Community Response to Land Use Change

Project Findings

Green Fin Studio worked with the Chesapeake Bay Program to develop an enhanced, hybrid (quantitative and qualitative) approach for targeting high-value areas for conservation and restoration activities AND engaging local stakeholders to ensure project success.

This approach covers how to better target areas for conservation, leverage trusted messengers, and use messages that will engage your target audience. The seven-step process is briefly outlined below,

Hybrid Approach

1. **Identify your conservation/ restoration goal**

   Decide what conservation or restoration effort you want to undertake.

2. **Conduct an inventory of available spatial data**

   Identify geospatial data for your desired physical characteristics and other factors you may want to include.

3. **Conduct a GIS analysis to narrow down project locations**

   Identify locations that meet your desired project criteria.

4. **Consult with experts**

   Speak with experts of your target restoration goal, preferably in your region of interest, to get their input on your list of project locations.

5. **Revise selection criteria (if necessary)**

   Consider feedback from experts to refine your quantitative criteria or analysis.

6. **Refine your selected areas**

   Create your final list of target locations and local stakeholder representatives.

7. **Talk with local stakeholder representatives**

   Understand the values and concerns of the community to inform your messaging and identify potential project partners.

Results

A detailed final report describing the project process and findings and a user-friendly 'How to Guide' with a replicable step-by-step approach to identify conservation and restoration sites and engage target communities.

Green Fin Studio

Chesapeake Bay Program
Science. Restoration. Partnership.

Community Response to Land Use Change

Final Report

December 2024

Prepared by

Green Fin Studio

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Introduction

This report details the findings of a year-long effort to evaluate the Chesapeake Bay Program's (CBP's) current methods of identifying high-value areas for conservation and restoration activities and then enhance those methods by consulting with conservation and restoration experts and conducting stakeholder research to understand and characterize the audiences in these areas. We describe this enhanced, hybrid (quantitative and qualitative) approach for targeting, outreach and engagement for four target areas as well as a generalized approach for applying this method watershed-wide.

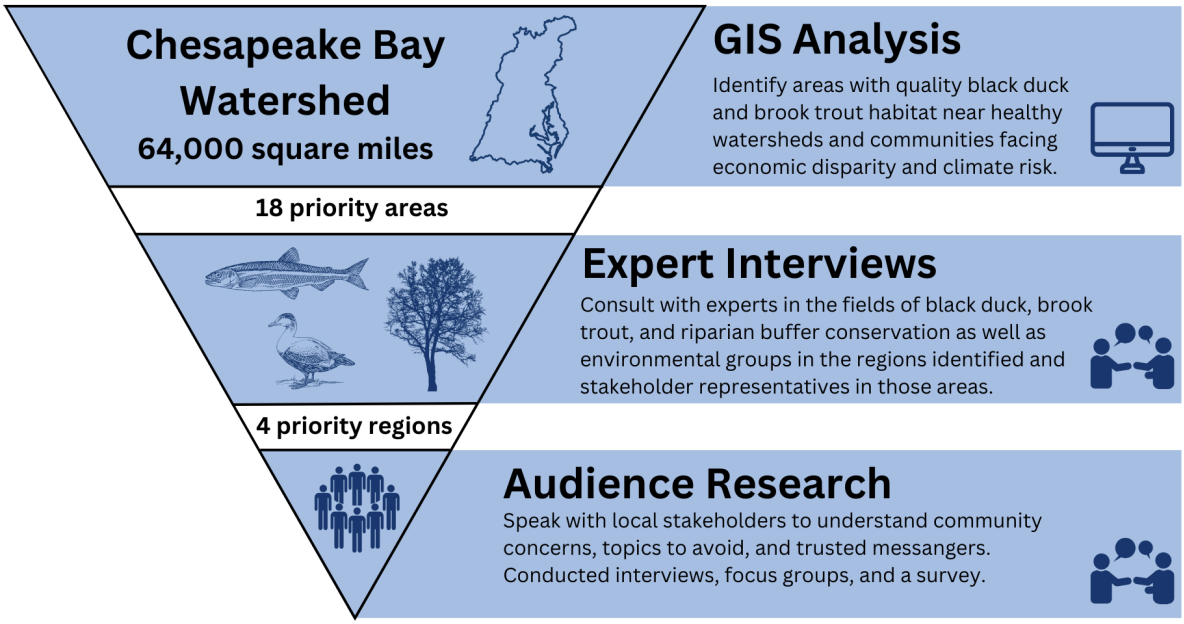
Background

The CBP has a wealth of spatial data and tools related to ecosystem and human health within the Chesapeake Bay's 64,000 square mile watershed. To date, this data has been used to inform conservation and restoration programs and make management decisions at the watershed level. Environmental groups and organizations have used the available data to take action on conservation and restoration goals at the local level. However, the CBP has not developed a program-wide, localized approach of their own.

A Quantitative and Qualitative Approach

The goal of this project was to combine the Bay Program's expansive spatial database with the wealth of knowledge available from Chesapeake Bay Program partners and regional environmental and community groups. In the pilot approach we developed, we are attempting to identify areas that are ideal for habitat conservation and restoration of either black duck, brook trout, healthy watersheds or riparian forest buffers that are also near at-risk communities that will benefit from restoration activities in their region. These selection factors were chosen by the CBP before the project outset with stated outcome being the identification of four priority areas to conduct further stakeholder research.

In the initial step, we conducted a Geographic Information System (GIS) analysis to identify high-value areas based on the selection factors above. We then consulted with regional experts on black duck, brook trout, riparian buffer and healthy watershed restoration to review the areas identified and offer their professional opinions on which areas were more likely to achieve successful conservation and restoration efforts. This assessment was based on their knowledge of the physical environment of each location as well as their perception of how likely these efforts would be supported by the local communities. Using this information, we narrowed our list to four priority regions. We then conducted stakeholder research in those regions to better understand local concerns and lived experiences as well as the perceptions of conservation and restoration activities. By better understanding the communities surrounding high-value restoration areas, we hope to be able to tailor outreach and engagement on restoration efforts and hopefully ensure a higher likelihood of success.



The initial GIS analysis identified 18 potential priority areas in the watershed. We narrowed this list down to four priority regions based on input from conservation and restoration specialists as well as regional stakeholder representatives. Audience research informed recommendations for a hybrid approach for targeted outreach and engagement.

The Quantitative Approach

Green Fin Studio developed a preliminary quantitative approach by evaluating a range of decision-support tools related to brook trout, black duck and riparian buffer restoration. In addition, we evaluated tools measuring climate vulnerability, underserved areas and organizational capacity. This preliminary approach was handed off to GIS specialists at the CBP for a more rigorous analysis.

The Data

The Bay Program conducted a rigorous GIS analysis with various layers related to the project's restoration targets (brook trout, black duck and riparian buffers) as well as additional criteria to narrow the search. The following five layers were deployed to identify a short list of priority locations:

1. Brook trout presence and stronghold areas.
2. Priority black duck conservation/restoration areas.
3. State identified healthy watersheds.
4. Protected lands.
5. Disadvantaged communities.

The Results

This analysis resulted in a list of 18 locations for further qualitative analysis. The locations represented geographic diversity across four watershed states; however, the locations were

primarily clustered near Kent County, Maryland and two counties in the Commonwealth of Pennsylvania.

Priority Location	County	State
Chesapeake Landing	Kent County	MD
Tolchester	Kent County	MD
Rock Hall	Kent County	MD
Georgetown	Kent County	MD
Fairlee	Kent County	MD
Chestertown	Kent County	MD
Edesville	Kent County	MD
Kingstown	Queen Anne's County	MD
Preston	Caroline County	MD
Dillwyn	Buckingham County	VA
Franklin	Pendleton County	WV
New Washington	Clearfield County	PA
Newburg	Clearfield County	PA
Irvona	Clearfield County	PA
Coalport	Clearfield County	PA
Curwensville	Clearfield County	PA
Mountain Top	Luzerne County	PA
Beech Mountain Lakes	Luzerne County	PA

The Qualitative Approach

Phase 1: Consult experts and local professionals

To narrow down the 18 locations to four priority locations for further audience research, we first consulted with several restoration experts and local professionals.

