

Water Quality Standards Variance Building Tool – Flow Chart

What is the purpose of this tool?

The purpose of a WQS variance is to facilitate progress toward attaining designated uses. This 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.

States, territories, and authorized tribes are not required to use this tool when adopting WQS variances. However, using this tool may help states, territories, and authorized tribes initiate the process of developing a WQS variance that can serve as the starting point for stakeholder and EPA engagement.

How does this tool work?

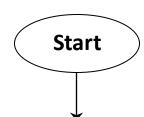
This flow chart serves as the structural layout for EPA's online version of the WQS Variance Building Tool. The online version follows the flow chart and asks a series of questions to identify the information that must be included in a WQS variance submission. As the user progresses, the tool records all of the answers provided and uses them to populate draft regulatory language. The tool does this by assigning each input parameter with a specific code (see the chart below for more information). States, territories, and authorized tribes may tailor the draft regulatory language to include additional information that more accurately captures the case-specific facts of the individual WQS variance or fits a desired format as long as all federal requirements are met. The final regulatory language can then be adopted and submitted, along with all necessary supporting documentation, to EPA for CWA Section 303(c) review.

Codes for Specific Parameters	Description
"Q#"	Defines a question (with "#" representing a number from 1-38) that requires the user to input a value or select an option. The response to these questions is recorded by the tool and used to populate the regulatory language.
"R#"	Defines a result or conclusion (with "#" representing a number from 1-5) that provides suggested next steps or actions.
"C#"	Defines additional content (with "#" representing a number from 1-9) that does not require input by the user but is provided for context or supplemental information.

Contact Information:

If you have any questions about this tool, please contact Gary Russo at (202)-566-1335 or at Russo.Gary@epa.gov.

WQS Variance Building Tool Flow Chart – Questions 1-4



DISCLAIMER: This tool does not impose legally binding requirements on the United States Environmental Protection Agency (EPA), states, territories, authorized tribes, or the regulated community, nor does it confer legal rights or impose legal obligations upon any member of the public. The Clean Water Act (CWA) provisions and EPA regulations described in the tool contain legally binding requirements. This tool does not constitute a regulation, nor does it change or substitute for any CWA provision or EPA regulations. This tool is a living document and may be revised periodically without public notice.

This tool populates draft regulatory language that is intended for states, territories, and authorized tribes to use as a starting point to customize their own legally binding water quality standards (WQS) variance. It also provides a list of the additional information that must be documented and submitted to EPA to support the WQS variance. The supporting documentation required may change depending on the type of WQS variance identified. The use of this tool and resulting draft regulatory language does not guarantee EPA approval. EPA encourages early and frequent coordination between a state, territory, or authorized tribe and EPA to provide the best chance that the submission meets the requirements of the CWA and regulation.

C1) As you progress through the questions, this tool will record each of your responses. To view your responses to any previous question, click the "Show/Hide Responses" button. Using the "Show/Hide Responses" button, you may also copy your responses into another document. You may return to previous questions by clicking "Go Back" or by clicking on the link to a particular question in the "Progress" list. If you wish to clear all your responses and start fresh, you may click "Start Over." If you close your browser, this tool will save your progress so you can continue your work at a later time. Please note that responses are stored within your computer's internet browser and are not transmitted to EPA or anywhere else.

Q1) Which of the following has regulatory jurisdiction over the waterbody or waterbody segment that will be subject to the desired water quality standards (WQS) variance, a(n): state, authorized tribe¹, or U.S. territory?

NOTE: The remainder of this tool uses "state" to refer to a state, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

1. An authorized tribe is any federally recognized Indian tribe approved by EPA to receive Treatment in a Similar Manner as a State (TAS) to administer a Clean Water Act WQS program.

Q2) What is the currently applicable designated use for the waterbody or waterbody segment that will be subject to the desired WQS variance?

Please be as specific as possible when identifying the applicable designated use. Example: cold water aquatic life use

It is important to consider the designated uses and criteria of downstream waterbodies or waterbody segments (see 40 CFR Part 131.10(b)) when deciding whether to adopt a WQS variance. EPA recommends coordinating with your EPA regional office to ensure the WQS variance does not conflict with this additional requirement. (See EPA's website to relevant contact information.)

