Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

# 1a. What strategic priority does this program address?

The Water Protection Program helps Missouri citizens thrive by managing natural resources to promote a healthy environment and economy by:

- Promoting environmental responsibility and resource stewardship.
- · Enhancing services, information, and communication to improve customer experience.
- Modernizing infrastructure, strengthening workforce, and supporting economic development.
- · Improving internal processes to better serve our customers.

# 1b. What does this program do?

The Water Protection Program works to protect surface water and groundwater, and promote safe drinking water for all Missourians by implementing standards and providing tools to assist water and wastewater facilities. The program implements regulations, issues permits, provides financial and technical assistance, conducts training and certification for operators, conducts monitoring, utilizes compliance assistance and enforcement tools, and implements strategies to restore impaired water bodies.

#### Water PSDs:

Financial Aid - Provides low-cost financial assistance to aid Missouri communities with capital improvements to water, wastewater, and stormwater systems. The program provides grants and below-market-rate loans for water and wastewater infrastructure. Small communities receive grants for engineering studies to plan for infrastructure improvement. Communities receiving infrastructure loans and grants serve approximately 681,000 Missouri residents annually.

Public Drinking Water Sample Analysis - Provides funding for statutorily-required routine sampling for Missouri's community and non-community public water systems.

Water Quality Studies - Provides funding to strategically monitor a portion of the state's waters that have designated uses. These data inform decisions on how to protect and improve water quality.

CAFO Closures - This appropriation authorizes the expenditure of Concentrated Animal Feeding Operation Indemnity Funds for closure of certain lagoon structures placed under state control due to bankruptcy, failure to pay property taxes, or abandonment. When the Department determines that an owner has successfully closed a CAFO, all moneys paid into the fund by such operation are returned to the owner.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

# 1b. What does this program do? (continued)

The following table shows financial data for the budget units included in this form.

	FY 2018 Actual	FY 2019 Actual	FY 2020 Actual	FY 2021 Current	FY 2022 Gov Rec
Water Protection Operations (78847C)	8,766,978	8,706,561	8,473,529	10,731,326	10,581,326
Water Infrastructure PSD (79415C)	113,475,649	107,541,467	98,709,907	315,008,852	315,008,852
Water Infrastructure Encumbrance (79415C)	n/a encumb	rance authority	must lapse	225,529,824	224,939,825
Water Quality Studies PSD (79405C)	5,278,039	4,919,818	4,334,352	13,399,852	10,899,852
Water Quality Studies Encumbrance (79405C)	n/a encumb	rance authority	must lapse	11,000,000	9,000,000
CAFO Closures PSD (79425C)	0	0	0	60,000	60,000
Total	127,520,666	121,167,846	111,517,788	575,729,854	570,489,855
Total excluding Encumbrances	127,520,666	121,167,846	111,517,788	339,200,030	336,550,030

The FY 2021 budget includes appropriation authority of \$225,529,824 to be used for encumbrance purposes only for Water Infrastructure loans and grants and \$11,000,000 to be used for encumbrance purposes only for Water Quality Studies. The FY 2022 budget includes appropriation authority of \$224,939,825 to be used for encumbrance purposes only for Water Infrastructure loans and grants and \$9,000,000 to be used for encumbrance purposes only for Water Quality Studies.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

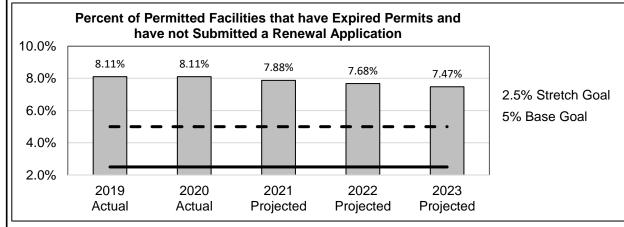
# 2a. Provide an activity measure(s) for the program.

#### **Annual Count of Permit Renewals Processed**

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Type	Actual	Actual	Actual	Projected	Projected	Projected
Site-Specific	634	473	443	735	726	495
General	1,322	865	427	418	1,473	1,434
Total	1,956	1,338	870	1,153	2,199	1,929

The projection for permit renewals is based on the number of expiring permits for the three projected fiscal years. These values do not include the number of modifications, terminations, applications for new permits, or denials. The 2023 projected total permits renewed takes into account the Water Protection Program's goal of eliminating the permit backlog by end of fiscal year 2023. Permits (site-specific and general) are not evenly dispersed across the 5 years; therefore, the permit cycle causes fluctuation of permit number between years.