What additional details are assessed?

Beyond quantitative measures, we were interested in what criteria experts consider when selecting brook trout and black duck habitat restoration locations, including the physical characteristics of a site as well as characteristics of the local community that can impact the success of a restoration effort. In our interviews with these experts, we also sought insights into the barriers, benefits and motivations of local communities in relation to conservation and restoration practices. In addition, we wanted to know what groups were active in supporting and/or implementing conservation and restoration projects. Collecting this additional information informed our determination of which of the 18 priority locations are the best areas for the

preservation of black duck, brook trout habitat or healthy watersheds AND have the highest likelihood of community buy-in and participation in the preservation process.

Identifying and interviewing the experts

To formulate a list of experts and local professionals, we developed a list of organizations based on their geographic proximity to our 18 target locations and area of expertise. For the black duck locations, we found organizations or programs related to birds, wildlife, wetlands, hunting and land protection. For the brook trout locations, we found organizations or programs related to fish, aquatic resources, cold water habitat, fishing and conservation. The co-chairs of the CBP Brook Trout and Black Duck Action Teams were consulted for input on our list.

To inform our interviewees about the purpose of this effort, we developed a project briefing packet that explained project goals and how the quantitative analysis was conducted. Maps of the priority locations were included. This briefing packet, along with the interview questions, can be found in Appendix A.

In total, we conducted 14 interviews:

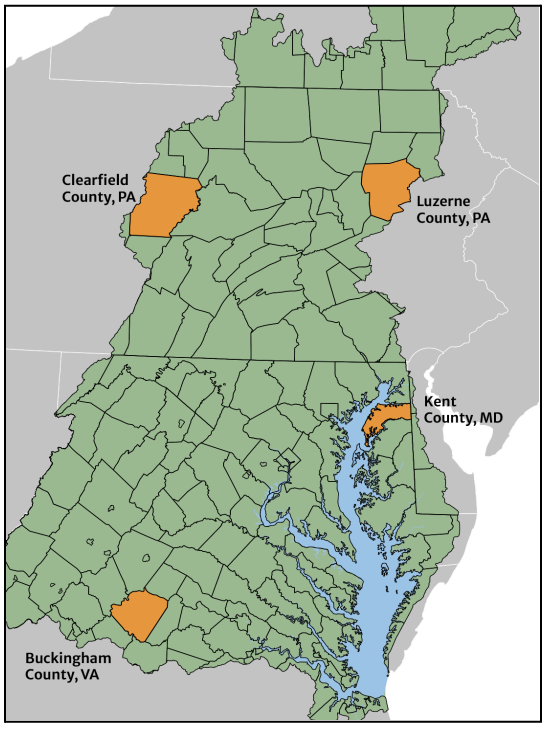
- Three black duck experts.
- Five black duck local professionals.
- Three brook trout experts.
- Three brook trout local professionals.

Experts included biologists, environmental nonprofit staff and representatives from state environmental organizations. Local professionals included restoration practitioners, county-level employees, local academics and extension agents.

The results and how they inform next steps

Final locations

Based on the input and recommendations from the interviews, we narrowed down the 18 priority locations to four regions. The 18 communities were largely clustered within three counties across the watershed with outliers in Commonwealth of Virginia and State of West Virginia. We decided to select priority locations on a county scale because the priority locations were very small areas that would not allow for sufficient audience research.



Our final selection of four regions aimed to represent geographic diversity (ie. headwaters vs. coastal, different states), various priority habitats and underserved populations.

- **Kent County, Maryland,** is an important habitat for overwintering black ducks and has seen recent

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investment in conservation. There is an active waterfowl hunting community who care about the health of bird populations.

- **Luzerne County, Pennsylvania,** has problems with legacy pollution from coal mining. With restoration activities, there is potential to reconnect populations of brook trout to many state identified healthy watershed areas. Additionally, several environmental organizations are active in the area.
- **Clearfield County, Pennsylvania,** has strong and persistent brook trout habitat and uplift potential with the remediation of acid mine drainage. Much of the land nearby is state-owned and near state identified healthy watershed areas.
- **Buckingham County, Virginia,** has agricultural lands that could benefit from riparian buffers and are adjacent to many state identified healthy watershed areas.

Common themes

Upon completion of the Phase 1 interviews, the responses were reviewed and common themes were identified. These themes are summarized here:

Framing – When thinking about the framing of messaging around restoration activities, consider leading with promoting the potential ancillary benefits. These include economic and public health and safety. For specific stakeholder sectors, such as farmers, it is helpful to tailor the messaging so it is specific to them. Farmers often want to hear messages that address problems they are facing and how solutions will benefit them in the long run.

Motivations – Different demographics are motivated by different messages. Older generations are often motivated by nostalgia (ie. hearing quail back in the day) and local pride, while younger generations are more often motivated by doing the right thing for the environment and want to know why they should care. Landowners often become motivated to seek environmental solutions when something is going wrong on their property (ie. erosion, flooding). Local government employees are motivated by constituent complaints and solutions related to infrastructure and flooding resilience. Regardless of demographic, many people are motivated by the value of natural beauty and scenery.

Barriers – Many barriers exist to successfully implementing conservation and restoration projects. To start a project, barriers include finding willing landowners, funding availability, partnerships and capacity. Once a project is implemented, a major barrier to project success is funding and education for long-term monitoring and maintenance.

Benefits – Conservation and restoration projects bring numerous environmental and community benefits. The most common environmental benefits include water quality improvements, multispecies benefits from habitat creation, sediment and erosion control and carbon storage and sequestration. The communities surrounding project sites benefit from economic stimulation, increased recreation opportunities, infrastructure resilience, clear air/water and cooler air/water, as well as natural beauty and aesthetic improvement.

The results we found summarize the framing, motivations, barriers and benefits surrounding brook trout, black duck and riparian buffer restoration projects, but do not provide detailed insights into the community characteristics in each of the regions.

Phase 2: Stakeholder research

With four priority regions identified, we conducted in-depth research with stakeholders in each region. Three different research tools were employed: interviews, focus groups and a survey.

Information Needs

The goal of conducting audience research is to gain an understanding of the perceptions, needs and concerns of local communities in the priority regions. Our target stakeholders for research are county-level practitioners that regularly interact with community members on conservation and restoration projects, particularly the community engagement component. Our questions were developed to gain a deeper understanding about their experiences speaking with community members–what topics do they avoid mentioning, how do they gain their trust and who else do they trust. Additionally, we wanted to assess what tools and data sources practitioners are using on a regular basis to inform decision-making.

We created a list of questions that would collect the desired information. Interview questions for Phase 2 can be found in Appendix B.

Identifying and interviewing additional community stakeholders

We solicited input on a Regional Stakeholders List from Bay Program staff, interview participants from Round 1 and Green Fin Studio contacts in the regions. The list of stakeholders was analyzed and assigned to a research method: interview, focus group or survey. This determination was based on each individual's proximity and role with the priority region. We conducted one interview per region, primarily with representatives of the County Conservation Districts. Interviewees recommended additional local contacts, whom we invited to attend regional focus groups. We held one to two focus groups per region to accommodate schedules and had five attendees per region. Any remaining contacts or contacts that could not attend a focus group were sent the survey.

In total, 30 people participated in the audience research process: four interviews, 20 focus group attendees and six survey respondents. Audience research was evenly spread between the four regions with approximately eight contributors per region.

The results and how they inform a new approach

We developed a Phase 2 Summary Report detailing our findings from the interviews, focus groups and survey results across the four regions. We identified common themes as well as unique characteristics of each region.

