Communicating Science with Policymakers

A Scientific and Technical Advisory Committee Workshop
June 5, 2024

Green Fin Studio

Welcome & Introductions

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Guiding Questions & Purpose of Session

Goal: To support STAC members in communicating STAC efforts to non-technical audiences, especially policymakers.

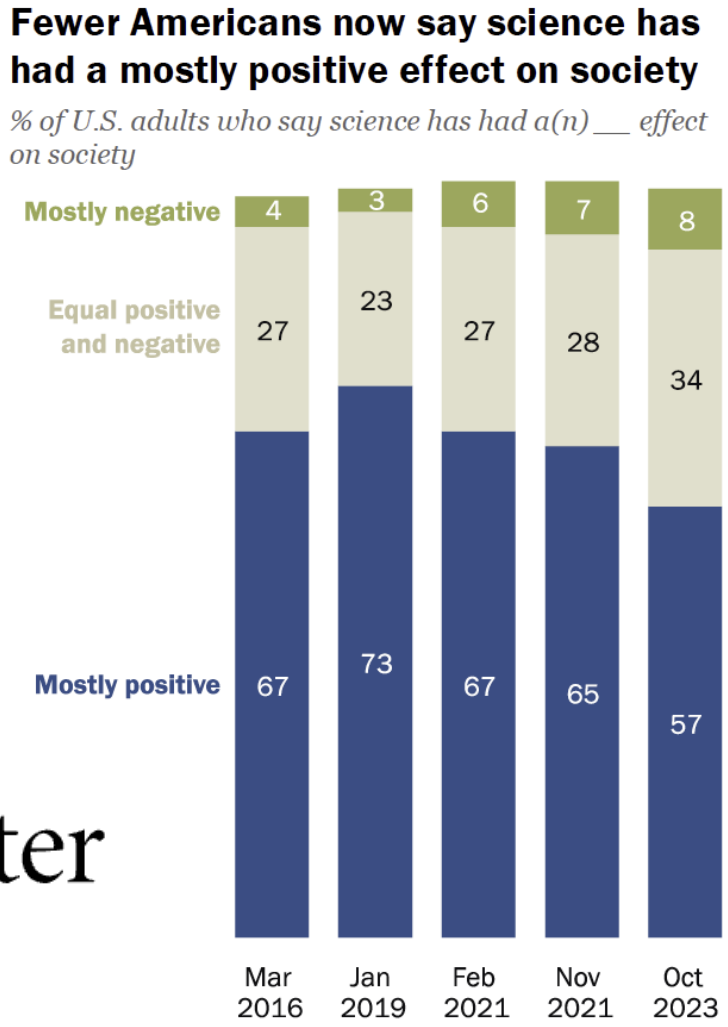
1. How do policymakers and those who routinely interact with them characterize productive engagement with a scientist? What advice do they have?
2. What are STAC member perceptions about public engagement and communication mechanisms?
3. Addressing your requests from STAC survey
4. Provide insight, best practices, and resources for you to use after today

Public Trust in Science and Scientists- Nov 2023

Science is not immune to politics or a pandemic.

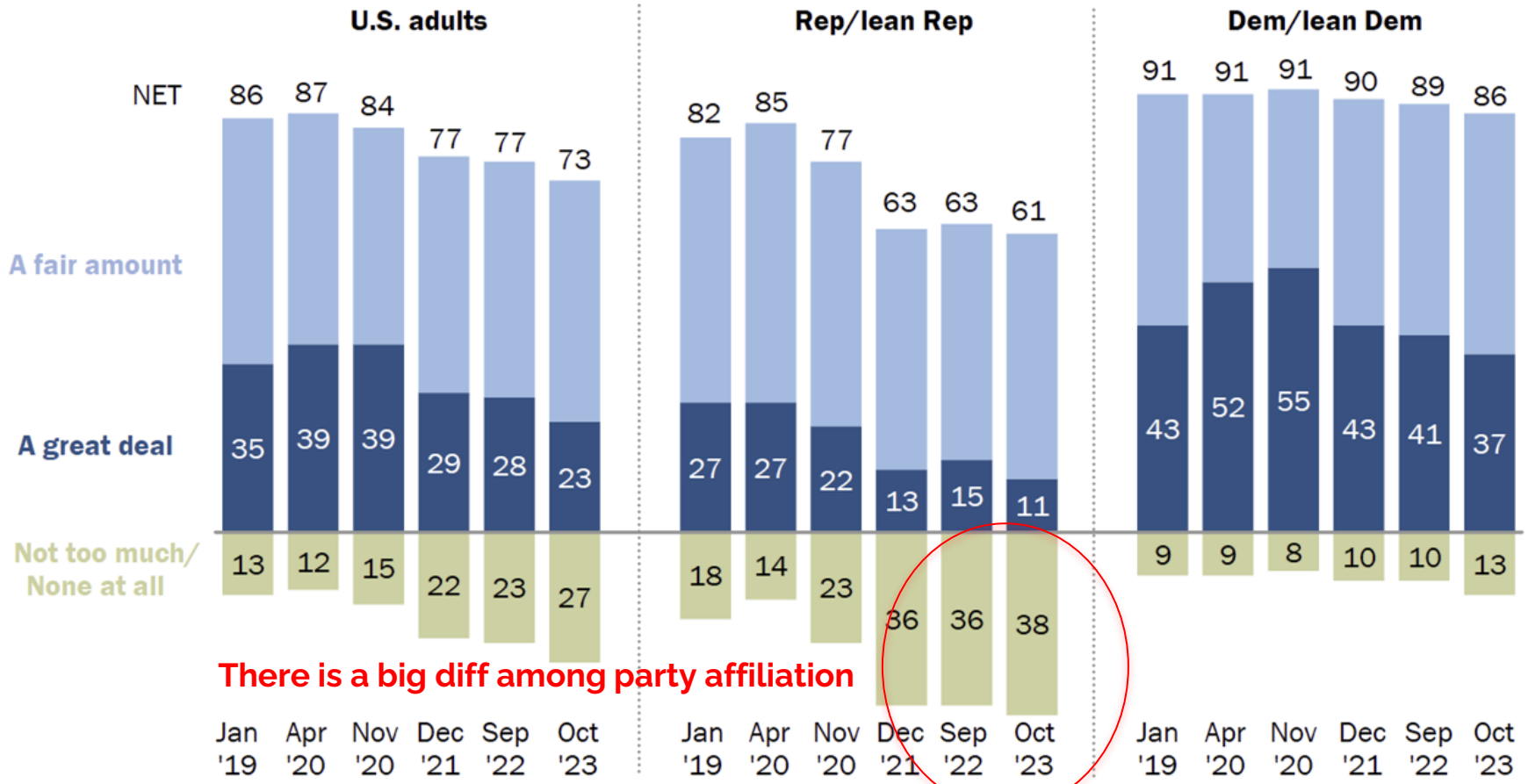
10 point drop between March 2016 and October 2023

Pew Research Center



Declining levels of public trust in scientists

*% of U.S. adults who have ___ of confidence in **scientists** to act in the best interests of the public*



ScienceCounts

Science Counts: 2022 Study of Americans (External)

To provide insights and data to develop more effective public engagement activities

Motivations	Barriers
Curiosity: Sparking imagination and sense of wonder	Logistics
Mastery: Gaining new knowledge and skills	Value Proposition
Joy: brings joy and makes me feel good	Belonging
Connections: finding overlap with existing interests	Identity

ScienceCounts and Alan Alda Center 2019 Study (Internal)

To assess U.S. scientists' and STEM professionals' perspectives on science communication, public engagement, and baseline attitudes regarding science and its interface with society. (pre-covid)

Study Questions

- HOW willing are scientists to take part in public engagement?
- WHAT goals do scientists have for engagement?
- WHAT kind of help do scientists want in communicating science effectively, and from whom?
- WHAT scientific research institutions do scientists most trust to be non-political?
- WHAT are views about basic research funding and the implications of possible cuts?
- HOW do scientists describe their personal connections to science

Poll: National Perspectives

ScienceCounts

Alan Alda Center for Communicating Science®
AT STONY BROOK UNIVERSITY

How willing are scientists to take part in public engagement?

#1. Face-to-face engagement where you discuss science with adults who are not scientists (e.g., giving a public talk or doing a demonstration)

#2. Direct interaction with government policymakers (e.g., meeting with elected officials, government officials, lobbyists, etc.)

#3. Interviews with journalists or other media professionals

#4. Online engagement through websites, blogs, or social media

#5. Protests, direct advocacy, or demonstrations about science related policy

* **N = 3,619;** Scientists surveyed identified as liberal, conservative, student, full professor, or employee of university, ngo, corporation

Poll: National Perspectives

ScienceCounts

Alan Alda Center for Communicating Science®
AT STONY BROOK UNIVERSITY

What goals do scientists have for engagement?

#1. Ensuring policy makers use scientific evidence

#2. Ensuring our culture values science

#3. Ensuring adequate funding for research

#4. Helping people use science to make better decisions

#5. Getting young people to choose careers in science

#6. Duty to society

#7. Strengthening professional reputation

Poll: National Perspectives

ScienceCounts

Alan Alda Center for Communicating Science®
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What communication tactics are you less comfortable using?

