Appendix A. 2023 Biological Assessment Addendum (pages 1-100)

Addendum to the October 2021 Biological Assessment for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas Addressing Operation of a Deluge System

OCTOBER 2023

Introduction

In October 2021, the Federal Aviation Administration (FAA) prepared a Biological Assessment (BA) for the SpaceX Starship-Super Heavy Launch Vehicle Program at the SpaceX Boca Chica Launch Site in Cameron County, Texas (FAA 2021). The BA supported Endangered Species Act (ESA) Section 7 interagency consultation between the FAA and the United States Fish and Wildlife Service (USFWS). The BA evaluated the effects to ESA-listed species and designated or proposed critical habitat of FAA's proposed issuance of commercial space licenses or permits to SpaceX. The USFWS issued a Biological and Conference Opinion (BCO) and Incidental Take Statement (ITS) for this action on May 12, 2022.

This Addendum to the BA evaluates the effects of an activity not fully considered in the October 2021 BA or the May 2022 BCO: the operation of a deluge system at the Vertical Launch Area (VLA). This Addendum also evaluates a new environmental baseline based on conditions after the test launch of the Starship-Super Heavy launch vehicle on April 20, 2023.

The action area defined in the October 2021 BA and May 2022 BCO, which approximates the extent of sonic boom impacts, extends approximately 13 miles around the VLA. This action area remains applicable to this Addendum.

Deluge System Components and Operation

Following the April 20, 2023 launch, SpaceX: (1) reinforced its launch pad foundation with thicker concrete and additional piles; and (2) installed steel plates over the foundation. Both of these actions are designed to protect against the potential of a pad breakup or a large dust cloud. The steel plates include a water-cooling element (i.e., deluge system) that can be activated to protect the steel plates during an engine ignition event and allow reusability of the steel plates.

SpaceX proposes to activate the deluge system during engine static fires and vehicle launches. Approximately 358,000 gallons of non-contaminated water would be pushed from ground tanks into the steel plates and released through holes in the plating. The deluge system would apply a large amount of water to rapidly cool and create a barrier between the steel plate and rocket exhaust that will help to absorb sound energy and heat produced by the rocket engines and would allow the steel plate to be reused.

Components

The deluge system includes the following physical components constructed within the boundary of the VLA. The physical components of the deluge system will not require an expansion of the VLA beyond the area previously considered in the October 2021 BA and May 2022 BCO. The effects of construction activities within the VLA boundary are already considered in prior consultations. The deluge system components are described here for context and to aid in understanding how the system will be operated.

Water Storage: A reliable water source is required to provide the necessary volume, flow, and pressure for the deluge system. Water sources could include potable water from trucks from the nearby town of Brownsville, clean water generating processes offsite, or collected rainwater. The deluge system water will be stored in water storage tanks located within one or more of the tank farm areas of the VLA.

Press Tank: The press tank is a storage tank pressurized with nitrogen gas at 3,000 pounds per square inch (psi). The press tank is connected to the water storage tank(s) to provide the driving force to expel the water when the deluge system is activated.

Pumping System and Piping Network: A system of pumps will move water from the water storage tanks to the piping network of the deluge system. The pumps provide the necessary pressure to ensure effective water distribution. The piping network is a series of interconnected pipes that distribute water throughout the deluge system. The piping network is designed to deliver the required amount of water to the launch pad and rocket.

Control System and Valves: The control system is used to activate and deactivate the deluge system and includes sensors, actuators, and a central control unit to monitor water levels, pressures, and system status. It allows operators to activate or deactivate the deluge system, adjust flow rates, and receive alarms or notifications regarding system performance or anomalies. Control valves are installed within the piping network to regulate the flow of water at various sections of the deluge system. These valves allow for manual or automated control over the distribution of water to different areas as required. Flow meters monitor and measure the amount of water being supplied by the deluge system. This information helps in maintaining the desired flow rates and ensuring adequate water supply.

Water Containment: Most of the water applied during deluge operations will be captured by containment structures within the VLA. These containment structures include gutters, a retention basin below the launch pad, one or more retention ponds, and berms. SpaceX has constructed retention areas within the VLA with a total capacity of 276, 000 gallons (Figure 1). Additional ponds may be constructed with potential capacity of 30,000 gallons. These containment structures also collect storm water within the VLA. Water captured by the containment structures and meeting water quality standards established by the Texas Commission on Environmental Quality (TCEQ) will be used to refill the water storage tanks to minimize the amount of potable water needed to be trucked in. Applicable TCEQ standards are included in Appendix A. Water that does not meet TCEQ quality standards will be removed from the containment structures and hauled to an industrial wastewater treatment facility outside the VLA.

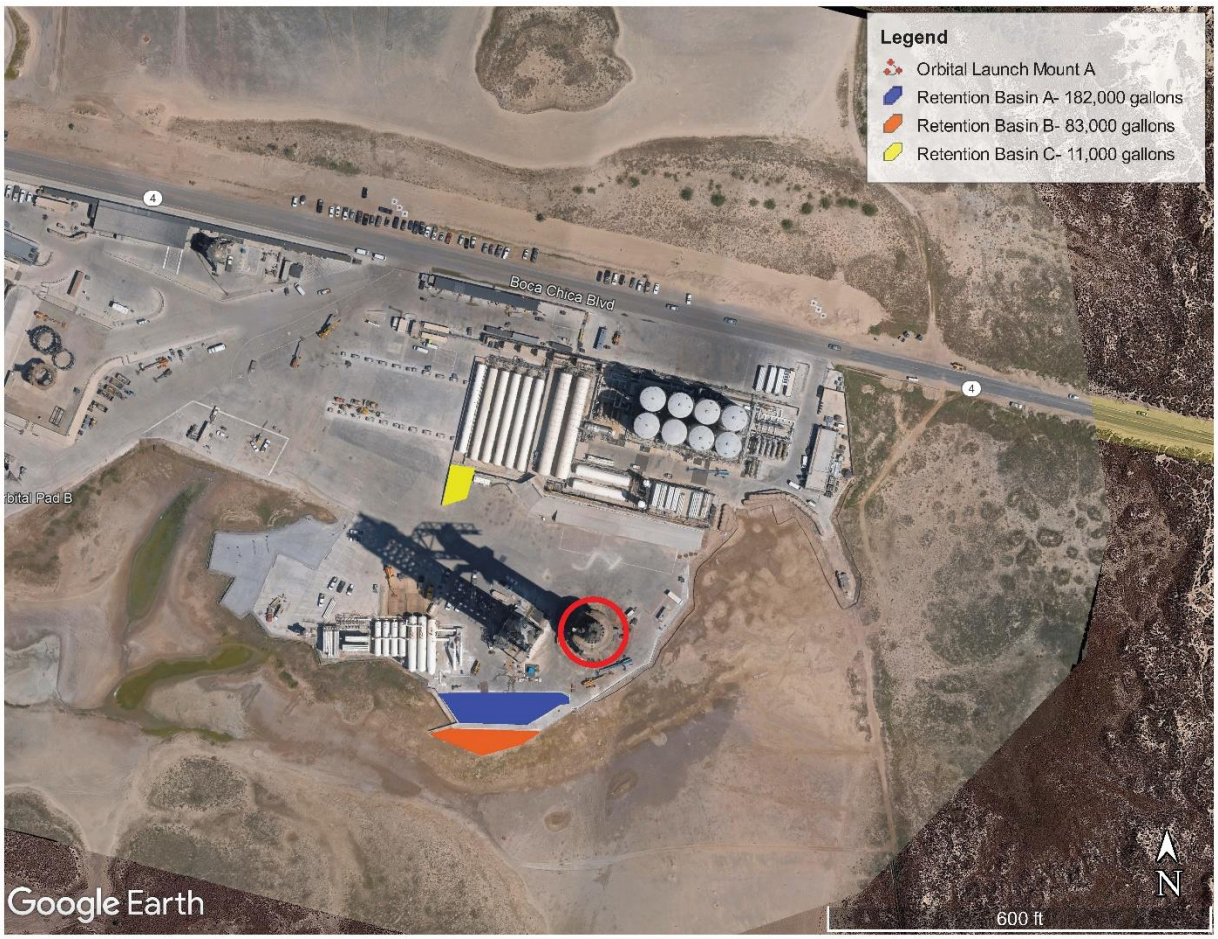

Figure 1 Existing Retention Pond Locations

Operation

The deluge system would be activated during each ignition event on the orbital launch pad including engine ignition tests and vehicle launches. The October 2021 BA and May 2022 BCO contemplate annual operations of up to [10] launches per year (see May 2022 BCO: Table 2). Each launch is associated with an estimated two static fire engine tests. The planned additional orbital launch mount will also include a deluge system and containment; however, design is not yet final. The construction of the additional orbital launch mount will not affect planned operational cadence. No deluge system is planned for the existing suborbital launch mount. Therefore, the deluge system may operate up to 30 times per year.

The deluge system would be activated immediately prior to an engine ignition event, allowing water to flow from the storage tanks, through the piping network, to the spray nozzles at the launch pad. Five seconds prior to ignition, water would begin discharging. Most of this pre-ignition water would be captured by the containment structures. In the event that stormwater runoff is collected in the retention pond, the retained water would be released in accordance with SpaceX's SWPPP prior to launch operations. The amount of water applied during activation of the deluge system will differ depending on the type of ignition event. It is estimated that approximately 72,000 gallons of water would be used for each static fire, and approximately 132,000 gallons of water for each launch event; however, for the purposes of this analysis, it is assumed that 358,000 gallons, the maximum volume of water available in

the tanks, could be used. In addition, 3,000 gallons of detonation suppression water (described below) would also be used during each operation. The peak flowrate would be between 100,000 gallons per minute and 260,000 gallons per minute.

Water applied during operation of the deluge system would disperse in the following ways. For the purposes of this assessment, it assumed that the maximum amount of water could be dispersed by a combination of all dispersal methods described below. Based on modeled and collected data from the deluge tests, most of the water prior to engines startup and following engine shutdown would be collected in the retention areas or pushed out and 92% of the of the water would vaporize when engines are on. The exact proportion of the water involved in each mode of dispersal may vary with the specific conditions of each ignition event.

Overland Sheet Flow: Some of the deluge water would disperse over land as sheet flow. Most of the sheet flow will be contained within the VLA by the water containment structures and confined to the existing developed area of the VLA. It is possible that some sheet flow would either evade or overwhelm the containment structures and enter into the areas immediately adjacent to the developed area of the VLA. It is expected that most of the sheet flow would not travel beyond the expanded, unconstructed area of VLA boundary.

Push Out: During an ignition event, some of the water applied by the deluge system could be pushed by the rocket thrust past the containment structures beyond the boundary of the existing developed area of the VLA. Similar to the possible extent of overland sheet flow, it is expected that pushed water would infiltrate the areas immediately adjacent to the site, or flow into adjacent water bodies. The exact volume of water that may be pushed away and the distance that it will carry is likely to vary with the specific conditions of each ignition event.

Vaporization: The heat and the thrust from the rocket fire would quickly vaporize most of the water applied by the deluge system and would generate a cloud of steam and aerosolized mist. Based on the amount of water, the heat of the plume is expected to dissipate quickly, and the majority of the vapor cloud is expected to take the form of aerosolized mist near the VLA. The vapor cloud would extend over the land and into the air as it is energized by the heat of the rocket plume. The temperature of the vapor cloud would depend on the temperature of the heat plume. With the addition of the water, the distance the heat travels is expected to be less than analyzed in the October 2021 BA and May 2022 BCO. It is expected that the vapor cloud would disperse within five minutes of an engine ignition event. As a conservative estimate, SpaceX expects the maximum extent of the vapor cloud to be no greater than the extent of the heat plume: the 0.6-mile radius analyzed in the October 2021 BA and May 2022 BCO. Since the vaporization would occur from the thrust and heat of the vehicle, it is not expected water vapor would form beyond the extent of the modeled plume. The fate of the vapor cloud as it cools would be either evaporation or condensation.

Evaporation: Water can be considered evaporated when it transitions from a liquid to a gas and becomes dispersed in the air, contributing to the overall moisture content of the atmosphere. The specific point at which water vapor is considered to have evaporated into the atmosphere is not well-defined, as evaporation is an ongoing process influenced by various factors such as temperature, humidity, and air currents. It is possible that most or all of the vapor cloud would evaporate instead of condense, and would remain in the atmosphere instead of falling back to the surrounding area.

Condensation: As the vapor cloud begins to cool, water molecules come together to form liquid droplets. Condensation may create clouds in the air or fog near the ground. Condensed water may fall as rain or form dew on vegetation and other surfaces. Though, the expectation of the range of impacts would be a 0.2-mile radius based on recorded data described below, weather conditions for future operations may vary from those conditions observed during the April test flight, such as winds, humidity, and temperature, therefore a conservative 0.6-mile radius is used to as the potential distance of the extent of the condensation directly attributable to condensation of the vapor cloud. Beyond that distance, evaporated water from the vapor cloud would be greatly dispersed and mingled with other atmospheric moisture.

Ablation: Launch mount structures, flame deflectors, noise suppression systems, framing, and mobile launch platforms are common steel components used across the rocket launch and testing industry. During engine ignition of the Starship/Super Heavy, surfaces of the steel infrastructure can experience ablation. Ablation is the mechanical erosion of steel from the surface of the metal as result of exposure to heat and force and is a common consequence from launch vehicle plumes on launch infrastructure[1]. The Starship-Super Heavy plume when in contact with the steel divertor could ablate up to 190 pounds of steel per launch. Relative to launch systems that use different solid propellant systems with high metal content, like the Space Shuttle and the Space Launch System, the metal from ablation associated with Starship is extremely minimal. The minimal nature of any steel ablation associated with Starship relative to other systems would have no significant environmental effect. There has never been any previous analysis or modeling done to quantify and assess metals from ablation of steel launch pad infrastructure. Nonetheless, impacts from metals from the plumes of solid rocket boosters (SRBs) used on the Space Shuttle have been analyzed by the National Aeronautics and Space Administration (NASA)[2] and are a reasonable proxy to determine the significance of minimal steel ablation. SRBs are made up of a solid propellant mixture consisting of ammonium perchlorate, aluminum, and iron oxide that react to produce hot gases at high speed creating thrust which resulted in deposition of metals from the plume of the vehicle. Starship-Super Heavy is powered by Raptor engines which use liquid oxygen and liquid methane as propellants, not SRBs. As such, for Starship-Super Heavy, no metals are present nor would be produced from the combustion of these propellants. The ablation from the steel plating is not a consequence of a chemical reaction from the vehicle but rather a localized event occurring when the plume contacts the stainless-steel plate compromised of chromium, nickel, and iron. This ablation results in substantially lower levels than are produced by the full burning of the SRBs.

During launch of the Space Shuttle, the SRBs caused acid and particulate deposition around the launch pad in both the near- and far-fields. This deposition was made up primarily of aluminum oxide and hydrogen chloride, occurring due to atomization of the deluge water by the turbulence of the launch vehicle exhaust. As analyzed in the *Ecological Impacts of the Space Shuttle Program at John F. Kennedy Space Center*[2] and *Final Constellation Programmatic Environmental Impact Statement*[3], near-field impacts (launch pad to approximately 1 mile) were generally within the immediate vicinity of the launch complex[2]. Far-field deposition was dependent on atmospheric and meteorological conditions and generally was within a few miles of the launch complex, but some launches did result in deposition across Kennedy Space Center and/or Cape Canaveral Space Force Station. The Space Shuttle exhaust had 28,048 kilograms (61,835 pounds) of aluminum-based metals and 14,000 kilograms (30,864 pounds) of hydrogen chloride (NASA 2014).

[1] https://www.faa.gov/sites/faa.gov/files/space/environmental/nepa_docs/Antares_V2_FINAL_SEA.pdf
[2] https://ntrs.nasa.gov/citations/20140012489
[3] https://netspublic.grc.nasa.gov/main/207909main_Cx_PEIS_final.pdf

Post-launch soil analysis found aluminum, copper, iron, lead, manganese, and zinc. Zinc concentrations above background levels were due to the large amounts of corrosion control materials on the launch pads and mobile service platform services, as SRB exhaust blasts were known to strip the coating off these exposed surfaces[2]. This type of stripping is not present for Starship-Super Heavy launches.

Near-field impacts to vegetative communities varied by strata, but generally shrubs and small trees were eliminated by repeated defoliation more rapidly than forbs and graminoids. Near-field impacts to dunes occurred from some launches, but vegetation recovery was nearly complete within six months. Impacts to the dunes were found to be infrequent and cumulative changes in vegetation did not occur. NASA found far-field deposition to be sufficiently dispersed and variable launch-to-launch that successive launches seldom affected the same areas. No changes in plant community composition or structure due to cumulative effects of far-field deposition were seen**Error! Bookmark not defined.Error! Bookmark not defined.**.

No federally listed threatened or endangered species were directly identified as being killed as a result of a launch event. Results of monitoring launch impacts have shown no long-term macro-scale negative responses. Ecological communities persisted through the duration of the Space Shuttle program with no dramatic change in species composition or distribution**Error! Bookmark not defined.**.

Unlike the Space Shuttle, no heavy metals are present in the Starship/Super Heavy rocket plume. Metals could be ablated from the steel divertor and deluge plate and intermix with the Starship-Super Heavy plume and deluge water during launch. However, the potential 190 pounds of heavy metals (approximately 18% chromium, 74% iron, and 8% nickel) makes up less than 0.3 percent of the heavy metals (aluminum compounds) seen during Space Shuttle launches. The Boca Chica Launch site is further from bodies of water than Launch Complex 39A and B, reducing the potential for both near- and far-field impacts to aquatic species. Vegetative communities at Boca Chica are primarily wetland plants such as salt grass and shore grass, which would be expected to have similar impacts as those seen during the Space Shuttle program.

SpaceX sampled the deluge water used during the August 6 and August 25, 2023 static fire testing events at the Boca Chica launch pad (Table 1). Trace amounts of arsenic, barium, fluoride, and nitrate were present in the results and comparable to the quantities found in the potable source water. Higher levels of chromium, zinc, (components of stainless steel) aluminum, iron, and total suspended solids were seen in the initial tests. However, this was most likely due to remnants of stainless steel remaining in the deflector after being manufactured and residual rust in the water holding tanks and associated piping. Levels of chromium, aluminum, iron, zinc, and total suspended solids have since decreased dramatically with the second test showing below the numeric effluent limitations found in TCEQ's Industrial Stormwater multi-sector general permit. It is not expected the deluge water would contain any pollutants during future operations.

The amount of ablation would vary during each ignition event but is not expected to exceed 190 lbs. The metal components of the steel could remain localized to the launch pad, captured in the deluge water and retained onsite, or dispersed in vapor the plume. Prior to and following a launch event, SpaceX would sample the soil, water and air adjacent to the launch pad for components of stainless steel including but not limited to total chromium, iron, and nickel.

Based on the deluge water results, NASA's monitoring and analysis during and after the Space Shuttle program, and the chemical properties associated with SRB's and Starship's different propellants, the amount of metal in Starship-Super Heavy exhaust plume from the minimal amount of ablation on the stainless divertor would have no long-term negative effects to ecological communities and have no significant impact on biological resources, water resources, or soils and geology.