# Permitted Facilities that have Expired Permits and have not Submitted a Renewal Application- Significant Noncompliance Reduction



		Expired Permits
State	Permits	without Renewal
Fiscal Year	Evaluated	<u>Application</u>
2019 Actual	7,574	614
2020 Actual	7,241	587
2021 Projected	7,235	570
2022 Projected	7,230	555
2023 Projected	7,225	540

The Department is working to reduce the number of significant noncompliance (SNC) violations associated with permitted facilities that have expired permits and have not submitted a renewal application. This measure provides the percentage of permitted facilities that have expired permits and have not submitted a renewal application as compared to the permit universe. In other words, this metric shows the noncompliance rate associated with permittees who have made no attempt to renew their permit.

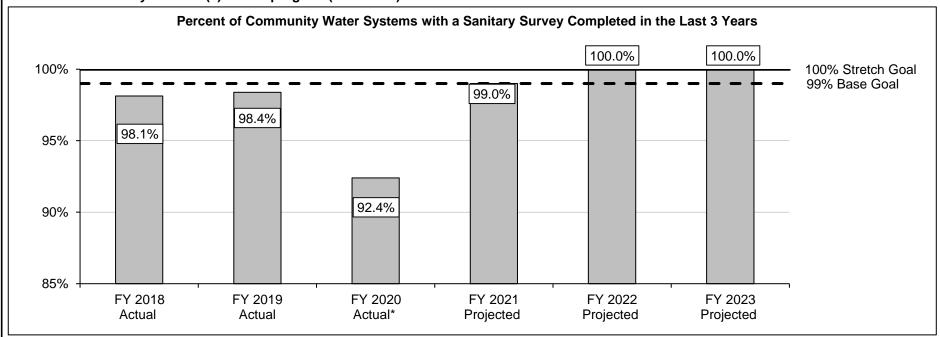
Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

In 2020, EPA eliminated its previously established target goals. Prior to 2020 the target was 82%.

2a. Provide an activity measure(s) for the program (continued).



<sup>\*</sup>Reason for decrease in 2020: COVID-19 pandemic and social distancing requirements put sanitary surveys on hold for a 3 month period.

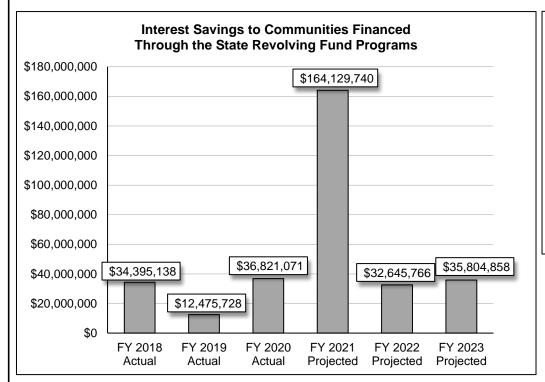
A sanitary survey is a review of a community water system to assess its capacity to supply safe drinking water to the public through an analysis of eight major components required by the U.S. Environmental Protection Agency (EPA). A sanitary survey is completed for a community water system once every three years and provides an opportunity for the Department to visit the water system and educate the operator about proper monitoring and sampling procedures and provide technical assistance. Each year the Department performs a sanitary survey on approximately one-third of the state's total 1,427 community water systems. This is a proactive public health measure and is required by the EPA through the federal Safe Drinking Water Act.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

# 2b. Provide a measure(s) of the program's quality.



Fiscal Year	Average Conventional Interest Rate*	SRF Average Interest Rate	<u>Difference</u>
FY2018 Actual	d 3.97	1.18	2.74
FY2019 Actual		1.33	3.08
FY2020 Actual		0.92	2.14
FY2021 Projecte		1.10	2.55
FY2022 Projecte		1.20	2.77
FY2023 Projecte		1.30	3.03

\*Source: The Bond Buyer

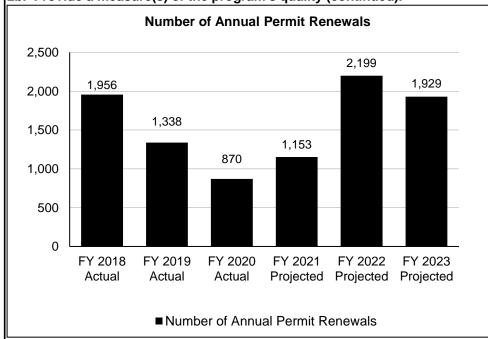
The financing provided through the State Revolving Fund (SRF) Programs allows communities to save approximately 70% of the interest cost of a conventional loan. For FY 2020, the average conventional interest rate was 3.06% as compared to the SRF average interest rate of 0.92%; a difference of 2.14% (70% savings) resulting in an overall estimated savings to Missouri communities of \$36.8 million. A decrease in FY 2019 interest savings is the result of a decrease in demand (as demonstrated by applications for financial assistance) with a corresponding decrease in financial assistance awards during this period. The SRF Program anticipates closing on several large loans during FY 2021, resulting in high interest savings. Typical SRF loans are for 20 years.

