submit a full application.
- Full application - Program staff will coordinate the review process for full applications by selecting a minimum of three reviewers per application. Reviewers will be selected from an established, semi-standing, *ad hoc* Technical Committee established for Project Review. Reviewers will use an online review form and the project review rating system to review project applications. The review process (review, comments, and response to applicant) will be completed in three weeks or less. Reviewers will be asked to complete their reviews within 2 weeks. Applicants will be informed of the results of the review and provided a summary of any recommendations for improvement that may be suggested by the reviewers.
- Full applications will be scored and provided review feedback.

Endorsed Projects – Benefits and Terms

Projects that are endorsed by the Program will receive a letter of endorsement, project promotion through the Program’s outreach and promotion activities, and approval to use the Program’s logo. Letters of endorsement will outline the terms of the endorsement and expectations for receiving endorsement to include, but not limited to, annual monitoring and progress reports on the project and notification if the scope of the project changes. Changes in project scope may warrant another review for continued endorsement.

c. Communication/Outreach/Branding -

Development of communication, outreach, and branding products and activities will primarily be the responsibility of Program staff. Products and activities will be informed by the best practices and policies outlined in the Communication and Training Plans developed by the Citizen Science Program Action Teams. Program staff will coordinate outreach and communication efforts related to citizen science activities with the Council’s Outreach Team that is already in place.

The following types of communication and outreach products and activities will be considered for development by the Program and updated as needed as part of an annual Plan of Work:

- Routine Program Communication – newsletter/blog/reports
- Program Website
- Program Social Media Development
- Program Support Materials – brochures, fact sheets, etc.
- Annual report of accomplishments and volunteer recognition

d. Volunteer Engagement -

Developing volunteer engagement (recruitment, training, and retention) products and activities will be the responsibility of Program staff. Products and activities will be informed by the best practices and policies outlined in the Communication and Training Plans developed by the Citizen Science Program Action Teams and incorporated into an annual Plan of Work for the Program. Items to be considered for an annual Plan of Work for Program staff include:

- Developing a Volunteer Recognition Program through an *ad hoc* Technical Committee
- Developing a Participant Attitude Survey for volunteers participating in projects

e. Data Standards & QA/QC –

The Program requires that project teams address data standards, QA/QC, and other data management and analysis considerations for each specific project.

The Program expects project data to be useful for management, have a targeted user, and comply with sound scientific practices. meet? Comply with? a

The Program will facilitate discussions between project Principal Investigators (PIs) and data recipients to ensure data management standards and requirements are clearly identified, and that the project includes adequate provisions to ensure they are met.

The Program will work with the Technical Advisors of the Program Oversight Board to develop and maintain rigorous data standards and QA/QC processes.

f. Partnership Development -

[\(See Appendix E\)](#)

The Program will pursue partnership development using the best practices outlined in the Partnership Development Plan prepared by the Finance & Infrastructure Action Team. The Council Citizen Science Committee can provide input on potential partners and support staff in pursuing partnership development.

g. Project Support Guidelines

The Program may support projects that are pursued internally by the Program, as well as projects that are developed external to the program and endorsed as described above. The Program will support internal and endorsed projects in the following ways:

- Internal Projects – Program staff are responsible for all project coordination and management.
- External, Endorsed Projects – Projects that receive Project Endorsement through the Citizen Science Program will:
 - Develop a shared vision of how the project PI and the Program will communicate about the project;
 - Receive assistance with promotion of the project and communication of project results.

IV. Project Support & Best Practices

Projects falling under the umbrella of the Program should consider the best practices and templates developed by the Citizen Science Action teams during the development, implementation, and management of all aspects of a project. The following sections contain resources (information and links to the best practices and templates) for key components of a successful citizen science project.

a. Project Development Components

See [Appendix F](#) to review the Project Development Plan template to serve as a guide for helping projects develop using the Program’s standards and suggested best practices.

b. Communication/Outreach/Branding

See [Appendix G](#) to review the Communication Plan Template that serves as a guide to help projects develop a dedicated communication plan and conduct outreach for the project using suggested best practices.

c. Data Management

See [Appendices H, I, and J](#) to review suggested best practices for a Data Management Plan for projects, including templates for Data Requirements, Data Standards, and QA/QC.

d. Volunteer Management

See [Appendices K and L](#) to review suggested best practices and the template for a Volunteer Training Plan. Additional resources related to volunteer training are also referenced in the Communication Plan template in [Appendix G](#).

e. Resources

Below are links to a list of the inventories created by the Action Teams related to Data Management Resources and Funding Opportunities.

- [Data Management Resources Inventory](#) – will be periodically updated as needed
- [Funding Opportunity Inventory](#) – will be continually updated

Once the Program initiates projects, a Volunteer Database will be maintained. The database will collect basic contact information on volunteers and their interest and skill sets for participating in different types of projects.

- Volunteer Database (from the Volunteer Interest Form entries) – will be continually updated once the Volunteer Interest Form is made active.

V. Program Evaluation & Needs Assessment -

- Purpose
 - Evaluation of the program activities and status, and identification of any modifications needed to respond to emerging needs and opportunities.
 - Elements for an evaluation rubric:
 - Stakeholder collaboration and program resources
 - Goals and objectives
 - Methods: design and implementation of
 - Data management: entry, storage, analysis, and synthesis
 - Reporting and dissemination
 - Outcome evaluation and program review
- Timing
 - Annual summary – timing based on a calendar year and presented to the Council Citizen Science Committee in March annually.
 - 5-year programmatic review
- Product
 - Summary report that includes volunteer recognition

VI. Appendices

Program Component Resources

Appendix A: Overview of Citizen Science Advisory Panel Pool

Appendix B: Citizen Science Program Research Prioritization Process (from Projects/Topics A-Team)

Appendix C: Current Citizen Science Research Priorities – Adopted by SAFMC December 2019

Appendix D: Project Endorsement Program (from Projects/Topics A-Team)

Appendix E: Partnership Development Plan (from Finance & Infrastructure A-Team)

Project Support Resources

Appendix F: Project Development Plan Template (from Projects/Topics A-Team)

Appendix G: Communication Plan Template (from Communications A-Team)

Appendix H: Data Management/Requirements Template (from Data Management A-Team)

Appendix I: Data Standards Template (from Data Management A-Team)

Appendix J: Data Quality Management Recommendations (from Data Management A-Team)

Appendix K: Volunteer Training Basic Orientation Best Practices (from Volunteers A-Team)

Appendix L: Volunteer Training Basic Orientation Template (from Volunteers A-Team)