Water Quality Standards and EPA

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- Prepared for the Minnesota Wild Rice Taskforce Meeting
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Goals of the Presentation

- Provide an overview of water quality standards under the Clean Water Act (CWA).
- Answer questions from the task force
- Set the stage for MPCA's presentation on wild rice protection.
- Provide EPA contact information should you have any further questions or need feedback from EPA at any time in the process going forward.

Presentation Outline

- WQS 101
- Who does what?
- WQS Process
- Variances

The Clean Water Act (CWA)

- Enacted in 1972.
- Sections 101(a) (Goals) and 303(c) (Water Quality Standards Program) are the most important sections of the CWA.
- States and authorized tribes are given primary responsibility for developing and adopting water quality standards for surface waters of the US.
- EPA ensures that state and tribal water quality standards are consistent with the CWA and federal regulations. EPA approves standards that are consistent and disapproves those that are not.
- Regulations for implementation of this portion of the CWA are found at 40 CFR 131 and 132 (Code of Federal Regulations).

What is a Water Quality Standard?

- Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the (Clean Water) Act.
- Provisions of State, Tribal or Federal law
- Consist of a
  - designated use or uses
  - Water quality criteria based on such uses
  - Antidegradation

40 CFR 131.3(i):

3 Components of Water Quality Standards

Designated Uses
Reflect the state/tribe's management goals for their water bodies, including CWA 101(a)(2) goals (40 CFR 131.10)

Antidegradation
To protect existing uses and high quality waters (40 CFR 131.12)

Criteria
To protect designated uses (40 CFR 131.11)

Designated Uses

- WQS define the water quality goals of a water body or segment, in part, by designating the use or uses to be made of the water.
- 40 CFR 131.3(f)- "Designated uses are those uses specified in water quality standards for each water body or segment whether or not they are being attained."
- Once the designated use is set, criteria are adopted to protect the designated use.
- Minnesota's term is for a designated use is a "beneficial use"

Two Major Classes of Uses: 101(a)(2) vs. Non-101(a)(2) Uses

- **101a(2) uses:** Wherever attainable, achieve a level of water quality that provides for the protection and propagation of **fish, shellfish, and wildlife and recreation in and on the water**.
  - Presumed to apply to *all* surface waters unless a state or tribe demonstrates they are unattainable.
  - Where demonstrated not attainable, the state or tribe is obligated to identify and adopt the highest attainable use and review the use every 3 years.

- **Non 101(a)(2) uses:** those uses identified in section CWA 303(c)(2)(A) that are not identified in 101(a)(2)- water quality standards shall serve the purposes of the Act and consider the use and value for ***public water supplies***, propagation of fish and wildlife, recreational, ***agricultural***, ***industrial***, and ***other purposes*** and…value for ***navigation***.

How is a use designated?

- States and tribes have the primary role in establishing uses and in weighing evidence regarding their attainability (101(a)(2)) for waters under their jurisdiction.
- States are free to develop and adopt any use classification system they see as appropriate. (provided the system is consistent with the requirements of the CWA and federal regulations)
  - Common use designations/classes are for aquatic life, public water supply, recreation, agriculture, and others.
  - Once approved by EPA, WQS are effective for CWA purposes until revisions are adopted and approved by EPA
- MPCA will be speaking to the designated (i.e. beneficial) use regarding wild rice in Minnesota.

Existing Uses

- Different than designated uses, though the two are related and often confused.
- 40 CFR 131.3(e)- Existing uses are those uses **actually attained** in the water body on or after November 28, 1975 whether or not they are included in the water quality standards.
  - States/tribes may not remove designated uses if they are existing uses…unless a use requiring a more stringent criteria is added (40 CFR 131. 10(h)(1))
  - Antidegradation (40 CFR 131.12)
- 40 CFR 131.10(i) – Where existing water quality standards specify uses less than what is being attained, the standards shall be revised to reflect uses being attained