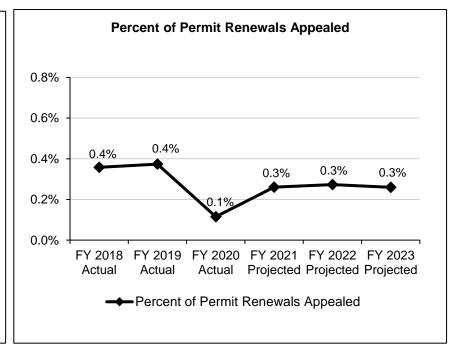
Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2b. Provide a measure(s) of the program's quality (continued).





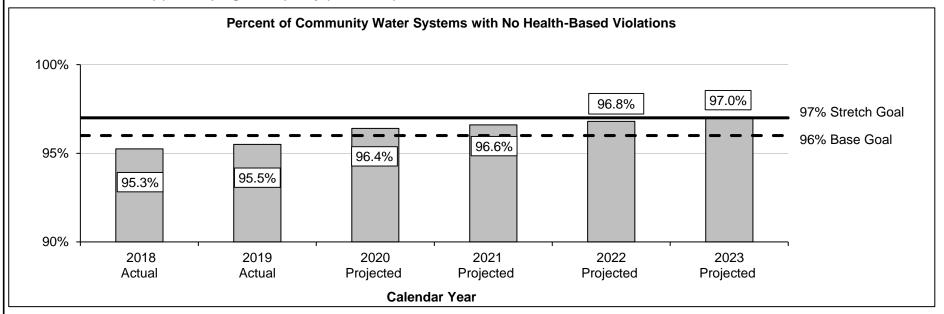
If a permittee or the public is adversely affected by permit issuance, they can appeal the permit. The Department has been reducing the backlog of permits since 2017, and anticipates eliminating the permit backlog by end of fiscal year 2023. Site specific permits have expiration dates that are aligned by watershed which causes an uneven distribution across a 5-year period. Additionally certain general permits have large numbers of dischargers covered and therefore when those general permits expire the corresponding individual permits covered under the general permit will also expire. These two factors cause fluctuations in the number of permits that are renewed each year due to expiration. The low rate of appeal in light of the increased number of permits is an indication of high quality permits that lead to a healthy environment and economy.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2b. Provide a measure(s) of the program's quality (continued).



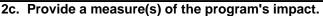
Each community water system must monitor for contaminants listed in the Safe Drinking Water Act. The monitoring schedules and sampling frequencies for the contaminants vary by source water type, population, if a water system produces water or purchases water, if the contaminant is considered an acute risk to public health or a chronic risk based on a lifetime exposure, etc. Health-based violations are exceedances of Maximum Contaminant Levels, failing to meet a treatment technique, such as failing to meet a turbidity or disinfection standard, or failing to address a significant deficiency.

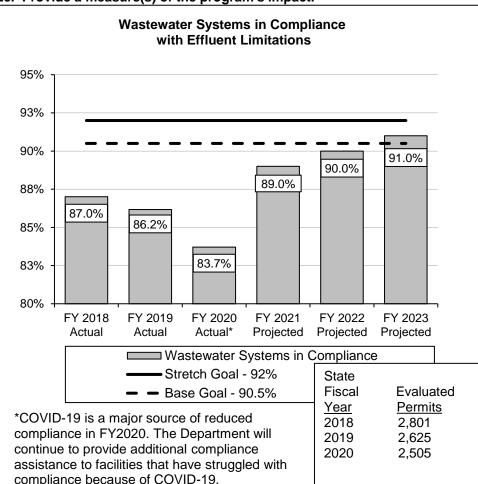
In 2020, EPA eliminated its previously established target goals. Prior to 2020 the target goal was 87%.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program





The Missouri Clean Water Law requires any person operating, using, or maintaining a wastewater system or point source to obtain a permit and verify the discharge complies with the limitations contained in the permit to protect the beneficial uses of the receiving stream. Permittees must analyze discharges for the contaminants listed in the permit and submit results to the Water Protection Program on discharge monitoring reports. The program monitors compliance with effluent limitations and reporting requirements each quarter and notifies the permitted entity when significant noncompliance occurs. Significant noncompliance includes but is not limited to the following:

- Exceeding a permit limitation 4 out of 6 consecutive months
- Exceeding a permit limitation by 1.4 times for conventional contaminants and 1.2 for toxic water contaminants 2 out of 6 consecutive months

Effluent limitation violations which meet the definition of significant noncompliance most often indicate aging infrastructure that is no longer able to adequately treat wastewater. The condition develops more slowly than other violations. In many cases, constructed upgrades to the facility are required in order to resolve the violations. Construction upgrades require engineering and may take up to two years depending on the extent of upgrades required. If a municipality is involved, an additional 2-3 years are required to obtain funding.

