WATER QUALITY STANDARDS (WQS) VARIANCES

VIRTUAL WQS ACADEMY

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

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- **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 a 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 REGULATION

- 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,

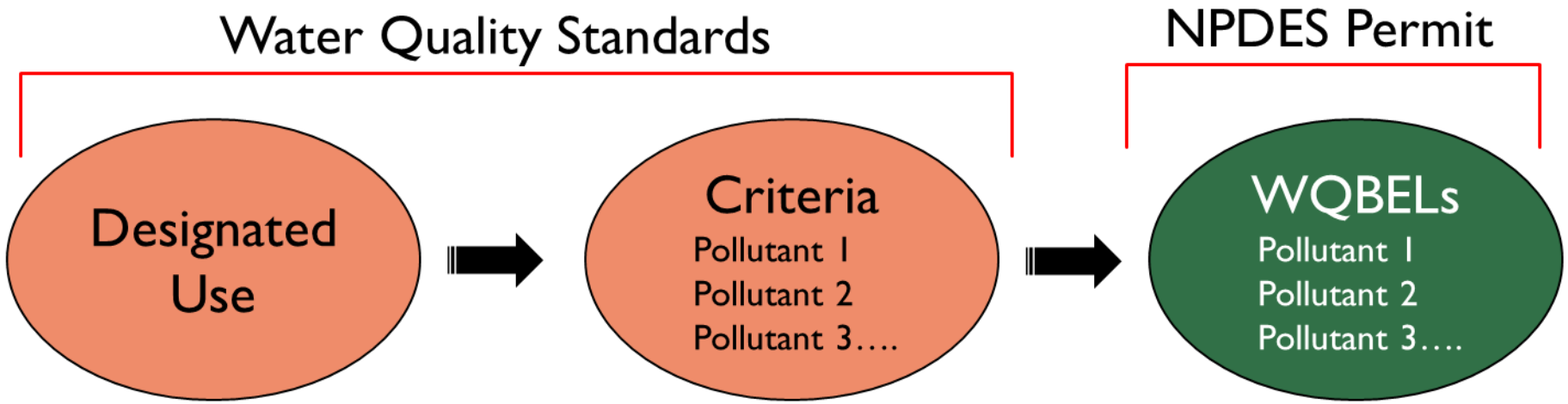
(5) WQS variances (131.14), and

(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 waterbody,
  - 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