#1. To commit time to making sure that non-scientists feel like they are being listened to by the social community

#2. To try to organize a group of scientists to work together to send decision-makers a common message

#3. To publicly question the credibility of those who disagree with science consensus

#4. To commit to spending about 10% of their project budget to support communication efforts

#5. To try to get people angry about a science topic

Policymakers: Perspectives

Adam Ortiz
Regional Administrator
EPA Mid-Atlantic

Sarah Elfreth
Senator
Maryland

Mike Rolband Director
Virginia DEQ

Nikki Rovner
Associate State Director VA
The Nature Conservancy

Ann Swanson
Former Director
Chesapeake Bay
Commission

Verna Harrison
Former Secretary
MD Department of
Natural Resources

Troy Hartley
Director
Virginia Sea Grant Program

Skip Stiles
Senior Advisor
Wetlands Watch

Policymakers: Perspectives

Policymakers: Perspectives Takehomes

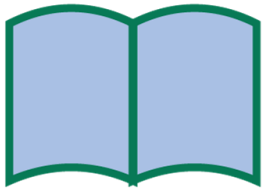
- Policymakers have to be **generalists** and must filter info through a political lens while balancing multiple, competing needs. Scientists are typically **specialists**.
- They want hear from you and do **value** scientific expertise.
- Time is a limited resource - be **brief**, **memorable**, and **clear** on your intentions.
- Be prepared for a **two-way** and **ongoing** conversation and have **patience** for incremental progress.
- Identify some leading **questions** in advance (e.g., how could my research influence the bill on X, would it be possible to propose new legislation that does Y)

Understanding Local Leaders' Priorities

Economy

Public Health & Safety

Infrastructure



Education

Full Ecologix report **https://bit.ly/policy-communication**

Messaging with Local Leaders

PROTECT LOCAL WATERWAYS

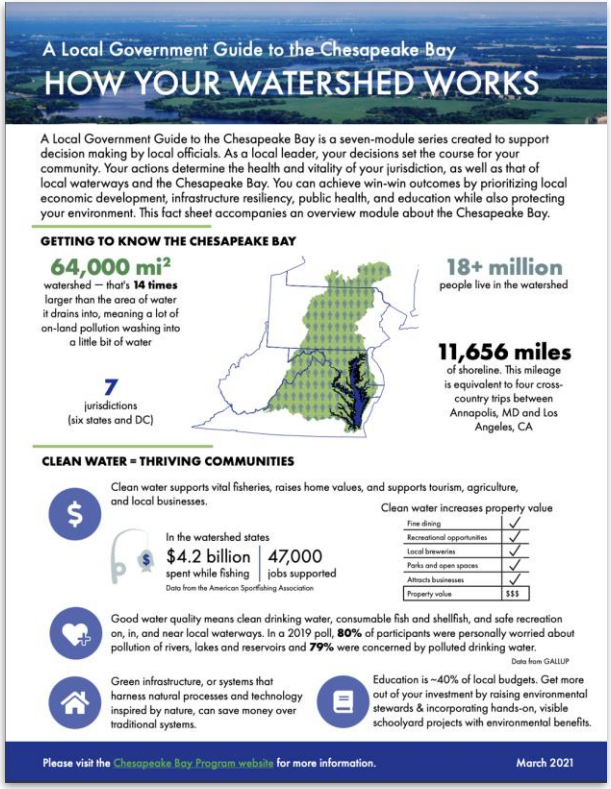
ANTHEM AWARDS 2024 WINNER

Tips for Engaging Municipal Leaders and Elected Officials

- Economic Development
- Public Health and Safety
- Infrastructure Maintenance and Finance
- Education

Cross-sector Concerns

- Diversity, Equity, and Inclusion; and
- Climate Change



Green Fin Studio

www.protectlocalwaterways.org/

greenfinstudio.com

Policymakers: Process

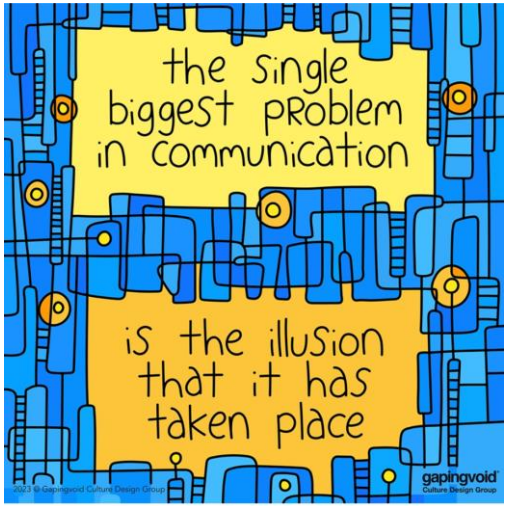
Policymakers: Process Takehomes

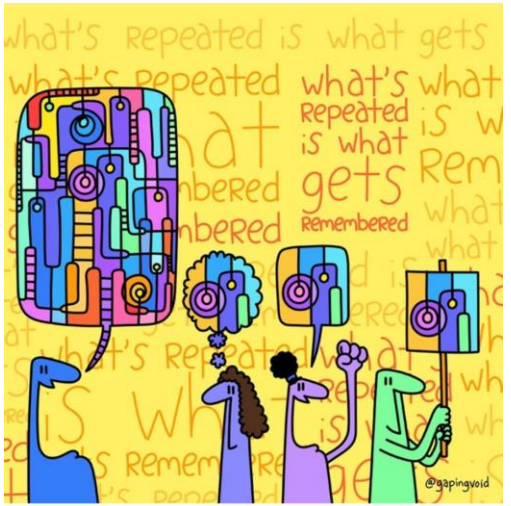
- Establish **relationships**, **credibility**, and **trust**, particularly with key staff
- Process typically requires going **above and beyond** most tenure track position descriptions
- There are other, indirect ways to **get your message out** - garden clubs, civic organizations, etc.
- Understand their **priorities** to make **connections**
- Identify and work with **associated groups** to help carry and amplify your message
- Peer pressure doesn't hurt (e.g., be better than Baltimore, hon; or LCWP)
- Look for reasons for **follow up** and continue the conversation - **be responsive**
- **Delivery matters** - practice, be nice, be respectful, don't talk down
- **Have patience** and be prepared for the long haul process

