Analysis of U.S. EPA Region 7's Clean Water Enforcement

Troubling Trends Put Midwest Water at Risk

ENVIRONMENTAL LAW & POLICY CENTER

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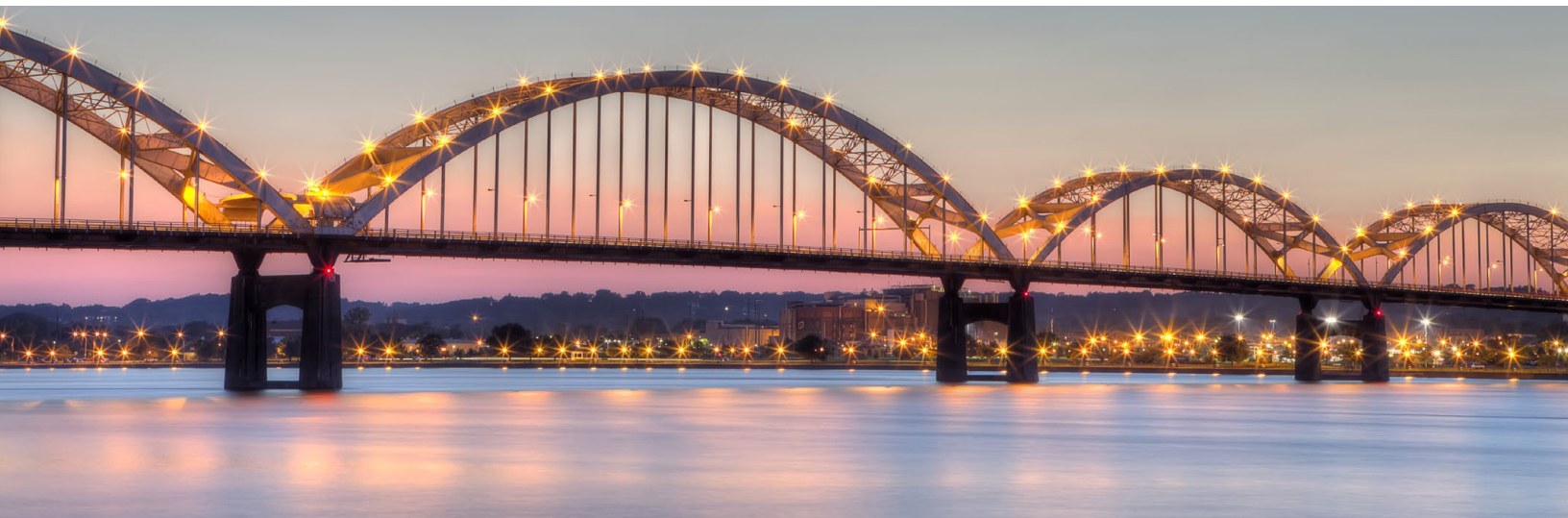


Introduction

The Clean Water Act requires the U.S. Environmental Protection Agency (EPA) to protect our rivers and lakes by achieving water quality that is both "fishable" and "swimmable." EPA must enforce the law in a tough-but-fair manner to protect against environmental degradation. EPA's Region 7 office covers four states: Iowa, Kansas, Missouri, and Nebraska and nine Native American Tribes. Unfortunately, EPA has stepped back from its responsibility, leaving our lakes, rivers, and streams vulnerable.

The Environmental Law & Policy Center (ELPC) reviewed publicly available enforcement data and found that EPA's Clean Water Act enforcement has been declining recently in Region 7. The downward trends coincide with shrinking resources and shrinking staff amid the current administration's shifting political priorities. Despite decades of bipartisan agreement on the value of environmental regulation and enforcement, recently, Republican federal governmental leaders have slashed EPA's resources by reducing funding and staffing levels. During the Obama Administration, the Republican-led Congress consistently cut EPA's budget. Since taking office, President Trump has proposed substantial budget cuts each year and appointed former fossil-fuel lobbyists for EPA leadership positions. Moreover, EPA began spending even less than Congress appropriated for enforcement, about $8 million less in fiscal year (FY) 2018 and about $16 million less in FY 2019. Shrinking budgets, lower staff levels, and fewer enforcement resources predictably result in less Clean Water Act enforcement.

When New York Times reporting in 2017 showed EPA enforcement rates had slowed, EPA's official response was: "EPA and states are working together to find violators of environmental laws and bring them back into compliance. . . There is not only no reduction in EPA's commitment to ensure compliance with our nation's environmental laws, but a greater emphasis on compliance in the first place." Unfortunately, the data does not support this assertion. As enforcement has trended downward, compliance has worsened. From FY 2013 to FY 2016, noncompliance was on a downward trend. However, beginning in 2017, noncompliance shifted into a concerning upward trend, as indicated by increases in significant noncompliance with the Clean Water Act in Region 7.

In Section II of this report, ELPC compiled multi-year trends using annual data available in reports published by EPA, data available in EPA's Enforcement and Compliance History Online (ECHO) database, and other publicly available reports and sources. The data shows that enforcement is trending downward in Region 7 by EPA. States are unlikely to pick up the slack because they see reductions in their own resources to enforce clean water laws. When EPA pulls back, states cannot replace those resources, and public health and the environment suffer.

In Section III, ELPC illustrates the impact of these trends by highlighting a few facilities in the region with significant violations of the law but no formal enforcement by EPA. These facilities include mines, metals processing and lead-based battery plants, food processing facilities, and animal processing facilities. These facilities were selected because of their high number of violations of their Clean Water Act permit while no government entity has publicly commenced formal enforcement against them (e.g., filing a lawsuit to seek fines and other relief to address the illegal water pollution). They are just a few examples of many facilities left unchecked as EPA steps back from its mission, and states cannot or choose not to pick up the slack.

EPA's Enforcement Trends in Region 7

DOWNWARD ENFORCEMENT TRENDS

EPA's enforcement declines are shown by less case initiations, lower civil penalties, and higher rates of significant noncompliance with the Clean Water Act among major facilities. EPA's declining resources and lower staffing levels in Region 7 lead to less enforcement and compliance spending. Likewise, resources for state pollution control agencies are declining, as many rely on federal pass-through funds and, in some cases, face hostile state administrations and legislatures.

All years presented here are federal fiscal years ("FY") October 1 through September 30 unless otherwise noted. All financial data has been adjusted for inflation and reported in 2019 dollars.

Case Initiations

Figure 1 shows EPA's downward enforcement trend in Region 7 with less case initiations and conclusions under the Clean Air Act and Clean Water Act, among other statutes. Between FY 2012 and FY 2016, there was an average of 199 case initiations per year, but these numbers dropped to an average of 149 annual initiations for FY 2017 through FY 2019. Regulated facilities may take less measures to ensure compliance with their permit limits if the owners and managers don't think that EPA will enforce permit limits. As shown in the next section, Clean Water Act noncompliance mirrors the waning enforcement in Region 7.

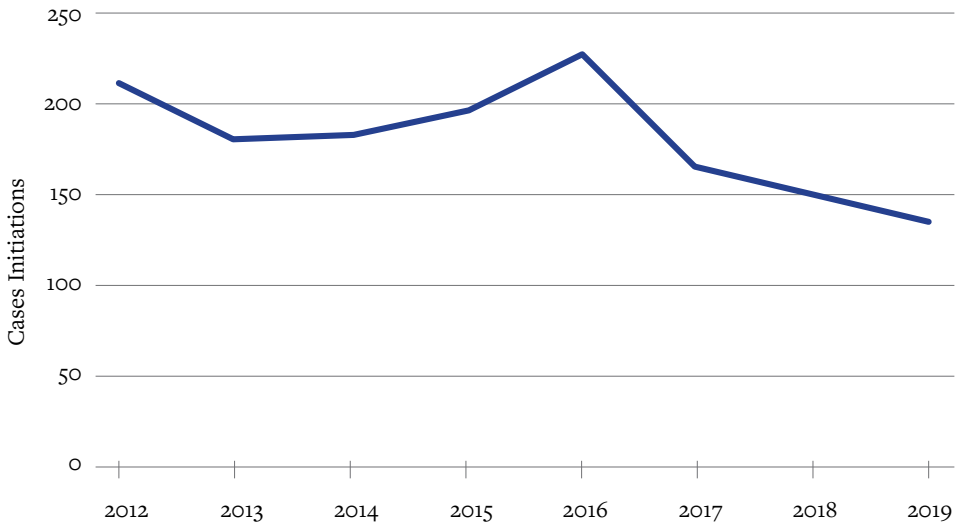


Figure 1: Case Initiations | FY 2012 – 2019
Source: EPA Enforcement Annual Results Reports

Less Clean Water Act Compliance

Figure 2 shows a troubling upward trend in the number of major facilities identified by EPA as in "significant noncompliance" with the Clean Water Act since FY 2016. This troubling trend comes after a successful decrease in significant noncompliance between FY 2013 to 2016. EPA's significant noncompliance designation is for the most serious violations, such as failure to meet pollution limits or failure to meet compliance schedules for new pollution limits.

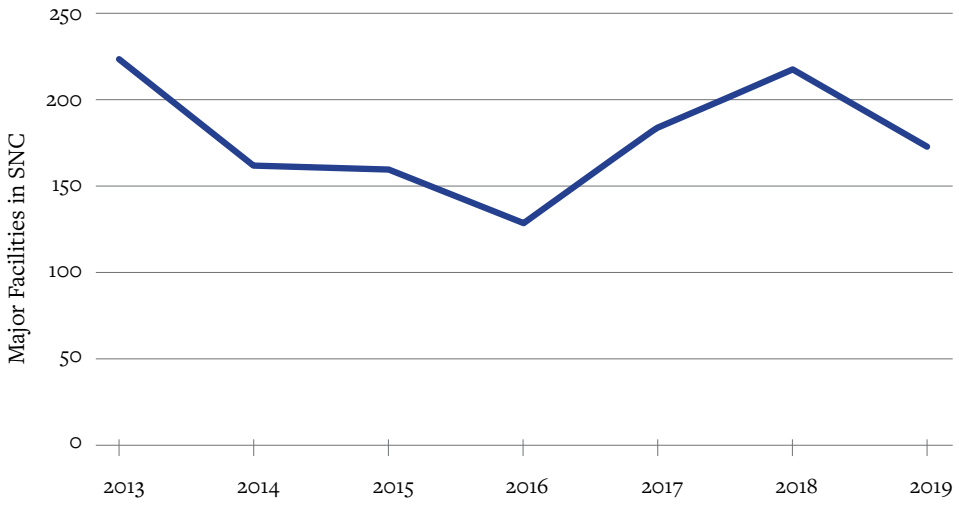


Figure 2: Major Facilities in Significant Noncompliance (SNC) with the Clean Water Act in Region 7 | FY 2013 – 2019
Source: EPA ECHO website, State Dashboard Water tool, "Analyze Trends" section

Fewer Civil Penalties and Compliance Costs for Clean Water Act Violations

Figure 3 shows that civil penalties and supplemental environmental project (SEP) costs have fallen since FY 2016 in enforcement actions brought by EPA Region 7 under the Clean Water Act. Civil penalties and SEPs are key tools used to enforce requirements of the National Pollution Discharge Elimination System (NPDES), the pollution permit system jointly administered by EPA and states. Regulators use SEPs to reduce civil penalties in exchange for beneficial environmental projects, so a sum of SEP costs and civil penalties provides an approximate picture of monetary penalties for violations. Each year on the chart is the sum of civil penalties assessed plus SEP costs.