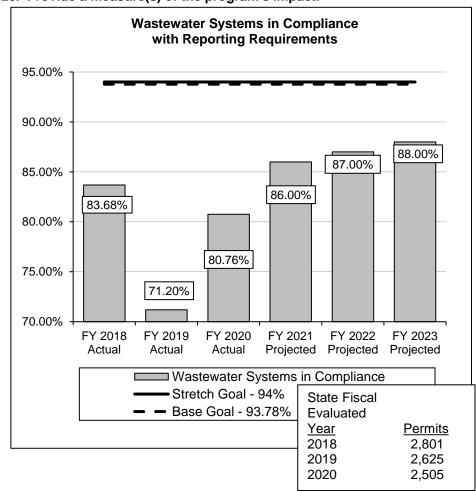
To increase effluent limitation compliance, the Water Protection Program will target those entities in significant noncompliance for inspections. Staff will review discharge monitoring report (DMR) data to determine which permittees will benefit from improved operation of their facility and which should receive guidance on the process of developing and funding or their facility. Region staff will work with facilities to improve operations using creative and cost effective solutions.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2c. Provide a measure(s) of the program's impact.



The Missouri Clean Water Law requires any person operating, using, or maintaining a wastewater system or point source to obtain a permit and verify the discharge complies with the limitations contained in the permit to protect the beneficial uses of the receiving stream. Permittees must analyze discharges for the contaminants listed in the permit and submit results to the Water Protection Program on discharge monitoring reports. The program monitors compliance with reporting requirements each quarter and notifies the permitted entity when significant noncompliance occurs. Significant noncompliance related to DMRs is defined as failing to submit the report within 30 days of the due date.

To increase reporting requirement compliance, the Water Protection Program continues to use Record Reviews to identify and target those entities in significant noncompliance.

The Water Protection Program uses the auto-dialer monthly to make calls informing permittees their DMR is late and should be submitted immediately, before reaching significant noncompliance. Program staff provide region staff with lists of the permittees with the most reporting violations for enhanced compliance assistance.

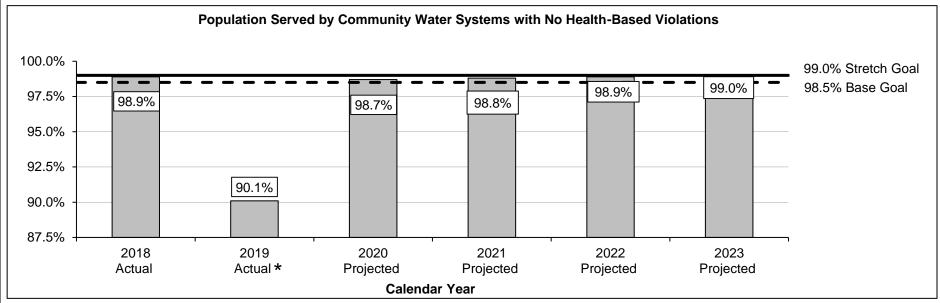
Through calls received in response to the auto-dialer, the Department learned many entities were not comfortable with or properly using the electronic discharge monitoring (eDMR) system. Region staff have been providing additional compliance assistance using the eDMR system to help permittees meet their reporting obligations. Additionally, the Department is redesigning the eDMR system to be more user friendly with an implementation date of October 2020.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2c. Provide a measure(s) of the program's impact (continued).



<sup>\*</sup> Reason for decrease in 2019: Flooding created unique water conditions in the Missouri River, which caused temporary violations for some community water systems.

The Department is working to reduce health-based violations through compliance assistance efforts, operator training, performing sanitary surveys, reviewing designs for water systems, the use of circuit riders, and the community assistance portal. Health-based violations are issued when water sample results show the presence of contaminant(s) at numbers above a Maximum Contaminant Level (MCL) or when a treatment technique is not met. MCLs are set by the U.S. Environmental Protection Agency and are based on human health and safety standards. The treatment techniques are specified processes intended to reduce contaminant levels. Health-based violations include, but are not limited to, MCL and treatment technique violations of health-based standards related to violations of the groundwater rule, chemicals, stage 1 and stage 2 disinfection byproducts, bacteriological, radiological, and surface water treatment.