Audience characterization

The four priority regions are all primarily rural with a strong agricultural presence. Each region is facing threats to the rural character through land use change – development, solar projects and/or farmland conversion. Given the rural nature of the four priority regions, recommendations from this study may differ when applied to more populated urban areas.

Community concerns

For non-environmental concerns, the four priority regions shared concerns about aging populations, development (especially the conversion of land for solar) and the economy (e.g., a lack of jobs, good-paying jobs and affordable housing).

For environmental concerns, the regions shared concerns about issues of water quality, fears about taking farmlands out of production and concerns about the symptoms of our changing climate, specifically flooding, sea level rise, an increase in the intensity and frequency of severe weather and drought.

Recommended messaging

In all four regions, the term 'climate change' is highly politicized and should be avoided. Many view climate change as a natural cycle, so avoid framing issues as human-caused. Instead, focus on the visible "symptoms" of climate change and local environmental changes that people are experiencing. Such as, more extreme storms, longer periods of drought or flooding in areas that didn't used to flood or are outside of the floodplain. Recognizing and legitimizing local experiences can help build trust and buy-in from community members that supports restoration and conservation projects.

Communicate based on your audience's priorities and interests. Make it clear how your solution directly addresses the problems a homeowner or landowner is facing. For example, if a landowner is worried about erosion of their streambank, make it clear that planting trees along the stream will help hold the soil from washing away. Even if your goal is to increase shading along streams to help brook trout populations, focus on what the community member cares about or how they will benefit.

Tools and Resources

A wealth of geospatial data exist from state and federal sources (ie. GIS layers, map viewers, online portals and tools, etc.) and are being utilized by practitioners on the ground for project selection and environmental data. However, there is a lack of capacity or training in non-government organizations or county departments to conduct GIS analyses or make custom maps.

Chesapeake Bay Program resources were not mentioned by any of the 30 people we spoke with or surveyed. We recommend that the Bay Program evaluate the audiences they envision using these resources by understanding the needs of those users and ensure the tools can

meet those needs with minimum skill, effort and/or time. Then, develop targeted marketing and outreach campaigns to highlight the utility of the resources.

Recommended allies

Although each region has a unique set of state, federal, nonprofit and academic organizations, every county has a Conservation District that are very well-connected in their respective counties and serve as a trusted resource. Local farm bureaus are also in touch with the needs and barriers of agriculture producers and often have already built relationships with the community. Extension agents from Virginia Tech, University of Maryland and Penn State were named as trusted messengers for delivering educational materials, resources and projects to community members. The CBP can use these organizations as inroads to a community and find trusted allies to support projects or information sharing.

Conclusions

The hybrid approach conducted in this project offers a replicable model for applying Bay Program resources to achieve more successful conservation and restoration outcomes. Traditional approaches rely primarily on geospatial data to identify candidate project areas that meet specific physical criteria, but do not consider other factors that may impact project success.

This approach covers how to better target high-value areas for conservation, leverage trusted messengers and use messages that will engage your target audience. The following seven-step process is briefly outlined below, with a more complete how-to guide also being available.

1. **Identify your conservation/restoration goal.**
    - Decide what conservation or restoration effort you want to undertake.
2. **Conduct an inventory of available spatial data.**
    - Identify geospatial data for your desired physical characteristics and other factors you may want to include (ie. climate vulnerability, underserved populations).
3. **Conduct a GIS analysis to narrow down project locations.**
    - Identify locations that meet your desired project criteria.
4. **Consult with experts.**
    - Speak with experts of your target restoration goal, preferably in your region of interest, to get their input on your list of project locations.
5. **Revise selection criteria (if necessary).**
    - Consider feedback from experts to refine your quantitative criteria or analysis.
6. **Refine your selected areas.**
    - Create your final list of target locations and local stakeholder representatives.
7. **Talk with local stakeholder representatives.**
    - Understand the values and concerns of the community to inform your messaging and identify potential project partners.

Appendix A: Phase 1 Briefing Packet

Community Response to Land Use Changes

Project Goals:

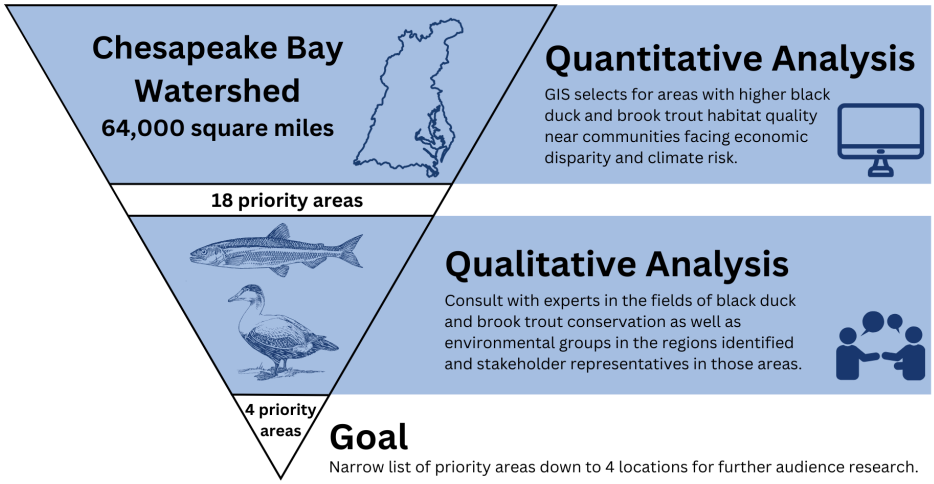
- Identify four communities across the Chesapeake Bay watershed that are proximal to high-value brook trout habitat threatened by climate change, high-value black duck habitat threatened by climate change and state-identified healthy watersheds. Some of the identified geographies should also include disadvantaged/underserved communities and areas warranting additional riparian and/or shoreline forest buffers. The four communities should be acknowledged by local or regional interest groups as audiences for information on restoring and conserving habitats and critical areas for water quality. The process used to identify these communities will be thoroughly documented so that it can be replicated.
- Increase the Bay Program's knowledge about the environmental values and perceptions of local communities. How do their values coincide with CBP outcomes? How do they receive and consume information about environmental threats and opportunities? What motivates them to implement restoration and conservation actions to protect their communities against adverse effects of land use and climate change? What opportunities for conservation and restoration would they be interested in pursuing?
- Develop recommendations for making CBP's decision-support tools, data and analyses actionable and operational at the community level.

Background

The CBP has a wealth of spatial data and tools related to ecosystem and human health within the Chesapeake Bay's 64,000 square mile watershed. To date, this data has been used to develop programs and make management decisions at the watershed level. Groups and organizations have used the available data to take action on conservation and restoration goals at the local level. However, the CBP has yet to develop a program-wide, local-level approach of their own.

The goal of this project is to combine the CBP's expansive spatial database with the wealth of knowledge available from Bay Program partners as well as regional environmental and community groups. In the pilot approach we are developing, we are attempting to identify areas that are ideal for habitat conservation for either black duck or brook trout that are also near at-risk communities that will benefit from restoration activities in their region. The benefit will likely be some combination of resiliency, economic uplift and public health.

An initial analysis identified 18 potential priority areas in the watershed. We would like to narrow this list down to four based on input from conservation and restoration specialists as well as regional stakeholder representatives.



The initial step is to conduct a quantitative analysis using GIS that identifies target communities. It selects for areas with higher black duck and brook trout habitat quality near communities facing economic disparity and climate risk. The next step is to consult with experts in the fields of black duck and brook trout conservation as well as environmental groups in the regions identified and stakeholder representatives in those areas. This approach will allow us to “ground truth” the initial quantitative analysis. In other words, the data may show that a specific area is ideal for conservation and recreation but consultation with target species experts may suggest that efforts would be more fruitful elsewhere. Additionally, stakeholder representatives in a particular area may provide insights on local community perceived barriers and benefits and motivations for participating in conservation and recreation activities.