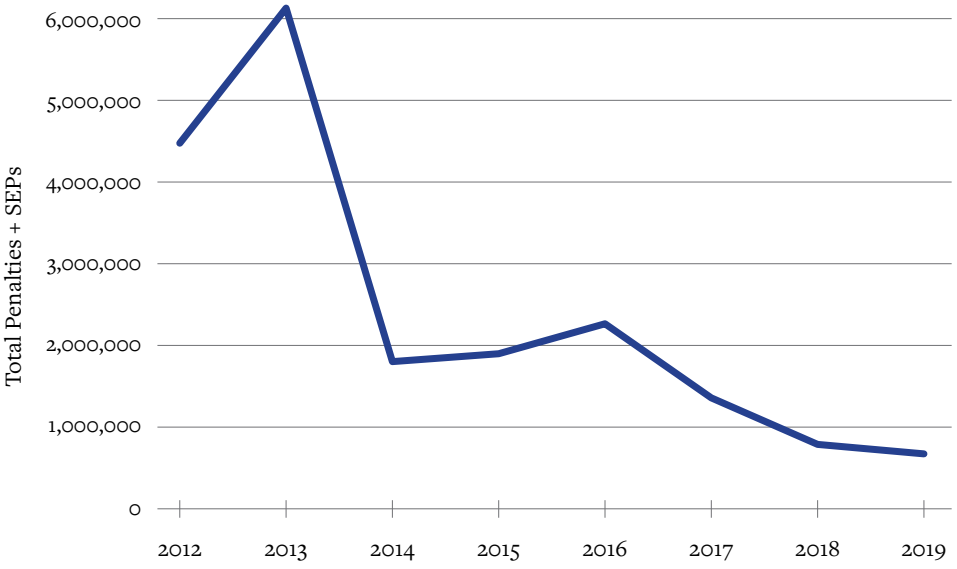


Figure 3: Penalty Amounts + SEPs Assessed under Clean Water Act-NPDES by EPA in Region 7 (real $, 2019) | FY 2012 – 2019

Source: EPA ECHO website

Civil penalties are monetary payments for violations of environmental laws aimed at deterring facilities from disobeying the law. They are necessary for any enforcement and compliance program. Civil penalties also aim to recover the economic benefit of noncompliance. Because a polluter often saves money by not complying with the law and deferring necessary expenditures, civil penalties help create a level playing field, whereby bad actors violating the law do not gain a competitive advantage over environmentally responsible companies.

FY 2012 and FY 2013 both had large spikes due to outlier enforcement cases resulting in unusually high penalties. For example, EPA's enforcement action against Roquette America, Inc. in FY 2013 concluded with a $4.1 million penalty (nominal, not real $), which represents about 80% of that year's nominal total. Between FY 2014 and FY 2016, penalties trended slightly upward, but beginning in FY 2017, the trends turn downward. Smaller penalties mean less deterrence for Clean Water Act violations, and less incentive for compliance. The downward trend in penalties beginning in FY 2017 coincides with the upward trend in significant noncompliance beginning in FY 2017, as shown in **Figure 2**.

Figure 4 shows an ebb and flow in compliance costs resulting from EPA Region 7 enforcement. When EPA settles with a violator, it often requires the company to undertake remedial actions to bring its facility into compliance with the Clean Water Act. For example, a company might install new pollution control technology or hire new staff for compliance monitoring. These compliance costs are an important metric for EPA's overall enforcement effectiveness.

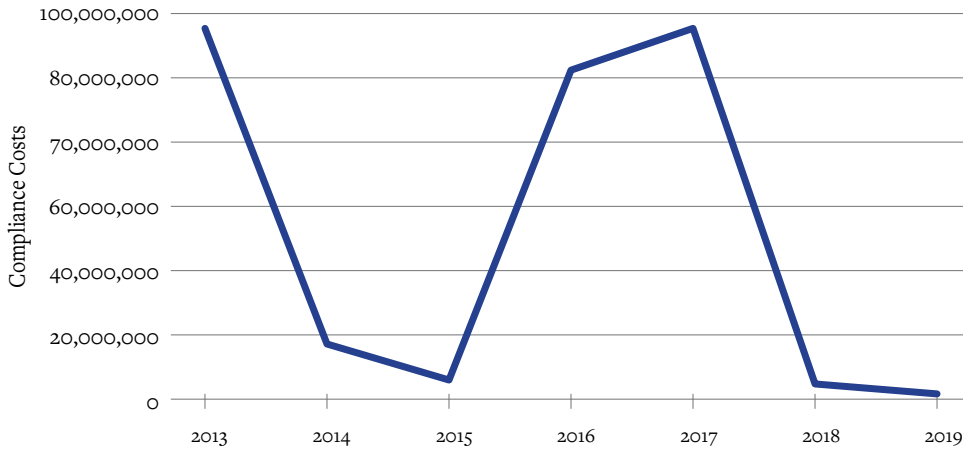


Figure 4: Compliance Costs Assessed under Clean Water Act-NPDES Enforcement by EPA in Region 7 (real $) | FY 2013 – 2019

Source: EPA ECHO website

Figure 5 shows trends in the number of cases with either civil penalties, SEPs, or compliance costs (with some overlap, as some cases might have a combination of the three). Beginning in FY 2016 and 2017, there is a downward trend in the number of enforcement actions with civil penalties, SEPs, or compliance costs in Region 7.

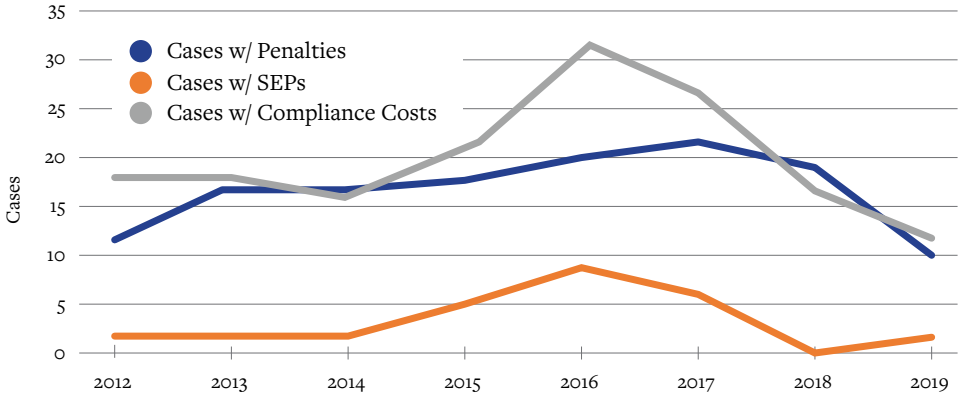


Figure 5: Number of Cases with Civil Penalties, SEPs, and/or Compliance Costs Assessed under Clean Water Act-NPDES Enforcement by EPA in Region 7 | FY 2013 – 2019

Source: EPA ECHO website

BUDGET CUTS AND LESS RESOURCES

Despite consistent polling showing the American public supports environmental protection, EPA has faced budget cuts and less resources for the last few years. That results in lower staffing levels and lower spending on enforcement and compliance monitoring activities. Furthermore, this administration initiated a massive retirement buy-out program amid a hiring freeze, prompting an exodus of EPA expertise without personnel to replace them.

Downward Trend in Staffing Levels

Figure 6 shows the downward trend in overall staffing levels at EPA's Region 7 office and across EPA nationwide. While we could not determine trends for enforcement personnel specifically, the overall decrease in staffing affects EPA's capacity to conduct enforcement and compliance monitoring. The Environmental Integrity Project's report *Less Enforcement: Communities at Risk – Federal Data Show Decline in EPA Enforcement Leading to Public Health Hazards*, showed that EPA's total personnel levels dropped from 17,106 to 14,172 from FY 2012 to FY 2018 (17% drop). During the same period, EPA's agency-wide enforcement staff (criminal, civil, and compliance monitoring) fell from 2,179 to 1,842 (15% drop), thus showing a correlation between an overall reduction in staffing with a specific reduction in enforcement staff. As EPA's overall staff headcount declines in Region 7, its enforcement staff likely declines as well.

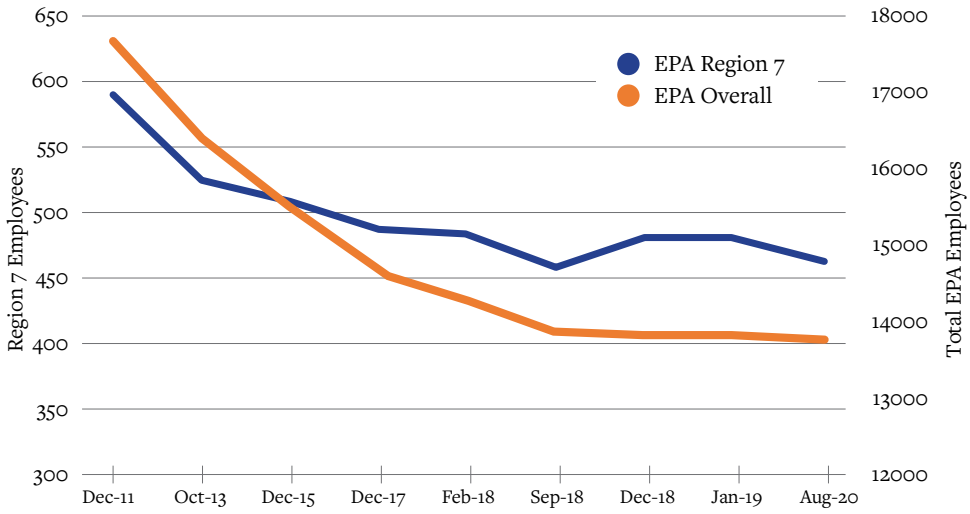


Figure 6: Staffing Level at EPA Region 7 and EPA Overall December 2011 to April 2020

Source: EPA Contingency Plans, which record the number of employees in each region

As of April 2020, there were 453 employees at EPA in Region 7, which is a loss of 133 employees since December 2011 (22% reduction in staff). EPA as a whole, has fared no better, with a loss of 3,725 employees from December 2011 to April 2020 (21% reduction in staff). Fewer employees mean less capacity to enforce and monitor compliance with environmental laws, including the Clean Water Act.

Declining Enforcement and Compliance Budget and Spending

Figure 7 shows a consistent downward trend in actual spending and appropriated funds for enforcement and compliance activities. Until recently, EPA often spent *more* on enforcement and compliance activities than Congress appropriated, if not an equal amount. Beginning in FY 2018, however, that trend shifted as EPA started spending *less* than Congress appropriated.

In FY 2018—the first full year under the Trump Administration—there is a significant difference of about $8 million *less* in actual spending than what Congress appropriated. In FY 2019, the gap between actual spending and appropriations doubled, with the actual spending about $16 million *less* than Congressional appropriation. The gap between spending and appropriations comes at a time when significant noncompliance is on the rise. EPA has much to do, but the agency is not even using the resources available to get its work done.