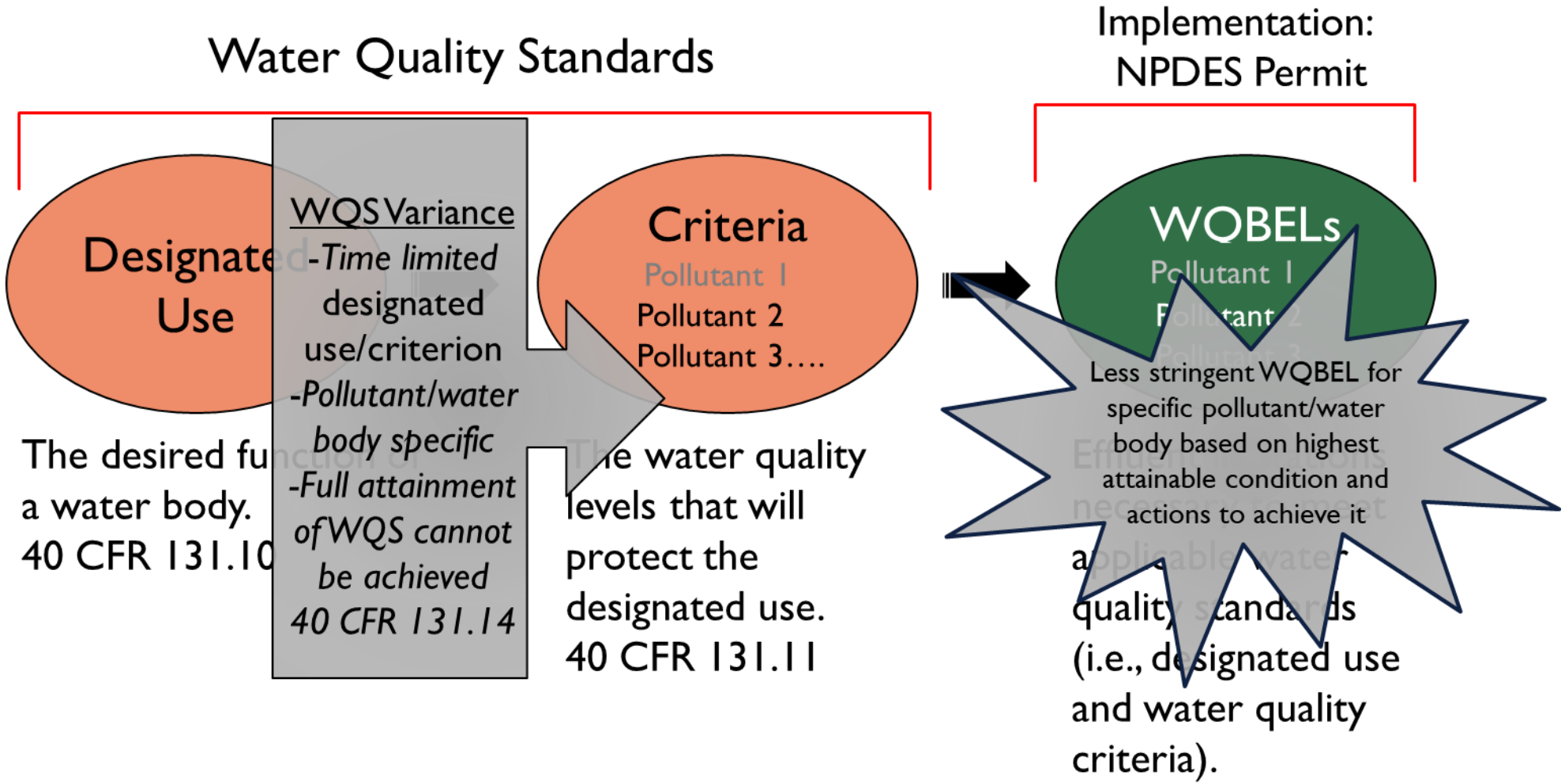


The desired function of a water body.
40 CFR 131.10

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 waterbody) 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

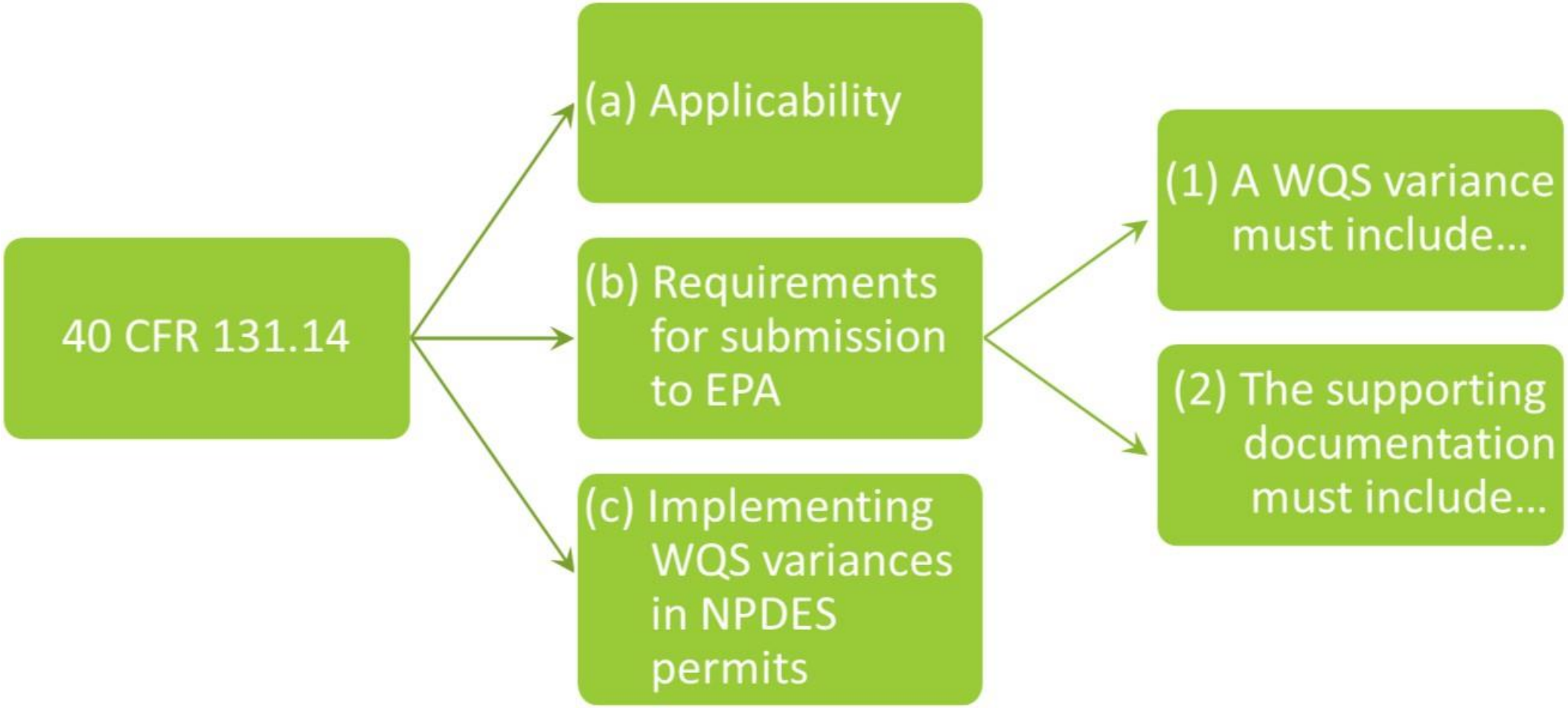
Site Specific Criteria	WQS Variance
Where the same designated use will be protected but with different (e.g., more or less stringent) water quality criteria.	Where the designated use cannot be attained for a period of time and the state adopts a less stringent designated use and criteria to be put in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