Q3) The regulations at 40 CFR Part 131.14(b)(1)(i) require WQS variances to identify the pollutant or water quality parameter to which the desired WQS variance will apply. WQS variances are generally applicable to one pollutant or water quality parameter, however EPA acknowledges that some pollutants (e.g., nitrogen and phosphorus) may be appropriate to cover under the same WQS variance.

What is/are the pollutant(s) or water quality parameter(s) to which the desired WQS variance will apply?

Please be as specific as possible when identifying the pollutant(s) or parameter(s). Example: dissolved copper

Q4) 40 CFR Part 131.11 requires that states adopt criteria that protect the designated use and that such criteria must be based on sound scientific rationale.

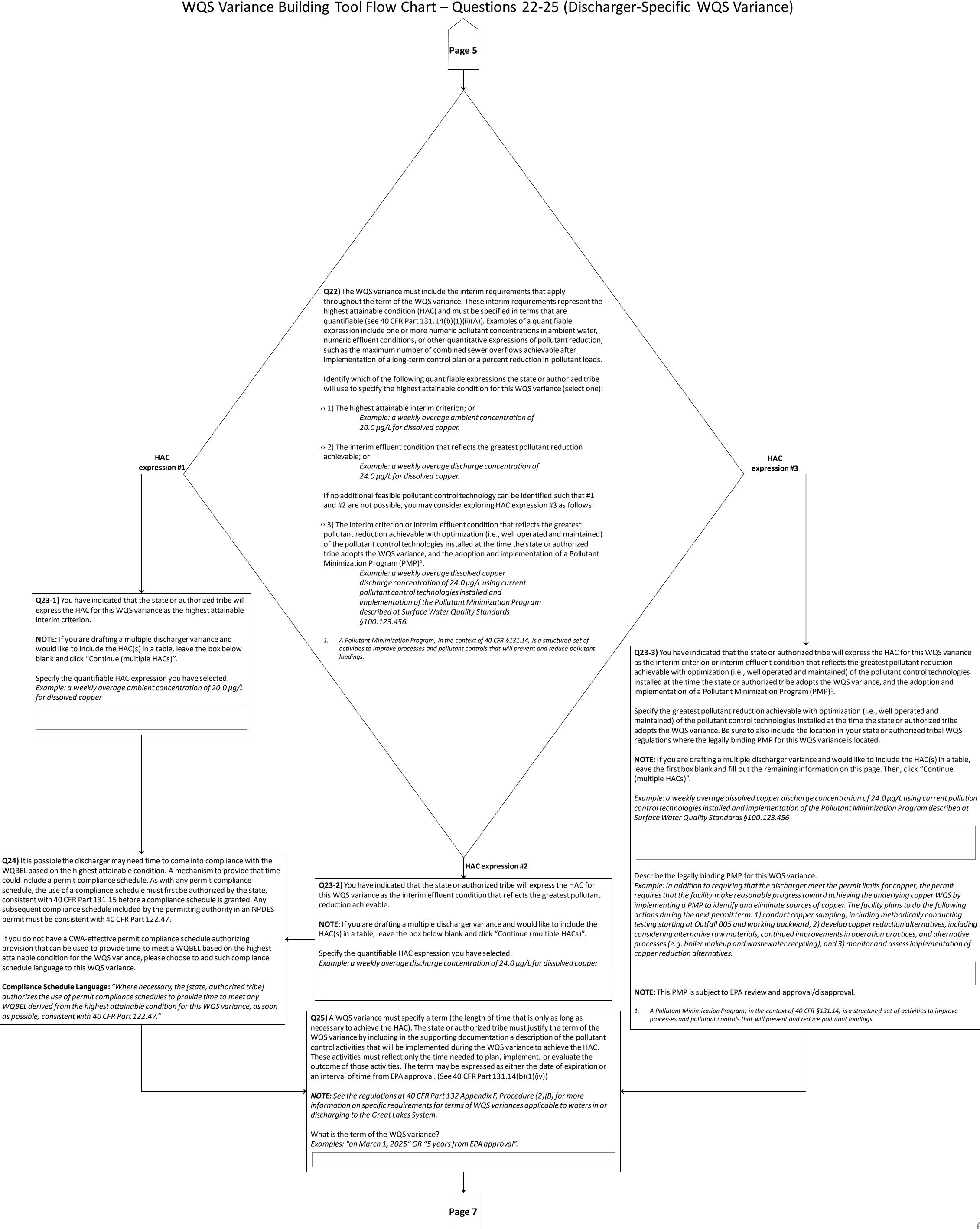
What is the currently applicable criterion that protects the currently applicable designated use for the pollutant(s) or water quality parameter(s) to which the desired WQS variance will apply?

