

Water Protection Program Update

Chris Wieberg, Director
Water Protection Program

Organizational/Leadership Changes

- Hannah Humphrey - Deputy Director of DNR (Previously FAC Director)
- Kyra Moore – Director of DEQ
- Art Goodin – Deputy Director of DEQ (over the WPP)
- Sara Pringer – Director of the Financial Assistance Center (FAC now resides in DEQ vs WPP)
- John Hoke – Branch Chief for the Water Pollution Control Branch

Our Department Goals

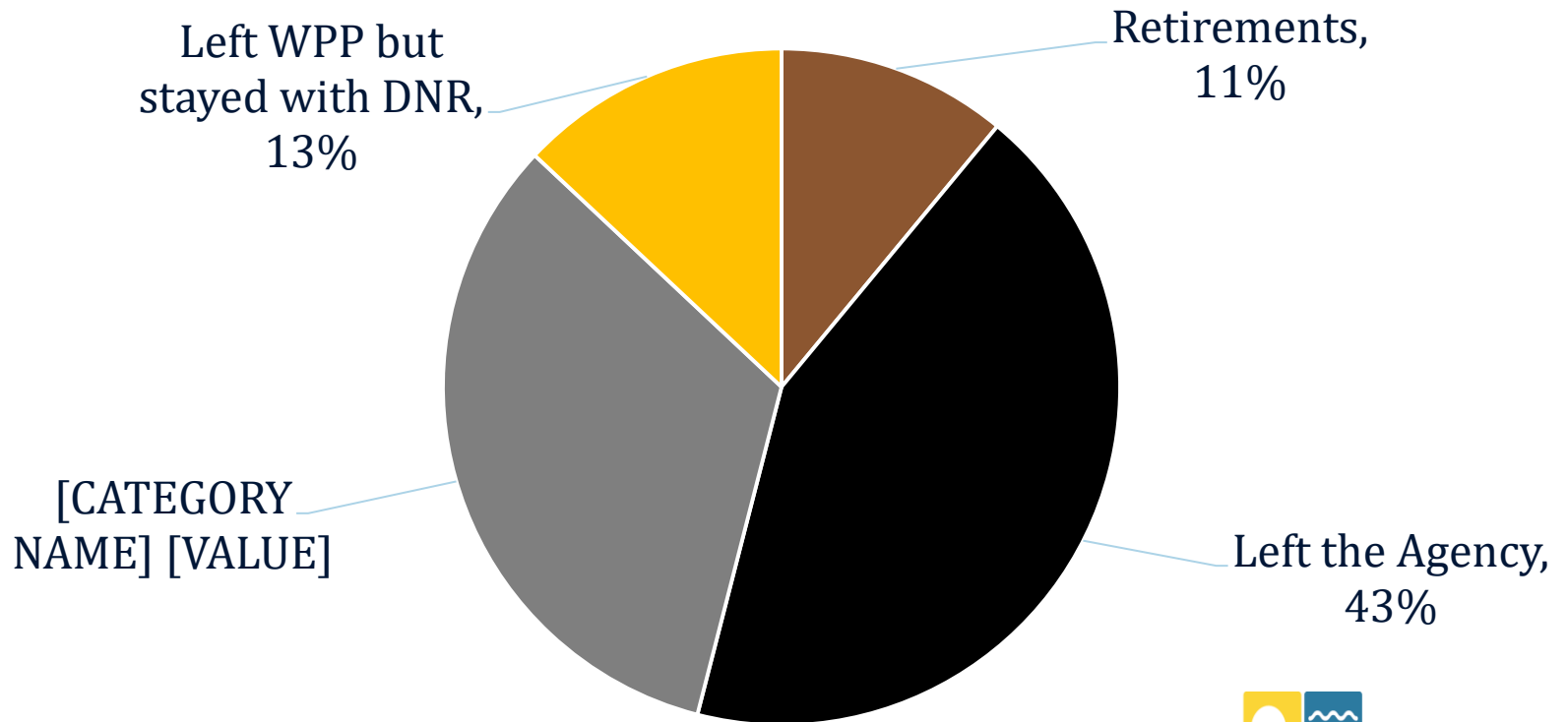
To protect our air, land, water, and mineral resources; preserve our unique natural and historic places; and provide recreational and learning opportunities; while promoting the environmentally sound and energy-efficient operations of businesses, communities, agriculture, and industry for the benefit of all Missourians.

