PENNSYLVANIA CLEAN WATER LEGISLATIVE BRIEFING BOOK



A state legislator's guide to protecting Pennsylvania's Waterways for the Future 2021–2022

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From the Delaware Water Gap's inspiring waterfalls, to the Youghiogheny River's roaring rapids, and the peaceful spring creeks feeding the Susquehanna, waterways touch the lives of every Pennsylvanian. These rivers, creeks, lakes, and wetlands serve as places of respite and recreation, sources of the water we drink, historic settings for many of the nation's most iconic stories, and valuable engines of Pennsylvania's economy.

While Pennsylvania has the highest density of stream miles per acre of any state in the continental United States, **nearly one-third of stream miles are listed as impaired and unsafe for their intended use**. These intended uses range from drinking water supplies to recreation and sustenance fishing. Despite challenges, the 86,000 miles of waterways that transect communities throughout the Commonwealth return billions of dollars in economic value to small businesses, agriculture, recreation, tourism industries, and tax revenues.

As we continue to adjust and respond to long term impacts from the coronavirus pandemic, it is critical to consider the connection between environmental protection and public health. Studies have shown an increase in overall public health when there is access to a clean environment.¹⁶ However, the coronavirus pandemic has brought to the forefront the disproportionate impact that a public health crisis can have on underserved communities and Black, indigenous, and communities of color. Many of these residents also face existing environmental justice threats to their air, water, and land, that often result in increased rates of asthma, cancer, and other diseases. Protecting our natural world and preserving public health are intertwined, which is why the legislative requests in this Clean Water Legislative Briefing Book support not only clean water priorities, but improving public health for all Pennsylvanians.

The coronavirus forced the Commonwealth to make difficult but necessary choices, which has caused long-term uncertainty for the economy. Now, the Pennsylvania legislature faces tough decisions on how to allocate and adjust funding resources to critical public health and environmental programs. While making these tough choices, it is important to remember that the protection of our environment is critical to Pennsylvania's economy. **Pennsylvania is home to 121 state parks, 21 water trails, 20 state forests, 19 national parks, and 3 national wildlife refuges.** These public lands are economic engines for surrounding communities, serve as the outdoor playground for a majority of Pennsylvania citizens,¹ and naturally filter the sources of the water we drink. Whether focused on safe drinking water or supporting farmers, each of the legislative requests in this Clean Water Legislative Briefing Book highlights a return on investment in these programs.

Recent polling shows that most Pennsylvanians, whether from urban, suburban, or rural communities, support increased state investments in restoring and protecting rivers and streams.² Enacting policy recommendations in this book will advance sustainable solutions to Pennsylvania's water challenges, maintain the integrity of the Commonwealth's natural systems, and promote public health while addressing the needs of municipalities, industry, agriculture, and business. By drafting legislation to support these policy recommendations, legislators commit to upholding the desires and needs of their constituents, which are inextricably linked to their public health and the health of their waterways.

PENNSYLVANIA'S MAJOR WATERSHEDS

Each of Pennsylvania's major river basins is distinct from others in the state. Distinct characteristics include diverse geographic and geologic features, as well as major differences in historical settlement, economic and land use patterns. We urge lawmakers to support legislation that will protect the quantity and quality of water in each of Pennsylvania's watersheds.

Central Pennsylvania | part of the Chesapeake Bay Watershed POTOMAC AND SUSQUEHANNA RIVER WATERSHEDS

The Chesapeake Bay Watershed — comprising the Potomac and Susquehanna River Basins stretches 524 miles, from Cooperstown, NY to Norfolk, VA. **More than half of the Commonwealth lies within the Potomac and Susquehanna watersheds.** In fact, the Susquehanna River provides half of the 51 billion gallons of freshwater that flows into the Bay each day and carries with it excess nitrogen, phosphorous, and sediment. This pollution creates harmful algal blooms that cause and contribute to dead zones, areas so devoid of oxygen that flora and fauna cannot survive. The largest sources of these pollutants in Pennsylvania's rivers and streams come from agriculture and stormwater runoff.

BACKGROUND

In 2010, Pennsylvania and other Bay jurisdictions developed watershed implementation plans to meet science-based pollution limits set by the U.S. Environmental Protection Agency (EPA). Those limits, plans, and milestones make up the Chesapeake Clean Water Blueprint, which is aimed at restoring and protecting Keystone State waterways.

Over 25,000 miles of the Commonwealth's rivers and streams are damaged by pollution. Achieving Blueprint goals remains the solution to Pennsylvania's clean water challenges and commitments. Unfortunately, the Commonwealth continues to fail to meet its commitments for reducing polluted agricultural and urban/ suburban runoff. Though, the good news is that efforts to reduce pollution from sewage treatment plants are ahead of schedule for 2025. Achieving the Blueprint will ensure the reduction of nitrogen, phosphorus, and sediment pollution to levels that safeguard the health, economic, and recreational well-being of Pennsylvanians. The 2014 economic analysis "The Economic Benefits of Cleaning up the Chesapeake — A Valuation of the Natural Benefits Gained by Implementing the Chesapeake Clean Water Blueprint," commissioned by the Chesapeake Bay Foundation, found that fully implementing Pennsylvania's Clean Water Blueprint will reduce flooding, make farms more productive, and benefit Pennsylvania's economy to the tune of \$6.2 billion annually.

Adequate financial support of the Department of Environmental Protection, Department of Agriculture, Department of Conservation and Natural Resources and County Conservation Districts is vital to success, as it affects their abilities to assure public health and provide clean water that is the right of every Pennsylvanian. Saving the rivers and streams in the Susquehanna and Potomac watershed is a legacy worth leaving future generations of Pennsylvanians.

CONCLUSION

Pennsylvania stands to gain tremendous local benefits by saving and protecting its own waters via full implementation of its Blueprint commitments. However, more must be done if the Commonwealth's tributaries are to continue to nurture diverse cultures and wildlife and contribute abundantly to local economies.

HARPERT PROPERTY.

Eastern Pennsylvania DELAWARE RIVER WATERSHED

The main stem of the Delaware River is the longest undammed river east of the Mississippi, traveling 300 miles from its headwaters in the Catskill Mountains down to the Delaware Bay Estuary. The watershed spans parts of New York, Pennsylvania, New Jersey, and Delaware through one of the most densely populated areas in the country.

The Delaware River Basin supports a world-class trout fishery and is home to striped bass, the endangered Shortnose and Atlantic sturgeon, bald eagles, horseshoe crabs, and more. The watershed is diverse in biodiversity, landscapes, and issues of concern, including flow management, habitat protection, stormwater management, and environmental justice. While the headwaters are clean and healthy, serious threats remain throughout the watershed, including polluted runoff, an aging drinking and wastewater infrastructure, habitat loss, and the threats of climate change. The need for protection and restoration of the Basin is urgent for the 13.3 million people and countless wildlife species that depend on clean water.

BACKGROUND

The vast river system of the Delaware River Watershed not only provides vital habitat for a rich variety of fish and wildlife species, and **provides drinking water to more than 13 million people.** The Delaware River Watershed provides drinking water to two of the five largest metropolitan centers in the country: New York City and Philadelphia. In total, the Delaware River supplies more than 40 percent of Pennsylvania's residents with drinking water, with only about 14 percent of the state's landscape. Maintaining this system depends, in part, on the Delaware River Basin Commission's (DRBC) ability to monitor and control salinity of the estuary. The salt line's location is expected to fluctuate along the tidal river below Philadelphia and can be unduly influenced by drought and sea level rise. If the salt line encroaches on drinking water intakes, it will threaten public health, increase watertreatment costs, and cause costly corrosion damage for industry. Many rivers, creeks, and streams flow into the Delaware River, creating a watershed that spans 12,800 square miles of diverse landscape that includes rural agricultural areas and major urban centers. Significant ecological and recreational assets include:

- The Delaware Water Gap National Recreation Area, one of the country's most visited national parks;
- More than 400 miles of waterways designated under the National Wild and Scenic Rivers program;
- Six national wildlife refuges, including Cherry Valley and John Heinz in Pennsylvania; and
- The highly complex Delaware Estuary, which is one of the most important shorebird migration sites in the world.

