



Less Shelter from the Storm

Environment Washington's Analysis of How Federal Budget Proposals put Washington at Risk

Thursday, September 28, 2017

With recent massive hurricanes pummeling our coasts, we need to do more to protect our communities. We need to make them less susceptible to flooding, sewage overflows and leaks from toxic waste sites, and, of course, we need to prevent even more intense global warming fueled extreme weather in the future. Unfortunately, as detailed below, pending budget proposals from the Trump administration and Congress threaten key programs that protect our communities. Rather than protecting our most vulnerable communities, budget proposals on the table in Washington, D.C. right now would threaten coastal resiliency, remove protections for flood-absorbing wetlands, neglect funding for stormwater and sewage treatment, and expose more Americans to toxic chemicals. While we do everything in our power to cut the pollution that will fuel even more extreme weather in the future, we need a budget that supports programs that can shelter us from the coming storms.

Environment Washington analyzed the FY 2018 budget proposed by President Trump in the spring of 2017 and the current House and Senate appropriations bills and their impact on programs that protect communities from storm-related impacts. Overall, the Trump administration proposes a 31% (\$2.6 billion) budget decrease for the Environmental Protection Agency (EPA) - the primary agency for protecting the air we breathe and the water we drink, and reducing our exposure to toxic chemicals. The administration's proposal also specifically proposed eliminating or cutting important clean water, coastal protection and slashing toxic waste cleanup programs. To date, the House has also proposed steep but slightly smaller cuts to the EPA of \$528 million. The House spending bills also include several harmful legislative "riders," including one that targets the Clean Water Rule, which protects flood-absorbing wetlands. The House bill also cuts important coastal protection programs and initially slashed clean water grants to states. Environment Washington is calling on Senators Patty Murray and Maria Cantwell to protect Washingtonians by fully funding important programs that protect our communities and opposing these and any other harmful proposals.

Protect Flood-Absorbing Wetlands

Floods are the most common natural disaster in the US, and scientists predict that the damage caused by floods will only increase in the years to come, to over \$1 trillion per year by 2050 globally¹. As climate change continues to progress, extreme rain events that trigger flooding are likely to become increasingly frequent. In a warming world where extreme precipitation events will be more common, we need to protect critical natural flood barriers so that communities are safer from flooding and extreme precipitation events.

Wetlands are Nature's Flood Control, but the House Budget Threatens their Protection

During times of heavy precipitation, wetlands act like a sponge to slow the velocity of runoff and retain excess water. In fact, an acre of wetland 1 foot deep can hold 330,000 gallons of water. In this way, wetlands reduce the danger of flooding and mitigate its worst impacts, providing water flow regulation services to communities across the US.

Wetlands protect our communities from flooding, so paving over or otherwise destroying wetlands reduces the ability of a landscape to absorb rainfall from extreme precipitation events.

Wetlands are important natural flood protections, and millions of acres of wetlands are protected by the Clean Water Rule, which restored full protections to thousands of wetlands and streams across the country. However, the Trump administration and some in Congress want to repeal the Clean Water Rule, which, in addition to protecting critical wetlands, protects the drinking water of one in three Americans, including 2 million Washingtonians.² Now, the House budget bill has provisions that would cut the public out of the repeal process, making it easier for President Trump to dismantle this important protection.

We should be doing everything we can to protect our wetlands, nature's best defense against flooding, but the current administration and the House budget bill would derail clean water protections and leave critical wetland ecosystems more vulnerable to pollution and degradation. We shouldn't be reducing the number of wetlands protected by our nation's bedrock environmental laws. Instead, we need to protect wetlands and protect our communities from flooding and extreme weather.

Make Our Coasts More Resilient

As the climate changes, our coastal communities will face more extreme weather events and increased dangers due to sea level rise. We need to help communities adapt to these coming changes by funding resiliency programs and making sure we have the best information on weather patterns and possible threats.