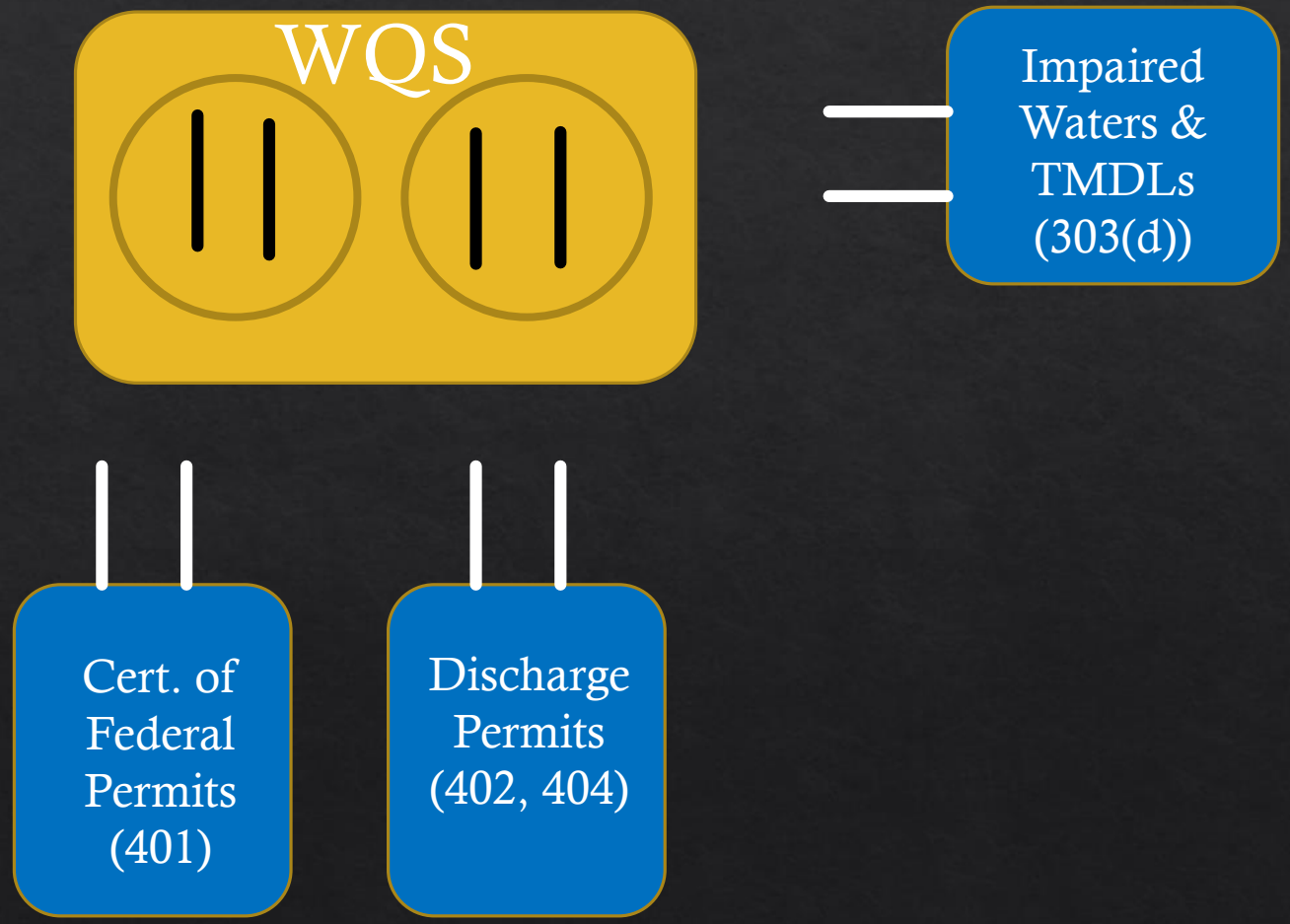
Water Quality Criteria

- 40 CFR 131.3(b)- constituent concentrations, levels, or narrative statements, representing a quality of water that supports a particular use. When criteria are met, water quality will generally protect the designated use.
  - **Narrative** – A descriptive statement such as "free from oil and grease"
  - **Numeric**- A concentration (i.e. 22 mg/L) or level (pH 6.5 – 9.0) over a particular duration and frequency.
    - 22 mg/L not to be exceeded over 4 days, not more than once in a 3 year period.
- CWA Section 304(a) - EPA periodically publishes guidance/criteria to provide quantitative/qualitative measures of pollutants that if not exceeded, will generally ensure adequate water quality to protect a designated use.
  - Equation-based water quality criteria are very common (metals, pentachlorophenol)
  - Are usually designed to protect different endpoints (i.e. aquatic life, human health)