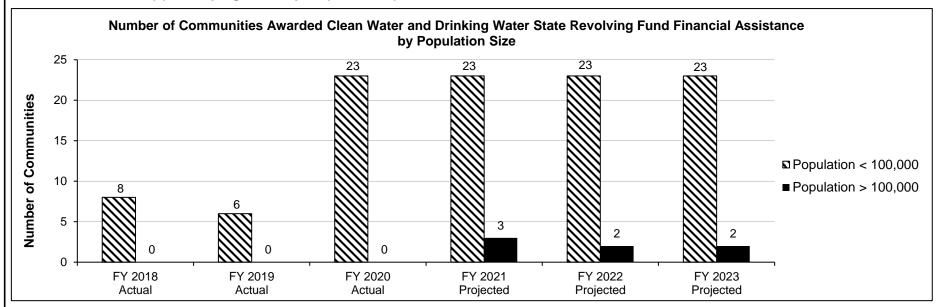
In 2020, EPA eliminated its previously established target goals. Prior to 2020 the target goal was 92%.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2c. Provide a measure(s) of the program's impact (continued).



The Clean Water and Drinking Water State Revolving Fund (SRF) programs provide assistance to systems serving populations of all sizes. In FY 2020, SRF assistance was awarded to 23 communities serving a population of less than 100,000. SRF financial assistance is provided through an application process and is based on eligibility. Financial assistance is open for all Missouri cities, towns, counties, regional sewer and water districts, water authorities, public water systems, not-for-profit, and instrumentalities of the state to apply for low interest loans and grants. A decrease in FY 2019 is the result of a decrease in applications for financial assistance with a corresponding decrease in the number of financial assistance agreements awarded during this period. Since 2018, the program has increased marketing efforts and implemented numerous customer service and process improvements intended to improve efficiency and program attractiveness to borrowers. As the average length of time from the application to the financial assistance award is 18 to 24 months, results from process improvements were realized in FY 2020. In FY 2021 the Department is implementing new grant programs, which will increase the number of awards.

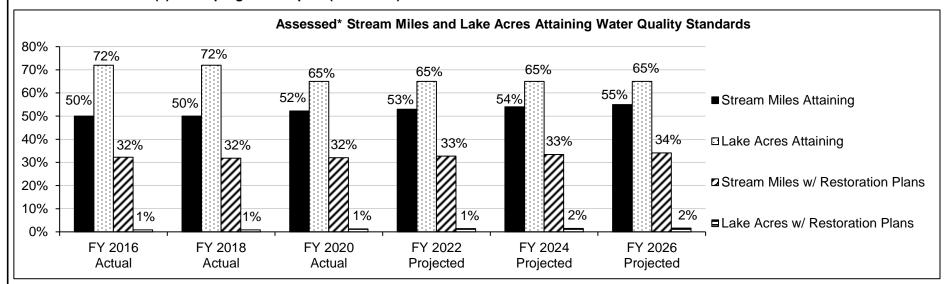
The goal is to assist as many communities that apply as possible with water infrastructure improvements through low interest loans and grants. Water infrastructure improvements benefit each community's health, economy, and overall well-being.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2c. Provide a measure(s) of the program's impact (continued).



Base Goal: By 2024, increase the number of assessed stream miles and lake acres attaining water quality standards to 54% for stream miles and 65% for lake acres.

Stretch Goal: By 2026, increase the number of assessed stream miles and lake acres attaining water quality standards to 55% for stream miles and 65% for lake acres.

\*Assessed waters are those that have sufficient data to conduct an assessment as required by Section 303(d) of the Clean Water Act.

FY2020 Lake Acres Attaining shows a reduction because more lakes were listed impaired as a result of lake nutrient water quality standards approved by EPA in calendar year 2019. Beginning with the 2020 assessment, the number of lakes identified as impaired may increase as the Department assesses more lakes. For the 2020 reporting cycle, data were available to assess approximately 11,673 miles of the 115,150 classified stream miles and 267,386 acres of the 319,550 acres of classified lakes in the state.