- Compliance assistance
- Pass-through funding (approximately \$500 million a year)
- Partnerships to leverage resources, expertise
- Improve, maintain state park infrastructure
- Complete water supply and flood infrastructure projects funded by the General Assembly
- Open communication with partners



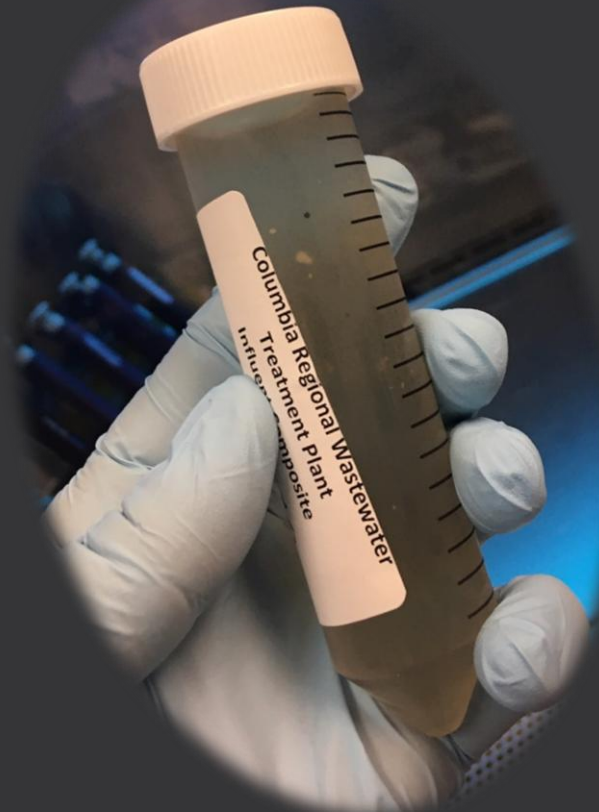
WPP Resource Challenges - Turnover

SFY22 = 33% Position Turnover Rate (percentage of positions vacant sometime during July 1, 2021 – June 30, 2022)



Coronavirus Sewershed Surveillance Project (CSSP)

Monitoring SARS-COV-2 through Wastewater



Funded by CDC ELC, NIH, and
Environmental Public Health Tracking

CSSP Recognition

- Storymap recognized by ESRI
- Only State Agency funded by NIH for our research
- Mentions in Time Magazine, Bloomberg, New York Times
- 2021 Governors Award for Quality and Productivity – Pinnacle Award

Sewershed Sampling Questions

- What are DNR's thoughts about this program?
 - Cost effective
 - Required resource shifts to manage the project
 - Could be used for other public health surveillance
- Does DNR see an ongoing public health function for wastewater sampling?
 - Yes, for continued surveillance of Covid 19
 - Future work for other viruses is dependent on the priorities of MODHSS and funding.

American Rescue Plan Act Water, Wastewater, and Stormwater Grants

- Grant application were due to FAC by July 14th
- WPP Engineering will work on construction permits and operating permit modifications.
- Projects will need to be complete by Dec. 2026 so file your permit applications ASAP.
 - 125 M – DW
 - 125 M – WW
 - 150 M – SW
 - 10 M – LSLI



Summary of Four PFAS Health Advisories

- EPA is releasing health advisories for four PFAS:
 - **Interim HAs:** PFOA and PFOS
 - **Final HAs:** GenX chemicals (PFOA replacement) and PFBS (PFOS replacement)
- Analytical methods can detect GenX chemicals and PFBS at the HA values but cannot detect PFOA and PFOS at the level of the interim HAs.
- Because of this, EPA recommends that if water systems detect PFOA and PFOS, they take steps such as informing residents, undertaking monitoring, and examining steps to limit exposure.