Table 1. Analytical results from Water Deluge Sampling

Parameter	Potable Source Water	Sample Event 2 Static fire (off pad)	Sample Event 2 Static fire (retention pond)	Sample Event 4 Static fire (off pad)	Sample Event 4 Static fire (retention pond)	Sample Event 4 Static fire central outfall	
Date	8/18/2023	**8/6/2023**	**8/6/2023**	**8/25/2023**	**8/25/2023**	**8/25/2023**	**Units**
Arsenic, Total	0.00305	0.00156	0.00194	0.00583	ND	0.00657	**mg/L**
Barium, Total	0.169	0.0945	0.611	0.0922	0.122	0.113	**mg/L**
Cadmium, Total	ND	ND	ND	ND	0.00321	0.00237	**mg/L**
Chromium, Total	0.00122	ND	0.00675	0.00585	0.00697	0.0066	**mg/L**
Copper, Total	0.00602	0.00865	0.0233	0.00471	0.0155	0.00705	**mg/L**
Lead, Total	ND	ND	0.001	ND	ND	ND	**mg/L**
Mercury, Total	ND	0.363	0.224	ND	ND	ND	**ug/L**
Selenium, Total	ND	0.00226	ND	0.014	ND	0.0173	**mg/L**
DW Nitrate-Nitrogen Total	0.305	1.57	0.291	1.07	0.369	0.483	**mg/L**
DW Nitrite-Nitrogen, Total	ND	0.283	0.327	0.0634	0.0503	0.15	**mg/L**
Fluoride	0.643	1.34	0.72	0.805	0.61	0.525	**mg/L**
Cyanide, total	0.006	0.112	0.0414	0.0414	0.299	0.0336	**mg/L**
Laboratory pH	7.9	7.5	8.4	8.1	8.2	7.4	**SU**
Total Alkalinity (as CaCO3)	118	69.7	90	112	115	163	**mg/L**
Total Hardness (as CaCO3)	260	460	250	603	240	560	**mg/L**
Aluminum, Total	0.0614	0.415	0.833	0.218	0.951	0.952	**mg/L**
Calcium	68.8	152	66.8	149	69.5	143	**mg/L**
Copper, Total	0.00608	0.0085	0.0208	0.00506	0.0133	0.00839	**mg/L**
Iron, Total	0.0687	13.6	7.93	0.15	0.619	0.35	**mg/L**
Manganese, Total	0.00393	0.289	0.163	0.0179	0.0262	0.0223	**mg/L**
Sodium	136	618	143	792	135	517	**mg/L**
Zinc, Total	0.00721	0.0077	0.383	0.00695	0.18	0.0821	**mg/L**
Chloride	143	881	147	1070	152	4080	**mg/L**

Parameter	Potable Source Water	Sample Event 2 Static fire	Sample Event 2 Static fire	Sample Event 4 Static fire	Sample Event 4 Static fire	Sample Event 4 Static fire	
		(off pad)	(retention pond)	(off pad)	(retention pond)	central outfall	
Date	8/18/2023	8/6/2023	8/6/2023	8/25/2023	8/25/2023	8/25/2023	Units
Fluoride	ND	1.38	ND	5.3	ND	ND	mg/L
Sulfate	232	337	230	402	232	630	mg/L
Total Dissolved Solids	700	1950	530	2450	660	7880	mg/L
Chemical Oxygen Demand	24.6	ND	ND	21.7	ND	33.2	mg/L
Phosphorus (as P), total	22.5	0.172	0.0694	0.277	0.176	0.0975	mg/L
Fluoride	ND	1.45	ND	ND	ND	ND	mg/L
Nitrate-Nitrite Nitrogen	ND	2.55	0.838	0.912	ND	ND	mg/L
Total Suspended Solids	ND	370	34	34.9	15.5	52.7	mg/L
Total Kjeldahl Nitrogen	1.28	0.959	0.588	1.29	1.3	1.94	mg/L
Biochemical Oxygen Demand	3.13	8.31	4.39	4.85	4.82	7.69	mg/L
Nitrogen, Total	1.28	3.509	1.426	2.202	1.3	1.94	mg/L

Other Pad Water Systems

A detonation suppression system would also be activated during ignition events. The detonation suppression system is independent of the deluge system. The source of the water for the detonation suppression system is stored in a separate tank. It sprays approximately 3,000 gallons of non-contaminated water downward from the nozzles installed on the launch mount ring and is intended to prevent detonations resulting from free methane mixing in air and autoigniting during launch operations. The water would be dispersed in the same ways described above for the deluge water. It is expected that of the approximately 3,000 gallons of water from the detonation suppression system, most (if not all) would be vaporized by the heat of the rocket engines.

In addition, the FireX system[4] would be activated only in the event of a fire on the launch pad. The FireX system is capable of releasing 120,000 gallons of water; however, it is anticipated that approximately 20,000 gallons would be used in the event of a fire on the launchpad. The final volume may vary depending on the fire. Most of the water not vaporized by the fire would be collected in the retention areas on the VLA. This would be an unexpected, off-nominal event and is not considered in the analysis of the BA.

Deluge System Impact Area

This Addendum addresses the effects of deluge system operation and the detonation suppression system. Operation of the deluge system would have physical consequences within an impact area defined by the distance that applied water disperses across the landscape. The maximum expected distance that water would disperse during deluge system operation is 0.6-mile, based on the expected distance of the vapor cloud and subsequent condensation (Figure 2). This is the same distance as the impact area for the heat plume and is contained within the action area defined and evaluated in the October 2021 BA and May 2022 BCO.

[4] The FireX system is a separate system from the detonation suppression system and deluge system and is used in the event of a fire on the launch pad.

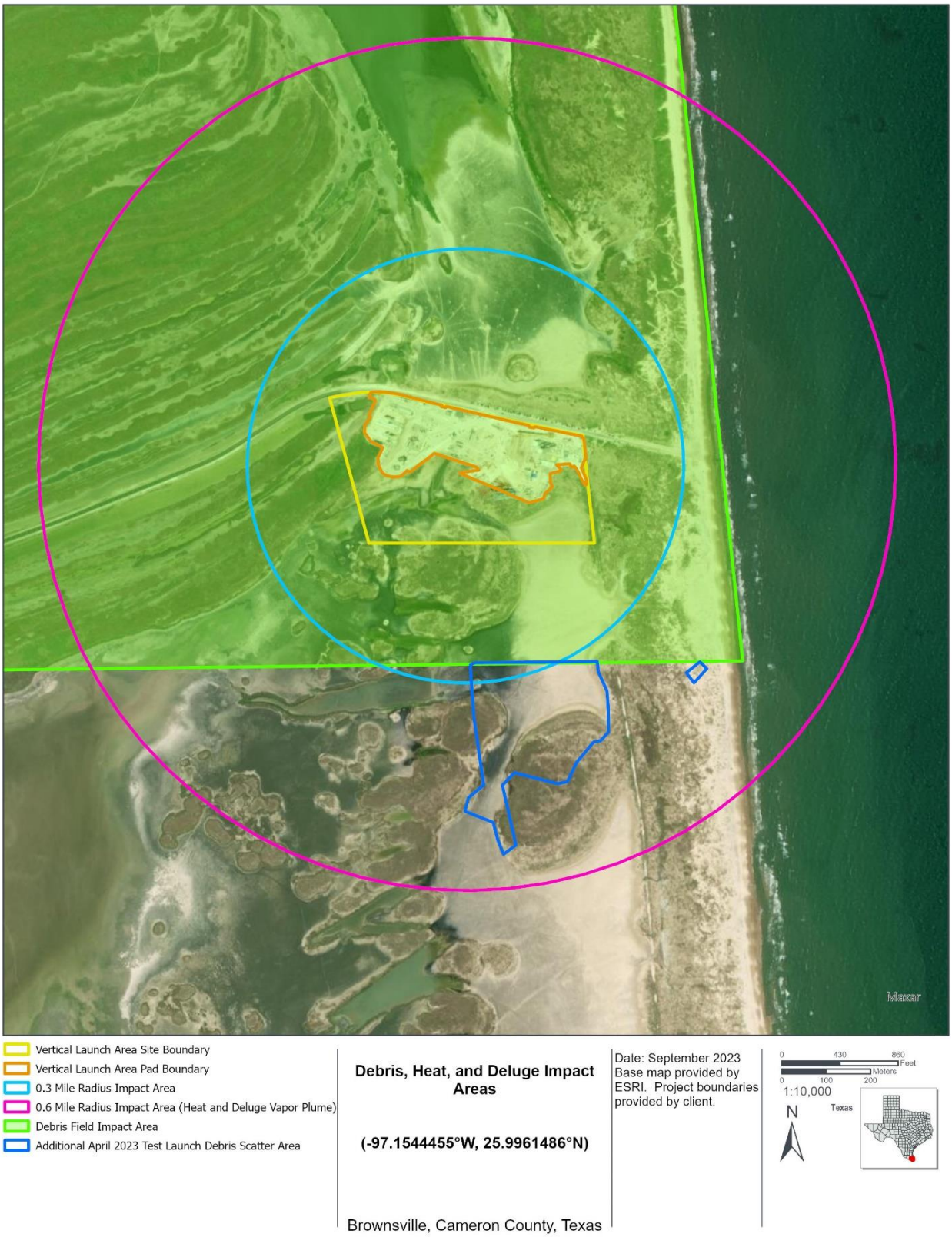

Figure 2. Deluge Impact Area

Updated Environmental Baseline

The USFWS's Information for Planning and Consultation (IPaC) system was queried on October 2, 2023, for an official species list for the action area (Appendix B). The official species list identified 17 ESA-listed endangered, threatened, proposed, or candidate species and designated critical habitat for the piping plover (Table 2; USFWS 2023a). The May 2022 BCO also considers proposed critical habitat for the red knot, which is included on Table 2.

The cactus ferruginous pygmy-owl was not considered in the May 2022 BCO and was not on the October 2, 2023 IPaC list. The pygmy-owl was listed as threatened effective August 21, 2023 (USFWS 2023b). The pygmy-owl has a range that includes Cameron County, Texas (USFWS 2022). Therefore, the pygmy-owl is included in Table 2 and considered in this Addendum.

The tricolored bat was also not considered in the May 2022 BCO and was not on the October 2, 2023 IPaC list. The tricolored bat was proposed for listing on September 14, 2022 (USFWS 2022b). The tricolored bat has a range that includes Cameron County, Texas (USFWS 2021). Therefore, the tricolored bat is included in Table 2 and considered in this Addendum.

The monarch butterfly is a candidate species and under consideration for listing. However, candidate species are not subject to evaluation under ESA Section 7 and, therefore, the monarch is not addressed in this Addendum.

The Mexican fawnsfoot and Salina mucket are proposed endangered and listed on the IPaC report. Both species have proposed critical habitat, but not within Cameron County. The action area does not overlap the current or historic ranges of these two species as reported in the July 2023 Species Status Assessment for these species (USFWS 2023d). Therefore, neither of these species nor their proposed critical habitats are addressed in this Addendum.

USFWS also requested consideration for the star cactus and Walker's manioc, two other endangered plants. However, neither of these plants has a current range that extends into Cameron County or the action area (TPWD 2023a, TPWD 2023b). These two plants are not addressed in this Addendum.

Table 2. Endangered Species Act Listed Species and Designated Critical Habitat in Cameron County, Texas

Mammals	**Status**
Gulf Coast Jaguarundi (*Puma yagouaroundi cacomitli*)	Endangered
Ocelot (*Leopardus (=Felis) pardalis*)	Endangered
West Indian Manatee (*Trichechus manatus*)	Threatened
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered

Birds	**Status**
Eastern Black Rail (*Laterallus jamaicensis ssp. Jamaicensisi*)	Threatened
Northern Aplomado Falcon (*Falco femoralis septentrionalis*)	Endangered
Piping Plover (*Charadrius melodus*)	Threatened
Red Knot (*Calidris canutus rufa*)	Threatened

Cactus Ferruginous Pygmy-owl (*Glaucidium brasilianum cactorum*)	Threatened

Reptiles	**Status**
Green Sea Turtle (*Chelonia mydasi*)	Threatened
Hawksbill Sea Turtle (*Eretmochelys imbricata*)	Endangered
Kemp's Ridley Sea Turtle (*Lepidochelys kempii*)	Endangered
Leatherback Sea Turtle (*Dermochelys coriacea*)	Endangered
Loggerhead Sea Turtle (*Caretta caretta*)	Threatened

Flowering Plants	**Status**
South Texas Ambrosia (*Ambrosia cheiranthifolia*)	Endangered
Texas Ayenia (*Ayenia limitaris*)	Endangered

Critical Habitats	**Status**
Piping Plover (*Charadrius melodus*)	Final
Red Knot (*Calidris canutus rufa*)	Proposed

Wildlife

The USFWS published a proposed rule on July 15, 2021, to designate critical habitat unit TX-11 in South Bay and Boca Chica for the red knot. This proposed rule was revised and republished on April 13, 2023 (USFWS 2023c). The revisions included a change to the proposed boundaries of critical habitat unit TX-11. Figure 3 shows the currently proposed boundary of critical habitat unit TX-11. However, the May 2022 BCO already considered the revised boundary in the analysis of effects (see Figure 21 of the BCO).

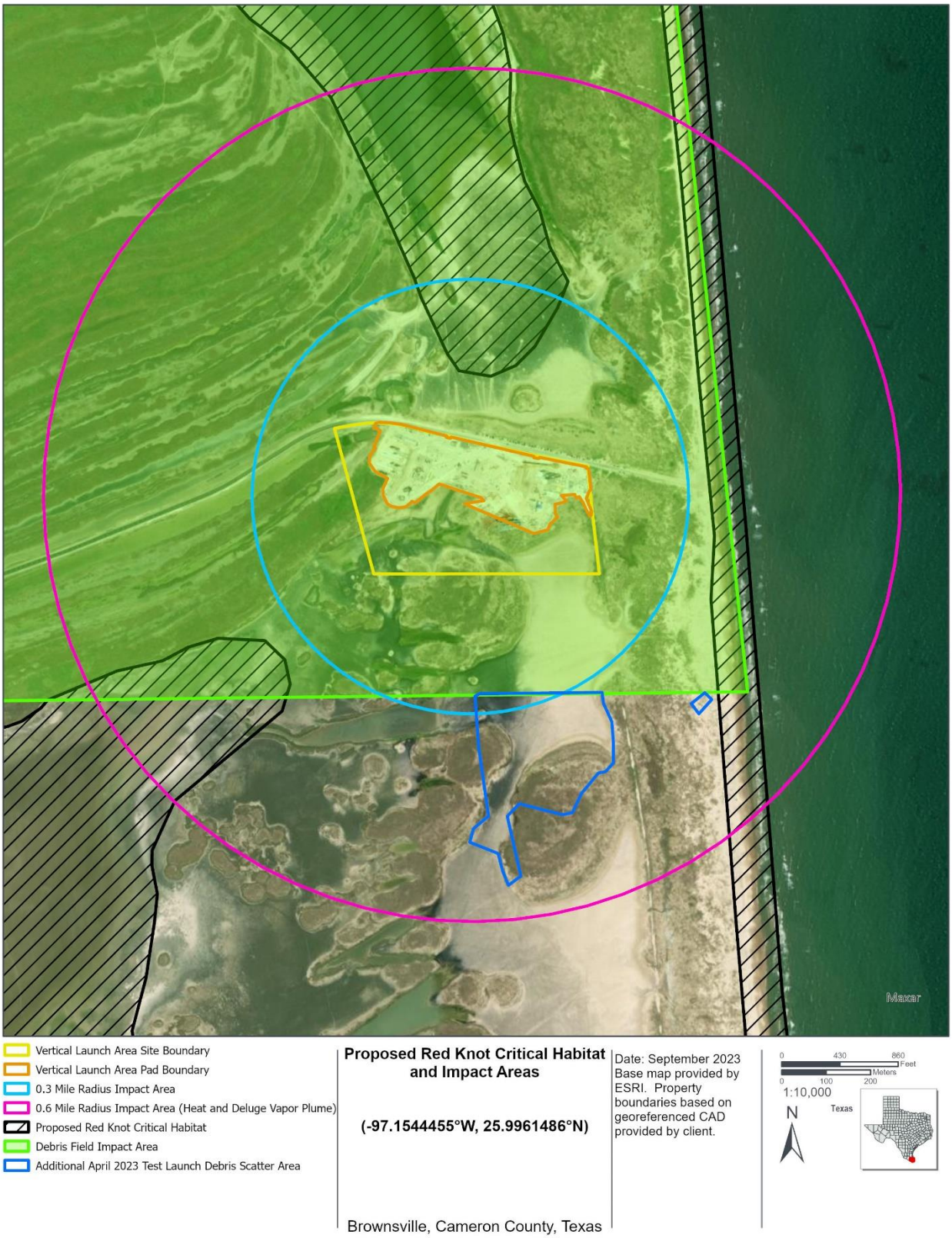

Figure 3. Proposed Red Knot Critical Habitat

SpaceX has been implementing a biological monitoring program in the vicinity of the VLA since 2015 that includes annual avian monitoring and vegetation monitoring (University of Texas 2021). The avian monitoring program includes the piping plover, red knot, and aplomado falcon as target species. The vegetation monitoring targets the area adjacent to the VLA in Boca Chica, Texas. Both types of monitoring occur in the deluge system impact area.

Since the publication of the May 2022 BCO, SpaceX has deployed avian biologists from SWCA Environmental Consultants (SWCA) with experience monitoring for coastal shorebirds to implement monthly surveys (starting in July 2022) as part of the avian monitoring plan. SpaceX deployed biologists from Raba Kistner and SWCA for additional avian monitoring immediately before and after the April 20, 2023 launch. During the pre-launch survey on April 16, 2023, a total of 67 piping plovers, 13 snowy plovers, and 65 Wilson's plovers were observed, no aplomado falcons or red knots were observed. During the post-lunch survey conducted on April 22 and April 23, 2023, 22 Piping Plovers, 15 Snowy Plovers, 11 Wilson's Plovers, and 74 Red Knots, and no aplomado falcons were observed. No deceased species were observed along any of the routes during pre- or post-launch surveys (Raba Kistner 2023a).

Trend analysis of the data collected by University of Texas Rio Grande Valley (UTRGV) from 2015 to 2021 found little to no evidence of meaningful trends, either increasing or decreasing, in the number of birds observed through time. SWCA's survey data from July 2022 to June 2023 (Appendix C) are consistent with the natural, varied cycles of the target species. Additional years of data collection will likely allow for a more definitive conclusion regarding whether potential trends are more likely the result of background variation and sampling issues rather than trends in abundance. Only one aplomado falcon was observed several miles away from the VLA during the 10 months of surveys.

Vegetation

Vegetation monitoring near the VLA has tracked the composition and extent of three different habitat types that are present adjacent to the VLA: low-lying and unvegetated mud flats, a transition zone of halophytic vegetation, and short "hind dunes" (referred to in the monitoring reports as 'Bare', 'Transition', and 'Dune' communities). The monitoring also tracks encroachment ('creep') of vegetation at the transition between the unvegetated mud flats and halophytic salt flats. The vegetation monitoring report published in 2021 by UTRGV was previously evaluated in the May 2022 BCO. Since then, results from the 2022 vegetation monitoring were released and used for the evaluation in this report.

