WATER QUALITY STANDARDS VARIANCES

VIRTUAL WQS ACADEMY

MAY 2023

OFFICE OF SCIENCE AND TECHNOLOGY
OFFICE OF WATER
U.S. EPA

DISCLAIMERS

This presentation does not:

Impose any binding requirements.

Determine the obligations of the regulated community.

Change or substitute for any statutory provision or regulatory requirement.

Change or substitute for any Agency policy or guidance.

Control in any case of conflict between this discussion and statute, regulation, policy or guidance.

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OBJECTIVES

1. Learn the basics of a Water Quality Standards (WQS) variance
2. Understand how using a WQS variance can help to get real improvements in water quality
3. Decide if WQS variance is right tool for your situation
4. Learn how to adopt a WQS variance and submit it to EPA
5. Understand how WQS variances relate to other Clean Water Act (CWA) programs

WHAT IS A WQS VARIANCE?

STATUTORY BASIS FOR WQS VARIANCES

- Sec. 101 of the Clean Water Act
  - (a) The objective of this Act is to **restore** and maintain the chemical, physical, and biological integrity of the Nation's waters.
    - (1) …
      - (2) it is the national goal that **wherever attainable**, an interim goal of water quality which provides for…
- Interpretation
  - The goal is to make water quality better.
  - This goal may not always be readily attainable.

WQS REGULATIONS

- In August 2015, the EPA published a final rule in the Federal Register updating the federal water quality standards regulation to improve implementation of the Clean Water Act (80 FR 51019) in six key areas:

(1) EPA Administrator's determinations that new or revised water quality standards are necessary,

(2) designated uses for water bodies,

(3) triennial reviews of state and tribal WQS,

(4) antidegradation requirements,

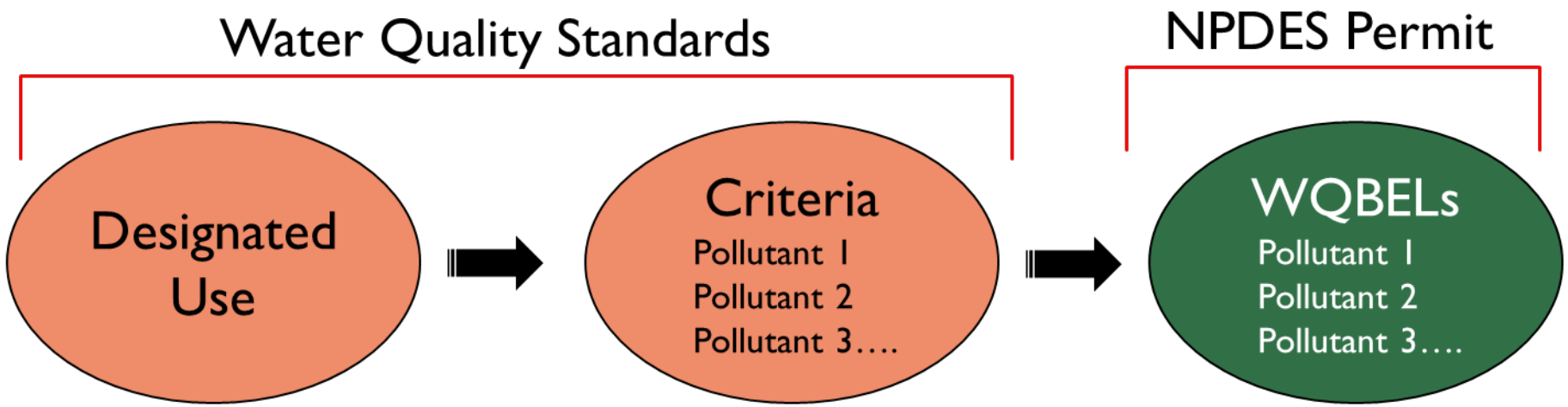
(5) WQS variances (131.14), and

(6) provisions authorizing the use of schedules of compliance for water quality-based effluent limits (WQBELs) in NPDES permits.

A WQS VARIANCE IS:

- A time-limited designated use and criterion:
  - for a specific pollutant or water quality parameter,
  - from a specific source or for a specific water body,
  - that reflects the highest attainable condition for a specific time period.
- A regulatory mechanism that **ensures incremental water quality improvements** when/where the designated use and criterion are not currently attainable and there is uncertainty as to what designated use and criterion may be ultimately attainable.