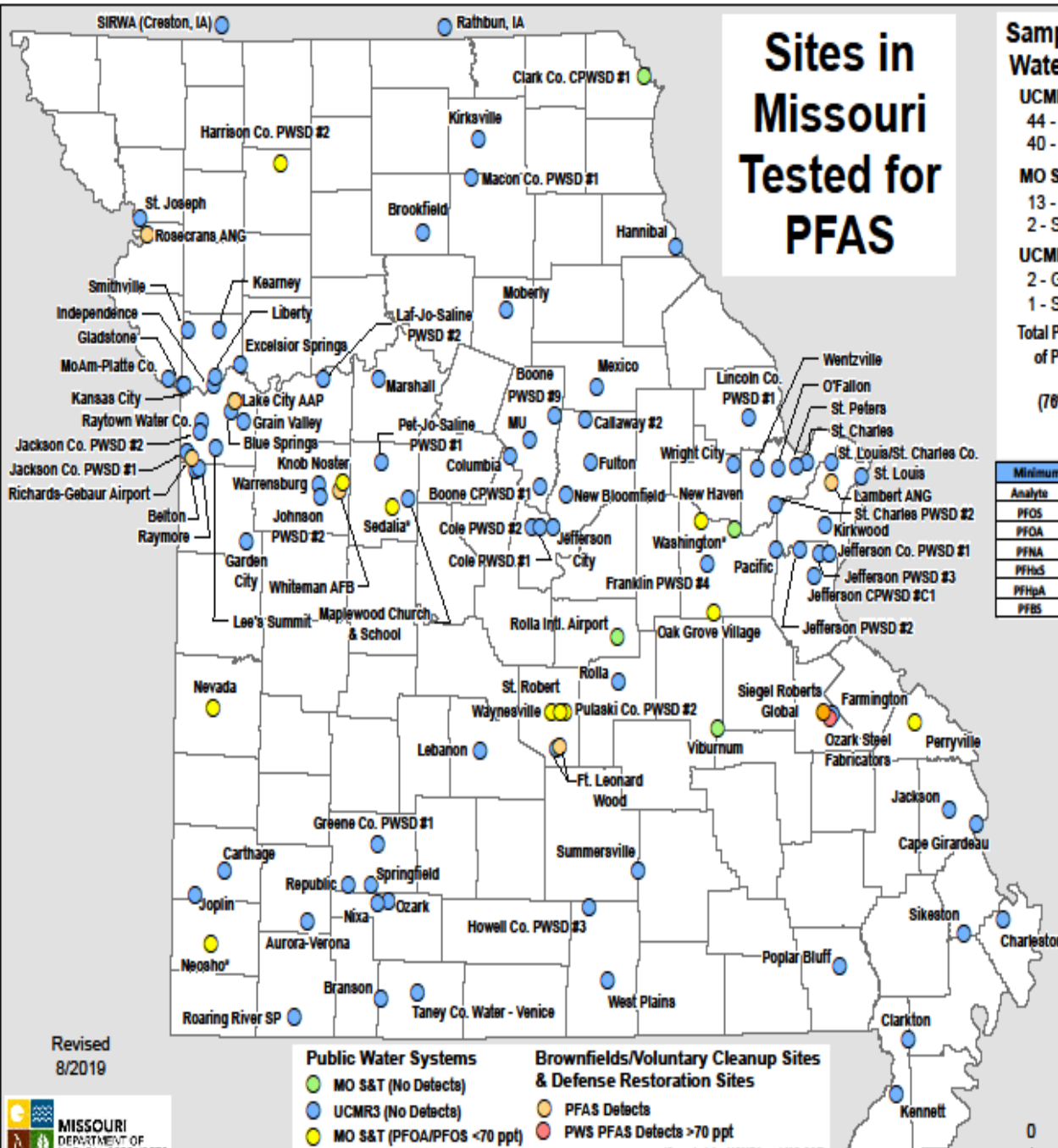
Chemical	Health Advisory (ppt)	Minimum Reporting Level (MRL) ^a (ppt)
PFOA	0.004 (Interim)	4
PFOS	0.02 (Interim)	4
GenX Chemicals	10 (Final)	5
PFBS	2,000 (Final)	3

^a Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) MRL is the minimum quantitation level that, with 95 percent confidence, can be achieved by capable analysts at 75 percent or more of the laboratories using a specified analytical method. These MRLs are based on the UCMR 5 requirement to use EPA Analytical Method 533.

Interim and Final HALs Questions

- How to explain this to the public?
 - DNR webpage, strategy, and action plan coming soon.
 - Public Water Supplies can use consumer confidence reports to notify customers of HAL exceedances.
- What is the status of water systems and wells in Missouri in comparison to these levels?
 - Interactive Map Viewer is currently being developed.
- Are there DNR recommendations to water systems?
 - Participate in upcoming sampling efforts.
- State/federal grant funding available for GAC/RO?
 - Yes – Apply to FAC to secure funding if you identify a problem, much of which will be grant.