Figure 7 compares congressional budget appropriations for EPA with the agency's actual spending, as reported in EPA's annual *Budget in Brief*. Each value is a sum of both "Compliance Monitoring" and "Enforcement" line items in EPA's Environmental Program and Management Budget. For each year shown, those two categories were summed and adjusted for inflation (2019 reference point). Enforcement spending includes the agency's civil and criminal enforcement activities. Compliance monitoring spending covers pre-enforcement activities:

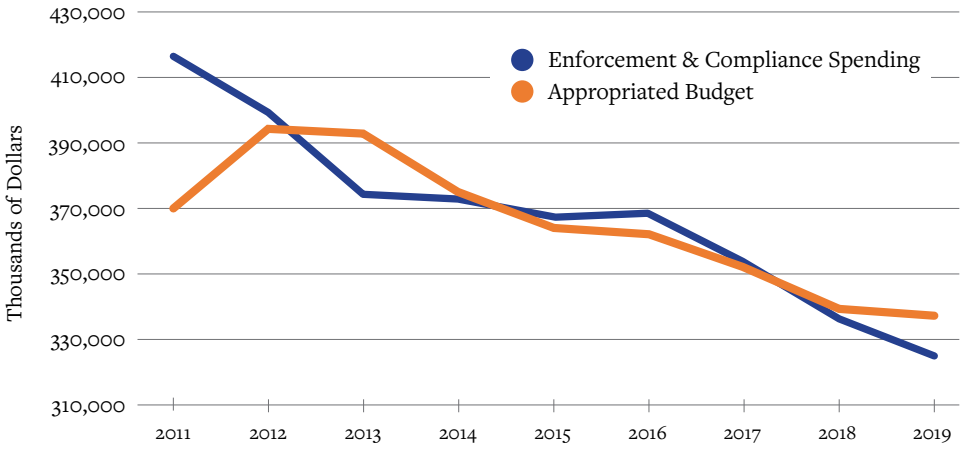


Figure 7: Nationwide Enforcement and Compliance Monitoring Actual Spending Compared with Appropriated Budget (real $, 2019) | FY 2011 – 2019
Source: EPA Budget in Briefs

> EPA's compliance monitoring program reviews and evaluates the activities of the regulated community to determine compliance with applicable laws, regulations, permit conditions and settlement agreements. The program also determines whether conditions exist at facilities that present imminent and substantial endangerment. (Fiscal Year 2017 *Budget in Brief*, page 70).

The steady decline in enforcement and compliance monitoring spending and budgets shown in **Figure 7** likely contributes to less EPA enforcement in Region 7.

Figure 8 shows the presidential administration's proposed budget for each fiscal year. The Obama Administration proposed the budgets for FYs 2012 through 2017, and the Trump Administration proposed the budgets for FYs 2018 through 2020. Although Congress often modifies or ignores these proposals, Presidential budgets nonetheless provide insight into an administration's priorities, which can be implemented through funding or actions.

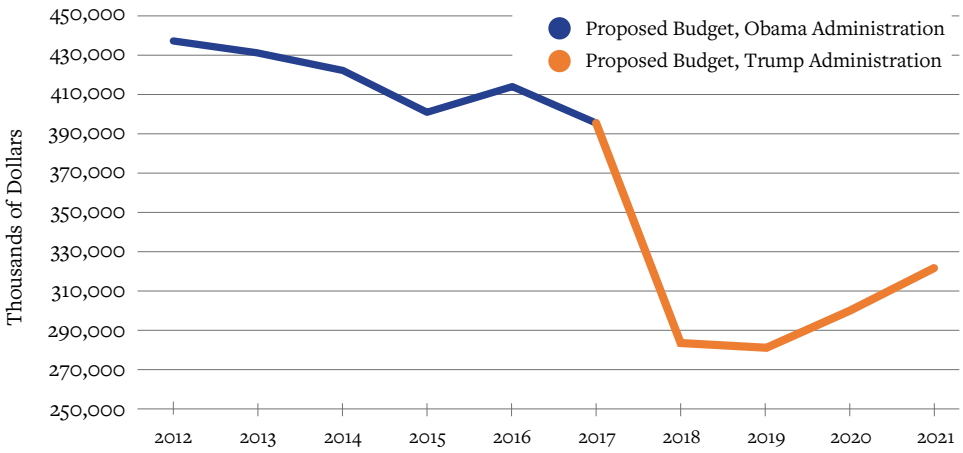


Figure 8: Presidential Budget Proposals for Enforcement and Compliance Monitoring (real $, 2019) | FY 2012 – 2021 *Source: EPA Budget in Briefs*

STATES LACK THE RESOURCES TO REPLACE ROLE OF EPA IN REGION 7

Former EPA Administrator Scott Pruitt and current EPA Administrator Andrew Wheeler have said that shrinking environmental powers at the federal level are part of the Trump administration's broader plan to shift power to the states. To see how that plan is working for the Midwest, we looked into states' environmental protection resources in Region 7.

As federal-level enforcement declines, the states in Region 7 are unlikely able to make up the difference because they are also receiving less funding and resources. **Figures 9** and **10** reflect data from the Environmental Integrity Project's December 5, 2019 report titled *The Thin Green Line: Cuts in State Pollution Control Agencies Threaten Public Health*, showing combined staffing and budgets for pollution control agencies in Region 7 States: Iowa, Nebraska, Kansas, and Missouri.

Shrinking Budgets and Staff Levels for State Pollution Control Agencies

Figure 9, below, shows a downward trend in state pollution control agency budgets in Region 7, except for Missouri. This trend is particularly pronounced for Iowa, which experienced the largest percentage reduction in its budget even though it already had a significantly smaller budget than Kansas and Nebraska, despite having a larger population. The decline in states' pollution control agency budgets is likely related to reductions in federal funding to states, as shown in **Figure 11** below.

STATE	2008 INFLATION ADJUSTED BUDGET (REAL $ IN MILLIONS, 2018)	2018 BUDGET ($ IN MILLIONS)	DIFFERENCE BETWEEN 2008 AND 2018 ($ IN MILLIONS)	PERCENT CHANGE
IOWA	47.10	38.30	-8.8	-19%
MISSOURI	165.80	224.10	58.3	-35%
KANSAS	82.40	73.00	-9.4	-11%
NEBRASKA	66.20	60.30	-5.9	-9%
TOTAL	**361.50**	**395.70**	**34.2**	9%

Figure 9: Budget Changes from 2008 to 2018 for States in EPA Region 7
Source: ENVIRONMENTAL INTEGRITY PROJECT, The Thin Green Line: Cuts in State Pollution Control Agencies Threaten Public Health

Figure 10 shows a downward trend in the state agencies' staffing levels. Less personnel affect the agencies' abilities to effectively monitor and enforce the Clean Water Act.

STATE	2008 STAFFING	2018 STAFFING	DIFFERENCE BETWEEN 2008 AND 2018	PERCENT CHANGE
IOWA	375	338	-37	-10%
MISSOURI	864	697	-167	-19%
KANSAS	468	427	-41	-9%
NEBRASKA	218	217	-1	-0%
TOTAL	**1925**	**1679**	**-246**	**-13%**

Figure 10: Staffing Level Changes from 2008 to 2018 for States in EPA Region 7
Source: ENVIRONMENTAL INTEGRITY PROJECT, The Thin Green Line: Cuts in State Pollution Control Agencies Threaten Public Health

Less Federal Funding for State Clean Water Programs

The decline in federal environmental funding for state environmental agencies is shown in **Figure 11** for clean water programs during FY 2012 through FY 2019. Although this is national data, it likely indicates funding reductions for the Region 7 states.

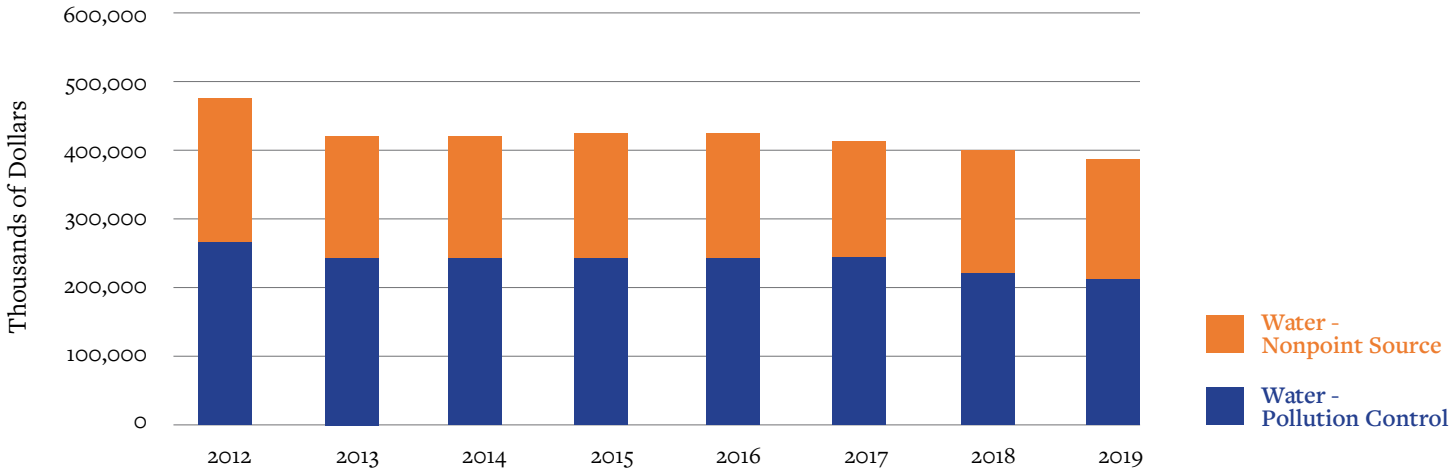


Figure 11: EPA Funding to States to Administer State Clean Water Programs Nationwide (real $, 2019)

Source: 2012 through 2020 EPA Budget in Briefs

Figure 11.1 shows the reduction in federal funding to states to reduce nonpoint source pollution. This type of pollution is defined as any source of water pollution that does not come from a discernible, confined, and discrete conveyance, such as a pipe, ditch, conduit, or vessel. Nonpoint source water pollution takes many forms, including runoff from rural and urban sources. Nitrogen and phosphorus from fertilizers and manure waste are common agricultural runoff pollutants, which can contribute to toxic algal blooms in lakes and rivers.

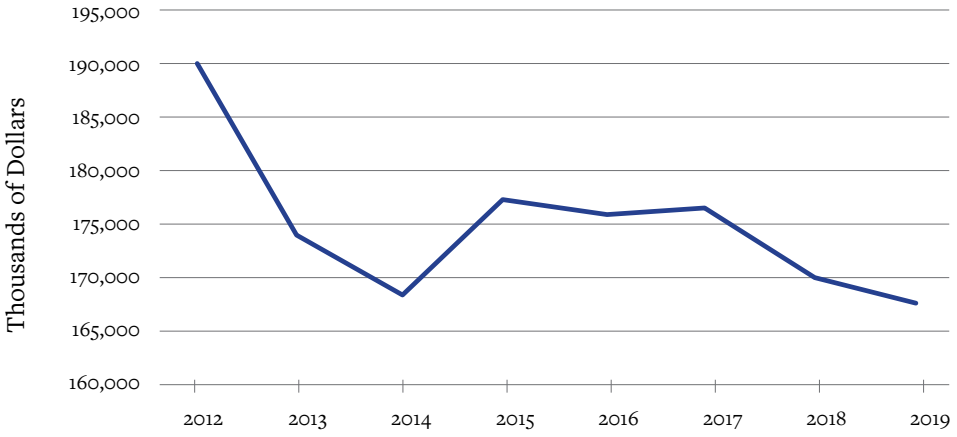


Figure 11.1: Funding for Water – Nonpoint Source (real $, 2019) | FY 2012 – 2019

Source: 2012 through 2020 EPA Budget in Briefs

EPA's Fiscal Year 2017 Budget in Brief at page 93 describes this program as "enabl[ing] states to use a range of tools to implement their programs, including technical assistance, financial assistance, education, training, technology transfer, and demonstration projects.