¹ Stephane Hallegatte et al, "Future Flood Losses in Major Coastal Cities," Nature Climate Change, doi: 10/1038/NCLIMATE1979, 18 August 2013.

² https://19january2017snapshot.epa.gov/sites/production/files/2015-04/documents/wetlands_science_surface_drinking_water_surface_drinking_water_results_county.pdf

Coastal Resiliency is Key

With recent mega-storms showing the importance of protecting and creating more resilient coastlines, it's disappointing to see budget proposals from the Trump administration and Congress that threaten coastal communities.

As our climate changes, our coastal communities will need to adapt to more intense storms and changing ecosystems, and state governments need to help coordinate their response. That's why Coastal Zone Management Grants are so important--they provide a vital source of funding for states who are working with coastal communities to protect our coasts and beaches. The Trump budget would eliminate this funding, reducing the money states have to respond to the needs of coastal communities.

In Washington, NOAA recommended \$2.59 million in Coastal Zone Management Grants to support Washington's coastal management in 2017. The Trump Budget planned on eliminating this program³, and it would see cuts under the House's budget as well--they propose to cut the Coastal Zone Management grants program from \$70 million to \$45 million--a 35% cut.⁴

Regional Coastal Resilience Grants provide our coastal communities with the funding they need to tackle the threat of climate change. These grants go to communities and regions that have identified gaps in their defense against storms and rising oceans, and are working together with state agencies and private organizations to address hazards and problems on their coasts. By providing funding for these grants, the Federal government is empowering local decision-makers and unlocking additional resources to protect coastal communities.

For example, in Washington, Washington Department of Fish and Wildlife will work with NOAA and other local partners to restore 337 acres of wetlands in the Stillaguamish River delta of Puget Sound, Washington. As a gateway to the Stillaguamish River basin spawning and rearing areas, the restored estuarine habitat will provide valuable foraging opportunities and refuge habitat for migratory species, including Endangered Species Act-listed Puget Sound Chinook. This restoration project will breach existing dikes, build a setback dike, re-establish and enhance off-channel habitat, and reestablish tidal flow into the area. Not only will a new setback dike provide protection to critical infrastructure and private property, but the restored habitat will also provide natural flood protection because it can absorb and store large amounts of rainwater or water runoff during a storm, in addition to providing a buffer for tidal influence during periods of high water.

And Washington has felt the impact. In 2017 thanks to Regional Coastal Resilience Grants, NOAA recommended that Washington receive \$2.59 million for projects that will help our coastal communities prepare for coastal storms and changes due to sea level rise and restore vital coastal habitat.⁵

³ <https://www.nrdc.org/experts/alison-chase/trump-budget-slashes-coastal-and-ocean-funding>

⁴ <https://www.nrdc.org/experts/alison-chase/next-steps-our-ocean-budget>

⁵ <https://coast.noaa.gov/czm/media/fy17-funding-guidance.pdf>

Communities in Washington State face significant risks from the impacts of sea level rise, storm surges, and shoreline erosion. Another program that could be impacted is the Washington Sea Grant. Washington Sea Grant will lead a partnership of state and local managers, conservation groups, and academic scientists to enhance coastal community resilience through **cutting-edge science, community pilot projects, and revised state guidance and restoration project design. The work will increase understanding of coastal risks and impacts and improve existing planning tools.** The effort will also include significant outreach to ensure that new information and approaches are shared with coastal communities across the state.

Both the Trump administration and the House propose eliminating these grants entirely, harming the ability of Washington's coastal communities to prepare themselves for future storms.

Research to help us prepare

As weather patterns and sea levels change, it will be more important than ever to have our best minds working to understand and document new changes, so policy makers and local communities can get the information they need to protect themselves.