Antidegradation

- 40 CFR 131.12- States and tribes must develop and adopt a statewide anti)degradation policy to protect:
  - Tier 1- Existing in-stream uses for wall waters of the U.S.
  - Tier 2- High quality waters better than necessary to support 101(a)(2) uses.
  - Tier 3- Outstanding national resource waters designated by the state or tribe.
- State/applicant must think about WQ effects before allowing a lowering of WQ.
- Opportunity for public involvement in decision-making.
- Except for Tier 3, antidegradation does not prohibit degradation.
- When considering an action that may lower water quality, water quality sufficient to protect existing uses must be maintained.

The Clean Water Act (CWA)



Questions on WQS 101?

Who does what and in what order?

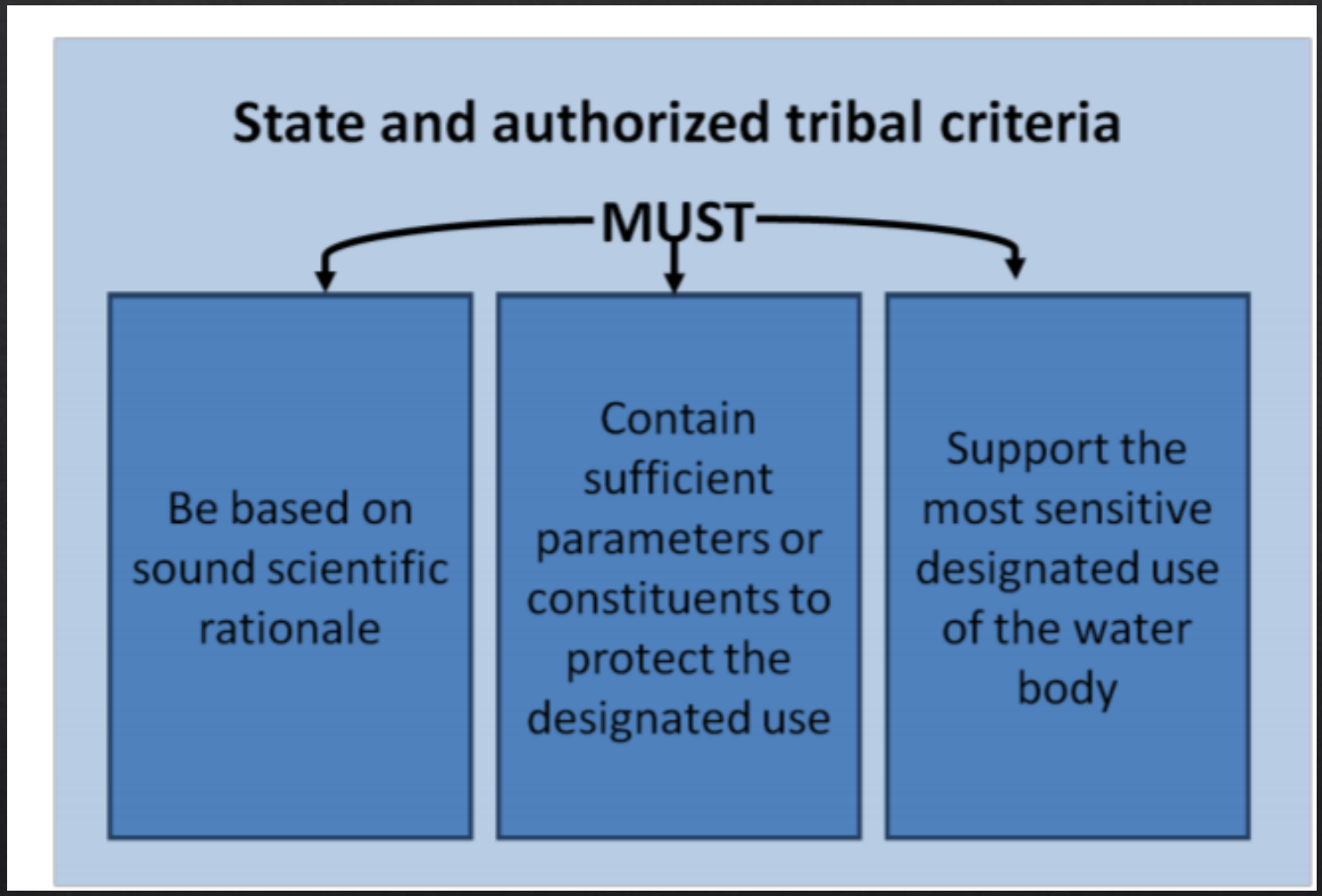
- **State** and **tribal** roles and responsibilities:
  - **Primary responsibility** to protect surface waters (designate uses, establish criteria to protect uses, specify an antidegradation policy and implementation procedures)
  - develop new and revised WQS
  - provide opportunity for public review and comment
  - adopt new and revised WQS
  - submit to EPA for review and approval.
  - public review of WQS every 3 years