Figure 11.2 shows the reduction in federal funding to states for point source water pollution controls at factories, refineries, steel mills, coal plants, petrochemical facilities, and other industrial plants. EPA's Fiscal Year 2017 *Budget in Brief* at page 93 describes the grant as:

[A]ssist[ing] state and tribal efforts to restore and maintain the quality of the nation's waters by strengthening water quality standards, improving water quality monitoring and assessment, implementing Total Maximum Daily Loads (TMDLs) and other watershed-related plans, strengthening the National Pollutant Discharge Elimination System (NPDES) permit program, and implementing practices to reduce pollution from all nonpoint sources.

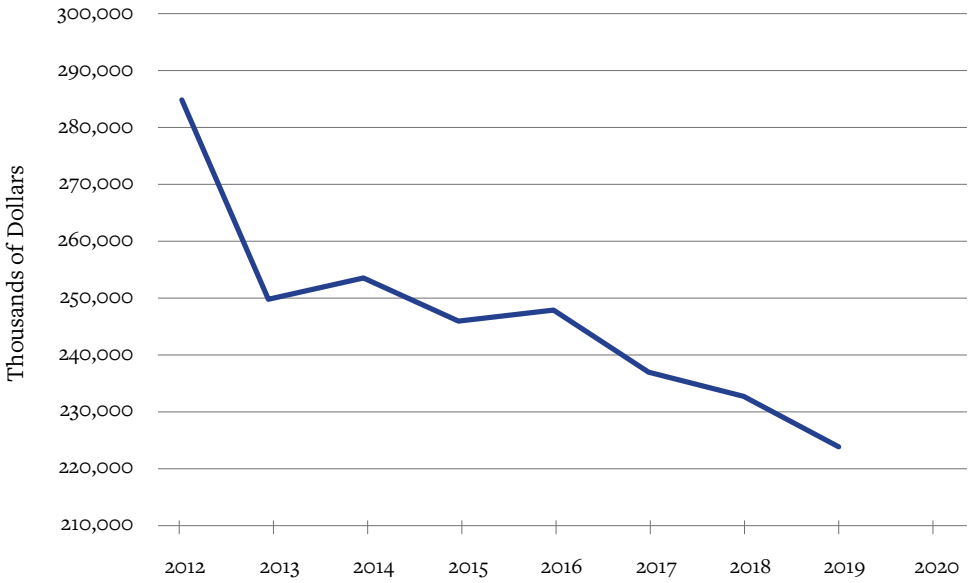
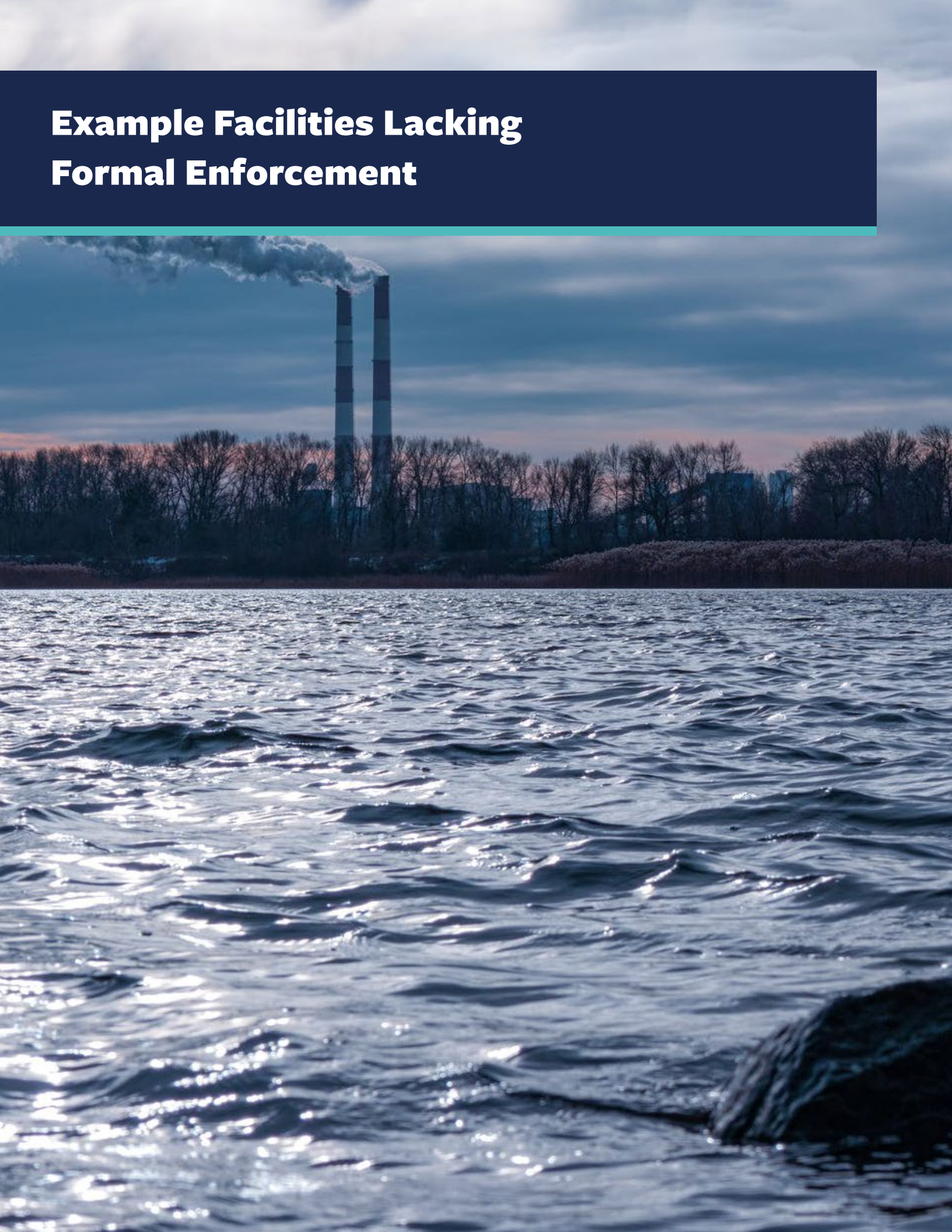


Figure 11.2: Funding for Water – Pollution Control (real $, 2019) | FY 2012 – 2019
Source: 2012 through 2020 EPA Budget in Briefs

Example Facilities Lacking Formal Enforcement



EXAMPLE FACILITIES LACKING FORMAL ENFORCEMENT

When the U.S. EPA pulls back on its enforcement responsibilities, that sends a signal that facility owners and operators can put less emphasis on environmental compliance and continue to discharge pollution into our waters. The following facilities have a significant number of self-reported Clean Water Act permit violations, but it appears there is no formal enforcement by EPA or the state. Formal enforcement takes the form of either an administrative complaint or a complaint filed with a court.

ADM Corn Processing (Iowa)

Location: Clinton, Iowa
NPDES Permit No. IA0003620

ADM Corn Processing is a feed manufacturing facility that performs biological fermentation using dextrose feedstock from the ADM Clinton Corn Processing Facility. Pollution from the facility flows into the Mississippi River, which supports a wide variety of recreational uses and fishing. The river is also the drinking water source for approximately 18 million people, including the Quad Cities and St. Louis downstream. There are 21,239 people who live within a 3-mile radius of the facility, 41% of which are low-income according to EPA's EJSCREEN tool. In addition to facing water pollution, this community is also in the 64th percentile in the state for air toxics cancer risk, and in the 65th percentile in the state for the respiratory hazard index according to EJSCREEN's EJ Index for the National-Scale Air Toxics Assessment.

Since January 1, 2017, ADM Corn Processing has reported exceeding its effluent limitations for temperature numerous times, thereby violating the Clean Water Act. However, the EPA and the State of Iowa have not undertaken any formal enforcement actions against ADM Corn Processing since 2017. The data for all of ADM Corn Processing's Clean Water Act effluent exceedances in the chart below come directly from its monthly discharge monitoring reports.

POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
TEMPERATURE	30 DAY AVERAGE (CONCENTRATION)	22	660
TEMPERATURE	DAILY MAXIMUM (CONCENTRATION)	29	29
	TOTAL	**51**	**689**

ADM Corn Processing has exceeded its permit limitations for water temperature regulated by the Clean Water Act. According to the USGS, water temperature governs the types of organisms that can live in a body of water. Fish, insects, zooplankton, phytoplankton, and other aquatic species have a preferred temperature range, and water temperatures outside that range decrease the number of individuals of those species. Higher water temperatures also reduce the amount of dissolved oxygen in the water available for aquatic life.

ADM Facility Map (Iowa)

Gelita USA (Iowa)

Location: Sergeant Bluff, Iowa
NPDES Permit No. IA0004413

Gelita USA, Inc. produces gelatin, edible greases, and meal foodstuffs using pork skin and cattle bones. 1,183 people live within a 3-mile radius of the facility. Wastewater from the facility flows into the Missouri River, which supports various recreational uses and fishing. The river is also the drinking water source for approximately 10 million people, including Omaha and Kansas City downstream.

Since January 1, 2017, Gelita USA has reported exceeding its effluent limitations numerous times at Outfall 003, thereby violating the Clean Water Act. However, the EPA and the State of Iowa have not undertaken any formal enforcement actions against Gelita USA since 2017. The data for all of Gelita USA's Clean Water Act effluent exceedances in the chart below come directly from its monthly discharge monitoring reports.

POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
BIOCHEMICAL OXYGEN DEMAND	30 DAY AVERAGE (CONCENTRATION)	14	420
BIOCHEMICAL OXYGEN DEMAND	30 DAY AVERAGE (LOAD)	1	30
BIOCHEMICAL OXYGEN DEMAND	DAILY MAXIMUM (CONCENTRATION)	12	12
NITROGEN AS AMMONIA (N)	DAILY MAXIMUM (CONCENTRATION)	12	12
IRON AS FE	DAILY MAXIMUM (CONCENTRATION)	2	2
NITROGEN AS AMMONIA (N)	DAILY MAXIMUM (LOAD)	1	1
PH	DAILY MINIMUM (CONCENTRATION)	1	1
	TOTAL	**43**	**478**

Gelita USA has exceeded its permit limitations for discharges regulated by the Clean Water Act, including nitrogen as ammonia and biochemical oxygen demand (BOD).. According to the EPA, too much nitrogen in our surface water causes algal blooms and harms respiratory systems in aquatic life. Algal blooms severely reduce oxygen in water, which leads to fish kills and toxic cyanobacteria that harm humans and other animals. Ammonia harms aquatic life in water systems by causing toxic buildup in internal tissues and blood, potentially causing death. According to the CDC, ammonia is a corrosive substance, and its main toxic human health effects occur to the sites of direct contact with ammonia (e.g., skin, eyes, respiratory tract, and mouth). BOD represents the amount of oxygen consumed by microorganisms that decompose organic waste in water and is a measure for certain organic pollutants. According to the EPA, the higher the BOD in a body of water, the quicker oxygen is depleted, making less oxygen available for other forms of aquatic life. A large BOD can cause aquatic organisms to become stressed, suffocate, and die.