LINK BETWEEN WQS VARIANCES AND NPDES PERMITS

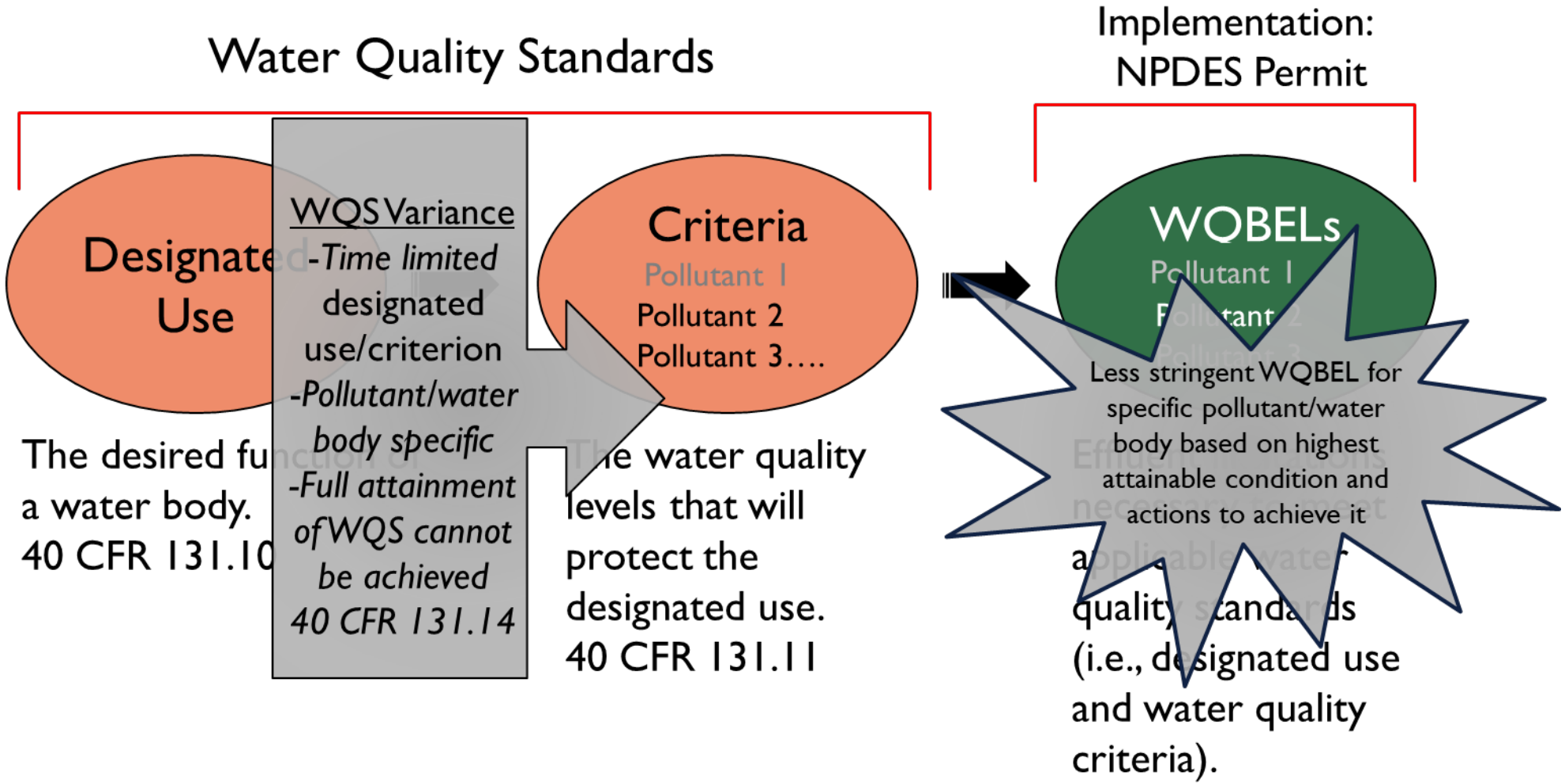


The desired function of a water body.
40 CFR 131.10

The water quality levels that will protect the designated use.
40 CFR 131.11

Effluent limitations necessary to meet applicable water quality standards (i.e., designated use and water quality criteria).

