

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

# DNR UPDATES

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Wastewater Section Chief  
February 14, 2024



# Agenda

- Water Quality Standards Updates
  - Triennial Standards Review Priorities
  - Antidegradation
  - Human Health Criteria
- PFAS Groundwater Standards
- Disinfection Guidance
- In-person Operator Certification Exams
- WET Test Failures
- Upcoming General Permit Reissuances
- NR 110 Update
- Meat and Poultry Effluent Limit Guidelines
- Staffing Updates
- Operator and Facility of the Year Awards

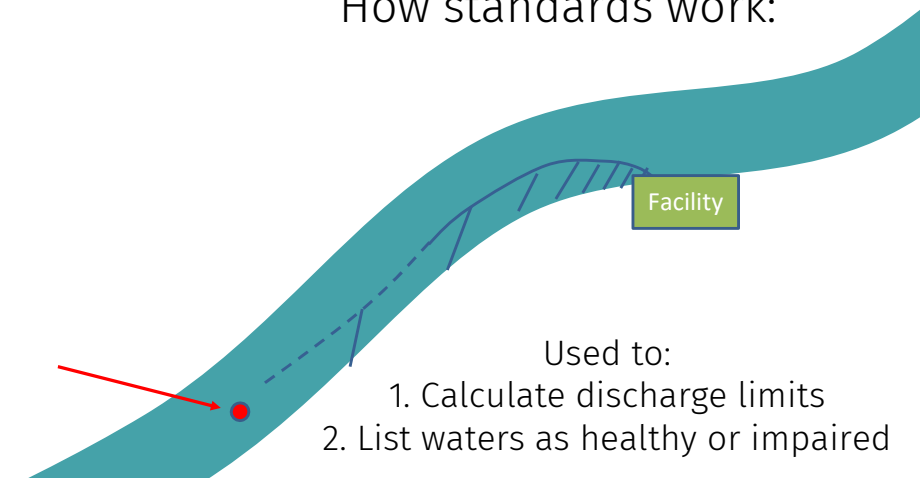


# Water Quality Standards Process (TSR)

How standards are developed:

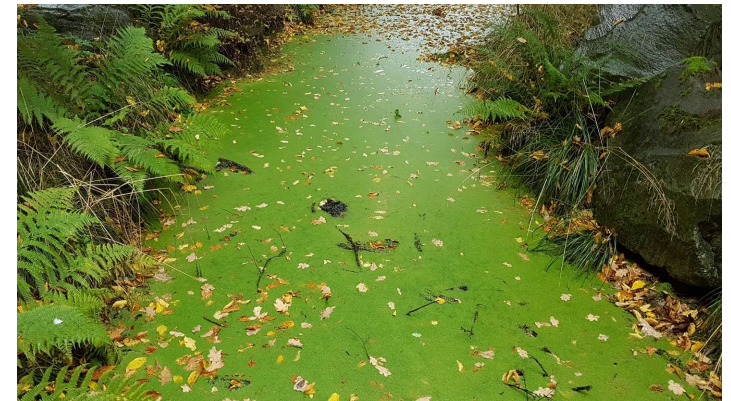
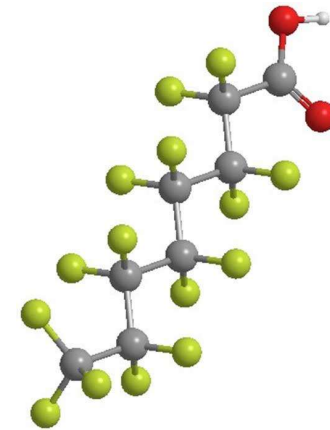


How standards work:



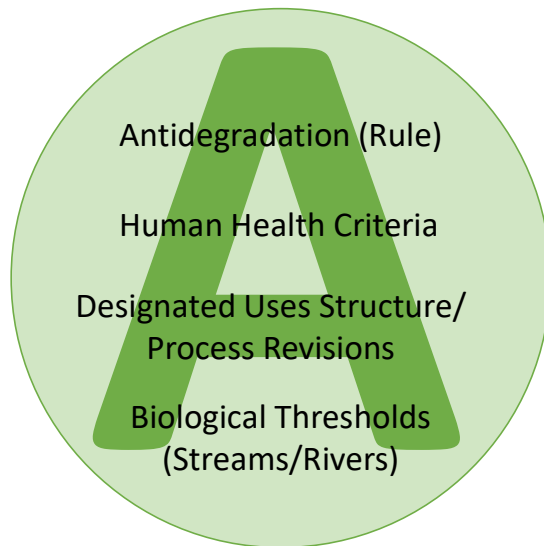
# Completed Efforts from Last Triennium

- PFOS & PFOA Standards ✓
- Waterbody Assessment Rule ✓
- Site-specific Criteria Process for Phosphorus ✓
- Variance Streamlining (Hg & Chloride) ✓
- Antidegradation (seeking legislative approval)
- Human Health Criteria (Scope statement drafted)