The watershed is critical to the economic wellbeing of the region, powering a \$20 billion economy that supports more than half a million jobs and sustains vibrant fishing, farming, and

tourism businesses. Additionally, the watershed provides an estimated \$21 billion in ecosystem services to the region, including water filtration and carbon sequestration, as well as habitats such as forests and wetlands.³

CONCLUSION

The health of the Delaware River system has improved over recent years as we have reduced toxic industrial pollution, but we have more work to do. The Delaware River Watershed provides significant economic and health benefits to the region and is worthy of priority investments by decision-makers to protect and restore this natural resource.

Photo Credit: Rita Yelda

Western Pennsylvania OHIO RIVER WATERSHED

The Ohio River is a valuable economic and ecological resource used for transportation, recreation, and hydropower. It **provides drinking** water to more than 25 million people, and commodities worth \$43 billion are transported along the river and its tributaries each year. Despite its economic and cultural value, the Ohio River Basin remains dangerously vulnerable to pollution.

The basin is polluted by harmful algae and bacteria; legacy toxins from industry; and excess nutrients caused largely by improper wastewater and stormwater management, acid mine drainage, and excessive agricultural runoff. To improve water quality in the Ohio River Basin, the General Assembly must provide more resources for safe and effective wastewater and stormwater infrastructure and properly fund agricultural best management practice (BMP) programs to reduce the nutrient runoff.

BACKGROUND

Prior to the establishment of ORSANCO (the Ohio River Valley Sanitation Commission) in 1948, the Ohio River and its tributaries were subject to unmonitored and unrestricted pollution. Wastewater effluent has historically been the most significant water quality threat to the Ohio River Basin. By collaborating with Ohio River Basin states and the U.S. Environmental Protection Agency, the Commission reduced bacterial contamination, most notably *E. coli*. However, pollution from farm fields, urban runoff, and sewage overflows continue to be a major problem.

Pennsylvania is the second leading producer of natural gas in the United States. Much of the

state's shale gas development is concentrated in the Ohio River basin, with detrimental impacts on water quality from leaks, spills of drilling wells and pipelines. In addition, Shell Chemicals is currently constructing a factory on the banks of the Ohio River in Beaver County that will convert a component of shale gas into millions of tons of plastics pellets annually. This plant, and the ethane pipeline that accompanies it, could have many and varied detrimental effects on the Ohio River basin in the decades ahead.

Combined Sewer Overflows (CSOs) occur when rainwater from storm drains is carried to sewer lines and exceeds the volume capacity of those sewer lines. When carrying volume is exceeded, human waste and contaminated rainwater overflow the sewer lines into rivers. These CSOs contribute a significant amount of bacterial pollution to the Ohio River Basin. Nonpoint pollutants are a significant and growing threat to the Ohio River Basin. Legacy pollution, such as acid mine drainage (AMD) from abandoned

coal mines, has contaminated more than 3,000 miles of streams and groundwater in Pennsylvania. AMD is one of the Commonwealth's most extensive water pollution problems. Because of the toxic concentrations of acidity, metals, and sediment, many of the streams polluted by AMD cannot support any life.

CONCLUSION

Bacteria, toxins, and excess nutrients enter waterways in the Ohio River Basin from point and nonpoint sources polluting our water. Increased resources for safe and effective wastewater and stormwater infrastructure will reduce bacterial pollution. Proper funding for agricultural BMP programs will reduce the excess nutrient pollution which can cause harmful algal blooms that, if left unabated, can cause dead-zones deplete of life.

Smaller Pennsylvania Watersheds GENESEE RIVER AND LAKE ERIE WATERSHEDS

GENESEE WATERSHED

The Genesee River starts in the Allegheny Plateau of Northern Pennsylvania, encompassed entirely by Potter County and originating in Ulysses, PA. It then flows north for 11 miles before reaching New York State where it continues for 140 miles before draining into Lake Ontario at Rochester, NY. The Genesee River Watershed spans a total of 99 square miles of Pennsylvania. Many of the water quality challenges facing the Genesee River Watershed come from urban and industrial sources in the northern portion of the river and agricultural and other nonpoint sources within the largely rural areas upstream. The Genesee's headwaters in Pennsylvania are home to trout species and bring enjoyment to anglers from near and far. Boating, swimming, hiking, camping, fishing, and hunting are prevalent throughout the entire watershed. The Pennsylvania portion of the watershed is lightly populated and primarily a rural, agricultural area. Industrial use becomes much more prominent in New York near Rochester.

LAKE ERIE

Lake Erie is bordered by four U.S. states — New York, Pennsylvania, Ohio, and Michigan — and the Canadian province of Ontario. It is the fourth largest of the Great Lakes and is the 11th largest lake in the world by surface area. Lake Erie is the shallowest of all of the Great Lakes, making it more prone to impacts of pollution like harmful algal blooms (HABs). To add to this issue, the Lake Erie watershed supports more farms (livestock and crops) than any other Great Lake. In Pennsylvania, Lake Erie is considered the best walleye fishery in the world. In total, **the Lake Erie fishing industry contributes \$40.6 million to the state economy each year.** This is in addition to yearly economic contributions of \$1.2 billion in tourism, driven largely by the most visited state park in the Commonwealth, Presque Isle State Park, and \$23 million in agriculture. The lake also supplies drinking water to over 240,000 Pennsylvanians.

By the 1960s, Lake Erie had become the poster child for water pollution. Pollutants from factories, waste from sewers, and fertilizer and pesticides from farms made their way into the lake,⁴ which led to significant algal blooms.⁵ The algal blooms caused dead zones by depleting oxygen, and toxins they produced caused dead fish to litter the shoreline. In 1969, the Cuyahoga River, a tributary to Lake Erie, was so polluted that it caught on fire and prompted Congress to pass the federal Clean Water Act in 1972.

While water quality in Lake Erie has significantly improved, it is again experiencing a growing number of harmful algal blooms and parts of the lake continue to have dead zones. In 2012, Lake Erie saw the largest algal bloom in its history, creating a thick green slime in large portions of the eastern end of the lake and affecting the water supply of 11 million people. In Pennsylvania, harmful algal blooms and E. coli levels cause beach closures and swim advisories throughout the summer, which harms the local economy. Urban and agricultural runoff, sedimentation from unstable streambanks, failing septic systems, plastic pollution, and legacy pollution from industries threaten water quality in Pennsylvania's Lake Erie watershed.

LEGISLATIVE PRIORITIES FOR PENNSYLVANIA'S WATERWAYS

PROVIDE ADEQUATE FUNDING FOR STATE RESOURCE AGENCIES

RECOMMENDATIONS

Appropriation levels should meet the agencies' programmatic, staffing, and compliance needs; fulfill their missions; and support Pennsylvania's legal obligations under state and federal law.

The legislature request summaries of the Department of Environmental Protection, Department of Conservation and Natural Resources, and Department of Agriculture's programmatic, staffing, and compliance needs and use the directions laid out by state resource agency leaders to guide their budget decision-making.

BACKGROUND

Article I, Section 27 of the Pennsylvania Constitution states, "As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people." With expanded populations, development growth, and a range of environmental stressors on our waterways, increased investments in state resource agencies are critical. However, state resource agencies are operating with significantly reduced resources than necessary to keep our air and water clean.

State resource agencies are charged with protecting Pennsylvania's rivers, streams, lakes, and wetlands by supporting a range of conservation and preservation programs, restoring polluted or degraded waterways, protecting wildlife and native ecosystems, and helping land managers, like farmers, implement common-sense conservation practices that yield local returns.

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP)

The DEP's mission is to protect Pennsylvania's air, land, and water from pollution, thereby providing for the health and safety of its citizens. However, since 2002, **state funding for the DEP has been cut by nearly 40 percent**, leading to a reduction of 600 staff. With an increase from \$148.8 million in FY 2017–2018 to \$153.3 million in FY 2018–2019, Pennsylvania took a step in the right direction. However, the funds received are still woefully behind FY 2002–2003 funding levels, which peaked at \$246 million. The cuts to the agency are particularly dangerous as the DEP struggles to meet its minimum enforcement obligations, which threatens Pennsylvania's access to matching federal grants, federal pass-through dollars, and its ability to maintain state authority over its compliance and enforcement programs.