LINK BETWEEN WQS VARIANCES AND NPDES PERMITS



WQS VARIANCES: A BRIDGE BETWEEN WQS AND NPDES EFFLUENT LIMITS

A WQS variance is a WQS that requires review and approval by EPA.

Permitting authorities implement the requirements of WQS variances by:

- Establishing less stringent Water Quality Based Effluent Limits (WQBELs) for a specific pollutant based on what is the best condition (i.e., HAC) that the discharger (or water body) can achieve,
- for a specified period of time (only as long as necessary to achieve HAC),
- that still derive from and comply with all applicable WQS consistent with 40 CFR 122.44(d)(1)(vii)(A).

SITE SPECIFIC CRITERIA

Site Specific Criteria	WQS Variance
Where the same designated use will be protected but with different (e.g., more or less stringent) water quality criteria.	Where the designated use cannot be attained for a period of time and the state adopts a less stringent designated use and criteria to be put in place for a specified period of time.

POP QUIZ!

True/False:

- **A WQS Variance replaces the underlying designated use and criteria.**

POP QUIZ!

True/False:

- **A WQS Variance replaces the underlying designated use and criteria.**

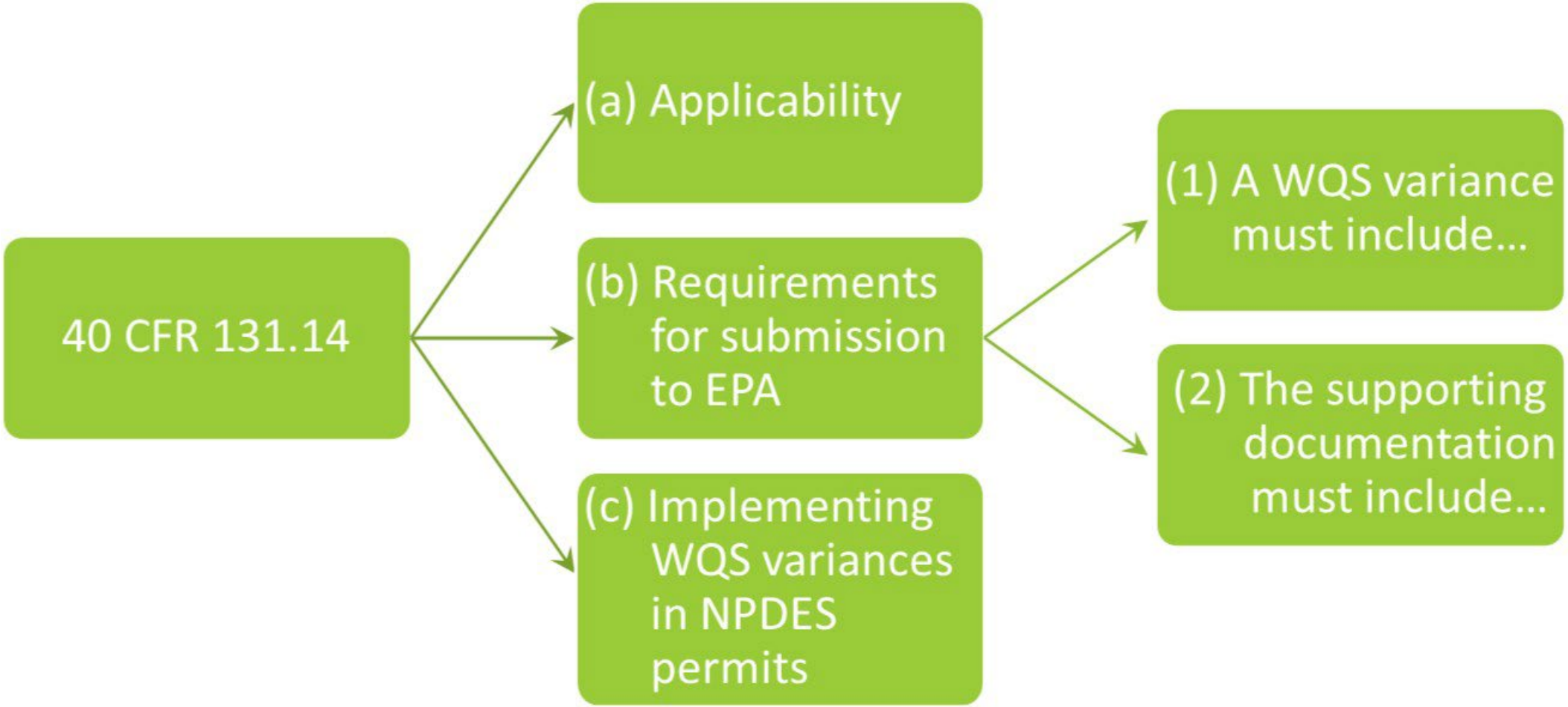
- **False** – Variances establish temporary alternative requirements for NPDES permits, and for the purposes of 401 certification, for specific pollutants or pollutant parameters (and usually for specific dischargers). The underlying designated use and associated criteria remain in effect for all other pollutants or pollutant parameters and all other CWA purposes such as impairment listings and TMDLs.