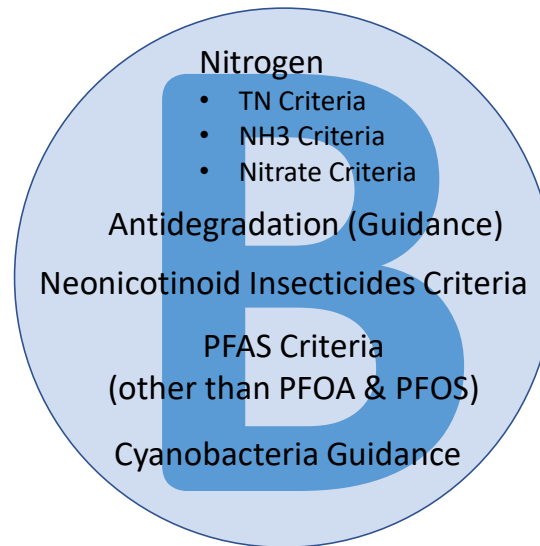


# Proposed Prioritization for 2024-26

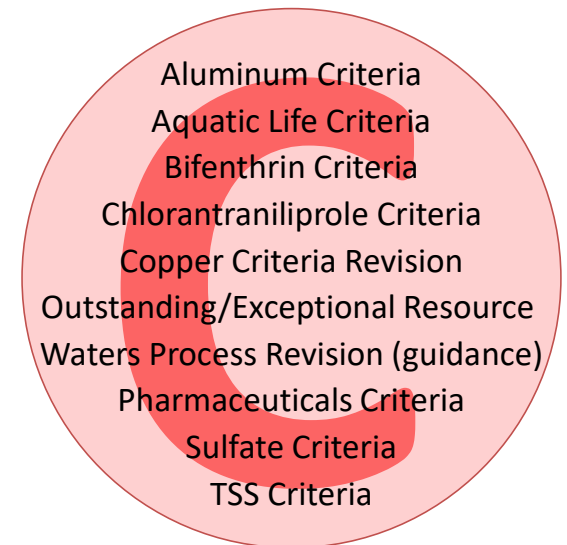
## PRIORITIES



## EXPLORATORY WORK/ AS TIME ALLOWS

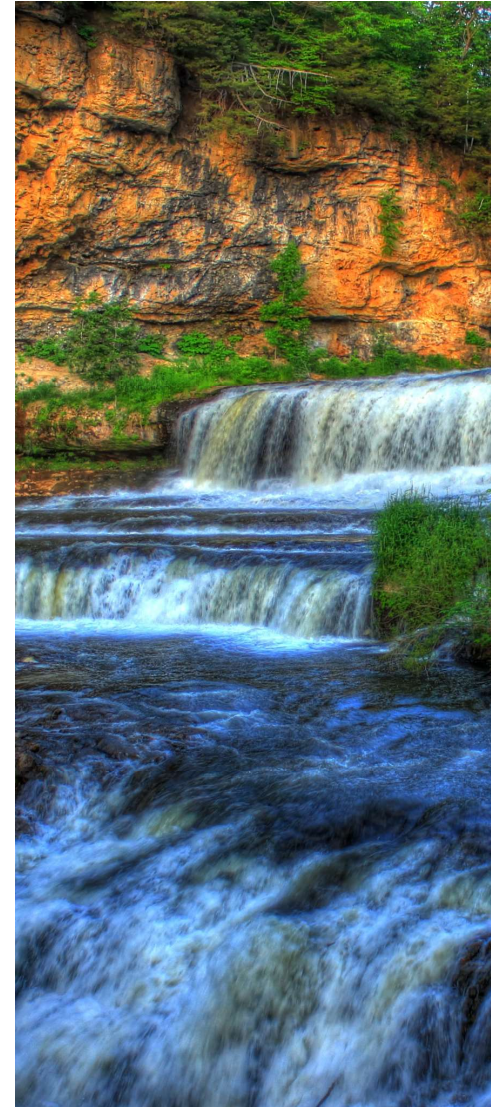


## NOT PRIORITIES THIS CYCLE



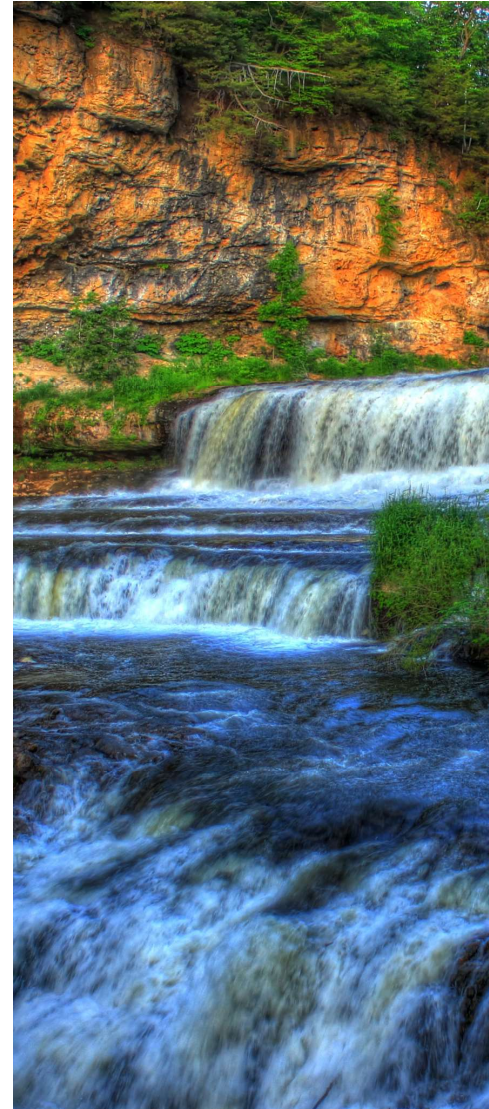
# Antidegradation

- Antidegradation: Prohibits degradation of high-quality waters except where necessary to support social or economic development
- Purpose:
  - Consistency with 2015 federal requirements
  - Clarify when antidegradation reviews are necessary
    - For new or increased discharges that cannot meet limits and result in “significant lowering of water quality” on high quality waters
      - 10% of assimilative capacity (current is 33%)
  - Clarify what the applicant must demonstrate
    - New/increased discharge is of social/economic importance
    - Least degrading alternative is selected
    - If insufficient ambient water quality data exists, surface water sampling
  - Identify public participation requirements