Sites in Missouri Tested for PFAS



Sampled Public Water Systems

UCMR3:
 44 - Groundwater
 40 - Surface Water

MO S&T:
 13 - Groundwater
 2 - Surface Water

UCMR3 & MO S&T:
 2 - Groundwater
 1 - Surface Water

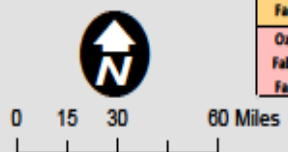
Total Population Served of PWSs Sampled:
 4,093,525
 (78% of 5,384,153 served)

Minimum Reporting Level (ppt)		
Analyte	UCMR3	MO S&T
PFOS	40	0.2
PFOA	20	0.2
PFNA	20	N/A
PFHxS	30	N/A
PFHpA	30	N/A
PFBS	90	N/A

PWS Facility	Sample Site	MO S&T PFAS Detections			
		September 2016	February 2017		
		PFOA (ppt)	PFOS (ppt)	PFOA (ppt)	PFOS (ppt)
Neosho PWS (SW)*	Raw	0.68	1.04	0.42	1.59
	Finished	0.67	1.05	0.31	0.6
Nevada PWS	Raw	<0.2	<0.2	0.57	0.6
	Finished	<0.2	<0.2	<0.2	<0.2
Waynesville PWS	Raw	0.43	<0.2	<0.2	<0.2
	Finished	0.26	<0.2	<0.2	<0.2
Pulaski Co. PWS #2	Raw	N/A	N/A	N/A	N/A
	Finished	<0.2	0.32	<0.2	0.3
Perryville PWS (SW)	Raw	0.66	0.68	0.24	0.29
	Finished	0.51	0.72	0.24	0.27
Knob Noster PWS	Raw	<0.2	<0.2	<0.2	<0.2
	Finished	0.3	0.82	<0.2	<0.2
Oak Grove Village PWS	Raw	<0.2	0.43	0.28	0.43
	Finished	<0.2	0.46	0.29	0.54
New Haven PWS	Raw	<0.2	<0.2	N/A	N/A
	Finished	0.41	<0.2	<0.2	<0.2
Sedalia PWS*	Raw	<0.2	<0.2	<0.2	<0.2
	Finished	<0.2	1.21	<0.2	<0.2
Harrison Co. PWS #1	Raw	0.35	<0.2	N/A	N/A
	Finished	0.31	<0.2	N/A	N/A
St. Robert PWS	Raw	<0.2	0.25	<0.2	0.24
	Finished	<0.2	0.25	<0.2	0.24

Other Sites Sampled (soil, monitoring wells, surface water)

MoDNR Defense Sites Restoration Unit - PFAS Report	
Location	PFAS Testing Summary
Lake City AAP - Independence	24 PWS Samples - Only PFHpA detected (6.3 ppt).
Whiteman AFB	4 AFFF sites tested with 0.56-4,900 ppb PFOA/PFOS. PWS not impacted.
Richards-Gebaur AFB	6 sites tested with 0.73-329 ppb PFOA/PFOS. PWS not impacted.
Ft. Leonard Wood PWS	18 samples at PWS Treatment Plant (2013) - no detects
Lambert ANG - St. Louis	3 sites tested with 0.02-0.57 ppb PFOA/PFOS. No known wells in area.
Rosecrans ANG - St. Joseph	6 of 9 monitoring wells and 2 surface water sites with 0.01-34 ppb PFOA/PFOS. PWS not impacted.
MoDNR Brownfields/Voluntary Cleanup (BFVC) Section	
Location	PFAS Testing Summary
Siegel Roberts - Farmington	15 monitoring wells with PFAS detections up to 2.8 ppb. Contaminated offsite Ozark Steel Fabricators well.
Ozark Steel Fabricators - Farmington	Inactivated PWS after connection to Farmington PWS from BFVC site impacted well.