HOW CAN WQS VARIANCES LEAD TO REAL IMPROVEMENTS IN WATER QUALITY?

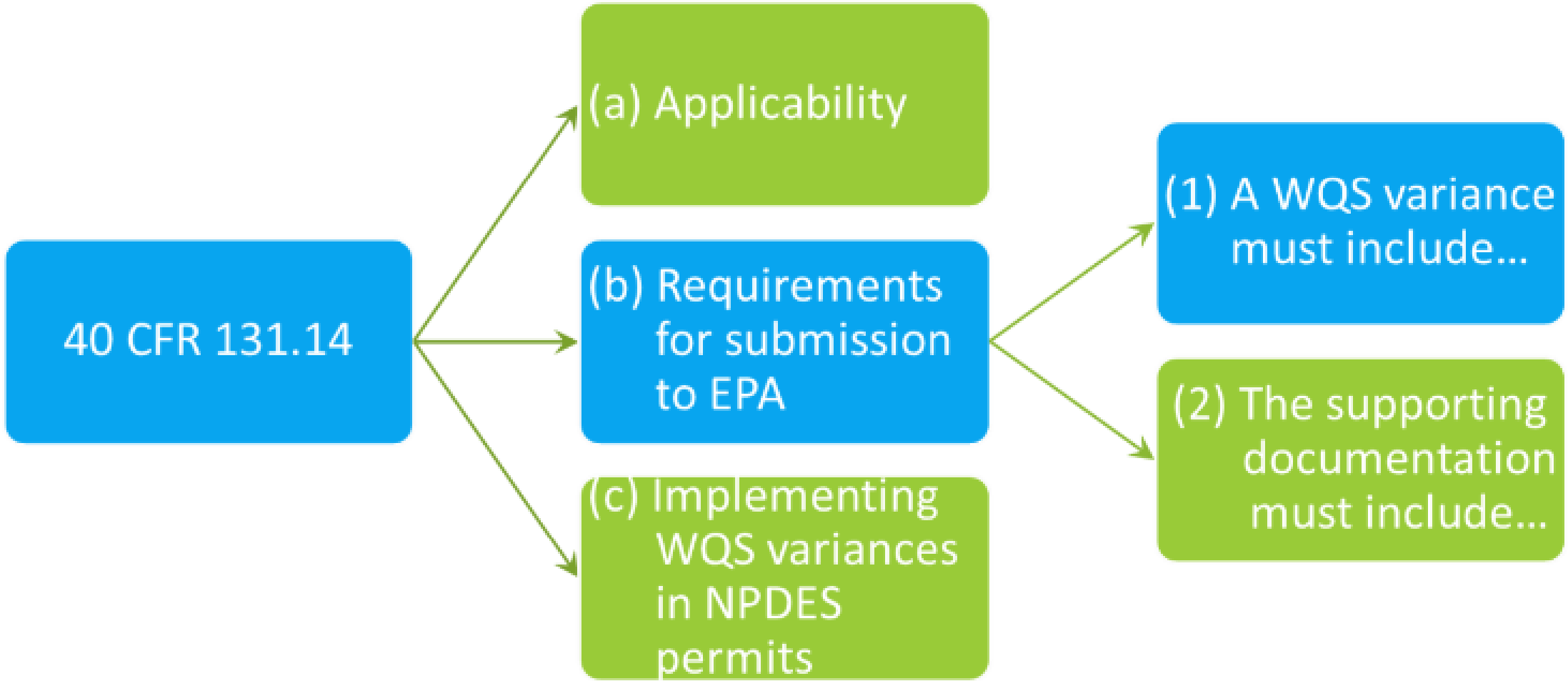
INTENT OF 40 CFR 131.14

- EPA promulgated 40 CFR 131.14 to explicitly authorize the use of WQS variances and the requirements to obtain EPA approval.
- States and authorized tribes are not required to adopt their own authorizing provisions or procedures.
- Reduces uncertainty and facilitates appropriate, consistent, and effective implementation over a defined period of time.
- Ensures transparency and accountability to both the regulated community and the public.
- Provides specific regulatory basis and required documentation to justify the need for the variance, the interim requirements, and the length of the variance.