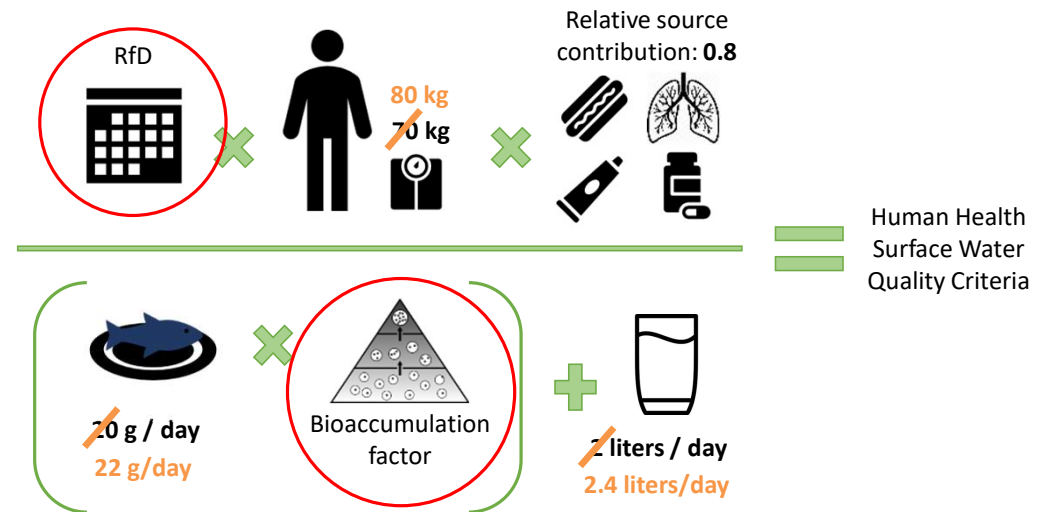
# Antidegradation

- Changes in Response to Comments:
  - Temporary Discharge Exemption (90 days)
  - 6-month Delayed Effective Date
  - Clarified Antidegradation only applies if limits are increased
  - Recommend 18 months advance notice
    - Allows for WQ data collection, alternatives analysis, socioeconomic demonstration
  - Emphasized practicable alternatives analysis
- Current Status:
  - Sent to Legislature for Approval in October 2023
  - Assembly Hearing on 11/28/2023 – germane modifications requested



# Human Health Criteria

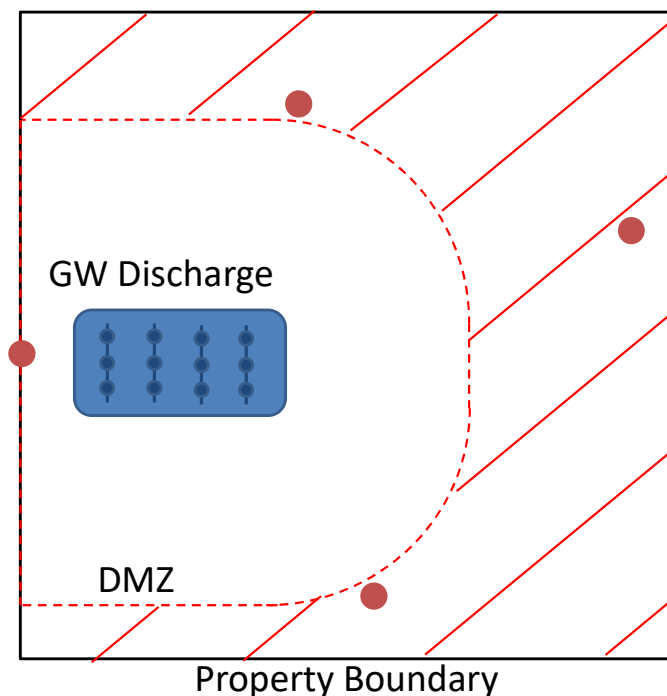
- Based on EPA's 2015 recommendations for criteria to protect against:
  - Incidental ingestion of surface water
  - Fish consumption
- Next priority – scope statement drafted, awaiting new toxicologist hire
- 2 Rule Packages
  - 1) New and revised water quality criteria
    - e.g. phenols, toluene, benzenes
  - 2) Revisions to exposure parameters used to calculate criteria





# Proposed PFAS Groundwater Standards

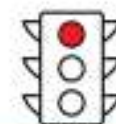
- 2 Types of Standards
  - Enforcement Standards (ES)
  - Preventive Action Limits (PAL)
- Apply at edge of “DMZ” (Design Management Zone)
  - Closer of 250 feet from groundwater discharge or Property Boundary
  - Standards must be met in all wells outside DMZ
- PFAS Standards not approved by WI Natural Resources Board in 2022
  - Seeking Reapproval



