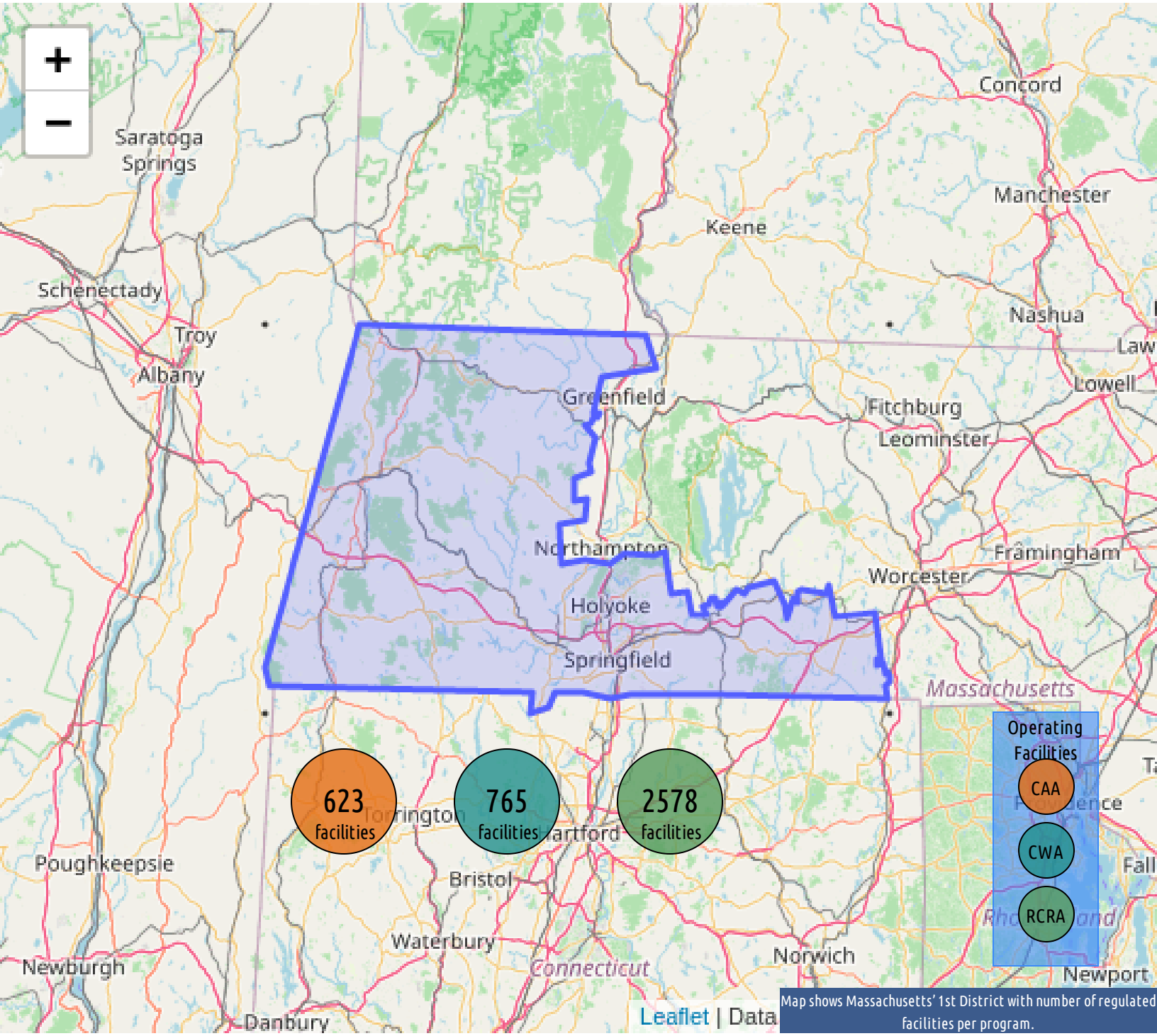
ENVIRONMENTAL ENFORCEMENT WATCH

Congressional Report Card

Massachusetts' 1st District; seat held by Richard E. Neal since 2013



Map shows Massachusetts' 1st District with number of regulated facilities per program.

ENVIRONMENTAL ENFORCEMENT WATCH

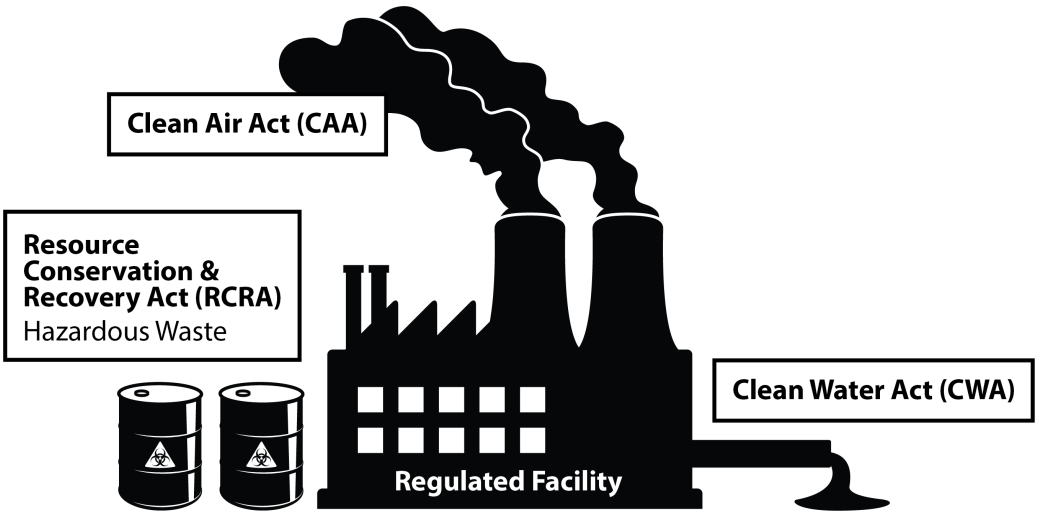
EDGI Environmental Data & Governance Initiative

INTRODUCTION

Why Report Cards on compliance with and enforcement of Environmental Laws?