Please be as specific as possible when identifying the applicable criterion. You may enter a numeric expression (e.g., a concentration or equation) or a citation to the section of the legally binding state or authorized tribal regulations where the criterion is written.

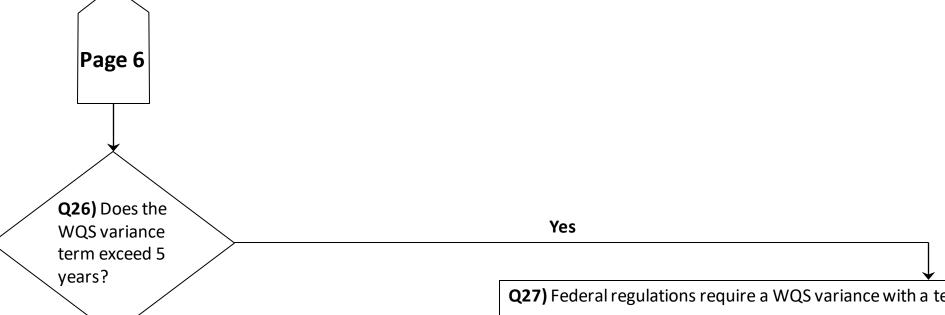
Examples include but are not limited to: 1) a chronic freshwater aquatic life criterion of 18.0 μ g/L; 2) pH and temperature dependent: given a pH of 7 and water temperature of 20 °C, a chronic freshwater aquatic life criterion of 1.9 μ g/L; OR 3) written in Table A within Surface Water Quality Standards §10-100.123.

WQS Variance Building Tool Flow Chart – Questions 5-9 Page 2 **Q5)** Technology-based effluent limits (TBELs) represent the minimum level of control that must be imposed in a permit issued under Section 402 of R1) The regulation at 40 CFR Part 131.14(a)(4) the CWA. TBELs are required under Sections 301(b) prohibits a permittee from receiving a WQS and 306 of the CWA, and can be imposed using one variance when the designated use and of three methods described at 40 CFR Part 125.3(c). Yes associated criterion can be achieved by Can the currently applicable designated use and implementing technology-based effluent limits associated criterion addressed by the desired WQS required under Sections 301(b) and 306 of the variance be achieved by implementing TBELs? (See CWA. The permitee must comply with any 40 CFR Part 131.14(a)(4)). applicable TBEL's. NOTE: If the pollutant to which the desired WQS variance will apply does not require a TBEL, click "TBEL not required for this pollutant." No **Q6)** Is/Are the permittee(s) able to meet the water quality-based effluent limit (WQBEL) derived from the R2) The permitee must comply with the applicable WQBEL Yes designated use and derived from the designated use and associated criterion. associated criterion at the A WQS variance is not appropriate. time of the National Pollutant Discharge Elimination System (NPDES) permit issuance? No **R3)** Permit compliance schedules are a more appropriate tool for situations where an enforceable sequence of Q7) Can the actions that will lead to compliance with the WQBEL can be discharger/permitting identified. The state or authorized tribe should consider Yes authority identify a series using a permit compliance schedule consistent with 40 CFR of enforceable actions that Part 122.47, and adopting a permit compliance schedule will lead to compliance authorizing provision consistent with 40 CFR Part 131.15, if with the WQBEL? none exists, to provide dischargers time to comply with WQBEL's. No **Q8)** WQS variances may be appropriate to address situations where it is known that the designated use and criterion are unattainable today (or for a limited **R4)** The state or authorized tribe should consider period of time) but feasible progress No could be made toward attaining the revising the designated use and associated criterion consistent with the regulations at 40 CFR Part 131.10 designated use and criterion in the and 40 CFR Part 131.11. future. Taking into account potential uncertainty, is it possible that feasible progress could be made toward attaining the designated use and criterion in the future? Yes **C2)** The state or authorized tribe should consider adopting a WQS variance to provide time to make incremental progress toward improving water quality. As the state or authorized tribe begins its process of drafting a WQS variance, use the following questions and guidelines to ensure the WQS variance is consistent with the requirements at 40 CFR Part 131.14. Waterbody or Q9) Will the WQS variance Specific waterbody apply to specific Discharger(s) segment Page 4 Page 8 discharger(s) or will it apply to a waterbody or waterbody segment? 3

