

CHESAPEAKE MONITORING COOPERATIVE: COMMUNITY DRIVEN CASE STUDIES

March 22, 2023

Photo by Chesapeake Bay Program

CHESAPEAKE MONITORING COOPERATIVE

The CMC connects water quality monitoring initiatives across the region in order to amplify voices and enhance our understanding of the Chesapeake Bay Watershed. The CMC envisions a Chesapeake community where all data of known quality are used to inform watershed management decisions and restoration efforts.

CMC development team partners & service providers:



University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE

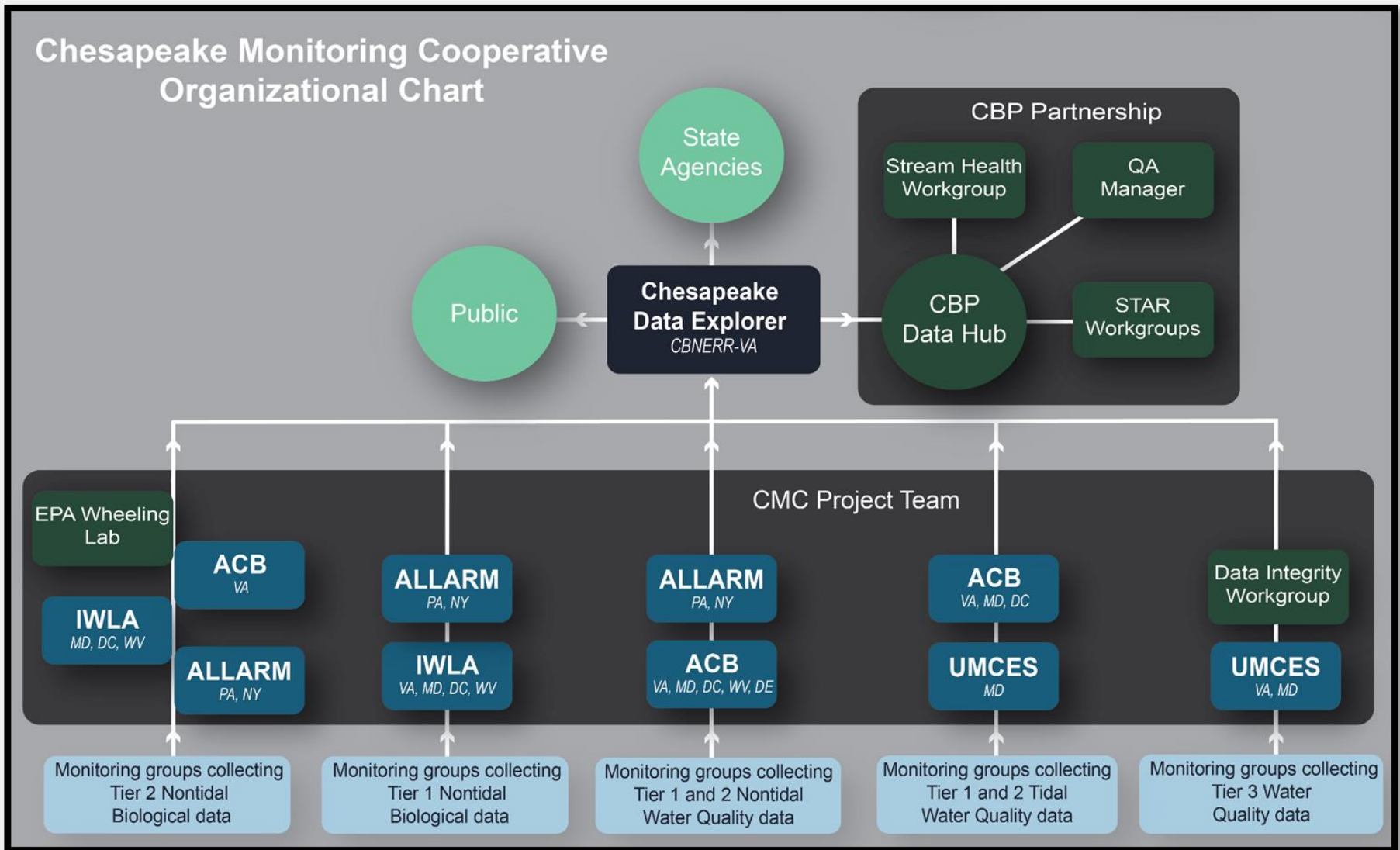


Dickinson

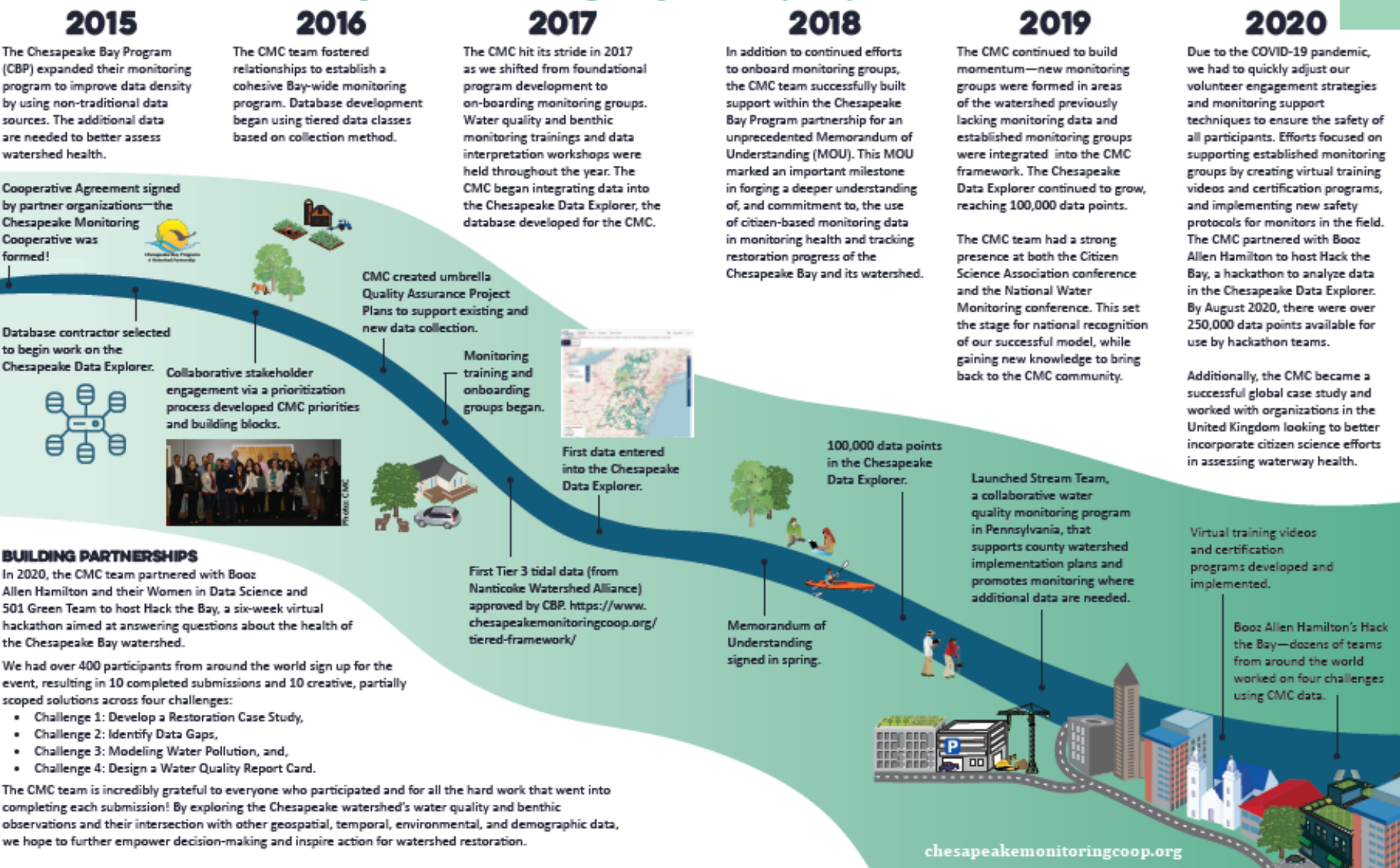


ORGANIZATIONAL STRUCTURE

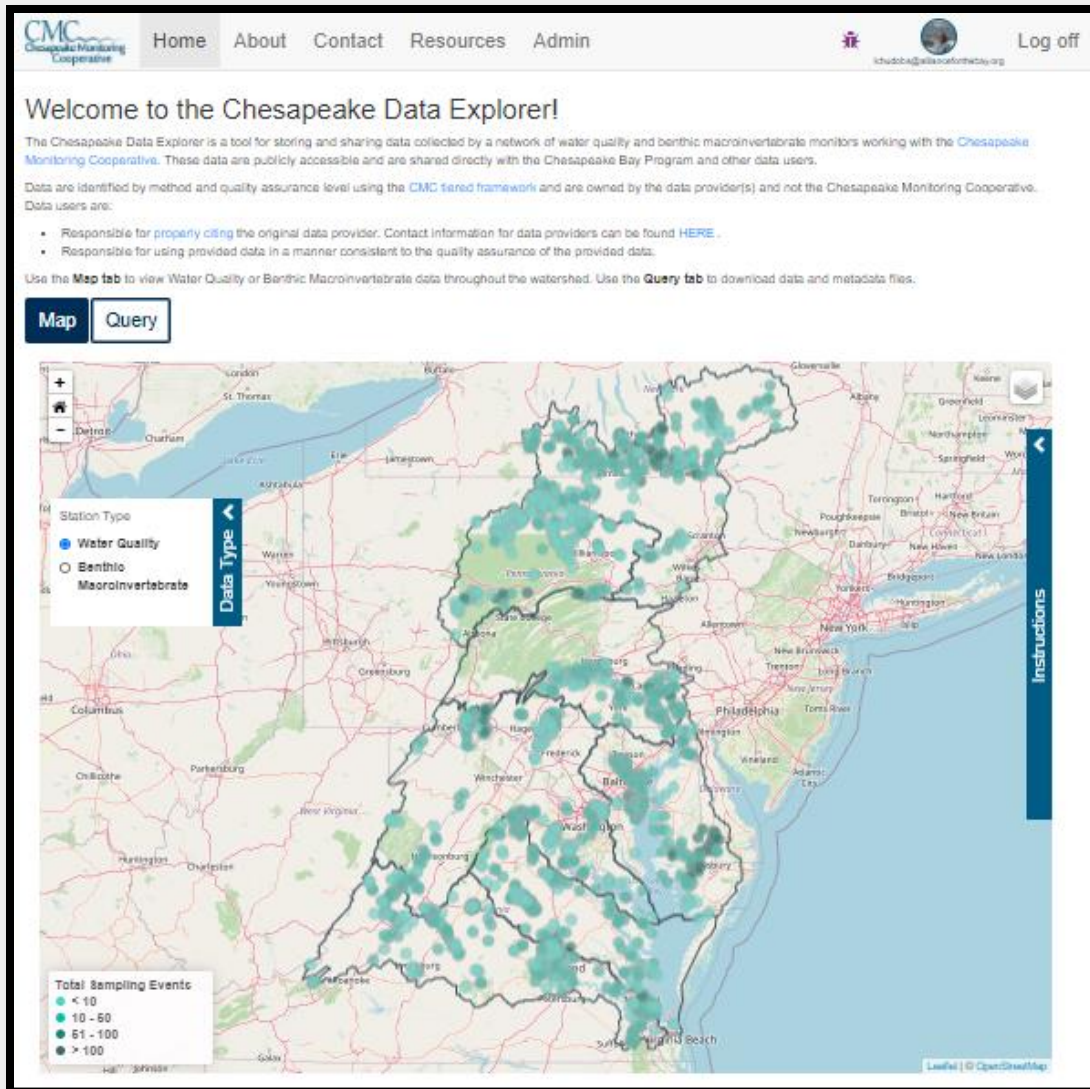
Chesapeake Monitoring Cooperative Organizational Chart



The evolution of the Chesapeake Monitoring Cooperative (CMC)



