Dear Curt Campbell,

We have reviewed the plans for the referenced permit application. The project proposes the use of stormwater basins to meet the Performance Standards established by LCRA’s Highland Lakes Watershed Ordinance. We have the following comments regarding the plans and application:

1. Public Notice
   a. Mailed Notice: Provide a statement signed by the applicant certifying that each owner has been sent a notice of the application by first class mail.

2. Financial Security
   a. Changes to the Erosion and Sedimentation Control Plan have been requested. Please revise the cost estimate to include these changes. Once the cost estimate is approved, a letter of credit or other form of financial security acceptable to LCRA must be submitted prior to issuance of a permit. Letter of Credit shall have a minimum expiration of 3 years or shall renew automatically until LCRA determines that the project has achieved final stabilization. Contact this reviewer for a template for the letter of credit.

3. General Requirements
   a. Include a slope map at the same scale as the water quality management plan, depicting slope categories of 0-5%, 5-20%, and over 20%.
   b. Provide design information for the access roads within the property.
   c. Please separate the construction plans from the report and create a stand-alone construction plan set.
   d. Once the dredging operation is complete, will the plant be removed from the site? If so, please provide a plan to demobilize and restore the site.

4. Erosion/Sediment Control
   a. Please provide revegetation plans and include these costs in the Letter of Credit. A restoration plan for all disturbed areas on the site that includes seed, sod and mulch type and rate of application; application technique; watering and fertilization schedule; and criteria for acceptance of revegetation is required.
   b. Please provide a detailed sequence of construction showing different items constructed in each phase. Include details of erosion controls that relate to each phase and specifications for and locations of controls.
   c. Please depict the Limits of Construction line, location of all access roads, haul roads, equipment storage areas, and spoil and topsoil stockpile areas on the temporary erosion control plan.
d. Provide sizing calculations for the proposed channel that drains to the extended detention basin. Include flow, normal depth, and velocity of flow in the channel. If erosive velocities are expected provide additional erosion controls for mitigation.

e. Provide grading and details for the proposed earthen berms throughout the project.

f. Provide sizing and design information for the proposed culvert under the access road.

g. Include the sequence of construction on the Erosion Control Plans.

h. Install rock berms rather than silt fence at all locations where concentrated flows are to be encountered, pond outfalls, culvert outfalls, etc.

i. Install a rock berm around the culvert inflow to prevent sediment from clogging and/or flowing through the culvert and across the access road.

j. Add silt fence to the north side of the plant stockpile area outside of the earthen berm at least until the earthen berms are permanently stabilized.

k. Show J-hooks on the plans where required.

l. The seed mixture quantity in the Engineer’s Erosion Control Cost Estimate needs to reflect the entire limits of construction. Revise the quantity to reflect this.

m. The fee for the water truck rental does not account for all the watering requirements as outlined in the water application assumptions “watering occurs every two weeks for the first three months, followed by once monthly until the vegetation is established, approximately six months total”.

5. Water Quality Management

a. Please identify proposed vegetated buffer areas and mechanism for achieving sheet flow through buffer areas.

b. Show the 25-year water surface elevation on the pond profiles.

c. Verify that the sediment forebay volume is equal or greater than 25% of the total water quality volume.

d. Detail the gabion divider separating stage 1 and 2 of the extended detention pond.

e. Provide calculations for apron and rock size for all proposed rock rip rap. Include installation details for rip rap.

f. Specify the soil profile for the extended detention basin.

g. Natural vegetated filter strips require a slope of less than 12%, revise grading to be less than 12% maximum.

h. Provide outfall specifications for both water quality ponds. The primary spillways are not detailed, callout outfall inverts on plans, what size is the primary outfall of the bioretention pond, show the underdrain layout in the bioretention basin, show cleanout locations for the underdrain.

i. Show the 25-yr water surface elevation on the pond profiles. Show that a minimum 4” of freeboard is provided.

j. Label existing contours on the pond detail sheets.

k. Provide level spreader sizing calculations based on the calculations based on Equation 2.11 of the HLWO Technical Manual.
6. Maintenance Plan

   a. Separate the Maintenance Plan from the Engineering Report and provide as a stand-alone document.

If you have any questions about these comments, please call me at (512) 578-7633, or contact me by e-mail at blake.allison@lcra.org.

Additional information addressing these comments or revised application materials must be provided within 30 calendar days from the date of this letter. An extension of time to provide information may be requested, however the cumulative amount of time to provide additional information may not exceed 6 months from the date that the application for permit was filed.

Thank you,

Blake Allison
Water Quality Protection