State PFAS Sampling Efforts

In addition to UCMR 5

EPA Performance and Partnership Grant (PPG)

- PFAS Sampling Project 2022
 - ~200 PWS <3,300 population to be sampled
 - Screening for 18 PFAS analytes (Method 537.1)
 - Confirmation Samples collected by DNR Regional Office
 - Samples will include 29 PFAS analytes from both Methods
 - Field Reagent Blank will be included to rule out sampler contamination
 - Water system and public notification of results above Health Advisory (DHSS and EPA R7)

Voluntary Point Source PFAS Sampling

- Permit Writers will solicit participation at permit renewal for certain facilities
- Recommended Only
- Influent, Effluent, Biosolids
- Quarterly Sampling and Reporting
- CWA Method 1633
- 40 target Analytes
- Stormwater-only facilities should collect samples from rain events greater than 0.1 inches in magnitude and occurring at least 72 hours from the previously measurable precipitation event



Potential PFAS site inventory – Coming Soon

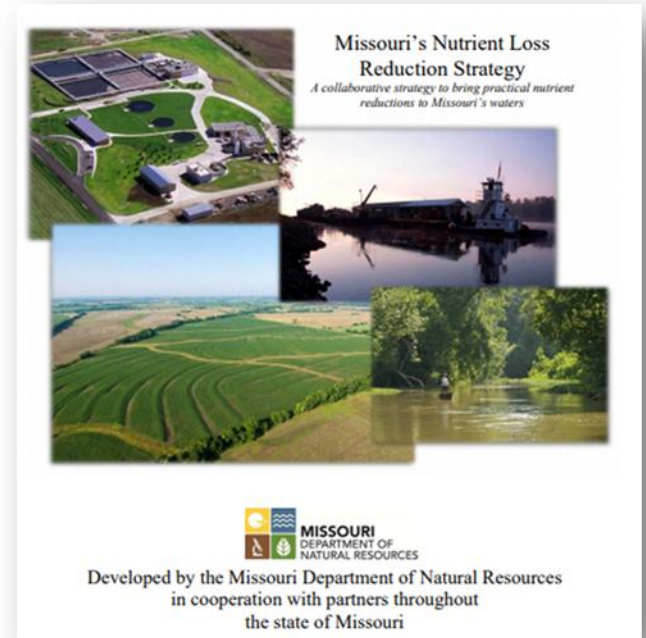
- Currently being scoped
- Utilizing an EPA contactor
- Potential Sites are established with similar methodologies used in other states
 - SIC Codes
 - POTWs
 - Landfills
 - Military
 - Firefighting Training
 - Airports etc.

Lead and Copper Rule

- LCRR – LC Rule Revision – effective December 2021
- LCRI – LC Rule Improvements – Coming soon but before the LCRR compliance date.
- LSLI – Lead Service Line Inventory
 - Compliance Date **Oct 16, 2024**
 - Guidance available on our webpage
 - Financial Opportunities Available
- Get the Lead Out of Schools Act

WPP Nutrient Priorities

- TP Rule (Revisions to 10 CSR 20-7.015)
- NLRS projects funded by BIL grants
- Watershed Permitting and Water Quality Trading
- Nutrient Emphasis in Source Water Protection
- Targeted Conservation
- Updates to the state's Nutrient Loss Reduction Strategy (NLRS)
- Addressing MCE's Cyanotoxin Petition



EPA's approach to permit reviews, inspections, enforcement, goal setting

- EPA compliance initiative for DW
 - EPA inspections of DW systems will be targeted to specific issues beyond the standard Sanitary Surveys.
 - EPA still reviews major facility PNs and Master General permits.
 - CWA SNC Compliance initiative
 - 2019 CW Enforcement Program Review
 - Data concerns
 - Timely return to compliance
 - Documentation
 - Determining Pretreatment compliance and RTC





Update from the Branch – July 2022

REGFORM Water Seminar

John Hoke

Chief, Water Pollution Control Branch

Water Pollution Control Branch (WPCB)