CHESAPEAKE DATA EXPLORER



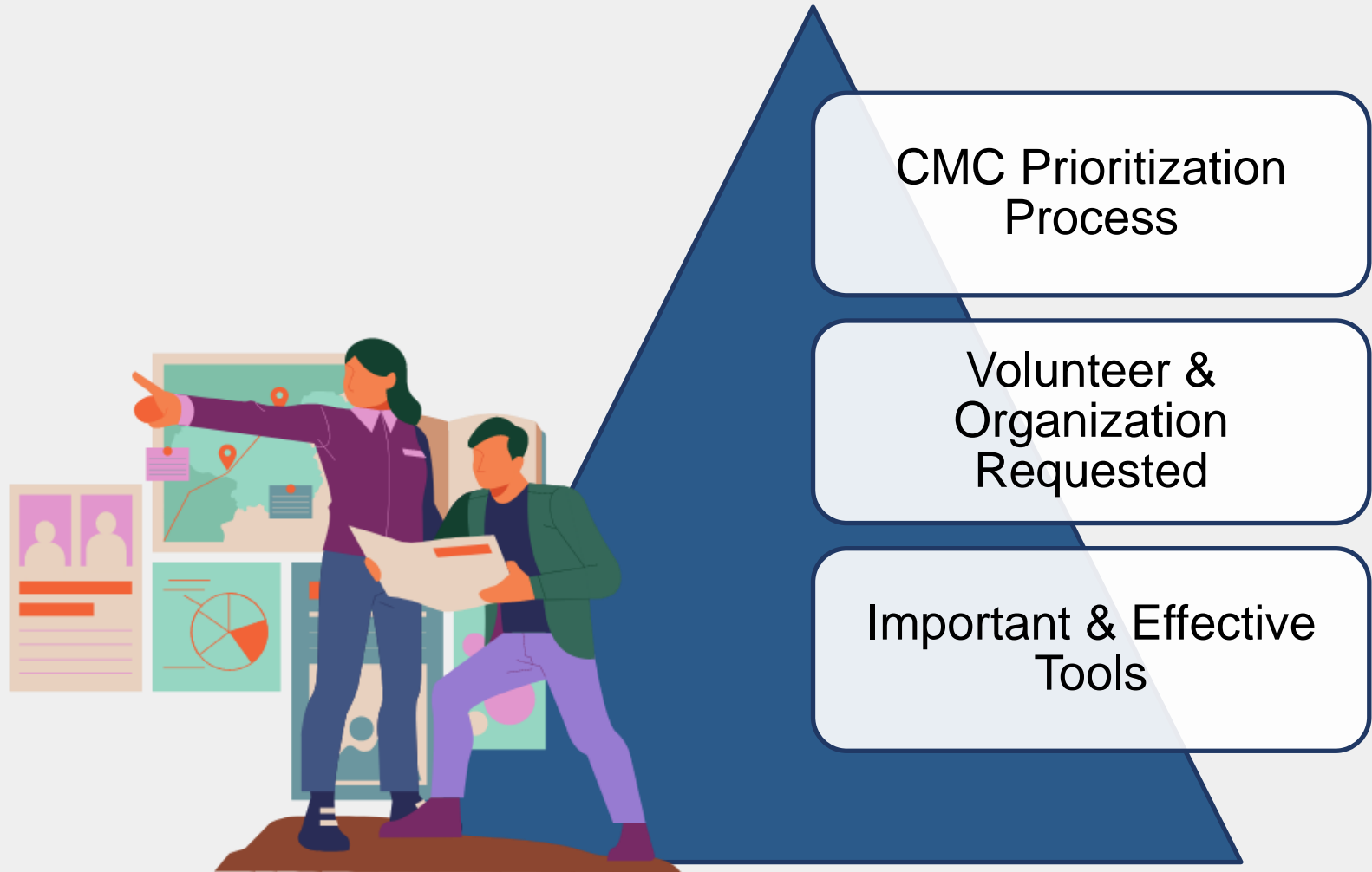
683,000 Data points
2,800 stations
7 Bay jurisdictions
117 Organizations