BASIC STRUCTURE OF 40 CFR 131.14



VARIANCE REQUIREMENTS



WQS VARIANCE REQUIREMENTS-SCOPE

- Define the **scope of the variance**:
  - Pollutant specific
  - Discharger specific
    - Individual discharger
    - Multiple dischargers*
  - Waterbody/waterbody segment specific

*A multiple-discharger variance (MDV):

-Can reduce the administrative burden associated with adopting many otherwise similarly justifiable individual discharger-specific WQS variances

-Must fulfill the requirements at 131.14 (e.g., dischargers included in an MDV must be eligible to receive a WQS variance)

VARIANCE REQUIREMENTS-HAC

1. Highest attainable interim criterion; or
2. Interim effluent condition reflecting greatest pollutant reduction achievable; or
3. *If no additional feasible pollutant controls*, the interim criterion or interim effluent condition reflecting greatest pollutant reduction with optimization of installed treatment **AND** adoption and implementation of a pollutant minimization program (PMP).

- *Pollutant Minimization Program (131.3(p))* – "in the context of 131.14, is a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings."

WQS VARIANCE REQUIREMENTS- HIGHEST ATTAINABLE CONDITION (HAC)

Similarities between HAU and HAC

- HAU is defined as a "modified…use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, based on the evaluation of the factors in131.10(g) that precludes attainment of the use and any other information or analyses used to evaluate attainability."

- HAC is a similar requirement- a quantifiable expression of the best condition that can be achieved during the term of the variance. Cannot lower currently attained water quality.

Differences Between HAU and HAC

Highest Attainable Use (HAU)	Highest Attainable Condition (HAC)
-Only expressed as a use -Applies only to CWA 101(a)(2) uses and subcategories of such uses	-does not have to be expressed as a use -Applies to WQS variance for either 101(a)2 or non-101(a)(2) uses

WQS VARIANCE REQUIREMENTS- TERM AND PUBLIC INPUT

- **Term of the variance must be a specified time after EPA approval of variance, or date**. Must document that the term is only as long as necessary to achieve the highest attainable condition.
  - Timeframe is justified by describing the pollutant control activities that need to occur during that term.

- **Established after a public hearing** consistent with 40 CFR 131.20.

WQS VARIANCE REQUIREMENTS- REEVALUATIONS

A variance with a term of longer than 5 years must also reevaluate the highest attainable condition.

- Reevaluations provide public assurance that the variance terms are evaluated in a transparent way at predictable periods, instead of the regulations requiring a time limit on all variance terms.
- Variance must specify a frequency to reevaluate, but at least every 5 years.
  - The reevaluations must be submitted to EPA within 30 days of completion.