The Environmental Protection Agency (EPA) is charged by Congress to enforce laws that protect people from air pollution, water pollution and hazardous waste. **Without effective enforcement, these laws are meaningless**. Based on data from EPA's Enforcement and Compliance History Online (ECHO) database this report card reviews violations, inspections and enforcement actions under three laws: Clean Air Act (CAA), Clean Water Act (CWA) and Resource Conservation and Recovery Act (RCRA) for this Congressional District or State since 2001. Report cards like this one are becoming available on the EEW website for all House Representatives and Senators. The EEW website also has a summary analysis of enforcement trends and data issues for all geographies covered by the House Energy and Commerce and Senate Environment and Public Works Committees. The report cards contain data from *both* state environmental agencies and the EPA. If the states are enforcing the above laws, it is because the EPA has delegated that authority to them. The EPA must ensure that states are doing their job. Congress must ensure that the EPA is doing its job. And the public must have accurate data from states and the EPA in order to understand if national environmental laws are being properly enforced. For the first time, EEW Congressional Report Cards give members of Congress and their constituents the chance to evaluate whether the EPA is fulfilling its mandate in their district. Congress can strengthen EPA enforcement by increasing its budget, passing more effective laws, requiring better data collection, and holding the EPA accountable when it fails to protect people.

What is a "regulated facility"?



Toxic Barrel by nopixel from the Noun Project
Factory Pollution by Gan Khoon Lay from the Noun Project

A regulated facility in this report is a facility that reports air or water emissions under the Clean Air Act or Clean Water Act, or a facility that generates, transports, or disposes of hazardous waste under the Resource Conservation and Recovery Act. Regulated facilities can be large-scale e.g. oil refineries, or small-scale e.g. dry cleaners.

GRADING THE DISTRICT ON DATA FROM 2017 THROUGH 2021

We can look at how this district's national percentile compares with all U.S. congressional districts on three metrics: number of violations, number of violations per inspection, and number of violations per enforcement action. These metrics are used on the data from each of the three EPA programs– the Clean Water Act (CWA), the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA). The data used is for the past five years, 2017 through 2021.

As an example, a Violations per Facility score of 39 for CWA means that this district has more violations per regulated facility than 39% of all districts in the United States.
From these scores we might assign letter grades to districts–the top 20%, those districts with more violations than 80% of all districts, would get an F; the districts scoring between 60% and 80% get a D; between 40% and 60% get a C; between 20% and 40% get a B; and less than 20% get an A. With that grading scheme, Massachusetts' 1st District is given the following grades:

- **CAA Violations per Facility - 46% –> C**
- **CAA Violations per Inspection - 66% –> D**
- **CAA Violations per Enforcement - 59% –> C**
- **CWA Violations per Facility - 39% –> B**
- **CWA Violations per Inspection - 10% –> A**
- **CWA Violations per Enforcement - 61% –> D**
- **RCRA Violations per Facility - 78% –> D**
- **RCRA Violations per Inspection - 16% –> A**
- **RCRA Violations per Enforcement - 26% –> B**

Rationale for grading using these metrics:

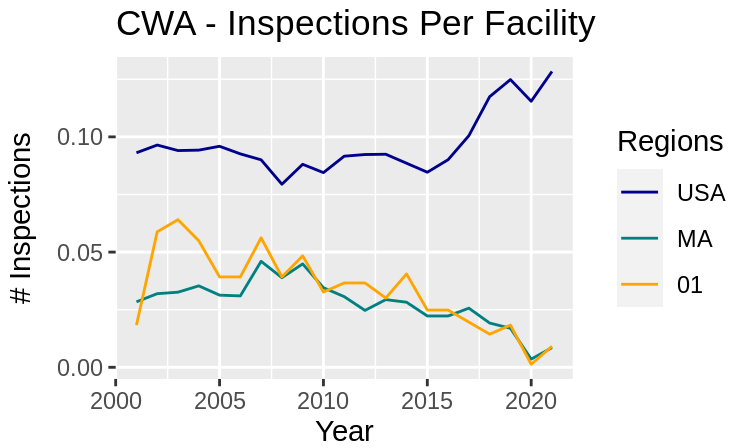
- More **violations per active facility** are worse.
- More **inspections** mean more problems will be found, which is good. Dividing violations by inspections factors in the strength of the inspecting
- More **enforcements** when violations are found disincentivizes violating. Dividing violations by enforcements indicates the willingness to call fouls.

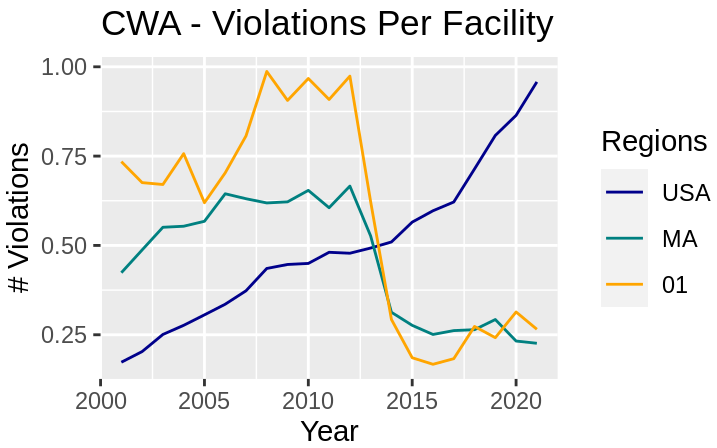
*see data limitations pages for more on these grades