<https://www.cmc.vims.edu>

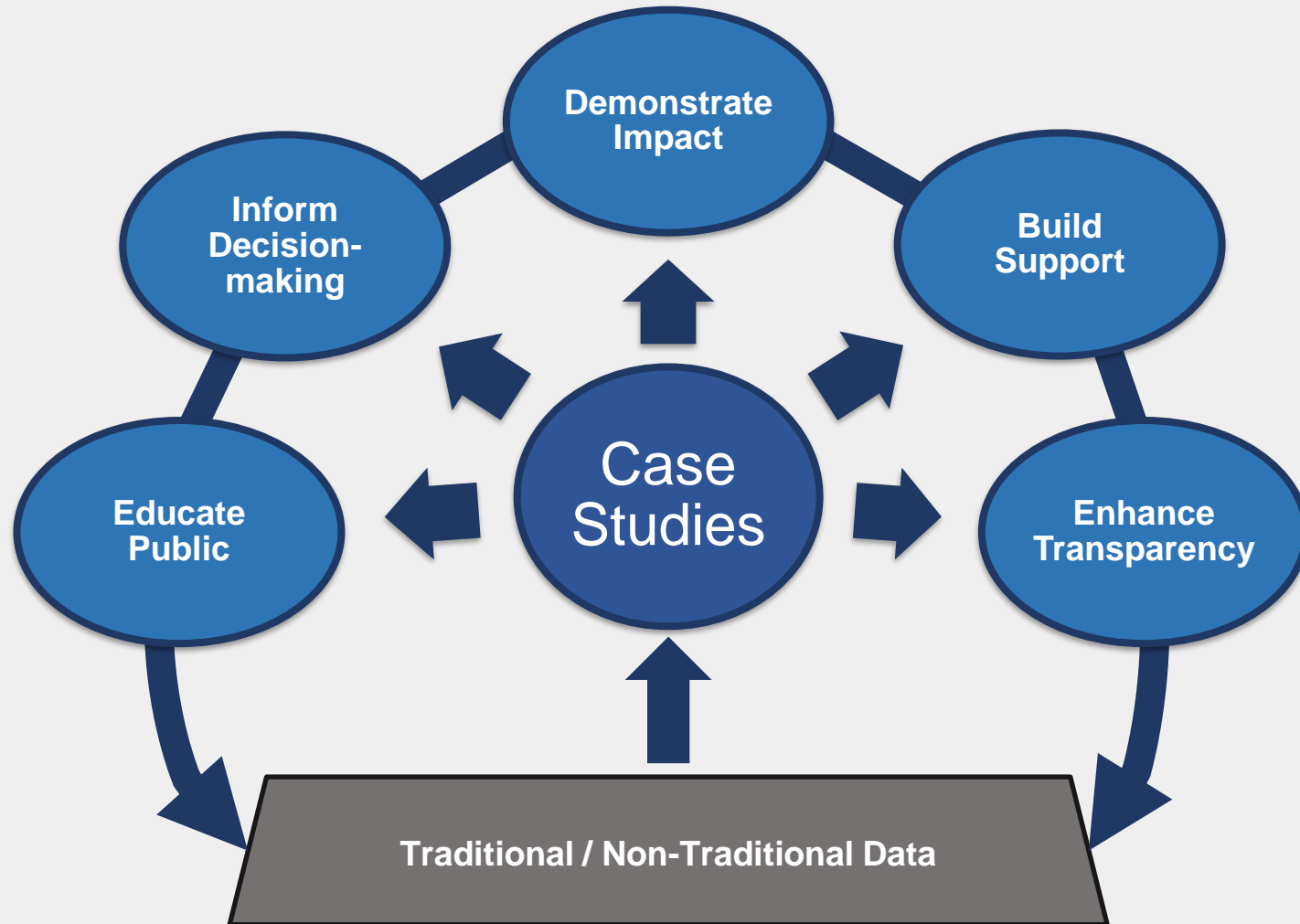


COMMUNITY DRIVEN CASE STUDIES

WHY CASE STUDIES?