WQS Variance Building Tool Flow Chart – Questions 18-21 (Discharger-Specific WQS Variance) Page 4 Q18) The regulations at 40 CFR Part 131.14(b)(2)(i) require the state or authorized **Q20)** Before adopting a WQS variance for tribe to submit supporting documentation a non-101(a)(2) use, federal regulations demonstrating the need for a WQS variance. require a demonstration that The type of demonstration required depends consideration of the use and value of the on whether the designated use is a 101(a)(2) water for those uses listed in 40 CFR Part use 1 or a non-101(a)(2) use 2 . 131.10(a) appropriately supports the WQS variance and its term as specified in 40 Which type of designated use is affected by Non-CFR Part 131.14(b)(2)(i)(B). This 101(a)(2) this WQS variance? Attainability of the designated use requirement can also be satisfied by providing a demonstration showing that 1. 101(a)(2) uses are any uses specified in Section attaining the designated use and 101(a)(2) of the CWA, or subcategory of such a use. associated criterion is not feasible due to Examples include but are not limited to: cold-water at least one of the regulatory factors aquatic life use and primary contact recreation use. specified in 40 CFR Part 131.14(b)(2)(i)(A). 2. Non-101(a)(2) uses are any uses unrelated to the protection and propagation of fish, shellfish, and Which type of demonstration will the wildlife or recreation in or on the water. Examples state or authorized tribe provide for this include but are not limited to: navigational, WQS variance? agricultural, industrial, or public water supply uses. **Q21)** The state or authorized tribe will need to demonstrate that the designated use and associated criterion are not feasible to attain throughout the term of the WQS variance using at least one of the factors specified in 40 CFR Part 131.14(b)(2)(i)(A). Select the relevant factor(s) listed below. Describe in separate documentation how the selected factor(s) precludes attainment of the designated use and associated criterion during the term of the WQS variance. The state or authorized tribe must include this documentation with the WQS variance they submit to EPA for review and approval or disapproval. 1) Naturally occurring pollutant concentrations prevent the attainment of the use; 101(a)(2) 2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent Q19) A WQS variance for a use specified in section 101(a)(2) of the Act, or sub-category of such the attainment of the use, unless these conditions may be compensated for by **Consideration of the use** a use, requires a demonstration that attaining the designated use is not feasible during the term the discharge of sufficient volume of effluent discharges without violating State and value of the wate of the WQS variance due to at least one of the factors specified in 40 CFR Part water conservation requirements to enable uses to be met; or 131.14(b)(2)(i)(A). Select the relevant factor(s) listed below. Document how the selected 3) Human caused conditions or sources of pollution prevent the attainment of the factor(s) precludes attainment of the use during the term of the WQS variance and include such use and cannot be remedied or would cause more environmental damage to documentation in the supporting documentation submitted to EPA with the WQS variance. correct than to leave in place; or Dams, diversions or other types of hydrologic modifications preclude the 1) Naturally occurring pollutant concentrations prevent the attainment of the use; attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in **C5)** The state or authorized tribe will need to 2) Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the use; or document how the consideration of the use and value the attainment of the use, unless these conditions may be compensated for by 5) Physical conditions related to the natural features of the waterbody, such as a of the water for the non-101(a)(2) uses affected by this the discharge of sufficient volume of effluent discharges without violating State lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, WQS variance appropriately supports the WQS water conservation requirements to enable uses to be met; or unrelated to the water quality, preclude attainment of aquatic life protection variance and term (see 40 CFR Part 131.14(b)(2)(i)(B)). 3) Human caused conditions or sources of pollution prevent the attainment of the The state or authorized tribe must include this use and cannot be remedied or would cause more environmental damage to Controls more stringent than those required by sections 301(b) and 306 of the documentation with the WQS variance they submit to correct than to leave in place; or Clean Water Act would result in substantial and widespread economic and social EPA for review and approval or disapproval. Dams, diversions or other types of hydrologic modifications preclude the impact (see EPA's spreadsheet tools to evaluate economic impacts for help); or attainment of the use, and it is not feasible to restore the waterbody to its 7) Actions necessary to facilitate lake, wetland, or stream restoration through dam original condition or to operate such modification in a way that would result in removal or other significant reconfiguration activities preclude attainment of the attainment of the use; or the designated use and criterion while the actions are being implemented. Physical conditions related to the natural features of the waterbody, such as a lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to the water quality, preclude attainment of aquatic life protection uses; or Controls more stringent than those required by sections 301(b) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact (see EPA's spreadsheet tools to evaluate economic impacts for help); or Actions necessary to facilitate lake, wetland, or stream restoration through dam removal or other significant reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented. Page 6