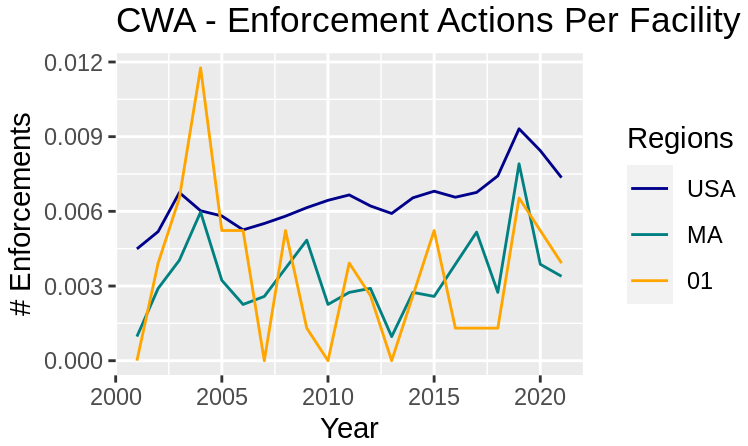
CLEAN WATER ACT - INSPECTIONS, VIOLATIONS, ENFORCEMENTS SINCE 2000

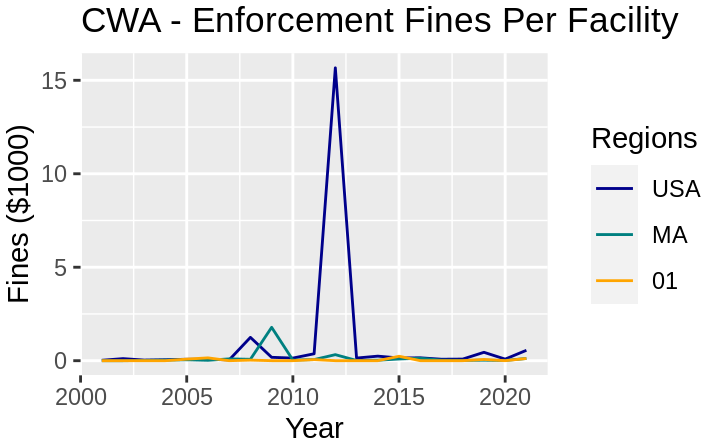
These graphs show the changes in numbers of inspections, violations and enforcement actions per facility for the U.S., the state of MA, and congressional district 01, under the Clean Water Act (CWA)*.

*(The current number of active facilities is used for the calculations for all graphs, as the historical data for facility counts was not available. The graphs therefore give trends rather than faithful statistics.)









Clean Water Act Violations*: Violations during the four Trump administration years were better than the average over the previous 16 years, representing a 63% decrease in violations

Enforcement Actions under Clean Air Act, Clean Water Act, and the Resource Conservation and Recovery Act*: better than the average over the previous 16 years, representing a 12% increase in enforcement actions

When comparing the graphs, note that the vertical axes may have considerably different scales.

*see data limitations page for metric calculations

HIGHLIGHTS FOR MASSACHUSETTS' 1ST DISTRICT

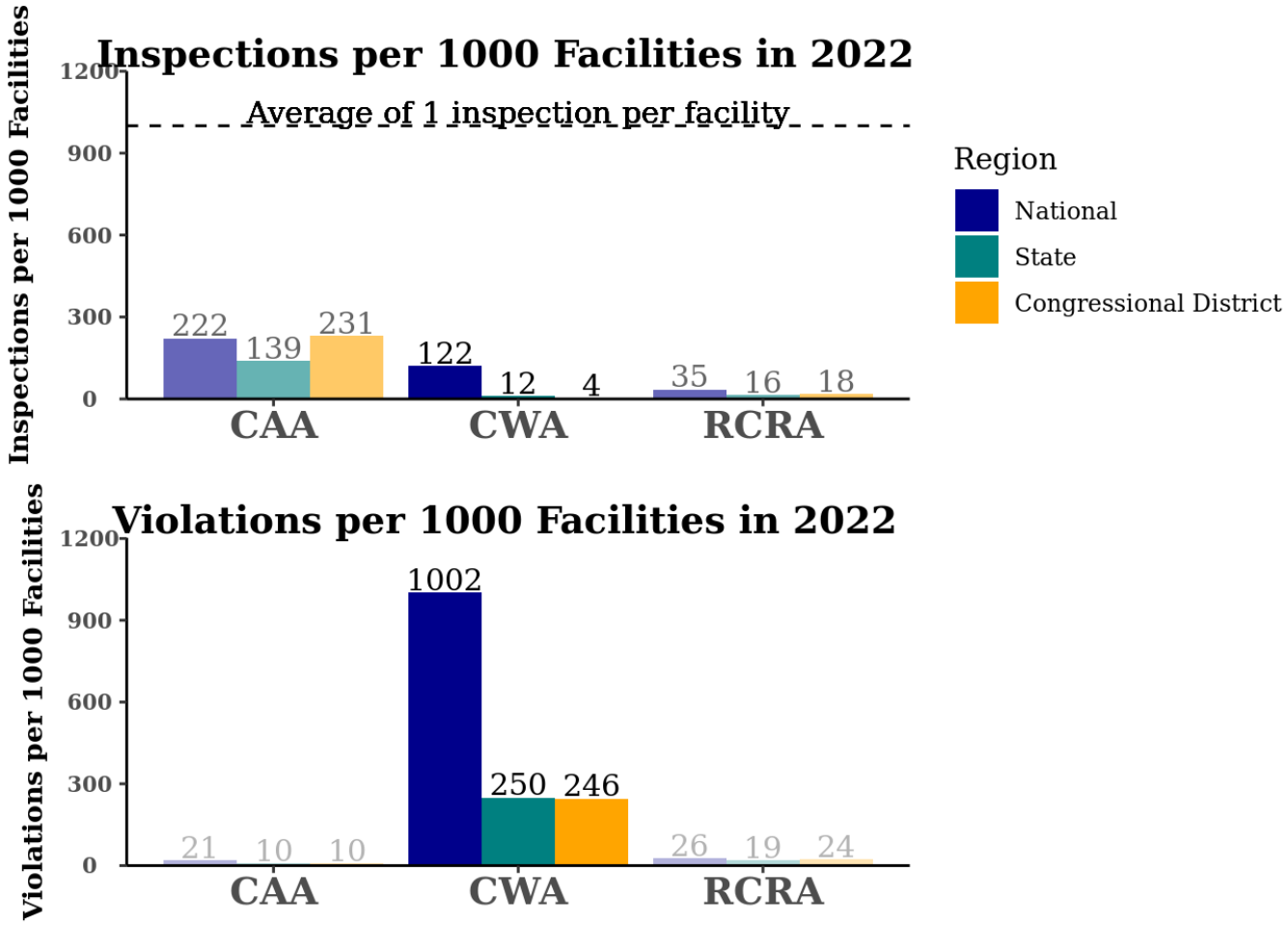
Comparing the four years of the Obama administration to the four years of the Trump administration, there has been a 31% decrease in inspections, 73% decrease in fines, and a 42% increase in enforcement actions.

Under the Clean Water Act, the law whose regulation is best documented by available EPA data, 85 facilities, representing 11.1% of all regulated facilities in MA01, were in violation for at least 9 months of the last 3 years.