# Proposed PFAS Groundwater Standards



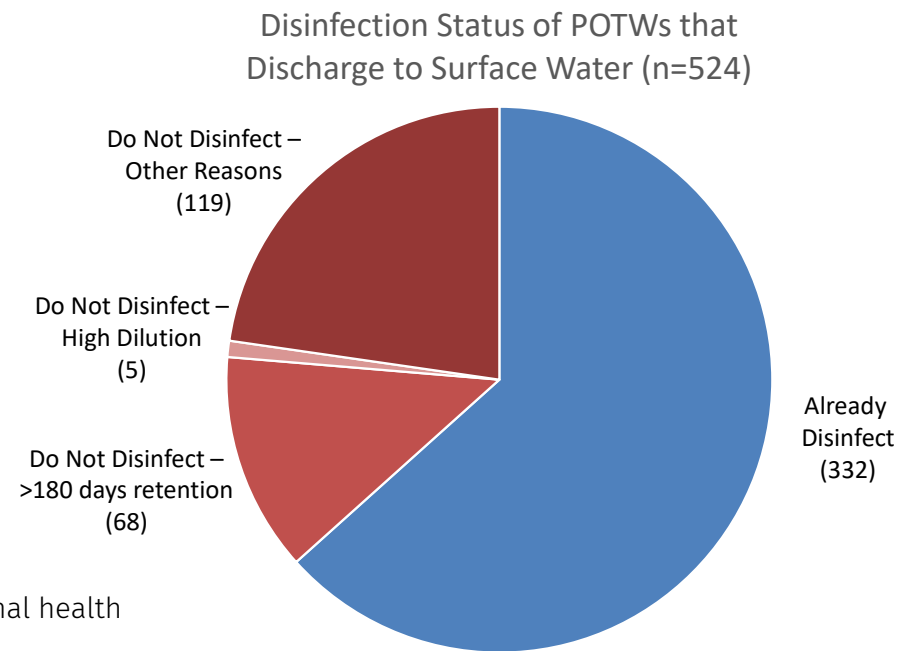
Parameter	Enforcement Standard	Preventive Action Limit
PFOA	20 ng/L (ppt) combined	2 ng/L (ppt) combined
PFOS		
FOSA		
NEtFOSE		
NEtFOSA		
NEtFOSAA		
HPFO-DA ("GenX")	300 ng/L (ppt)	30 ng/L (ppt)
PFBA	10 ug/L (ppb)	2 ug/L (ppb)
PFBS	450 ug/L (ppb)	90 ug/L (ppb)



Parameter	Enforcement Standard	Preventive Action Limit
PFHxA	150 ug/L (ppb)	90 ug/L (ppb)
PFHxS	40 ng/L (ppt)	4 ng/L (ppt)
PFNA	30 ng/L (ppt)	3 ng/L (ppt)
PFDA	300 ng/L (ppt)	60 ng/L (ppt)
PFUnA	3 ug/L (ppb)	0.6 ug/L (ppb)
PFDoA	500 ng/L (ppt)	100 ng/L (ppt)
PFTeA	10 ug/L (ppb)	2 ug/L (ppb)
PFODA	400 ug/L (ppb)	80 ug/L (ppb)
DONA	3 ug/L (ppb)	0.6 ug/L (ppb)

# Disinfection Guidance

- DNR reviewing and responding to comments received during public notice
- 2<sup>nd</sup> Public Notice forthcoming
- Purpose is to reconcile:
  - NR 102.04(5): All waters shall be suitable for supporting recreational use and meet E. Coli standards; and
  - NR 210.06: Disinfection required:
    - May 1 – Sept 30 to protect recreational uses
    - Year-round to protect public water supplies
    - Period may be adjusted where necessary to protect human/animal health
- Code does not allow for disinfection exemptions based solely on LAL or LFF receiving water classifications



# Operator Certification Exams

- Wisconsin DNR's Operator Certification program will no longer be hosting computer-based exams.
  - Decision based upon external survey
- Beginning in March 2024, all Operator Certification exams will be in-person paper exams coordinated and facilitated by Wisconsin DNR staff.