Water quality restoration plans are integrated, comprehensive strategies focused on restoring and protecting water quality in Missouri's impaired streams and lakes. Restoration plans may include Total Maximum Daily Loads (TMDLs), EPA approved 9-element watershed management plans, or other comprehensive alternative restoration or protection plans.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

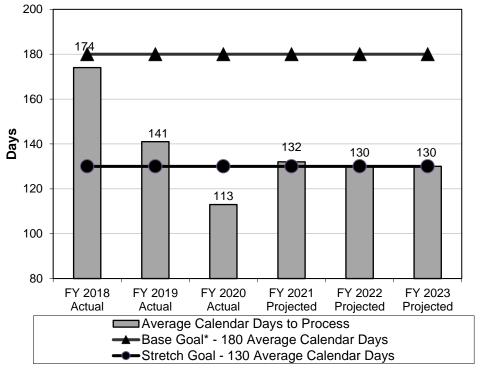
2d. Provide a measure(s) of the program's efficiency.

# **Processing Time for Construction Permits**

70

60

# Average Days to Issue New Wastewater Construction Permits



## 50 30 30 30 30 25 20 10 0 FY 2018 FY 2019 FY 2020 FY 2021 FY 2022 FY 2023 Projected Projected Actual Actual Actual

Average Calendar Days to Process

→ Base Goal\* - 60 Average Calendar Days

--- Stretch Goal - 30 Average Calendar Days

**Average Days to Issue Sewer Extension** 

**Construction Permits** 

<sup>\*</sup> Baseline goals are derived from statutory requirements.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

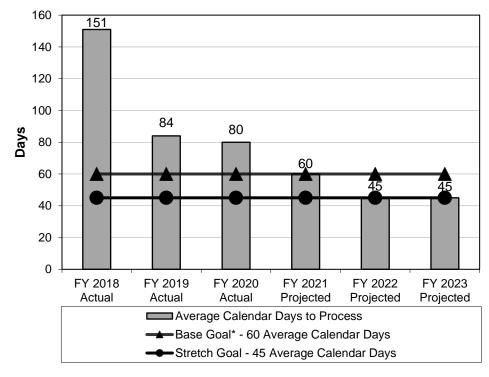
**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2d. Provide a measure(s) of the program's efficiency (continued).

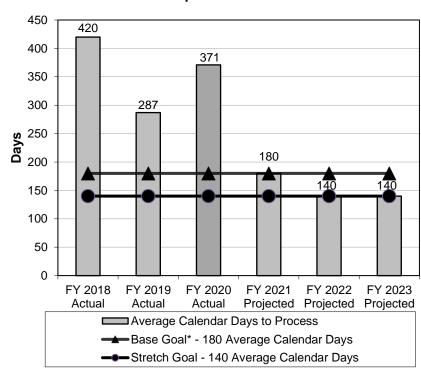
# **Processing Time for Wastewater Operating Permits**

Average Days to Issue General Operating Permits



<sup>\*</sup> Baseline goals are derived from statutory requirements.

# Average Days to Issue Site-Specific Permits



Average processing times for site specific renewals will continue to be variable or high until the permit backlog is eliminated. This is because many backlog permits have been in process for hundreds of days so when backlog permits are issued this negatively impacts the average processing times as a whole.

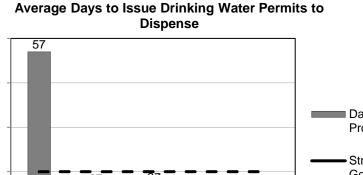
**Department of Natural Resources** HB Section(s): 6.225, 6.235, 6.240, 6.245

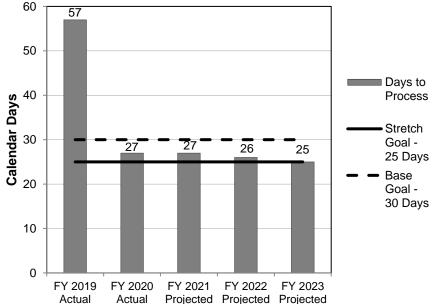
DEQ - Water Protection Program

Program is found in the following core budget(s): Water Protection Program

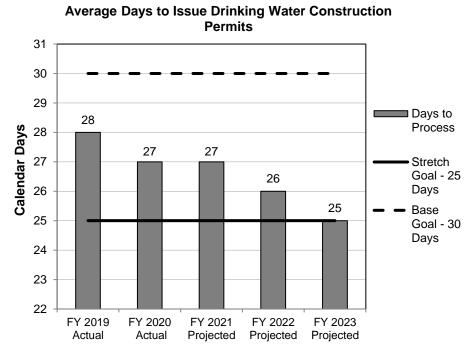
2d. Provide a measure(s) of the program's efficiency (continued).

# **Processing Time for Drinking Water Permits**





All community water systems are required to apply for and obtain a permit from the Department to dispense water pursuant to Section 640.115, RSMo.



All water systems are required to obtain authorization from the Department prior to construction, alteration, or extension of a public water system pursuant to Section 640.115, RSMo.

