

Water Quality Standard Variances in Wisconsin

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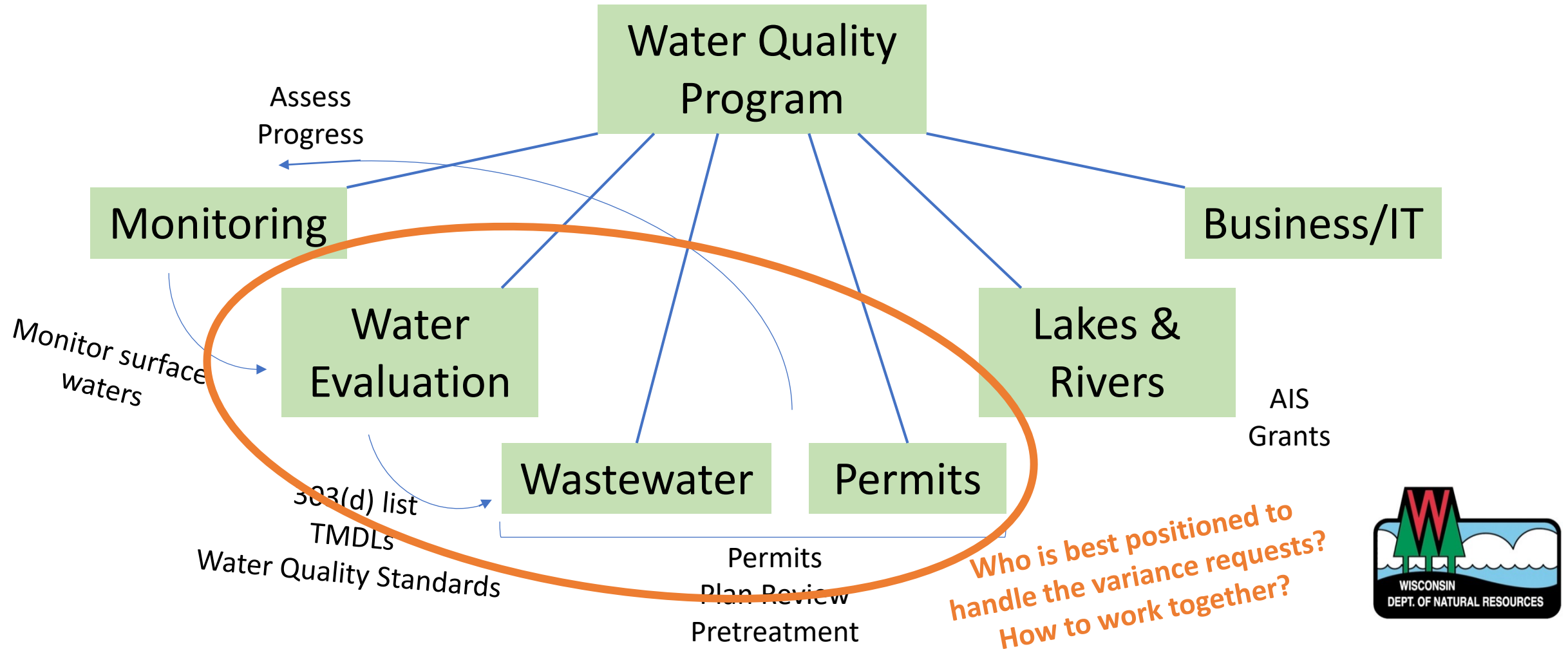


Outline

- Workflow for Processing Variances
 - Permits Staff vs. Standards Staff
 - Work Flow
- Variance Outcomes (Mercury as an example)
- MDV for Phosphorus



Wisconsin DNR's Water Quality Bureau Structure



Who should lead on variance requests?

- Standards Staff:
 - Knowledge of standards regs
 - Central contact person
 - Variances are temporary standards revisions
- Permits Staff:
 - Facility-specific knowledge
 - Knowledge on treatment feasibility
 - Involvement in permitting process/schedule

It Depends...



In Wisconsin...