Between 2021 and 2022, total plant cover within different habitat types was highly variable. There was a 57% decrease in total live plant cover in mudflats (from 1.87% to 0.80%) and a 20% decrease in transition plots (from 17.57% to 13.97%); however, live plant cover changed little in dune plots (from 26.2% to 26.4%), and there was a 20% increase in creep plots (from 15.7% to 18.8%). This was the lowest plant cover observed in mudflat and transition plots since 2018, and for transition plots this represents a continuing decline in plant cover. Creep plots also exhibited a gradual increase in plant cover.

UTRGV identified two possible alternative explanations regarding the observed differences between plant communities in the monitoring and take zones: First, it is possible that some of the observed differences be explained by additional factors that have not been quantified or analyzed, such as proximity to the road or differences in elevation. Second, it is possible that proximity to the launch pad is having more and/or stronger effects on plant communities than UTRGV was previously able to detect because the operational distance for this proximity effect is greater than the cutoff between monitoring zone categories. Much of the variation observed over the past 7 years of monitoring has been within the range

of natural variability, but some large changes attributable to land use change at the launch pad have also been observed (Appendix D). Primary constituent elements essential for conservation of piping plovers includes intertidal flats with sand and/or mud flats with no or very sparse emergent vegetation (65 FR 41782). The monitoring to date has not detected increased vegetation in the mudflat monitoring plots.

Reporting from the vegetation monitoring conducted by Raba Kistner within the 0.6-mile radius area surrounding the VLA following the April 20 launch shows minimal damage to vegetation, consisting of sand and debris. Larger vegetation damage patterns were identified approximately 360 feet southwest and southeast of the VLA. Damage to the northern and western portions of the study area consisted of sand deposits and launch pad debris, with no other changes identified. The southeastern portion of the study area contained minor sand deposits and debris, with no loss of vegetation identified. The study areas surrounding the VLA and south of the VLA exhibited the most damage, consisting of heavy sand deposits, debris, and 3.5 acres of fire damage (Raba Kistner 2023b). No discoloration, browning or death of vegetation has been noted as result of the rocket heat plume or from the sand. Evaluation of the fire damaged area shows that the fire resulted in a temporary reduction of upland shrubs, in particular *Sophora tomentosa* (Hicks and Contreras 2022). Based on the vegetation recovery documented to date, habitat function and ecosystem services should return to pre-burn levels within one to two growing seasons (Hicks and Contreras 2022). Long-term impacts from the sand deposited on vegetation is not expected.

Changes to Habitat from Previous Anomalies

Following engine ignition and lift-off of the April 20 test flight, it became clear immediately that the pad deck under the launch mount had sustained unanticipated damage, which directly caused concrete debris and dust to be expelled into the air and deposited in the vicinity of the launchpad in an approximately 1,000-acre area. The majority of the debris was concrete detritus from the damaged VLA. The remaining debris was fondag (refractory concrete used for thermal protection) from the launchpad and debris from the vehicle. A small (approximately 4%) amount of debris was deposited outside of the area previously analyzed in the 2022 PEA in an area of approximately 20 acres (Figure 3). SpaceX has undertaken a comprehensive redesign of the pad deck infrastructure in order to avoid a recurrence of the pad failure from the April 20 test flight.

Critically, SpaceX's revised approach to pad infrastructure is designed to resolve the dust and debris consequences associated with the test flight pad deck anomaly in three critical respects:

1. **Improved Pad Deck Foundation**. The improved depth and robustness of the pad foundation will ensure that the concrete debris and dust seen during the test flight, which was principally sand from underneath the earlier pad foundation that was ejected into the air, does not recur—if the pad deck does not fail, there will not be debris or dust which previously resulted from the failure;
2. **Steel Plating**. The steel plating will prevent fracture of the concrete pad deck foundation and is substantially more survivable than the Fondag (refractory concrete) material used during the test flight. Additionally, steel plating is analytically more predictable with respect to erosion as compared to Fondag, allowing SpaceX to better anchor its models with respect to the pad infrastructure;
3. **Water Cooling**. While the primary mitigation for dust and debris is the steel plates, SpaceX will implement the water cooling system as an additional measure. This system, as implemented in combination with the steel plates and improved foundation, will have a secondary but

important benefit of further mitigating dust and heat while enhancing the reusability of the redesigned pad system.

SpaceX's improvements to the Starship pad systems are derived from lessons learned and data gathered from the first orbital flight of Starship, consistent with continuous development for new launch vehicle systems. In preventing a recurrence of the pad deck failure, SpaceX's redesign also solves for the dust and debris generation that occurred as a consequence of the pad deck failure during the first test flight and is not reasonably foreseeable for future missions.

Following the test flight, SpaceX coordinated with TPWD to retrieve debris; however, TPWD requested the remaining debris be left in place due to the presence of nesting birds in the area. TPWD also requested that remaining debris retrieval take place following the nesting bird season. The debris left in place during bird nesting season is non-hazardous, and does not pose a risk to wildlife. Debris from previous anomalies has been removed in coordination with the land managing agencies, and SpaceX is investigating restoration measures for damaged lands in accordance with the Memorandum of Agreement between SpaceX and TPWD (2022 PEA, Appendix K).

The 3.5-acre fire that resulted from the test flight occurred on upland habitat. An assessment of the fire was conducted 22 days after the fire. Significant regrowth of grasses was observed. A single blue crab exoskeleton was observed in the burn area; however, it is unclear if the fire caused the mortality. No evidence of direct impacts to any federally listed species was found. The surveyors noted that impacts to wildlife appeared similar to those which would occur during a prescribed burn in comparable habitats and that prescribed burns are routinely used to improve habitat. The fire occurred within piping plover critical habitat (Unit TX-1) and near proposed critical wintering habitat for red knot (Unit TX-11). However, upland habitat is not suitable habitat for piping plovers or red knots.

Consequences of Deluge System Operation

Operation of the deluge system will have the following physical consequences that might be relevant to the species and critical habitats considered in this Addendum.

Deluge System and Detonation Suppression System Water

Several spacecraft launch and testing facilities around the world employ deluge systems to improve operational safety, absorb vibrations, and protect the integrity of the launch pad infrastructure. Notable examples include the Kennedy Space Center in Florida, the Vandenberg Space Force Base in California, the Baikonur Cosmodrome in Kazakhastan, and the Satish Dhawan Space Centre in India.

Consistent with these other sites, SpaceX has proposed to use a deluge system to cool the area around the VLA and absorb vibrations to improve safety and protect infrastructure so it can be reused. SpaceX has installed a steel plate below the launch pad after the April 20, 2023 launch. Without the water-cooling element, this steel plate could melt and would need to be replaced after each launch attempt.

The operation of the deluge system would also help mitigate the risk of fires igniting in or spreading through adjacent vegetated areas, either within the unconstructed portion of the VLA or outside of the VLA. Deluge system water may exit the launch pad and the constructed portion of the VLA as overland sheet flow, as push out, or as a vapor cloud. Overland sheet flow and push out water will remain close to

the launch pad (within a few hundred feet), which could at least partially mitigate fire within the unconstructed part of the VLA (where most of the vegetation adjacent to the VLA occurs) by dousing the surrounding area with water (a fire prevention tactic). The vapor cloud and any resulting condensation could help suppress fire beyond the VLA.

Vegetation Changes

An influx of freshwater from deluge system operations could increase the amount of vegetation creep into the bare areas of the mud flats. Due to the extremely saline conditions of the mudflats, it is not anticipated that creep would be from non-native species. The vegetation monitoring has not shown an increase in non-native species in the monitored creep plots (Appendix D). When freshwater is added to vegetated areas, it can promote the growth of existing plants and encourage the expansion of their root systems. As plants grow and spread, they may extend their roots into adjacent areas, including the mud flats. However, some plants may not be adapted to the salinity, sediment composition, and availability of nutrients and struggle to establish in the mud flats. The amount of fresh water likely to leave the constructed part of the VLA by overland sheet flow, push out, or condensation is comparable to slightly increased rainfall runoff, so the potential for significant vegetation changes is low.

The operation of the deluge system would apply a maximum of approximately 361,000 gallons per operation (static fire or launch) in combination with the detonation suppression system. Most of the water would be collected in the containment structures or vaporized, although the specific amount in either volume or relative percentage is unknown and may vary across ignition events. For the purposes of this analysis, SpaceX estimates that 92% of the 358,000 gallons of water is vaporized during engine ignition and approximately 20% of the total water (approximately 71,000 gallons) assumed to be dispersed outside the constructed portion of the VLA as overland sheet flow, push out, or condensation. The 20% of the water that would be dispersed outside the constructed area would mainly be from the water that is released during the first five seconds prior to engine ignition and the water released after engine shutdown or launch. Once the engines ignite, the heat is expected to vaporize any water coming out of the deluge system. Using video from the April test flight, the approximate distance the heat plume advances before stopping is approximately a 0.2-mile radius. With the addition of the steel plate deflector, this radius is expected to be reduced due to the additional mass being added to the system. Additionally, temperature data recorded during the April test flight, when extrapolated, shows a predicted temperature of 80°F at approximately a 0.3-mile radius. Though, the expectation of the range of impacts would be a 0.2-mile radius, weather conditions for future operations may vary from those conditions observed during the April test flight, such as winds, humidity, and temperature, therefore a conservative 0.6-mile radius is used to as the potential distance the plume/vapor cloud could reach. This 0.6-mile radius is equal to about 723 acres. If 71,000 gallons were dispersed evenly across the entire 0.6-mile deluge system impact area, it would equate to 0.003 inches of water over this entire area. For the 0.3-mile radius zone with a 181-acre area, the amount of water dispersed evenly throughout would equate to 0.014 inches of water over this entire area. The estimated 20% of water not captured within a 300-foot zone surrounding the launch pad equates to 0.40 inches of water over the 6.5 acres.

The National Oceanic and Atmospheric Administration (NOAA) provides historical data on rainfall averages for various locations. According to their data, the average yearly precipitation from 2000-2022 in the nearby city of Brownsville, Texas, which is about 20 miles from Boca Chica Beach, is nearly 27 inches per year (US Dept of Commerce / NOAA / National Weather Service 2023).

Monthly Total Precipitation for Brownsville Area, TX (NOAA)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	0.85	0.19	2.89	0.39	1.87	0.85	0.28	4.29	0.66	2.71	0.41	1.10	16.49
2001	0.48	1.43	0.36	1.10	0.49	2.21	1.81	1.80	3.25	0.36	2.42	1.02	16.73
2002	0.09	0.98	0.22	0.64	1.96	1.88	0.84	1.87	6.04	8.31	4.22	1.24	28.29
2003	0.69	0.55	0.56	0.41	0.19	3.24	2.58	2.74	15.13	6.90	0.44	0.31	33.74
2004	1.84	0.79	3.63	2.85	5.37	3.19	0.38	2.35	4.05	1.98	1.82	1.46	29.71
2005	0.57	0.78	0.24	0.03	1.17	0.06	3.32	0.77	2.70	1.43	1.84	1.50	14.41
2006	0.68	0.14	0.42	0.05	3.46	0.24	1.90	2.89	3.67	5.02	1.16	2.04	21.67
2007	1.84	0.90	5.50	0.56	1.91	5.23	4.73	3.16	5.32	1.02	0.77	0.11	31.05
2008	1.34	0.04	0.28	3.35	0.61	0.62	13.24	2.61	9.57	3.26	2.98	0.47	38.37
2009	0.11	0.47	0.11	T	4.52	0.49	0.24	0.60	9.43	3.12	1.46	5.64	26.19
2010	0.61	4.08	0.90	1.53	2.99	7.62	5.14	0.92	12.63	0.00	0.13	0.01	36.56
2011	2.42	0.06	0.07	0.00	0.08	8.88	0.71	0.22	2.14	1.25	0.55	1.55	17.93
2012	0.34	4.24	0.51	0.26	1.14	3.85	2.17	3.85	3.76	0.80	0.16	0.32	21.40
2013	1.47	0.01	0.28	3.10	0.74	0.85	2.13	1.47	11.88	1.63	1.93	3.52	29.01
2014	0.68	0.07	1.46	0.28	2.83	0.64	1.64	1.91	10.36	3.82	3.46	1.43	28.58
2015	3.56	0.76	4.74	1.73	9.72	0.76	2.36	3.03	3.84	13.68	2.54	0.16	46.88
2016	1.88	T	2.67	3.26	2.18	2.98	0.18	0.51	1.98	1.08	4.42	1.67	22.81
2017	0.18	1.36	1.84	0.63	1.85	3.49	2.31	1.38	4.64	3.25	0.79	1.15	22.87
2018	0.76	1.47	0.49	1.90	0.68	5.21	0.48	0.48	7.71	1.31	1.90	0.65	23.04
2019	1.60	0.30	2.22	0.41	1.15	4.38	2.56	1.07	4.58	3.38	0.45	0.74	22.84
2020	0.53	0.10	0.07	0.39	2.38	5.66	4.93	0.46	5.96	0.06	0.45	1.34	22.33
2021	0.90	0.61	0.90	1.55	4.96	1.67	9.54	0.50	4.64	9.17	3.84	1.32	39.60
2022	2.54	1.88	0.12	3.03	5.14	0.13	0.25	2.87	4.56	2.30	5.44	0.25	28.51
Mean	1.13	0.92	1.33	1.19	2.50	2.79	2.77	1.82	6.02	3.30	1.89	1.26	26.91
Max	3.56 2015	4.24 2012	5.50 2007	3.35 2008	9.72 2015	8.88 2011	13.24 2008	4.29 2000	15.13 2003	13.68 2015	5.44 2022	5.64 2009	46.88 2015
Min	0.09 2002	T 2016	0.07 2020	0.00 2011	0.08 2011	0.06 2005	0.18 2016	0.22 2011	0.66 2000	0.00 2010	0.13 2010	0.01 2010	14.41 2005

Source: US Dept of Commerce / NOAA / National Weather Service 2023

An average summertime thunderstorm at Boca Chica would deposit more water over the landscape than any single or all combined activations of the deluge system. Brownsville receives about 27 inches of rain a year on average. The operation of the deluge system and detonation suppression system combined at its maximum discharge amount might add the equivalent of 0.001 inches of rain over the 723-acre deluge impact area approximately two times per month on average. Since the amount of water that is anticipated to reach the mud flats from a maximum of the operation of the deluge system is expected to be less than significant in comparison to an average summer rainfall event, this amount of water would be unlikely to alter the habitat and cause alterations to vegetation growth.

Water Quality

The vapor cloud would form as a result of the rocket engine fire vaporizing water from deluge system operation. The rocket engine fire includes exhaust from the combustion of the propellent fuels. The launch vehicles use only liquid oxygen (LOX) and cryogenic liquid methane (LCH4). The exhaust produced from the combustion of LCH4 and LOX in the rocket engine primarily consists of carbon dioxide (CO_2) and water vapor (H_2O); thus, the exhaust cloud would consist mainly of CO_2 and steam and would contain only trace amounts of other combustion byproducts such as carbon monoxide (CO) and nitrogen oxides (NOx). A more detailed discussion of the combustion products is found in Appendix G: Exhaust Plume Calculations for Space X Raptor Booster Engine, dated May 31, 2022, and is part of the existing FAA file. Due to the trace amounts, none of the combustion byproducts are expected to degrade the quality of water that may leave the VLA.

Truck Traffic

The initial filling of the water storage tanks will require deliveries by tanker trucks from either the nearby town of Brownsville or from Starbase. An average large-capacity tanker truck will hold approximately 5,000 gallons. Filling the water storage tanks to the 361,000-gallon capacity would require 73 truck trips. If the entire capacity of the water storage tanks needs to be refilled after every activation of the deluge system (which is unlikely), then truck traffic would increase by approximately 2,190 trips per year. However, much of the water applied during deluge system operation would be captured by the containment structures and would be reused. It is not expected that the entire 361,000 gallons would need to be trucked in from other locations before each deluge system operation. Additionally, rainwater that falls on the launch pad area will be captured and collected the same way the deluge water is collected and used to further refill the water tanks. Various operations at Starbase produce water, which could also be reused. Only water meeting TCEQ water standards would be used. Water trucked in from Starbase would only need to travel approximately 3 miles to the water storage tanks at the VLA. The BA stated it was anticipated that the combined construction activity and SpaceX staff vehicles would add up to 505 vehicles per day along State Highway 4. Assuming the entire capacity of the water tanks is depleted between each ignition event and needs to be fully refilled, which is unlikely, the maximum additional traffic from water truck deliveries would add less than 1% to this estimated daily traffic load of trucks supporting the Proposed Action.

Effects to Listed and Proposed Species and Critical Habitats

In comparison to the effects already evaluated in the October 2021 BA and May 2022 BCO, deluge system operation would have presumed beneficial direct effects to listed species that occupy the deluge system impact area. The activation of the deluge system in advance of ignition would provide an additional advanced warning to nearby animals and cause them to flush from the immediate vicinity of the VLA. These animals would have an opportunity to move to a safer distance from the launch pad before the heat plume begins to radiate outward. The deluge system may help dampen the vibrations and attenuate the sound waves generated by a rocket launch near the launch mount and is a common method in the rocket industry for vibration and noise suppression. By reducing the intensity of vibrations and noise during the early phases of launch, animals in the vicinity may experience lower levels of stress and disruption.

Deluge system operation may alter the distribution, cover, and species composition of vegetation in the deluge system impact area, with vegetation closer to the VLA most likely to experience the greatest amount of potential change. However, since the amount of water that is anticipated to reach the mud flats from a maximum operation of the deluge system is expected to be insignificant, resulting in less water over the area than an average summer rainfall event, it would not likely be enough to alter the habitat and cause vegetation growth. Further, water deposited from deluge system operation is not expected to include pollutants. Therefore, habitat used by listed species in the deluge system impact area is not expected to be lost or significantly modified. Similarly, deluge system operation is not expected to degrade any of the factors contributing to the designation of critical habitat.

Effects analyses for each of the listed species and designated or proposed critical habitats that occur within the deluge system impact area are provided below.

Eastern Black Rail

Eastern black rail habitat (i.e., marsh with dense herbaceous vegetation) does not occur within the deluge system impact area (FAA 2021). Therefore, the eastern black rail would not be affected by the operation of the deluge system.

Northern Aplomado Falcon

Northern aplomado falcons have not been reported from the deluge system impact area. The closest recent observations of a foraging falcon occurred approximately 2.5 miles north-northeast of the VLA in April 2023 (*personal communication*, Michael Heimbuch 2023). No aplomado falcons were observed in the UTRGV bird surveys from 2015 - 2020 (UTRGV 2021). Aside from the one observation in April 2023, there have not been any other falcon sightings in the past 8 years within the Boca Chica survey areas. There are no falcon nests or nest platforms within the deluge system impact area, the closest nests are located approximately 4.7 miles to the southwest and 4.5 miles to the northwest of the VLA (USFWS 2012b).