Gelita Facility Map (Iowa)

Madison Mine (Missouri)

Location: Fredericktown, Missouri
NPDES Permit No. MO0098752

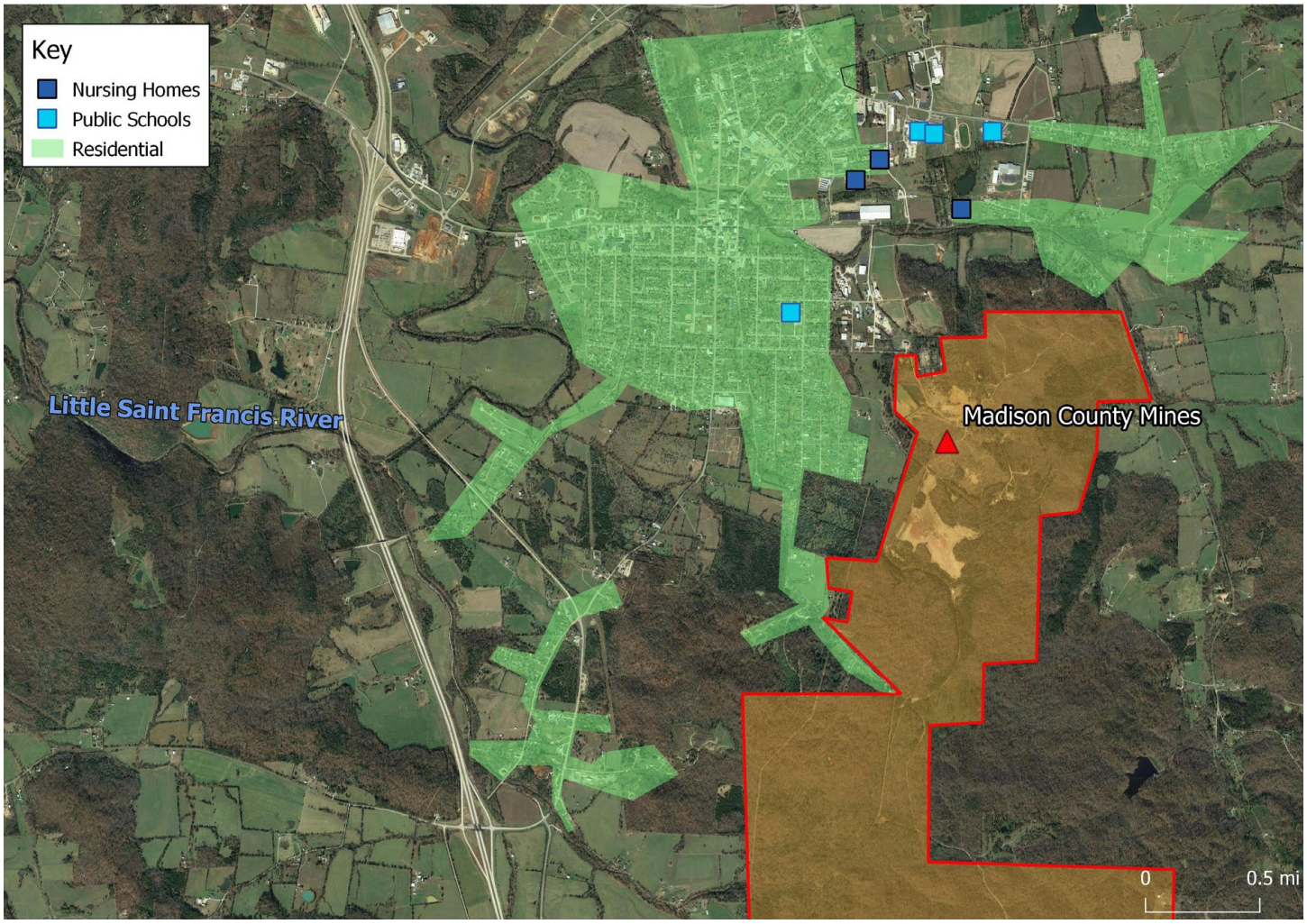
Madison Mine, owned by Missouri Mining Investments, LLC, is a subsurface lead and cobalt mining operation, which has been inactive since 1961. The mine discharges pollutants into the Tollar Branch and Saline Creek, which are warm-water habitats used for fishing, irrigation, and a variety of recreational uses. There are 1,170 people living in the three-mile radius surrounding the mine, 56% of which are low-income according to EPA's EJSCREEN tool. This community is also in the 68th percentile in Missouri for air toxics cancer risk and for the respiratory hazard index according to EJSCREEN's EJ Index for the National-Scale Air Toxics Assessment.

Since January 1, 2017, Madison Mine has reported exceeding its effluent limitations numerous times at Outfalls 001 and 002, which violate its permit requirements. EPA has not undertaken any formal enforcement actions against Madison Mine since 2017, and the State of Missouri has not commenced formal enforcement proceedings against Madison Mine. The data for Madison Mine's Clean Water Act effluent exceedances listed in the chart below come directly from the self-reported monthly discharge monitoring reports.

POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
NICKEL	MONTHLY AVERAGE (CONCENTRATION)	32	960
COBALT	MONTHLY AVERAGE (CONCENTRATION)	19	570
COPPER	MONTHLY AVERAGE (CONCENTRATION)	16	480
TOTAL SUSPENDED SOLIDS	MONTHLY AVERAGE (CONCENTRATION)	4	120
ZINC	MONTHLY AVERAGE (CONCENTRATION)	3	90
LEAD	MONTHLY AVERAGE (CONCENTRATION)	2	60
NICKEL	DAILY MAXIMUM (CONCENTRATION)	32	32
SETTLEABLE SOLIDS	MONTHLY AVERAGE (CONCENTRATION)	1	30
COBALT	DAILY MAXIMUM (CONCENTRATION)	19	19
COPPER	DAILY MAXIMUM (CONCENTRATION)	6	6
FREEBOARD	DAILY MINIMUM (LOAD)	5	5
PH	MAXIMUM (CONCENTRATION)	2	2
TOTAL SUSPENDED SOLIDS	DAILY MAXIMUM (CONCENTRATION)	2	2
SETTLEABLE SOLIDS	DAILY MAXIMUM (CONCENTRATION)	1	1
	TOTAL	**144**	**2377**

The Madison Mine has exceeded its permit limitations for pollutants regulated by the Clean Water Act, including nickel, cobalt, and copper. According to the Centers for Disease Control and Prevention (CDC), contact with nickel in water can cause skin rashes for people with nickel allergies. Drinking water with excessive amounts of nickel can cause stomach aches, blood issues, and kidney problems. Drinking water with excessive amounts of cobalt harms human health, as it can cause heart, stomach, thyroid, and vision issues and can ultimately result in death. Significant exposure to cobalt can also cause birth defects for pregnant women. Excessive amounts of cobalt in food and water can lead to blood, liver, kidney, and heart problems, and long-term exposure can cause behavioral impacts. According to the EPA, copper is toxic to aquatic life at high concentrations, as it can cause mortality and negatively impact survival, growth, reproduction, brain function, enzyme activity, blood chemistry, and metabolism.

Madison Mine Map (Missouri)



Doe Run Company (Missouri)

Location: Fredericktown, Missouri
NPDES Permit No. MO0098752

Location: Mark Twain National Forest, Missouri
NPDES Permit No. MO0100218, MO0100226, MO0001856, and MO0000086

The Doe Run Company owns multiple mines in Missouri engaging in pervasive mining operations. These mining operations, many of which are located within the Mark Twain National Forest, mine minerals and metals such as zinc, copper, and lead. Four mines owned by Doe Run, including Doe Run West Fork, Doe Run Viburnum Mine, Doe Run Fletcher Mine, and Doe Run Viburnum Operations, have reported exceeding their effluent limitations numerous times since January 1, 2017, thereby violating the Clean Water Act. However, the EPA and the State of Missouri have not undertaken any formal enforcement actions against these Doe Run mines for exceeding their effluent limitations.

Doe Run West Fork is a lead mine in Reynolds County, Missouri, with past problems from water infiltration due to rockfalls and the creation of sinkholes. There are 55 people living within a 3-mile radius of the mine, 33% of which are low-income according to EPA's EJSCREEN tool. Pollution from the mine flows into the West Fork of the Black River, which is a cool-water habitat that contains water used for irrigation, fishing, and various recreational uses. Due to the sinkholes created by the West Fork mine, the West Fork Black River temporarily disappeared, flowing as low as six cubic feet per second.

Doe Run Viburnum Mine is a mineral mine in Bixby, Missouri. There are 977 people who live within a 3-mile radius of the Viburnum Mine, 34% of which are low-income according to EPA's EJSCREEN Tool. Pollution from the Viburnum Mine discharges into Crooked Creek, which the EPA lists as an impaired waterbody due to cadmium. People use Crooked Creek for recreation activities, including boating, fishing, and swimming.

Doe Run Fletcher Mine, located in Centerville, Missouri, mines and mills copper, lead, and zinc ore. There are 94 people who live within a 3-mile radius of the Fletcher Mine, 53% of which are low-income according to EPA's EJSCREEN Tool. Pollution from the Fletcher Mine discharges into Bee Fork Creek, which is home to the endangered Ozark hellbender. Bee Fork Creek is listed as a class 5 impaired waterbody by the EPA for metals contamination.