Who does what and in what order?

- EPA's role:
  - Technical assistance
  - Alert states and tribes to any technical or legal issues that could be a barrier to EPA approval
  - EPA has the authority and duty under CWA Section 303(c) to ensure that new or revised WQS are consistent with the requirements of the CWA and federal regulations.

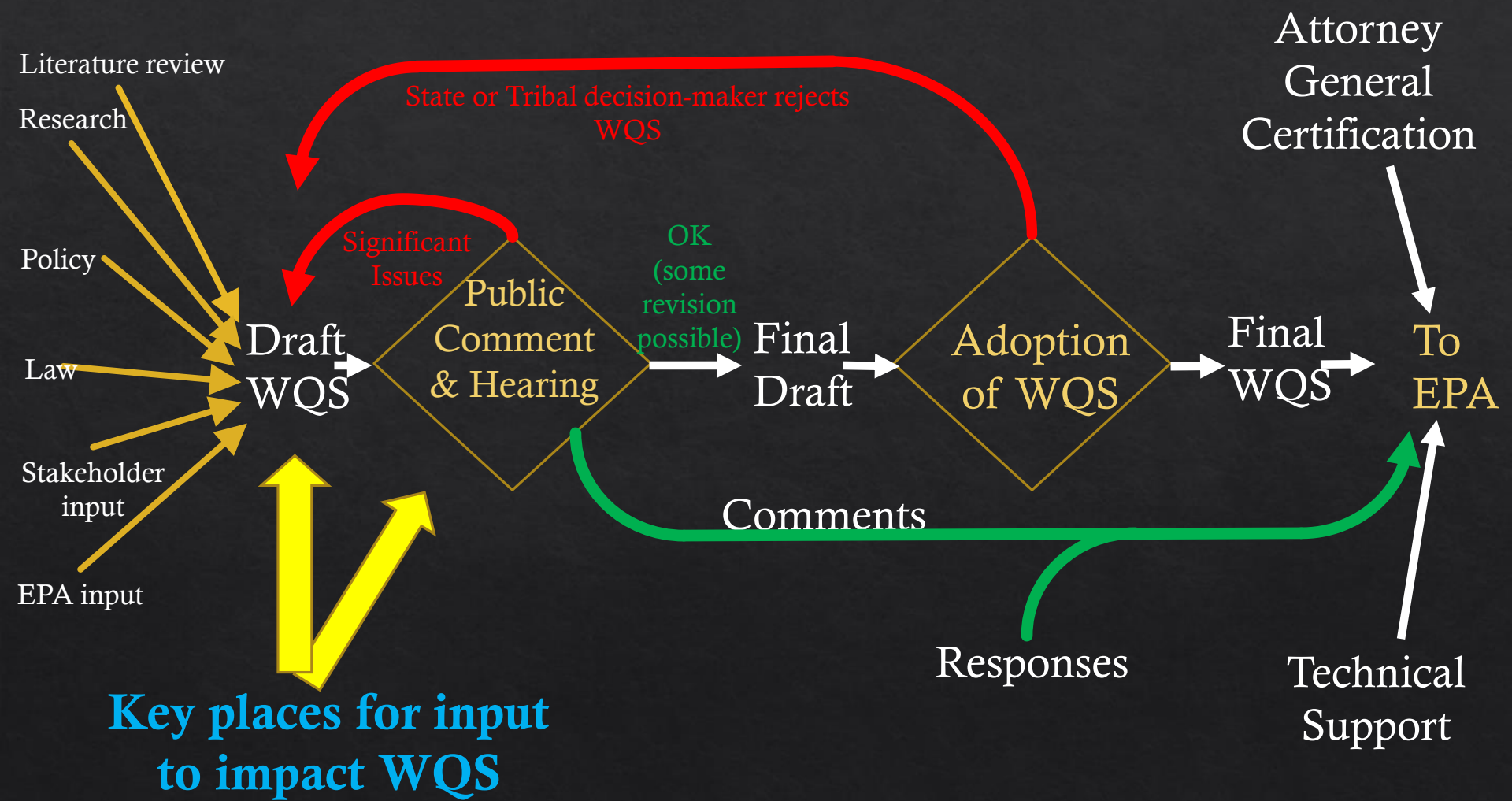
Generic WQS Submittal Requirements (40 CFR 131.6)