Project Approach:

1. **Quantitative Analysis:** Eighteen communities within the Chesapeake Bay watershed were identified using a GIS analysis. In this analysis, locations with disadvantaged communities, protected lands and/or healthy watersheds with either Brook Trout presence and stronghold areas or priority Black Duck conservation/restoration areas were selected. **View maps here.** An interactive map viewer with the layers is available **here.**
    - Black Duck

Priority Location	County	State
Chesapeake Landing	Kent County	MD
Tolchester	Kent County	MD
Rock Hall	Kent County	MD
Georgetown	Kent County	MD
Fairlee	Kent County	MD

Chestertown	Kent County	MD
Edesville	Kent County	MD
Kingstown	Queen Anne's County	MD
Preston	Caroline County	MD

- Brook Trout

Priority Location	**County**	**State**
Dillwyn	Buckingham County	VA
Franklin	Pendleton County	WV
New Washington	Clearfield County	PA
Newburg	Clearfield County	PA
Irvona	Clearfield County	PA
Coalport	Clearfield County	PA
Curwensville	Clearfield County	PA
Mountain Top	Luzerne County	PA
Beech Mountain Lakes	Luzerne County	PA

2. **Qualitative Analysis:** We will solicit input from regional experts and individuals who are familiar with the identified priority areas and have an understanding of the key audiences, local social structure and available resources. Interview questions will help determine which of the 18 priority areas are the best locations for the preservation of black duck or brook trout habitat AND have the highest likelihood of community buy-in and participation in the preservation process.
    a. Interview selection:
        i. Category 1: Experts on Black Duck and Brook Trout; conservation and restoration professionals.
        ii. Category 2: Local watershed groups active in the priority areas.
    b. Questions**:**
        i. Brook Trout/Black Duck questions
            - What local organizations are most active in restoration/conservation activities or related activities (e.g., floodplain protection) in this region?
            - How do you lead into/introduce the topic of restoration/conservation in the context of community interests and needs?
            - What factors do you generally screen for when assessing an area for conservation/restoration success?

- In your opinion, based on the physical characteristics of the region(s) do you feel these regions have a high likelihood of conservation/restoration success? Why or why not?
    - Are you aware of any sub-regions that are good candidates for restoration/conservation.
- Physical characteristics aside, are you aware of any other factors in the identified region(s) that would impact conservation/restoration success?
- Where have you seen successful BT/BD restoration efforts? What made the efforts successful?
- What are the ecological benefits to BT/BD restoration apart from providing habitat? What are the human community benefits from BT/BD restoration (health, economy, safety, etc)?
- Are there other data sets we should be evaluating in the initial quantitative step?
- Can you think of any other individuals we should be speaking with?

ii. Local stakeholder representatives questions

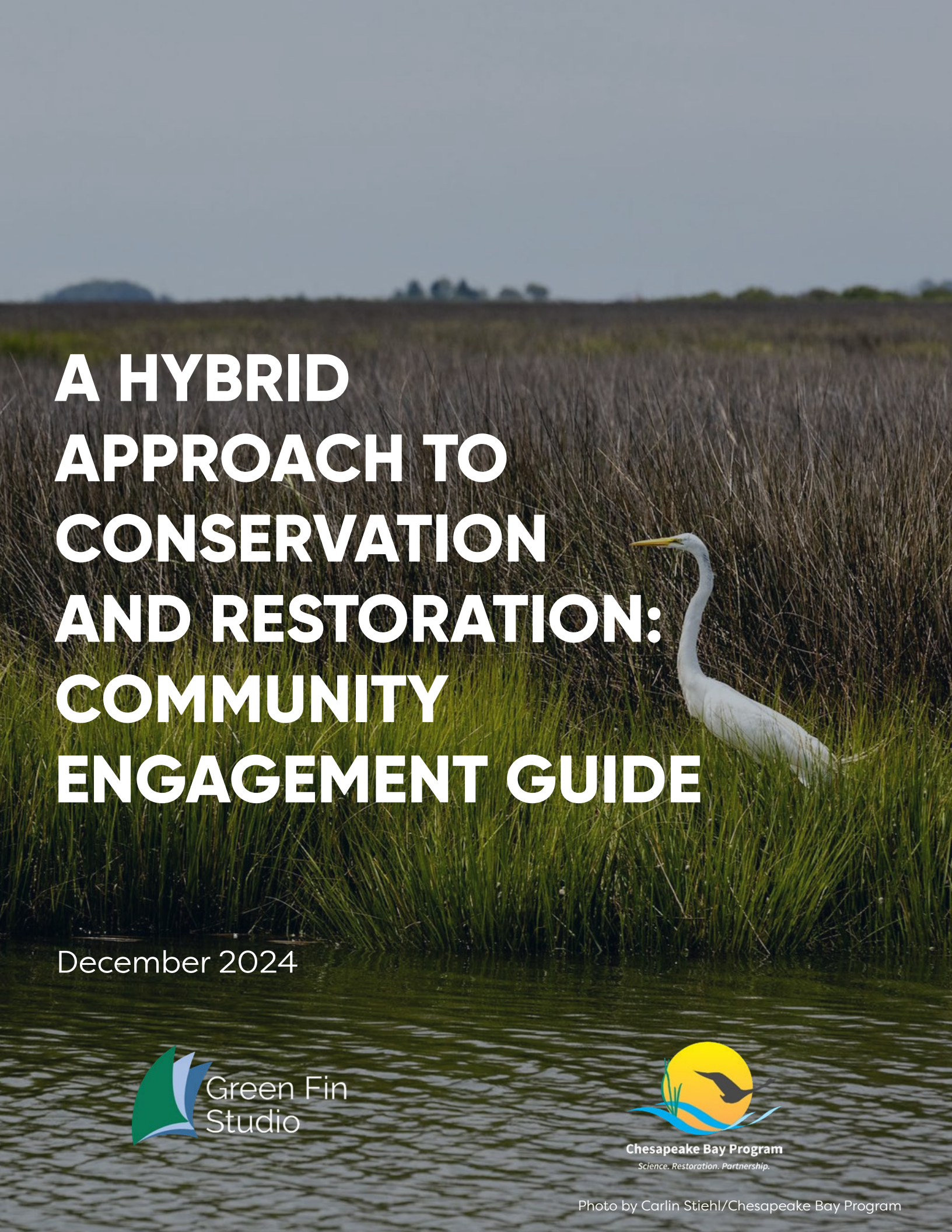
- Tell us about your organization's involvement with conservation activities.
- What local organizations are most active in conservation and restoration activities in this region?
- What are the top motivators in this region for environmental conservation? For example–Hunting and fishing opportunities, flood protection, preservation of rural landscape and culture, protection of wildlife and water quality, etc.
- What are the perceived barriers to supporting and/or participating in environmental conservation efforts?
- What are the benefits to the community from environmental conservation/restoration activities?
- What environmental threats are most pressing in [priority location]?
- What have successful community environmental projects/efforts looked like? What do you think has made them successful?
- Can you think of any other individuals we should be speaking with?

Appendix B: Phase 2 Interview Questions

Interview, focus group and survey questions

- In [priority region], what are some of the general concerns of the community? What are the environmental concerns?
- Do you feel there is a general understanding by the public in [priority region] that there is a connection between environmental conservation/restoration and resilience, economy or public health? *(interview only question)*
- When discussing environmental, conservation or restoration issues with the community in [priority region], is there any topic, language or issue to avoid mentioning? (e.g., climate change, increased tourism)
- Working in [priority region], what barriers did you encounter in gaining the community's trust and support for your work? How did you overcome those barriers?
- What geospatial tools or data sources are you currently utilizing for conservation or restoration projects? Where or from whom do you obtain these tools and data?
- What would be your recommendation to the CBP if they were interested in funding a restoration or conservation project in this region? Who could they partner with? *(focus group only question)*
- Are there any other sources (individuals, organizations) that would be helpful for us to speak to in [priority region]? Please include their name, organization and email.