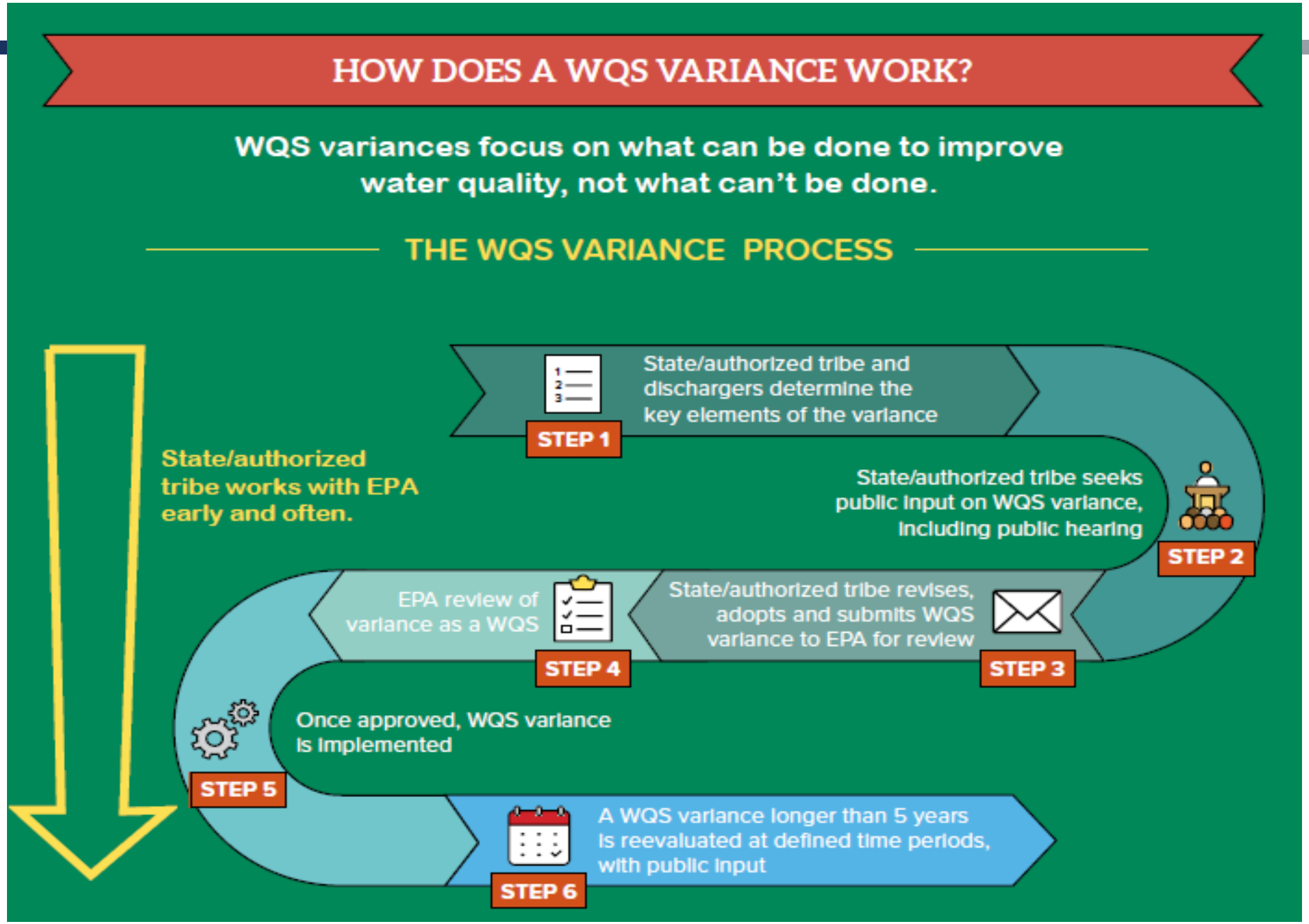
- * *Great Lakes Waters (40 CFR Part 132) Federal Max term = 5 years*

WQS VARIANCE: SUMMARY OF REQUIREMENTS

1) Scope – Identification of the pollutant(s) or water quality parameter(s) and water body or waterbody segment.
2) Interim Requirements - Requirements that apply throughout the term of the variance (i.e., Highest Attainable Condition (HAC)), which must be quantifiable but can be expressed as an interim ambient criterion or as an effluent condition.
3) Variance Term – term of the variance that is only as long as necessary to achieve the HAC.
4) Reevaluation
   - Reevaluation schedule and process for public input where variance term > 5 years.
   - Statement that variance requirements are the more stringent of either HAC at time of adoption, or HAC identified at reevaluation.

STRONG SUPPORTING DOCUMENTATION: ENSURES CONSISTENCY WITH 40 CFR 131.14

1. The need for the WQS variance (40 CFR 131.14(b)(2)).
2. The interim WQS represents the highest attainable condition (40 CFR 131.14(b)(1)(ii)).
3. The term of the WQS variance is only as long as necessary to achieve the highest attainable condition (40 CFR 131.14(b)(2)).


HOW DOES A WQS VARIANCE WORK?
WQS variances focus on what can be done to improve water quality, not what can't be done.
THE WQS VARIANCE PROCESS
State/authorized tribe works with EPA early and often.
STEP 1
State/authorized tribe and dischargers determine the key elements of the variance
STEP 2
State/authorized tribe seeks public input on WQS variance, including public hearing
STEP 3
State/authorized tribe revises, adopts and submits WQS variance to EPA for review
STEP 4
EPA review of variance as a WQS
STEP 5
Once approved, WQS variance is implemented
STEP 6
A WQS variance longer than 5 years is reevaluated at defined time periods, with public input

SUBSEQUENT VARIANCES

- The regulations do not prohibit adoption of a subsequent variance once the initial variance expires.
- A subsequent variance may be obtained if the requirements of 131.14 are fully met again.
- In addition, a subsequent waterbody or waterbody segment variance would require additional documentation on implementation of Best Management Practices (BMPs)and progress for nonpoint sources.