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

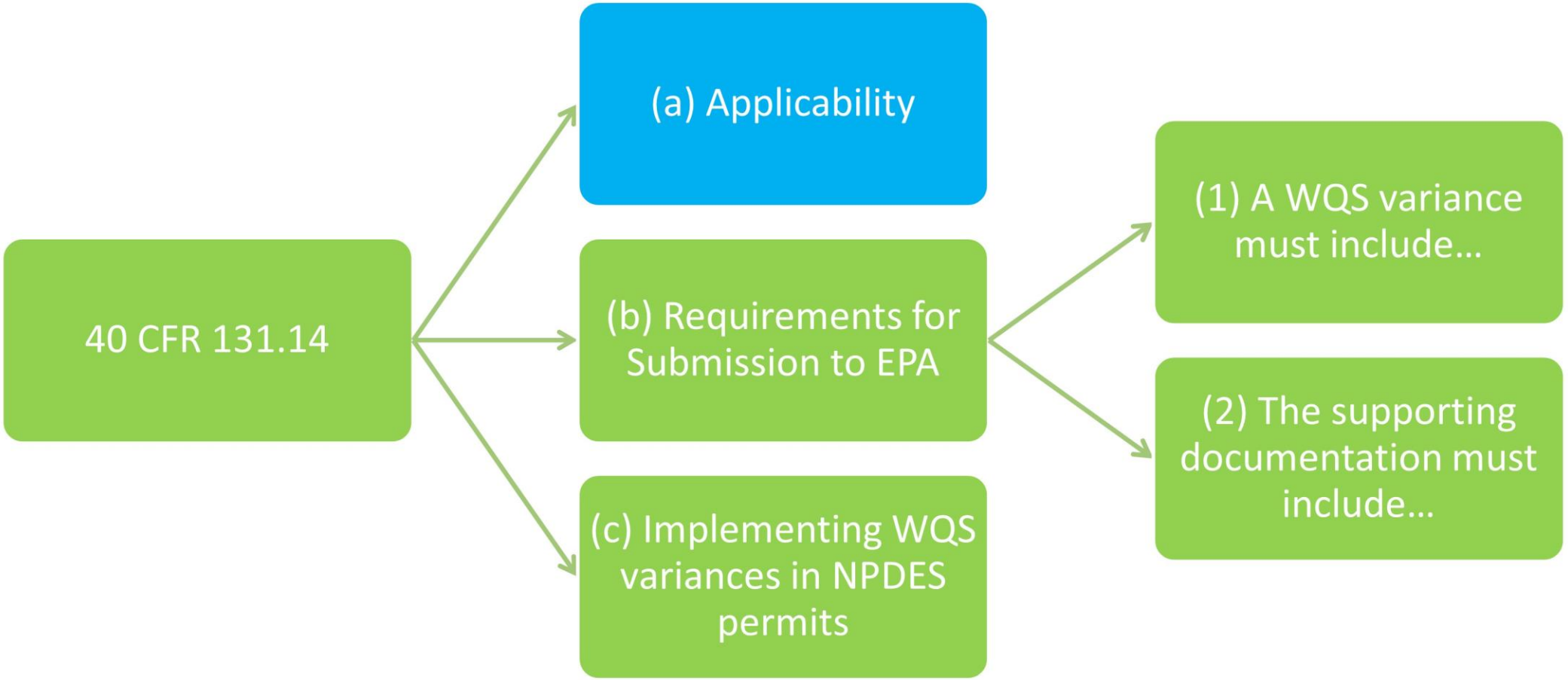
INTENT OF 40 CFR 131.14

- 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



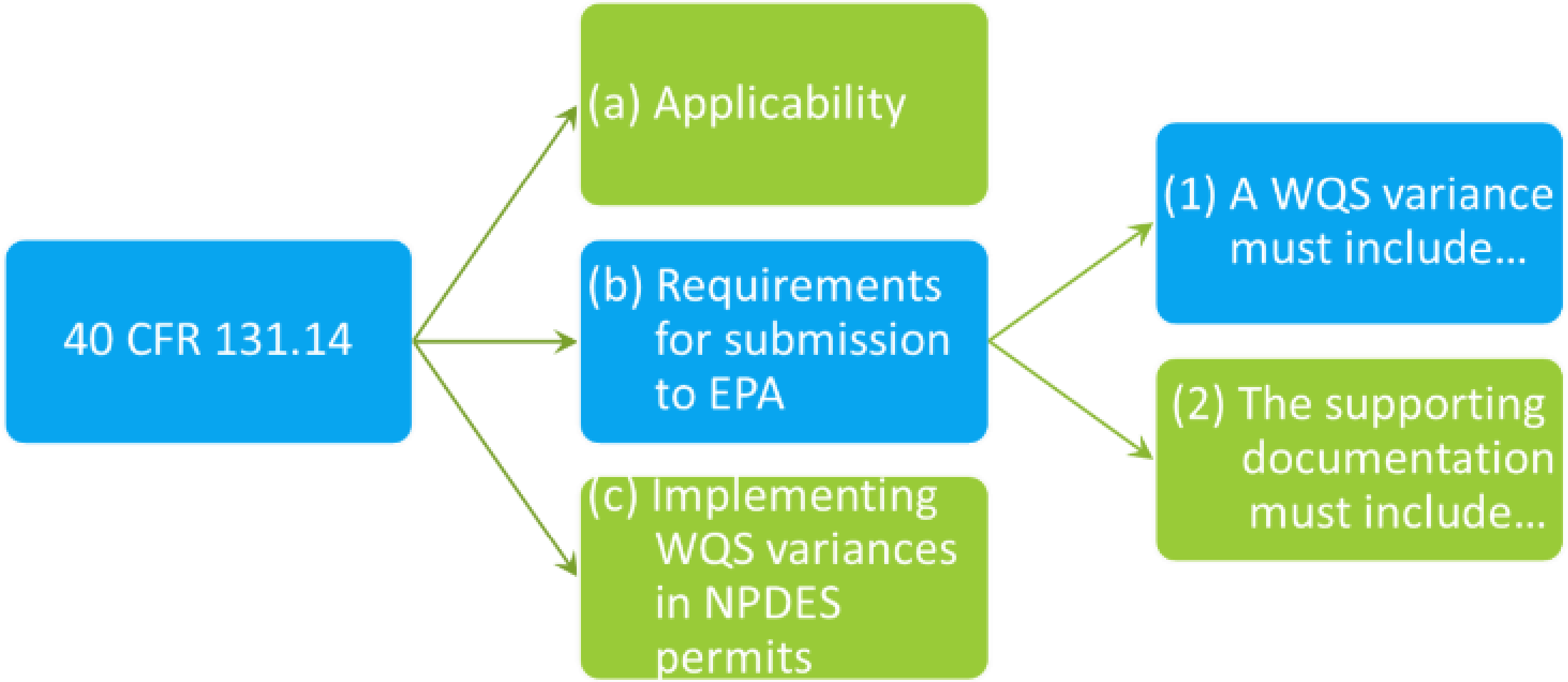
WQS VARIANCE-APPLICABILITY



WQS VARIANCE-APPLICABILITY

- A WQS variance only applies to the permittee(s) or water body/waterbody segment(s) specified in the WQS variance (40 CFR 131.14 (a)(1))
- The state or authorized Tribe must retain, in its WQS, the underlying designated use and criterion addressed by the WQS variance, and all other applicable WQS remain applicable (40 CFR 131.14 (a)(2))