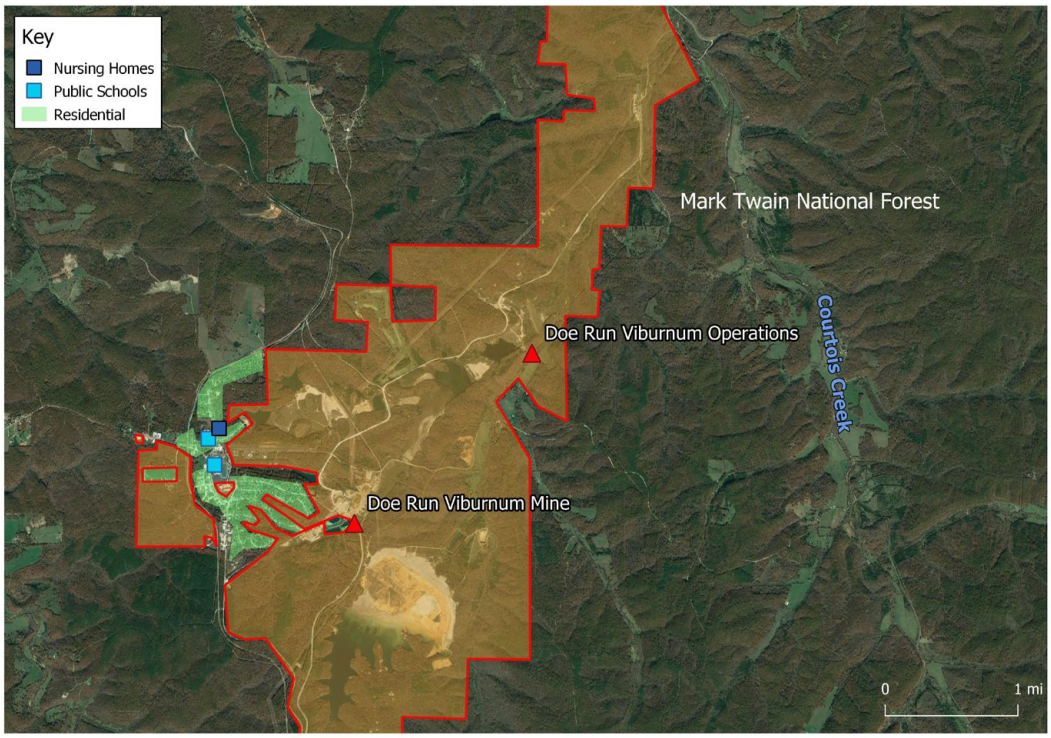
Doe Run Viburnum Operations, located in Viburnum, Missouri, engages in mining and milling ores. There are 884 people who live within a 3-mile radius of the Viburnum Operations, 34% of which are low-income according to EPA's EJSCREEN Tool. Pollution from the Viburnum Operations discharges into Indian Creek, which the EPA lists as an impaired waterbody due to lead and zinc.

The data for all the mines' Clean Water Act effluent exceedances come directly from their monthly discharge monitoring reports. The chart below provides a summary of the combined Clean Water Act effluent limitation exceedances for all four Doe Run mines:

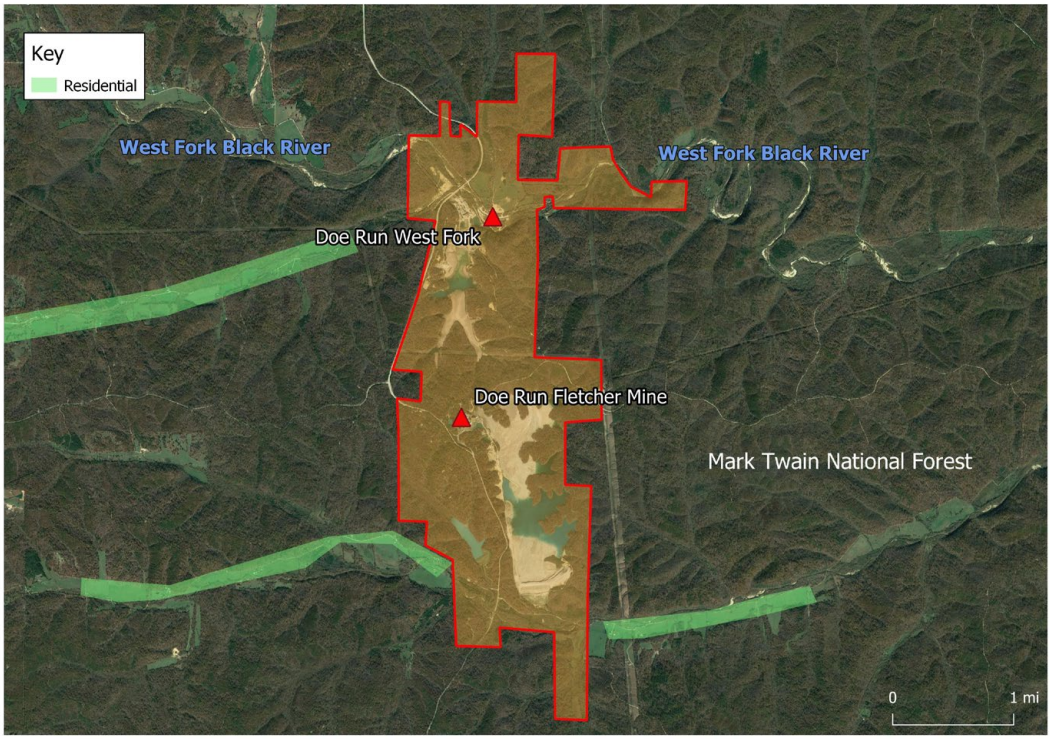
POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
LEAD	MONTHLY AVERAGE (CONCENTRATION)	34	1020
ZINC	MONTHLY AVERAGE (CONCENTRATION)	16	480
CADMIUM	MONTHLY AVERAGE (CONCENTRATION)	11	330
COPPER	MONTHLY AVERAGE (CONCENTRATION)	6	180
LEAD	DAILY MAXIMUM (CONCENTRATION)	33	33
TOTAL SUSPENDED SOLIDS	MONTHLY AVERAGE (CONCENTRATION)	1	30
CADMIUM	DAILY MAXIMUM (CONCENTRATION)	19	19
ZINC	DAILY MAXIMUM (CONCENTRATION)	11	11
COPPER	DAILY MAXIMUM (CONCENTRATION)	4	4
TOTAL SUSPENDED SOLIDS	DAILY MAXIMUM (CONCENTRATION)	4	4
CERIODAPHNIA DUBIA	MAXIMUM (CONCENTRATION)	2	2
PH	MINIMUM (CONCENTRATION)	1	1
	TOTAL	**142**	**2114**

The Doe Run Company has exceeded its permit limitations for pollutants regulated by the Clean Water Act, including lead, zinc, and cadmium. According to the CDC, even low levels of exposure to lead in drinking water can harm human health. EPA states low levels of lead in children can cause behavioral and learning problems, slowed growth, hearing issues, and anemia. Consumption of lead by pregnant women can reduce the growth of the fetus or cause premature birth. Adult exposure to lead in drinking water can cause cardiovascular impacts, decreased kidney function, and reproductive problems. Large amounts of zinc taken by mouth even for a short time can cause stomach issues. Ingestion over several months can cause anemia, pancreas damage, and decreased levels of good cholesterol. Drinking water with excessive levels of cadmium can cause bone and kidney problems it builds up in the body. Cadmium is also toxic to fish and other aquatic life, as it interferes with the endocrine system and can impact fish behavior.

Doe Run Viburnum Map (Missouri)



Doe Run West Fork Fletcher Map (Missouri)



Buick Resource Recycling Center (Missouri)

Location: Boss, Missouri
NPDES Permit No. MO0000337

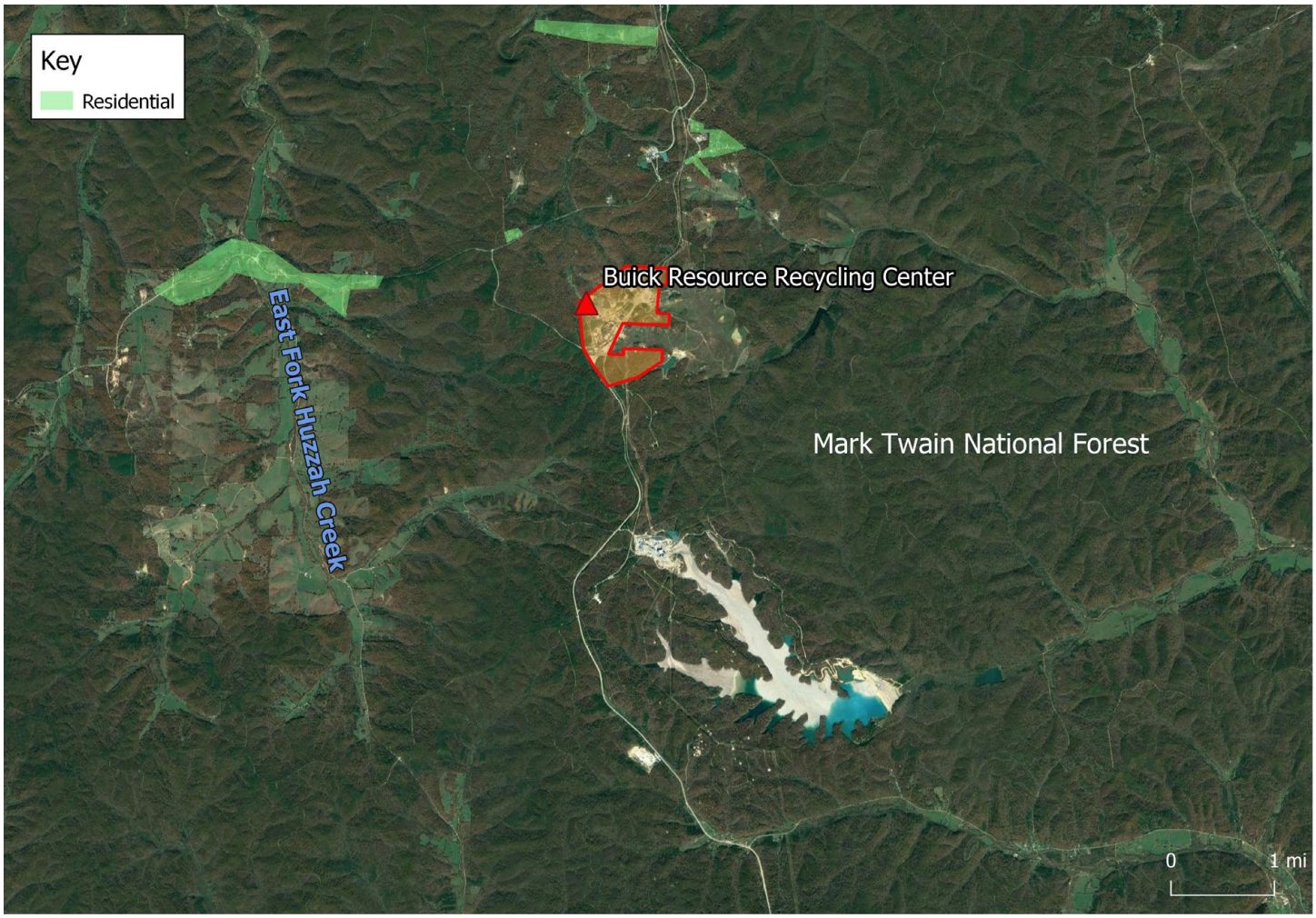
The Buick Resource Recycling Facility, which is also owned by the Doe Run Company, recycles lead-bearing materials, with a focus on lead-acid batteries, to produce lead metal, lead alloys, metallic drosses, and other byproducts. Pollutants from the recycling facility flow into Crooked Creek, a warm water habitat that protects fish, shellfish, and wildlife and supports irrigation and a variety of recreational uses. There are 209 people who live within a 3-mile radius of the facility, 37% of which are low-income according to EPA's EJSCREEN tool.