The October 2021 BA and May 2022 BCO determined the species was likely to be adversely affected due to the construction of the new infrastructure that could attract falcons to the launch site for nesting and perching. Perching and potential foraging habitat exist within the deluge impact area. The activation of the deluge system may act as an advanced warning system by flushing perched falcons, if present, prior to ignition. Additionally, the concurrent operation of the deluge system during ignition events would likely mitigate the sound and heat generated by the engines and reduce the risk of fire outside of the VLA. The aplomado falcons may be affected, but are not likely to be adversely affected by the operation of the deluge system.

Piping Plover and Critical Habitat

The launch site is within the piping plover critical habitat unit TX-1. The TX-1 unit includes mud flats, intertidal flats, and salt flats and does not include densely vegetated habitat within those boundaries. Piping plovers prefer open mud flats for their habitat due to several factors that meet their specific ecological needs. The mud flats provide a rich source of food for the plovers as they contain many invertebrates and other small organisms dwelling in shallow water or sediment (USFWS 2009).

The VLA is located next to an unvegetated flat that provides foraging and roosting habitat for the plover. Some water applied by deluge system operation may reach this unvegetated area via uncaptured overland sheet flow, push out from the engine thrust, water vapor, or condensation.

The operational impacts of the construction within the VLA were previously evaluated in the May 2022 BCO. It was noted that an increase in discharges to adjacent wetlands could cause vegetation to grow within the mud flats or reduce available piping plover food and roosting habitat in piping plover Critical Habitat Unit TX-1. The operation of the deluge is likely to have similar impacts on piping plover habitat as the previous stormwater discharge from construction and would mostly affect the same vegetation (i.e., that which is closest to the VLA). Therefore, changes to habitat due to freshwater inflows have already been considered. Beyond the immediate area of the VLA (e.g., approximately 300 feet), the amount of additional freshwater that may occur from deluge system operation via the vapor cloud and subsequent condensation would be a small percentage of the amount of rainfall in these areas, with each use of the system resulting in less water in this area than an average summer rainfall event. The likelihood of detectable vegetation change beyond the immediate vicinity of the VLA is low.

The activation of the deluge system may act as an advanced warning system by flushing the plovers prior to the ignition of the engine. Additionally, the concurrent operation of the deluge system during engine ignition events would likely mitigate the sound and heat generated by the engines and heat plume, reducing the impact on plovers that may be present beyond the heat plume impact area.

The piping plover and critical habitat are likely to be adversely affected by the operation of the deluge system. But since the deluge system impact area is within the heat plume impact area, for which adverse effects and incidental take have been accounted for, these new activities are not likely to cause additional incidental take.

Red Knot and Proposed Critical Habitat

The species is occasionally detected within the deluge system impact area using habitat similar to that described for the piping plover. Proposed critical habitat for the red knot occurs within the deluge system impact area. Deluge system operation would have effects similar to those described for the piping plover and its critical habitat.

The red knot is likely to be adversely affected by the operation of the deluge system. But since the deluge system is within the heat plume impact area, for which adverse effects and incidental take have been accounted for, these new activities are not likely to cause additional incidental take.

Cactus Ferruginous Pygmy-owl

The Species Status Assessment (SSA) reports the current known distribution of the pygmy-owl as "Almost extirpated along Rio Grande, but more common now in areas of Kenedy and Brooks counties" (USFWS 2022a Table 4.2). Kenedy and Brooks Counties are approximately 42 miles from the action area. Preferred habitat for the pygmy-owl in Texas is associated with Southern Texas Plains ecoregions, which do not occur in the action area that is located in the Western Gulf Coastal Plains (Griffith et al., 2007).

Cavity trees in thorny scrub and woodlands of live oak forests as well as large, columnar cacti are essential components of pygmy-owl habitat (USFWS 2022a), which are lacking in the action area. The action area ecoregion consists of vegetated flats of grass-stabilized dunes, wide tidal mud flats, vast seagrass meadows, and a hypersaline lagoon system (USFWS 2022). Other birds that create cavities that may be used by pygmy-owls include woodpeckers and flickers. (USFWS 2022a). Daytime avian monitoring within 3 miles of the VLA has not documented pygmy-owls and has documented only a few auditory observations of the golden-fronted woodpecker in an area with yucca and mesquite 2.5 miles southwest of the action area (*personal communication*, Michael Heimbuch August 2023). Due to general lack of suitable habitat within the action area, the likely near extirpation of the species from areas along the Rio Grande, and the large distance to the nearest likely extant population in Kenedy and Brooks Counties, the FAA-licensed SpaceX Starship-Super Heavy Launch Vehicle Program may affect, but is not likely to adversely affect, the pygmy-owl.

Gulf Coast Jaguarundi and Ocelot

The tidal flats and lomas in the immediate vicinity of the VLA are not known to be used regularly or predictably by ocelots or jaguarundis, but could be occasionally used by these species as travel corridors. Neither species has been documented occurring within the 0.6-mile deluge system impact area. Since individuals of these species are not expected to be present, the activities and consequences that occur within the deluge system impact area would not affect these species.

Vehicle traffic from water transport trucks traveling from either the town of Brownsville or Starbase would increase the potential for vehicle collisions on Boca Chica Boulevard/State Highway 4. Most of the traffic from water trucks and operations would occur during daylight hours. Peak ocelot activity occurs at sunset and sunrise, with activity continuing during the night; however, jaguarundis are known to be primarily diurnal. Neither species has been observed in the area in decades and neither are believed to occupy this area. The traffic is expected to increase when filling the tanks; however, a large amount of the water from the operations of the deluge system is expected to be recaptured and cycled back into the water storage tanks for reuse. Increased traffic on State Highway 4 from SpaceX operations has not resulted in any reported road mortality of either species.

The Gulf Coast jaguarundi and ocelot may be affected but are not likely to be adversely affected by the operation of the deluge system.

West Indian Manatee

The deluge system impact area extends over a small nearshore portion of the Gulf of Mexico and into potential manatee habitat (Figure 2). However, the deluge system operation would only cause condensation of water into this area. This condensation may affect, not likely to adversely affect the manatee.

Tricolored Bat

The known distribution of the tricolored bat (TCB) includes Cameron County, Texas (Schmidly and Bradley 2016). According to the 2021 SSA for the TCB, the species roosts in woodland habitats with live or recently dead hardwoods, pines, and cedars during the spring, summer, and fall months (USFWS 2021). During the winter, TCB hibernate in caves and mines, however in the South where caves are less common, they may also overwinter in culverts, tree cavities, and other abandoned artificial structures (USFWS 2021).

The action area encompasses a 0.6-mile radius zone surrounding the Vertical Launch Area in which the extent of impacts from the rocket heat plume and operation of the deluge system are estimated to reach. Within this radius, there is an absence of wooded habitat and a lack of structures, such as large culverts, that would provide optimal roosting or hibernation habitat. TCB may be present within this area while migrating from winter hibernacula to summer roosting habitat, however, it is unlikely that the species would utilize launch facility structures for roosting and hibernating as they prefer landscapes with tree corridors and largely forested areas and are less abundant among urban development (USFWS 2021) The area outside the 0.6-mile radius, but within the action area is also prominently devoid of preferred habitat. Due to general lack of suitable habitat within the action area, the FAA-licensed SpaceX Starship-Super Heavy Launch Vehicle Program may affect, but is not likely to adversely affect, the tricolored bat.

Sea Turtles

The green sea turtle (*Chelonia mydas*), hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), and loggerhead sea turtle (*Caretta caretta*) have all been recorded nesting along the beaches within the action area, with Kemp's ridley the only species nesting on Boca Chica Beach with regularity (Sea Turtle Inc. 2020). The deluge system impact area includes a portion of Boca Chica Beach.

Deluge system operation would only cause condensation of water onto this area. This condensation would not affect sea turtles. While this Addendum to the BA evaluates deluge system operation and determined the condensation would not affect sea turtles, the Service found in the May 2022 BCO that the Proposed Action was likely to adversely affect each of the five species of sea turtles considered in the BCO. This determination was made in consideration of the mitigation measures detailed in the BCO. Therefore, the Updated Overall Effect Determination is Adversely Effect.

South Texas Ambrosia and Texas Ayenia

The South Texas ambrosia and Texas ayenia have not been found to occur within the action area. Suitable habitat for either species does not occur within the deluge system impact area, and the operation of the deluge system would have no effect to the ambrosia or ayenia. Therefore, neither of these plants would be affected by the operation of the deluge system.

Measures to Minimize Adverse Effects

Water Recapture and Treatment

The launch pad is engineered to recapture as much water as possible. This includes rainwater and water discharged from the deluge system or other fire suppression systems. Any water falling to the launch pad is directed to the periphery gutter system and then to containment structures. SpaceX would develop appropriate sampling protocols and water quality criteria in coordination with TCEQ to confirm the water does not exceed the water quality criteria. SpaceX would pump water back to the water storage tanks at the VLA.

Vegetation Monitoring

Vegetation monitoring is implemented by qualified biologists as described in the Biological Monitoring Plan and reported annually. The findings of the most recent monitoring report are reported above (see the "Vegetation" discussion in the Updated Environmental Baseline).

New Foundation

The launch of the Starship-Super Heavy launch vehicle on April 20, 2023, caused damage to the launch pad, launch mount, and equipment within the VLA. The reconstructed launch pad includes more piles and a thicker concrete mat designed to strengthen the foundation. Steel plates were installed on top of the new foundation underneath the launch mount to prevent launch pad debris scatter and the potential for a large dust cloud. This steel plate will protect the launch pad from excessive damage. There is also a stainless-steel apron and specialized concrete with high-strength and heat-resistant properties (i.e., fondag) installed at the launch mount area.

Vehicle Collisions

SpaceX continues to follow the terms and conditions of the incidental take statement included with the May 2022 BCO. This includes educating its personnel on the potential for vehicle collisions with ocelots and jaguarundis and encouraging personnel to reduce speeds along State Highway 4. Vehicles would be restricted to existing paved and unpaved roads, parking areas, and authorized construction sites.

Timing of Debris Removal

In the event that an anomaly occurs during avian nesting season (February 15 through August 31), SpaceX would coordinate with TPWD and USFWS to determine whether debris should be left in place until after nesting season. SpaceX would coordinate with TPWD and USFWS to determine whether the debris poses an immediate hazard to the ecosystem and to evaluate the likelihood that debris retrieval activities may further disturb the habitat or birds. If the agencies recommend that debris remain in place to minimize impacts to birds and their nests, SpaceX would delay debris retrieval activities until after avian nesting season.

Conclusion

Deluge systems are widely used and have proven effective at other rocket launch pads around the world. The operation of the deluge system at the SpaceX Boca Chica Launch Site would help mitigate the impacts of Starship-Super Heavy operations by reducing sound waves and vibrations, assist in cooling and fire suppression, and provide protection to the launch pad and other equipment. A new foundation and a steel plate were installed underneath the launch mount to reduce debris scatter and the potential for a large dust cloud. Some water applied during the operation of the deluge system could reach the surrounding landscape and may cause vegetation changes. However, the amount of water that is expected to escape the VLA is likely to be less than the amount of water released on this area from an average rainfall event; therefore, it is not expected to change the salinity of the existing mud flats or significantly reduce or modify piping plover or red knot habitat.

The effect determinations for the ESA-listed species evaluated in the October 2021 BA are summarized in Table 3 and compared to the effect determinations for the new activities addressed in this Addendum.

Table 3. Effect Determinations for ESA-listed and Proposed Species

ESA Listed Species	Original Effects Determination in BA	Effect Determination for Operation of Deluge System	Updated Overall Effect Determination
Eastern black rail	May affect, not likely to adversely affect	No effect	May affect, not likely to adversely affect
Northern aplomado falcon	May affect, likely to adversely affect	May affect, not likely to adversely affect	May affect, likely to adversely affect
Piping plover	May affect, likely to adversely affect	May affect, likely to adversely affect; No additional incidental take	May affect, likely to adversely affect
Piping plover Critical Habitat TX-01	May affect, likely to adversely affect	May affect, likely to adversely affect	May affect, likely to adversely affect

ESA Listed Species	Original Effects Determination in BA	Effect Determination for Operation of Deluge System	Updated Overall Effect Determination
Red knot	May affect, likely to adversely affect	May affect, likely to adversely affect; No additional incidental take	May affect, likely to adversely affect
Proposed red knot critical habitat TX-11	May affect, likely to adversely affect	May affect, likely to adversely affect	May affect, likely to adversely affect
Cactus Ferruginous Pygmy-owl	May affect, not likely to adversely affect	May affect, not likely to adversely affect	May affect, not likely to adversely affect
Gulf Coast jaguarundi	May affect, likely to adversely affect	May affect, likely to adversely affect	May affect, likely to adversely affect
Ocelot	May affect, likely to adversely affect	May affect, likely to adversely affect; No additional incidental take	May affect, likely to adversely affect
West Indian manatee	May affect, not likely to adversely affect	No effect	May affect, not likely to adversely affect
Green sea turtle	Adversely Affect	No effect	Adversely Affect
Hawksbill sea turtle	Adversely Affect	No effect	Adversely Affect
Kemp's ridley sea turtle	Adversely Affect	No effect	Adversely Affect
Leatherback sea turtle	Adversely Affect	No effect	Adversely Affect
Loggerhead sea turtle	Adversely Affect	No effect	Adversely Affect
South Texas ambrosia	No effect	No effect	No effect
Texas ayenia	No effect	No effect	No effect
Tricolored Bat	None	May affect, not likely to adversely affect	May affect, not likely to adversely affect

The May 2022 BCO outlines the amount or extent of incidental take that is expected because of the proposed construction and operations of the SpaceX Boca Chica Launch Site. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Impacts caused by vegetation change that may affect the listed species from the operations of the deluge system would not likely result in direct mortality. The minor increase in vehicle traffic due to water truck deliveries has been previously evaluated with the traffic increases due to construction activities. The amount and extent of take previously considered will not be increased by the operation of the deluge system. No additional incidental take needs to be considered at this time.

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Attachments

Appendix A – Texas Council on Environmental Quality General Permits to Discharge Under the Texas Pollutant Discharge Elimination System

Appendix B – USFWS Species List – Texas Coastal Ecological Services Field Office, May 30, 2023

Appendix C – Final Biological Monitoring Annual Report for the SpaceX Boca Chica Launch Site Construction and Seasonal Avian Monitoring report –July 2022 through June 2023.

Appendix D – Commercial Launch Site Construction-Phase Vegetation Monitoring Survey. 2021 to 2022 reporting cycle.

APPENDIX A
TEXAS COMMISION ON ENVIRONMENTAL QUALITY GENERAL PERMITS TO DISCHARGE UNDER THE TEXAS POLLUNTANT DISCHARGE ELIMINATION SYSTEM

Texas Commission on Environmental Quality

P.O. Box 13087, Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR150000,
effective March 5, 2018, and amended January 28, 2022

Construction sites that discharge stormwater associated with construction activity located in the state of Texas may discharge to surface water in the state only according to monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the Commission of the TCEQ. The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of stormwater and certain non-stormwater discharges along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This general permit and the authorization contained herein shall expire at midnight, on March 5, 2028.

EFFECTIVE DATE: March 5, 2023

ISSUED DATE: February 27, 2023

For the Commission

TPDES GENERAL PERMIT NUMBER TXR150000

RELATING TO STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

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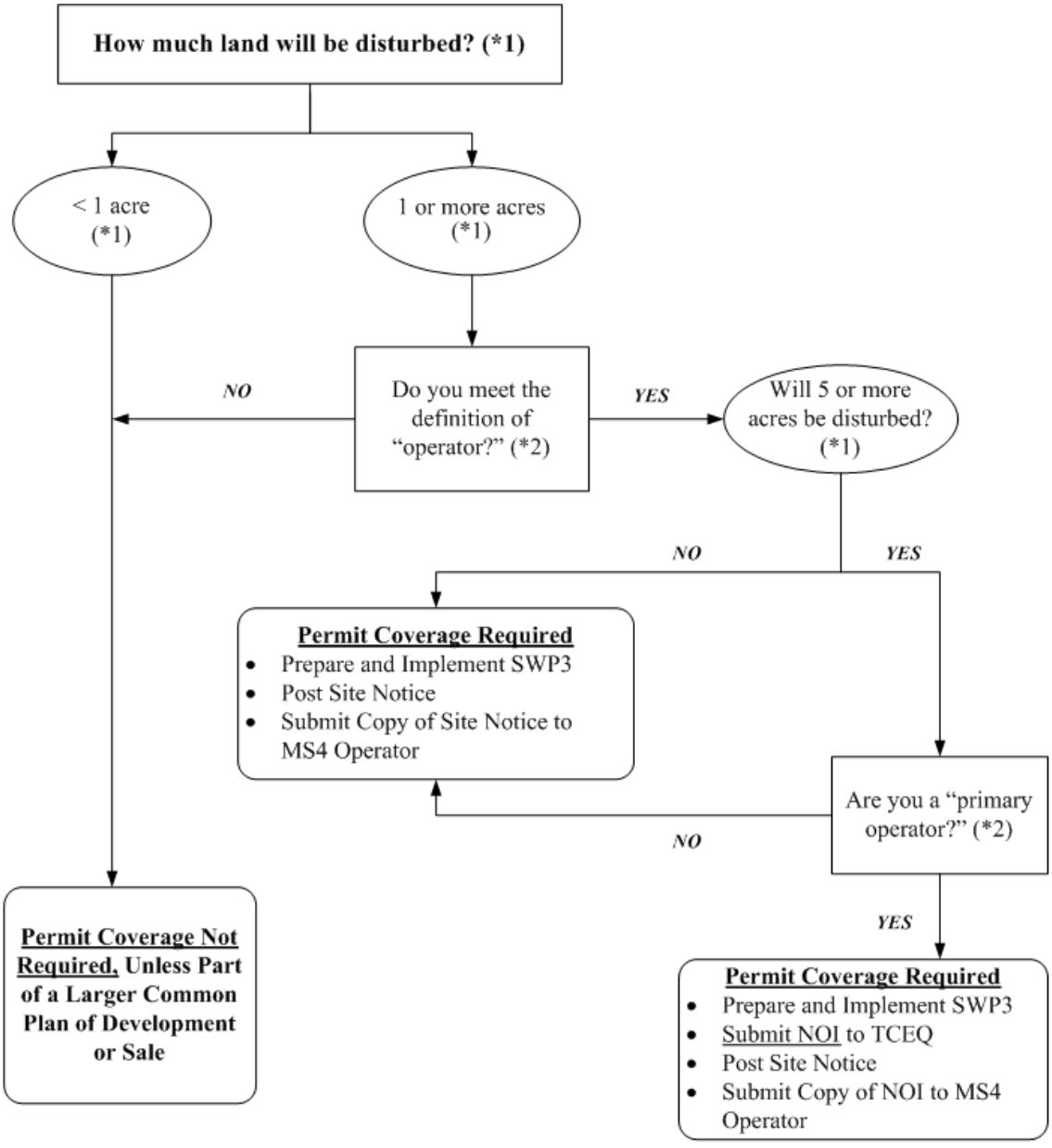
Part I. Flow Chart and Definitions

Section A. Flow Chart to Determine Whether Coverage is Required

When calculating the acreage of land area disturbed, include the disturbed land-area of all construction and construction support activities.