Watershed Protection Section

Heather Peters, Chief

Engineering Section

Cindy LePage, Chief

Operating Permits

Michael Abbott, Chief

Compliance & Enforcement Section

Joe Clayton, Chief

Data Management Unit

Rebecca Cripe, Chief

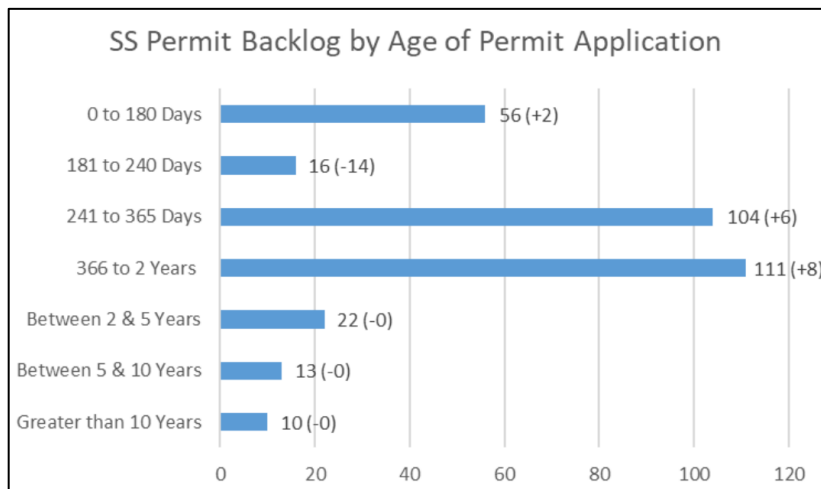
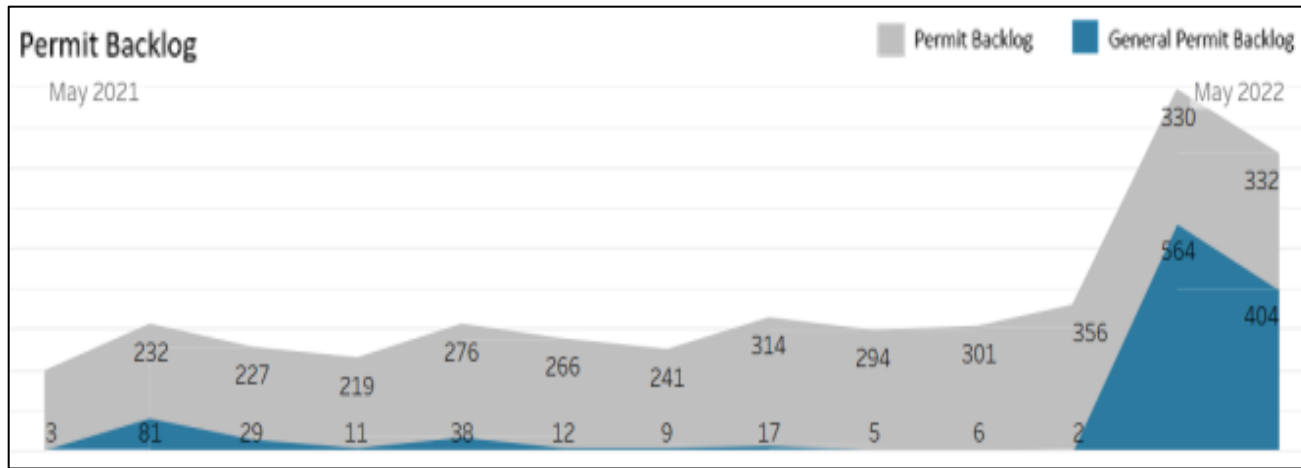


WPCB – Rulemakings In Progress

- Electronic Permit Applications – 10 CSR 20-6.010
- RHD Alternative Determination – 10 CSR 20-6.030
- Stormwater Qualifying Local Program – 10 CSR 20-6.200
- Total Phosphorous Rule – 10 CSR 20-7.015
- Algal Toxin Petition – 10 CSR 20-7.031
- Alternative Design (Emergency Storage) – 10 CSR 20-8.130
- Wastewater Treatment Lagoons (Earthen Basin) & Wastewater Irrigation Alternatives – 10 CSR 20-8.200