That's why it's so troubling that the Trump budget proposes a \$139 million cut to NOAA's Office of Oceanic and Atmospheric Research. This office is responsible for financing cutting-edge research into our changing climate through its competitively funded climate research, which works with universities, labs, and institutes to better understand our climate. Trump would cut this program by \$31 million. The office also oversees NOAA's weather and air chemistry research, leaving us less prepared to predict the weather and the aftereffects of air pollution.⁶

Under the Trump budget, the federal Sea Grant program, which provides support to oceanic research institutes and ocean departments at partner universities that work to better understand our oceans and better manage our coastal resources, would be eliminated.⁷ This would halt the critical research into coastal resilience and our changing oceans conducted by these universities and institutes that will make sure we have the best tools to protect our communities from the changing climate.

In Washington alone, \$2.47 million will be cut, cutting off funds to institutes researching how our coasts can best adapt to changing oceans and climates.⁸

Improve and Repair our Wastewater and Sewage Infrastructure

The Budget Proposals Mean More Sewage Overflows and Runoff Pollution

The Clean Water State Revolving Fund helps prevent sewage overflows and runoff pollution, both of which are exacerbated by heavy storms and rains. Adequate wastewater infrastructure plays

⁶ http://www.corporateservices.noaa.gov/nbo/fy18_bluebook/FY18-BlueBook.pdf

⁷ <https://www.nrdc.org/experts/alison-chase/trump-budget-slashes-coastal-and-ocean-funding>

⁸ http://seagrant.noaa.gov/Portals/0/Documents/who_we_are/legislation/SeaGrantAllocationPolicyFY2014andBeyond_9_23_14.pdf

a vital role in the health of streams, rivers, and lakes, where discharged wastewater and stormwater often end up. Wastewater infrastructure must also become more resilient to the impacts of climate change, including sea level rise, stronger and more frequent storms, flooding, and drought.

In the aftermath of Harvey, we are already seeing reports of sewage contamination in the water flooding citizen's homes. People are getting sick, and it's because our wastewater and sewage infrastructure wasn't ready⁹.

The Clean Water State Revolving Fund helps improve infrastructure resilience against extreme weather events. Since its inception in 1987, the Clean Water State Revolving Fund has provided more than \$111 billion in low-interest loans and subsidies. In 2016, Washington received \$23.2 million through this program to repair and upgrade wastewater systems, manage contaminated urban runoff, and upgrade treatment facilities.¹⁰ The program provides affordable financing to thousands of communities to upgrade and repair wastewater treatment plants, correct combined and sanitary sewer overflows, and protect waterbodies from nonpoint sources of pollution at a much lower cost than possible through conventional financing.

Unfortunately, this program is inadequate. We are already facing a maintenance backlog in our wastewater systems, and this problem will only become more pressing. An EPA survey¹¹ estimated that \$271 billion is needed over the next 20 years to maintain and improve the nation's wastewater infrastructure, including pipes that carry wastewater to treatment plants, the technology that treats the water, and methods for managing stormwater runoff. Most of that \$271 billion investment is needed for projects in the next 5 years.

However, despite the desperate need across the country for these critical repairs and upgrades, the Trump administration keeps the program funded at current inadequate levels and the initial House budget actually proposed cutting funding for the Clean Water State Revolving Fund by \$250 million. This cut was later reversed by an amendment on the House floor.

Instead of shortchanging a program that helps states and communities protect their waterways and become more resilient to the impacts of climate change, we should have a budget that protects and expands the Clean Water State Revolving Fund, providing funds for communities to build up their resilience.

Keep Us Safe from Toxic Wastes

The Superfund program was established in the 1980's by the EPA in the aftermath of several environmental crises such as the Love Canal disaster in New York that forced hundreds of people to relocate from exposure to dangerous chemical pollution. The Superfund program is currently

⁹ https://www.nytimes.com/2017/09/11/health/houston-flood-contamination.html?_r=1

¹⁰ https://www.epa.gov/sites/production/files/2016-12/documents/2016_cwsrf_final_allotments.pdf

¹¹ <https://www.epa.gov/newsreleases/epa-survey-shows-271-billion-needed-nations-wastewater-infrastructure>

tasked with cleaning up more than 1,300 of the most toxic wastes sites¹² in the country and responding to environmental catastrophes and natural disasters.