WQS Variance Building Tool Flow Chart – Questions 26-27 (Discharger-Specific WQS Variance)



C6) In order to adopt a WQS variance, the state or authorized tribe must hold one or more public hearings to meet the public participation requirements at 40 CFR Part 131.20(b). EPA's regulations at 40 CFR Part 25.5 specify the requirements for conducting such hearings, including providing a well-publicized notice at least 45 days prior to the date of the hearing and supporting analyses/documentation to the public at least 30 days prior to the date of the hearing.

No

Throughout and following the public participation process, the state or authorized tribe should consider any public input received and make any necessary revisions to the WQS variance and/or supporting documentation.

C7) EPA recommends that the state or authorized tribe coordinate with its EPA regional office before adopting the WQS variance into state or authorized tribal regulations. Early and frequent communication with EPA will help ensure that the WQS variance submission will be consistent with federal regulations and CWA requirements. (See EPA's website for relevant contact information.)

K5) Use the information provided in this tool, as well as the draft regulatory language located below, to engage in discussions with EPA and stakeholders and to begin creating a legally binding WQS variance (see EPA's website for relevant contact information). If necessary, tailor the draft regulatory language to include additional information that more accurately captures the case-specific facts of the individual WQS variance or fits a desired format as long as all federal requirements are met. Then, adopt the final WQS variance and submit it, along with all necessary supporting documentation, to EPA for CWA 303(c) review. Be sure to copy and paste the draft regulatory language below into a separate **document before clicking "start over".** Please also refer to the "Checklist for Water Quality Standards Variance Supporting Documentation Requirements" on the "Resources" tab to see what additional information must be documented and submitted to EPA to support this WQS variance.

If EPA approves the WQS variance, the WQS variance will become the applicable water quality standard when developing NPDES permit limits and requirements for the discharger(s) and the pollutant(s)/parameter(s) specified in the WQS variance. The approved WQS variance can also be used when issuing CWA Section 401 certifications. All other WQS not addressed by the WQS variance continue to apply. The state or authorized tribe must retain the underlying designated use and associated criterion in their WQS. The underlying designated use and criteria will continue to apply for all other CWA purposes (e.g., total maximum daily loads and 303(d) listings).

If EPA disapproves the WQS variance, consult with your EPA regional office and consider any remedies EPA may provide. If the state or authorized tribe chooses to resubmit a revised WQS variance, the state or authorized tribe should coordinate with EPA as needed and resubmit the revised WQS variance for CWA 303(c) review.

Q27) Federal regulations require a WQS variance with a term greater than five years to include:

• A specified frequency to reevaluate the highest attainable condition using all existing and readily available information. The reevaluation frequency must be at least once every 5 years from the date of EPA approval (see 40 CFR Part 131.14(b)(1)(v)).