Pollutant	Standard(s)	Number of Variances
Mercury	1.3 ng/L	~76
Chloride	395 mg/L (chronic) 757 mg/L (acute)	~66
Copper	Variable (hardness)	~19
Phosphorus	0.1 mg/L (River) 0.075 mg/L (Stream) 0.03-0.04 (Lakes)	92 MDV 14 individual
Arsenic	0.2 ug/L (Public Water Supply)	1

- Permitting staff coordinate
- Created Variance Coordinator
 - ~0.5 FTE
 - Reviews all variances
 - Coordinates with standards staff at EPA (and WI)
- Established Process with EPA Region 5



Variance Processing

Wisconsin Drafting

Permit Staff

Standards Staff



EPA Review

Permit Staff

Standards Staff

Standards Staff Involvement: Triennial Standards Review – Priorities for 2018-2020

Antidegradation
Bacteria Criteria Revision
Biocriteria
Chloride Variance Streamlining
Designated Uses Process Revision
P Assimilative Capacity in GLs
P Site Specific Criteria
Wetlands Floristic Assessment
Numeric Benchmarks

Aquatic Life
Criteria Revisions

P Criteria for
2-Story Lakes
**Arsenic Variance
Process**

Cyanobacteria
Human Health Criteria Revisions
Mercury MDV
Outstanding/Exceptional Resource
Water Process Revision
PFOS/PFOA

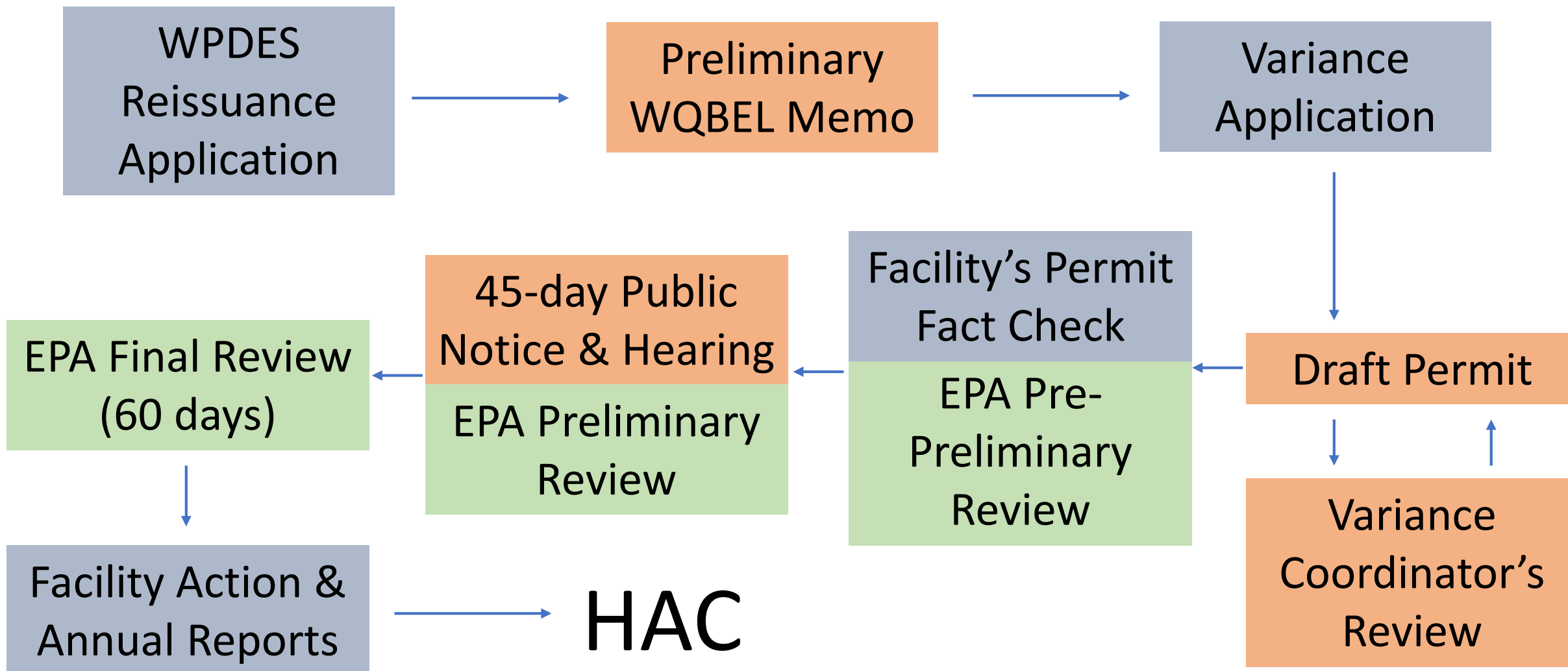
Ammonia
Arsenic
Chloride
Total Suspended Solids (TSS)
Copper
Nitrate/Nitrogen