The reliability of data in figures throughout this report is indicated by the figure subtitle and degree of transparency. See the data limitations page (Page 10) to view the transparency-coding table and access state and congressional district data here.

When comparing the graphs, note that the vertical axes may have considerably different scales.

THIS DISTRICT IN COMPARISON

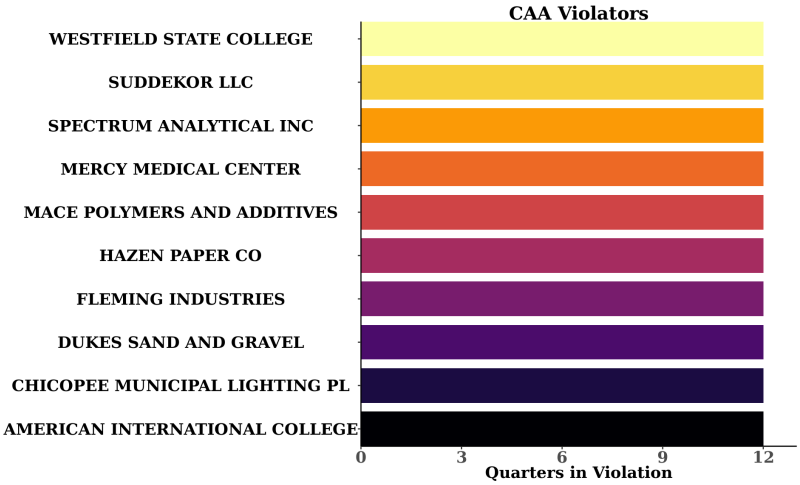


These two charts show how inspections and violations in this district compare to the national and state averages per 1000 facilities in 2022. We use data from 2022 as it was the most recent full year and the ECHO database only reports *currently* active facilities. To enable comparison across locations with a differing number of active facilities, we standardize the comparison to a value per 1000 facilities, proportionally adjusting the data if there are more or less than 1000 facilities in a district or state.

For access to the software which pulls data from ECHO, see the Github repository here. The reliability of data in figures throughout this report is indicated by the figure subtitle and degree of transparency. Figure transparency illustrates data reliability: the more transparent, the more uncertain the data. See the data limitations page (Page 10) to view the transparency-coding table

RECENT NON-COMPLIANCE IN THIS DISTRICT

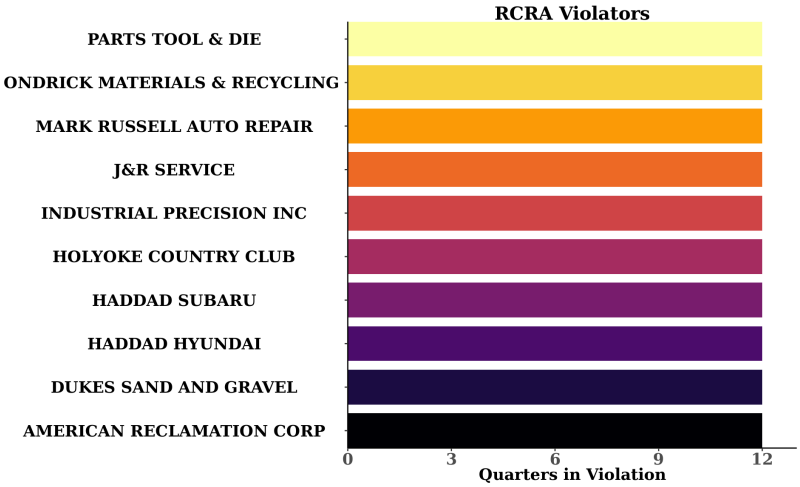
These figures show the ten facilities in this district with the worst history of environmental compliance based on their number of noncompliant quarters in the past 3 years (not necessarily consecutive). In some districts, for some programs, the number may be fewer than ten. The EPA data used shows records for the past 12 months for CAA and RCRA, and 13 months for CWA. The facilities shown with equal number of quarters in violation are selected at random. We only have room for ten in the graph, so we note when there are more facilities with the same number of quarters in violation.



ECHO reports for facilities:

WESTFIELD STATE COLLEGE
DUKES SAND AND GRAVEL
SUDDEKOR LLC
FLEMING INDUSTRIES
AMERICAN INTERNATIONAL COLLEGE
MACE POLYMERS AND ADDITIVES
HAZEN PAPER CO
MERCY MEDICAL CENTER
SPECTRUM ANALYTICAL INC
CHICOPEE MUNICIPAL LIGHTING PL

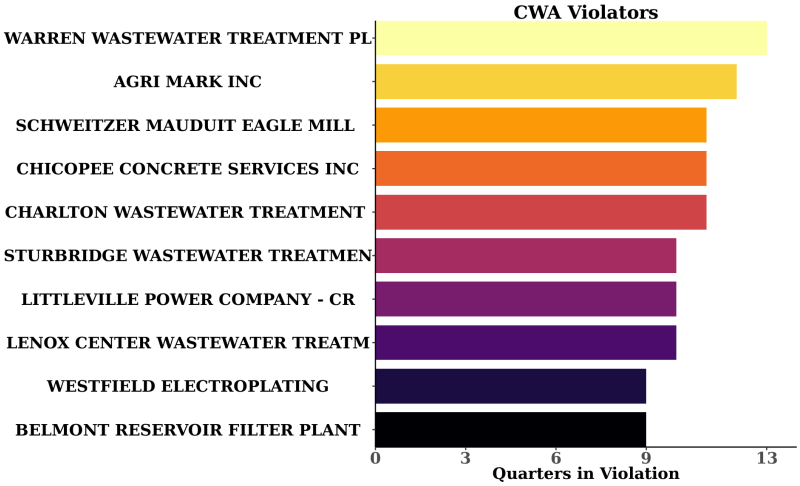
4 additional facilities with 12 quarters in violation



ECHO reports for facilities:

HOLYOKE COUNTRY CLUB
INDUSTRIAL PRECISION INC
HADDAD SUBARU
HADDAD HYUNDAI
PARTS TOOL & DIE
AMERICAN RECLAMATION CORP
MARK RUSSELL AUTO REPAIR
ONDRICK MATERIALS & RECYCLING
J&R SERVICE
DUKES SAND AND GRAVEL

1 additional facility with 12 quarters in violation



ECHO reports for facilities:

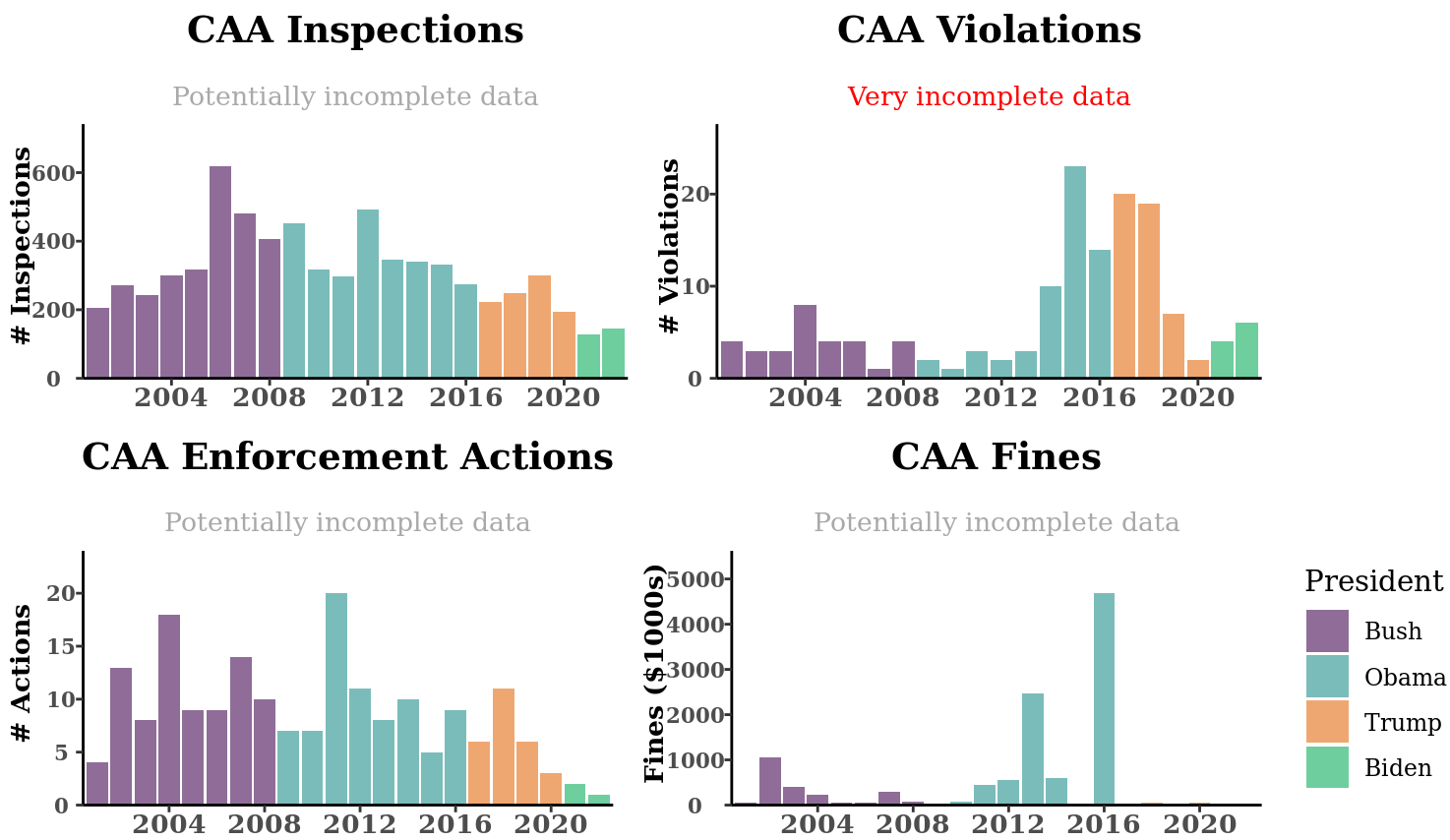
WARREN WASTEWATER TREATMENT PL
AGRI MARK INC
CHARLTON WASTEWATER TREATMENT
SCHWEITZER MAUDUIT EAGLE MILL
CHICOPEE CONCRETE SERVICES INC
LITTLEVILLE POWER COMPANY - CR
LENOX CENTER WASTEWATER TREATM
STURBRIDGE WASTEWATER TREATMEN
WESTFIELD ELECTROPLATING
BELMONT RESERVOIR FILTER PLANT

4 additional facilities with 9 quarters in violation

CLEAN AIR ACT

The Clean Air Act (CAA) regulates air emissions from mobile sources, such as cars, and stationary sources, such as refineries and power plants. *Please note, in this report we are only utilizing data from stationary air emission sources.* For the CAA, violations are most commonly recognized via inspections. Infrequent inspection usually results in fewer identified violations. If CAA violations have decreased, make sure to check whether inspections have also decreased as recent cuts in inspections are likely related to drops in CAA violations. Unless thorough inspections are occurring regularly, fewer violations does not necessarily mean air quality has improved. More info on CAA

There are 623 facilities currently reporting under the CAA in this district.