A HYBRID APPROACH TO CONSERVATION AND RESTORATION: COMMUNITY ENGAGEMENT GUIDE



December 2024

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Photo by Carlin Stiehl/Chesapeake Bay Program

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This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement CB96374201 to the Chesapeake Bay Trust. The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

Photo by Keith Rutowski/ Chesapeake Bay Program

EXECUTIVE SUMMARY

Photo by Will Parson/Chesapeake Bay Program

Recently, the Chesapeake Bay Program (CBP) initiated an effort to develop a new approach of identifying locations for restoration and conservation in the Chesapeake Bay watershed. Traditional approaches generally identify candidate locations by prioritizing areas that meet specific physical criteria. They do not take into account other factors such as vulnerable communities or issues related to infrastructure resilience to climate change, nor do they consider the lived experience of the local community which may impact the acceptance or rejection of restoration and conservation activities in the region. This reality has created an interest in developing a hybrid approach that combines quantitative analysis, including relevant spatial data, decision-making tools and qualitative information obtained by speaking directly with restoration and conservation experts as well as community members from candidate locations.

The hybrid approach that was developed is detailed in "Community Response to Land Use Change (2024)." A critical aspect of this work revolved around understanding local audiences' perceptions of environmental conservation and developing a messaging strategy to support conservation efforts based on those perceptions. This document is an easy-to-follow guide to applying the hybrid approach.

Ultimately, the importance of engaging communities cannot be understated. Community engagement is critical for successful conservation and restoration projects due to the value of community members' insights and input and for helping to understand how communities will be impacted by decisions. Projects have better outcomes when local perspectives are brought to the table and considered in decision-making processes. Additionally, it supports buy-in for projects/efforts, reduces backlash, improves local understanding and oftentimes results in a more engaged community–a win for everyone.

HOW TO USE THIS GUIDE

Photo by
Envato Elements

This how-to guide provides a step-by-step hybrid approach that combines using available Geographic Information System (GIS) data with communication best practices and real-world insights from communities in the Chesapeake Bay watershed to identify conservation and restoration sites. These restoration sites will potentially have a higher likelihood of success then those identified using GIS analysis alone. This hybrid approach balances quantitative data with qualitative community insights to give an understanding of the "situation on the ground" in communities adjacent to restoration targets across the watershed. The pages that follow also provide detailed guidance on how to best approach engaging communities around conservation and restoration goals in ways that account for local lived experiences, community needs and building relationships that can be sustained over time.

As a Chesapeake Bay Program staff member or community liaison, the following guide gives you steps you can take to ensure your community outreach and engagement efforts consider the different values and priorities of the communities you hope to help reach as well as examples of what language to use, words or controversial topics to avoid and how to engage with diverse audiences in ways that are sensitive to the issues facing their communities. This how-to guide concludes with a general summary of recommendations for tailored outreach and engagement on restoration efforts.

The guidance is meant to highlight examples of best practices based on the findings from our research. However, these are not the only dynamics to be aware of. Each community is different and it is crucial to engage with trusted messengers and allies who can help you determine how best to engage with their community.

APPROACH

1

Characterize or define your conservation/restoration goal.

Decide what conservation or restoration effort to undertake.

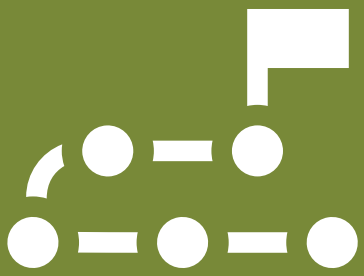
Determine the specific region for the effort.

Specify the number of locations to identify.

Consider additional factors beyond conservation or restoration success, such as working in communities at risk from climate change or historically underrepresented areas.

APPROACH

2



Conduct an inventory of available spatial data.

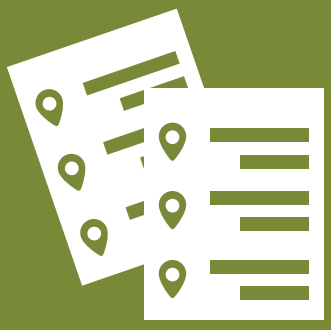
Identify spatial data that will help pinpoint the specific land characteristics needed for your conservation or restoration focus.

Explore the assembled list of spatial data resources here. This list is not exhaustive.

Include relevant data in your inventory if considering additional community factors in your targeting approach. The provided list includes data sources offering this additional community information.

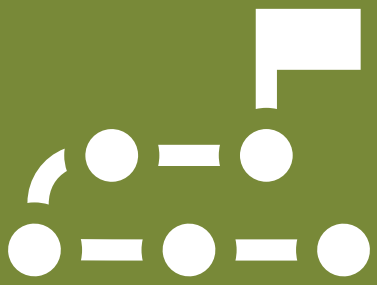
APPROACH

3



Conduct a GIS analysis to narrow down project locations.

Identify two to three times the number of locations that you hope to restore to ensure a strong group of candidates to review. The collected data to conduct a spatial analysis that identifies locations in your region of interest that meet your criteria for potential conservation/restoration.



Incorporate additional factors in your spatial analysis (if considering other targeting priorities).

Apply weighting factors to prioritize locations, such as giving higher scores to areas that meet habitat requirements and are in historically underrepresented communities.

APPROACH

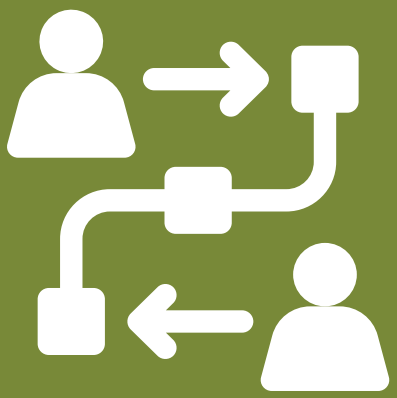
4

Consult with experts.

Develop a list of experts who have experience with your target restoration habitat or species, preferably in your region of interest.

An excellent starting point for developing your list is to reach out to members of the Habitat Goal Implementation Team and Maintain Healthy Watersheds Goal Implementation Team of the Chesapeake Bay Program.

Conduct interviews with as many of these experts as you can to verify your quantitative approach and the areas that were identified using it.



Gather input on local stakeholder contacts in the region of interest to develop a list of stakeholder representatives in the region.

Conduct interviews and focus groups with these stakeholders to gather information that will inform your engagement strategy for your restoration project.

Suggested expert interview questions:

- What factors do you generally screen for when assessing an area for conservation/restoration success?
- Based on the physical characteristics of the region(s) do you feel these regions have a high likelihood of conservation/restoration success?
- Physical characteristics aside, are you aware of other factors in the identified region(s) that would impact conservation/restoration success?
- What local organizations are most active in restoration/conservation activities or related activities in this region?

APPROACH

5

Revise selection criteria (if necessary).

Consider feedback from experts to refine your quantitative criteria and/or analysis.

Suggested questions to ask yourself:

- What relevant quantitative metrics did I not include the first time?
- Are there any aspects unique to this community that I need to account for moving forward?

6

Refine your selected areas.

Create the final list of target locations informed by conversations with experts and any updated spatial analysis results.

Finalize the list of stakeholder representatives, seeking assistance from Members of the Habitat and Maintain Healthy Watersheds Goal Implementation Teams, if necessary.

APPROACH

7

Talk with local stakeholder representatives.

Understand the values and concerns of the community to inform/refine messaging AND identify potential project partners.