March – La Crosse	June – Waukesha & Fennimore	September – Eau Claire & Waukesha
April – Plover & Eau Claire	July – Rhinelander & Madison	October – Rhinelander & Green Bay
May – Madison & Green Bay	August – Hayward & Plover	December – Madison & Plover

# Whole Effluent Toxicity (WET) Failures

- Phosphorus treatment chemical overdosing
  - All chem types appear to be OK if dosed properly (no discharge/no tox)
  - Overdosing causing WET failures at municipal & industrial WWTP
  - Solution:
    - Department-approved SOPs at permit reissuance recommended
    - No SOP = increased WET monitoring



# WET Failures - Food Industry

- Review of 2012-2022 WET data from dairy & cheesemaking showed:
  - 38% discharged acutely toxic effluent
  - 93% discharged chronically toxic effluent
- Other food industry (e.g., meat, petfood) also having WET failures
- Increased WET monitoring, TRES, & limits in response
- What is causing food industry failures?
  - Chemical additives! (Production & WWT)
    - Quaternary ammonia/amine products
    - Production facility cleaning products (surfactants, etc.)
    - DAF polymers
  - Overdosing of P treatment chemicals
  - Total Dissolved Solids (TDS) and/or chloride



# Upcoming General Permit Reissuances

- Landspreading GPs – Anticipated 4/1/24
  - Industrial Liquid Waste
  - Industrial By-product Solids
  - Industrial Sludge

Annual → Quarterly Monitoring  
For Nutrient Management Plans and Accurate Loading Data



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AC Condensate & RO Permeate of Whey no longer eligible  
Sets of thermal limits for subgroups of permittees  
based on dilution ratios  
Considering options for simplifying Phosphorus limits,  
minimizing compliance burden



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  - AC Condensate & RO Permeate of Whey no longer eligible
  - Sets of thermal limits for subgroups of permittees based on dilution ratios
  - Considering options for simplifying Phosphorus limits, minimizing compliance burden
- Pesticide GPs – Late 2024
  - Aquatic Plants, Algae, & Pathogens
  - Detrimental/Invasive Aquatic Animals
  - Forest Canopy Pests
  - Mosquitoes/Flying Insects

Minimal Changes

# NR 110 Revision

- Drafting Scope Statement for Rulemaking
- Last updated 10 years ago
- Technical Advisory Committee
- Possible revisions include:
  - Reviewable project definition
  - Facility plan amendment process
  - Abbreviated facility plan contents
  - Pilot projects
  - Common sewer design variances
  - Process for POTWs in non-conformance with isolation distances
  - Consistency with recent 10 States Standards updates
  - Design standards for tertiary treatment technologies
  - Consideration of adaptive management and trading in facility plans for phosphorus



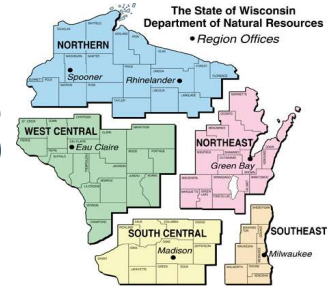
# Meat & Poultry Effluent Limit Guidelines: Federal Rulemaking