One in four Americans, including over 10 million children, live within 3 miles of a Superfund site¹³. In Washington, there are 69 Superfund sites that are registered on the National Priority List and warrant further investigation and long-term cleanup.¹⁴ Since the program was founded, over 394 sites have been cleaned up and delisted¹⁵.

The Superfund program facilitates natural disaster response in two ways: First, the Superfund program provides training for thousands of first responders (firefighters, police, emergency room nurses, etc.) so they can protect the public and themselves by detecting and identifying hazardous substances. This training is an essential element of emergency and disaster response capabilities. Second, the Superfund program provides the expertise and financial resources to conduct emergency and long-term response actions that protect the public from hazardous substances.

A 2012 EPA assessment found that more than 500 Superfund sites were located in flood zones, 50 of which were based in coastal areas susceptible to sea level rise¹⁶. In the last month, Hurricane Harvey flooded 13 Superfund sites¹⁷ and left citizens in Houston wading through toxic water. With climate change expected to intensify storms like Hurricane Harvey in the future, reinforcing the Superfund program will become more critical than ever to keep our communities safe from harmful toxins.

Unfortunately, The Trump administration has proposed to cut the Superfund program by \$330 million, nearly 30% of its previous budget.¹⁸ However, the House has proposed to increase the level of funding for the Superfund program as a whole by \$27.6 million.

Now, more than ever, is it essential that we fully fund toxic waste cleanups, not slash their budgets. Reduced funding levels for the Superfund program has already prompted the EPA to delay approximately one-third of new projects that were scheduled.¹⁹ These drastic funding cuts would further backlog the cleanup of these sites, posing a significant risk to to our families.

¹² <https://www.epa.gov/superfund/national-priorities-list-npl-sites-state>

¹³ <http://www.uspirg.org/reports/usp/empty-pockets>

¹⁴ <https://www.epa.gov/superfund/search-superfund-sites-where-you-live#npl>

¹⁵ <https://www.epa.gov/superfund/deleted-national-priorities-list-npl-sites-state>

¹⁶ <https://www.nytimes.com/aponline/2017/09/09/us/ap-us-hurricane-irma-toxic-sites.html>

¹⁷ <https://www.epa.gov/newsreleases/status-superfund-sites-areas-affected-harvey>

¹⁸ <https://www.govinfo.gov/content/pkg/BUDGET-2018-MSV/pdf/BUDGET-2018-MSV.pdf>

¹⁹ <https://www.gao.gov/products/GAO-15-812>

Appendix A: Data Tables

Table 1: Wetland Acreage for Select States

State	Acres of freshwater wetlands in STATE	Acres of freshwater wetlands in 100-year flood zones for which flood hazard data are available from FEMA
Colorado	1 million	75,000
Florida	9.8 million	6.9 million
Maryland	425,000	106,000
Massachusetts	444,000	148,000
Minnesota	10.1 million	270,000
New Jersey	687,000	125,500
New York	2 million	183,000
Pennsylvania	377,000	164,000
Virginia	1 million	529,000
Wisconsin	5.4 million	1.4 million
Source	http://www.environmentamerica.org/sites/environment/files/reports/ShelterfromtheStorm_EnvAmerica_Final.pdf	

Table 2: Clean Water Rule Data

State	State population whose drinking water is protected by the Clean Water Rule	Miles of streams protected by Clean Water Rule in State	Percent of streams protected by Clean Water Rule in State
Maine	454,000	25,000	55%
Massachusetts	4.9 million	4,300	52%