DEP also manages the Conservation District Fund Allocation Program for Conservation Districts to provide critical administrative and technical assistance to farmers, municipalities, and other landowners. Conservation Districts protect streams, provide financial and technical assistance for installing best management practices, and help farmers with their conservation plans.

In 2016, the U.S. Environmental Protection Agency cited DEP for failing to conduct the minimum number of sanitary surveys of water systems and for failing to meet required compliance rates. In the same year, the U.S. Department of the Interior's Office of Surface Mining Reclamation and Enforcement informed the DEP that it had an insufficient number of Surface Mining Compliance Inspectors, putting Pennsylvania's rivers, streams, and wetlands as well as private water wells and springs — at risk. We strongly urge legislative committees of jurisdiction to open a dialogue with the DEP and its leadership prior to setting annual appropriation levels and to heed the advice of secretaries during budget hearings when setting funding levels. This is key to ensuring Pennsylvania's compliance with state and federal law.

PENNSYLVANIA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES (DCNR)

DCNR's mission is to conserve and sustain Pennsylvania's natural resources for present and future generations' use and enjoyment. To do this, the agency is charged with maintaining and protecting 121 state parks, managing 2.2 million acres of state forestland, collecting information about the state's ecological and geological resources, and establishing community conservation partnerships with grants and technical assistance. These programs benefit rivers, trails, greenways, parks, open space, and natural areas. As with DEP, General Fund support for DCNR has been drastically slashed over the last 15 years, declining to a low of \$14.5 million in 2014-2015. The cuts experienced by DCNR to date threaten reduction or even elimination of services across the Commonwealth - most notably in our state parks and forests, which welcome more than 40 million visitors each year. It could also lead to loss of agency support for public recreation projects across the state that support a \$29 billion outdoor recreational economy.⁶ In order to continue protecting our natural resources, it is essential the General Assembly increases funding for DCNR and heed the agency's annual budgeting needs reports.

PENNSYLVANIA DEPARTMENT OF AGRICULTURE (PDA)

The PDA is critical for encouraging, protecting, and promoting agriculture and related industries throughout the Commonwealth while providing consumer protection through inspection services. PDA programs support agricultural land preservation and keep farmers farming with assistance programs and education. **Agriculture is one of Pennsylvania's top grossing economies** and, as such, investment in agricultural preservation, assistance, and compliance via consistent and dedicated funding sources is essential to its continued prosperity.

Overall, the PDA experienced a \$7.49 million increase since the FY 2017-2018 budget, with a \$1 million increase for general operation and a \$3 million increase for spotted lanternfly control in FY 2018-2019. Regarding water quality in Pennsylvania, technical and financial assistance for farmers is key to implementing conservation practices on their properties. This will help reduce harmful nutrient pollution from agricultural runoff, which in turn will then protect farm resources from nutrient and sediment loss. The PDA budget and the 2019 PA Farm Bill reflect a commitment to preserving, protecting, and advancing agriculture in the Commonwealth; however, there is still work that needs to be done.

CONCLUSION

After more than a decade of cuts, we applaud the General Assembly's recent modest increases for these state agency budgets. However, the previous cuts were consequential, and reduced staffing by hundreds of positions that resulted in significant conservation setbacks and limited resources for efficient and effective permitting and other compliance processes. This jeopardizes the health of our waterways, which support our tourism economy, provides the water we drink, and promotes quality of life for local communities. Increased funding for state resource agencies that protect Pennsylvania's waterways is essential. With a litany of threats facing the Commonwealth's rivers and streams, time is of the essence for legislative action.

ESTABLISH A DEDICATED FUND FOR WATERSHED RESTORATION

RECOMMENDATIONS

Establish a dedicated fund for watershed restoration and protection, complete with a sustainable revenue source(s). Enabling legislation should:

Direct money solely to support water quality management activities, such as monitoring, planning, farmer cost-share programs, and onthe-ground restoration and protection activities, as well as to support existing water quality programs through state resource agencies.

Given the long-term maintenance savings of investing in green infrastructure versus gray infrastructure, prioritize funding of projects that use natural infrastructure to support greater return on investment. Green infrastructure investments will help reduce more pollution per dollar invested over the course of the project's life cycle.

Provide matching funds to local governments for projects that address watershed management program goals. Prioritize investments for municipalities in the Chesapeake Bay Watershed so that they may help the state comply with U.S. Environmental Protection Agency requirements.

Legislators should consider and revisit revenue proposals from previous legislative sessions like water usage fee legislation (HB 20 from the 2017–2018 Session) and other revenue generation concepts, like a plastic bottle tax.

A dedicated fund for water quality and flood abatement efforts would make better use of state agency staff time and resources by promoting more consistent planning and leveraging local and private investments more efficiently. According to a 2020 poll, 89 percent of Pennsylvanians agree that even when the state budget is tight due to the coronavirus pandemic, the Commonwealth should still invest in protecting Pennsylvania's land, water and wildlife. However, inconsistent and inadequate appropriations jeopardize the resources needed to restore and protect waterways. Correspondingly, the number of polluted river and stream miles in Pennsylvania has grown to over 25,000. Despite these challenges, our waterways are generating remarkable returns for communities; supporting more than 250,000 outdoor recreation jobs; driving \$29 billion in consumer spending on outdoor recreation;⁷ and bolstering tourism, the second leading state economic sector.

BACKGROUND

To protect their valuable water resources, neighboring states — Maryland, New Jersey, and New York — have better leveraged scarce resources by establishing a dedicated fund for clean water and/or for environmental protection more broadly. Dedicated funds help protect hard-won watershed restoration progress from harm when budgets fluctuate. As a result, some tourism-focused states, such as New York and Colorado, have seen a \$6 to \$7 return on each \$1 invested in restoration, driving job creation and diverse industry growth⁸ all while bringing new life to their waterways and the communities that depend on them.

A dedicated Clean Water Fund would solely support water quality management activities — such as monitoring, planning, and on-theground restoration and protection activities — and would bolster existing water quality programs managed by state resource agencies.

The purpose of these investments would be to:

- Protect drinking water sources;
- Protect, enhance, and restore wetlands, forests, fish, game, and wildlife habitat;
- Support jobs;
- Support parks and trails that generate state revenue; and
- Protect, enhance, and restore lakes, rivers, streams, and groundwater.

A dedicated Clean Water Fund would provide committed and continuous funding for watershed restoration, provide matching funds to local governments that create their own dedicated Clean Water Funds, and offer greater transparency of government spending for constituent taxpayers.

Many states provide dedicated funds to support conservation efforts through the following means:

- Bonds (New Jersey, California, Florida);
- General fund appropriations (Arizona, Indiana, Georgia);
- Environmental license plate sales (Virginia, Maryland, Pennsylvania);
- Real estate transfer taxes (Washington, Illinois, Delaware, Maryland);

- Cigarette taxes (Minnesota, Texas, Nebraska);
- Sales taxes (Missouri, New Jersey, Arkansas);
- Gas taxes (Idaho, California),
- Lotteries (Maine, Oregon, Colorado); and
- Environmental penalty money (Alaska, Utah, Kentucky).

A few best practices help states leverage their dedicated funding investments. Local governments are important partners in successful watershed conservation efforts. State clean water programs should use incentives, such as matching grants with higher scores given to municipalities who are implementing Act 167 programs, to leverage investment and encourage robust clean water conservation practices at the local level. Local governments should be encouraged to be current with Act 167 requirements, conduct comprehensive planning that incorporates the results of a stormwater management inventory and clearly defines high-priority areas for watershed conservation and restoration, along with areas for development.⁹ According to a 2017 poll, Pennsylvanians from urban, suburban, and rural areas predominantly support increased state investments to restore and protect local rivers and streams.

Faced with growing stormwater pollution, excess nutrient pollution from agriculture, legacy toxins, and extreme weather events, Pennsylvania's rivers and streams require increased investments in restoration, adaptation, and protection efforts. Yet, these investments are too often caught in political crosshairs, which result in environmental setbacks. A dedicated fund for clean water is a strategic and logical solution.