(*1) ***To determine the size of the construction project, use the size of the entire area to be disturbed, and include the size of the larger common plan of development or sale, if the project is part of a larger project (refer to Part I.B., "Definitions," for an explanation of "common plan of development or sale").***

(*2) ***Refer to the definitions for "operator," "primary operator," and "secondary operator" in Part I., Section B. of this permit.***

Section B. Definitions

Arid Areas – Areas with an average annual rainfall of zero (0) to ten (10) inches.

Best Management Practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Commencement of Construction – The initial disturbance of soils associated with clearing, grading, or excavation activities, as well as other construction-related activities (e.g., demolition; grubbing; stockpiling of fill material; placement of raw materials at the site).

Common Plan of Development – A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities. A common plan of development does not necessarily include all construction projects within the jurisdiction of a public entity (e.g., a city or university). Construction of roads or buildings in different parts of the jurisdiction would be considered separate "common plans," with only the interconnected parts of a project being considered part of a "common plan" (e.g., a building and its associated parking lot and driveways, airport runway and associated taxiways, a building complex, etc.). Where discrete construction projects occur within a larger common plan of development or sale but are located one quarter (¼) mile or more apart, and the area between the projects is not being disturbed, each individual project can be treated as a separate plan of development or sale, provided that any interconnecting road, pipeline or utility project that is part of the same "common plan" is not included in the area to be disturbed.

Construction Activity – Includes soil disturbance activities, including clearing, grading, excavating, construction-related activity (e.g., stockpiling of fill material, demolition), and construction support activity. This does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing rights-of-way, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

Construction Support Activity – A construction-related activity that specifically supports construction activity, which can involve earth disturbance or pollutant-generating activities of its own, and can include, but are not limited to, activities associated with concrete or asphalt batch plants, rock crushers, equipment staging or storage areas, chemical storage areas, material storage areas, material borrow areas, and excavated material disposal areas. Construction support activity must only directly support the construction activity authorized under this general permit.

Dewatering – The act of draining accumulated stormwater or groundwater from building foundations, vaults, trenches, and other similar points of accumulation.

Discharge – For the purposes of this permit, the drainage, release, or disposal of pollutants in stormwater and certain non-stormwater from areas where soil disturbing activities (e.g., clearing, grading, excavation, stockpiling of fill material, and demolition), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck wash out, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located.

Drought-Stricken Area – For the purposes of this permit, an area in which the National Oceanic and Atmospheric Administration's U.S. Seasonal Drought Outlook indicates for the period during which the construction will occur that any of the following conditions are likely: (1) "Drought to persist or intensify", (2) "Drought ongoing, some improvement", (3) "Drought likely to improve, impacts ease", or (4) "Drought development likely". See http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html.

Edwards Aquifer – As defined under Texas Administrative Code (TAC) § 213.3 of this title (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone – Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the Texas Commission on Environmental Quality (TCEQ) and the appropriate regional office. The Edwards Aquifer Map Viewer, located at https://www.tceq.texas.gov/gis/edwards-viewer.html

Edwards Aquifer Contributing Zone – The area or watershed where runoff from precipitation flows downgradient to the recharge zone of the Edwards Aquifer. The contributing zone is located upstream (upgradient) and generally north and northwest of the recharge zone for the following counties: all areas within Kinney County, except the area within the watershed draining to Segment No. 2304 of the Rio Grande Basin; all areas within Uvalde, Medina, Bexar, and Comal Counties; all areas within Hays and Travis Counties, except the area within the watersheds draining to the Colorado River above a point 1.3 miles upstream from Tom Miller Dam, Lake Austin at the confluence of Barrow Brook Cove, Segment No. 1403 of the Colorado River Basin; and all areas within Williamson County, except the area within the watersheds draining to the Lampasas River above the dam at Stillhouse Hollow reservoir, Segment No. 1216 of the Brazos River Basin. The contributing zone is illustrated on the Edwards Aquifer map viewer at https://www.tceq.texas.gov/gis/edwards-viewer.html

Effluent Limitations Guideline (ELG) – Defined in 40 Code of Federal Regulations (CFR) § 122.2 as a regulation published by the Administrator under § 304(b) of the Clean Water Act (CWA) to adopt or revise effluent limitations.

Facility or Activity – For the purpose of this permit, referring to a construction site, the location of construction activity, or a construction support activity that is regulated under this general permit, including all contiguous land and fixtures (for example, ponds and materials stockpiles), structures, or appurtenances used at a construction site or industrial site.

Final Stabilization – A construction site status where any of the following conditions are met:

(a) All soil disturbing activities at the site have been completed and a uniform (that is, evenly distributed, without large bare areas) perennial vegetative cover with a density of at least 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, or gabions) have been employed.

(b) For individual lots in a residential construction site by either:

(1) the homebuilder completing final stabilization as specified in condition (a) above; or

(2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization. If temporary stabilization is not feasible, then the homebuilder may fulfill this requirement by retaining perimeter controls or BMPs, and informing the homeowner of the need for removal of temporary controls and the establishment of final stabilization. Fulfillment of this requirement must be documented in the homebuilder's stormwater pollution prevention plan (SWP3).

(c) For construction activities on land used for agricultural purposes (such as pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to surface water and areas that are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

(d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:

(1) temporary erosion control measures (for example, degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and

(2) the temporary erosion control measures are selected, designed, and installed to achieve 70% of the native background vegetative coverage within three years.

High-Level Radioactive Waste – Meaning as assigned by 42 United States Code (U.S.C.) Section 10101 (12) and includes spent nuclear fuel as defined by 42 U.S.C. Section 10101 (23).

Hyperchlorination of Waterlines – Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water – A surface water body that is identified as impaired on the latest approved CWA § 303(d) List or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

Indian Country Land – (1) All land within the limits of any Indian reservation under the jurisdiction of the United States government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation; (2) all dependent Indian communities with the borders of the United States whether within the originally or subsequently acquired territory thereof, and whether within or without the limits of a state; and (3) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. (40 CFR § 122.2)

Indian Tribe – Any Indian Tribe, band, group, or community recognized by the Secretary of the Interior and exercising governmental authority over a Federal Indian Reservation (40 CFR § 122.2).

Infeasible – Not technologically possible, or not economically practicable and achievable in light of best industry practices. (40 CFR § 450.11(b)).

Large Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Linear Project – Includes the construction of roads, bridges, conduits, substructures, pipelines, sewer lines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities in a long, narrow area.

Low Rainfall Erosivity Waiver (LREW) – A written submission to the executive director from an operator of a construction site that is considered as small construction activity under the permit, which qualifies for a waiver from the requirements for small construction activities, only during the period of time when the calculated rainfall erosivity factor is less than five (5).

Minimize – To reduce or eliminate to the extent achievable using stormwater controls that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4) – A separate storm sewer system owned or operated by the United States, a state, city, town, county, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, that discharges to surface water in the state.

Notice of Change (NOC) – Written notification to the executive director from a discharger authorized under this permit, providing changes to information that was previously provided to the agency in a notice of intent form.

Notice of Intent (NOI) – A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) – A written submission to the executive director from a discharger authorized under this general permit requesting termination of coverage.

Operator – The person or persons associated with a large or small construction activity that is either a primary or secondary operator as defined below:

Primary Operator – The person or persons associated with construction activity that meets either of the following two criteria:

(a) the person or persons have on-site operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or

(b) the person or persons have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater Pollution Prevention Plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Secondary Operator – The person or entity, often the property owner, whose operational control is limited to:

(a) the employment of other operators, such as a general contractor, to perform or supervise construction activities; or

(b) the ability to approve or disapprove changes to construction plans and specifications, but who does not have day-to-day on-site operational control over construction activities at the site.

Secondary operators must either prepare their own SWP3 or participate in a shared SWP3 that covers the areas of the construction site, where they have control over the construction plans and specifications.

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators.

Outfall – For the purpose of this permit, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S. and are used to convey waters of the U.S.

Permittee – An operator authorized under this general permit. The authorization may be gained through submission of a notice of intent, by waiver, or by meeting the requirements for automatic coverage to discharge stormwater runoff and certain non-stormwater discharges from construction activity.

Point Source – Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are, or may be, discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (40 CFR § 122.2).

Pollutant – Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any surface water in the state. The term "pollutant" does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of this permit, the term “pollutant” includes sediment.

Pollution – The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose (Texas Water Code (TWC) § 26.001(14)).

Rainfall Erosivity Factor (R factor) – The total annual erosive potential that is due to climatic effects, and is part of the Revised Universal Soil Loss Equation (RUSLE).

Receiving Water – A "Water of the United States" as defined in 40 CFR § 122.2 or a surface water in the state into which the regulated stormwater discharges.

Semi-arid Areas – Areas with an average annual rainfall of 10 to 20 inches.

Separate Storm Sewer System – A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Small Construction Activity – Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (for example, the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities).

Steep Slopes – Where a state, Tribe, local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a "steep slope", this permit's definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 15 percent or greater in grade.

Stormwater (or Stormwater Runoff) – Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity – Stormwater runoff, as defined above, from a construction activity.

Structural Control (or Practice) – A pollution prevention practice that requires the construction of a device, or the use of a device, to reduce or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: silt fences, earthen dikes, drainage swales, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State – Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Temporary Stabilization – A condition where exposed soils or disturbed areas are provided a protective cover or other structural control to prevent the migration of pollutants. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either permanent stabilization can be achieved or until further construction activities take place.

Thawing Conditions – For the purposes of this permit, thawing conditions are expected based on the historical likelihood of two (2) or more days with daytime temperatures greater than 32 degrees Fahrenheit (℉). This date can be determined by looking at historical weather data.

NOTE: The estimation of thawing conditions is for planning purposes only. During construction, the permittee will be required to conduct site inspections based upon actual conditions (i.e., if thawing conditions occur sooner than expected, the permittee will be required to conduct inspections at the regular frequency).

Total Maximum Daily Load (TMDL) – The total amount of a pollutant that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Turbidity – A condition of water quality characterized by the presence of suspended solids and/or organic material.

Waters of the United States – Waters of the United States or waters of the U.S. means the term as defined in 40 CFR § 122.2.

Part II. Permit Applicability and Coverage

Section A. Discharges Eligible for Authorization

1. Stormwater Associated with Construction Activity

   Discharges of stormwater runoff and certain non-stormwater discharges from small and large construction activities may be authorized under this general permit, except as described in Part II.C. of this permit.

2. Discharges of Stormwater Associated with Construction Support Activities

   Discharges of stormwater runoff and certain non-stormwater discharges from construction support activities as defined in Part I.B. of this general permit may be authorized, provided that the following conditions are met:

   (a) the construction support activities are located within one (1) mile from the boundary of the construction site where the construction activity authorized under the permit is being conducted that requires the support of these activities;

   (b) an SWP3 is developed and implemented for the permitted construction site according to the provisions in Part III.F. of this general permit, including appropriate controls and measures to reduce erosion and the discharge of pollutants in stormwater runoff according to the provisions in Part IV. of this general permit;

   (c) the activities are directly related to the construction site;

   (d) the activities are not a commercial operation, nor serve other unrelated construction projects; and

   (e) the activities do not continue to operate beyond the completion of the construction activity at the project it supports.

   Construction support activities that operate outside the terms provided in (a) through (e) above must obtain authorization under a separate Texas Pollutant Discharge Elimination System (TPDES) permit, which may include the TPDES Multi-Sector General Permit (MSGP), TXR050000 (related to stormwater discharges associated with industrial activity), an alternative general permit (if available), or an individual water quality permit.

3. Non-Stormwater Discharges

   The following non-stormwater discharges from sites authorized under this general permit are also eligible for authorization under this general permit:

(a) discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

(b) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

(c) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

(d) uncontaminated water used to control dust;

(e) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

(f) uncontaminated air conditioning condensate;

(g) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

(h) lawn watering and similar irrigation drainage.

4. Other Permitted Discharges

Any discharge authorized under a separate National Pollutant Discharge Elimination System (NPDES), TPDES, or TCEQ permit may be combined with discharges authorized by this general permit, provided those discharges comply with the associated permit.

Section B. Concrete Truck Wash Out

The wash out of concrete trucks at regulated construction sites must be performed in accordance with the requirements of Part VI of this general permit.

Section C. Limitations on Permit Coverage

1. Post Construction Discharges

Discharges that occur after construction activities have been completed, and after the construction site and any supporting activity site have undergone final stabilization, are not eligible for coverage under this general permit. Discharges originating from the sites are not authorized under this general permit following the submission of the Notice of Termination (NOT) or removal of the appropriate TCEQ site notice, as applicable, for the regulated construction activity.

2. Prohibition of Non-Stormwater Discharges

Except as otherwise provided in Part II.A. of this general permit, only discharges that are composed entirely of stormwater associated with construction activity may be authorized under this general permit.

3. Compliance with Water Quality Standards

   Discharges to surface water in the state that would cause, have the reasonable potential to cause, or contribute to a violation of water quality standards or that would fail to protect and maintain existing designated uses of surface water in the state are not eligible for coverage under this general permit. The executive director may require an application for an individual permit or alternative general permit (see Parts II.H.2. and 3.) to authorize discharges to surface water in the state if the executive director determines that any activity will cause, has the reasonable potential to cause, or contribute to a violation of water quality standards or is found to cause, has the reasonable potential to cause, or contribute to, the impairment of a designated use. The executive director may also require an application for an individual permit considering factors described in Part II.H.3. of this general permit.

4. Impaired Receiving Waters and Total Maximum Daily Load (TMDL) Requirements

   The permittee shall determine whether the authorized discharge is to an impaired water body on the latest EPA-approved CWA § 303(d) List or waters with an EPA-approved or established TMDL that are found on the latest EPA-approved *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, which lists the category 4 and 5 water bodies.

   New sources or new discharges of the pollutants of concern to impaired waters are not authorized by this permit unless otherwise allowable under 30 TAC Chapter 305 and applicable state law. Impaired waters are those that do not meet applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)*, and waterbodies listed on the CWA § 303(d) List. Pollutants of concern are those for which the water body is listed as impaired.

   Discharges of the pollutants of concern to impaired water bodies for which there is a TMDL are not eligible for coverage under this general permit unless they are consistent with the approved TMDL. Permittees must incorporate the conditions and requirements applicable to their discharges into their SWP3, in order to be eligible for coverage under this general permit. For consistency with the construction stormwater-related items in an approved TMDL, the SWP3 must be consistent with any applicable condition, goal, or requirement in the TMDL, TMDL Implementation Plan (I-Plan), or as otherwise directed by the executive director.

5. Discharges to the Edwards Aquifer Recharge or Contributing Zone

   Discharges cannot be authorized by this general permit where prohibited by 30 TAC Chapter 213 (relating to Edwards Aquifer). In addition, commencement of construction (see definition for commencement of construction in Part I.B. above)) at a site regulated under 30 TAC Chapter 213, may not begin until the appropriate Edwards Aquifer Protection Plan (EAPP) has been approved by the TCEQ's Edwards Aquifer Protection Program.

   (a) For new discharges located within the Edwards Aquifer Recharge Zone, or within that area upstream from the recharge zone and defined as the Contributing Zone (CZ), operators must meet all applicable requirements of, and operate according to, 30 TAC Chapter 213 (Edwards Aquifer Rule) in addition to the provisions and requirements of this general permit.

(b) For existing discharges located within the Edwards Aquifer Recharge Zone, the requirements of the agency-approved Water Pollution Abatement Plan (WPAP) under the Edwards Aquifer Rule are in addition to the requirements of this general permit. BMPs and maintenance schedules for structural stormwater controls, for example, may be required as a provision of the rule. All applicable requirements of the Edwards Aquifer Rule for reductions of suspended solids in stormwater runoff are in addition to the requirements in this general permit for this pollutant.

(c) For discharges located within ten (10) stream miles upstream of the Edwards Aquifer recharge zone, applicants shall also submit a copy of the NOI to the appropriate TCEQ regional office.

Counties: Comal, Bexar, Medina, Uvalde, and Kinney

Contact: TCEQ Water Program Manager
San Antonio Regional Office
14250 Judson Road
San Antonio, Texas 78233-4480
(210) 490-3096

Counties: Williamson, Travis, and Hays

Contact: TCEQ Water Program Manager
Austin Regional Office
12100 Park 35 Circle
Room 179, Building A
Austin, Texas 78753
(512) 339-2929

6. Discharges to Specific Watersheds and Water Quality Areas

Discharges otherwise eligible for coverage cannot be authorized by this general permit where prohibited by 30 TAC Chapter 311 (relating to Watershed Protection) for water quality areas and watersheds.

7. Protection of Streams and Watersheds by Other Governmental Entities

This general permit does not limit the authority or ability of federal, other state, or local governmental entities from placing additional or more stringent requirements on construction activities or discharges from construction activities.

8. Indian Country Lands

Stormwater runoff from construction activities occurring on Indian Country lands are not under the authority of the TCEQ and are not eligible for coverage under this general permit. If discharges of stormwater require authorization under federal NPDES regulations, authority for these discharges must be obtained from the U.S. Environmental Protection Agency (EPA).

9. Exempt Oil and Gas Activities

The CWA § 402(l)(2) provides that stormwater discharges from construction activities related to oil and gas exploration, production, processing, or treatment, or transmission facilities are exempt from regulation under this permit. The term “oil and gas exploration, production, processing, or treatment operations, or transmission facilities” is defined in 33 U.S.C. Annotated § 1362 (24).

The exemption in CWA § 402(l)(2) *includes* stormwater discharges from construction activities regardless of the amount of disturbed acreage, which are necessary to prepare a site for drilling and the movement and placement of drilling equipment, drilling waste management pits, in field treatment plants, and in field transportation infrastructure (e.g., crude oil pipelines, natural gas treatment plants, and both natural gas transmission pipeline compressor and crude oil pumping stations) necessary for the operation of most producing oil and gas fields. Construction activities are defined in 33 U.S. Code § 1362(24) and interpreted by EPA in the final rule. *See* June 12, 2006 Amendments to the NPDES Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities (71 FR 33628, Part V. Terminology).

The exemption *does not include* stormwater discharges from the construction of administrative buildings, parking lots, and roads servicing an administrative building at an oil and gas site, as these are considered traditional construction activities.

As described in 40 CFR § 122.26(c)(1)(iii) [*regulations prior to 2006*], discharges from oil and gas construction activities are waived from CWA § 402(l)(2) permit coverage *unless* the construction activity (or construction support activity) has had a discharge of stormwater resulting in the discharge of a reportable quantity of oil or hazardous substances or the discharge contributes to a violation of water quality standards.

Exempt oil and gas activities which have lost their exemption as a result of one of the above discharges, must obtain permit coverage under this general permit, an alternative general permit, or a TPDES individual permit prior to the next discharge.

10. Stormwater Discharges from Agricultural Activities

Stormwater discharges from agricultural activities that are not point source discharges of stormwater are not subject to TPDES permit requirements. These activities may include clearing and cultivating ground for crops, construction of fences to contain livestock, construction of stock ponds, and other similar agricultural activities. Discharges of stormwater runoff associated with the construction of facilities that are subject to TPDES regulations, such as the construction of concentrated animal feeding operations, would be point sources regulated under this general permit.