Policymakers: Messaging

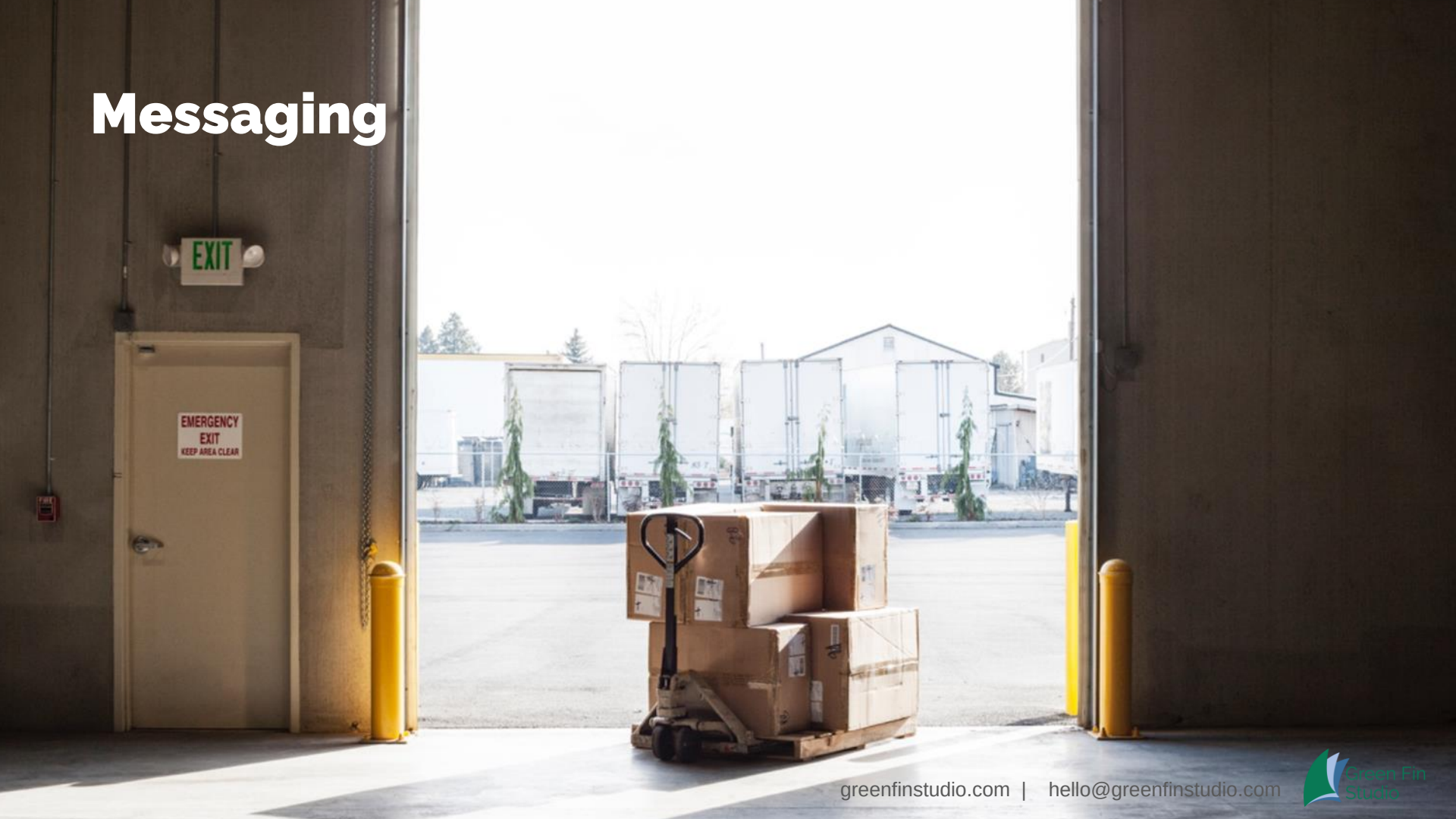
Policymakers: Messaging Takehomes

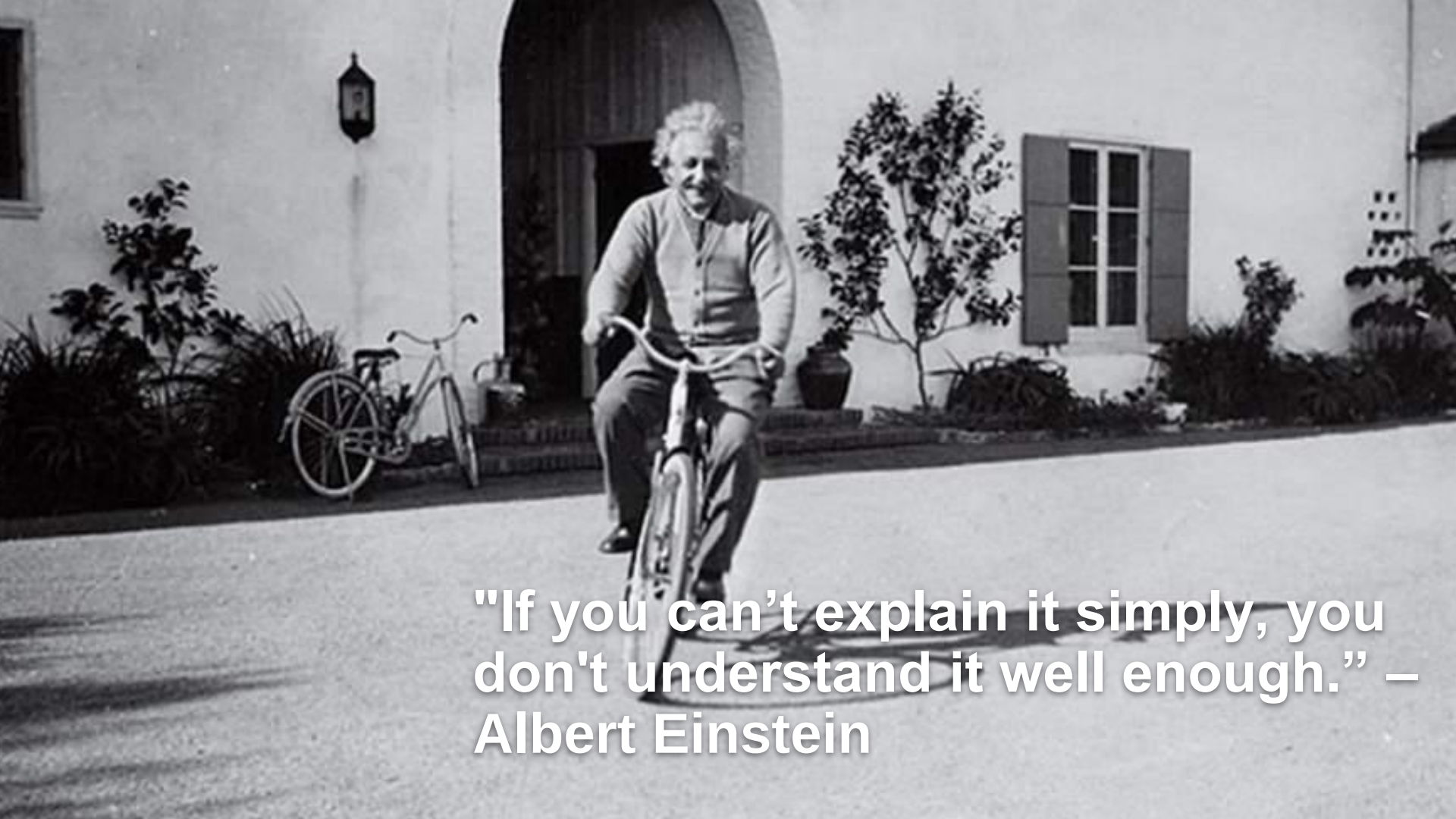
- **Be clear** about pros and cons
- Learn about them and **what they care about** - locally relevant examples, words they care about
- Share your **passion**
- Don't show your work! **Conclusions over process**. Never never never show a spreadsheet!
- **Engaging**, **beautiful**, and **brief** products
- **Tailor** for your audience and meet them where they are
- Acknowledge **gaps** between your priorities and theirs
- **Repeat, repeat, repeat**. Repeat main points a couple of times in a presentation or conversation





Messaging




"If you can’t explain it simply, you don't understand it well enough.” – Albert Einstein

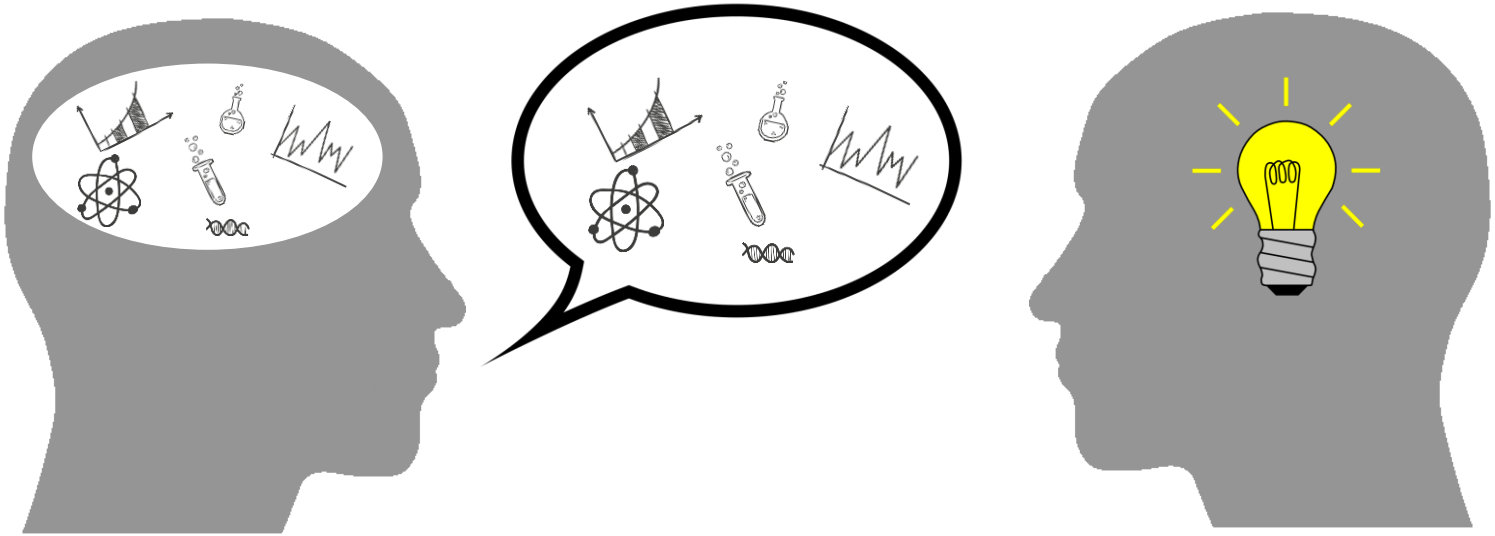
jargon | jar·gon | jär-gən | *noun*

1. **the technical terminology or characteristic idiom of a special activity or group**
2. **Obscure and often pretentious language marked by circumlocutions* and long words**

***the use of an unnecessarily large number of words to express and idea**

Why do we use Jargon?

It makes communication between colleagues more efficient

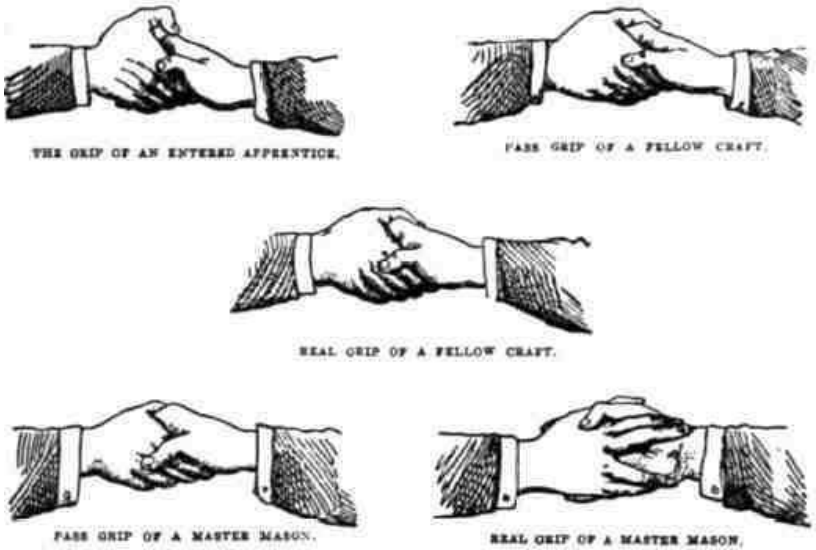


Why do we use Jargon? (the negative perspective!)