- Creates pretreatment standards for facilities processing > 50million lbs/yr\*

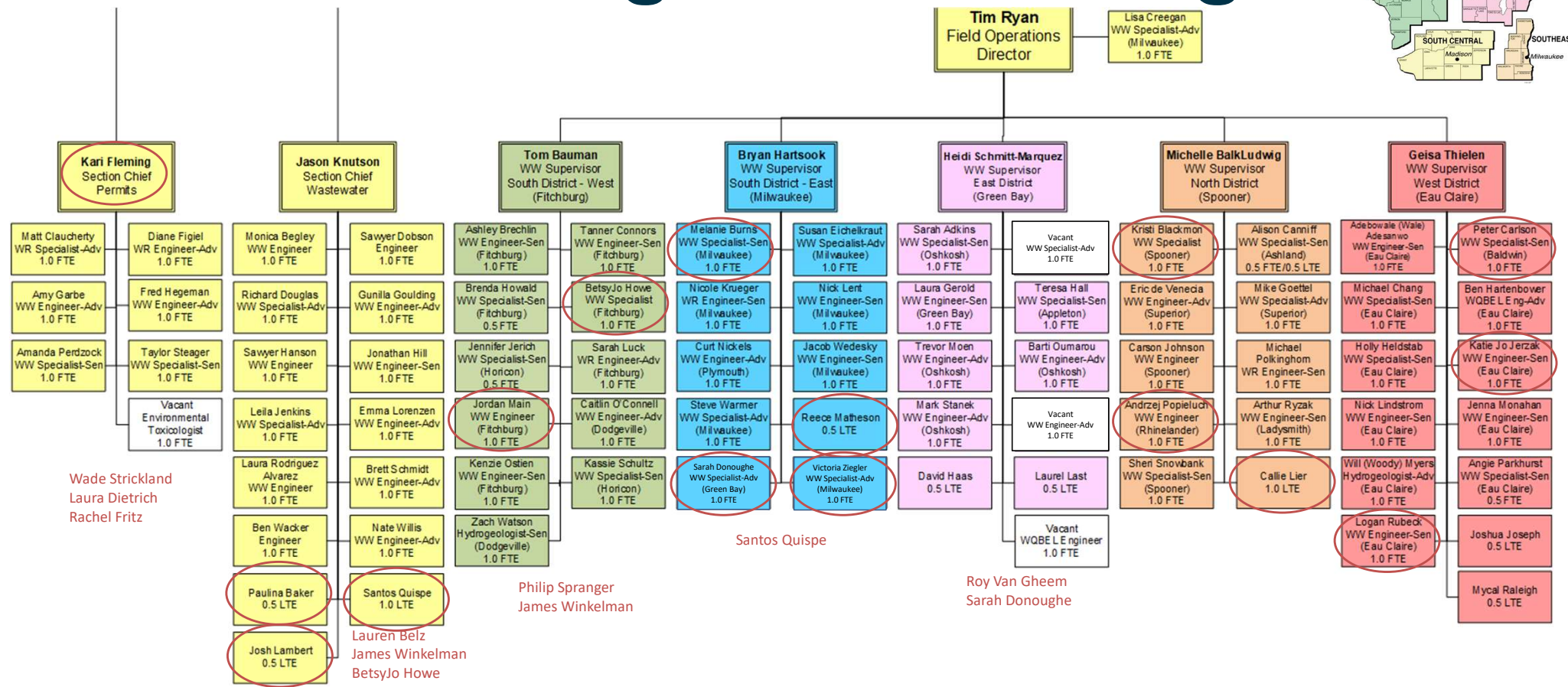
	Daily Max	Monthly Avg
BOD	1945 mg/L	1323 mg/L
TSS	1578 mg/L	925 mg/L
Oil & Grease	1635 mg/L	1393 mg/L

- New limits for direct dischargers to surface water processing > 50 million lbs/yr\*
  - Fecal coliform: 400 CFU/100mL daily max → 22 CFU/100 mL monthly avg, 40 CFU/100 mL daily max
  - Nitrogen: 194 mg/L daily max & 134 mg/L monthly avg → 20 mg/L daily max & 12 mg/L monthly avg
  - Phosphorus: New limits of 1.5 mg/L daily max & 0.8 mg/L monthly avg
  - E.Coli: New limits of 14 CFU/100 mL daily max & 9 CFU/100 mL monthly avg

\*These limits are reflective of most meat and poultry process subcategories, but some unique subcategories may have different limits proposed



# Wastewater Program Staff Changes



WISCONSIN DEPARTMENT OF NATURAL RESOURCES

# OPERATOR & POTW AWARDS



# Outstanding Operator Performance

- Larry Gates - Prairie Du Chien, Bloomington, Patch Grove
  - Turned around two POTWs that were in enforcement
  - Training new operator
  - Active in wastewater community
- Larry Shallow - Lena
  - Connects effluent quality with public health
  - Extra sampling for process control
  - Advocacy for plant needs at Village Board



# Facility of the Year

- Juneau
  - Strong process control & adjustments
  - Preventative Maintenance
- Mount Horeb
  - Optimized Biological P Removal
  - Eliminated need for chloride variance





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