- Use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2)
- Methods used and analyses conducted to support water quality standards revisions
- Water quality criteria sufficient to protect the designated uses
- An antidegradation policy consistent with 40 CFR 131.12
- Certification by the State Attorney General or other appropriate legal authority within the State that the water quality standards were *duly adopted pursuant to State law*
- General information which will aid EPA in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the Act as well as information on general policies applicable to State standards which may affect their application and implementation

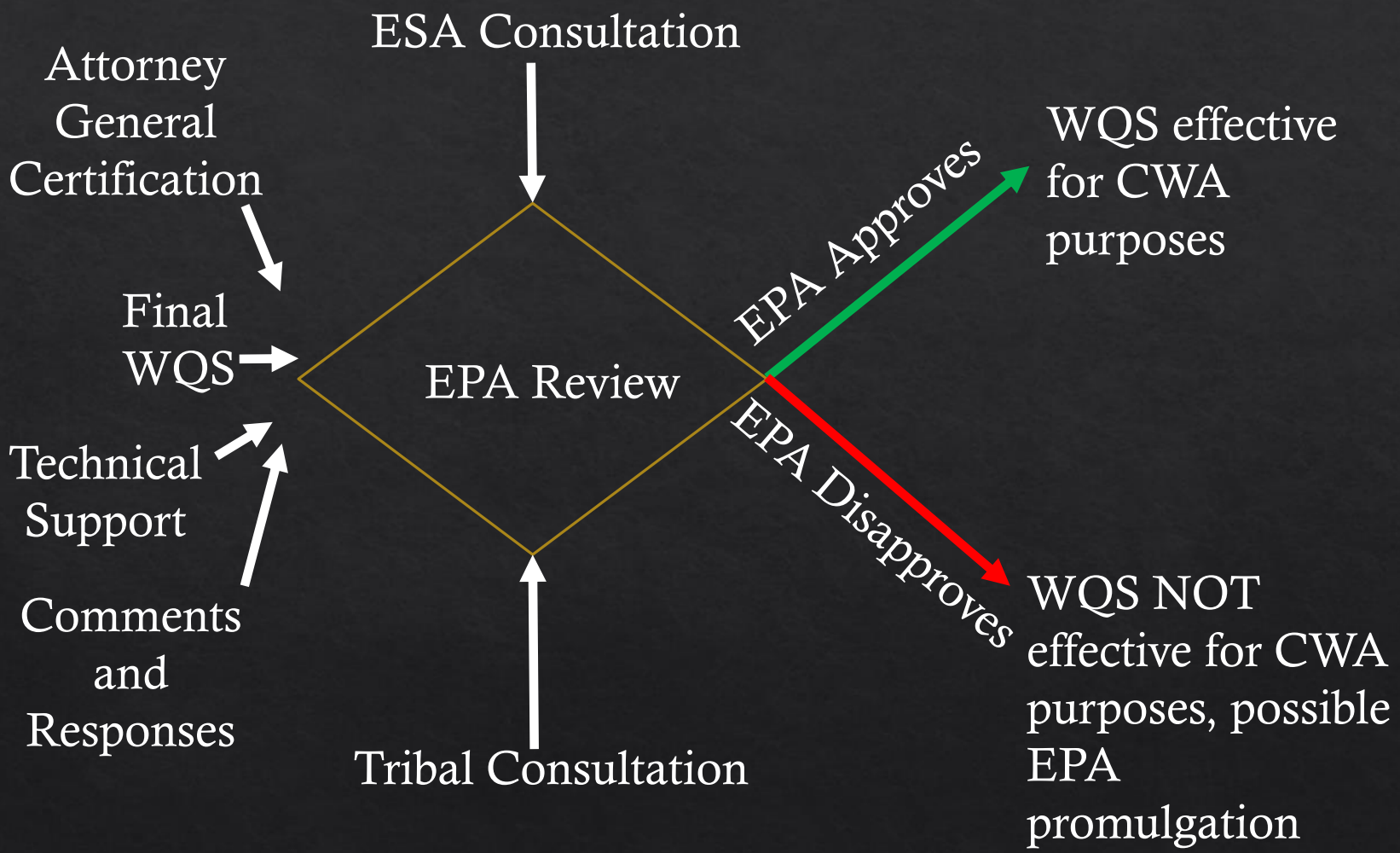

State and authorized tribal criteria
MUST
Be based on sound scientific rationale
Contain sufficient parameters or constituents to protect the designated use
Support the most sensitive designated use of the water body

Questions on who does what?

Generic WQS Development Process



Generic EPA WQS Review Process



Questions on the WQS process?

WQS Variances

- 40 CFR 131.3(o)- A WQS variance is a ***time-limited*** designated use and criterion for a specific pollutant(s) or water quality parameter(s) that reflect the ***highest attainable condition*** during the term of the WQS variance.
- Highest Attainable Condition (131.14)

Essential components of a variance:

- **Content:**
  - Explanation of why it is not feasible to comply with the WQS
  - Quantitative expression of the highest attainable condition
  - Explanation of how the duration of the variance is based on the time necessary to achieve the highest attainable condition
  - Permit conditions sufficient to implement the variance (esp. highest attainable condition)
- **Process:**
  - Public notice
    - Supporting documentation
    - 45 days
    - Public hearing
  - State adoption
  - Certification that the variance was "duly adopted" by an appropriate legal authority in the state
  - Submittal to EPA and EPA review under 303(c) of the CWA

Key Players in a variance & their roles:

EPA

- Consult with affected tribes (if any)
- Consult with USFWS on Section 7, ESA
- Review for consistency with Federal regulations and CWA
- Approve or disapprove

Permittee

- Demonstrate why it is not feasible to attain the WQS
- Describe the highest attainable condition (HAC)
- Explain how the HAC relates to the duration of the variance
- Comply with permit conditions implementing the variance