It's the "Secret Handshake" of the Science community

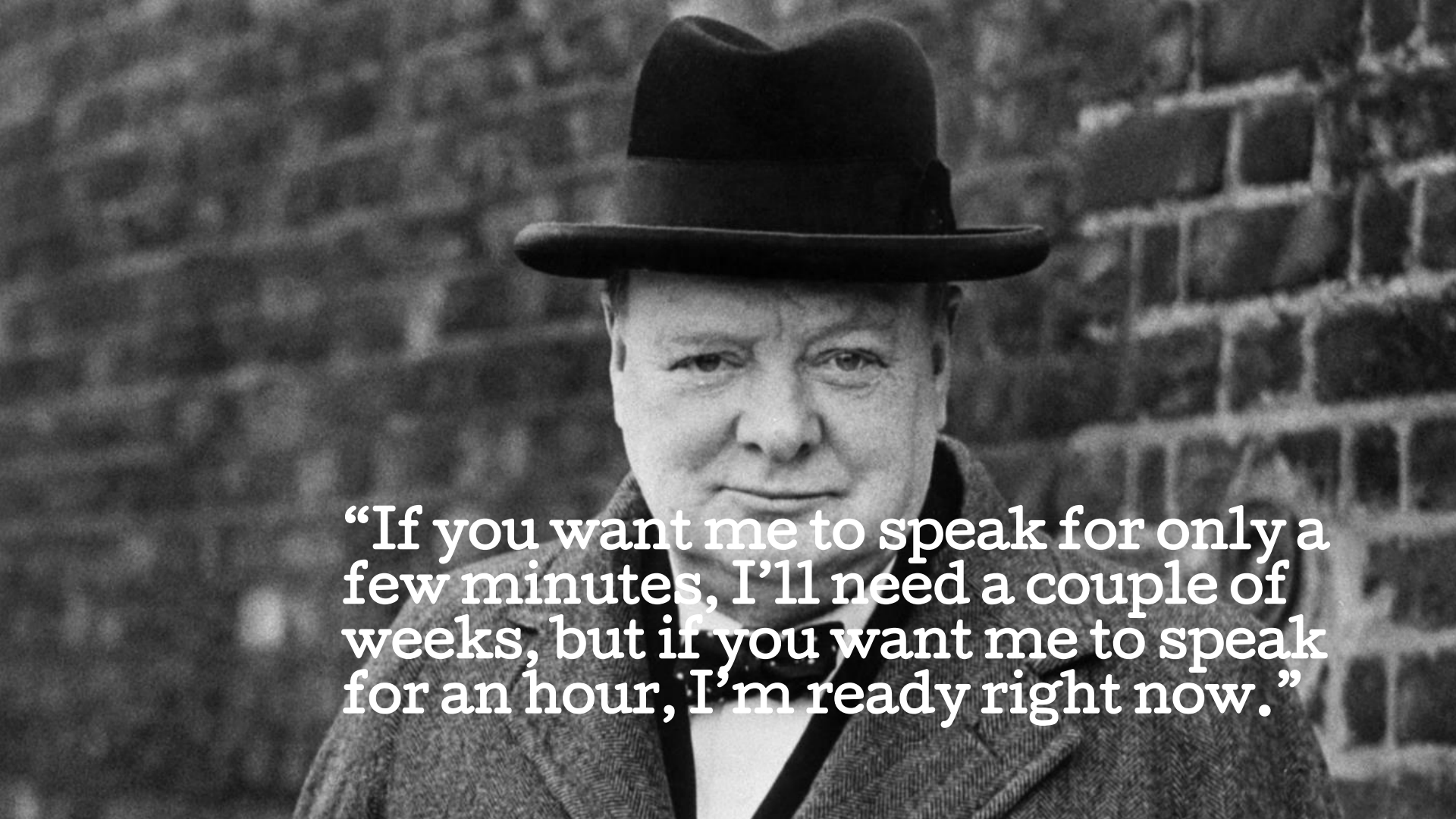
"Expressing ideas in a jargon-filled complex manner aims to 'exclude interlopers'- in other words, keep others out of the club." – Lee (Forbes)

"Most science communication isn't about persuading people; it's self-affirmation for those already on the inside. Look at us, it says, aren't we clever? We are exclusive, we are a gang, we are family." – Grant (Guardian)



Tips

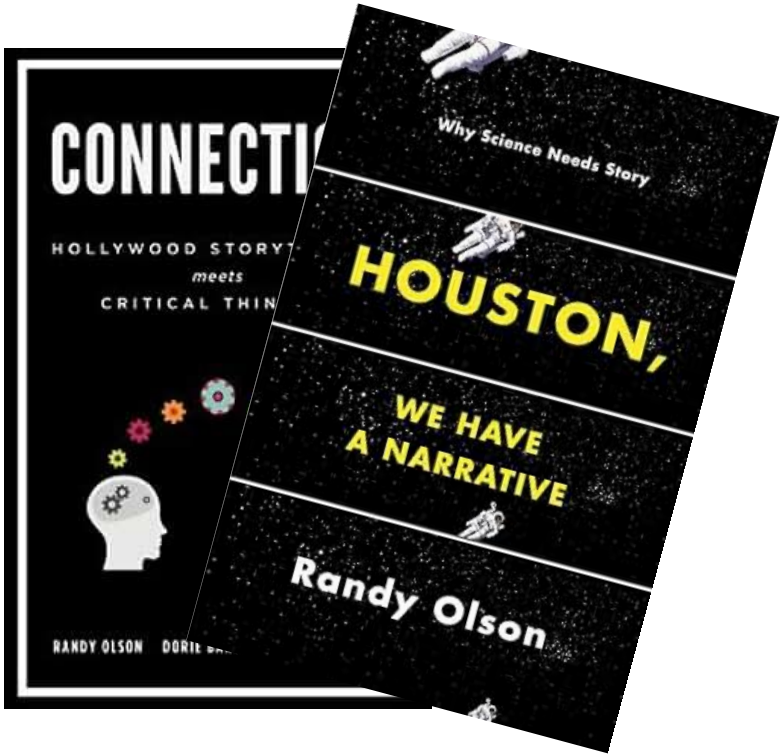
- Think about the **audience(s)** you are communicating with. Will they understand the words and phrases you are using?
- AGU suggests that scientists communicate at the **9th grade** reading level.


“If you want me to speak for only a few minutes, I’ll need a couple of weeks, but if you want me to speak for an hour, I’m ready right now.”

ABT Method

- **A**nd - **B**ut - **T**herefore
- Developed by Randy Olson*
- Introduces the idea of a narrative arc to a one sentence description
- Your message takes the form of a story

*borrowed from Trey Parker



ABT Method

Policymaking often benefits from scientific information **and** scientists have a wealth of that information **and** are willing to share it **but** they are sometimes unsure about how to effectively communicate with policymakers **therefore** STAC is hosting a science communication workshop.

ABT Method - your message in three acts

Act I – We introduce some facts and set the story up

Policymaking often benefits from scientific information **and** scientists have a wealth of that information **and** are willing to share it **but** they are sometimes unsure about how to effectively communicate with policymakers **therefore** STAC is hosting a science communication workshop.

Act II – We introduce some conflict (all good stories have conflict!!)

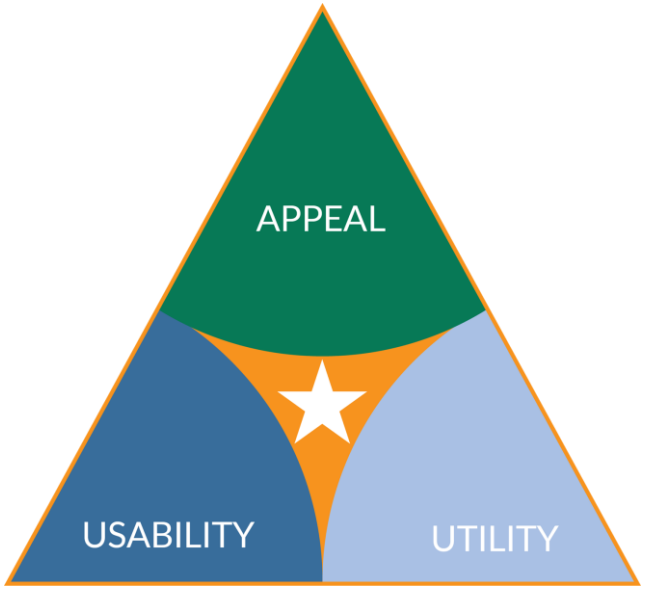
Act III – We attempt to resolve the conflict (nothing is more frustrating than a story that doesn't resolve the conflict!!)


BONUS:
Now
you have
your
elevator
Speech!

Activity #2- ABT Method

What are you currently working on? Create an ABT that encapsulates it.

Guide to 1-pagers - Tips and Tricks



Your ABT is the overarching narrative

Use engaging visuals and as little text as possible

- ONLY relevant images
- NOT complicated graphs, 30 seconds or less

Instead of paragraphs, try lists

- Improves skimmability and retention of your take home points

Include human-centric stories and/or pictures of people where possible

Call to Action

Call to Action (The Ask)

What do you want your audience to do?

Examples include: visit a site or website, vote for or against something, join an organization, etc. - in the case of policy makers, the ask is likely to use your research to influence policy.

Make sure that you give them the information or tools to accomplish the ask!

Green Fin's Approach to a One-Pager

Choose the right colors

Frame out the content

Make sure graphs have a clear purpose

Select relevant photos/graphics

- Potential sources: your own, Chesapeake Bay Program's Flickr, Integration and Application Network, etc.

Have others review

Making a color scheme

Theme: marshes

Core colors

Accent color

Wireframing 101

Margin - keep text and the key parts of visuals at least 0.5" from the edge of the page