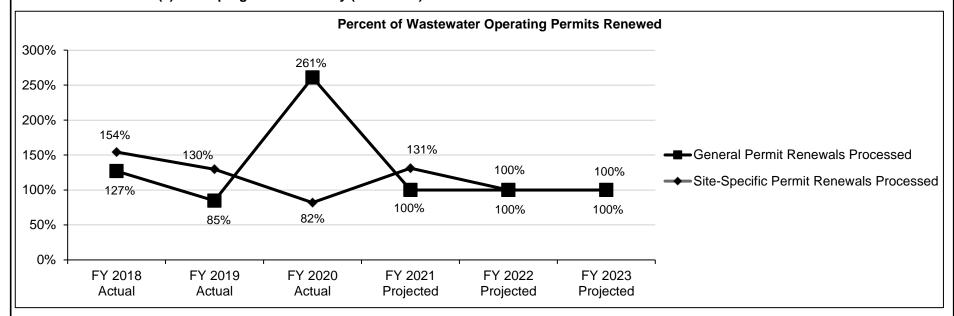
Note: New review procedures were implemented in 2019 causing a downward trend.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2d. Provide a measure(s) of the program's efficiency (continued).



Percent of permits renewed equals the number of permits renewed divided by the number of permit applications received in that fiscal year, which may cause the percentage to exceed 100 percent.

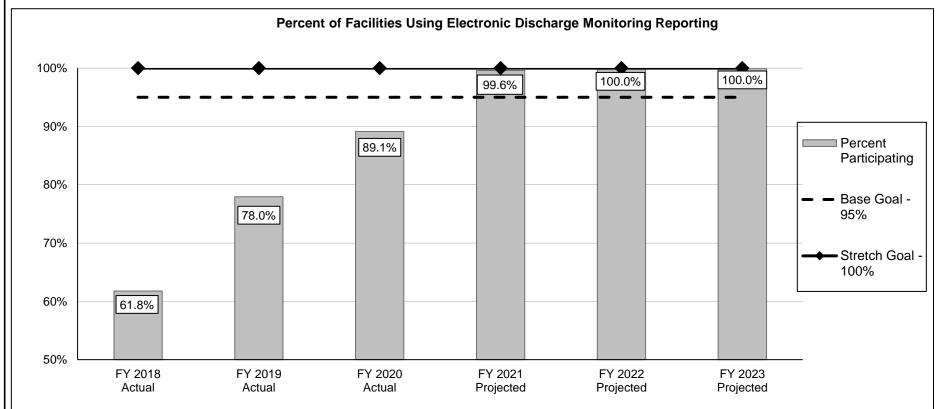
Permits cannot be reissued before the expiration date. ~300 general and ~200 site-specific permits expired in June but were renewed in July. This caused the percentage of general permits in FY 2019 and site-specific permits in FY 2020 to be less than 100 percent. The implementation of the Master General Permit Plan allowed for an increase in master general permits issued, which resulted in an increase of general permits issued in FY 2020. The Department has been reducing the backlog of permits since 2017, and anticipates eliminating the permit backlog by end of fiscal year 2023.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

2d. Provide a measure(s) of the program's efficiency (continued).



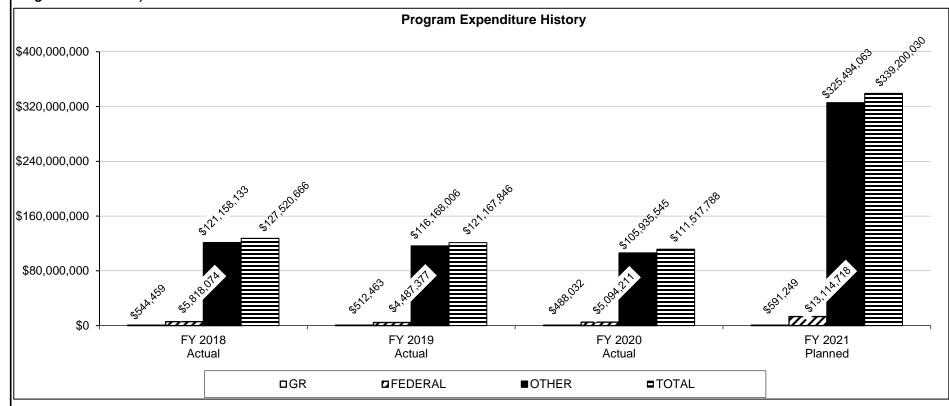
This is a measure of the number of National Pollution Discharge Elimination System regulated facilities that are required by the EPA eReporting Rule to submit discharge monitoring reports (DMRs) electronically known as eDMR. Until October 1, 2016, the use of eDMR was voluntary. After that date, all permits are required to use the eDMR system at renewal when submitting DMRs. With over 40,000 DMRs received by the program annually, the benefit of using eDMR is to streamline the submittal process, reduce transcription errors, and to have the ability to submit DMRs instantaneously.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

3. Provide actual expenditures for the prior three fiscal years and planned expenditures for the current fiscal year. (Note: Amounts do not include fringe benefit costs.)