11. Endangered Species Act

Discharges that would adversely affect a listed endangered or threatened aquatic or aquatic-dependent species or its critical habitat are not authorized by this permit, unless the requirements of the Endangered Species Act are satisfied. Federal requirements related to endangered species apply to all TPDES permitted discharges and site-specific controls may be required to ensure that protection of endangered or threatened species is achieved. If a permittee has concerns over potential impacts to listed species, the permittee may contact TCEQ for additional information.

12. Storage of High-Level Radioactive Waste

Discharges of stormwater from construction activities associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 are not authorized by this general permit. Texas Health and Safety Code (THSC) § 401.0525 prohibits TCEQ from issuing any TPDES authorizations for the construction or operation of these facilities.

Discharges of stormwater from the construction activities associated with the construction of a facility located at the site of currently or formerly operating nuclear power reactors and currently or formerly operating nuclear research and test reactors operated by a university are not prohibited under THSC § 401.0525 and continue to be regulated under this general permit.

13. Other

Nothing in Part II. of the general permit is intended to negate any person's ability to assert *force majeure* (act of God, war, strike, riot, or other catastrophe) defenses found in 30 TAC § 70.7

Section D. Deadlines for Obtaining Authorization to Discharge

1. Large Construction Activities

   (a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

   (b) Ongoing Construction – Operators of large construction activities continuing to operate after the effective date of this permit, and authorized under the TPDES Construction General Permit (CGP) TXR150000 (effective on March 5, 2018, and amended on January 28, 2022), must submit an NOI to renew authorization or an NOT to terminate coverage under this general permit within 90 days of the effective date of this general permit. During this interim or grace period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

2. Small Construction Activities

   (a) New Construction – Discharges from sites where the commencement of construction activity occurs on or after the effective date of this general permit must be authorized, either under this general permit or a separate TPDES permit, prior to the commencement of those construction activities.

   (b) Ongoing Construction – Discharges from ongoing small construction activities that commenced prior to the effective date of this general permit, and that do not meet the conditions to qualify for termination of this permit as described in Part II.F. of this general permit, must meet the requirements to be authorized, either under this general permit or a separate TPDES permit, within 90 days of the effective date of this general permit. During this interim period, as a requirement of this TPDES permit, the operator must continue to meet the conditions and requirements of the issued and amended 2018 TPDES CGP.

Section E. Obtaining Authorization to Discharge

1. Automatic Authorization for Small Construction Activities with Low Potential for Erosion

   Operators of small construction activity, as defined in Part I.B. of this general permit, shall not submit an NOI for coverage, unless otherwise required by the executive director.

   Operators of small construction activities, which occur in certain counties and during periods of low potential for erosion that do not meet the conditions of the waiver described in Part II.G. of this general permit, may be automatically authorized under this general permit if all the following conditions are met prior to the commencement of construction.

   (a) The construction activity occurs in a county and during the corresponding date range(s) listed in Appendix A;

(b) The construction activity is initiated and completed, including either final or temporary stabilization of all disturbed areas, within the time frame identified in Appendix A for the location of the construction site;

(c) All temporary stabilization is adequately maintained to effectively reduce or prohibit erosion, permanent stabilization activities have been initiated, and a condition of final stabilization is completed no later than 30 days following the end date of the time frame identified in Appendix A for the location of the construction site; the permittee signs a completed TCEQ Small Construction Site Notice for low potential for erosion (Form TCEQ-20964), including the certification statement;

(d) A signed and certified copy of the TCEQ Small Construction Site Notice for low potential for erosion is posted at the construction site in a location where it is readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and maintained in that location until final stabilization has been achieved;

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ site notice, with a viewable signature, located on-site and available for review by any applicable regulatory authority.

(e) A copy of the signed and certified TCEQ Small Construction Site Notice for low potential for erosion is provided to the operator of any MS4 receiving the discharge at least two (2) days prior to commencement of construction activities;

(f) Discharges of stormwater runoff or other non-stormwater discharges from any supporting concrete batch plant or asphalt batch plant is separately authorized under an individual TPDES permit, another TPDES general permit, or under an individual TCEQ permit where stormwater and non-stormwater is disposed of by evaporation or irrigation (discharges are adjacent to water in the state); and

(g) Any non-stormwater discharges are either authorized under a separate permit or authorization, are not considered by TCEQ to be a wastewater, or are captured and routed for disposal at a publicly operated treatment works or licensed waste disposal facility.

If all of the conditions in (a) – (h) above are met, then the operator(s) of small construction activities with low potential for erosion are not required to develop a SWP3.

If an operator is conducting small construction activities and any of the above conditions (a) – (h) are not met, the operator cannot declare coverage under the automatic authorization for small construction activities with low potential for erosion and must meet the requirements for automatic authorization (all other) small construction activities, described below in Part II.E.2.

For small construction activities that occur during a period with a low potential for erosion, where automatic authorization under this section is not available, an operator may apply for and obtain a waiver from permitting (Low Rainfall Erosivity Waiver – LREW), as described in Part II.G. of this general permit. Waivers from coverage under the LREW do not allow for any discharges of non-stormwater and the operator must ensure that discharges on non-stormwater are either authorized under a separate permit or authorization.

2. Automatic Authorization for Small Construction Activities

Operators of small construction activities as defined in Part I.B. of this general permit shall not submit an NOI for coverage, unless otherwise required by the executive director.

Operators of small construction activities, as defined in Part I.B. of this general permit or as defined but who do not meet in the conditions and requirements located in Part II.E.1 above, may be automatically authorized for small construction activities, provided that they meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit, that covers either the entire site or all portions of the site for which the applicant is the operator, and implement the SWP3 prior to commencing construction activities;

(b) all operators of regulated small construction activities must post a copy of a signed and certified TCEQ Small Construction Site Notice (Form TCEQ-20963), the notice must be posted at the construction site in a location where it is safely and readily available for viewing by the general public, local, state, and federal authorities, at least two (2) days prior to commencing construction activity , and maintain the notice in that location until completion of the construction activity (for linear construction activities, e.g. pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public; local, state, and federal authorities);

(c) operators must maintain a posted TCEQ Small Construction Site Notice on the approved TCEQ form at the construction site until final stabilization has been achieved; and

> NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Small Construction Site Notice, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

(d) provide a copy of the signed and certified TCEQ Small Construction Site Notice to the operator of any municipal separate storm sewer system (MS4) receiving the discharge at least two (2) days prior to commencement of construction activities.

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatory form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Operators for small construction activities must submit this form via mail following the instructions on the approved TCEQ paper form. A new Delegation of Signatory form must be submitted if the delegation changes to another individual or position.

As described in Part I.B of this general permit, large construction activities include those that will disturb less than five (5) acres of land, but that are part of a larger common plan of development or sale that will ultimately disturb five (5) or more acres of land and must meet the requirements of Part II.E.3. below.

3. Authorization for Large Construction Activities

Operators of large construction activities that qualify for coverage under this general permit must meet all of the following conditions:

(a) develop a SWP3 according to the provisions of this general permit that covers either the entire site or all portions of the site where the applicant is the operator. The SWP3 must be developed and implemented prior to obtaining coverage and prior to commencing construction activities;

(b) primary operators of large construction activities must submit an NOI prior to commencing construction activity at a construction site. A completed NOI must be submitted to TCEQ electronically using the online ePermits system on TCEQ's website.

Operators with an electronic reporting waiver must submit a completed paper NOI to TCEQ at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the NOI is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the NOI.

If an additional primary operator is added after the initial NOI is submitted, the additional primary operator must meet the same requirements for existing primary operator(s), as indicated above.

If the primary operator changes due to responsibility at the site being transferred from one primary operator to another after the initial NOI is submitted, the new primary operator must submit an electronic NOI, unless they request and obtain a waiver from electronic reporting, at least ten (10) days prior to assuming operational control of a construction site and commencing construction activity.

(c) all operators of large construction activities must post a TCEQ Large Construction Site Notice on the approved TCEQ form (Form TCEQ-20961) in accordance with Part III.D.2. of this permit. The TCEQ site notice must be located where it is safely and readily available for viewing by the general public, local, state, and federal authorities prior to commencing construction activities, and must be maintained in that location until final stabilization has been achieved. For linear construction activities, e.g., pipeline or highway, the TCEQ site notice must be placed in a publicly accessible location near where construction is actively underway; notice for these linear sites may be relocated, as necessary, along the length of the project, and the notice must be safely and readily available for viewing by the general public, local, state, and federal authorities;

(d) two days prior to commencing construction activities, all primary operators must:

i. provide a copy of the signed NOI to the operator of any MS4 receiving the discharge and to any secondary construction operator, and

ii. list in the SWP3 the names and addresses of all MS4 operators receiving a copy;

(e) if signatory authority is delegated by an authorized representative, then a Delegation of Signatories form must be submitted as required by 30 TAC § 305.128 (relating to Signatories to Reports). Primary operators must submit this form electronically using the State of Texas Environmental Electronic Reporting System (STEERS), TCEQ's online permitting system, or by paper if the permittee requested and obtained an electronic reporting waiver. A new Delegation of Signatories form must be submitted, if the delegation changes to another individual or position;

(f) all persons meeting the definition of "secondary operator" in Part I of this permit are hereby notified that they are regulated under this general permit, but are not required to submit an NOI, provided that a primary operator at the site has submitted an NOI, or prior to commencement of construction activities, a primary operator is required to submit an NOI and the secondary operator has provided notification to the operator(s) of the need to obtain coverage (with records of notification available upon request). Any secondary operator notified under this provision may alternatively submit an NOI under this general permit, may seek coverage under an alternative TPDES individual permit, or may seek coverage under an alternative TPDES general permit if available; and

(g) all secondary operators of large construction activities must post a copy of the signed and certified TCEQ Large Construction Site Notice for Secondary Operators on the approved TCEQ form (Form TCEQ-20962) and provide a copy of the signed and certified TCEQ site notice to the operator of any MS4 receiving the discharge at least two (2) days prior to the commencement construction activities.

NOTE: Posted TCEQ site notices may have a redacted signature as long as there is an original signed and certified TCEQ Large Construction Site Notice for Secondary Operators, with a viewable signature, located on-site and available for review by an applicable regulatory authority.

Applicants must submit an NOI using the online ePermits system (accessed using STEERS) available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Waivers for Small Construction Activities:

Operators of certain small construction activities may obtain a waiver from coverage under this general permit, if applicable. The requirements are outlined in Part II.G. below.

5. Effective Date of Coverage

(a) Operators of small construction activities as described in either Part II.E.1. or II.E.2. above are authorized immediately following compliance with the applicable conditions of Part II.E.1. or II.E.2. Secondary operators of large construction activities as described in Part II.E.3. above are authorized immediately following compliance with the applicable conditions in Part II.E.3. For activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(b) Primary operators of large construction activities as described in Part II.E.3. above that electronically submit an NOI are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

Operators with an electronic reporting waiver are provisionally authorized 48-hours from the date that a completed paper NOI is postmarked for delivery to the TCEQ, unless otherwise notified by the executive director. An authorization is no longer provisional when the executive director finds the NOI is administratively complete and an authorization number is issued to the permittee for the construction site indicated on the NOI.

For construction activities located in areas regulated by 30 TAC Chapter 213, related to the Edwards Aquifer, this authorization to discharge is separate from the requirements of the operator's responsibilities under that rule. Construction activities may not commence for sites regulated under 30 TAC Chapter 213 until all applicable requirements of that rule are met.

(c) Operators are not prohibited from submitting late NOIs or posting late site notices to obtain authorization under this general permit. The TCEQ reserves the right to take appropriate enforcement action for any unpermitted activities that may have occurred between the time construction commenced and authorization under this general permit was obtained.

(d) If operators that submitted NOIs have active authorizations for construction activities that are ongoing when this general permit expires on March 5, 2028, and a new general permit is issued, a 90-day interim (grace) period is granted to provide coverage that is administratively continued until operators with active authorizations can obtain coverage under the newly issued CGP. The 90-day grace period starts on the effective date of the newly issued CGP.

6. Contents of the NOI

The NOI form shall require, at a minimum, the following information:

(a) the TPDES CGP authorization number for existing authorizations under this general permit, where the operator submits an NOI to renew coverage within 90 days of the effective date of this general permit;

(b) the name, address, and telephone number of the operator filing the NOI for permit coverage;

(c) the name (or other identifier), address, county, and latitude/longitude of the construction project or site;

(d) the number of acres that will be disturbed by the applicant;

(e) the estimated construction project start date and end date;

(f) confirmation that the project or site will not be located on Indian Country lands;

(g) confirmation if the construction activity is associated with an oil and gas exploration, production, processing, or treatment, or transmission facility (see Part II.C.9.)

(h) confirmation that the construction activities are not associated with the construction of a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72 (see Part II.C.12.);

(i) confirmation that a SWP3 has been developed in accordance with all conditions of this general permit, that it will be implemented prior to commencement of construction activities, and that it is compliant with any applicable local sediment and erosion control plans; for multiple operators who prepare a shared SWP3, the confirmation for an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator;

(j) name of the receiving water(s);

(k) the classified segment number for each classified segment that receives discharges from the regulated construction activity (if the discharge is not directly to a classified segment, then the classified segment number of the first classified segment that those discharges reach); and

(l) the name of all surface waters receiving discharges from the regulated construction activity that are on the latest EPA-approved CWA § 303(d) List of impaired waters or *Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d)* as not meeting applicable state water quality standards.

7. Notice of Change (NOC)

(a) If relevant information provided in the NOI changes, the operator that has submitted the NOI must submit an NOC to TCEQ at least fourteen (14) days before the change occurs. Where a 14-day advance notice is not possible, the operator must submit an NOC to TCEQ within fourteen (14) days of discovery of the change. If the operator becomes aware that it failed to submit any relevant facts or submitted

incorrect information in an NOI, the correct information must be submitted to TCEQ in an NOC within fourteen (14) days after discovery.

(b) Information on an NOC may include, but is not limited to, the following:

i. a change in the description of the construction project;

ii. an increase in the number of acres disturbed (for increases of one (1) or more acres);

iii. or the name of the operator (where the name of the operator has changed).

(c) Electronic NOC.

Applicants must submit an NOC using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. All waivers from electronic reporting are not transferrable. Electronic reporting waivers expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance. A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. Operators are authorized immediately following confirmation of receipt of the electronic form by the TCEQ, unless otherwise notified by the executive director.

(d) Paper NOC.

Applicants who request and obtain an electronic reporting waiver shall submit the NOC on a paper form provided by the executive director, or by letter if an NOC form is not available.

(e) A copy of the NOC form or letter must also be placed in the SWP3 and provided to the operator of any MS4 receiving the discharge. A list that includes the names and addresses of all MS4 operators receiving a copy of the NOC (or NOC letter) must be included in the SWP3. Information that may not be included on an NOC includes but is not limited to the following:

i. transfer of operational control from one operator to another, including a transfer of the ownership of a company. A transfer of ownership of a company includes changes to the structure of a company, such as changing from a partnership to a corporation or changing corporation types, so that the filing or charter number that is on record with the Texas Secretary of State (SOS) must be changed.

ii. coverage under this general permit is not transferable from one operator to another. Instead, the new operator will need to submit an NOI or LREW, as applicable, and the previous operator will need to submit an NOT.

iii. a decrease in the number of acres disturbed. This information must be included in the SWP3 and retained on site.

8. Signatory Requirement for NOI Forms, NOT Forms, NOC Forms, and Construction Site Notices

NOI forms, NOT forms, NOC forms, and Construction Site Notices that require a signature must be signed according to 30 TAC § 305.44 (relating to Signatories for Applications).

Section F. Terminating Coverage

1. Notice of Termination (NOT) Required

   Each operator that has submitted an NOI for authorization of large construction activities under this general permit must apply to terminate that authorization following the conditions described in this section of the general permit.

   Authorization of large construction must be terminated by submitting an NOT electronically via the online ePermits system available through the TCEQ website, or on a paper NOT form to TCEQ supplied by the executive director with an approved waiver from electronic reporting. Authorization to discharge under this general permit terminates at midnight on the day a paper NOT is postmarked for delivery to the TCEQ or immediately following confirmation of the receipt of the NOT submitted electronically by the TCEQ.

   Applicants must submit an NOT using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

   The NOT must be submitted to TCEQ, and a copy of the NOT provided to the operator of any MS4 receiving the discharge (with a list in the SWP3 of the names and addresses of all MS4 operators receiving a copy), within 30 days after any of the following conditions are met:

   (a) final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

   (b) a transfer of operational control has occurred (See Section II.F.4. below); or

   (c) the operator has obtained alternative authorization under an individual TPDES permit or alternative TPDES general permit.

   Compliance with the conditions and requirements of this permit is required until the NOT is submitted and approved by TCEQ.

2. Minimum Contents of the NOT

   The NOT form shall require, at a minimum, the following information:

   (a) if authorization for construction activity was granted following submission of an NOI, the permittee's site-specific TPDES authorization number for a specific construction site;

   (b) an indication of whether final stabilization has been achieved at the site and a NOT has been submitted or if the permittee is simply no longer an operator at the site;

   (c) the name, address, and telephone number of the permittee submitting the NOT;

   (d) the name (or other identifier), address, county, and location (latitude/longitude) of the construction project or site; and

   (e) a signed certification that either all stormwater discharges requiring authorization under this general permit will no longer occur, or that the applicant is no longer the operator of the facility or construction site, and that all temporary structural erosion controls have either been removed, will be removed on a schedule defined in the SWP3, or have been transferred to a new operator if the new operator has applied for permit coverage. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal.

3. Termination of Coverage for Small Construction Sites and for Secondary Operators at Large Construction Sites

   (a) Each operator that has obtained automatic authorization for small construction or is a secondary operator for large construction must perform the following when terminating coverage under the permit:

      i. remove the TCEQ site notice;

      ii. complete the applicable portion of the TCEQ site notice related to removal of the TCEQ site notice; and

      iii. submit a copy of the completed TCEQ site notice to the operator of any MS4 receiving the discharge (or provide alternative notification as allowed by the MS4 operator, with documentation of such notification included in the SWP3).

   (b) The activities described in Part II.F.3.(a) above must be completed by the operator within 30 days of meeting any of the following conditions:

      i. final stabilization has been achieved on all portions of the site that are the responsibility of the operator;

      ii. a transfer of day-to-day operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions has occurred (See Section II.F.4. below); or

      iii. the operator has obtained alternative authorization under an individual or general TPDES permit.

   For Small Construction Sites and Secondary Operators at Large Construction Sites, authorization to discharge under this general permit terminates immediately upon removal of the applicable TCEQ construction site notice. Compliance with the conditions and requirements of this permit is required until the TCEQ construction site notice is removed. The construction site notice cannot be removed until final stabilization has been achieved.

4. Transfer of Day-to-Day Operational Control

   (a) When the primary operator of a large construction activity changes or operational control over activities necessary to ensure compliance with the SWP3 and other permit conditions is transferred to another primary operator, the original operator must do the following:

      i. submit an NOT within ten (10) days prior to the date that responsibility for operations terminates, and the new operator must submit an NOI at least ten (10) days prior to the transfer of operational control, in accordance with condition (c) below; and

      ii. submit a copy of the NOT from the primary operator terminating its coverage under the permit and its operational control of the construction site and submit a copy of the NOI from the new primary operator to the operator of any MS4 receiving the discharge in accordance with Part II.F.1. above.