WPCB – Initiatives and Projects

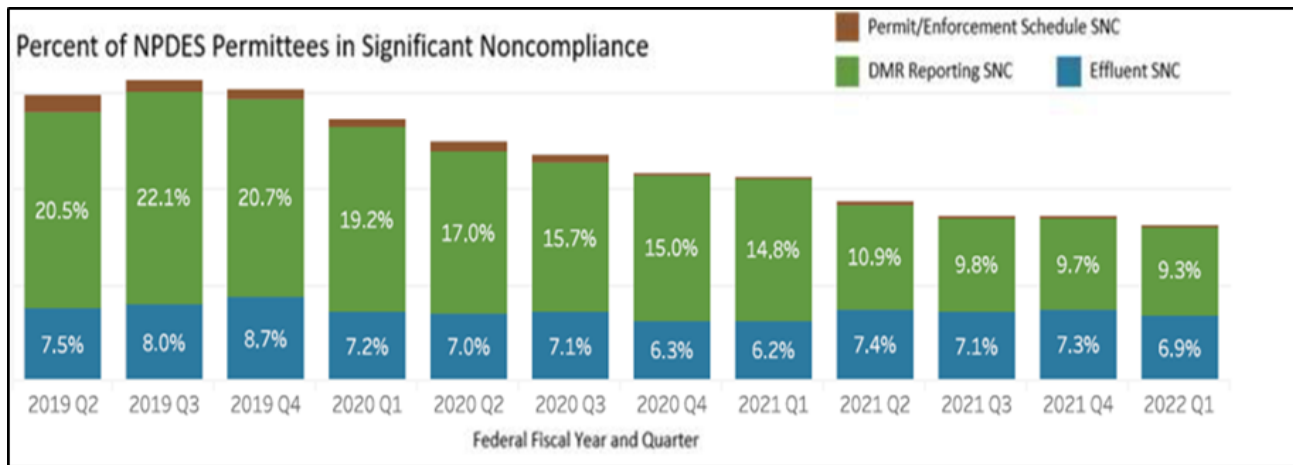
Permit Backlog Reduction



- No net increase in backlog
- Reduce >2 year backlog by 50% (Dec 2022)

WPCB – Initiatives and Projects

Reduction of Significant Non-Compliance (SNC)



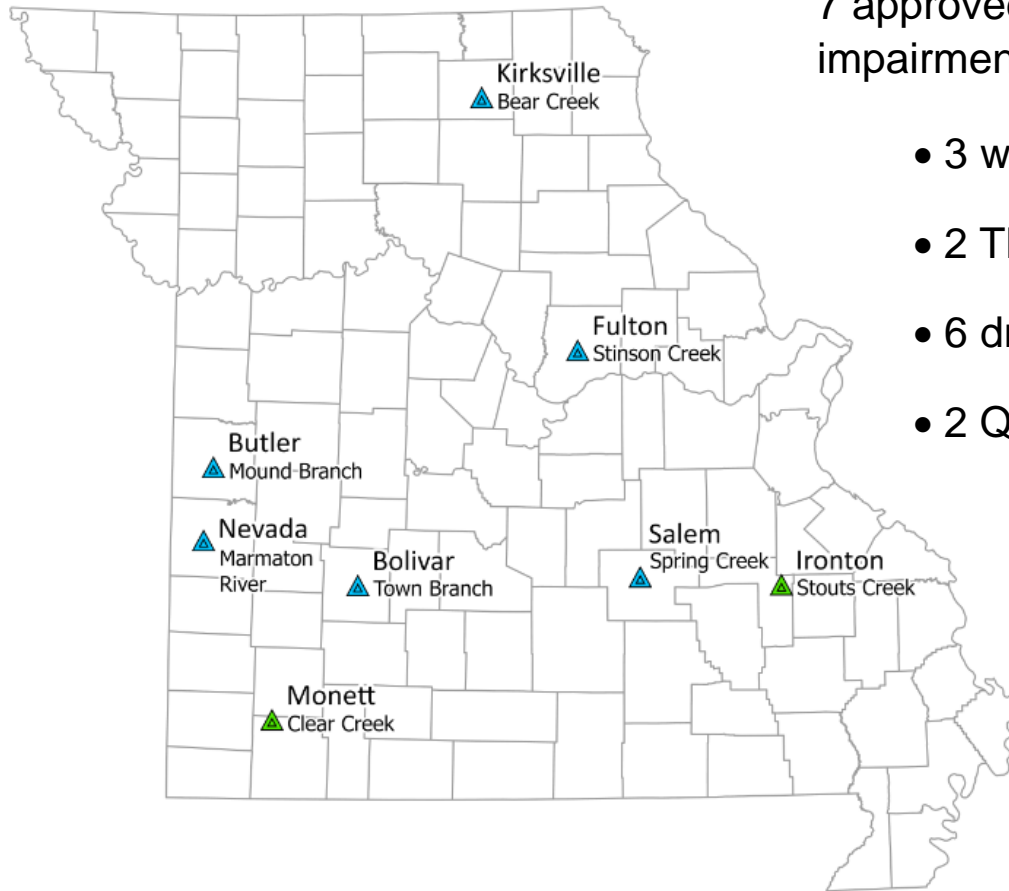
- Continue to clean-up MoCWIS and ECHO data
- Continue to use autodialer for DMR SNC
- Continue to enroll facilities in eDMR