Financial data includes operating and pass-through appropriations. In many cases, pass-through appropriations have been provided to allow for encumbrance and payment of our commitments, which often span multiple fiscal years causing high unexpended balances. Not included in the data above is appropriation authority of \$225,529,824 for Water Infrastructure loans and grants and \$11,000,000 for Water Quality Studies encumbrance purposes only, which must lapse. Otherwise, FY 2021 Planned is shown at full appropriation.

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

## 4. What are the sources of the "Other " funds?

Stormwater Control Fund (0302); Water Pollution Control Funds (0329, 0330); Natural Resources Protection Fund - Damages Subaccount (0555); Natural Resources Protection Fund - Water Pollution Permit Fee Subaccount (0568); Solid Waste Management Fund (0570); Underground Storage Tank Regulation Program Fund (0586); Water and Wastewater Loan Revolving Fund (0602); Water and Wastewater Loan Fund (0649); Hazardous Waste Fund (0676); Safe Drinking Water Fund (0679); Stormwater Loan Revolving Fund (0754); Rural Water and Sewer Loan Revolving Fund (0755); Concentrated Animal Feeding Operation Indemnity Fund (0834)

# 5. What is the authorization for this program, i.e., federal or state statute, etc.? (Include the federal program number, if applicable.)

Title 42. Chapter 6A. Subchapter XII. Part B. § 300(g)

Title 33, Chapter 26, Subchapters I-IV

Section 319(h)

Section 604(b)

Section 104(b)(3)

Public Law (107-117) USGS Organic Act of 1879

Missouri Constitution Article III, Sect 37(c),(e),(g), & (h)

RSMo Chapter 644

RSMo 640.100 through 640.140

RSMo 640.100.3 and 640.120

RSMo 644.006 through 644.096 and

RSMo 644.125 through 644.150

RSMo 640.700 through 640.758

RSMo 644.101 through 644.124

RSMo 644.500 through 644.564

Federal Safe Drinking Water Act

Federal Clean Water Act

Federal Clean Water Act

Federal Clean Water Act

Federal Clean Water Act

Recovery from and Response to Terrorist Attacks on the United States Act, 2002

USGS Survey Research and Data Acquisition

Water Pollution Control and Storm Water Control Bonds

Missouri Clean Water Law

Missouri Drinking Water Law

Water Testing Required

Planning, Permitting, Inspection, Remediation, Technical Assistance, Enforcement, and

Wastewater Operator Certification

Concentrated Animal Feeding Operation

Water Pollution Grants and Loans or Revolving Fund

Water Pollution Bonds

Department of Natural Resources HB Section(s): 6.225, 6.235, 6.240, 6.245

**DEQ - Water Protection Program** 

Program is found in the following core budget(s): Water Protection Program

# 6. Are there federal matching requirements? If yes, please explain.

Clean Water Act §319(h) Non-point Source Management Grant 40% State/Local (EPA) Clean Water Act §604(b) Water Quality Management Planning Grant 100% Federal (EPA) Clean Water State Revolving Fund Capitalization Grant 20% State/Local (EPA) Drinking Water State Revolving Fund Capitalization Grant 20% State/Local (EPA) Performance Partnership Grant funds for Water Pollution \$438,127 State (EPA) Performance Partnership Grant funds for Drinking Water 25% State (EPA) Section 106 Special Monitoring Grant 100% Federal (EPA) Small and Disadvantaged Communities Drinking Water Grant 45% State/Local (EPA)

# 7. Is this a federally mandated program? If yes, please explain.

EPA has delegated implementation of the Federal Clean Water Act and the Federal State Drinking Water Act to Missouri. This includes the Clean Water State Revolving Fund and Drinking Water State Revolving Fund.

The Federal Safe Drinking Water Act requires public drinking water systems to conduct routine chemical, radiological, and microbiological monitoring of the water. Section 640.100.3, RSMo, mandates that the state will provide this monitoring for these drinking water systems.

The Water Quality Studies appropriation funds mandates of the Federal Clean Water Act to report on water quality, identify impaired waters, and develop permits and strategies to restore and maintain water bodies.