- A:** In Progress
- B:** New Priorities
- C:** Priorities, but limited progress expected
- D:** Barriers to progress
- E:** Not Priorities



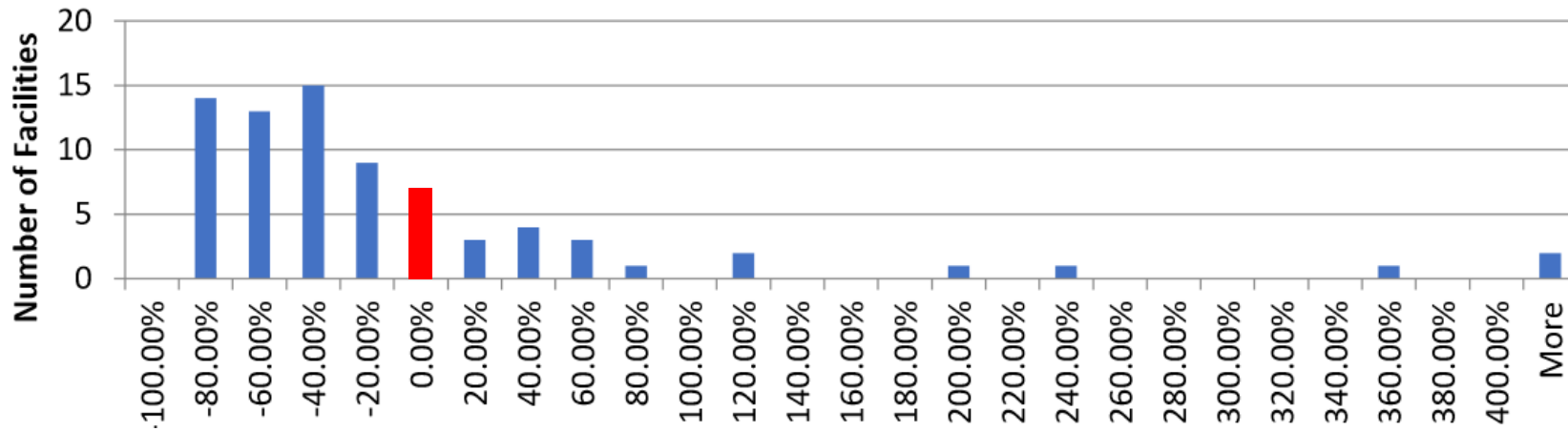


Wisconsin's Variance Process

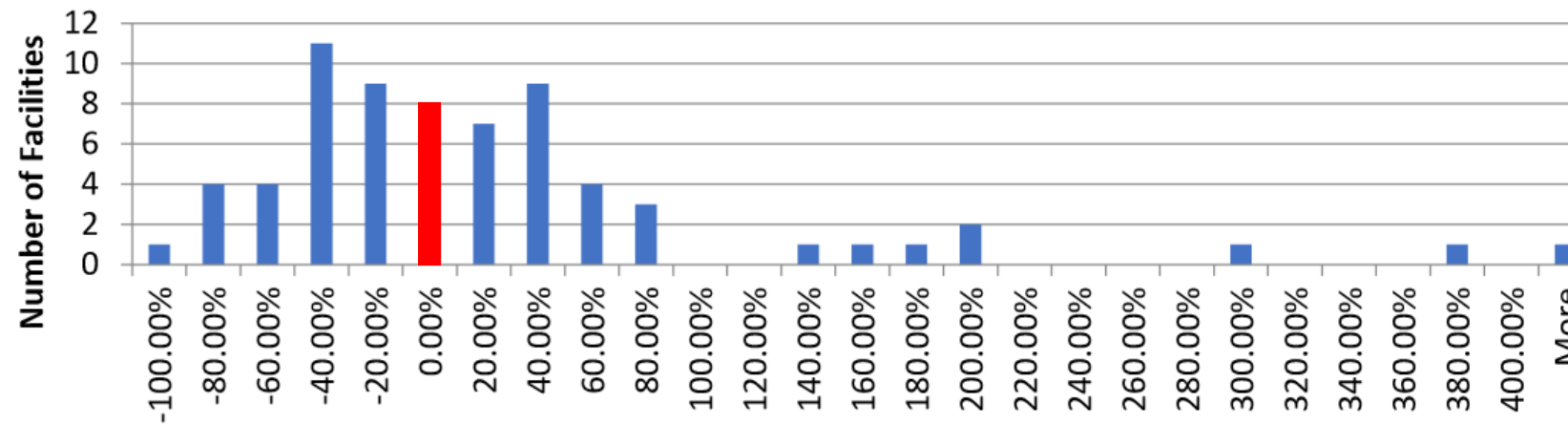


Variance Outcomes: Mercury

Change in 1-day P99 from 1st to 2nd Term



Change in 1 day P99 from 2nd to 3rd Term

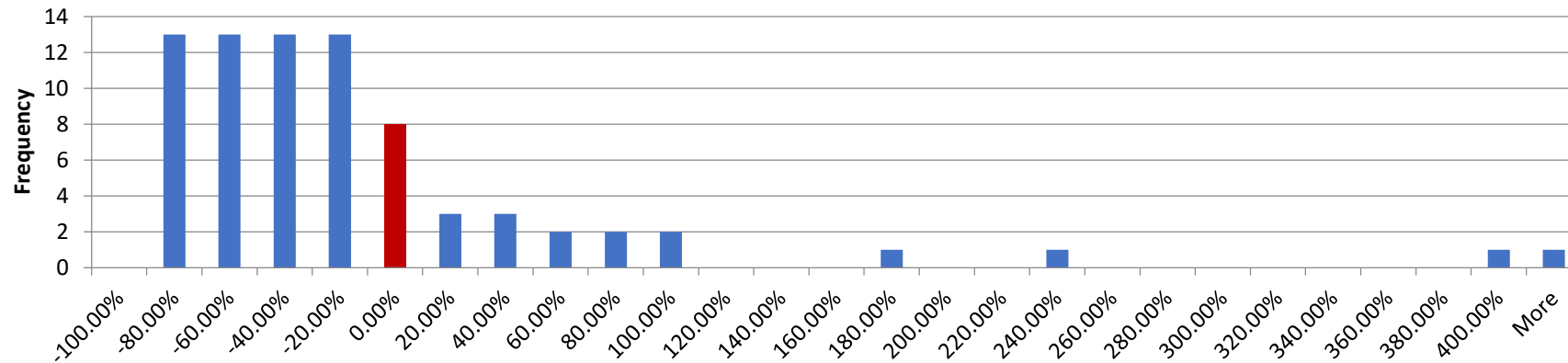


Percent Change

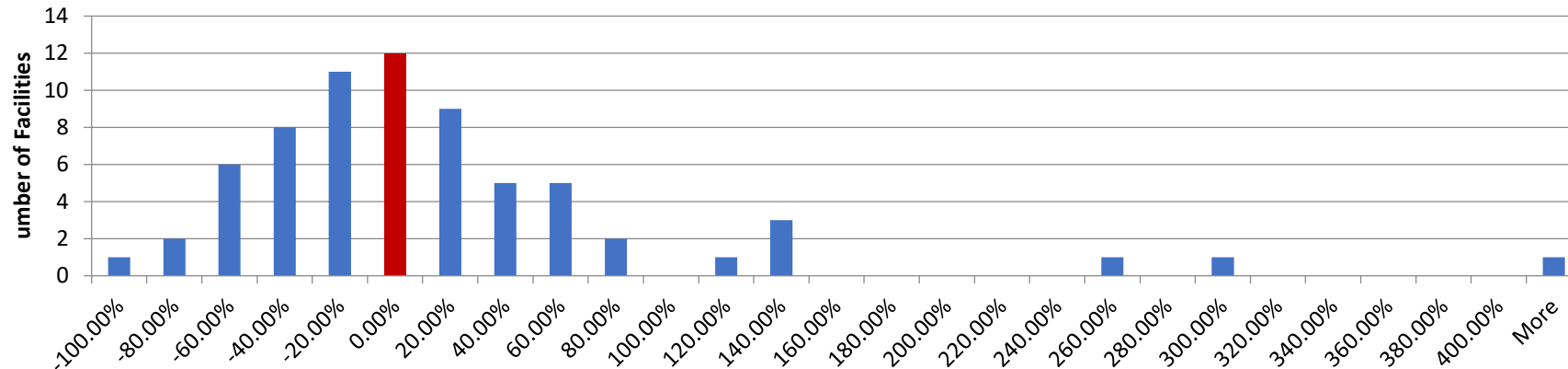