- An approved WQS variance is the applicable WQS for developing NPDES permit limits and requirements and for CWA Section 401 certifications (40 CFR 131.14 (a)(3))
- A WQS variance cannot be adopted if the designated use and criterion addressed by the WQS variance can be met by implementing technology-based effluent limits (40 CFR 131.14 (a)(4))

WQS 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)

WQS VARIANCE REQUIREMENTS- HIGHEST ATTAINABLE CONDITION (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 WQS variance with a term of longer than 5 years must also reevaluate the highest attainable condition.

- Reevaluations provide public assurance that the WQS variance terms are evaluated in a transparent way at predictable periods, instead of the regulations requiring a time limit on all WQS 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 REQUIREMENTS- REEVALUATIONS

The WQS variance must also include provisions:

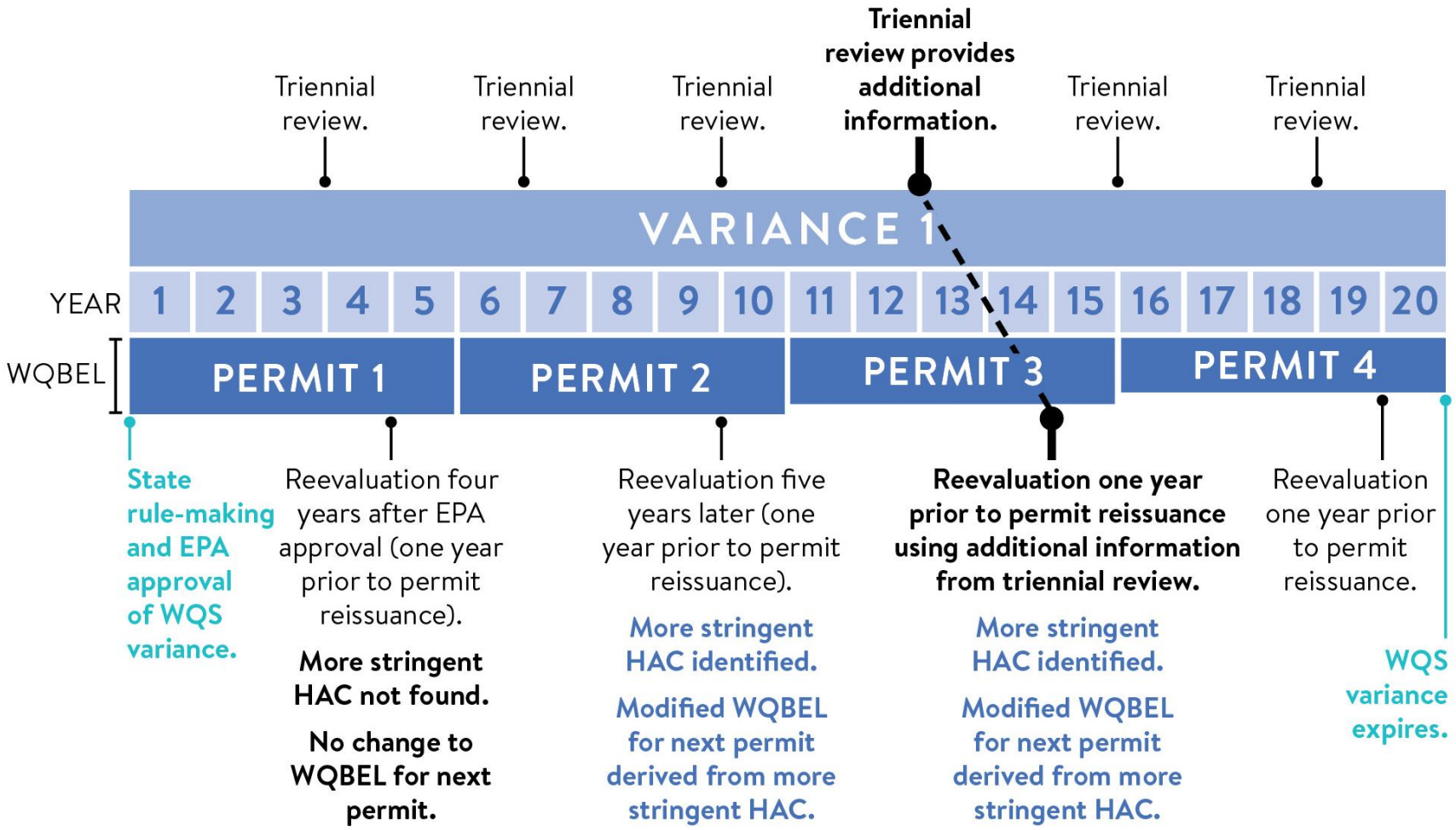
- "providing that the requirements of the WQS variance are either the highest attainable condition identified at the time of the adoption of the WQS variance, or the highest attainable condition identified during any reevaluation consistent with (b)(1)(v) of this section, whichever is more stringent." (40 CFR 131.14(b)(1)(iii))