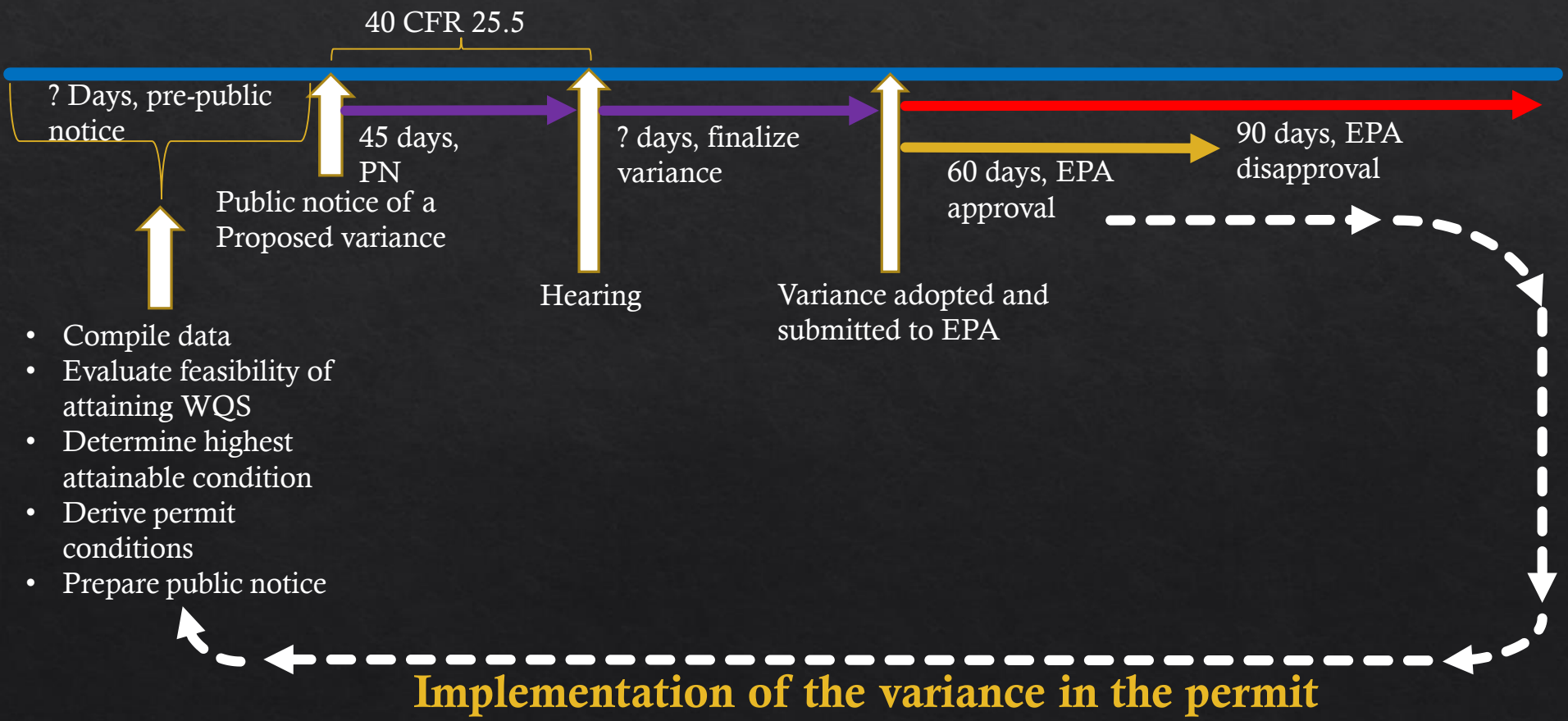
Public

- Review PN materials
- Participate in the hearing
- Offer comments on proposal
- Potential appeal rights (permit)
- Potential litigation of the standard

State

- Initial review
- Public notice & hearing
- Review the comments received and possible revision
- Adoption of the final variance
- Submittal to EPA
- Triennial Review

Generic variance development & review timeline:



WQS Variances In Region 5:

- **188** variance actions submitted by Wisconsin and approved by Region 5 since 2002
- **40%** of EPA's annual standards actions are in Region 5 (on average over the last 5 years)
- ≈ **20** variance submittals from Wisconsin received and approved per year (2013 = 23, 2014 = 25, 2015 = 22, 2016 = 7, 2017 = 24) and **5 – 6** submittals that are not variances from Wisconsin.
- **1** variance litigated (Mesabi Nugget). Approval remanded and EPA subsequently disapproved.
- **Mercury and chlorides** are the most common variances; remaining variances are mostly for copper

WQS Variances- Take Home Messages

- In Region 5, variances are a widely-used and important water quality management tool
- Fewer questions, less turn around time.
- Better variances, better environmental outcomes and less legal risk.
- Given the volume of variances, States and Region 5 have a strong shared interest in ensuring this process is as simple as possible without compromising legal defensibility.
- We are here to help make sure the federal requirements are understood up front by all parties so that processing variances is as simple as possible for everyone.

Questions on variances?

More Questions?

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Additional Resources

- EPA water quality standards handbook:
  - https://www.epa.gov/wqs-tech/water-quality-standards-handbook
- EPA water quality standards website:
  - https://www.epa.gov/wqs-tech
- Other EPA guidance/memos arranged by topic:
  - https://www.epa.gov/wqs-tech/reference-library-water-quality-standards-policy-and-guidance-documents