   (b) For transfer of operational control, operators of small construction activities and secondary operators of large construction activities who are not required to submit an NOI must do the following:

      i. the existing operator must remove the original TCEQ construction site notice, and the new operator must post the required TCEQ construction site notice prior to the transfer of operational control, in accordance with the conditions in Part II.F.4.(c) i or ii below; and

ii. a copy of the TCEQ construction site notice, which must be completed and provided to the operator of any MS4 receiving the discharge, in accordance with Part II.F.3. above.

(c) Each operator is responsible for determining its role as an operator as defined in Part I.B. and obtaining authorization under the permit, as described above in Part II.E. 1. - 3. Where authorization has been obtained by submitting an NOI for coverage under this general permit, permit coverage is not transferable from one operator to another. A transfer of operational control can include changes to the structure of a company, such as changing from a partnership to a corporation, or changing to a different corporation type such that a different filing (or charter) number is established with the Texas Secretary of State (SOS). A transfer of operational control can also occur when one of the following criteria is met, as applicable:

i. another operator has assumed control over all areas of the site that do not meet the definition for final stabilization;

ii. all silt fences and other temporary erosion controls have either been removed, scheduled for removal as defined in the SWP3, or transferred to a new operator, provided that the original permitted operator has attempted to notify the new operator in writing of the requirement to obtain permit coverage. Records of this notification (or attempt at notification) shall be retained by the operator transferring operational control to another operator in accordance with Part VI of this permit. Erosion controls that are designed to remain in place for an indefinite period, such as mulches and fiber mats, are not required to be removed or scheduled for removal; or

iii. a homebuilder has purchased one (1) or more lots from an operator who obtained coverage under this general permit for a common plan of development or sale. The homebuilder is considered a new operator and shall comply with the requirements of this permit. Under these circumstances, the homebuilder is only responsible for compliance with the general permit requirements as they apply to the lot(s) it has operational control over in a larger common plan of development, and the original operator remains responsible for common controls or discharges, and must amend its SWP3 to remove the lot(s) transferred to the homebuilder.

Section G. Waivers from Coverage

The executive director may waive the otherwise applicable requirements of this general permit for stormwater discharges from small construction activities under the terms and conditions described in this section.

1. Waiver Applicability and Coverage

Operators of small construction activities may apply for and receive a waiver from the requirements to obtain authorization under this general permit, when the calculated rainfall erosivity (R) factor for the entire period of the construction project is less than five (5).

The operator must submit a Low Rainfall Erosivity Waiver (LREW) certification form to the TCEQ electronically via the online ePermits system available through the TCEQ website. The LREW form is a certification by the operator that the small construction activity will commence and be completed within a period when the value of the calculated R factor is less than five (5).

Applicants who request and obtain an electronic reporting waiver shall submit the LREW on a paper form provided by the executive director at least seven (7) days prior to commencing construction activity to obtain provisional coverage 48-hours from the postmark date for delivery to the TCEQ. An authorization is no longer provisional when the executive director finds the LREW is administratively complete, and an authorization number is issued to the permittee for the construction site indicated on the LREW. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge, except for temporary waivers that expire one (1) year from issuance.

This LREW from coverage does not apply to any non-stormwater discharges, including what is allowed under this permit. The operator must ensure that all non-stormwater discharges are either authorized under a separate permit or authorization or are captured and routed to an authorized treatment facility for disposal.

2. Steps to Obtaining a Waiver

The construction site operator may calculate the R factor to request a waiver using the following steps:

(a) estimate the construction start date and the construction end date. The construction end date is the date that final stabilization will be achieved.

(b) find the appropriate Erosivity Index (EI) zone in Appendix B of this permit.

(c) find the EI percentage for the project period by adding the results for each period of the project using the table provided in Appendix D of this permit, in EPA Fact Sheet 2.1, or in USDA Handbook 703, by subtracting the start value from the end value to find the percent EI for the site.

(d) refer to the Isoerodent Map (Appendix C of this permit) and interpolate the annual isoerodent value for the proposed construction location.

(e) multiply the percent value obtained in Step (c) above by the annual isoerodent value obtained in Step (d). This is the R factor for the proposed project. If the value is less than five (5), then a waiver may be obtained. If the value is five (5) or more, then a waiver may not be obtained, and the operator must obtain coverage under Part II.E.2. of this permit.

Alternatively, the operator may calculate a site-specific R factor utilizing the following online calculator: https://lew.epa.gov/, or using another available resource.

A copy of the LREW certification form is not required to be posted at the small construction site.

3. Effective Date of an LREW

Unless otherwise notified by the executive director, operators of small construction activities seeking coverage under an LREW are provisionally waived from the otherwise applicable requirements of this general permit 48-hours from the date that a completed paper LREW certification form is postmarked for delivery to TCEQ, or immediately upon receiving confirmation of approval of an electronic submittal, made via the online ePermits system available through the TCEQ website.

Applicants seeking coverage under an LREW must submit an application for an LREW using the online ePermits system available through the TCEQ website, or request and obtain a waiver from electronic reporting from the TCEQ. Waivers from electronic reporting are not transferrable and expire on the same date as the authorization to discharge.

4. Activities Extending Beyond the LREW Period

   If a construction activity extends beyond the approved waiver period due to circumstances beyond the control of the operator, the operator must either:

   (a) recalculate the R factor using the original start date and a new projected ending date, and if the R factor is still under five (5), submit a new LREW form at least two (2) days before the end of the original waiver period; or

   (b) obtain authorization under this general permit according to the requirements for automatic authorization for small construction activities in Part II.E.2. of this permit, prior to the end of the approved LREW period.

Section H. Alternative TPDES Permit Coverage

1. Individual Permit Alternative

   Any discharge eligible for coverage under this general permit may alternatively be authorized under an individual TPDES permit according to 30 TAC Chapter 305 (relating to Consolidated Permits). Applications for individual permit coverage must be submitted at least 330 days prior to commencement of construction activities to ensure timely authorization. Existing coverage under this general permit should not be terminated until an individual permit is issued and in effect.

2. General Permit Alternative

   Any discharges eligible for authorization under this general permit may alternatively be authorized under a separate general permit according to 30 TAC Chapter 205 (relating to General Permits for Waste Discharges), as applicable.

3. Individual Permit Required

   The executive director may require an operator of a construction site, otherwise eligible for authorization under this general permit, to apply for an individual TPDES permit in the following circumstances:

   (a) the conditions of an approved TMDL or TMDL I-Plan on the receiving water;

   (b) the activity being determined to cause, has a reasonable potential to cause, or contribute to a violation of water quality standards or being found to cause, or contribute to, the loss of a designated use of surface water in the state; and

   (c) any other consideration defined in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges) including 30 TAC § 205.4(c)(3)(D), which allows the commission to deny authorization under the general permit and require an individual permit if a discharger has been determined by the executive director to have been out of compliance with any rule, order, or permit of the commission, including non-payment of fees assessed by the executive director.

      A discharger with a TCEQ compliance history rating of “unsatisfactory” is ineligible for coverage under this general permit. In that case, 30 TAC § 60.3 requires the executive director to deny or suspend an authorization to discharge under a general permit. However, per TWC § 26.040(h), a discharger is entitled to a hearing before the commission prior to having an authorization denied or suspended for having an “unsatisfactory” compliance history.

   Denial of authorization to discharge under this general permit or suspension of a permittee’s authorization under this general permit for reasons other than compliance history shall be done according to commission rules in 30 TAC Chapter 205 (relating to General Permits for Waste Discharges).

Section I. Permit Expiration

1. This general permit is effective for a term not to exceed five (5) years. All active discharge authorizations expire on the date provided on page one (1) of this permit. Following public notice and comment, as provided by 30 TAC § 205.3 (relating to Public Notice, Public Meetings, and Public Comment), the commission may amend, revoke, cancel, or renew this general permit. All authorizations that are active at the time the permit term expires will be administratively continued as indicated in Part II.I.2. below and in Part II.D.1.(b) and D.2.(b) of this permit.
2. If the executive director publishes a notice of the intent to renew or amend this general permit before the expiration date, the permit will remain in effect for existing, authorized discharges until the commission takes final action on the permit. Upon issuance of a renewed or amended permit, permittees may be required to submit an NOI within 90 days following the effective date of the renewed or amended permit, unless that permit provides for an alternative method for obtaining authorization.
3. If the commission does not propose to reissue this general permit within 90 days before the expiration date, permittees shall apply for authorization under an individual permit or an alternative general permit. If the application for an individual permit is submitted before the expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual permit. No new NOIs will be accepted nor new authorizations honored under the general permit after the expiration date.

Part III. Stormwater Pollution Prevention Plans (SWP3)

All regulated construction site operators shall prepare an SWP3, prior to submittal of an NOI, to address discharges authorized under Parts II.E.2. and II.E.3. of this general permit that will reach waters of the U.S. This includes discharges to MS4s and privately owned separate storm sewer systems that drain into surface water in the state or waters of the U.S.

Individual operators at a site may develop separate SWP3s that cover only their portion of the project, provided reference is made to the other operators at the site. Where there is more than one (1) SWP3 for a site, operators must coordinate to ensure that BMPs and controls are consistent and do not negate or impair the effectiveness of each other. Regardless of whether a single comprehensive SWP3 is developed or separate SWP3s are developed for each operator, it is the responsibility of each operator to ensure compliance with the terms and conditions of this general permit in the areas of the construction site where that operator has control over construction plans and specifications or day-to-day operations.

An SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater associated with construction activity and non-stormwater discharges described in Part II.A.3., in compliance with the terms and conditions of this permit.

An SWP3 must also identify any potential sources of pollution that have been determined to cause, have a reasonable potential to cause, or contribute to a violation of water quality standards or have been found to cause or contribute to the loss of a designated use of surface water in the state from discharges of stormwater from construction activities and construction support activities. Where potential sources of these pollutants are present at a construction site, the SWP3 must also contain a description of the management practices that will be used to prevent these pollutants from being discharged into surface water in the state or waters of the U.S.

> NOTE: Construction support activities can also include vehicle repair areas, fueling areas, etc. that are present at a construction site solely for the support construction activities and are only used by operators at the construction site.

The SWP3 is intended to serve as a road map for how the construction operator will comply with the effluent limits and other conditions of this permit. Additional portions of the effluent limits are established in Part IV. of the permit.

Section A. Shared SWP3 Development

For more effective coordination of BMPs and opportunities for cost sharing, a cooperative effort by the different operators at a site is encouraged. Operators of small and large construction activities must independently obtain authorization under this permit but may work together with other regulated operators at the construction site to prepare and implement a single, comprehensive SWP3, which can be shared by some or all operators, for the construction activities that each of the operators are performing at the entire construction site.

1. The SWP3 must include the following:
   (a) for small construction activities – the name of each operator that participates in the shared SWP3;
   (b) for large construction activities – the name of each operator that participates in the shared SWP3, the general permit authorization numbers of each operator (or the date that the NOI was submitted to TCEQ by each operator that has not received an authorization number for coverage under this permit); and
   (c) for large and small construction activities – the signature of each operator participating in the shared SWP3.
2. The SWP3 must clearly indicate which operator is responsible for satisfying each shared requirement of the SWP3. If the responsibility for satisfying a requirement is not described in the plan, then each permittee is entirely responsible for meeting the requirement within the boundaries of the construction site where they perform construction activities. The SWP3 must clearly describe responsibilities for meeting each requirement in shared or common areas.
3. The SWP3 may provide that one operator is responsible for preparation of a SWP3 in compliance with the CGP, and another operator is responsible for implementation of the SWP3 at the project site.

Section B. Responsibilities of Operators

1. Secondary Operators and Primary Operators with Control Over Construction Plans and Specifications

   All secondary operators and primary operators with control over construction plans and specifications shall:
   (a) ensure the project specifications allow or provide that adequate BMPs are developed to meet the requirements of Part III of this general permit;
   (b) ensure that the SWP3 indicates the areas of the project where they have control over project specifications, including the ability to make modifications in specifications;
   (c) ensure that all other operators affected by modifications in project specifications are notified in a timely manner so that those operators may modify their BMP s as necessary to remain compliant with the conditions of this general permit; and

(d) ensure that the SWP3 for portions of the project where each operator has control indicates the name and site-specific TPDES authorization number(s) for operators with the day-to-day operational control over those activities necessary to ensure compliance with the SWP3 and other permit conditions. If a primary operator has not been authorized or has abandoned the site, the secondary operator is considered to be the responsible party and must obtain authorization as a primary operator under the permit, until the authority for day-to-day operational control is transferred to another primary operator. The new primary operator must update or develop a new SWP3 that will reflect the transfer of operational control and include any additional updates to the SWP3 to meet requirements of the permit.

2. Primary Operators with Day-to-Day Operational Control

Primary operators with day-to-day operational control of those activities at a project that are necessary to ensure compliance with an SWP3 and other permit conditions must ensure that the SWP3 accomplishes the following requirements:

(a) meets the requirements of this general permit for those portions of the project where they are operators;

(b) identifies the parties responsible for implementation of BMPs described in the SWP3;

(c) indicates areas of the project where they have operational control over day-to-day activities; and

(d) the name and site-specific TPDES authorization number of the parties with control over project specifications, including the ability to make modifications in specifications for areas where they have operational control over day-to-day activities.

Section C. Deadlines for SWP3 Preparation, Implementation, and Compliance

The SWP3 must be prepared prior to obtaining authorization under this general permit, and implemented prior to commencing construction activities that result in soil disturbance. The SWP3 must be prepared so that it provides for compliance with the terms and conditions of this general permit.

Section D. Plan Review and Making Plans Available

1. The SWP3 must be retained on-site at the construction site or, if the site is inactive or does not have an on-site location to store the plan, a notice must be posted describing the location of the SWP3. The SWP3 must be made readily available at the time of an on-site inspection to: the executive director; a federal, state, or local agency approving sediment and erosion plans, grading plans, or stormwater management plans; local government officials; and the operator of a municipal separate storm sewer receiving discharges from the site. If the SWP3 is retained off-site, then it shall be made available as soon as reasonably possible. In most instances, it is reasonable that the SWP3 shall be made available within 24 hours of the request.

   NOTE: The SWP3 may be prepared and kept electronically, rather than in paper form, if the records are: (a) in a format that can be read in a similar manner as a paper record; (b) legally valid with no less evidentiary value than their paper equivalent; and (c) immediately accessible to the inspector during an inspection to the same extent as a paper copy stored at the site would be, if the records were stored in paper form.

2. Operators with authorization for construction activity under this general permit must post a TCEQ site notice at the construction site at a place readily available for viewing by the general public, and local, state, and federal authorities.

(a) Primary and secondary operators of large construction activities must each post a TCEQ construction site notice, respective to their role as an operator at the construction site, as required above and according to requirements in Part II.E.3. of this general permit.

(b) Primary and secondary operators of small construction activities must post the TCEQ site notice as required in Part III.D.2.(a) above and for the specific type of small construction described in Part II.E.1. and 2. of the permit.

(c) If the construction project is a linear construction project, such as a pipeline or highway, the notices must be placed in a publicly accessible location near where construction is actively underway. TCEQ construction site notices for small and large construction activities at these linear construction sites may be relocated, as necessary, along the length of the project, but must still be readily available for viewing by the general public; local, state, and federal authorities; and contain the following information:

i. the site-specific TPDES authorization number for the project if assigned;

ii. the operator name, contact name, and contact phone number;

iii. a brief description of the project; and

iv. the location of the SWP3.

3. This permit does not provide the general public with any right to trespass on a construction site for any reason, including inspection of a site; nor does this permit require that permittees allow members of the general public access to a construction site.

Section E. Revisions and Updates to SWP3s

The permittee must revise or update the SWP3, including the site map, within seven (7) days of when any of the following occurs:

1. a change in design, construction, operation, or maintenance that has a significant effect on the discharge of pollutants and that has not been previously addressed in the SWP3;
2. changing site conditions based on updated plans and specifications, new operators, new areas of responsibility, and changes in BMPs; or
3. results of inspections or investigations by construction site personnel authorized by the permittee, operators of a municipal separate storm sewer system receiving the discharge, authorized TCEQ personnel, or a federal, state or local agency approving sediment and erosion plans indicate the SWP3 is proving ineffective in eliminating or significantly minimizing pollutants in discharges authorized under this general permit.

Section F. Contents of SWP3

The SWP3 must be developed and implemented by primary operators of small and large construction activities and include, at a minimum, the information described in this section and must comply with the construction and development effluent guidelines in Part IV. of the general permit.

1. A site or project description, which includes the following information:

(a) a description of the nature of the construction activity;

(b) a list of potential pollutants and their sources;

(c) a description of the intended schedule or sequence of activities that will disturb soils for major portions of the site, including estimated start dates and duration of activities;

(d) the total number of acres of the entire property and the total number of acres where construction activities will occur, including areas where construction support activities (defined in Part I.B. of this general permit) occur;

(e) data describing the soil or the quality of any discharge from the site;

(f) a map showing the general location of the site (e.g., a portion of a city or county map);

(g) a detailed site map (or maps) indicating the following:

i. property boundary(ies);

ii. drainage patterns and approximate slopes anticipated before and after major grading activities;

iii. areas where soil disturbance will occur (note any phasing), including any demolition activities;

iv. locations of all controls and buffers, either planned or in place;

v. locations where temporary or permanent stabilization practices are expected to be used;

vi. locations of construction support activities, including those located off-site;

vii. surface waters (including wetlands) either at, adjacent, or in close proximity to the site, and also indicate whether those waters are impaired;

NOTE: Surface waters adjacent to or in close proximity to the site means any receiving waters within the site and all receiving waters within one mile downstream of the site's discharge point(s).

viii. locations where stormwater discharges from the site directly to a surface water body or a municipal separate storm sewer system;

ix. vehicle wash areas; and

x. designated points on the site where vehicles will exit onto paved roads (for instance, this applies to construction transition from unstable dirt areas to exterior paved roads).

Where the amount of information required to be included on the map would result in a single map being difficult to read and interpret, the operator shall develop a series of maps that collectively include the required information.

(h) the location and description of support activities authorized under the permittee's NOI, including asphalt plants, concrete plants, and other activities providing support to the construction site that is authorized under this general permit;

(i) the name of receiving waters at or near the site that may be disturbed or that may receive discharges from disturbed areas of the project;

(j) a copy of this TPDES general permit (an electronic copy of this TPDES general permit or a current link to this TPDES general permit on the TCEQ webpage is acceptable);

(k) the NOI and the acknowledgement of provisional and non-provisional authorization for primary operators of large construction sites, and the TCEQ site notice for small construction sites and for secondary operators of large construction sites;

(l) if signatory authority is delegated by an authorized representative, then a copy of the formal notification to TCEQ, as required by 30 TAC 305.128 relating to Signatories to Reports must be filed in the SWP3 and made available for review upon request by TCEQ or local MS4 Operator. For primary operators of large construction activities, the formal notification to TCEQ must be submitted either electronically through

STEERS, TCEQ's electronic reporting system, or, if qualifying for an electronic reporting waiver, by paper on a Delegation of Signatories form. For operators or small construction activities, the formal notification to TCEQ must be submitted by paper on a Delegation of Signatories form.