- "specifying how the State intends to obtain public input on the reevaluation." (40 CFR 131.14(b)(1)(v))

  Note: The public input at the reevaluation does not need to be a public hearing

- "that the WQS variance will no longer be the applicable WQS for purposes of the Act, if the reevaluation is not conducted consistent with the frequency specified in the WQS variance or the results are not submitted to EPA [within 30 days of completion of the reevaluation]." (40 CFR 131.14(b)(1)(vi))

EXAMPLE: REEVALUATION AT PERMIT REISSUANCE



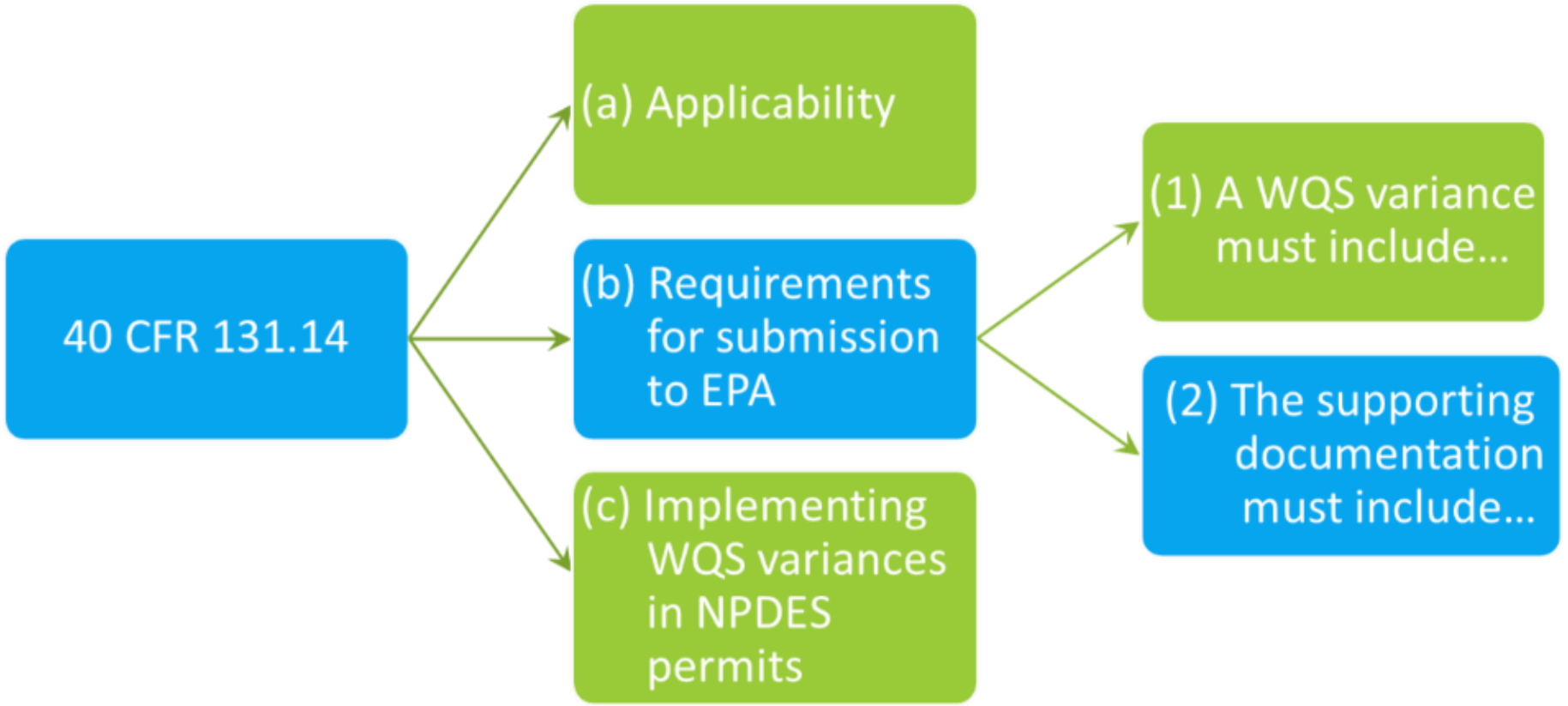
WQBEL - *Water Quality Based Effluent Limit*