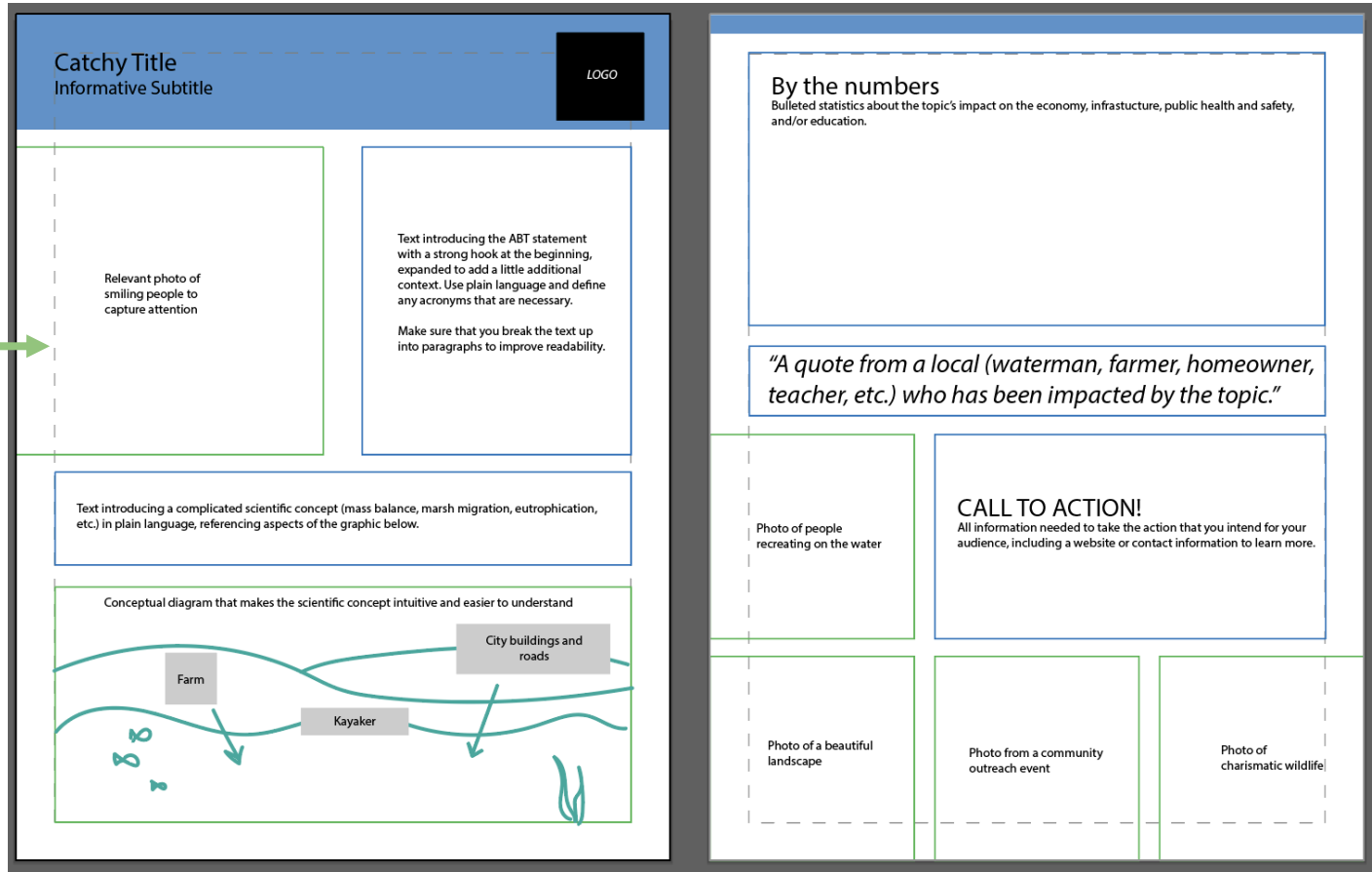
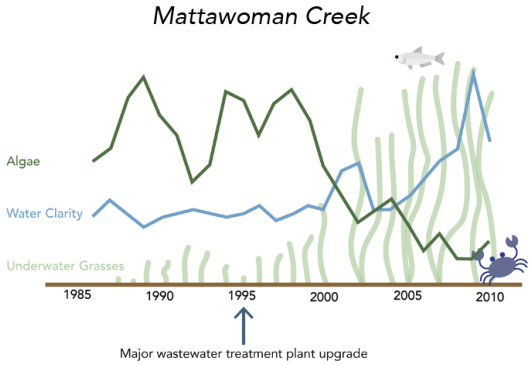
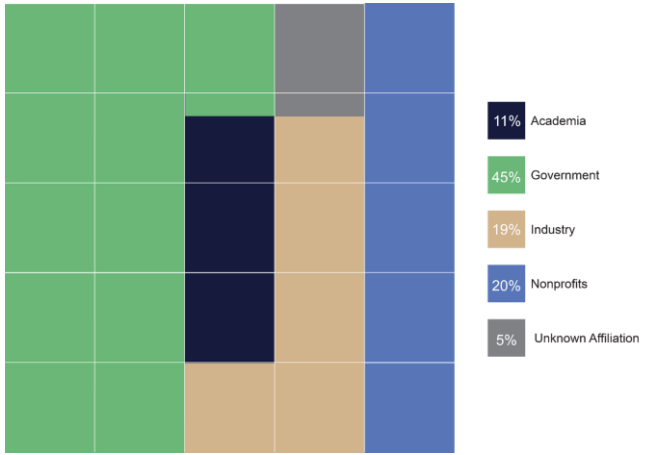


Chart Examples

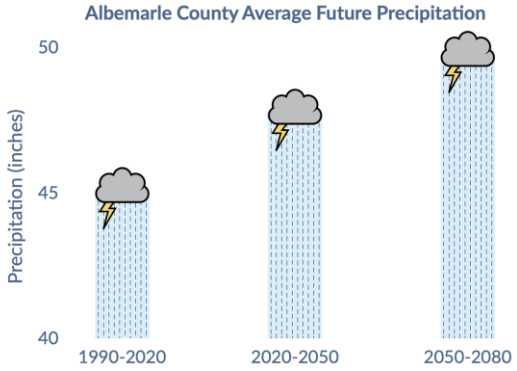
Relationship



Composition



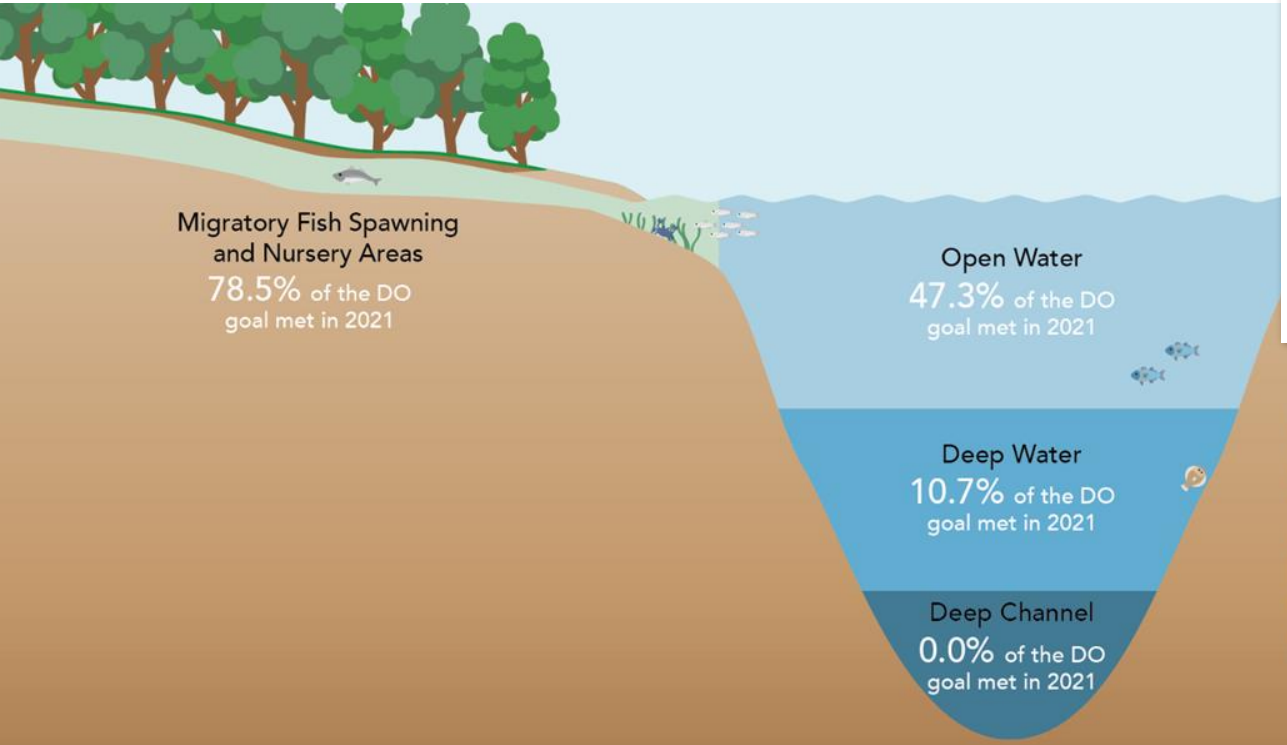
Comparison

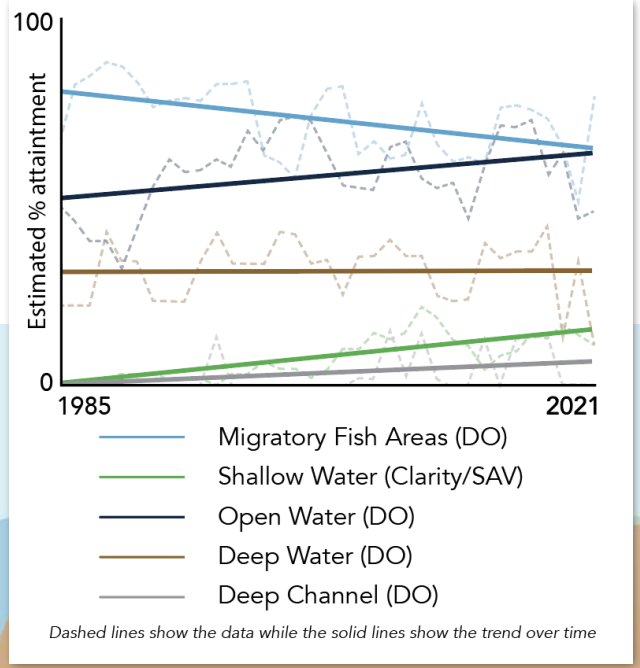


Add visual interest without detracting from the message

Use the chart to show major findings (1-2 points only)

