UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Citizen Science
Project/Study Design: Basic Elements to Consider

Project/Study Protocol Development
- A lot depends on WHERE you pick your sites – consider if the sites are right to achieve your goal
- How often will you need to sample and under what conditions?
- Do you have or can you get the equipment needed?
- Do you know or can you learn the necessary methods to conduct your project/study?
- Quantity of environmental data –how much data do you need?
- Quality of environmental data – are your methods, equipment and/or laboratory going to give you what you need?

Technology Requirements and Use
- Equipment – type of equipment used will tie directly to your data needs
- Web Services – do you have/need a forum to serve as a focal point/communication for your project?
- Computer Resources – will you use apps, uploads via smartphone, social media, classic data entry or a combination?
- Capacity – do you have the computer know-how; power and data storage you need for your project/study?

Supporting Materials and Mechanisms
- Supporting Materials:
  - o Do you have a central location or space to manage all aspects of the project/study?
  - o Do you have training materials, field procedures and health and safety material?
- Laboratory, statistics, dissemination:
  - o Is your laboratory the right one for your project?
  - o Do you have the right statistical support for data interpretation?
  - o Do you have in place mechanisms for communicating immediate and final results?

Plan for Analyzing Data, Results and Information
- Analyzing the data – How will you deal with the data: data entry, management, evaluation and validation, reconciliation with your project/study goals and data sharing?
- Data Results – How will you present your findings?
- Dissemination – How will you promote your project start to finish?
- How will you provide feedback to your volunteers and professionals throughout the entire project/study; encouraging and training them to spot anything out of the ordinary, and not to be afraid to offer solutions or alternatives?

Final Considerations
- Project/Study Evaluations – How will you evaluate your project throughout its cycle?
- Lessons Learned and Next Steps – have you meet your goal (s)? Encountered any roadblocks? Would you approach your project the same, or differently, and why? How will you share your experience and invite outside feedback?