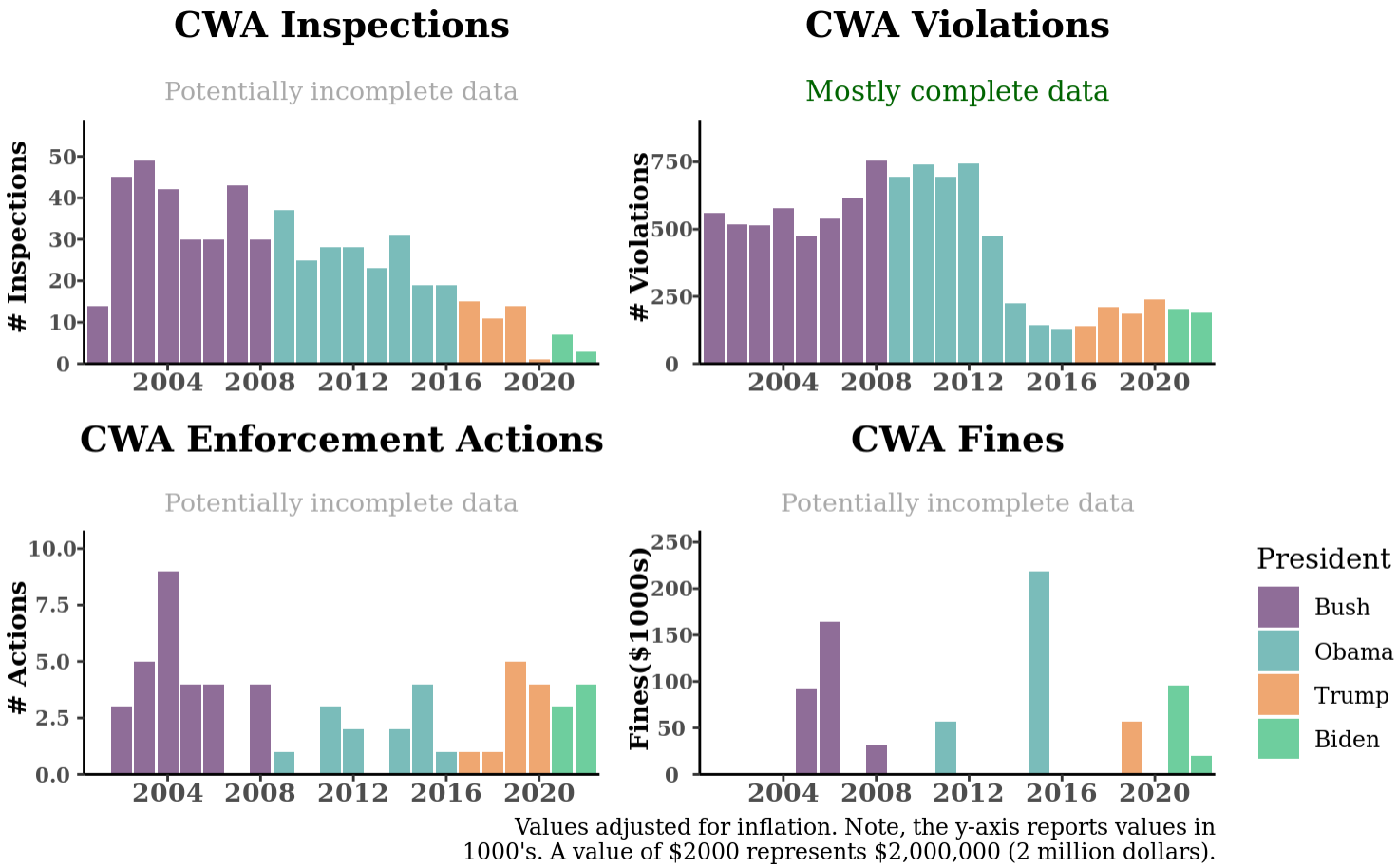
Values adjusted for inflation. Note, the y-axis reports values in 1000's. A value of $2000 represents $2,000,000 (2 million dollars).

These figures show patterns of CAA inspections, violations, enforcement actions and fines in this district since 2001 based on available EPA data (see page 10). The bars are colored by the president. Figure transparency illustrates data reliability: the more transparent the figure is, the more uncertain the data. Data on CAA violations is particularly unreliable as emissions are often not directly monitored but are estimates. Inspection, enforcement, and fine data can be unreliable because state reporting to ECHO may be incomplete.For access to the Jupyter Notebook which pulls data from ECHO at the state and congressional district level, click here.
When comparing the graphs, note that the vertical axes may have considerably different scales.

CLEAN WATER ACT

The Clean Water Act (CWA) establishes quality standards for surface waters. In this report, we focus on CWA's National Pollutant Discharge Elimination System (NPDES) which permits facilities to discharge certain kinds and amounts of pollutants. Unlike the CAA, under the CWA effluent (waste emissions) is directly measured and routinely reported electronically to ECHO. CWA violations are automatically triggered if data is not submitted and if contaminant levels in effluent exceed the permitted amount. Such CWA violations can lead to inspections. More info on CWA

There are 765 facilities currently reporting under the CWA in this district.



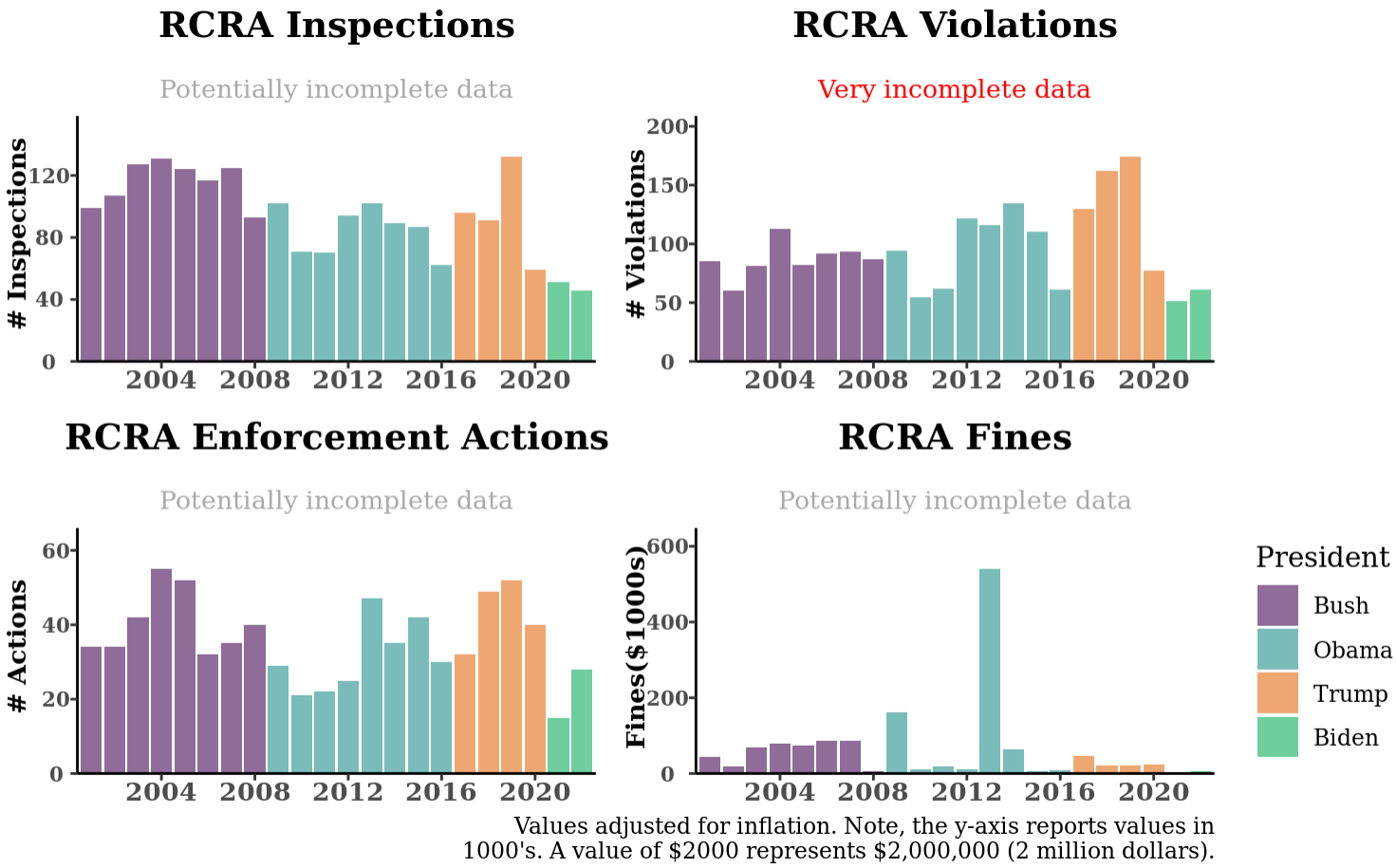
These figures show patterns of Clean Water Act inspections, violations, enforcement actions and fines in this district since 2001 based on available EPA data (see page 10). The bars are colored by the president. Figure transparency illustrates data reliability: the more transparent, the more uncertain the data. Data on CWA violations is particularly reliable as effluent violations are automatically reported to EPA. For access to the Jupyter Notebook which pulls data from ECHO at the state and congressional district level, click here.

