Texas Commission on Environmental Quality
Tier II 401 Certification Questionnaire & Alternatives Analysis

Authorization. The Texas Commission on Environmental Quality (TCEQ) conducts Federal Clean Water Act (CWA), §401 state water quality certification reviews in accordance with 30 Texas Administrative Code §279 that establishes the procedures and criteria for applying for, processing, and reviewing state certifications.

Least Damaging Practicable Alternative. In accordance with Chapter 279, the applicant is required to follow a mitigation sequence that includes avoidance, minimization, and mitigation of proposed project impacts to the aquatic ecosystem to determine the *least environmentally damaging practicable alternative*. *Practicable* is what is available and capable of being done after taking into consideration cost, existing technology, and logistics considering overall project purposes. Activities that are not water dependent are presumed to have a practicable alternative. A *water dependent activity* is an activity that is proposed for or adjacent to an aquatic site that requires access, proximity to, or siting within an aquatic site to fulfill its basic purpose. The applicant shall perform an Alternatives Analysis to demonstrate that the preferred alternative is the least environmentally damaging practicable alternative.

Avoidance. *"No discharge shall be certified if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem."*

The applicant shall consider both off-site alternatives and on-site alternative layouts and explain how the alternatives did not provide practicable avoidance of impacts to aquatic resources compared to the preferred alternative.

Minimization. *"No discharge of dredged or fill material shall be certified unless appropriate and practicable steps have been taken that will minimize potential adverse impacts of the discharge on the aquatic ecosystem."*

Once the applicant has demonstrated practicable avoidance, they shall demonstrate minimization of unavoidable impacts to aquatic resources. Such minimization should also mitigate for the loss of on-site water quality functions. Minimization measures may include, but are not limited to:

- Best management practices (BMPs) that protect avoided aquatic resources and protect and maintain water quality
- Buffers between the project and avoided aquatic resources
- Soft engineering approaches that attenuate extent of impacts to aquatic resources
- Spanning water crossings with bridges as an alternative to culverts
- Reduction of the project footprint such as a multi-level parking garage
- Minimize impervious cover
- Wet, earthen detention basins that aid in filtration and attenuate temperature
- Include existing aquatic resources into development design
- Living shorelines or shoreline stabilization that provides aquatic habitat and water quality functions
- Low impact development (LID) and green infrastructure

Mitigation. *"Certification shall require appropriate and practicable compensatory mitigation for all unavoidable adverse impacts that remain after all practicable avoidance and minimization have been completed."*

The intent of compensatory mitigation is to replace the lost aquatic functions incurred by project impacts. The applicant has the option to purchase credits from an approved mitigation bank or provide a complete permittee-responsible mitigation (PRM) plan with all the required elements of the *Compensatory Mitigation for Losses of Aquatic Resources* (2008) https://www.federalregister.gov/documents/2008/04/10/E8-6918/compensatory-mitigation-for-losses-of-aquatic-resources

Applicants may be required to perform functional assessments on aquatic resources proposed to be impacted and aquatic resources proposed for use in PRM. Functional assessments quantify the loss of aquatic functions resulting from the proposed project and estimate the required compensation for those losses. Functional assessments may also be used to determine the amount of credits required to be purchased from a mitigation bank. Applicants may contact the U.S. Army Corps of Engineers (Corps) for the approved functional assessments within the Corps district that the project is located.

In-kind mitigation is preferred to out-of-kind mitigation. On-site mitigation is preferred to off-site mitigation, except for approved mitigation banks which have an established service area that provides mitigation for impacted aquatic resources located within the same watershed as the mitigation bank. If an applicant proposes mitigation through an approved mitigation bank, they will be required to provide documentation that credits are available at their preferred mitigation bank. Out-of-kind, offsite PRM, or out-of-service area credits from a mitigation bank may require additional mitigation whereby multipliers are applied to compensate for the loss of a type of aquatic resource, or localized loss of aquatic functions onsite or within the same watershed.

Tier II 401 Certification Questionnaire

The following questions seek to determine how adverse impacts will be minimized during construction or upon completion of the project. If any of the following questions are not applicable to your project, write N/A ("not applicable"). Please include the applicant's name as it appears on the Corps of Engineers' permit application and Corps permit number on all submitted documents. Documents can be sent to:

Texas Commission on Environmental Quality
Attn: 401 Coordinator (MC-150)
P.O. Box 13087
Austin, TX 78711-3087

or via email: 401Certs@tceq.texas.gov

I. Water quality impacts

A. Describe BMPs to control short-term and long-term **turbidity and suspended solid**s in the waters being dredged and/or filled. Please refer to the TCEQ approved list of BMPs. Also, describe the type of sediment (sand, clay, etc.) that will be dredged or used for fill. Note: the return water from the upland placement of hydraulically dredged material will be required to meet the permit limit of 300 mg/L total suspended solids.

B. Describe measures that will be used to **stabilize disturbed soil areas,** i.e., dredge material mounds, recently constructed levees or berms, and construction sites, during and after construction. Special construction techniques intended to minimize soil or sediment disruption should also be described.

C. Describe any methods used to **test the sediments for contamination**, especially when dredging will occur in areas with a potential to be contaminated i.e., downstream of wastewater outfalls, waterbodies listed for contaminated sediments in the CWA 303(d) list, or within an Area of Concern of a Superfund site.

II. Disposal of waste materials

A. Describe the methods for disposing of materials recovered from the removal or destruction of existing structures.

B. Describe the methods for disposing of sewage generated during construction. If the proposed work establishes a business or a subdivision, describe the method for disposing of sewage after completing the project.

C. For marinas, describe plans for collecting and disposing of sewage from marine sanitation devices. Also, discuss provisions for the disposing of sewage generated from day-to-day activities

Tier II Alternatives Analysis

I. Alternatives

A. How could the project purpose be achieved without impacting surface water in the State?

B. How could the project layout onsite be designed to avoid and minimize impacts to surface water in the State?

C. How could the project footprint be reduced to avoid and minimize impacts to surface water in the State?

D. What offsite locations were considered as an alternative for the project site?

E. What are the consequences of not building the project (no-build alternative)?

II. Comparison of Alternatives

A. How do the costs compare for each alternative?

B. What are the logistical (location, access, transportation, etc.) limitations for each alternative?

C. What are the technological limitations for each alternative?

D. Are there other reasons why an alternative was not considered feasible?

E. Please provide a comparison of each alternative considered using each of the criteria above.

F. Please explain how the preferred alternative is the least damaging practicable alternative

G. If all impacts to jurisdictional surface water in the State cannot be avoided, please explain how the remaining impacts will be minimized?