New York	11.1 million	28,000	55%
Virginia	2.4 million	28,000	57%
Ohio	5.3 million	51,000	60%
Michigan	1.4 million	24,000	48%
Colorado	3.7 million	73,000	68%
Montana	234,000	109,000	63%
Maryland	4 million	10,000	59%
Pennsylvania	8 million	50,000	59%
Florida	1.8 million	15,000	29%
New Jersey	4.3 million	4,000	48%
North Carolina	4.7 million	136,000	56%
Minnesota	979,000	47,000	51%
Oregon	1.8 million	61,000	53%
Washington	2 million	38,000	54%
Data Source:	https://19january2017snapshot.epa.gov/sites/production/files/2015-04/documents/wetlands_science_surface_drinking_water_surface_drinking_water_results_county.pdf		

Table 3: Coastal Zone Management Grants & Sea Grants

State	Coastal Zone Management Grants, NOAA FY 2017 funding guidance	Sea Grants: funding research on Oceans at Universities and Institutes in 33 States (*Base funding, FY 2014--)
Colorado	n/a	n/a
Florida	\$2.68 mil	\$2,256,975
Maine	\$2.56 mil	\$1,004,221
Maryland	\$2.62 mil	\$1,372,903
Massachusetts	\$2.48 mil	**\$1,951,000; \$1,000,000
Michigan	\$2.62 mil	\$1,361,700
Minnesota	\$0.98 mil	\$1,000,000
Montana	n/a	n/a
New Jersey	\$2.61 mil	\$1,274,449
New York	\$2.68 mil	\$2,531,676

North Carolina	\$2.54 mil	\$1,509,000
Ohio	\$1.83 mil	\$1,111,432
Oregon	\$1.69 mil	\$2,157,000
Pennsylvania	\$1.80 mil	\$1,000,000
Virginia	\$2.67 mil	\$1,446,574
Washington	\$2.59 mil	\$2,470,000
Wisconsin	\$2.29 mil	\$1,789,000
		* includes Coastal Community Development funds
		**Funds distributed between MIT and Woods Hole Oceanographic Institute
Source	State numbers: https://coast.noaa.gov/czm/media/fy17-funding-guidance.pdf ; elimination of funding: https://www.nrdc.org/experts/alison-chase/trump-budget-slashes-coastal-and-ocean-funding ; House cuts: https://www.nrdc.org/experts/alison-chase/next-steps-our-ocean-budget	State numbers: http://seagrant.noaa.gov/Portals/0/Documents/who_we_are/legislation/SeaGrantAllocationPolicyFY2014andBeyond_9_23_14.pdf ; elimination of funding by Trump budget: https://www.nrdc.org/experts/alison-chase/trump-budget-slashes-coastal-and-ocean-funding ; restoration of funding: p. 18, https://appropriations.house.gov/uploadedfiles/cjs.report.07.13.17.pdf

Table 4: Clean Water State Revolving Fund Grants

State	Clean Water State Revolving Fund Grant Money for STATE, 2016 ²⁰
Colorado	\$10.7 million
Florida	\$45.1 million
Maine	\$10.3 million

²⁰ https://www.epa.gov/sites/production/files/2016-12/documents/2016_cwsrf_final_allotments.pdf

Maryland	\$32.3 million
Massachusetts	\$45.4 million
Michigan	\$57.4 million
Minnesota	\$24.6 million
Montana	\$6.5 million
New Jersey	\$54.6 million
New York	\$147.5 million
North Carolina	\$24.1 million
Ohio	\$75.2 million
Oregon	\$15.1 million
Pennsylvania	\$53 million
Virginia	\$27.3 million
Washington	\$23.2 million
Wisconsin	\$36.1 million

Table 5: National Priority List Superfund Sites

State	Hazardous waste sites in STATE on the EPA's national priority list for the Superfund program ²¹
Colorado	23
Florida	94
Maine	16
Maryland	25
Massachusetts	40
Michigan	88
Minnesota	46
Montana	18

²¹ <https://www.epa.gov/superfund/search-superfund-sites-where-you-live#npl>

New Jersey	150
New York	119
North Carolina	48
Ohio	53
Oregon	19
Pennsylvania	127
Virginia	35
Washington	69
Wisconsin	55

Appendix B: Regional Coastal Resilience Grants

The Federal government empowers state and local decision-makers to tackle problems and threats they've identified for their own communities by providing federal funding. This funding, which is matched by state and private funds, helps state and local coalitions take preventative steps that will improve their coastal communities' ability to deal with things like sea level rise and coastal storms.

