



Brazoria Drainage District No. 4

A Political Subdivision of the State of Texas

BDD No. 4 Sand Pit Policy Effective December 1, 2021

On November 2, 2021 at a regularly held meeting of the Brazoria Drainage District No. 4 Board of Commissioners, the following policy was adopted and shall become effective December 1, 2021.

POLICY AND PROCEDURES FOR SAND MINING OPERATIONS

All sites within the jurisdiction of Brazoria Drainage District No. 4 which are commercially mining sand, fill, aggregate and similar materials will be subject to the policies and procedures contained herein.

These policies and procedures include the minimum requirements for mining and associated groundwater pumping on those sites. Additional requirements may be imposed as deemed necessary based upon the complexity and scale of the operation.

All mining operations are additionally subject to the Rules, Regulations, and Guidelines of Brazoria Drainage District No. 4.

SECTION 1 – PROCEDURES

- A meeting shall be held at the District office with the District Staff and District Engineer prior to initiating the design and preparing engineering drawings for the proposed mining operation.
- Applicant's Engineer initiates design and construction plan preparation.
- Applicant (or Agent) initiates required paperwork and approval processes with TCEQ and other agencies with jurisdictional authority.
- Applicant (or Agent) submits the required items to the Drainage District for review and comment. Applicant and / or Applicant's Engineer make corrections as required.
- Final approval can be issued only by the Brazoria Drainage District No. 4 Board of Commissioners at a posted District meeting which typically occurs only once per month. No approval will be given until all of the requisite TCEQ paperwork and approvals have been provided.
- The Drainage District will issue Sand Pumping Permit which expires after one year. Applicant must request renewal of the Sand Pumping Permit annually.

No construction or mining related activity may begin until the project receives Board approval and the Sand Pumping Permit has been issued.

SECTION 2 – DESIGN REQUIREMENTS

- Design a Storm Water Pollution Prevention Plan (SWPPP) showing the temporary erosion control measures to prevent sediment laden storm water from leaving the site during the initial disturbance and setup of the mining operation. This plan would typically include filter fabric fence, reinforced filter fabric fence, diversion swales, stabilized construction entrance, and concrete truck washout. This plan must include procedures for maintenance of the erosion control measures and requirements for regular record keeping regarding rainfall and maintenance events on site.
- Design a Storm Water Quality Management Plan (SWQMP) showing the permanent measures which will be put in place to remove sediment prior to the discharge off site as water is pumped from the excavation area. This plan would typically include settling ditches, sedimentation basins, and other anti-scour erosion control measures. This plan must also include an operations manual for the maintenance and cleaning of permanent storm water control measures on site. Records shall be kept on site for all maintenance and cleaning activities. The manual and records shall be made available to the District upon request.
- Drainage calculations shall be in conformance with the District's Rules, Regulations, and Guidelines. At a minimum, the plans and calculations shall show the existing and proposed 3-year, 10-year, and 100-year runoff. This will include an analysis of offsite flows which drain toward the subject tract. The calculations shall show no adverse impact to neighboring tracts as a result of the proposed mining operation.
- Pumping calculations shall show that no net increase in water leaving the site will occur as a result of rainfall and / or pumping operations. Pumping rates shall not exceed the existing / allowable 3-year runoff rate. Pumping shall discontinue when the receiving ditch is more than ½ full. Pumping shall discontinue during rain events and when rainfall is eminent. Notes to this effect must be on the plans.
- For projects which propose perimeter levees on site, the Applicant must obtain approval or letter of no objection from the Floodplain Administrator. This approval will be required prior to Board approval of the plan and issuance of the pumping permit.
- The plans shall include the design of a combination of settling ditches and settling ponds to remove sediment for pumped water prior to the release from the site.
- Settling calculations shall be provided on the plans and must meet the following minimum criteria:
 - Provide the flow velocity across the cross section of each settling ditch and settling pond. Velocities in settling ditches shall not exceed 0.1 fps. Velocities in settling ponds shall not exceed 0.01 fps. The cross section used in these calculations shall account for sediment accumulation prior to cleaning.
 - Provide the settling time for each settling ditch and settling pond. The minimum treatment time for settling ditches shall be 5 hours. The minimum treatment time for settling ponds shall be 10 hours. The total treatment time prior to release from the site shall be no less than 15 hours.
 - All transitions between pumps, ditches, ponds, and the outfall point shall be manufactured conduit, reinforced, or concrete lined to prevent erosion and resuspension of sediment.
- A minimum 30 foot setback from the property line to the edge of the excavation area is required.
- The slope of the excavation area shall be no steeper than 4:1.
- Construction plans must be in compliance with the District's Rules, Regulations, and Guidelines.

SECTION 3 – SUBMITTAL REQUIREMENTS

One (1) complete set of construction plans and supporting documentation containing the following items shall be submitted to the District office.

- Provide a copy of the approved Texas Commission on Environmental Quality (TCEQ) Aggregate Production Operation (APO) Registration form with assigned APO number. <https://www.tceq.texas.gov/permitting/registration/aggregates>
- Provide a copy of the approved Texas Commission on Environmental Quality (TCEQ) Storm Water Permit. <https://www.tceq.texas.gov/permitting/stormwater>
- Provide a complete set of plans for the proposed mining operation signed and sealed by a Professional Engineer registered in the State of Texas. The plans shall include at a minimum:
 - Cover sheet including a vicinity map, and BDD No. 4 signature block.
 - General construction notes including the BDD No. 4 Standard District Notes.
 - Topographic survey prepared by a Professional Land Surveyor registered in the State of Texas and including actual on the ground survey collected within the last year.
 - Overall layout showing the pit location, pumping facilities, storm water outfall, and other pertinent improvements.
 - Drainage Plan showing how on site and off site runoff will be managed without an adverse impact on site or to neighboring property.
 - Storm Water Pollution Prevention Plan (SWPPP).
 - Storm Water Quality Management Plan (SWQMP).
 - Plan and profile drawing showing the outfall per BDD No. 4 requirements and details.
 - Detailed drawings and cross sections for mining areas, settling ditches, sedimentation basins, and perimeter levees.
 - Drainage, pumping, and settling calculations.
 - Construction details.
 - A Geotechnical Report including boring logs and slope stability analysis prepared by a Professional Engineer registered in the State of Texas.
 - Technical specifications for the pumping equipment to be used on site including pump curves and other data to substantiate the actual pumping rates.
 - Additional paperwork and documentation as required by District Staff.

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John Genaro
District Superintendent