HAC - *Highest Attainable Condition*

WQS VARIANCE: SUMMARY OF REQUIREMENTS

1) Scope – Identification of the pollutant(s) or water quality parameter(s) and waterbody 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 WQS variance term > 5 years.
   - Reevaluation provisions.

WQS VARIANCE SUPPORTING DOCUMENTATION



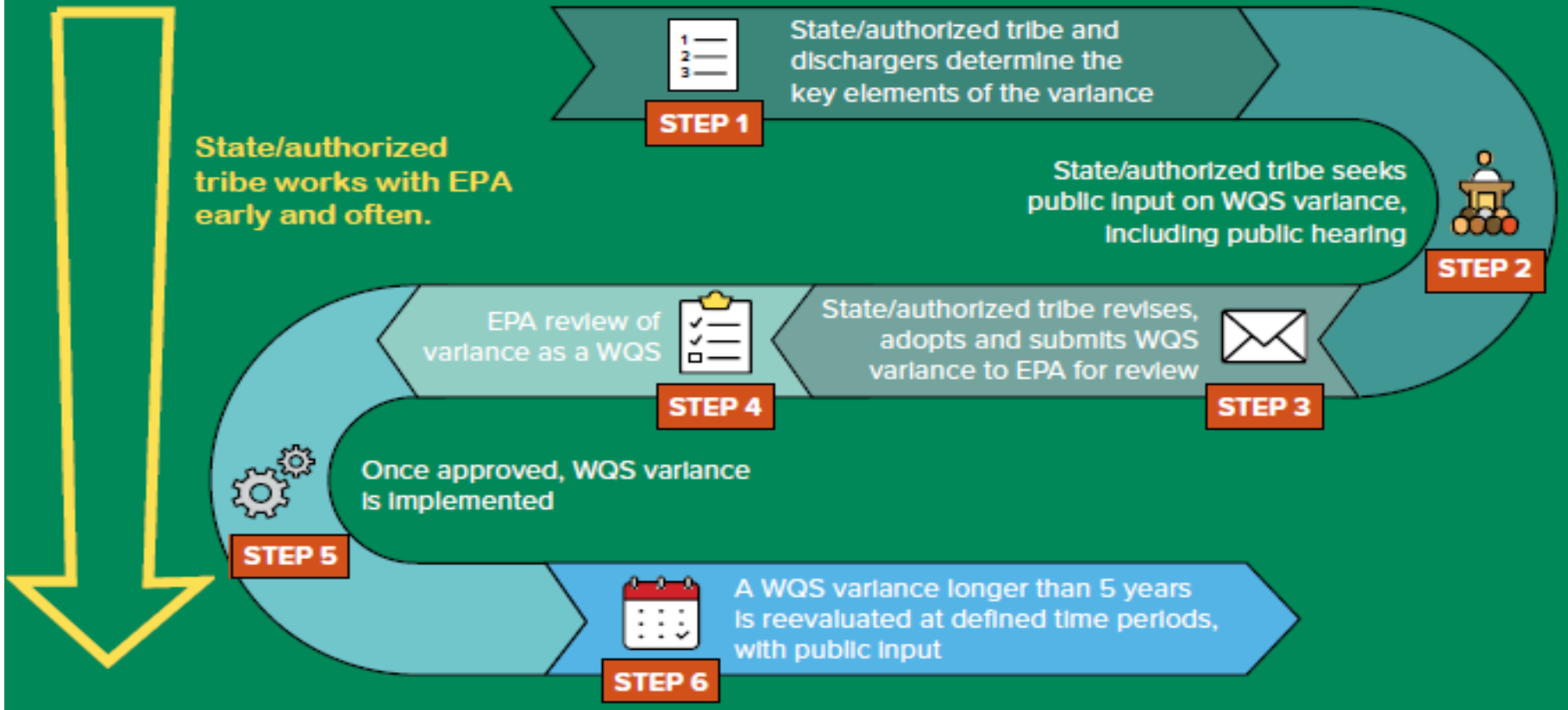
STRONG SUPPORTING DOCUMENTATION: ENSURES CONSISTENCY WITH 40 CFR 131.14

1. The need for the WQS variance
   - 40 CFR 131.14(b)(2)(ii): "Documentation demonstrating that the term of the WQS variance is only as long as necessary to achieve the highest attainable condition."
2. The term of the WQS variance is only as long as necessary to achieve the highest attainable condition
   - 40 CFR 131.14(b)(2)(ii): "Documentation demonstrating that the term of the WQS variance is only as long as necessary to achieve the highest attainable condition."
3. The interim WQS represents the highest attainable condition
   - 40 CFR 131.14(b)(1)(ii): "The requirements shall represent the highest attainable condition of the water body or waterbody segment applicable throughout the term of the WQS variance based on the documentation required in (b)(2) of this section.
4. For water body or waterbody segment WQS variances, identification and documentation of any cost-effective and reasonable best management practices (BMPs) for nonpoint source controls
   - 40 CFR 131.14(b)(2)(iii): "Identification and documentation of any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and water body or waterbody segment(s) specified in the WQS variance that could be implement to make progress towards attaining the underlying designated use and criterion. A State must provide public notice and comment for any such documentation."

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



SUBSEQUENT WQS VARIANCES

- The regulations do not prohibit adoption of a subsequent WQS variance once the initial WQS variance expires.
- A subsequent WQS variance may be obtained if the requirements of 40 CFR131.14 are fully met again.
- In addition, to adopt a subsequent waterbody or waterbody segment WQS variance, states and authorized Tribes must submit additional documentation on whether and to what extent best management practices (BMPs) for nonpoint sources were implemented and the water quality ~~and~~ progress achieved. (40 CFR 131.14(b)(2)(iii)).

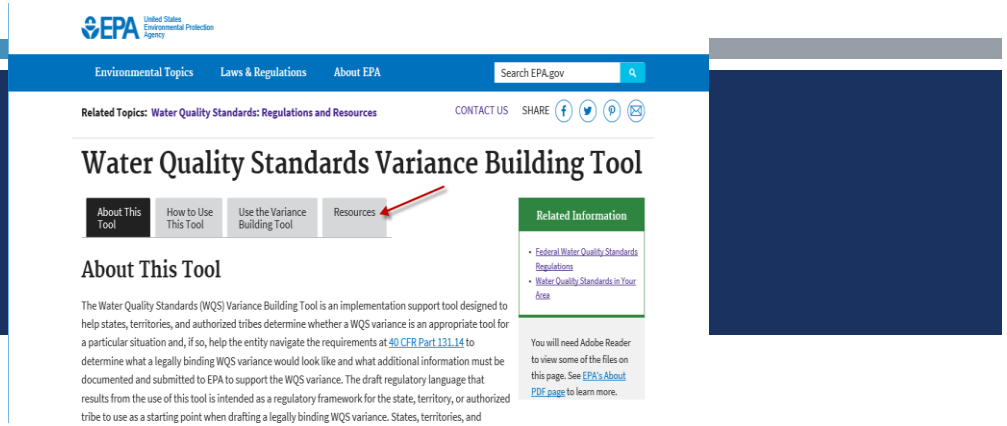
EPA'S WQS VARIANCE BUILDING TOOL *DEMONSTRATION*

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.

HELPFUL RESOURCES



- "WQS Variances" website:

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

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

- 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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