Project Descriptions, 2017:

These are projects in our target states that are on the calendar for 2017-- NOAA has recommended the funds for them, though those funds may not yet have been fully dispersed.

Washington

Restoring Resiliency in Puget Sound Stillaguamish River Delta

Applicant: Washington Department of Fish and Wildlife

Recommended Federal Funding: \$1,446,985

Match: \$1,000,000

Washington Department of Fish and Wildlife will work with NOAA and other local partners to restore 337 acres of wetlands in the Stillaguamish River delta of Puget Sound, Washington. As a gateway to the Stillaguamish River basin spawning and rearing areas, the restored estuarine habitat will provide valuable foraging opportunities and refuge habitat for migratory species, including Endangered Species Act-listed Puget Sound Chinook. ***This restoration project will breach existing dikes, build a setback dike, re-establish and enhance off-channel habitat, and reestablish tidal flow into the area. Not only will a new setback dike provide protection to critical infrastructure and private property, but the restored habitat will also provide natural flood protection because it can absorb and store large amounts of rainwater or water runoff during a storm, in addition to providing a buffer for tidal influence during periods of high water.***

Project Partners: Stillaguamish Tribe, Skagit River Systems Cooperative, The Nature Conservancy

Kilisut Harbor Channel Restoration

Applicant: North Olympic Salmon Coalition

Recommended Federal Funding: \$548,000

Match: \$274,000

The North Olympic Salmon Coalition, in collaboration with NOAA and the Port Gamble S'Klallam Tribe, will replace an earthen causeway and culverts with a bridge that will allow for tidal flow

between southern Kilisut Harbor and Oak Bay. The project will restore 27 acres of tidal wetlands and improve water quality in Kilisut Harbor. Water quality improvements are expected to lower water temperature and reduce the potential for low dissolved-oxygen levels. This will help shellfish and Endangered Species Act-listed Puget Sound Chinook and Hood Canal summer chum. ***Upgrading the only road access to an island community by raising the road and embedded utilities will improve the community's resilience by reducing its vulnerability to flooding.***

Project Partners: Port Gamble S'Klallam Tribe, U.S. Navy, Washington Department of Transportation, Washington Department of Natural Resources

Project descriptions, 2015-2016

These projects in our target states were recommended by NOAA to receive grant funding in 2015-2016.

Washington

Improving Risk Communication and Leveraging Existing Programs in Washington State to Build Capacity and Enhance Resilience in Coastal Communities

Applicant: Washington Sea Grant (University of Washington)

Recommended Federal Funding: \$879,255 (FY 2016)

Match: \$442,180

Communities in Washington State face significant risk from the impacts of sea level rise, storm surges, and shoreline erosion. Washington Sea Grant will lead a partnership of state and local managers, conservation groups, and academic scientists to enhance coastal community resilience through ***cutting-edge science, community pilot projects, and revised state guidance and restoration project design. The work will increase understanding of coastal risks and impacts and improve existing planning tools.*** The effort will also include significant outreach to ensure that new information and approaches are shared with coastal communities across the state.

Project Partners: Washington State Department of Ecology's Coastal Zone Management Program, University of Washington Climate Impacts Group and other departments, Estuary and Salmon Restoration Program (Washington State Recreation and Conservation Office), Island County Department of Natural Resources, City of Tacoma, Western Washington University, and The Nature Conservancy.