When comparing the graphs, note that the vertical axes may have considerably different scales.

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from "cradle-to-grave", regulating the generation, transportation, treatment, storage, and disposal of hazardous waste. Facilities self-report under RCRA, like the CAA, and violations are most often found after an inspection. If RCRA violations have decreased, make sure to check whether inspections have also decreased as recent cuts in inspections are likely related to drops in RCRA violations. More info on RCRA

There are 2578 facilities currently reporting under RCRA in this district.



These figures show patterns of RCRA inspections, violations, enforcement actions and fines in this district since 2001 based on available EPA data (see page 10). The bars are colored by the president. Figure transparency illustrates data reliability: the more transparent, the more uncertain the data. Data on RCRA violations is particularly unreliable as violations are not necessarily directly measured. Inspection, enforcement, and fine data can be unreliable because state reporting to ECHO may be incomplete.For access to the Jupyter Notebooks which pull data from ECHO at the state and congressional district level, click here.
When comparing the graphs, note that the vertical axes may have considerably different scales.

LEGISLATOR INFORMATION

Richard E. Neal (Democrat)

In office since January 3rd, 2013

Govtrack web page
OpenSecrets web page

This member of Congress serves on the following committees relevant to this report:

ABOUT THE EPA DATA ANALYZED IN THIS REPORT CARD AND ITS LIMITATIONS

The data in this report is from EPA's publicly-available ECHO database that compiles information from a number of distinct state and federal sources. However, poor reporting by states and inconsistent reporting schemes result in data gaps and inaccuracies. EPA lists numerous specific issues on its "Known Data Problems" page. In addition, EPA notes that data on inspections, violations, and enforcement actions prior to 2001 should be treated as incomplete and unreliable. For that reason, we have only tracked data back to 2001. In addition to many data entry errors – too numerous to list here – there are several major problems with ECHO:

- There is serious under-recording and under-reporting of CAA violations at the state level. Most CAA violations – perhaps 85% or more – do not make it into ECHO. Violation data is therefore inaccurate and misleading: states which report the fewest violations may be states whose recording and reporting of violations is actually the poorest.
- Although there is no specific information about the quality of data on RCRA violations, it is likely that this program, like the CAA, has serious reporting problems. Therefore, RCRA violations data should also be considered inaccurate and potentially misleading. The key difference between these and the CWA is that the CWA entails mandatory electronic self-reporting.
- ECHO does not record how many regulated facilities there were for programs in previous years. Therefore, we cannot calculate the number of inspections, enforcement actions, and violations per regulated facility before `target_year`.

Data reliability coding

In this report, we have divided data issues into three categories, using transparencies in graphs as well as subtitles to indicate data reliability and completeness. See the table below:

Data Quality	Example	Opacity	Explanation
High	CWA NPDES violations	100% (full color)	These data are relatively reliable because effluent levels are frequently directly measured. The data are mostly complete due to mandatory electronic reporting.
Medium	CWA, CAA, RCRA inspections; CAA, CWA, RCRA enforcement actions and penalties	60%	These data can be incomplete due to incomplete state reporting to ECHO.
Low	CAA and RCRA violations data	30%	These data are unreliable and potentially misleading because emissions may not be directly measured, there are few mandatory federal electronic reporting requirements, and there are large gaps in state reporting to ECHO.

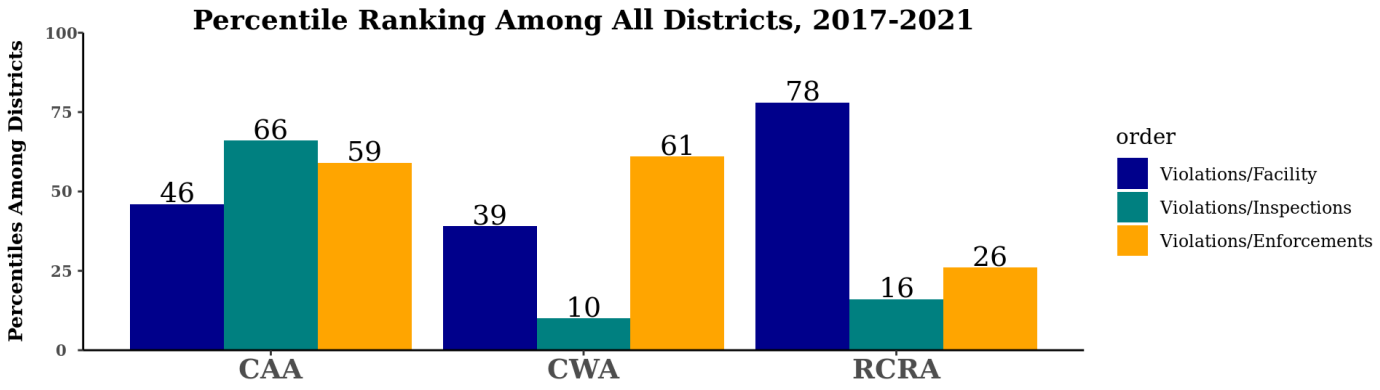
Notes on 2023 data

We do not include data from 2023 because we are only part way through the year. It is important to note, as well, that data from 2020 will be strongly influenced by the EPA's decision to suspend, from March through August, pollution monitoring requirements for industries that claim to have been impacted by COVID-19. EDGI's report on this policy "More Permission to Pollute" found that, despite relatively few facilities claiming the COVID exemption, a much larger proportion of facilities are still failing to report environmental data.