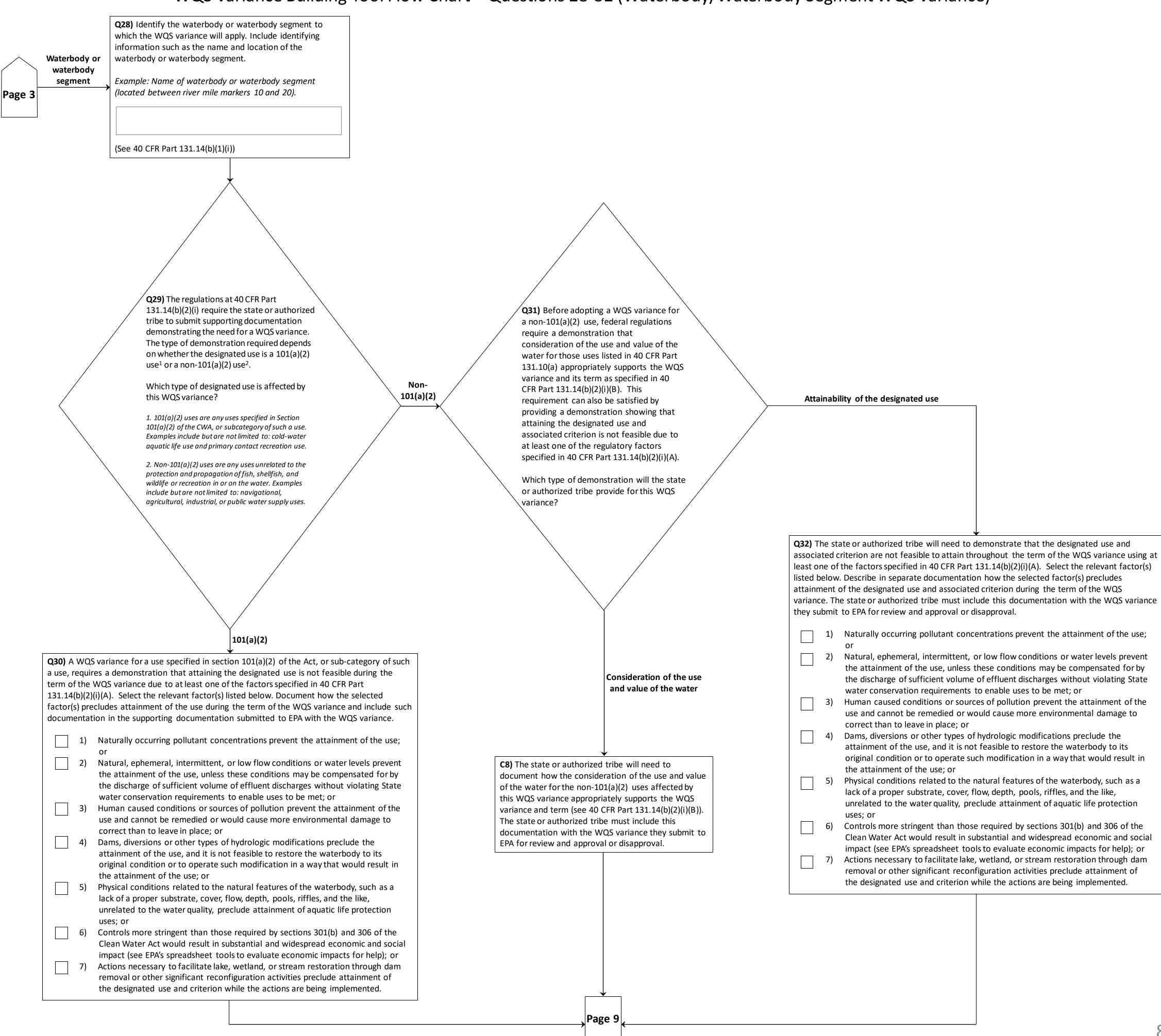
Specify the frequency of reevaluation for this WQS variance.

Examples can include but are not limited to: 1) every 5 years from EPA approval OR 2) 1 year prior to the NPDES permit expiration OR 3) at each WQS triennial review throughout the duration of the WQS variance

• A legally binding provision specifying how the state or authorized tribe intends to obtain public input on each reevaluation (see 40 CFR Part 131.14(b)(1)(v)).

Specify how public input will be obtained for reevaluations of this WQS variance. Examples can include but are not limited to: holding public meetings, opening public comment periods on relevant supporting documents for the WQS variance, obtaining public comment through the public process on a draft NPDES permit, etc.