EPA'S WQS VARIANCE BUILDING TOOL *DEMONSTRATION*

The WQS Variance Building Tool is an implementation support tool designed to help states, territories, and authorized tribes:

1) determine if a WQS variance is the appropriate tool for their situation, and

2) adopt WQS variances that are consistent with the regulatory requirements at 40 CFR Part 131.14.

POP QUIZ!

True/False:

- **State or authorized tribes must conduct a public hearing when adopting a WQS variance.**

POP QUIZ!

True/False:

- **State or authorized tribes must conduct a public hearing when adopting a WQS variance.**

- **True** – A WQS Variance is a new or revised WQS and therefore must meet the same public participation requirements at 131.20(b) as any other new or revised WQS.

POP QUIZ!

True/False:

- **There is no limit to how long a WQS variance can last.**

POP QUIZ!

True/False:

- **There is no limit to how long a WQS variance can last.**

- **True*** – BUT the state or authorized tribe must justify the term of a WQS variance by providing documentation that demonstrates the term is no longer than necessary to achieve the HAC. This includes identifying the pollutant control activities that will be implemented to achieve the HAC. Any variance with a term longer than 5 years is subject to the additional reevaluation requirements.

* *However, Great Lakes Waters (40 CFR Part 132) Federal Max term = 5 years*

POP QUIZ!

True/False:

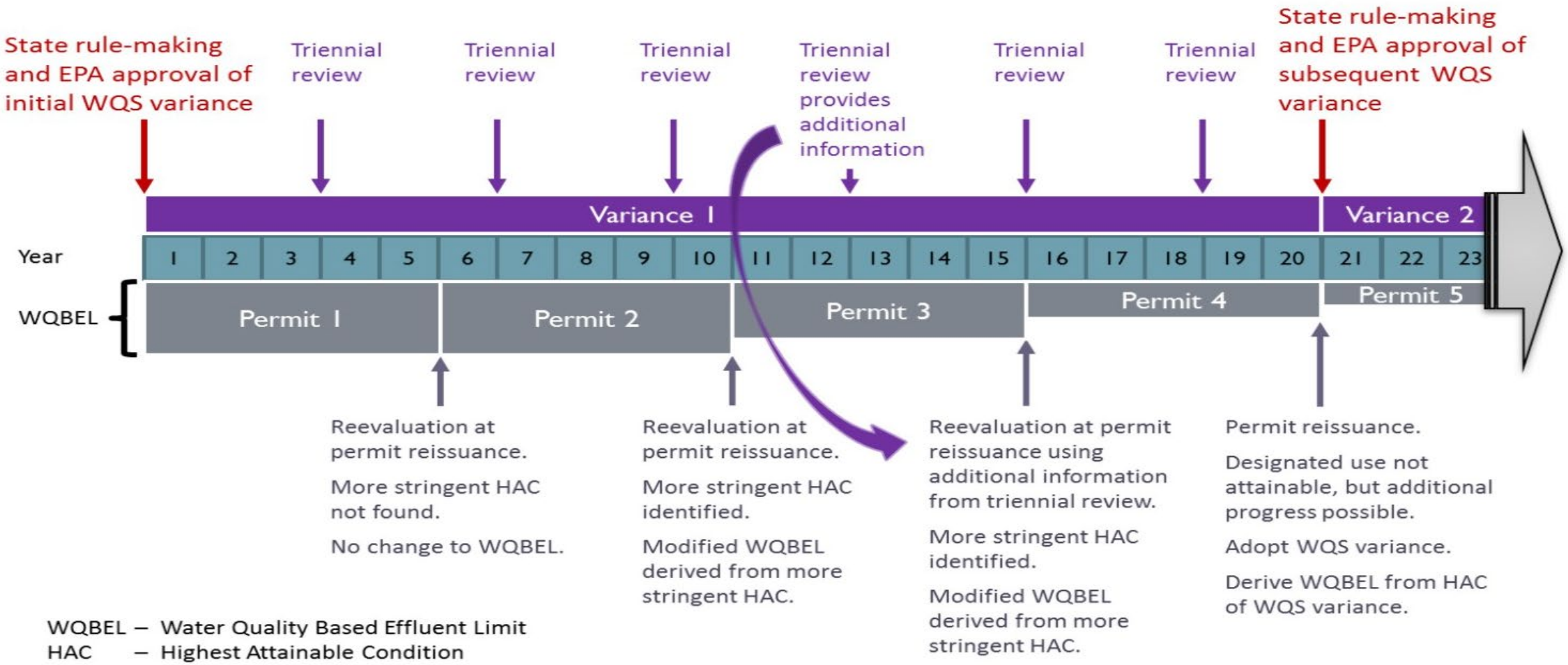
- **States and authorized tribes must reevaluate all WQS variances at the time of permit reissuance.**