Suggested stakeholder interview questions:

- In this region, what are some of the general concerns of the community? What are the environmental concerns?
- When discussing environmental, conservation or restoration issues with the community in your priority region, is there any topic, language or issue to avoid mentioning?
- Working in this region, what barriers did you encounter in gaining the community's trust and support for your work? How did you overcome those barriers?
- What organizations or individuals do community members trust?

TIPS ON BUILDING TRUST AND ENGAGING YOUR AUDIENCES

Photo by Will Parson/Chesapeake Bay Program

TRUSTED MESSENGERS

Photo by Will Parson/Chesapeake Bay Program

Trusted messengers are individuals or organizations who have built credibility, trust and influence with their community. They have unique insights into local values, culture and lived experiences. Leveraging their established community relationships can break down barriers and pave the way for more effective community engagement.

Trusted messengers can be divided into two sub-categories, with some falling into both categories.

1. **Trusted sources** – The people and organizations who community members trust.

2. **Trusted allies** – The people and organizations who can provide inroads into the community for external organizations.

In an assessment of four counties throughout the Chesapeake Bay watershed, we identified the following types of organizations as trusted sources and allies. Please note, the findings from this pilot were primarily based on rural communities, insights may differ when this approach is applied in urban or suburban areas.

Trusted Sources

Who community members trust

- Conservation Districts
- Agriculture extension agents
- Fishing, hunting, and birdwatching organizations (i.e., Trout Unlimited, Ducks Unlimited)
- Local Farm Bureau
- Churches

Trusted Allies

Who can provide inroads for CBP

- Conservation Districts
- Agriculture extension agents
- Non-profits: Land Conservancies & Trusts, Watershed Alliances/ Associations
- State environmental organizations

Know the History

- Understand the community perceptions of organizations.
- Be cognizant of the working relationships with organizations and communities you are working with.
- Past mis-steps or misunderstandings with otherwise well-meaning organizations can result in a 'history' that you should be aware of when engaging with local stakeholders.

How to identify and reach trusted messengers:

LEVERAGE YOUR NETWORK

Start by talking those knowledgeable about your target community to gather insights and gain a better understanding of the community.

CROWD SOURCE STAKEHOLDER CONTACTS

Ask colleagues or your network if they know people with valuable insights in your target community.

BUILD OFF OF CONVERSATIONS

Ask individuals you speak with for recommendations of other organizations active in the area related to your goals.

FIND CONTACT INFORMATION

Many organizations have staff web pages with email or phone contact information.

RESEARCH STAKEHOLDER ORGANIZATIONS

Use the internet and social media to find out what organizations are active in an area and what their goals are.

TIP: Consider reaching out to both smaller organizations (e.g., grassroots organizations, nonprofits, and community groups) along with larger municipality groups (e.g., Soil and Water Conservation Districts, Extension Agents and local government organizations).

STAKEHOLDER ENGAGEMENT TIPS

Reach out: Create an open line of communication with the audience you want to reach. If you don't have a direct line of communication, use your network and resources to get you into contact with the stakeholders you hope to work with.

Be transparent: Be intentional about your purpose and goals and explain how working together benefits everyone involved. Highlight the benefits for others and be honest about what your organization gains.

Build trust: The importance of "breaking bread" and becoming a trusted source with your audiences cannot be understated. Once you have built a rapport with your audience, it is easier for you to engage with them. Then, you can ask questions and hopefully gain support and buy-in with your work.

Show up for partners: If you want to build relationships and trust with stakeholders, then you need to be present and put in the effort so that people understand who you are, why you are there and why they need to take the time to share their knowledge and experiences with you.

Maintain relationships: Reaching out once is not enough. To build a strong, lasting relationship, you should put in the effort and engage frequently. Consider information sharing, educational resources, leveraging resources and funding and important insights that may be beneficial for stakeholders to have access to.

Photo by Will Parson/Chesapeake Bay Program

COMMUNICATE BASED ON YOUR AUDIENCE'S CONCERNS

Photo by Will Parson/ Chesapeake Bay Program

There is no one-size-fits-all message that will resonate with all audiences. Your target audience's values and concerns should be the basis of your messaging and outreach. Listen to your target audience's needs in order to align your message with their concerns. Most importantly, frame your message to show how your solution will benefit them.

Connect your messages to:

- The economy
- Infrastructure
- Recreation
- Human or animal (pets, livestock) health

Tips:

- Acknowledge and validate your audience's concerns.
- Clearly explain how your solution(s) will address their concerns.
- Highlight the benefit to the locality, residents and environment.
- Frame messages as voluntary, never as mandatory

For example, in the image above, a farmer is voicing his concerns about his livestock getting sick from drinking water out of the local creek. A restoration professional shares how cattle fencing is a solution to keep the livestock from getting sick, and it also has the added benefit of improving water quality for brook trout habitat.

Other examples of responding to your audience's concerns with messages that will resonate include:

Audience	Audience Concern	Solution	Goal	Connection
Riverfront homeowner	Property value decreasing due to streambank erosion	Riparian forest buffer	Brook trout habitat	Economy/ Resilience
Waterfowl outfitter with 200 acres of land	Fewer waterfowl for hunting	Wetland restoration on their property	Black duck habitat	Recreation
Local government	Flood resilience	Upgrading and replacing old culverts	Fish passage	Infrastructure

HOW TO TALK ABOUT COMMON COMMUNITY CONCERNS

Photo by Will Parson/ Chesapeake Bay Program

Although the Chesapeake Bay watershed contains a diverse range of communities, many of the communities are facing the same challenges– climate change, the economy, tourism and land use changes.

Some of these concerns may be "red flag" topics for certain community members, influenced by the local economy, political views or the culture of the region. Be aware of both sides of an issue and be prepared to tweak your messaging based on your audience's views.

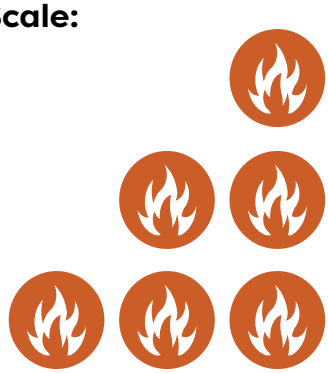
The pages that follow highlight how to approach addressing or responding to several common community concerns for residents within Chesapeake Bay watershed. It also provides communication recommendations on what to say and what not to say to be most effective when speaking with your audiences. The following are examples of some common community concerns and provide examples of how to engage surrounding the topics, but are meant to highlight how nuanced some of these topics can be and how to navigate them with intentionality and consideration.

TIP:
Ask about local "red flag" topics that the community you are working with is most sensitive to. This will help you engage without stepping into difficult conversations you aren't prepared to address.

When speaking directly with a property owner, listen to what they have to say. Ask general questions about changes they've seen or issues they are having.

Community concerns can be differentiated by how 'hot' the topic is based on a few considerations including the scale, impact, urgency, visibility and polarization of an issue.

Scale:



These topics are of concern for community members, but they may be less visible, move at a slower pace or only impact a subset of the population.

These concerns have a noticeable impact, potentially with growing urgency or some level of polarization. They tend to involve a broader segment of the community.

These concerns are highly visible, deeply impactful and/or large in scale. They are typically polarizing and contentious among community members driven by strong emotions.

Farmland Conversion

Farming communities are often characterized by an aging population. A variety of factors, including rising operating costs, act as barriers for younger generations to take over family farms or enter the profession. Selling farmland for development offers opportunities for housing, infrastructure, and economic growth; however, at the expense of food security, environmental impacts, and loss of rural character. Restoration and conservation efforts can protect farmland for generations, but people don't always understand this reality.

What to Consider

- Share the range of options available for farmland conservation practices.
- Highlight the benefits of installing best management practices (BMPs) with economic benefits, on-farm benefits, etc.
- Avoid dismissing the gravity of how taking farmland out of production has real life implications for farmers, their family, local economies, and supply chains.
- Avoid frames or statements that disregard the work, time, and money that goes into farming and making improvements that support conservation and restoration efforts.
- Engage farm operators, as they make great trusted messengers. Tours of farms that are successfully implementing conservation practices can help convince farmers who are considering similar actions.
- Consider estate and farm transition planning as it is important to decide how to handle the future of the land.