- A legally binding provision specifying that the HAC will either be the HAC at the time of adoption or a higher attainable condition identified during any subsequent reevaluation, whichever is more stringent (see 40 CFR Part 131.14(b)(1)(iii)). (*This provision is automatically built into the template*).
- A legally binding provision that if the state or authorized tribe does not complete a reevaluation on the schedule specified in the WQS variance and/or does not submit the results to EPA within 30 days of completion, the variance is no longer the applicable water quality standard for CWA purposes until they complete and/or submit the reevaluation (see 40 CFR Part 131.14(b)(1)(vi)). (This provision is automatically built into the template).



HAC expression #2

Q34-2) You have indicated that the state or authorized tribe will express the HAC for this WQS variance as the interim use and interim criterion that reflects the greatest pollutant reduction achievable with optimization (i.e., well operated and maintained) of the pollutant control technologies installed at the time the state or authorized tribe adopts the WQS variance, and the adoption and implementation of a Pollutant Minimization Program

Specify the interim use and the greatest pollutant reduction achievable with optimization (i.e., well operated and maintained) of the pollutant control technologies installed at the time the state or authorized tribe adopts the WQS variance. Be sure to also include the location in your state or authorized tribal WQS regulations where the legally binding PMP for this WQS variance is located.

Example: a cold, freshwater habitat use with a weekly average dissolved copper discharge concentration of 24.0 μg/L using current pollution control technologies installed and implementation of a Pollutant Minimization Program described at Surface Water Quality Standards §100.123.456

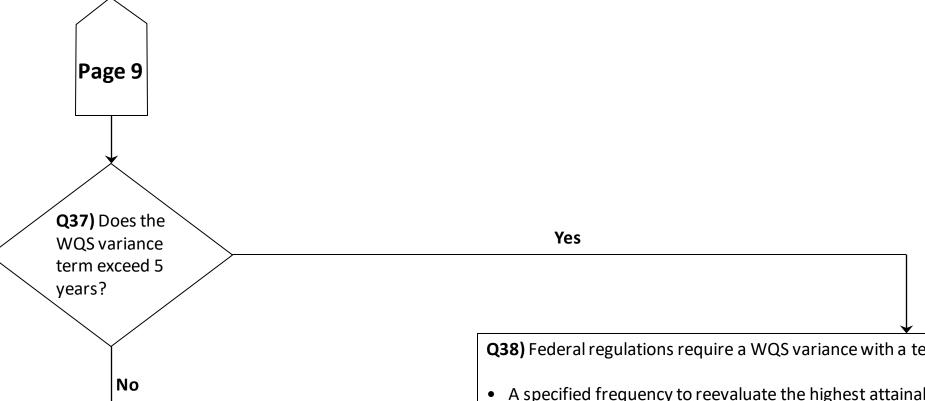
Describe the legally binding PMP for this WQS variance.

Example: In addition to requiring that the discharger meet the permit limits for copper, the permit requires that the facility make reasonable progress toward achieving the underlying copper WQS by implementing a PMP to identify and eliminate sources of copper. The facility plans to do the following actions during the next permit term: 1) conduct copper sampling, including methodically conducting testing starting at Outfall 005 and working backward, 2) develop copper reduction alternatives, including considering alternative raw materials, continued improvements in operation practices, and alternative processes (e.g. boiler makeup and wastewater recycling), and 3) monitor and assess implementation of copper reduction alternatives.

NOTE: This PMP is subject to EPA review and approval/disapproval.

1. A Pollutant Minimization Program, in the context of 40 CFR §131.14, is a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.

WQS Variance Building Tool Flow Chart – Questions 37-38 (Waterbody/Waterbody Segment WQS Variance)



C9) The regulations at 40 CFR Part 131.14(b)(2)(iii) specify two additional requirements for WQS variances applicable to a waterbody or waterbody segment including:

- Identification and documentation of any cost-effective and reasonable best management practices for nonpoint source¹ controls related to the pollutant(s) or water quality parameter(s) and waterbody or waterbody segment(s) specified in the WQS variance that could be implemented to make progress towards attaining the underlying designated use and criterion. The state or authorized tribe must also provide public notice and comment for any such document.
- Any subsequent WQS variance for a waterbody or waterbody segment must include documentation of whether and to what extent best management practices for nonpoint source controls were implemented to address the pollutant(s) or water quality parameter(s) subject to the WQS variance and the water quality progress achieved.