Since January 1, 2017, the Buick Resource Recycling Center has reported exceeding its effluent limitations numerous times at Outfalls 001 and 003, thereby violating the Clean Water Act. However, the EPA and the State of Missouri have not undertaken any formal enforcement actions against the Buick Resource Recycling Center since 2017. The data for all of the recycling center's Clean Water Act effluent exceedances come directly from its monthly discharge monitoring reports. The chart below provides a summary of the Buick Resource Recycling Center's Clean Water Act effluent limitation exceedances:

POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
ARSENIC	MONTHLY AVERAGE (LOAD)	4	120
ARSENIC	MONTHLY AVERAGE (CONCENTRATION)	4	120
CADMIUM	MONTHLY AVERAGE (CONCENTRATION)	4	120
COPPER	MONTHLY AVERAGE (CONCENTRATION)	4	120
LEAD	MONTHLY AVERAGE (LOAD)	4	120
LEAD	MONTHLY AVERAGE (CONCENTRATION)	4	120
NITROGEN AS AMMONIA (N)	MONTHLY AVERAGE (CONCENTRATION)	4	120
ACUTE CERIODAPHNIA	MONTHLY AVERAGE (CONCENTRATION)	3	90
ZINC	MONTHLY AVERAGE (LOAD)	2	60
ACUTE PIMEPHALES	MONTHLY AVERAGE (CONCENTRATION)	1	30
ANTIMONY	MONTHLY AVERAGE (LOAD)	1	30
TOTAL SUSPENDED SOLIDS	MONTHLY AVERAGE (CONCENTRATION)	1	30
ZINC	MONTHLY AVERAGE (CONCENTRATION)	1	30
PH	MAXIMUM (CONCENTRATION)	12	12
TOTAL SUSPENDED SOLIDS	WEEKLY AVERAGE (CONCENTRATION)	1	7
ARSENIC	DAILY MAXIMUM (LOAD)	4	4
ARSENIC	DAILY MAXIMUM (CONCENTRATION)	4	4
CADMIUM	DAILY MAXIMUM (CONCENTRATION)	4	4
LEAD	DAILY MAXIMUM (LOAD)	4	4
LEAD	DAILY MAXIMUM (CONCENTRATION)	4	4
NITROGEN AS AMMONIA (N)	DAILY MAXIMUM (CONCENTRATION)	3	3
ANTIMONY	DAILY MAXIMUM (LOAD)	1	1
COPPER	DAILY MAXIMUM (CONCENTRATION)	1	1
ZINC	DAILY MAXIMUM (LOAD)	1	1
ZINC	DAILY MAXIMUM (CONCENTRATION)	1	1
	TOTAL	**77**	**1156**

The Buick Resource Recycling Center has exceeded its permit limitations for pollutants regulated by the Clean Water Act, including nitrogen, ammonia, arsenic, copper, and cadmium. The environmental and public health effects of nitrogen ammonia are discussed above under the Gelita facility. According to the U.S. Geological Survey (USGS), arsenic is toxic to humans in drinking water even at very low levels, and it is a known carcinogen. Drinking water containing high levels of arsenic can cause thickening and discoloration of the skin, which can lead to skin cancer, digestive problems, and numbness in the hands and feet. The environmental and public health effects of copper and cadmium are discussed above under the Doe Run mine facilities.

Buick Resource Recycling Center Map (Missouri)



Western Sugar Cooperative (Nebraska)

Location: Scottsbluff, Nebraska
NPDES Permit No. NE0111686

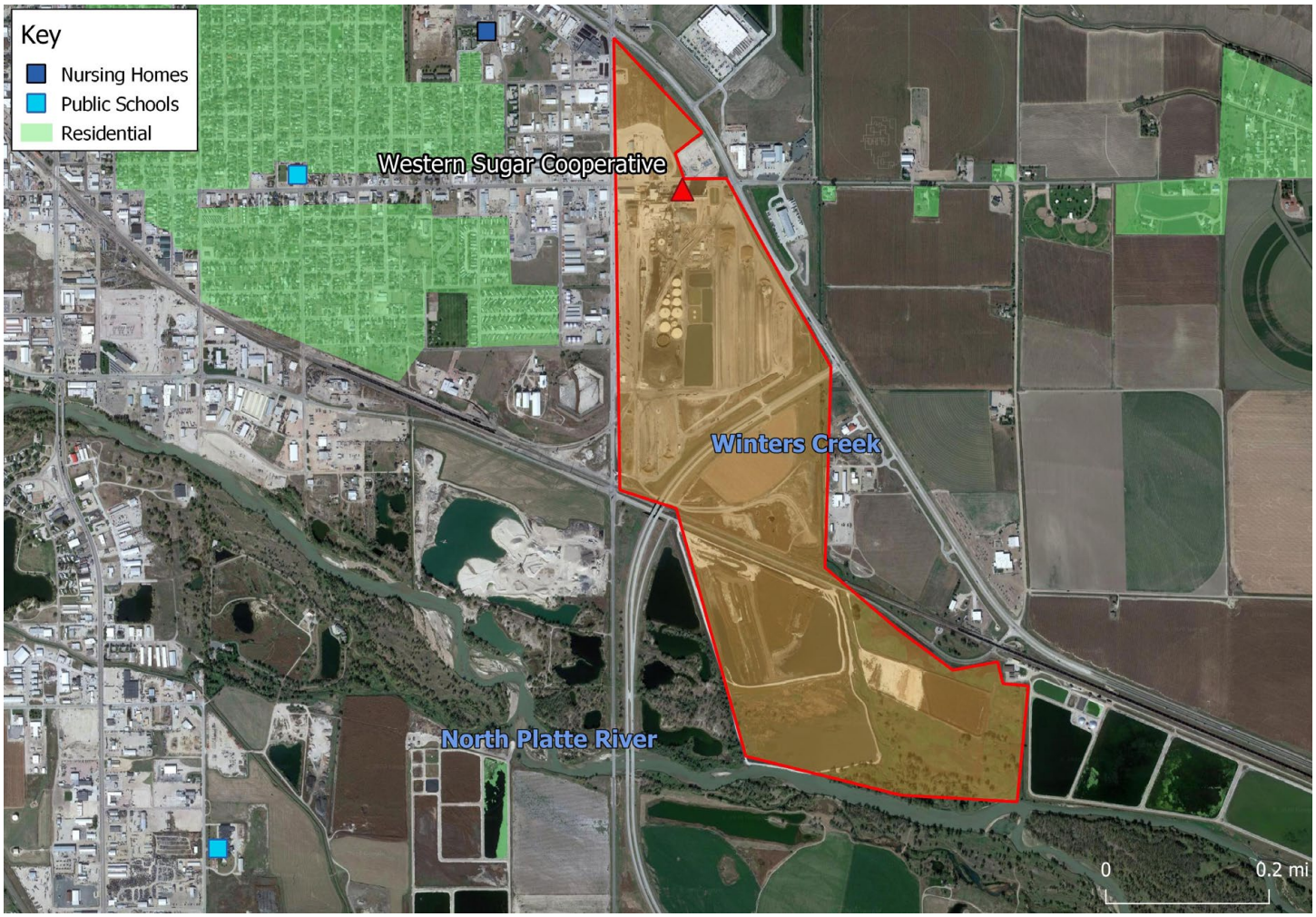
Western Sugar is a sugar processing, refining, and manufacturing plant located on the North Platte River. There are 21,109 people who live within a 3-mile radius of this facility, 43% of which are low-income and 34% of which come from a racially marginalized background according to EPA's EJSCREEN Tool. In addition to facing water pollution, this community is also in the 79th percentile in the state of Nebraska for air toxics cancer risk, and in the 80th percentile in the state for the respiratory hazard index according to EJSCREEN's EJ Index for the National-Scale Air Toxics Assessment. Closer to the facility, within a one-mile radius, there are about 3,200 people—68% of which are from a racially marginalized background and 71% of which are low-income. This community ranks higher for several environmental justice indicators including proximity to hazardous waste (92nd percentile), air toxics cancer risk (92nd percentile), and respiratory hazard index (93rd percentile). The facility discharges into the North Platte River, which the EPA lists as an impaired waterbody. People use the North Platte River for recreation activities, including boating, swimming, fishing, and wildlife viewing.

Since January 1, 2017, Western Sugar has reported exceeding its effluent limitations numerous times at Outfall 001, thereby violating the Clean Water Act. However, the EPA and the State of Nebraska have not undertaken any formal enforcement actions against Western Sugar for exceeding its effluent limitations since 2017. The data for all of Western Sugar's Clean Water Act effluent exceedances in the chart below come directly from its monthly discharge monitoring reports.

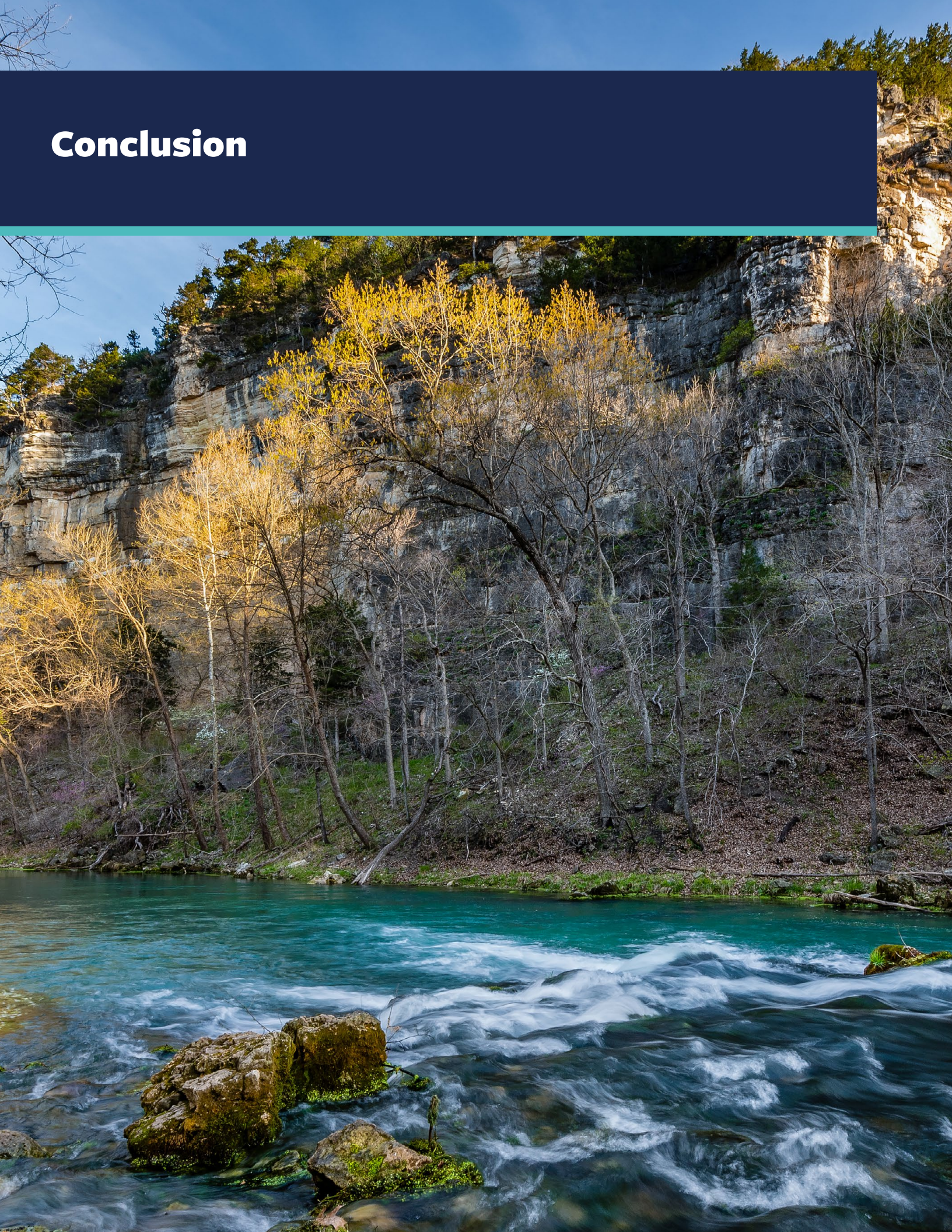
POLLUTANT	LIMIT FREQUENCY	NUMBER OF VIOLATIONS	DAYS IN VIOLATION
BIOCHEMICAL OXYGEN DEMAND	MONTHLY AVERAGE (LOAD)	13	390
TOTAL SUSPENDED SOLIDS	MONTHLY AVERAGE (LOAD)	11	330
FECAL COLIFORM	DAILY MAXIMUM (CONCENTRATION)	24	24
BIOCHEMICAL OXYGEN DEMAND	DAILY MAXIMUM (LOAD)	12	12
TOTAL SUSPENDED SOLIDS	DAILY MAXIMUM (LOAD)	10	10
TEMPERATURE	DAILY MAXIMUM (LOAD)	7	7
	TOTAL	**77**	**773**