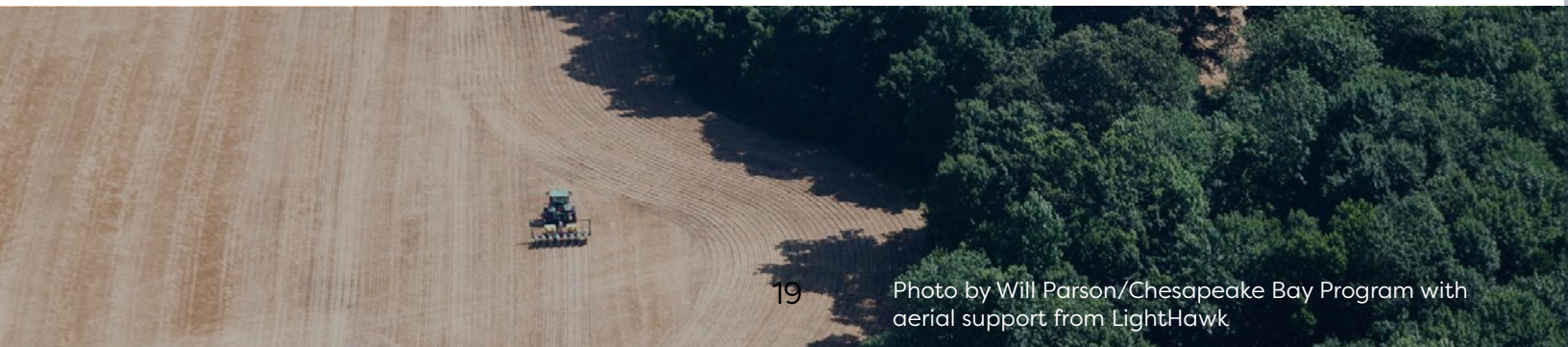


Photo by Will Parson/Chesapeake Bay Program with aerial support from LightHawk

Economy

The economy is a central concern for all communities, including challenges related to inflation, availability of good-paying jobs, and access to affordable housing. These issues profoundly affect people's lives, livelihoods, and they have cascading impacts on family and community. If you fail to consider your audience's resource constraints, you risk alienating your audience with your message. Ultimately, conservation and restoration work has impacts to the economy and can provide many local benefits.

What to Consider

- Discuss both the short-term gains and long-term economic benefits related to your proposed conservation/restoration project.
- Explain the return-on-investment and clearly indicate a reasonable timeline of when people can expect to see results.
- Avoid dismissing the gravity or importance of economic factors to an individual's decision-making.

Photo by Will Parson/Chesapeake Bay Program

Development

The rise of development is a growing concern, especially for more rural communities with ample undeveloped land. Local residents are often fearful about losing the unique character of their landscape due to development demands, and feeling frustrated they have little say in the issue. Impacts from development commonly include runoff and erosion, resource extraction, over-development, and conversion of farmland, to name a few. When it comes to restoration and conservation efforts, community members need to understand how they will impact land, land use, and development concerns.

What to Consider

- Use community development concerns as an opportunity to establish common ground. Development is an issue that community members and environmentalists can agree on.
- Consider how bringing more people to a region, and associated development, is not likely to be a selling point in rural areas where there is increasing concern about preservation of local character and access to natural resources (i.e. hunting and fishing).

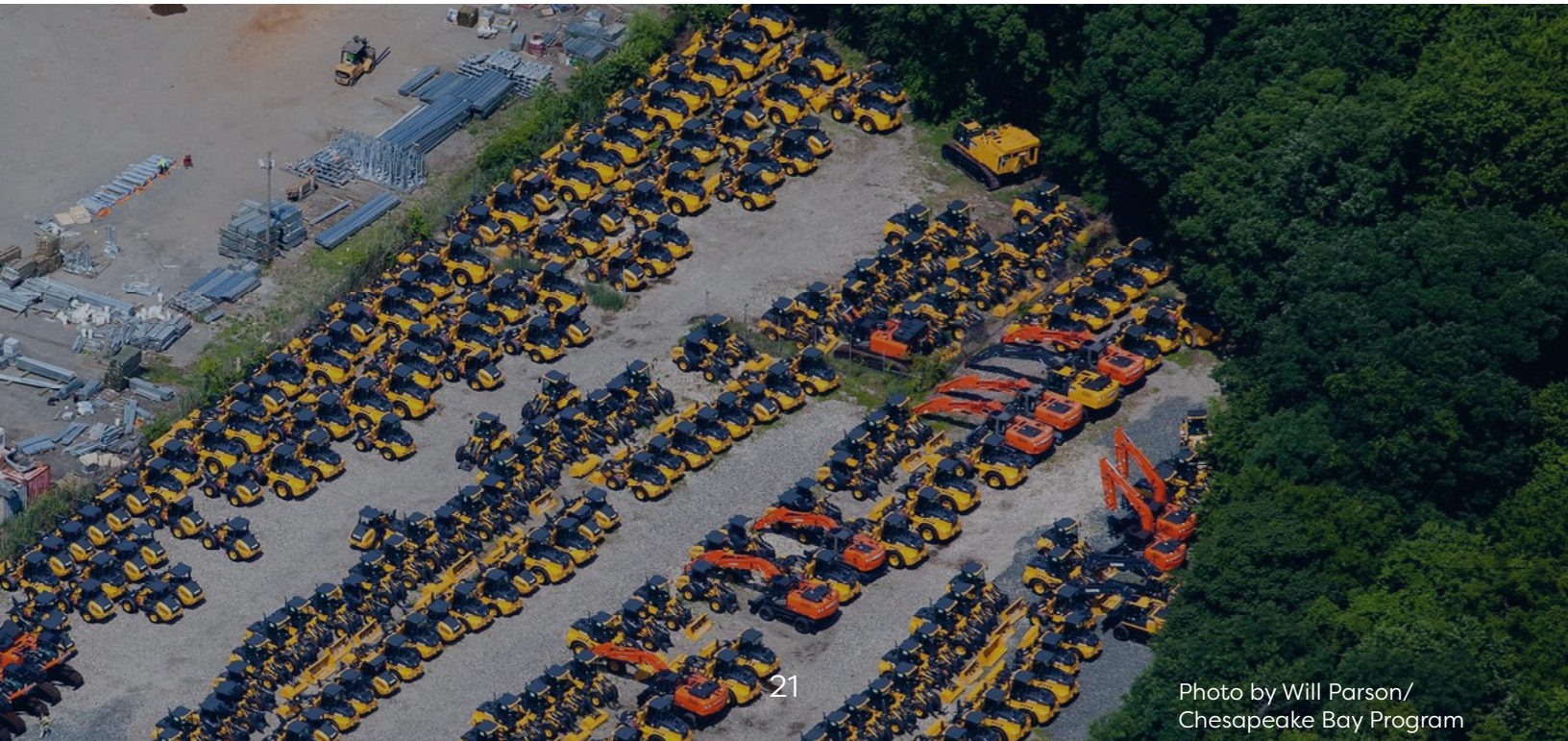


Photo by Will Parson/ Chesapeake Bay Program

Tourism

Many local economies are stimulated, and sometimes driven, by tourism-related business–hotels, restaurants, outfitters, tour guides, and more. However, some locals perceive increased tourism as an influx of "outsiders" coming into the community and changing the local character and landscape. Successful conservation and restoration projects often benefit local species or landscapes in ways that can result in an increase in tourism to the region.