The state or authorized tribe should prepare such documentation and submit it along with the WQS variance and all other required supporting documentation to EPA for CWA 303(c) review.

1. See EPA's website for more information on nonpoint sources of pollution.

C6) In order to adopt a WQS variance, the state or authorized tribe must hold one or more public hearings to meet the public participation requirements at 40 CFR Part 131.20(b). EPA's regulations at 40 CFR Part 25.5 specify the requirements for conducting such hearings, including providing a well-publicized notice at least 45 days prior to the date of the hearing and supporting analyses/documentation to the public at least 30 days prior to the date of the hearing.

Throughout and following the public participation process, the state or authorized tribe should consider any public input received and make any necessary revisions to the WQS variance and/or supporting documentation.

C7) EPA recommends that the state or authorized tribe coordinate with its EPA regional office before adopting the WQS variance into state or authorized tribal regulations. Early and frequent communication with EPA will help ensure that the WQS variance submission will be consistent with federal regulations and CWA requirements. (See EPA's website for relevant contact information.)

R5) Use the information provided in this tool, as well as the draft regulatory language located below, to engage in discussions with EPA and stakeholders and to begin creating a legally binding WQS variance (see EPA's website for relevant contact information). If necessary, tailor the draft regulatory language to include additional information that more accurately captures the case-specific facts of the individual WQS variance or fits a desired format as long as all federal requirements are met. Then, adopt the final WQS variance and submit it, along with all necessary supporting documentation, to EPA for CWA 303(c) review. Be sure to copy and paste the draft regulatory language below into a separate document before clicking "start over". Please also refer to the "Checklist for Water Quality Standards Variance Supporting Documentation Requirements" on the "Resources" tab to see what additional information must be documented and submitted to EPA to support this WQS variance.

If EPA approves the WQS variance, the WQS variance will become the applicable water quality standard when developing NPDES permit limits and requirements for the discharger(s) and the pollutant(s)/parameter(s) specified in the WQS variance. The approved WQS variance can also be used when issuing CWA Section 401 certifications. All other WQS not addressed by the WQS variance continue to apply. The state or authorized tribe must retain the underlying designated use and associated criterion in their WQS. The underlying designated use and criteria will continue to apply for all other CWA purposes (e.g., total maximum daily loads and 303(d) listings).

If EPA disapproves the WQS variance, consult with your EPA regional office and consider any remedies EPA may provide. If the state or authorized tribe chooses to resubmit a revised WQS variance, the state or authorized tribe should coordinate with EPA as needed and resubmit the revised WQS variance for CWA 303(c) review.

Q38) Federal regulations require a WQS variance with a term greater than five years to include:

• A specified frequency to reevaluate the highest attainable condition using all existing and readily available information. The reevaluation frequency must be at least once every 5 years from the date of EPA approval (see 40 CFR Part 131.14(b)(1)(v)).

Specify the frequency of reevaluation for this WQS variance.

Examples can include but are not limited to: 1) every 5 years from EPA approval OR 2) 1 year prior to the NPDES permit expiration OR 3) at each WQS triennial review throughout the duration of the WQS variance

• A legally binding provision specifying how the state or authorized tribe intends to obtain public input on each reevaluation (see 40 CFR Part 131.14(b)(1)(v)).

Specify how public input will be obtained for reevaluations of this WQS variance. Examples can include but are not limited to: holding public meetings, opening public comment periods on relevant supporting documents for the WQS variance, obtaining public comment through the public process on a draft NPDES permit, etc.

- A legally binding provision specifying that the HAC will either be the HAC at the time of adoption or a higher attainable condition identified during any subsequent reevaluation, whichever is more stringent (see 40 CFR Part 131.14(b)(1)(iii)). (*This provision is automatically built into the template*).
- A legally binding provision that if the state or authorized tribe does not complete a reevaluation on the schedule specified in the WQS variance and/or does not submit the results to EPA within 30 days of completion, the variance is no longer the applicable water quality standard for CWA purposes until they complete and/or submit the reevaluation (see 40 CFR Part 131.14(b)(1)(vi)). (This provision is automatically built into the template).