CONCLUSION

Setting money aside for watershed restoration and flood abatement provides greater certainty for protecting the sources of the water we drink, waterscapes where Pennsylvanians and visitors recreate and reflect, and unique landscapes that attract businesses and support jobs. The General Assembly has ample models from neighboring states to learn from as it works to establish a dedicated Clean Water Fund that meets Pennsylvania's unique needs. Clean water organizations and advocates throughout the state stand ready to support legislators in defining and implementing this strategic investment in Pennsylvania waterways.

RESTORE FAIR SHARE FUNDING TO BASIN COMMISSIONS

RECOMMENDATION

Restore Full-Share Funding — as defined in each basin's compact — for all five Interstate Basin Commissions that serve Pennsylvania's major watersheds.

River Basin Commissions are agencies formed by interstate compact to serve state and federal government agencies that coordinate interstate waterway planning and management. The authority of each River Basin Commission varies but each may be responsible for overseeing water quality, flood control, wildlife, water flow, water withdrawals, aquatic flora, recreation, navigation, and industrial runoff in their respective basin. The health and prosperity of each river basin and its inhabitants rely on strong participation and supportive funding of member states in each River Basin Commission.

BACKGROUND

DELAWARE RIVER BASIN COMMISSION

Created in 1961, the Delaware River Basin Commission (DRBC) is a regulatory body operated by four states — Delaware, Pennsylvania, New York, and New Jersey and the federal government through the U.S. Army Corps of Engineers. The DRBC monitors water quality, conducts comprehensive resource planning, and manages drinking water supplies for over 13.3 million Americans, including the residents of Philadelphia.

In 1988, the DRBC commissioners reached an agreement by which the states and federal government would appropriate sufficient funds in their annual budgets to support the functions of the Commission. The signatory party contributions to the DRBC budget should be — but are too often not — broken out by the percentages listed below and should, if fulfilled, differ in sum by fiscal year.

- Delaware 12.5%
- New York 17.5%
- New Jersey 25%
- Pennsylvania 25%
- Federal Government 20%

Most states and the federal government have not contributed their fair share of funding since 2014, dramatically underfunding a key collaborative agency that protects the health and availability of Pennsylvania's water.

The DRBC is positioned to manage multi-state land-use planning decisions, like oil and gas development, that could cause undue and disproportionate harm to river health. The DRBC regularly monitors and studies the salt line on the Delaware River, which could threaten municipal drinking water intakes if not kept in check by adequate flows. The DRBC's research informs interstate and DEP policies on flow regime and guides decision-making that will ensure water supplies for generations to come in some of Pennsylvania's most populated areas.

There is some overlap, but also differences between, the DRBC and the Flexible Flow Management Program (FFMP) Delaware River Decree Parties. The Decree Parties are made up of New York State, New York City (NYC), New Jersey, Pennsylvania, and Delaware. They were formed through litigation, which led to the 1954 U.S. Supreme Court Decree which governs the water releases from NYC's reservoirs in the headwaters of the Delaware River. Through time,the Decree Parties have unanimously come to agreements under the Decree, such as the recent ten-year October 2017 Flexible Flow Management Program (FFMP 2017).



among the member states; restoration and preservation; and the monitoring and protection of water quality.

The SRBC enhances protections for the drinking water supply of more than 4.1 million basin residents, preserving habitat for wildlife and ensuring river-based economies can continue to thrive. Pennsylvania should participate in basin commission activities and utilize its collaborative planning and basin research to inform policy.

INTERSTATE COMMISSION FOR THE POTOMAC RIVER BASIN

The Interstate Commission for the Potomac River Basin (ICPRB)'s mission is to protect and enhance the waters and related resources of the Potomac River Basin through science, regional cooperation, and education. For more than six million Americans, this river plays a vital role in their everyday lives as a source of drinking water, river-based recreation, and economic opportunity.

Originally authorized by Congress in 1940, the ICPRB is an advisory, non-regulatory agency of the District of Columbia, Maryland, Virginia, West Virginia, Pennsylvania, and the federal government. It was formed in response to the extreme pollution levels that required a regional, cooperative response by all jurisdictions. In 1970, amendments to the Compact empowered the ICPRB to address not only pollution issues but also water resources and related land issues affecting two or more jurisdictions. Although this has improved the river's water quality in many ways, various threats - such as population increases, land-use changes, increased impervious surfaces, contamination from legacy toxins, and nutrient and sediment pollution require regional attention.

OHIO RIVER VALLEY WATER SANITATION COMMISSION

The Ohio River Valley Water Sanitation Commission (ORSANCO) was formed in 1948 as a multi-state and federal partnership amongst Illinois, Indiana, Kentucky, New York, Ohio, Virginia, West Virginia, Pennsylvania, and the U.S. Army Corps of Engineers. This

The DRBC acts as a host to the Flexible Flow Management Program (FFMP) Decree Parties, and sometimes the DRBC will assign staff to Decree Party projects. For example, the DRBC assigned staff to act on the FFMP Decree Parties' Subcommittee on Ecological Flows (SEF). This subcommittee focuses on water temperature issues, salinity concerns, and erratic water releases in the Upper Delaware region. The DRBC's Regulated Flow Advisory Committee and SEF are now working with FFMP stakeholders to further improve reservoir release policies. By limiting high water temperatures and erratic water levels on the Upper Delaware, we can better protect an ecosystem that supports an economically significant wild trout fishery and other important aquatic species.

SUSQUEHANNA RIVER BASIN COMMISSION

The Susquehanna River Basin Commission (SRBC) guides the water resource management of the Susquehanna River Basin, which ranges from Cooperstown, NY to Havre De Grace, MD and spans 43 Pennsylvania counties. The SRBC was established by an interstate and federal Compact, adopted by the U.S. Congress and the General Assemblies of Maryland, New York, and Pennsylvania in 1970. Under the Compact, the SRBC coordinates water resource management via implementation of structural and nonstructural flood mitigation projects; evaluation and regulation of water withdrawals and consumptive use; allocation of water resources collaborative effort improves water quality in the Ohio River Basin and ensures the river can be used for drinking water, industrial supplies, and recreational purposes, and can support a healthy and diverse aquatic community.

To improve water quality in the Ohio River and expansive tributary network, ORSANCO sets wastewater discharge standards, performs biological assessments, monitors basin waterways, and conducts watershed surveys and studies. ORSANCO establishes water quality standards for the mainstem of the Ohio River and each state chooses how to adopt these standards for discharges to the river. The Commission coordinates emergency response activities for pollution spills and accidental discharges into the river and promotes public participation in watershed protection.

GREAT LAKES COMMISSION

Since it was established in 1955 by the Great Lakes Basin Compact, the Great Lakes Commission has worked with its member states and Canadian provinces to address issues of common concern, develop shared solutions, and collectively advance an agenda to protect and enhance the Great Lakes region's economic prosperity and environmental health. In Pennsylvania, this Commission is a critical player in protecting and restoring Lake Erie and its watershed for ecological and economic benefits.

CONCLUSION

Many polls conducted throughout the last decade have revealed overwhelming support from citizens in every county protecting and investing in clean water. But Pennsylvania's leaders are not doing nearly enough to safeguard and improve our water resources. A significant challenge is that the Commonwealth is failing to meet its fair share of contributions to the Basin Commissions that work every day to properly manage and protect the great rivers and streams that make up Pennsylvania. Without properly funded and staffed Commissions, Pennsylvania's communities are increasingly at risk of more polluted waters, infrastructure issues, declining aquatic life, and irregular water supply. Pennsylvania should not short-change these essential institutions protecting such a vital resource.

IMPORTANT ISSUES AFFECTING PENNSYLVANIA'S WATER

A. A.

ADVANCING ENVIRONMENTAL JUSTICE

RECOMMENDATIONS



The guiding principle of environmental justice is that everyone — regardless of race, color, national origin, or income — is entitled to equal protection from environmental harms and risks. In 2015, the Department of Environmental Protection (DEP) identified 851 environmental justice communities. This is defined as communities in which at least 20 percent of residents live in poverty and/ or at least 30 percent of people are ethnic minorities disproportionately burdened by negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.¹⁰

BACKGROUND

The COVID-19 pandemic is exacerbating the equity and injustice gap between communities impacted by harmful pollution. Low-income households, immigrants, and people of color are experiencing higher levels of infection and death. A report conducted by American Public Media Research Lab found that Pennsylvania has seen the 9th largest absolute disparity between Black and White Americans when examining COVID-19 mortality rates, the 11th largest absolute disparity between Asian and White Americans, and the 13th largest absolute disparity between Latino and White Americans when examining COVID-19 mortality rates.

