Who's Monitoring in the Chesapeake Bay Watershed?

Thank you for taking 15-20 minutes to help us learn about your monitoring efforts!

This survey is the first step of a larger project to integrate citizen science data, along with non-federal sources, into the Chesapeake Bay Program that will aid in informing water quality assessments and policy management. Your data could not only be used in your local watershed, but could also be used to help assess the health of the entire Chesapeake Bay watershed.

The intent of this survey is to take a census of what monitoring is taking place by volunteers, local government, county programs, Riverkeepers, academia, and community-based organizations in the Chesapeake Bay watershed. With your help we will be able to identify locations, frequency, and types of monitoring taking place which will ultimately help to fill information gaps and lead to better decision making on all scales.

Your participation is essential to developing a robust program and achieving increased usage of your data. Through this new project there will be many opportunities for your program, including:

- A Chesapeake-wide database to store, retrieve, analyze, and interpret data;
- Access to data communication workshops and additional monitoring trainings;
- Increased collaboration and networking across watershed, county, state boundaries; and
- Better understanding of the health of the Bay and its watershed.

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~~Citizen science is not a modern invention, even as early as the 17th century, citizen scientists were developing the sort of sophisticated collaborations and networks that professional researcher's use today. There are two major roles of citizen science in modern research: First, to facilitate large-scale and/or geographically diverse projects, and, second, to undertake projects that professionals would (or could) not ordinarily do on their own. — *Caitlin Kight, Anthrophysis*~~

~~Thank you for taking 10-15 minute to help us learn about your monitoring efforts! We are very excited to be a part of a project that is going to coordinate the wonderful data collection efforts you have been conducting in the Chesapeake Bay watershed to help increase data use from the local to the regional levels.~~

~~In 2015 a new project was launched to integrate data from diverse partners throughout the watershed to better understand the health of the Chesapeake Bay and its watershed. This survey is a crucial first step to understand what monitoring is taking place by volunteers, local government, county programs, Riverkeepers, academia, and community-based organizations.~~
~~There are many sources of data – including data collected by volunteers, local governments, conservations districts, and nongovernmental groups such as academia and watershed organizations that are not currently being used by the Chesapeake Bay Program to track Bay health and determine success of restoration efforts. This is the first effort to integrate citizen science data, along with these other sources, to inform policy management and water quality assessments into a federal program. Our aim is to help provide a more inclusive picture of the health of the Chesapeake Bay and our local rivers and streams.~~

~~The purpose of this survey is to identify locations, frequency, and types of monitoring taking place throughout the watershed that can fill some of the information gaps for the Chesapeake Bay Program and larger Chesapeake community and lead to better decision making.~~

Sincerely,

Citizen-based and Nontraditional Monitoring Project Team – *Alliance for the Chesapeake Bay, Izaak Walton League of America, Alliance for Aquatic Resource Monitoring (ALLARM), and University of Maryland Center for Environmental Science's Integration and Application Network (IAN)*

Questions? Contact Lea Rubin, Project Coordinator
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Survey software which allows for file upload:
Form+ (uses Google Drive to store files)

General Information

1) Name [text box]

2) Name of organization/group [text box]

3) Type of organization/group [check one]
   a. Volunteer monitor
   b. Watershed association
   c. Riverkeeper
   d. Local, county, state, or interstate government entity
   e. Academia
   f. Service provider to volunteer monitoring groups
   g. Individual
   h. Other [text box]

4) Email address [text box]

5) Phone number (optional) [text box]

6) Mailing Address (optional) [text box]

Monitoring Program Overview

7) What watersheds do you monitor? Please include the town, county and state for each watershed that you list. [large text box]

8) How many sites does your group monitor? [text box]

9) Do you have latitude and longitude coordinates for your site(s)?
    a. Yes
        I. Would you be willing to share them with us?
            i. Yes
                a. Please upload the coordinates for your sites [upload file]
            ii. No
    b. No

10) How many paid staff? [text box]

11) How many volunteers? [text box]

12) How long has your organization/group been monitoring? [text box]

Monitoring Program Design

13) Why do you monitor? What questions, issues, and/concerns does monitoring help you answer? [large text box]

14) How frequently do you monitor each site? [check more than one if applicable]
    a. Continuous data logging
    b. Daily
    c. Weekly
    d. Monthly
    e. Quarterly
    f. Two to three times a year
    g. Once a year
    h. Other [text box]
    i. If you checked more than one, please explain [text box]