POP QUIZ!

True/False:

- **States and authorized tribes must reevaluate all WQS variances at the time of permit reissuance.**
- **False** – States and authorized tribes only need to reevaluate WQS variances at least every 5 years if they have a term that is longer than 5 years. The regulations allow states and authorized tribes the flexibility to choose the frequency and schedule of reevaluation as provided they occur at least every 5 years.

EXAMPLE: REEVALUATION AT PERMIT REISSUANCE



WQBEL – Water Quality Based Effluent Limit
HAC – Highest Attainable Condition

POP QUIZ!

True/False:

- **States and authorized tribes must adopt authorizing provisions for WQS variances before they can adopt a WQS variance.**

POP QUIZ!

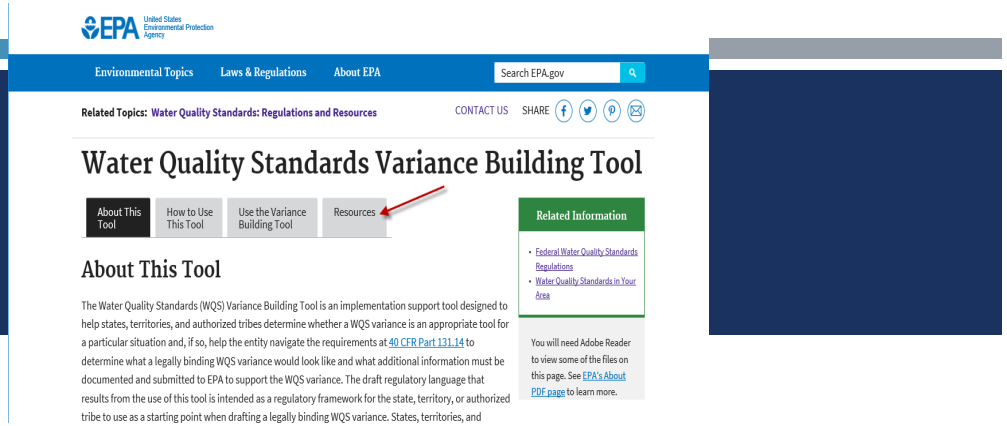
True/False:

- **States and authorized tribes must adopt authorizing provisions for WQS variances before they can adopt a WQS variance.**

False – The federal regulations authorize adoption of WQS variances, so it is not necessary for states and authorized tribes to have their own WQS variance authorizing provisions the way it is necessary for compliance schedules.

- States and authorized tribes may choose to have them if they want additional legally binding requirements or guidance for their public regarding WQS variances in their state or tribe.
- Such legally binding requirements are "general policies" that require EPA review and approval.
- EPA's review of each WQS variance the state or tribe adopts under their own EPA-approved authorizing provision will be based upon consistency with the CWA and 131.14 and not the state's authorizing provision.

HELPFUL RESOURCES



- "WQS Variances" website:

Provides information on WQS variances including links to the online WQS Variance Building Tool

https://www.epa.gov/wqs-tech/water-quality-standards-variances

- WQS Variance Building Tool

https://www.epa.gov/wqs-tech/water-quality-standards-variance-building-tool

  - Checklist For Evaluating State Submission Of Discharger-Specific Water Quality Standards Variances
  - Checklist for Water Quality Standards Variance Supporting Documentation Requirements (PDF)

- Dedicated chapter in the WQS Handbook (under development)

QUESTIONS/DISCUSSION

THANK YOU!

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