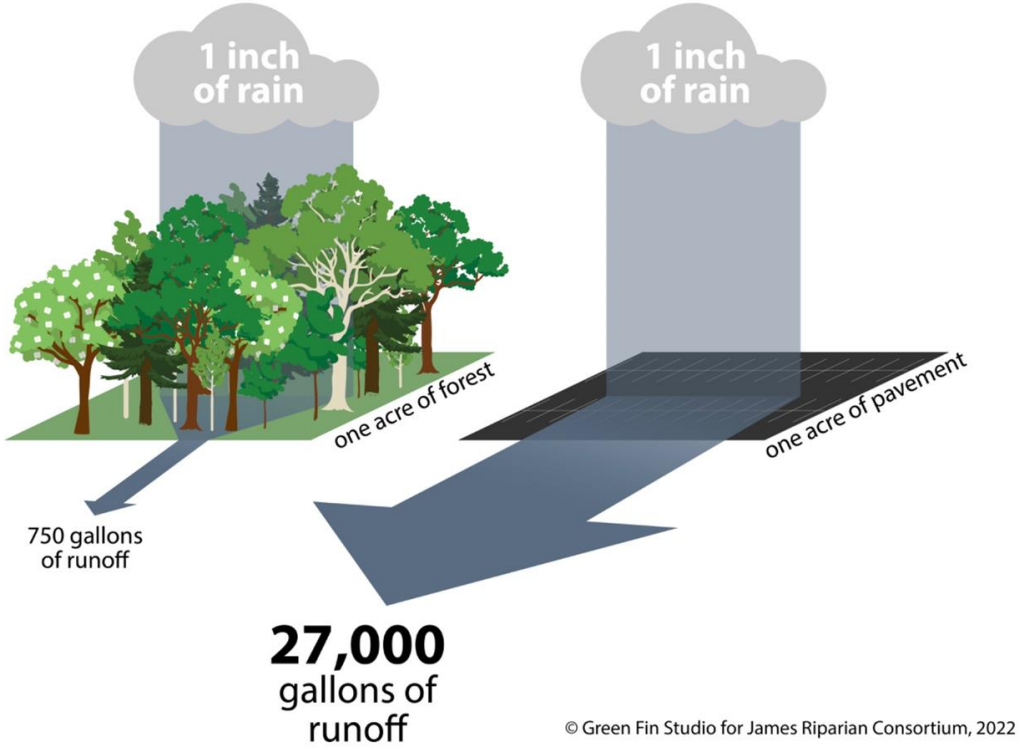
Other visuals





Because of differing physical and chemical traits, improvements vary across the five habitats. For example, the Deep Channel lags behind Deep Water which lags behind the others in attainment of the water quality standards.

Other Visuals



Data source: PennState Extension

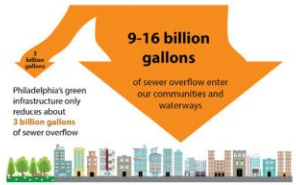
Fact sheet examples

What's Going On?

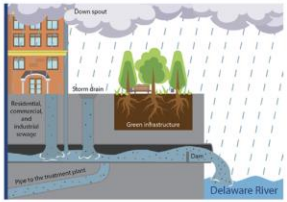
Like our famous Liberty Bell, Philadelphia's approach to managing stormwater has a serious crack in it. Due to an over-reliance on green versus gray (hardened) systems, our sewers routinely overflow and dump raw sewage into our communities and waterways.

In 2010, Philadelphia Water Department (PWD) launched its well-intentioned Green City, Clean Waters (GCCW) Plan to reduce the billions of gallons per year of raw sewage being released into our local waterways. The GCCW Plan relies heavily on green infrastructure –rain gardens, green roofs, permeable surfaces – to control water runoff and is not set to be re-evaluated until 2035. The Plan was heralded for innovation at the time but we know now it needs additional complementary measures.

Philadelphia cannot wait over a decade to protect our communities. While the GCCW Plan has led to the capture of 3 billion gallons of stormwater, a whopping 9-16 billion gallons of untreated sewage and stormwater are still dumped into Philadelphia's communities and waterways each year - that's enough to fill 15 Lincoln Financial Fields!



In all weather, our Delaware River is being used as a sewer!



Philadelphia's Combined Sewer Overflow system:

In mild weather, the system should send all of the sewage to a treatment plant, but there is evidence that some raw sewage leaks out even in dry weather. In very wet weather, excess sewage and stormwater flow freely

What You Can Do

Tell your local representatives that keeping our rivers free from stormwater pollutants is important to you! Philadelphia needs to catch up to other river-centric cities whose residents can recreate in their waterways, rain or shine! Tell them that they need to do better handling stormwater and that EVERYONE in the city deserves access to clean and safe water! After all, this is the City of Brotherly (and Sisterly) Love!

It's Time For A Change

1. **The GCCW Plan does not protect our communities or public health.** Even when fully complete, the Plan will still allow billions of gallons of raw sewage to be discharged into Philadelphia's waterways. Philadelphia needs to fight for their share of federal and state funding to support the infrastructure needed to prevent these discharges.
2. **Equity is not considered.** The GCCW Plan has not prioritized our most vulnerable neighborhoods, leaving them unprotected from raw sewage flooding into their homes, streets, parks and waterways.
3. **Climate change is not accounted for.** The GCCW Plan is based on climate rainfall data from 2005. The Northeast is seeing the largest increases in precipitation in the US, far beyond what the GCCW Plan was ever designed to accommodate.
4. **Recreation and access are not included.** Philadelphians want safe communities and to enjoy our rivers. The 27 miles of the Delaware River between Philly and Chester is the only stretch of the 330-mile river off limits for in-water recreation; despite the risks, communities want to (and do) use the river.
5. **National best practices are not being met.** Philadelphia is way behind other river-centric cities in terms of waste in our waterways, including the amounts of trash and floatables and sewage overflows. Most other cities project a maximum of four overflows per year; at completion of the GCCW, PWD projects Philadelphia will still suffer 30 overflows each year!

We Must Adapt Or Be Left Behind

We applaud PWD for leading the national conversation around green infrastructure in urban areas, but cannot ignore the reality that the GCCW Plan is not enough to protect Philadelphians from raw sewage contamination. It is time to complement the GCCW Plan in ways that address climate change and equity. Below are some of the adaptations we can make to address these shortfalls. Others are linked here - **bit.ly/PhillyRivers**

How To Fix It

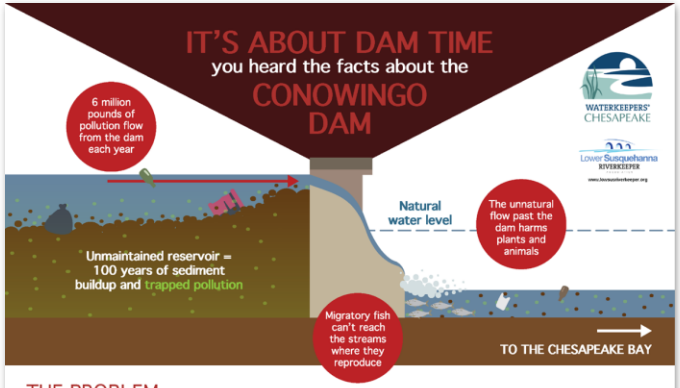
1. Follow the law to prevent raw sewage in our waterways when not raining and close the treatment capacity gap by incorporating additional gray infrastructure to reduce the flow as done in other cities.
2. Prioritize projects and funding in vulnerable neighborhoods, including those with low average income or a history of flooding.
3. Use current and projected climate rainfall data to give us a clearer picture of how the system is performing and additional adaptations needed.
4. Fix sewage overflows to make waterways safer and prioritize work and funding around accessible recreation sites.
5. Philadelphia should hold itself to the same standards as other cities, with no raw sewage overflows except in the most extreme weather. Pilot new approaches like netting stormwater outfalls as an additional layer of protection.

Questions or comments?

Contact:
Tim Dillingham - tim@littoralsociety.org
David Masur - David@pennenvironment.org

glen foerd
PennEnvironment
Riverways
CENTER for AQUATIC SCIENCES
UrbanPromise

Fact sheet examples



THE PROBLEM

It's about dam time to value the health of the Chesapeake Bay over the profits of a billion dollar energy corporation! After years of stalling by Constellation Energy, the owner of the Conowingo Dam, Maryland's Department of the Environment (MDE) will soon be determining the environmental requirements it will place on Constellation as part of its water quality certification. The corporation needs this before it can get its federal hydro-electric dam license. Let's make sure MDE stays strong on the 2018 water quality certification Constellation maneuvered out of in 2019! The federal license is for FIFTY YEARS, so MDE's decision will impact the health of the Bay and the lives and livelihoods of the people who depend on it for decades to come!

WHAT'S AT STAKE?

Since its construction in 1928, the owners of Conowingo Dam have done nothing to clean up the pollution containing sediment that gets trapped in the reservoir behind the dam. Now it is full and spews out more than 6 million pounds of pollution every year!

The millions of pounds of pollution behind the dam threaten our collective decades-long efforts to restore the Bay.

Tourism and outdoor recreation around the Chesapeake bring in $11.6 billion annually, support 104,000 Maryland jobs, and provide $1.7 billion in tax revenue. Don't let Constellation continue to jeopardize this!

Each year, 25.6 million pounds of seafood are harvested in Maryland. This harvest is valued at $60,317,112 and includes blue crabs, striped bass, and oysters.

We support clean energy, but because of its tremendous negative environmental impact, Constellation is not providing "clean" energy from Conowingo!

HOW DID WE GET HERE?

- The Conowingo Dam was due for a 50-year Federal Energy Regulatory Commission (FERC) license renewal in 2014.
- To get a FERC license, the dam owner needs a water quality certification from the State of Maryland. To get the certification, a series of environmental studies must be done in the area around the dam.
- Constellation (formerly Exelon), the dam's owner, repeatedly submitted incomplete study data as part of their certification application, so they were denied a certification in 2014, 2015, 2016, and 2017. *Delay tactic?*
- Constellation finally submitted a complete water quality certification application in 2017 and was granted a certification in 2018.
- The Maryland certification had several requirements, including that Constellation pay $172 million/year to fund pollution reduction efforts on the Susquehanna River to offset the pollution coming from the dam. *They shouldn't be allowed to profit while polluting a public resource!*
- Constellation filed suit in state and federal courts to overturn the requirements of the certification and petitioned FERC that Maryland had waived the right to grant the water quality certification. *They're legal bullies!*
- MDE felt pressured to negotiate with Constellation behind closed doors on the terms of a new, watered-down settlement. *No opportunity for public scrutiny or comment!*
- FERC granted the 50-year license based on the closed door settlement in 2021.
- Waterkeepers Chesapeake, Lower Susquehanna Riverkeeper Association, and ShoreRivers challenged the unlawful FERC license in federal court and WON!
- The December 2022 court decision vacated the FERC license and stated that MDE never withdrew its 2018 water quality certification, which should be included in the license – not the grossly inadequate settlement. *YAY FOR THE BAY!*
- Now is the time to put pressure on MDE to uphold the requirements of the original 2018 certification!