15) What biological parameters do you monitor? [check all that apply]
    a. None
    b. Benthic macroinvertebrates
    c. Bacteria (Enterococcus, E. coli or fecal coliform)
    d. Fish
    e. Algae
    f. Submerged Aquatic Vegetation
    g. Salamanders
    h. Birds
    i. Other [text box]

If answered anything but "None" in Q15 move to Q16
If answered "None" in Q15 move to Q17

16) What biological monitoring protocols do you use? [check more than one if applicable]
    a. EPA Rapid Bioassessment
    b. Virginia Save Our Streams
    c. IWLA Save Our Streams (not in Virginia)
    d. West Virginia Save Our Streams
    e. Audubon Naturalist Society
    f. Maryland Biological Stream Survey
    g. Maryland Stream Waders
    h. Coliscan Easy Gel
    i. Other [text box]
        I. If available, please provide a copy of the biological monitoring protocols you use. [upload file]

17) What physicochemical parameters do you monitor? [check all that apply]
    a. None
    b. Dissolved oxygen
    c. Temperature
    d. % Saturation
    e. pH
    f. Alkalinity
    g. Ammonium
    h. Nitrates
    i. Nitrites
    j. Total nitrogen
    k. Orthophosphate
    l. Total phosphorus
    m. Total Dissolved Solids
    n. Total Suspended Solids
    o. Biological Oxygen Demand
    p. Conductivity
    q. Turbidity
    r. Water Clarity
    s. Salinity
    t. Chlorophyll A
    u. Other [text box]

If answered anything but "None" in Q17 move to Q18
If answered "None" in Q17 move to Q19

18) What chemical monitoring protocols or techniques do you use? [check more than one if applicable]
    a. Alliance for the Chesapeake Bay's River Trends
    b. Izaak Walton League's Creek Freaks or Save Our Streams Chemical Monitoring Protocols
    c. Mid-Atlantic Tributary Assessment Coalition (MTAC)
    d. Other (including chemical monitoring kits/testers/probes) [text box]
        I. If available, please provide a copy of the chemical monitoring protocols you use. [upload file]

19) What physical/visual parameters do you monitor? [check all that apply]
    a. None
    b. Stream flow
    c. Habitat assessment
    d. Visual observations of stream bed and bank
    e. Direct measurements of stream bed and bank
    f. Trash
    g. Other [text box]

If answered anything but "None" in Q19 move to Q20
If answered "None" in Q19 move to Q21

20) What physical/visual monitoring protocols do you use?
    a. EPA Rapid Bioassessment
    b. Maryland Biological Stream Survey
    c. Izaak Walton League Save Our Streams
    d. Other [text box]
        I. If available, please provide a copy of the physical/visual monitoring protocols you use. [upload file]

21) Do you follow a quality assurance project plan?
    a. Yes
        I. If so, please provide a link or a copy of the plan. [text box] [upload file]
    b. No
        I. Do you follow a less formalized set of quality assurance procedures?
            i. Yes
                a. Are there any written guidelines? If so, please provide a link or a copy of the written guidelines. [text box] [upload file]
            ii. No

Data Use and Storage

22) Who currently uses your data? [check all that apply]
    a. Our own group
    b. Local government
    c. State government
    d. Federal government
    e. Universities
    f. Watershed associations
    g. General public
    h. Other [text box]

23) Is your data available to the public?
    a. Yes
    b. No

24) Where are your data currently housed? [check all that apply]
    a. Data sheets
    b. Field notebooks

c. Excel files
d. Organization's website
e. Online database, if yes, which ones? [text box]
f. Other [text box]

25) How are your data formatted?
    a. Text Files (.csv, .txt, ect.)
    b. Microsoft Excel
    c. Microsoft Access
    d. SQL
    e. MySQL
    f. Other [text box]

Wrap Up

26) Do you want to receive our quarterly newsletter to stay informed about this project?
    a. Yes
        i. Please provide your email if different from above [text box]
    b. No

27) Are you connected with other monitoring groups in the Chesapeake Bay watershed on social media? You can share this survey using (facebook button) (twitter button) and/or use this (link) to share via email.

Thank you for taking a moment to tell us about your program!

-- **Citizen-based and Nontraditional Monitoring Project Team**