CONCLUSION

Written into the Commonwealth's constitution is a promise of a clean environment for all Pennsylvanians. Yet, some Pennsylvanians have borne the undue burden of disproportionate pollution hazards that affect their health, limit their economic opportunities, and eliminate opportunities for safe recreation. All state residents deserve equitable rights to Pennsylvania's natural resources, including clean air and clean water.

The consequences from the pandemic are felt more acutely by people who have underlying conditions, those who lack access to healthcare, and frontline workers. According to new research from Harvard University, COVID-19 patients in areas with high levels of air pollution have a higher likelihood of death. Chronic air pollutants from factories and fossil fuel plants cause more cases of asthma, lung disease and cardiovascular disease, that when combined with severe lung inflammation caused by COVID-19, is often fatal. It brings into clear view the longterm damage caused by chronic pollution to our environmental justice communities and how reducing pollution should now more than ever be a top public health priority.

According to the PA DEP, one-third of Pennsylvania's populations live in environmental justice areas. These areas are defined as a census block group with a 30 percent or greater minority population or 20 percent or greater population at or below the poverty level. These inequities exist due to longstanding systematic and structural systems of oppression.

By establishing an Environmental Justice Advisory Board, the Commonwealth has begun to demonstrate its understanding of the need to confront the disproportionate pollution impacts that legacy and present pollution has on underserved and underrepresented communities. However, this body lacks formal decision-making authority. It is imperative that elected officials develop stronger policies that protect the health of all people regardless of their socioeconomic status. The legislature can and must do much more to provide oversight of the decision-making process that threatens clean air and water for these Pennsylvanians.

HELPING FARMS THRIVE BY PROTECTING WATER AND SOIL

RECOMMENDATIONS



Agriculture is a major component of Pennsylvania's economy, producing 280,000 jobs and generating \$135 billion annually.¹¹ With food supply chains disrupted by the COVID-19 pandemic, investments in sustainable farming practices are needed to uplift local communities and boost the economy. Each county hosts family farms with an average size of 137 acres. Pennsylvania can make investments in innovative ways that strengthen opportunities and resources, while protecting local water quality.

Protecting this multibillion-dollar industry is imperative to the health and wellbeing of Pennsylvanians who rely on a stable supply as well as clean air and water. As the COVID-19 pandemic persists, farmers continue to be

challenged to maintain their economic viability while conserving natural resources. Supporting efforts to improve agricultural land's resilience will make communities stronger and more prosperous. The Commonwealth's 58,000 farms produce \$7.4 billion worth of crop and livestock products on 7.6 million acres.¹² What happens on this farmland directly impacts our communities and access to clean water. As the state continues to adapt to adverse effects from the pandemic, it is imperative that we take responsibility for the state's 6,798 stream miles that are impaired by the results of agricultural activities, especially nutrient runoff, soil erosion, and unrestricted livestock access.13 Pennsylvania legislators in Harrisburg need to make commitments to help farmers improve environmental stewardship on their land.

BACKGROUND

Over 50,000 family farmers are working diligently to provide for Pennsylvania. Responsible farming practices that provide clean water to downstream communities depend on technical and financial assistance. Implementing agricultural best management practices to address local water quality needs comes at high costs, which make conservation investments difficult for family farmers to bear on their own, especially now with market instability. Federal farm conservation programs only meet a fraction of the annual need, so additional resources are imperative to help farms invest in conservation.

Almost one-third of the Commonwealth's streams do not meet water quality standards for drinking, fishing, and recreation. Lancaster and York counties alone have more than 640,000 acres of farmland without proper erosion and sediment controls. In order to meet the Commonwealth's Chesapeake Bay pollution reduction goals, farmers need to cut 22.3 million pounds of nitrogen runoff to local waters. Farmers are required to develop and implement management plans to reduce pollution from nutrient sources, mitigate sediment loss, and prevent erosion. These plans are often the key first step to set the framework for implementing conservation practices on farms. They promote a healthy farming economy, while providing local benefits to surrounding communities.

If implemented according to schedule, these plans not only reduce water pollution, but also improve crop utilization of nutrients and keep top soil in place to sustain long-term production. However, measures to ensure that farms have and follow these plans only began in earnest after 2010 with limited resources, so significant gaps remain. It is crucial that, after the development of these plans, a variety of funding options are made available to farmers to implement planned best management practices. Otherwise, the plan becomes nothing more than a pile of paper.

Many farms are now focusing on production systems that reduce tillage intensity to maintain soil structure, responsibly incorporate manure,

CONCLUSION

A thriving agricultural economy and healthy waters are dependent on increased financial and technical assistance to farms. Pennsylvania should focus its limited resources on the most cost- effective practices benefiting both the environment and farm profitability, including but not limited to, no-till cropping systems, cover crops, nutrient management, manure storage, livestock exclusions from streams, riparian forested buffers, and improved pasture management.



and sustain a cover of living plants to improve soil health and reduce water pollution. This increases water infiltration, retains soil moisture for periods of drought, and reduces stormwater runoff and soil erosion during heavy rains. Soil and nutrients stay in agricultural fields for production, rather than degrade local streams. When adopting new production methods, farms often need technical advice adapted to their specific agricultural operation, soil, terrain, climate, and production goals.

EMPOWERING MUNICIPALITIES TO REDUCE THE IMPACTS OF POLLUTED RUNOFF

RECOMMENDATIONS

Renew Act 167 planning funds and program funding to PA DEP. Funding must provide critical support for local governments to comply with Pennsylvania's stormwater management programs. PA DEP must work with watershed organizations to assist with guidance and address stormwater in a watershed context.

Grant authority for all local governments to collect a stormwater fee without creating a new stormwater authority. This additional local revenue would help to ensure that municipal stormwater management programs are able to meet local needs.

Avail new resources to municipalities to bolster implementation of best management practices at the local level and encourage and facilitate multi- municipal planning activities to cost- effectively manage stormwater. New programs such as a green stormwater infrastructure grant and/ or a municipal assistance fund could deliver much needed dollars to local governments for stormwater management. Any new program should prioritize allocations to disadvantaged communities and provide for income-based assistance where stormwater fees are applicable.

The impacts of rainfall events include nuisance flooding along with serious stream, roadway, and basement flooding. Additionally, debris and contaminants including pet waste, oil, pesticides, herbicides, and trash, are picked up and carried by stormwater and often discharged untreated, into waterways. Municipalities must manage stormwater to avoid stream impairment, and higher water treatment costs. Investments in protecting existing stormwater infrastructure and adding green infrastructure will protect local businesses, create jobs, and improve public health. Our recommendations would provide pathways for the state legislature to help municipalities advance best management practices (BMPs) and fund stormwater programs with a focus on collaboration and equity.

BACKGROUND

Pennsylvania has two municipal stormwater management programs that are authorized by state and federal law respectively, the Stormwater Management Act (Act 167) and the Municipal Separate Storm Sewer System (MS4). Act 167 requires counties to adopt a stormwater management plan for each watershed. In turn, municipalities adopt ordinances and local regulations consistent with their county's Act 167 plan. The federal MS4 program includes approximately 1,000 small urban/suburban Pennsylvania municipalities required to apply for coverage under the stormwater management permit, also known as the MS4 permit. Each municipality with MS4 permit coverage is required to install BMPs, such as rain gardens, riparian forest buffers, and other infiltration or retention techniques, to control stormwater and thereby reduce nutrients and sediment from impaired streams.

In the age of COVID-19, some municipalities that were in the process of implementing MS4 plans have temporarily suspended stormwater fees, which will lead to a budget shortfall to implement plans. Revenue streams must be enhanced during this time.

Act 167 and the MS4 program are valuable tools for managing stormwater. However, to implement these programs more fully, municipalities need resources for planning and to invest local funding which, with stretched budgets, may require additional resources and support. If Pennsylvania were to set aside dedicated state funding, such as a dedicated Clean Water Fund, it would help municipalities and state resource agencies implement BMPs and clean local waterways and reduce the impacts of flooding.