CASE STUDY IMPORTANCE



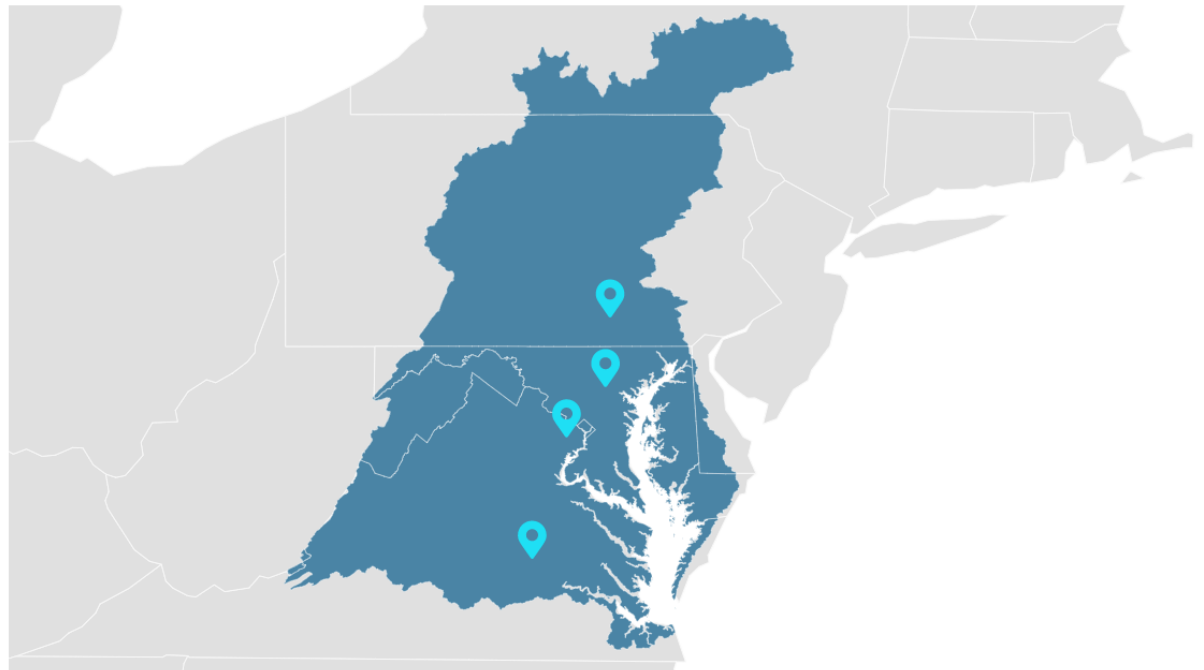
EFFECTIVE CASE STUDIES

<https://www.chesapeakemonitoringcoop.org/resources/cmc-case-studies/>

- Interactivity
- Geographical connection
- Scalability

Stories from Around the Chesapeake

The case studies on the map below showcase the success of our volunteer monitors, whose efforts have made a tangible impact on the water quality of the Chesapeake Bay watershed. These stories demonstrate the power of community science and the positive impact that volunteers can have on their environment. By sharing these stories, we hope to inspire others to join the CMC in our mission to monitor and preserve the waterways in the Chesapeake Bay for future generations.



EFFECTIVE CASE STUDIES

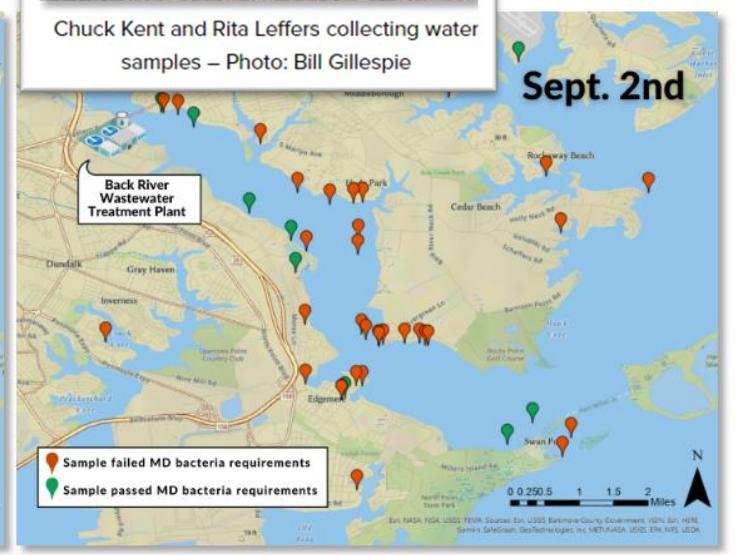
- Visualizations
 - Data, Graphs, Maps, Pictures
- Message
 - Objectives
 - Background
 - Results
 - Implications



Water sample collection for nitrate and heavy metals testing. – Photo: Daniella Heminghaus



Chuck Kent and Rita Leffers collecting water samples – Photo: Bill Gillespie



EXAMPLE – JORDAN’S BRANCH

Business Corrects Practices in Response to Monitoring Results

- Nearby dog daycare business, Impawsible Pups, caused E. coli contamination
- Illicit discharges from turfed dog runs
- Formal letter sent to Impawsible Pups to cease discharging contaminated water
- HAWQS volunteer monitoring program, continues to monitor the area
- E. coli levels increased again - traced back to Impawsible Pups
- Henrico County reaches out to business to address issue



CASE STUDY: JORDAN'S BRANCH

PDF

DOWNLOAD

EXAMPLE – BLUE WATER BALTIMORE

Monitoring Discovery Leads to Improved Wastewater Management

- Blue Water Baltimore (BWB) monitors at 49 stations near Patapsco
- High bacteria counts found at outflow of effluent pipe from Patapsco River Wastewater Treatment Plant - Investigation uncovered operational and maintenance deficiencies
- BWB filed a federal Clean Water Act lawsuit against Baltimore City
- MDE filed a lawsuit requesting a state enforcement action for violations of water pollution statutes
- Continuous testing by BWB shows bacteria and pollution levels are improving near both wastewater treatment plants
- Judge ordered Baltimore City to submit monthly status updates demonstrating progress towards lower bacteria levels and decreased pollution



CONCLUSION

- CMC to continue to refine processes to capture stories
- Diversify case study parameters and locations across watershed
- Use as resource to engage volunteer networks on these successes



THANK YOU!

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