WPCB – Initiatives and Projects

Total Maximum Daily Load (TMDL) Development

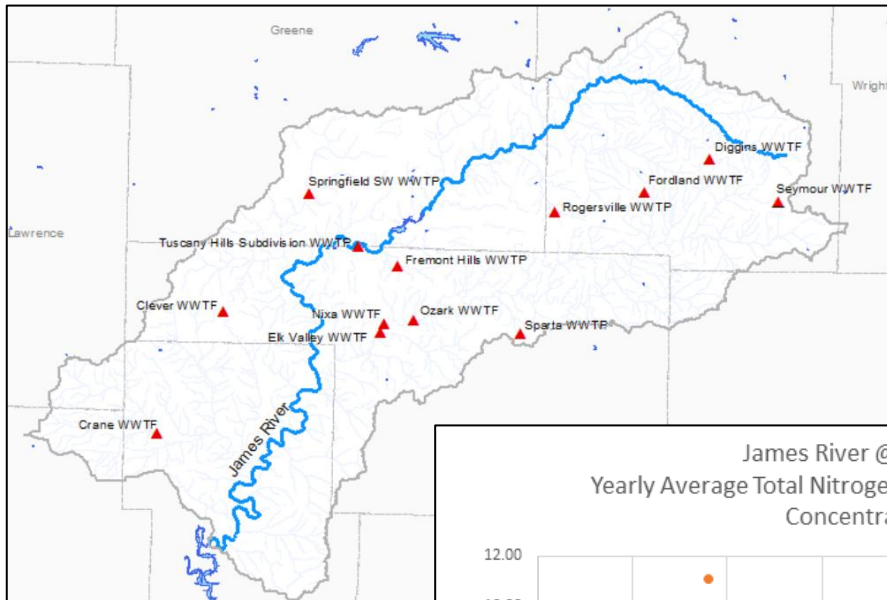
7 approved TMDL documents addressing 22 separate impairment listings and 222 stream miles

- 3 were revisions to old 2010 TMDLs
- 2 TMDL documents awaiting approval @ EPA
- 6 draft TMDLs currently under development
- 2 QUAL2K models instead of TMDL



WPCB – Initiatives and Projects

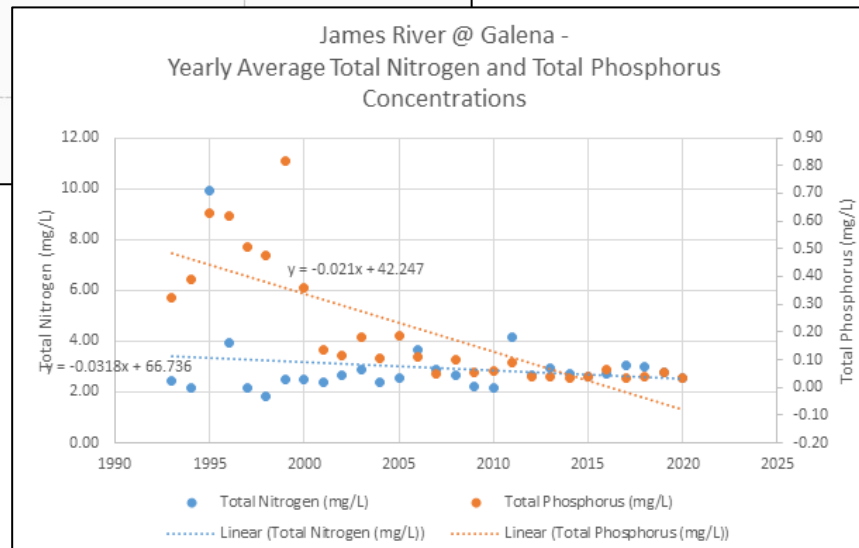
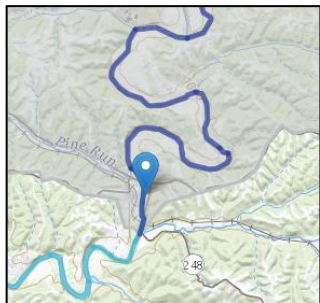
Watershed-based TMDL Implementation



James River TMDL approved May 2001

TMDL Targets @ Galena, Mo (USGS 07052500)

- TP = 0.075 mg/L
- TN = 1.5 mg/L



DF > 100,000 gpd

Captures 99.4% of TN

TN WLA Equity

Optimization, Trading

Thank You

- Questions and Comments for WPP or the WPCB can be directed to:

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