CONCLUSION

The legislature has an important role to play in providing municipalities with the resources they need to manage stormwater. Namely, state resource agencies need increased funding to provide technical and financial support to municipalities, which will empower them to reduce pollution and limit the impacts of flooding. Investing state resources in the stormwater solutions described above will help protect our waterways and the many benefits they offer communities throughout the Commonwealth, particularly those disproportionately impacted communities of color, particularly amidst the public health crisis.







CLEANING UP ABANDONED MINE DRAINAGE

RECOMMENDATIONS

Support the Growing Greener (Environmental Stewardship Fund) and existing state-level programs that fund Abandoned Mine Drainage (AMD) cleanup.

2

3

Authorize a new clean water funding source to accelerate the pace of AMD remediation in the state.

Commission a statewide study on the short- and long-term return on investments to remediate AMD sites through alternative technology. The study should investigate the benefits of remediation and the negative impacts AMD has had on human health, especially for minorities, low income populations, and environmental justice communities who live near abandoned mines.

Pennsylvania has more unreclaimed mine sites than any other state. AMD is one of mining's most serious threats to public health and water quality. Of the 11,249 abandoned mines in the state, 9,977 have health, safety, or environmental impacts. More than 5,600 miles of streams have been devastated by billions of gallons of polluted water from abandoned mines. Each day, children and families living within close proximity to these areas are exposed to toxic chemicals and drinking water contamination. These issues present complex challenges and opportunities for remediation across the Commonwealth. By working together, we can identify solutions that will stimulate economic growth, while protecting human health and the environment.

BACKGROUND

AMD is generally characterized by acidic water containing iron, aluminum, and other metals that can render streams uninhabitable by living things that threaten human health and water quality. AMD is a legacy of coal mining practices

prior to the 1977 Surface Mining Control and Reclamation Act, when mining companies were not required to address the impacts to land and water resources. AMD is the second leading source of pollution to Pennsylvania's waterways. The Lackawanna River, Pennsylvania's 2020 River of the Year, was nearly destroyed by 150-years of anthracite mining. The Fish and Boat Commission classified a 12-mile reach of the Lackawanna as Class "A" fishery for trout. Unfortunately, several studies including two conducted by the Lackawanna River Corridor Association have shown that the fishery and aquatic habitat are completely segregated by acid and metals loading and disposition. The Old Forge Bore Hole is largely responsible for the loss of fishery, aquatic habitat, and water quality in the lower Lackawanna. Over the past 30 years, the river has made strong recovery with support from the state and local communities. It is a valuable economic asset for communities living in Northeastern Pennsylvania and deserves continued commitment and support from the state.

Innovative and long-term solutions are needed to address complex challenges that pose major threats to Pennsylvania. According to an estimate by the U.S. Geological Survey, the cost of correcting acid mine drainage related problems with current technology across the Commonwealth could reach \$1 billion. Passive treatment systems are traditionally used to treat polluted streams, but other cost-effective technologies exist. Recovering rare earth elements from AMD sites can be used as a source for mine-water geothermal heating and cooling technology. Geothermal heating and cooling systems can save 40 to 65 percent in heating costs, 30 percent in cooling costs and 15 percent for hot water costs when compared to conventional air-source heat pumps or natural gas systems.¹⁴ Harnessing this energy will stimulate economic development, create jobs, diversify Pennsylvania's energy portfolio, and minimize the need for mining operations. Areas that have been restored by damages from AMD will also create new recreational opportunities for the public. With support from state funding,

these technologies can address the negative impacts of AMD while protecting human health, adding to economic interests, and restoring the environment for recreational use and enjoyment.

Planning and implementing mine drainage treatment projects can take years. Given the scope of the problem, ongoing funding particularly for the long-term operation and maintenance of treatment systems — is critical to restoring polluted waters. In 2021, these funding needs can be leveraged by elected officials through the reauthorization of the Federal Surface Mining Control & Reclamation Act and Title IV Abandoned Mine Land Trust Fund. Support for these programs has brought more than \$1.3 billion to Pennsylvania to finance cleanup. They serve as a critical state match to leverage additional federal grants to assist with further cleanup. Additional funding for this work has been provided by the Growing Greener Environmental Stewardship Fund, but new resources dedicated to clean water are still needed.

CONCLUSION

As the COVID-19 pandemic persists, it exacerbates threats to human health and public safety. With support from federal, state, private, and other funding programs and years of experience designing and implementing AMD treatment practices, Pennsylvania is making some headway in addressing its signature legacy water pollution problem. Still, the scope of the problem is enormous, demanding that the Commonwealth commit to long-term cleanup and a significant investment of additional resources. Addressing these challenges can create lasting solutions for remediation, while improving the quality of life for all Pennsylvanians who deserve clean water and an abundance of aquatic resources restored in our mining impacted watersheds.



MITIGATING THE IMPACTS **OF FLOODING IN PENNSYLVANIA**

RECOMMENDATIONS

		Pass legislation that integrates climate change resiliency into the state hazard mitigation plan to combat the severity of flooding in a changing world, prioritizing natural solutions and green infrastructure projects.		
		Pass legislation to empower municipalities by giving them the ability to enact stormwater fees. This funding will be crucial for municipalities to meet their clean water goals and combat flooding by installing best management practices and conservation projects.		
3	3 Develop and pass legislation to provide training, technical, and financial assistance for municipalities to design and install a range of flood adaptation strategies with preference for natural solutions and green infrastructure projects.			
		Pass legislation requiring municipalities, especially in urban areas, to factor flood adaptation, such as higher development standards into their comprehensive plan updates, to account for more frequent and severe flooding.		
	Pennsylvania has a history of severe flooding.resources and tools for planning, mitigation, and adequate stormwater infrastructure. Fac with increasingly common floods and worsenManagement Agency (PEMA), flooding iswith increasingly common floods and worsen			

the most frequent and costly of all hazards in Pennsylvania. In the past couple years, the Commonwealth has experienced unprecedented severe rainfall events¹⁵ that have flooded communities and seriously degraded the quality of local infrastructure. Floods cause road closures, property and infrastructure damage, and even take the lives of several Pennsylvanians. With a changing climate, scientists predict more frequent and severe flooding events here in the Commonwealth. It is critical that local governments have the

water conditions, local communities will need better tools and resources to prepare for a healthy, safe, and resilient future.

The effects of Pennsylvania's flood problem are two-fold:

- 1. Water pollution that occurs as a result of significant runoff carrying toxins like waste, pesticides, fertilizers and motor oils into streams and from eroded sediments; and
- 2. Property damage and safety concerns.

CONCLUSION

To combat the risks of flooding, we ask the General Assembly to pass legislation that allows local governments to adopt their own stormwater fees so that they may implement more stormwater best management practices. Stormwater fees will ensure residents, businesses, and developers pay their fair share. It is critical that the Pennsylvania legislature act to establish policy solutions that protect local communities, our waterways essential infrastructure, and integrate climate change resiliency into the state hazard mitigation plan. Local governments should also be required to include flood adaptation strategies into their comprehensive plans.



BACKGROUND

Recent rainfall rates in Pennsylvania are well in excess of historical trends. Heavy rainfall and flash flooding cause uncontrolled runoff of stormwater containing a surplus of nutrients, chemicals, sediments, and bacteria. These pollutants, collected in high-velocity runoff, inevitably enter Pennsylvania's waterways and degrade water quality, making water bodies unsafe for fishing and swimming. Additionally, flooding causes expensive property damage, like collapsing roofs, as well as severe injuries and even deaths. Intense velocity and volume of flood waters erode streambanks, causing sediment to cloud waterways. This inhibits photosynthesis of underwater grasses, which produce oxygen for all other aquatic species to survive. The depletion of dissolved oxygen can cause major fish kills and disrupt the balance of the entire ecosystem and even result in dead zones where no life can exist.