IT'S ABOUT DAM TIME! Let's make it happen!

TAKE ACTION!

Tell Serena McIlwain, Secretary of MDE, to enact the 2018 certification that protects our water quality. This would protect:

- the livelihoods of watermen
- recreation and tourism in Maryland
- millions of taxpayer dollars that have gone towards cleaner water in the Susquehanna and Chesapeake Bay

Visit ConowingoDam.org to learn more.

Scan the QR code to sign the petition.

Fact sheet examples

University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE
INTEGRATION AND APPLICATION NETWORK

Healthy Rivers for All

Empowering stakeholders to drive change

Healthy Rivers for All is a partnership of the World Wildlife Fund and the University of Maryland Center for Environmental Science.

The world's waters are threatened by a host of problems. Impacts from human activities like development and overuse are exacerbated by changes in climate and increased competition by different societal interests, putting vulnerable communities and ecosystems at risk. Virtually all of the United Nation's 17 Sustainable Development Goals are directly or indirectly impacted by water. Creating a sustainable balance of water needs for both nature and people is challenging. It will require people that are competing for water resources to work together in new collaborations and partnerships. Forming these partnerships and empowering them to make change is essential.

Healthy Rivers for All has refined a process to help form these collaborations in river basins around the world. The facilitated approach helps communities create a common understanding of the basin's health, foster a shared vision, and track progress in achieving goals. The catalyst for this process is co-creation of an ecosystem health report card that engages stakeholders to create a holistic understanding of the status of the basin and a vision for its future. The report card format is an easily accessible communication tool. Empowered with clear information, communities can advocate for their freshwater resources. The inclusive process, centered around creation of the report card, provides the platform for the new relationships and collaborations that achieve common goals.

Past report cards had powerful impacts including investments in sewage treatment upgrades (Moreton Bay, AU), nutrient reduction programs (Chesapeake Bay, USA), expansion of protected areas (Orinoco River, Colombia), and $350 million raised for restoration (Long Island Sound, USA).

Where we've worked

Of Report Card Partners surveyed

87% said report cards raised awareness of issues impacting basin health

58% agreed that report cards resulted in changed behavior of stakeholders

44% responded the report cards had improved the health of their basin

97% responded they would recommend using report cards to their peers

Get the Grade!

A report card game designed to engage a wide range of people on natural resources and water management.

5 countries

Represented in the 2018 "Healthy Rivers for All: Setting the course for sustainability with river basin health report cards" course.

The Practitioner's Guide

A reference and resource that provides an overview of basin report cards, and how to leverage the process and results to drive change.

A Potential River Basin Report Card Process

The report card process normally includes several regional workshops that allow stakeholders in different locations to discuss the issues that are relevant to the region and local communities. Results are then aggregated to create a report card for the entire basin. Report card development takes place in 3 phases, and, depending on the size, complexity, and capacity within the basin, can take anywhere from 12-24 months.

Phase I involves comprehensive planning and stakeholder assessment to identify the appropriate actors that need to be included in the process in order to achieve the relevance, legitimacy, and credibility of the results.

Phase II is the process to create the report card itself, and is where the collaborations needed for future collective action are formed. This process includes 5 Steps:

1. What is the big picture? What are the things that we value most in this system from environmental, social, cultural, and economic perspectives? What will affect the future condition of those values?
2. What do we measure? How can we measure the condition of those values and threats? Do we have the data and information that we need?
3. What is healthy? A suite of short and long term targets for indicators can be seen as a long term, comprehensive vision for a healthy ecosystem.
4. How does it add up? How can we use available data to score against their targets? How should we integrate results into a regional grade?
5. What is the story? How can we tell the story of the watershed? What is our communication plan?

Phase III leverages the report card results to improve conditions. This recognizes that the report card should be relevant to existing planning activities, and designed to inform management decision-making.

Scoping a River Basin Report Card

UMCES has pioneered report cards and completed 40 around the world during the last 15 years. Each report card, along with the stakeholder-based process, are unique with their own challenges and opportunities. The report card process is not easy: A single, one-size-fits-all approach to assessing the health of river ecosystems is unlikely to succeed. Issues, perspectives, and stakeholder needs vary between regions and landscapes and process must be sensitive to these differences to stay relevant. Because the development process is locally driven with diverse stakeholders, this regionally specific assessment is relevant to local issues, is legitimate in the eyes of the community, and is credible in its recommendations.

Contact us today!

For more information please visit:
https://www.worldwildlife.org/initiatives/healthy-rivers-for-all
http://ian.umces.edu/projects/project/130/wwf_umces_partnership/
Or contact us: WWF.UMCES.Partnership@umces.edu

WWF

University of Maryland
CENTER FOR ENVIRONMENTAL SCIENCE
INTEGRATION AND APPLICATION NETWORK

Fact sheet examples

Microplastic Marine Debris

What are Microplastics?

Microplastics are small plastic pieces or fibers that are smaller than 5 mm in size. They come in many forms including beads, fragments, pellets, fibers, and more.

Primary microplastics are made to be small and can come in the form of resin pellets and beads. Products like resin pellets are melted and used to create larger plastic items, while microbeads may be found in personal care products, such as toothpaste, face washes, and cosmetics.

Secondary microplastics come from larger pieces of plastics, such as beverage bottles, bags, and toys. Sun, wind, and waves can cause these plastics to become brittle and fragment into smaller and smaller pieces in the environment, though they may never fully go away.

Plastic microfibers are synthetic fibers, such as polyester or nylon, which are used to make clothing, furnishings, and even fishing nets and lines. Through general wear or washing and drying, fibers may break apart from larger items, creating secondary microplastics.

Why are Microplastics a Problem?

Our ocean and Great Lakes are polluted with a wide variety of marine debris, ranging from large fishing nets and abandoned vessels, down to the smallest plastic particles that can't be seen with the naked eye. These microplastics are found throughout the ocean, from tropical waters, to polar ice, and even in fresh water and the air we breathe. Microplastics have also been found in tap and bottled water, sea salt, and other products we eat or drink.

Because they are so small, wildlife can mistake microplastics for food. Zooplankton, fish, mussels, and even whales have been found to ingest microplastics. The microplastics and chemicals in the plastics may impact the bodily functions of animals.

Microplastics can also carry harmful pollutants. They may absorb pollutants that are in the water around them, or leach chemicals that are added to plastics to make them colorful or flexible. Although wildlife may ingest or be exposed to these contaminants, more research is needed to understand how they might be affected.

Marine Debris Program | Office of Response and Restoration | National Ocean Service

https://marinedebris.noaa.gov

How Do They Get Into the Environment?

Trash travels, and microplastics are no exception. Once in the ocean, it can be difficult to understand where a piece of marine debris comes from.

Microbeads, like those found in toothpastes and face washes, can wash down your drain and into a wastewater treatment plant. Here, some microplastics can end up in the sludge, while some can end up in the treated wastewater. Treated wastewater is discharged into the marine or freshwater environment or is used in agriculture to water crops.

Plastic pellets, like those used to produce larger plastic items, could directly enter the ocean and Great Lakes through a spill during shipping or at a manufacturing facility.

Plastic fragments come from larger plastic items. When they are littered or dumped, they can be moved by wind and storms, and travel directly from rivers and streams. Through exposure to winds, waves, and the sun, these larger plastics break into smaller and smaller pieces, creating microplastics.

When in use, fishing nets can shed **microfibers** directly into the environment. Our clothes also shed these fibers, releasing them in the wash or directly into the water and air around us during normal wear.

How YOU can help!

No matter where you live, you can help make a difference and stop microplastics and other marine debris from getting in the ocean and Great Lakes in the first place.

GET INVOLVED
and participate in local cleanups in your area.

REMEMBER
that our land and sea are connected.

DISPOSE OF WASTE PROPERLY
no matter where you are.

REDUCE
the amount of waste you produce.

REUSE
items when you can. Choose reusable items over disposable ones.

RECYCLE
as much as possible! Bottles, cans, cell phones, ink cartridges, and many other items can be recycled.

@NOAAMarineDebris @NOAAdebris @NOAAdebris https://blog.marinedebris.noaa.gov/

Activity #3- One-pager Exercise

Using a blank piece of paper and a writing utensil, create a wireframe of a one-pager that has boxes for text and visuals. Within the boxes, summarize what the text would say or what specific visuals you would want to include.

Start with your ABT!

One-pager Exercise - Grading

Swap with a neighbor and score based on this checklist:

1. Catchy title +1
2. Photos +1 (if they're of people, +1)
3. Graphic +1 (+1 if it is not a basic bar, pie, or line graph)
4. ABT +1
5. Bulleted or numbered list of take home points +1
6. Specific call to action +1
7. +1 for each priority you connect with (economy, infrastructure, health/safety, education)

Total possible points: 12

What does success look like?

Foundations of Success

- Using shared language
- Make connections to the policymaker's priorities and district
- Interdisciplinary - CESR
- Relationships of trust - CESR authors and relationship to Chesapeake Bay Commission
- Having each others' backs
- Repetition - Understanding of need to reduce nutrients
- Repeated conversations

Examples of Science to Policy Success

SCIENCE	POLICY
Livestock and Streams 	EQUIP funding in Farm Bill and state budget support for fencing
Phosphorus and Phosphate Management	Phosphorus Management Tool (MD), phosphate detergent bans
Oyster Restoration 	Ariakensis research, aquaculture, sanctuaries, source/sink reef siting, etc.
CESR	Whole Watershed Bill and sandboxing efforts
Microplastics 	Ban on microbeads, funding for research into microplastics

See CBC 2015 annual report as example https://www.chesbay.us/library/public/documents/Publications-Annual_Reports/CBC-annual-report-2015-.pdf

Lessons to Date on Communicating CESR

We came, we saw, we conversed…….