What to Consider

- Focus on the benefits to the environment and economy.
- Clarify that the local community will still have access to their natural resources.
- Be sensitive to the possible negative impacts of tourism to local character.
- Understand that while conservation and restoration actions may improve hunting and fishing opportunities, locals may not be interested in sharing these opportunities with outsiders.

Photo by Will Parson/Chesapeake Bay Program

Climate Change

The reality of climate change is supported by the vast majority of scientists, with communities across the Chesapeake Bay watershed experiencing its impacts firsthand. However, the term itself has become highly politicized, making it a sensitive topic for discussion–but not one you should steer away from. Conservation and restoration efforts are essential to alleviating the impacts from our changing climate and can help communities to be better prepared for environmental changes.

What to Consider

- Connect with your audience by focusing on the visible "symptoms" of climate change that your audience may be experiencing including:
    - Changes in weather patterns
    - Extreme weather events (intensity and frequency)
    - Shifts in seasonal timing
    - Natural resource challenges
- Highlight how the conservation and restoration actions you are recommending can offer resiliency to the negative changes that are being experienced.
- Avoid convincing the audience of the facts or data.
- Avoid assigning blame to people or putting the responsibility on individual actions.
- Avoid using other politicized terms related to climate change: global warming, carbon footprint, greenhouse gases, climate crisis, anthropogenic, etc.

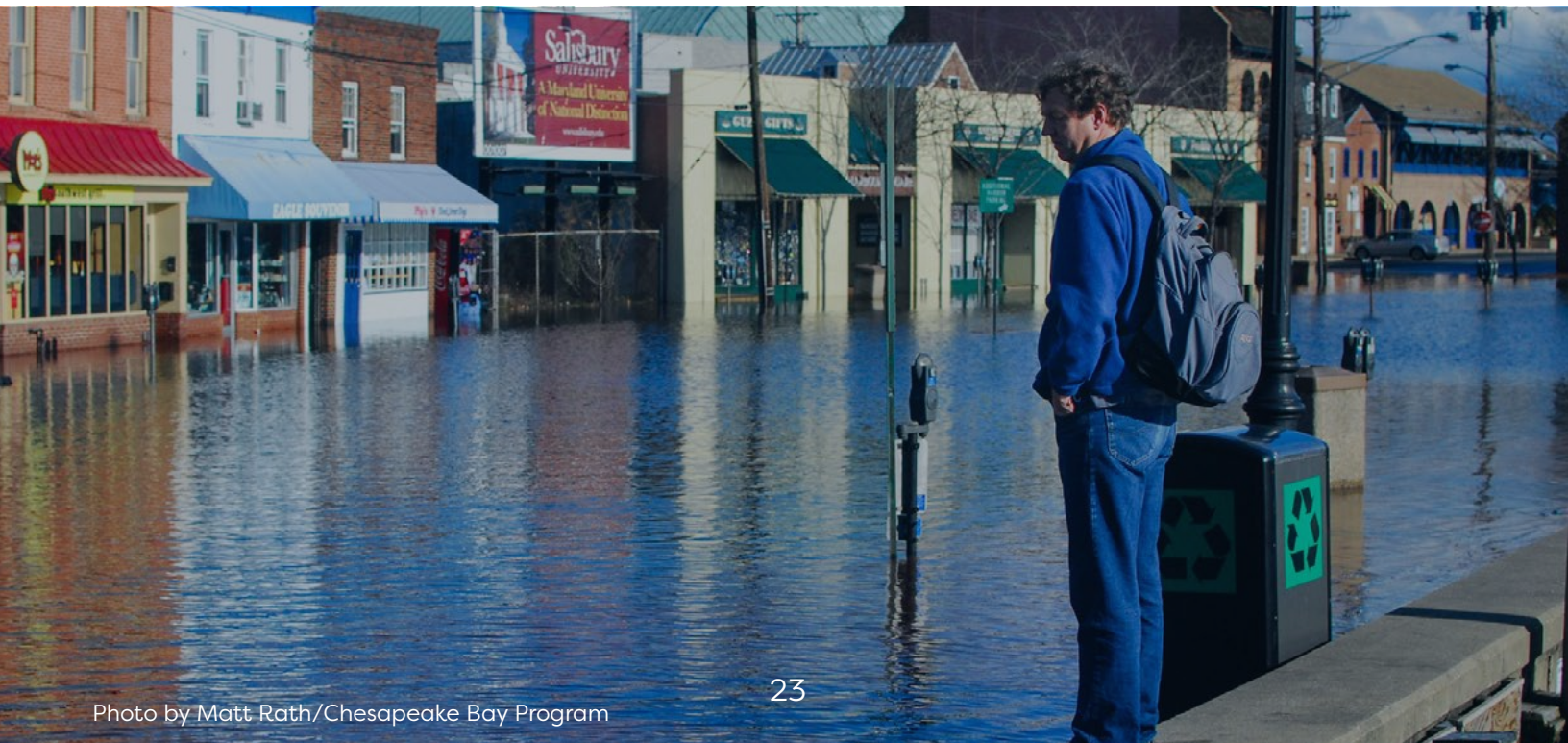


Photo by Matt Rath/Chesapeake Bay Program

RECOMMENDATIONS FOR TAILORED OUTREACH AND EDUCATION ON RESTORATION EFFORTS

Photo by Matt Rath/Chesapeake Bay Program

When developing any communication and outreach materials (e.g., flyers, infographics, presentations, or educational materials) be sure to avoid generalizations. Instead, incorporate local knowledge into developed materials so you can appeal to local concerns, be relevant, and resonate with the audiences you hope to reach. Do this by considering community perspectives and constraints as you develop materials. Keep community members' lived experiences in mind and do your best to address community needs and concerns in your outreach and education efforts. Additionally, do your best to avoid "red flag" language or topics. If you aren't sure what the red flags for the region or locality are, be sure to ask your trusted allies about what topics or language to avoid.

Some areas are polarized by politicized language surrounding climate change. While others do not want to hear anything that could negatively impact them financially (e.g., additional taxes/fees or required expenses). You will get less push back from the community and have greater success with your efforts if you take the time to learn what topics are triggers for the community. Lastly, you should be intentional and engage trusted messengers in the community to be a vehicle to share information with the audiences you want to reach. As a representative of the Chesapeake Bay Program, you do not need to be the party directly engaging communities. Instead, focus on investing in developing strong relationships with trusted community messengers who will help get your message and goals into outreach and projects in the community.

Ultimately, to make the Bay Program's decision-support tools and analyses actionable at the community level, there first must be an understanding of the environmental values, perceptions, needs and concerns. This understanding will help community partners and organizations across the Chesapeake Bay watershed to know how to best approach communities to make better-informed decisions with restoration efforts.

Chesapeake Bay Program

Science. Restoration. Partnership.

Green Fin Studio

GEOSPATIAL DATA AND TOOLS

Based on responses from audience research in four regions throughout the Chesapeake Bay Watershed, it was found that conservation and restoration practitioners rely on various geospatial tools for water quality, agriculture, and natural resources information. The resources shared were primarily federal and state resources and largely interactive map viewers.

The Chesapeake Bay Program resources were not mentioned by any of the 30 people we spoke with or surveyed.

Barriers:

- Lack of dedicated GIS staff or staff that have GIS training – often can't put together layers in a usable way.
- Lack of awareness of tools available.
- Ease of use of certain GIS tools.
- Lack of ability to combine certain tools, making the process of reviewing layers take more time and attention to detail.
- Inability to access certain tools (some tools are owned by organizations and are kept private and require requesting information or access to accounts to utilize important information).

Recommendations:

- Audit the current outreach strategy for marketing geospatial data and tools.
- Market CBP tools to the audiences you envision using them.
- Understand user needs and ensure t tools can meet those needs with minimum skill and effort/time.
- Identify additional tools that may be useful.
- Leverage existing tools to help others achieve conservation goals and address capacity constraints.

Photo by Will Parson/Chesapeake Bay Program