The combined effects of increasing frequency and intensity of rainfall and aging, ineffective or inadequate stormwater infrastructure are two major contributors to Pennsylvania's flood crisis. The legislature is encouraged to make proactive investments and improvements for stormwater management and flood adaptation projects

so that communities are better prepared for flood threats. While climate change is a global concern with many harmful threats to communities near and far, there are also simple steps the Pennsylvania legislature can take to reduce the Commonwealth's fossil fuel emissions. By contributing to climate change mitigation efforts, the Pennsylvania legislature can help to quell the larger cause of increased flooding throughout our region. Legislation that supports carbon-neutral energy production and energy efficiency in the home, workplace, and transit systems are important steps. Given the pandemic and COVID-19, parking lots at malls and concert halls are no longer being used and provide the state an opportunity to invest in natural solutions that will curb the likelihood of flooding. Through investing in greener infrastructure, the state can create more jobs and climate solutions that will economically pay for themselves long term.

Evidence indicates that minority communities are disproportionately at risk to flooding and oftentimes properties facing risks are not shown on FEMA maps. Residents of flood-prone areas often suffer more mold in their homes, which can worsen respiratory conditions, a danger in the pandemic.

RESTORING AND RECONNECTING STREAMS TO IMPROVE WATER QUALITY AND REDUCE FLOODING

RECOMMENDATIONS



Pennsylvania is home to 86,000 miles of rivers and streams. Among these are more than 16,000 miles of wild trout streams — but also many thousands of miles of streams that are impaired, fragmented, or otherwise degraded by historic and ongoing development and resource extraction. By restoring streams and reconnecting habitat, the Commonwealth can improve water quality, protect local communities from damaging floods, and support a \$29 billion outdoor recreational economy.

BACKGROUND

From urban and suburban development to agriculture, mining, and drilling, community and economic development has taken its toll on Pennsylvania's waterways. More than 25,000 stream miles are impaired by agricultural nutrient loading and sedimentation, urban and suburban runoff, abandoned mine drainage, and other factors. Pennsylvania is trailing far behind in Chesapeake Bay Watershed cleanup efforts for excess nutrients and sediment. Meanwhile, flooding continues to be a problem for local communities, exacerbated by thousands of undersized stream culverts where storm waters can pile up debris, wash out roads, and inundate upstream areas.

Restoring in-stream habitat, stabilizing stream banks, and installing streamside buffers can reduce pollution and sedimentation, lower stream temperatures to better support



coldwater species like trout, and protect the commonwealth's valuable outdoor recreation economy. Replacing faulty culverts allows flood waters to pass safely underneath roads, reduces bank erosion and streambed scour, and reconnects aquatic species to upstream habitat they need to feed, spawn, and thrive. The Commonwealth is making investments in projects like these, but more is needed. Programs like the Keystone Fund, the Environmental Stewardship Fund, and the Dirt, Gravel, and Low Volume Road program support stream restoration, riparian buffer work, and culvert improvements; however, a fresh infusion of funding for clean water programs is critical. Not only do healthy rivers and streams support our recreation economy, clean water practices require proper planning, design, and construction which can benefit local economics through creating demand for contractors, skilled labor engineers, and community outreach specialists.

CONCLUSION

Restoring and reconnecting Pennsylvania's streams is essential to protecting our aquatic life, not least the wild trout that are the crown jewel of the Commonwealth's \$1 billion fishing economy. This work will also improve drinking water quality, address pollution, and help communities avoid costly flood damage. Investing in this work should be a Pennsylvania priority and the need for stream restoration will likely increase as more frequent and intense storms scour our streams. Funding for stream restoration, as well as all clean water projects, should ensure funding is distributed equitably and that all communities receive the benefits of clean water.

PROTECTING WILD TROUT AND EXPANDING PROTECTIVE STREAM DESIGNATIONS

RECOMMENDATIONS

Provide necessary funding for the Department of Environmental Protection (DEP) as defined in the priority recommendations earlier in this document.

Accelerate the process of DEP considering stream designations and advancing protections of class A designations by utilizing current recommendations given to the agency in order to assist local and rural economies recover from COVID-19.

Establish new revenues for the Growing Greener Environmental Stewardship Fund, which supports state agencies, municipalities, and conservation organizations in implementing on-the-ground projects to conserve and restore these high value trout streams.

The Unassessed Waters Initiative was launched in 2010 by the Pennsylvania Fish & Boat Commission (PFBC) to document and protect populations of wild brook, brown, and rainbow trout. Thanks to this program, the Commonwealth now boasts more than 16,000 miles of designated wild trout streams, many of which are home to Pennsylvania's state fish, the Eastern brook trout. Wild trout require cold, clean water to survive and reproduce, and these waters are given special watershed and stream protections under state regulation.

BACKGROUND

3

The presence of wild trout in a coldwater stream does not simply provide recreational opportunities for anglers. It also means that those waters qualify for regulatory protections that translate into cleaner water for other forms of recreation, drinking water supplies, and businesses.

Coldwater streams found to contain sizable naturally-reproducing trout populations by the PFBC or partners like Trout Unlimited are awarded Wild Trout designations or Class A designations, and earn a higher level of protection from the Department of Environmental Protection. To ensure water quality is not degraded in these special designation subwatersheds, the DEP may limit wastewater discharges, add permit conditions before allowing residential or commercial development, and require protection of streamside buffers.

The PFBC and its partners employ a sciencebased approach to assessing streams for wild trout, with a goal of ensuring that these coldwater resources receive the protections required to remain the cleanest of Pennsylvania's streams. If a stream is on the state list of Wild Trout Waters, wetlands in its floodplain are classified as Exceptional Value. Class A streams are designated High Quality. Just 2 percent of Pennsylvania's streams are designated as Exceptional Value, while 23 percent meet High Quality standards. Funding uncertainties limit the ability of DEP to continue this important work in an efficient and appropriate manner. By designating Class A streams, DEP sustains an economic driver for the region through fishing and tourism. By investing in stream designations, ground water resources may also benefit as long as protections are prioritized by state agencies.

CONCLUSION

Expanding and enhancing Pennsylvania's Wild Trout and Class A designated waters benefits not just trout and recreational anglers, but downstream users and other wildlife, as well. Enhancing stream designations will help trout populations thrive in waters across the state. Also, providing sufficient funding to DEP will allow for the conservation, protection, and restoration of waterways in Pennsylvania.



KEEPING DRINKING WATER SAFE FROM EXISTING AND EMERGING THREATS

RECOMMENDATIONS

	1	We recommend reintroducing an 930 from the 2019–2020 legislati in schools' drinking water by requ schools: a) test the water, b) tell p any problems.	nd passing a policy similar to HB ve session that addresses lead uiring a program that ensures parents the condition, and c) treat	
	2	Press Department of Environmental Protection (DEP) to establish a state Maximum Contaminant Level (MCL) standard for PFAS in drinking water treatment.		
	3	Reintroduce and pass legislation similar to HB 2927 from the 2019– 2020 legislative session that closes the leachate loophole to protect our drinking water sources from hazardous and radioactive waste.		
	4	Increase annual appropriations to PENNVEST to support drinking water infrastructure upgrades, including funding for full lead service line replacements and to staff DEP's Safe Drinking Water Program who are responsible for overseeing drinking water permits and facilities.		
	5 We recommend supporting a state-wide moratorium on water shutoffs during the COVID-19 pandemic which will benefit members in the hardest hit communities and to keep such policies in place during the winter months going forward.			
Almost 90 percent of Pennsylvanians get their drinking water from a public water system. The American Society of Civil Engineers (ASCE) ranks Pennsylvania's public drinking water systems with a failing grade of D. Much of the infrastructure that make up these systems is old, aging, or needs replaced. To keep up over the next 10 years, the ASCE estimates across		percent of Pennsylvanians get their rater from a public water system. The Society of Civil Engineers (ASCE) nsylvania's public drinking water ith a failing grade of D. Much of the sure that make up these systems is	complicate matters more, there are other harmful components that impact our drinking water, such as lead, PFAS, and harmful waste from oil and gas operations.	
		or needs replaced. To keep up over 0 years, the ASCE estimates across	When we turn on the tap for water for drinking,	

When we turn on the tap for water for drinking, cooking, bathing, or cleaning, we expect the water coming from our tap to be safe to

the state, there is a \$10.2 billion funding gap. To



CONCLUSION

Failure to invest in infrastructure and set strong standards protective of health has compromised our drinking water. Without significant investments in our drinking water infrastructure and strong standards, these problems and the associated costs will continue to grow. We need to ensure drinking water facilities and regulators have the capacity to provide safe drinking water and that those struggling to pay their water bills do not see their water shutoff. Adequate resources and protective standards will require leadership and commitment from our legislators to protect our drinking water.

consume. We especially expect children to be safe when at school. In a 2012–2015 survey of federal data, Pennsylvania had the greatest number of schools with elevated levels of lead in their drinking water in the country. Currently, no federal or state-level requirements exist around testing, reporting, or maximum-allowable-levels of lead from water outlets in school buildings. While public water systems themselves are tested, lead contamination happens at or in the building itself, distinguishing it from other sources of pollution. Schools on municipal water systems are not compelled to test for lead, leaving them vulnerable to contamination by their own infrastructure.