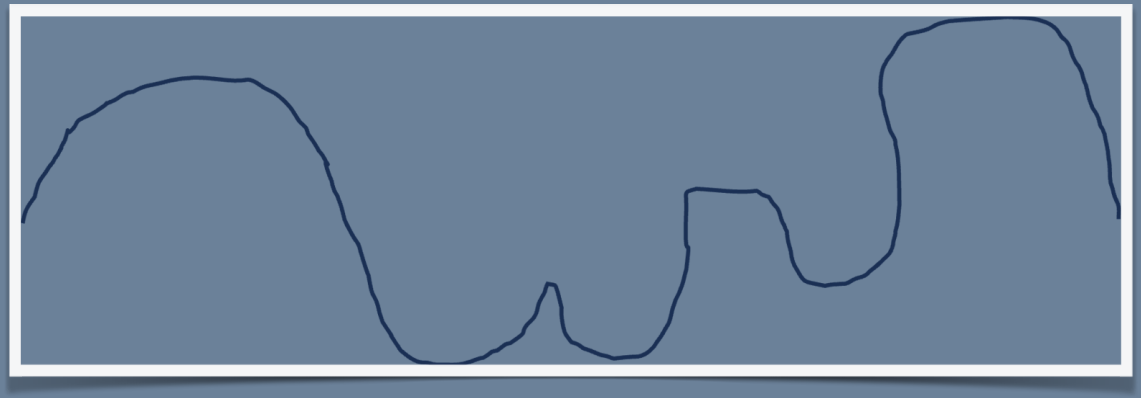
DHW 4 June 2024

27

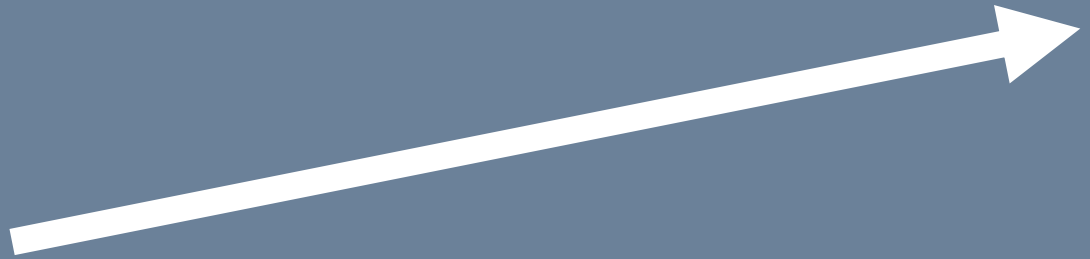
Tracked presentations by Stephenson & Wardrop pre-CESR publication (May 2023)

61

Tracked presentations by Stephenson & Wardrop to date since CESR publication; significant numbers by others



The journey looked like this, but we often turn it into:

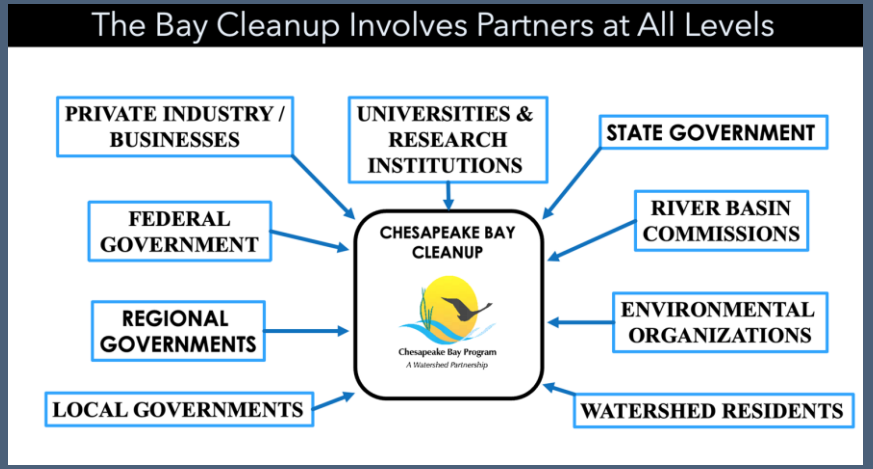


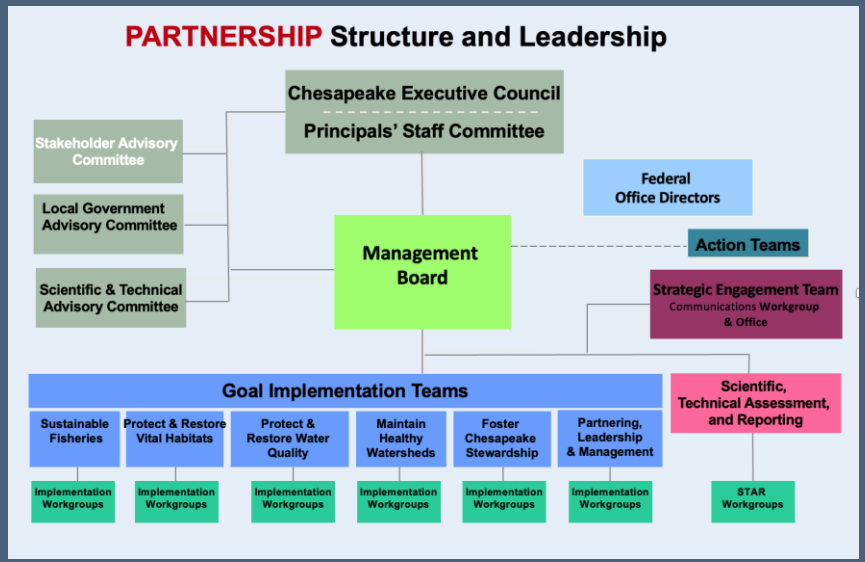
Let’s not do that

Points of Change

Push and Pull; Surround

- GITs/STAR/Advisory Committees
- Management Board/Principal's Staff Committee/Chesapeake Bay Commission
- CBP Gatherings (SRS Biennial Symposium)
- Legislators
- Other NGOs
- General public (MPT)
- Other Advisory Committees
- University groups
- Bay Program Personnel (past and present)





Above the Line

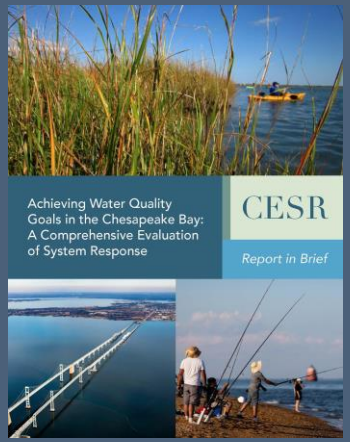
What has mattered

- A process that engaged all of STAC (thank you Brian Benham) and had 60 contributors (STAC and beyond)
- A solution to keeping original three resource documents while writing a report that followed framing questions (thank you Leonard Shabman)
- Gave permission to speak freely
- A review process with multiple levels (USGS, NOAA)
- Courage to confront inconvenient truths while recognizing opportunity
- A professional communications team (thank you Green Fin Studios) and multiple medias
- A pre-release socialization of messages
- A willingness to constantly revise
- Most of all, CONTINUED AND SUBSTANTIVE ENGAGEMENT BY PAST AND PRESENT STAC MEMBERS

Below the Line

It’s all about the learnings

- Better highlighting of other STAC products (e.g., Rising Temps, Overcoming the Hurdles)
- Faster production of Report-in-Brief
- What CESR doesn’t say as it is what it does say
- Managing expectations
- An enormous investment of time not planned for



The Universe Provided

Fortunate circumstances

- Timing
- Ann Swanson and Senator Elfreth
- Champions in unexpected places
- Fresh leadership
- A willing community

Five Take Home Points for Communicating with Policymakers

1. Identify your intent
2. Prepare for a marathon, not a sprint
3. Craft a frame
    a. ABT tailored to your audience
    b. Put people in the equation
4. Delivery matters
    a. Concise, targeted, repeat what you want remembered
    b. Leave info, bonus points for beauty
    c. Credibility and a smile :)
5. Be responsive and follow up
    a. Respond ASAP with any requested info
    b. Include links and additional info judiciously

Selected Sources for Communication Inspiration

- Alan Alda Center for Communicating Science
- Alan Alda: If I Understood You, Would I Have This Look on My Face? Adventures in the Art and Science of Relating and Communicating
- AAAS on Engaging Policymakers Programs and Resources
- Randy Olson et al.: Don't Be Such a Scientists: Talking Substance in an Age of Style; Connection: Hollywood Storytelling Meets Critical Thinking; Houston, We Have a Narrative.
- Katharine Hayhoe: Talking Climate Newsletter and Saving Us: A Climate Scientist's Cases for Hope and Healing in a Divided World book
- UMD Center for Environmental Science, Integration and Application Network
- Speaking of the Environment: What your science classes didn't teach you about effective communication (Jasinski and Jasinski)

Selected Sources for Visualization Inspiration

- Books, TED Talks, etc.
  - David McCandless - The Beauty of Data Visualization
  - Edward Tufte's book - The Visual Display of Quantitative Information
  - Hans Rosling - The best stats you've ever seen
- Green Fin Studio newsletter on data viz
- https://www.nytimes.com/column/whats-going-on-in-this-graph
- Web Resources
  - Information is Beautiful
  - Data Viz Catalogue
  - IAN media library

COMMUNICATION CLINIC

Ask us your
communication questions!