There is a similar shift for the 4-day P₉₉

Change in 4-day P99 from 1st to 2nd Term



Change in 4 day P99 from 2nd to 3rd Term



Variance Outcomes: Mercury

- **85%** of facilities show a long term downward trend
- **71%** of facilities were able to decrease 1-day P_{99} s between first and second terms
- **67%** of facilities were able to decrease 4-day P_{99} s between first and second terms
- **37%** of facilities were able to decrease 1-day P_{99} between second and third term
- **36%** of facilities were able to decrease 4-day P_{99} s between second and third term



Multidischarger Variance for Phosphorus



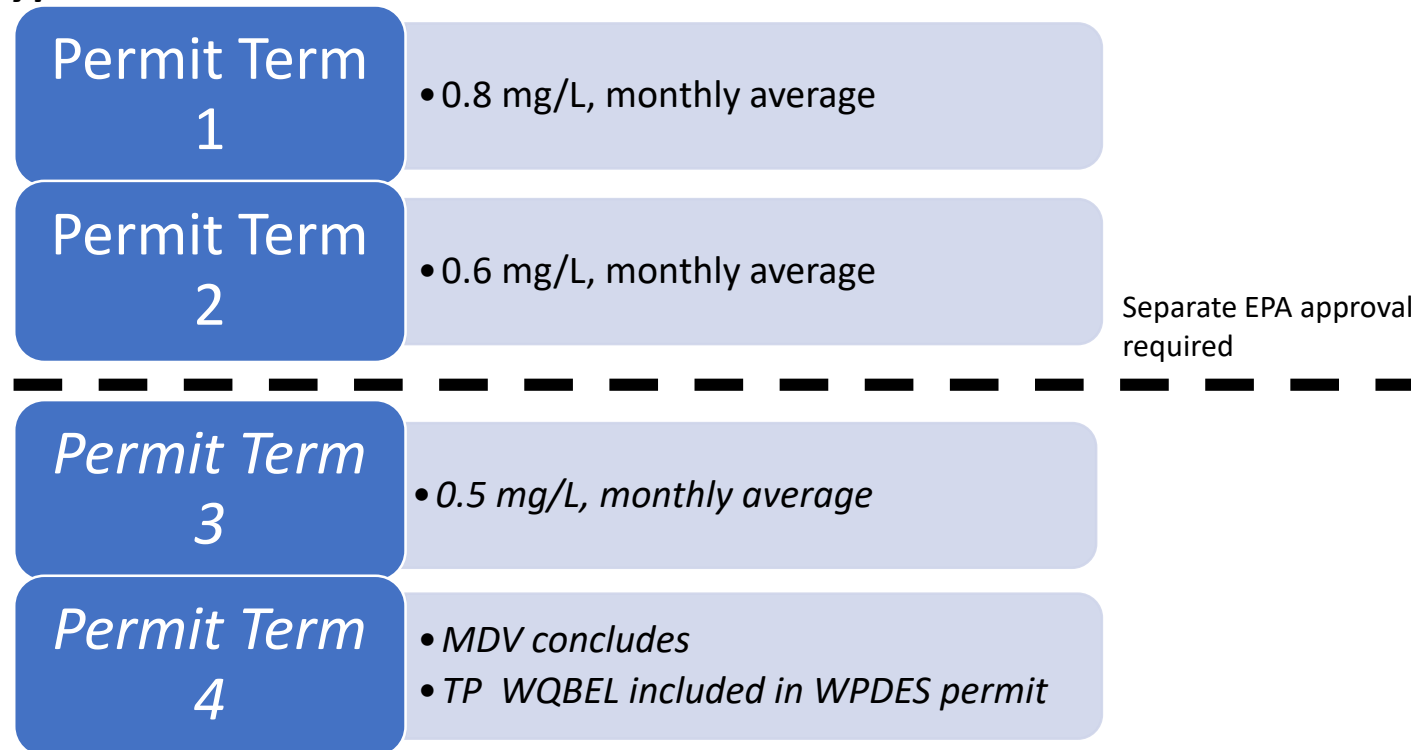
- Eligibility:
 - 1. Be in an eligible county
 - 2. Require a major facility upgrade
 - Tertiary Filtration or similar
 - 3. Meet Primary/Secondary Screeners
 - >2% MHI
 - Incur costs in top 75% of industry
 - MHI < \$53,000
 - Population Growth < 4.4%
 - Etc.