Western Sugar has exceeded its permit limitations for discharges regulated by the Clean Water Act, including biochemical oxygen demand and total suspended solids (TSS). The environmental and public health effects of biochemical oxygen demand are discussed above under the Gelita facility. TSS are organic and inorganic particles that do not dissolve in the water and are an indicator of water quality. According to the EPA, TSS affects water clarity, temperature, and the amount of dissolved oxygen in the water, thus harming aquatic life when there is too much TSS in a water system. High concentrations of TSS can serve as carriers of toxins such as pesticides that easily cling to TSS, creating an increase in pesticide concentrations. Levels of TSS that are too high or too low can reduce the efficiency of wastewater treatment plants and the operation of industrial processes that use raw water.

Western Sugar Cooperative Map (Nebraska)



Conclusion



CONCLUSION

The EPA has a vital national responsibility to protect the public from water pollution and environmental degradation, but the agency has retreated from its duties by reducing its compliance monitoring and enforcement in Region 7. Therefore, we recommend the following:

- EPA should refocus on its critical mission of upholding the rule of law and ensuring tough-but-fair enforcement of the Clean Water Act. It must improve environmental law enforcement and compliance activities, hire and retain adequate staff, and effectively deploy the full amount of funds appropriated by Congress.

- Concerned Americans should contact their members of Congress to ensure the agency has the tools to protect safe, clean water through adequate enforcement, both through supportive policies and increased funding. Likewise, residents of Iowa, Kansas, Missouri, & Nebraska should contact their state officials to ask for more resources for state environmental protection agencies.

- Congress should increase funding for EPA's enforcement and compliance so there is sufficient enforcement staff capacity at EPA in Region 7 and nationally. Likewise, Congress should increase funding for State and Tribal Assistance Grants to support enforcement and compliance monitoring activities by local environmental protection agencies.

Strong and effective Clean Water Act enforcement by EPA sends the right message and signals for owners and operators of facilities to comply with the law and step up with better pollution reduction controls and operational approaches. Prevention is less expensive than remediation. Failures to protect rivers, lakes, and streams puts people and the environment at risk. Safe, clean water is vital to protecting drinking water sources, habitat for fish and other aquatic life, and for people who enjoy the waters in Region 7.

Appendix 1: Data Tables

Figure 1: Case Initiations and Conclusions

FY 2012 – 2019

FISCAL YEAR	CASE INITIATIONS
2012	211
2013	180
2014	182
2015	197
2016	228
2017	164
2018	150
2019	135

Figure 2: Major Facilities in Significant Noncompliance (SNC) with the Clean Water Act in Region 7

FY 2012 – 2019

FISCAL YEAR	MAJOR FACILITIES IN SNC
2013	225
2014	162
2015	159
2016	129
2017	183
2018	218
2019	172

Figure 4: Compliance Costs Assessed under Clean Water Act-NPDES Enforcement by EPA in Region 7 (real $)

FY 2013 – 2019

FISCAL YEAR	CASE INITATIONS
2013	$96,687,615.08
2014	$17,792,046.15
2015	$4,530,493.41
2016	$80,262,249.26
2017	$93,164,721.29
2018	$4,188,667.64
2019	$303,407.00

Figure 3: Penalties + SEPs Assessed under Clean Water Act-NPDES by EPA in Region 7 (real $, 2019) FY 2012 – 2019

FISCAL YEAR	PENALTIES ASSESSED	SEPs	TOTAL
2012	$2,657,407.51	$1,833,106.40	$4,490,513.91
2013	$5,584,725.47	$573,499.94	$6,158,225.42
2014	$1,812,739.55	$60,921.56	$1,873,661.11
2015	$1,712,746.02	$165,050.60	$1,877,796.62
2016	$617,598.59	$1,588,174.82	$2,205,773.41
2017	$919,958.22	$314,846.15	$1,234,804.37
2018	$853,928.83	$0.00	$853,928.83
2019	$440,010.00	$357,040.00	$797,050.00

Figure 5: Number of Cases with Civil Penalties, SEPs, and/or Compliance Costs Assessed under Clean Water Act-NPDES Enforcement by EPA in Region 7

FY 2013 – 2019

FISCAL YEAR	# OF CASES W/ FEDERAL PENALTY	# OF CASES W/ COMPLYING ACTION	# OF CASES W/ SEP
2012	13	18	2
2013	17	18	2
2014	17	16	2
2015	18	22	5
2016	20	32	9
2017	22	27	6
2018	19	17	0
2019	10	12	2

Figure 6: Staffing Level at EPA in Region 7 and Nationally

December 2011 to April 2020

MONTH & YEAR	EPA REGION 7 PERSONNEL	EPA PERSONNEL AGENCY-WIDE
DEC-11	586	17650
OCT-13	528	16205
DEC-15	500	14992
DEC-17	476	14449
FEB-18	470	14262
SEP-18	455	13981
DEC-18	470	13972
JAN-19	470	13972
APR-20	453	13925

Figure 7: Nationwide Enforcement and Compliance Monitoring Actual Spending Compared with Appropriated Budget (real $, 2019) FY 2011 – 2019

	COMPLIANCE MONITORING (CM)		ENFORCEMENT (E)	
FISCAL YEAR	ACTUAL SPENDING (THOUSANDS OF $)	APPROPRIATED BUDGET (THOUSANDS OF $)	ACTUAL SPENDING (THOUSANDS OF $)	APPROPRIATED BUDGET (THOUSANDS OF $)
2011	$124,921.16	$113,640.67	$293,747.18	$257,119.44
2012	$119,983.39	$119,698.58	$281,403.66	$279,942.81
2013	$112,246.77	$118,069.55	$262,809.53	$275,546.69
2014	$110,275.98	$111,805.91	$264,616.13	$264,639.18
2015	$110,807.48	$108,905.63	$257,656.50	$257,775.29
2016	$109,961.63	$107,789.83	$259,839.06	$255,134.22
2017	$102,278.08	$105,596.06	$252,718.43	$249,940.44
2018	$102,838.12	$102,579.88	$234,456.92	$242,801.68
2019	$100,132.80	$101,665.00	$225,405.10	$240,637.00

	TOTAL CM +E	
FISCAL YEAR	ACTUAL SPENDING (THOUSANDS OF $)	EPA PERSONNEL AGENCY-WIDE
2011	$418,668.34	$370,760.11
2012	$401,387.05	$399,641.39
2013	$375,056.29	$393,616.24
2014	$374,892.10	$376,445.09
2015	$368,463.98	$366,680.93
2016	$369,800.69	$362,924.04
2017	$354,996.51	$355,536.49
2018	$337,295.05	$345,381.56
2019	$325,537.90	$342,302.00

Figure 11**: EPA Funding to States to Administer State Clean Water Programs Nationwide (real $, 2019 FY 2012 – 2019

FISCAL YEAR	POLLUTION CONTROL (THOUSANDS OF $)	NONPOINT SOURCE (THOUSANDS OF $)	PUBLIC WATER SYSTEM SUPERVISION (THOUSANDS OF $)
2012	$284,759.60	$194,435.62	$121,872.75
2013	$249,514.55	$173,922.79	$109,888.62
2014	$252,852.14	$168,534.18	$111,152.16
2015	$245,878.32	$177,486.24	$109,286.99
2016	$247,200.83	$176,188.36	$106,134.89
2017	$236,939.80	$176,671.51	$105,235.79
2018	$232,674.64	$170,256.50	$100,551.96
2019	$224,097.00	$166,310.00	$96,650.00

Figure 8: Presidential Budget Proposals for Enforcement and Compliance Monitoring (real $, 2019) FY 2012 – 2021

FISCAL YEAR	PRESIDENT	COMPLIANCE MONITORING (CM) (THOUSANDS OF $)	ENFORCEMENT (E) (THOUSANDS OF $)	TOTAL CM+E (THOUSANDS OF $)
2012	OBAMA	$134,215.14	$300,873.54	$435,088.69
2013	OBAMA	$138,030.76	$292,624.01	$430,654.77
2014	OBAMA	$138,045.89	$289,905.02	$427,950.90
2015	OBAMA	$127,359.55	$275,628.26	$402,987.81
2016	OBAMA	$129,799.46	$285,477.38	$415,276.83
2017	OBAMA	$115,792.27	$279,014.94	$394,807.21
2018	TRUMP	$87,804.72	$197,395.29	$285,200.01
2019	TRUMP	$86,374.00	$197,280.00	$283,654.00
2020	TRUMP	$89,584.10	$211,424.64	$301,008.75
2021	TRUMP	$95,436.45	$223,614.97	$319,051.42

** Figures 11.1, 11.2, and 11.3 are individual graphs that contain the same values as those shown in the data table for Figure 10

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ENVIRONMENTAL LAW & POLICY CENTER

The Environmental Law & Policy Center is the Midwest's leading public interest environmental legal advocacy organization. We develop and lead successful strategic advocacy campaigns to improve environmental quality and protect our natural resources. We are public interest environmental entrepreneurs who engage in creative business deal-making with diverse interests to put into practice our belief that environmental progress and economic development can be achieved together. ELPC's multidisciplinary staff of talented and experienced public interest attorneys, environmental business specialists, public policy advocates, and communications specialists bring a strong and effective combination of skills to solve environmental problems.

ELPC's vision embraces both smart, persuasive advocacy and sustainable development principles to win the most important environmental cases and create positive solutions to protect the environment. ELPC's teamwork approach uses legal, economic, scientific and public policy analysis, and communications advocacy tools to produce successes. ELPC's strategic advocacy and business deal making involves proposing solutions when we oppose threats to the Midwest environment. We say "yes" to better solutions; we don't just say "no."

ELPC was founded in 1993 after a year-long strategic planning process sponsored by seven major foundations. We have achieved a strong track record of successes on both national and regional clean energy development and pollution reduction, transportation and land use reform, and natural resources protection issues. ELPC brings a new form of creative public advocacy, effectively linking environmental progress and economic development that improves the quality of life in our Midwest communities.

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