HOW AND WHY EEW DEVELOPED THE METRICS IN THIS REPORT

Page 2: Grading the District on Data from 2017 through 2022

This graph shows how this district compares by its percentile with other U.S. congressional districts on three metrics: number of violations, number of violations per inspection, and number of violations per enforcement action. These metrics are used on the data from each of the three EPA programs– the Clean Water Act (CWA), the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA). The data used is for the past five years, 2017 through 2021.



HOW AND WHY EEW DEVELOPED THE METRICS IN THIS REPORT (CONTINUED)

Page 3: Comparisons to past years

To enable direct comparison between changes in enforcement and violations over the years, we calculate the percent change in Clean Water Act violations and enforcement actions per district or state between Trump's years in office, and the historical average in each district from 2001 to 2016. We analyze data since 2001, as EPA is most confident in its own data since 2001. We analyze violations data just for the Clean Water Act because that data is the most complete due to routine digital reporting requirements. We analyze all forms of enforcement actions, informal and formal. All data is drawn from the ECHO database.
We describe rates to be "Much Worse" if the percent increase in violations or decrease in enforcement actions is greater than 100%, "Worse" if the percent change is between 0% and 100% percent and "the same" if there is no change.
We describe rates to be "Better" if violation rates decreased or enforcement rates increased by 0% to 100% and "Much Better" if rates of enforcement or compliance increased by more than 100%.
Figures for the one complete year of the Biden Administration for which data is available (2021) is shown but not included in the comparisons.

Page 4: Highlights from this District

Trump and Obama Administration comparison: To enable comparison to a more recent administration we compare levels of inspection and enforcement in the first three years of the Obama administration to the first three years of the Trump administration. For these figures inspections and enforcement numbers for the CWA, CAA and RCRA are combined.
Does a reduction in violations indicate better adherence or less oversight?
Figures for the one complete year of the Biden Administration for which data is available (2021) is shown but not included in the comparisons.

Facilities in Violation (non-compliant facilities):

To highlight the problem of chronic and routine violations of major environmental laws, this bullet point provides data on the number of facilities in each Congressional District or state which have been out of compliance with environmental laws for 9 or more months in the past 3 years under the Clean Water Act.

HOW AND WHY EEW DEVELOPED THE METRICS IN THIS REPORT (CONTINUED)

Page 5: This District in Comparison

To generate a comparison across Congressional Districts, each of which has a different number of facilities, we look at the average number of violations, inspections and enforcement actions per 1000 facilities. In states where there are fewer than 1000 facilities this requires us to scale up their data.

Page 6: Recent Noncompliance in this District

To examine facilities with consistent records of noncompliance, we provide information on the 10 facilities with the most quarters of non-compliance under the CAA, CWA, and RCRA. Important notes here: These charts show the number of quarters of non-compliance, not exactly *which* quarters they were out of compliance. Non-compliance shown here may not be consecutive. Quarters can also be confusing: there are 4 quarters in a year, so 12 quarters equals 3 years of time. In some locations there may be more than 10 facilities out of compliance for all 12 quarters. We limit our figures to 10 facilities for space and clarity. A list of 20 facilities can be found in the Jupyter notebook for that district or state. Additionally, the x-axis for these figures displays a maximum of 12 quarters for the CAA and RCRA, but 13 for the CWA.

ABOUT THE AUTHORS AND LINKS TO DATA

About EEW

Environmental Enforcement Watch (EEW) is a collaborative project across working groups of the Environmental Data and Governance Initiative (EDGI). The EEW project builds on EDGI's 2020 Sheep in the Closet Report that documents large declines in EPA enforcement of environmental laws. This project uses data from EPA's ECHO database, revealing how useful ECHO could be for communities to track pollution and EPA responses in their areas. However, it also reveals the inaccessibility of ECHO for non-specialists, and major omissions, errors, and confusions present in the data itself (see page 10). EEW aims to highlight gaps and inadequacies in the enforcement of environmental laws and to help investigate whether EPA is fulfilling its congressionally-mandated duty to enforce environmental laws. EEW's data analysis is conducted using open source and publicly available data using Jupyter Notebooks developed by EDGI members.

A full list of EEW members, including their roles in this project, can be found here.

About this Project

This EEW project aims to make EPA data more directly accessible to the public and their representatives.In our first iteration of this project, we released reports for the 76 Senators and House Representatives that sit on the House Energy & Commerce Committee and the Senate Environment & Public Works Committee. We are now making report cards available for *every* state and congressional district in the US. By providing a novel look at the chronic state of non-compliance, we hope to provide representatives with the information they need to evaluate the state of environmental law compliance and enforcement in their communities so they might more effectively hold EPA accountable.

Useful Links

State and Congressional District Jupyter Notebooks | National-Level Jupyter Notebook | Github Repository to produce reports | EEW website | Contact Us | Link to download PDF version of this report

About EDGI

EDGI is an international network of over 175 members from more than 80 different academic institutions and non-profits, comprised foremost by grassroots volunteer efforts. Since 2016, EDGI has served as a preeminent watchdog group for federal environmental data, generating international effort to duplicate and monitor repositories of public data that are vital to environmental health research and knowledge. EDGI's work has been widely acknowledged, leading to EDGI testifying before Congress on declines in EPA enforcement, and hundreds of mentions in leading national and international media such as *The New York Times*,*The Washington Post*, Vice News, and CNN. For more about our work, read our 2022 Annual Report and 2022 Annual Report. For more on EDGI see our website.

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