Like lead, PFAS, or perfluoroalkyl and polyfluoroalkyl substances, are also dangerous to human health. A leading source of PFAS comes from firefighting foam. PFAS are also used in the manufacturing of cookware, carpets, clothing, fabrics for furniture, paper packaging for food. Unlike lead, PFAS are not a natural substance as they are manufactured for their resistance to heat, water, and oil. This class of contaminants has been found in drinking water in southeast Pennsylvania, most notably in Bucks and Montgomery County. Emerging research indicates links between this family of contaminants and thyroid disruption, cancer risk, and immune system dysfunction.

The expansion of unconventional natural gas extraction in the Commonwealth has posed risks associated with well integrity, subsurface migration of natural gas, and poorly treated wastewater and wastewater spills, all of which threaten well water. This is especially concerning in regard to a loophole that provides a pathway for unregulated, untreated industrial waste to end up in our drinking water. According to DEP data, an average of 800,000 tons a year of waste from both conventional and unconventional drilling operations is sent to landfills where it collects as leachate and can be sent to wastewater treatment facilities that cannot treat such substances. The wastewater treatment plants will then discharge hazardous and radioactive waste into our rivers and streams, which can eventually end up in our drinking water.

ENSURING THAT WASTEWATER PERMITS ARE UP-TO-DATE

RECOMMENDATIONS

3

Allocate sufficient funds in the Department of Environmental Protection's (DEP) budget to hire staff and secure the resources to review National Pollution Discharge Elimination System (NPDES) permits and Water Quality Management (WQM) permits. Support can also allow staff to effectively monitor permits and discharges, particularly as COVID-19 has been found in wastewater.

Increase funding for Pennsylvania's sewage treatment infrastructure to the \$18 billion figure suggested by the U.S. Environmental Protection Agency (EPA) in the 2008 Clean Watersheds Needs Survey. According to the EPA, nearly half of this amount is needed to address the combined sewer overflow issue.

Pass a statute and fund DEP to launch a public engagement and notification system so community members are aware of when and where combined sewer outfalls are discharging raw sewage.

Wastewater is used water from any combination of domestic, industrial, commercial or agricultural activities; stormwater runoff; and any sewer inflow or sewer infiltration. Wastewater can be conveyed in a single or shared system. Combined sewer systems are designed to collect both stormwater runoff and household and commercial wastewater (raw, untreated sewage) into a single pipe. During heavy rainfall, combined sewer systems can reach max capacity and discharge untreated wastewater into local waterways. These events are called Combined Sewer Overflows (CSOs).

Wastewater, treated or otherwise, comes out of a point source, a traceable and controllable location like a pipe or sewer outfall. The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. These permits are known as National Pollutant Discharge Elimination Systems and Water Quality Management permits and are administered in Pennsylvania by the Department of Environmental Protection. They regulate discharges from sewage, industrial waste, municipal and industrial stormwater facilities, and other activities including the application of pesticide.

BACKGROUND

Due to tightening budgets, DEP staff are unable to keep pace with updating water quality management permits for large industrial wastewater and stormwater discharges. Major sources of industrial pollution have been operating under decades-old NPDES and WQM permits and, as such, are not required to meet upto-date pollution reduction standards. As a result, Pennsylvania's rivers and streams that receive discharges from outdated pollution sources are not benefiting from modern improvements in pollution reduction requirements. The U.S. Environmental Protection Agency requires that permits are updated every five years to ensure that discharges are managed with the best available technology and information. As permits conclude their five-year term, states are required to review and reissue wastewater discharge permits that reflect best available technology and more protective effluent limits.

Unlike other sources, industrial and sewage wastewater treatment plants (WWTPs) in the Potomac and Susquehanna Watersheds have made considerable upgrades and progress, that have most notably resulted in reducing excess nitrogen. However, the pandemic has raised new concerns, as the coronavirus has been detected in wastewater discharge. This at a time when members of the public are increasingly utilizing their local waterways. This is especially true for environmental justice communities that depend on local waterways for subsistence fishing, disproportionately exposing a segment of the population to harmful bacteria and, potentially, a life-threatening virus.

The DEP's failure to update permits saves treatment facilities discharging pollutants from having to upgrade their facilities. However, this places the responsibility of cleaning up our rivers and streams on other users, such as public water suppliers, municipalities, and farmers. Industrial polluters can and should do more to clean our rivers and streams, and legislators can set policy and appropriations levels that will allow the DEP to encourage increased compliance.



PREVENT AND REDUCE SINGLE-USE PLASTICS FROM ENTERING THE WATERSHEDS

RECOMMENDATIONS

Overturn the existing moratorium barring Pennsylvania's municipalities from imposing bans or fees on the sale or distribution of single-use plastic bags.

2

Pass statewide legislation aimed at phasing out single-use plastics through fees, bans and creating manufacturer responsibility for plastic product packaging.

3

Remove the exemption of taxes on bottled water within the Pennsylvania tax code.

The COVID-19 pandemic significantly slowed down progress on phasing out single-use plastics, though now the science is clear: COVID-19 is not transmitted via surfaces. Secure in that knowledge, we should be supporting reusables at every opportunity. Single-use plastics are products designed to use once, including bags, bottles, foam, and straws. Created from fossil fuels, plastic production contributes to emissions and climate change implications. What's more is that only approximately 9 percent of plastics are recycled, and plastic waste often ends up polluting our communities and waterways. Plastics pose threats to drinking water and wildlife species when they enter the environment. Once in our environment, plastics will never biodegrade and instead break up into smaller particles, called microplastics which are smaller than 5mm — about the size of a grain of rice, which can accumulate in the water we drink and the seafood we eat.

BACKGROUND

Recycling is not the answer to the plastic pollution crisis. Plastic pollution must be stopped at its source by addressing some of the most pervasive, harmful types of plastics, single-use plastics. Pennsylvania must follow the actions of neighboring states, including Maryland, Delaware, and New York. Expanded polystyrene foam food packaging and singleuse plastic bags must be banned. Additionally, the Commonwealth must follow the lead of nine other states in the country and implement a deposit on bottles and cans. Longer-term, extended producer responsibility legislation must be enacted. Such policies would shift cradle-to-grave responsibility for product waste to the manufacturer.

While we advocate for state-level action, several municipalities across the Commonwealth have passed or are working to enact their own ordinances tackling single-use plastics. However, in July 2020 the 1-year moratorium on local plastics ordinances was extended indefinitely. The moratorium on local action must be removed immediately.

CONCLUSION

To reduce and prevent plastic pollution from entering our waterways, it must be stopped at its source through phase outs and bans of unnecessary single-use plastics. Working toward zero waste policy will be beneficial to the Commonwealth's environmental, economy, and public health.

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Alliance for the Chesapeake Bay	National Audubon Society
American Rivers	National Parks Conservation Association
Appalachian Mountain Club	Partnership for the Delaware Estuary
Audubon Pennsylvania	PennEnvironment
Chesapeake Bay Foundation	PennFuture
Choose Clean Water Coalition	Pennsylvania Planning Association
Clean Water Action	Legislative Committee
Coalition for the Delaware River Watershed	Pennypack Ecological Restoration Trust
Defensores de la Cuenca	Schuylkill Headwaters Association
Eastern Pennsylvania Coalition for Abandoned	Sierra Club, Pennsylvania Chapter
Mine Reclamation	Theodore Roosevelt Conservation Partnership
Lackawanna River Conservation Association	Waterkeepers Chesapeake
Lancaster Clean Water Partners	Wyncote Audubon Society
Lancaster Farmland Trust	
Lower Susquehanna Riverkeeper	

Mid-Atlantic Council of Trout Unlimited

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