Multidischarge Variance for Phosphorus

- ***Reduce phosphorus discharge:*** reduce phosphorus load each permit term of MDV coverage

Typical interim limits:



Multidischarger Variance for Phosphorus

- ***Reduce phosphorus discharge:*** reduce phosphorus load each permit term of MDV coverage

AND

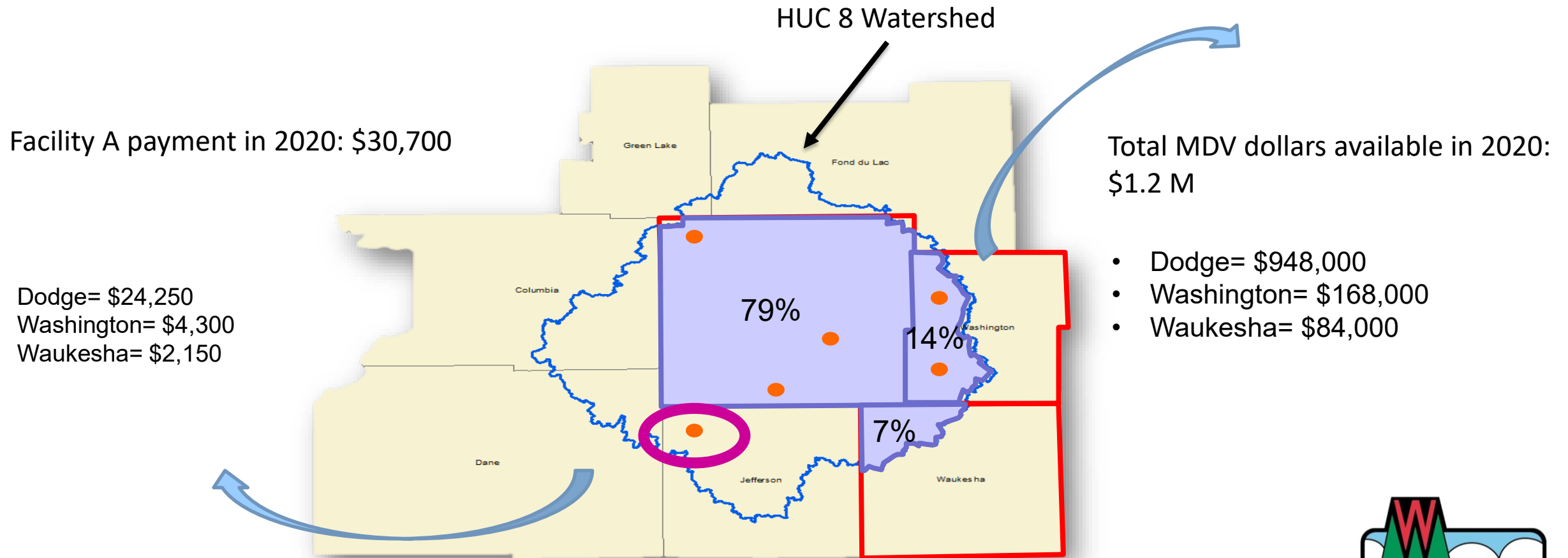
- ***Implement a watershed project that reduces nonpoint source phosphorus pollution:***

1. Implement watershed project directly;
2. Work with a third party to implement a watershed project; or
3. Make payments to County LCDs to implement ag practices (cost sharing + NR 151 compliance)

- **Projection: >\$1M available to counties in 2020**
- **To be reevaluated through triennial standards review**



MDV Funding Distribution: Hypothetical Example



Questions