(m) stormwater and allowable non-stormwater discharge locations, including storm drain inlets on site and in the immediate vicinity of the construction site where construction support activities will occur; and

(n) locations of all pollutant-generating activities at the construction site and where construction support activities will occur, such as the following: Paving operations; concrete, paint and stucco washout and water disposal; solid waste storage and disposal; and dewatering operations.

2. A description of the BMPs that will be used to minimize pollution in runoff.

The description must identify the general timing or sequence for installation and implementation. At a minimum, the description must include the following components:

(a) General Requirements

i. Erosion and sediment controls must be designed to retain sediment on-site to the extent practicable with consideration for local topography, soil type, and rainfall.

ii. Control measures must be properly selected, installed, and maintained according to good engineering practices, and the manufacturer's or designer's specifications.

iii. Controls must be developed to minimize the offsite transport of litter, construction debris, construction materials, and other pollutants required of Part IV.D.

(b) Erosion Control and Stabilization Practices

The SWP3 must include a description of temporary and permanent erosion control and stabilization practices for the construction site, where small or large construction activity will occur. The erosion control and stabilization practices selected by the permittee must be compliant with the requirements for sediment and erosion control, located in Part IV. of this permit. The description of the SWP3 must also include a schedule of when the practices will be implemented. Site plans must ensure that existing vegetation at the construction site is preserved where it is possible.

i. Erosion control and stabilization practices may include but are not limited to: establishment of temporary or permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of existing trees and vegetation, slope texturing, temporary velocity dissipation devices, flow diversion mechanisms, and other similar measures.

ii. The following records must be maintained and either attached to or referenced in the SWP3, and made readily available upon request to the parties listed in Part III.D.1 of this general permit:

(A) the dates when major grading activities occur;

(B) the dates when construction activities temporarily or permanently cease on a portion of the site; and

(C) the dates when stabilization measures are initiated.

iii. Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding fourteen (14) calendar days. Stabilization

measures that provide a protective cover must be initiated immediately in portions of the site where construction activities have permanently ceased. The term "immediately" is used to define the deadline for initiating stabilization measures. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next work day, following the day when the earth-disturbing activities have temporarily or permanently ceased. Except as provided in (A) through (D) below, these measures must be completed as soon as practicable, but no more than fourteen (14) calendar days after the initiation of soil stabilization measures:

(A) where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased due to frozen conditions, non-vegetative controls must be implemented until thawing conditions (as defined in Part I.B. of this general permit) are present, and vegetative stabilization measures can be initiated as soon as practicable.

(B) in arid areas, semi-arid areas, or drought-stricken areas, as they are defined in Part I.B. of this general permit, where the immediate initiation of vegetative stabilization measures after construction activity has temporarily or permanently ceased or is precluded by arid conditions, other types of erosion control and stabilization measures must be initiated at the site as soon as practicable. Where vegetative controls are infeasible due to arid conditions, and within fourteen (14) calendar days of a temporary or permanent cessation of construction activity in any portion of the site, the operator shall immediately install non-vegetative erosion controls in areas of the construction site where construction activity is complete or has ceased. If non-vegetative controls are infeasible, the operator shall install temporary sediment controls as required in Part III.F.2.(b)iii.(C) below.

(C) in areas where non-vegetative controls are infeasible, the operator may alternatively utilize temporary perimeter controls. The operator must document in the SWP3 the reason why stabilization measures are not feasible, and must demonstrate that the perimeter controls will retain sediment on site to the extent practicable. The operator must continue to inspect the BMPs at the frequencies established in Part III.F.8.(c) for unstabilized sites.

(D) the requirement for permittees to initiate stabilization is triggered as soon as it is known with reasonable certainty that construction activity at the site or in certain areas of the site will be stopped for 14 or more additional calendar days. If the initiation or completion of vegetative stabilization is prevented by circumstances beyond the control of the permittee, the permittee must employ and implement alternative stabilization measures immediately. When conditions at the site changes that would allow for vegetative stabilization, then the permittee must initiate or complete vegetative stabilization as soon as practicable.

iv. Final stabilization must be achieved prior to termination of permit coverage.

v. TCEQ does not expect that temporary or permanent stabilization measures to be applied to areas that are intended to be left un-vegetated or un-stabilized following construction (e.g., dirt access roads, utility pole pads, areas being used for storage of vehicles, equipment, or materials).

(c) Sediment Control Practices

The SWP3 must include a description of any sediment control practices used to remove eroded soils from stormwater runoff, including the general timing or sequence for implementation of controls. Controls selected by the permittee must be compliant with the requirements in Part IV. of this permit.

i. Sites With Drainage Areas of Ten (10) or More Acres

(A) Sedimentation Basin(s) or Impoundments

(1) A sedimentation basin or similar impoundment is required, where feasible, for a common drainage location that serves an area with ten (10) or more acres disturbed at one time. A sedimentation basin or impoundment may be temporary or permanent, and must provide sufficient storage to contain a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained. When calculating the volume of runoff from a 2-year, 24-hour storm event, it is not required to include the flows from offsite areas and flow from onsite areas that are either undisturbed or have already undergone permanent stabilization, if these flows are diverted around both the disturbed areas of the site and the sediment basin or similar impoundment. Capacity calculations shall be included in the SWP3. Sedimentation basins must be designed for and appropriate for controlling runoff at the site and existing detention or retention ponds at the site may not be appropriate.

(2) Where rainfall data is not available, or a calculation cannot be performed, the sedimentation basin must provide at least 3,600 cubic feet of storage per acre drained until final stabilization of the site.

(3) If a sedimentation basin or impoundment is not feasible, then the permittee shall provide equivalent control measures until final stabilization of the site. In determining whether installing a sediment basin or impoundment is feasible, the permittee may consider factors such as site soils, slope, available area, public safety, precipitation patterns, site geometry, site vegetation, infiltration capacity, geotechnical factors, depth to groundwater, and other similar considerations. The permittee shall document the reason that the sediment basins or impoundments are not feasible, and shall utilize equivalent control measures, which may include a series of smaller sediment basins or impoundments.

(4) Unless infeasible, when discharging from sedimentation basins and impoundments, the permittee shall utilize outlet structures that withdraw water from the surface.

(B) Perimeter Controls: At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

ii. Controls for Sites with Drainage Areas Less than Ten (10) Acres:

(A) Sediment traps and sediment basins may be used to control solids in stormwater runoff for drainage locations serving less than ten (10) acres. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries of the construction area, and for those side slope boundaries deemed appropriate as dictated by individual site conditions.

(B) Alternatively, a sediment basin that provides storage for a calculated volume of runoff from a 2-year, 24-hour storm from each disturbed acre drained may be utilized. Where rainfall data is not available or a calculation cannot be performed, a temporary or permanent sediment basin providing 3,600 cubic feet of storage per acre drained may be provided. If a calculation is performed, then the calculation shall be included in the SWP3.

(C) If sedimentation basins or impoundments are used, the permittee shall comply with the requirements in Part IV.F. of this general permit.

3. Description of Permanent Stormwater Controls

A description of any stormwater control measures that will be installed during the construction process to control pollutants in stormwater discharges that may occur after construction operations have been completed must be included in the SWP3. Permittees are responsible for the installation and maintenance of stormwater management measures, as follows:

(a) permittees authorized under the permit for small construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site; or

(b) permittees authorized under the permit for large construction activities are responsible for the installation and maintenance of stormwater control measures prior to final stabilization of the site and prior to submission of an NOT.

4. Other Required Controls and BMPs

(a) Permittees shall minimize, to the extent practicable, the off-site vehicle tracking of sediments and dust. The SWP3 shall include a description of controls utilized to control the generation of pollutants that could be discharged in stormwater from the site.

(b) The SWP3 must include a description of construction and waste materials expected to be stored on-site and a description of controls to minimize pollutants from these materials.

(c) The SWP3 must include a description of potential pollutant sources in discharges of stormwater from all areas of the construction site where construction activity, including construction support activities, will be located, and a description of controls and measures that will be implemented at those sites to minimize pollutant discharges.

(d) Permittees shall place velocity dissipation devices at discharge locations and along the length of any outfall channel (i.e., runoff conveyance) to provide a non-erosive flow velocity from the structure to a water course, so that the natural physical and biological characteristics and functions are maintained and protected.

(e) Permittees shall design and utilize appropriate controls in accordance with Part IV. of this permit to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water from the site.

(f) Permittees shall ensure that all other required controls and BMPs comply with all of the requirements of Part IV. of this general permit.

(g) For demolition of any structure with at least 10,000 square feet of floor space that was built or renovated before January 1, 1980, and the receiving waterbody is impaired for polychlorinated biphenyls (PCBs):

i. implement controls to minimize the exposure of PCB-containing building materials, including paint, caulk, and pre-1980 fluorescent lighting fixtures to precipitation and to stormwater; and

ii. ensure that disposal of such materials is performed in compliance with applicable state, federal, and local laws.

5. Documentation of Compliance with Approved State and Local Plans

   (a) Permittees must ensure that the SWP3 is consistent with requirements specified in applicable sediment and erosion site plans or site permits, or stormwater management site plans or site permits approved by federal, state, or local officials.

   (b) SWP3s must be updated as necessary to remain consistent with any changes applicable to protecting surface water resources in sediment erosion site plans or site permits, or stormwater management site plans or site permits approved by state or local official for which the permittee receives written notice.

   (c) If the permittee is required to prepare a separate management plan, including but not limited to a WPAP or Contributing Zone Plan in accordance with 30 TAC Chapter 213 (related to the Edwards Aquifer), then a copy of that plan must be either included in the SWP3 or made readily available upon request to authorized personnel of the TCEQ. The permittee shall maintain a copy of the approval letter for the plan in its SWP3.

6. Maintenance Requirements

   (a) All protective measures identified in the SWP3 must be maintained in effective operating condition. If, through inspections or other means, as soon as the permittee determines that BMPs are not operating effectively, then the permittee shall perform maintenance as necessary to maintain the continued effectiveness of stormwater controls, and prior to the next rain event if feasible. If maintenance prior to the next anticipated storm event is impracticable, the reason shall be documented in the SWP3 and maintenance must be scheduled and accomplished as soon as practicable. Erosion and sediment controls that have been intentionally disabled, run-over, removed, or otherwise rendered ineffective must be replaced or corrected immediately upon discovery.

   (b) If periodic inspections or other information indicates a control has been used incorrectly, is performing inadequately, or is damaged, then the operator shall replace or modify the control as soon as practicable after making the discovery.

   (c) Sediment must be removed from sediment traps and sedimentation ponds no later than the time that design capacity has been reduced by 50%. For perimeter controls such as silt fences, berms, etc., the trapped sediment must be removed before it reaches 50% of the above-ground height.

   (d) If sediment escapes the site, accumulations must be removed at a frequency that minimizes off-site impacts, and prior to the next rain event, if feasible. If the permittee does not own or operate the off-site conveyance, then the permittee shall work with the owner or operator of the property to remove the sediment.

7. Observation and Evaluation of Dewatering Controls Pursuant to Part IV.C. of this General Permit

   (a) Personnel provided by the permittee must observe and evaluate dewatering controls at a minimum of once per day on the days where dewatering discharges from the construction site occur. Personnel conducting these evaluations must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site. Personnel conducting these evaluations are not required to have signatory authority for reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Observations and Evaluations

i. A report summarizing the scope of any observation and evaluation must be completed within 24-hours following the evaluation. The report must also include, at a minimum, the following:

(A) date of the observations and evaluation;

(B) name(s) and title(s) of personnel making the observations and evaluation;

(C) approximate times that the dewatering discharge began and ended on the day of evaluation, or if the dewatering discharge is a continuous discharge that continues after normal business hours, indicate that the discharge is continuous (this information can be reported by personnel initiating the dewatering discharge);

(D) estimates of the rate (in gallons per day) of discharge on the day of evaluation;

(E) whether or not any indications of pollutant discharge were observed at the point of discharge (e.g., foam, oil sheen, noticeable odor, floating solids, suspended sediments, or other obvious indicators of stormwater pollution); and

(F) major observations, including: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of evaluations, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the evaluations for the permittee may be documented once in the SWP3 rather than being included in each report.

8. Inspections of All Controls

(a) Personnel provided by the permittee must inspect disturbed areas (cleared, graded, or excavated) of the construction site that do not meet the requirements of final stabilization in this general permit, all locations where stabilization measures have been implemented, areas of construction support activity covered under this permit, stormwater controls (including pollution prevention controls) for evidence of, or the potential for, the discharge of pollutants, areas where stormwater typically flows within the construction site, and points of discharge from the construction site.

i. Personnel conducting these inspections must be knowledgeable of this general permit, the construction activities at the site, and the SWP3 for the site.

ii. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128 (relating to Signatories to Reports).

(b) Requirements for Inspections

i. Inspect all stormwater controls (including sediment and erosion control measures identified in the SWP3) to ensure that they are installed properly, appear to be operational, and minimizing pollutants in discharges, as intended.

ii. Identify locations on the construction site where new or modified stormwater controls are necessary.

iii. Check for signs of visible erosion and sedimentation that can be attributed to the points of discharge where discharges leave the construction site or discharge into any surface water in the state flowing within or adjacent to the construction site.

iv. Identify any incidents of noncompliance observed during the inspection.

v. Inspect locations where vehicles enter or exit the site for evidence of off-site sediment tracking.

vi. If an inspection is performed when discharges from the construction site are occurring: identify all discharge points at the site, and observe and document the visual quality of the discharge (i.e., color, odor, floating, settled, or suspended solids, foam, oil sheen, and other such indicators of pollutants in stormwater).

vii. Complete any necessary maintenance needed, based on the results of the inspection and in accordance with the requirements listed in Part III.F.6. above.

(c) Inspection frequencies:

i. Inspections of construction sites must be conducted at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, unless as otherwise provided below in Part III.F.8.(c)ii. – v. below.

(A) If a storm event produces 0.5 inches or more of rain within a 24-hour period (including when there are multiple, smaller storms that alone produce less than 0.5 inches but together produce 0.5 inches or more in 24 hours), you are required to conduct one inspection within 24 hours of when 0.5 inches of rain or more has fallen. When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

(B) If a storm event produces 0.5 inches or more of rain within a 24-hour period on the first day of a storm and continues to produce 0.5 inches or more of rain on subsequent days, you must conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the last day of the storm that produces 0.5 inches or more of rain (i.e., only two (2) inspections would be required for such a storm event). When the 24-hour inspection time frame occurs entirely outside of normal working hours, you must conduct an inspection by no later than the end of the next business day.

ii. Inspection frequencies must be conducted at least once every month in areas of the construction site that meet final stabilization or have been temporarily stabilized.

iii. Inspection frequencies for construction sites, where runoff is unlikely due to the occurrence of frozen conditions at the site, must be conducted at least once every month until thawing conditions begin to occur (see definitions for thawing conditions in Part I.B.). The SWP3 must also contain a record of the approximate beginning and ending dates of when frozen conditions occurred at the site, which resulted in inspections being conducted monthly, while those

conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

iv. In arid, semi-arid, or drought-stricken areas, inspections must be conducted at least once every month and within 24 hours after the end of a storm event of 0.5 inches or greater. The SWP3 must also contain a record of the total rainfall measured, as well as the approximate beginning and ending dates of when drought conditions occurred at the site, which resulted in inspections being conducted monthly, while those conditions persisted, instead of at the interval of once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

v. As an alternative to the inspection schedule in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, then the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

vi. The inspection procedures described in Part III.F.8.(c)i. – v above can be performed at the frequencies and under the applicable conditions indicated for each schedule option, provided that the SWP3 reflects the current schedule and that any changes to the schedule are made in accordance with the following provisions: the inspection frequency schedule can only be changed a maximum of once per calendar month and implemented within the first five (5) business days of a calendar month; and the reason for the schedule change documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(d) Utility line installation, pipeline construction, and other examples of long, narrow, linear construction activities may provide inspection personnel with limited access to the areas described in Part III.F.8.(a) above.

i. Inspection of linear construction sites could require the use of vehicles that could compromise areas of temporary or permanent stabilization, cause additional disturbance of soils, and result in the increase the potential for erosion. In these circumstances, controls must be inspected at least once every fourteen (14) calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater, but representative inspections may be performed.

ii. For representative inspections, personnel must inspect controls along the construction site for 0.25 mile above and below each access point where a roadway, undisturbed right-of-way, or other similar feature intersects the construction site and allows access to the areas described in Part III.F.8.(a) above. The conditions of the controls along each inspected 0.25-mile portion may be considered as representative of the condition of controls along that reach extending from the end of the 0.25-mile portion to either the end of the next 0.25-mile inspected portion, or to the end of the project, whichever occurs first.

As an alternative to the inspection schedule described in Part III.F.8.(c)i. above, the SWP3 may be developed to require that these inspections will occur at least once every seven (7) calendar days. If this alternative schedule is developed, the inspection must occur regardless of whether or not there has been a rainfall event since the previous inspection.

iii. the SWP3 for a linear construction site must reflect the current inspection schedule. Any changes to the inspection schedule must be made in accordance with the following provisions:

(A) the schedule may be changed a maximum of one time each month;

(B) the schedule change must be implemented at the beginning of a calendar month, and

(C) the reason for the schedule change must be documented in the SWP3 (e.g., end of "dry" season and beginning of "wet" season).

(e) Adverse Conditions.

Requirements for inspections may be temporarily suspended for adverse conditions. Adverse conditions are conditions that are either dangerous to personnel (e.g., high wind, excessive lightning) or conditions that prohibit access to the site (e.g., flooding, freezing conditions). Adverse conditions that result in the temporary suspension of a permit requirement to inspect must be documented and included as part of the SWP3. Documentation must include:

i. the date and time of the adverse condition,

ii. names of personnel that witnessed the adverse condition, and

iii. a narrative for the nature of the adverse condition.

(f) In the event of flooding or other adverse conditions which prohibit access to the inspection sites, inspections must be conducted as soon as access is practicable. Inspection Reports.

i. A report summarizing the scope of any inspection must be completed within 24-hours following the inspection. The report must also include the date(s) of the inspection and major observations relating to the implementation of the SWP3. Major observations in the report must include: the locations of where erosion and discharges of sediment or other pollutants from the site have occurred; locations of BMPs that need to be maintained; locations of BMPs that failed to operate as designed or proved inadequate for a particular location; and locations where additional BMPs are needed.

ii. Actions taken as a result of inspections, including the date(s) of actions taken, must be described within, and retained as a part of, the SWP3. Reports must identify any incidents of non-compliance. Where a report does not identify any incidents of non-compliance, the report must contain a certification that the facility or site is in compliance with the SWP3 and this permit. The report must be retained as part of the SWP3 and signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

iii. The names and qualifications of personnel making the inspections for the permittee may be documented once in the SWP3 rather than being included in each report.

(g) The SWP3 must be modified based on the results of inspections, as necessary, to better control pollutants in runoff. Revisions to the SWP3 must be completed within seven (7) calendar days following the inspection. If existing BMPs are modified or if additional BMPs are necessary, an implementation schedule must be described in the SWP3 and wherever possible those changes implemented before the next storm event. If implementation before the next anticipated storm event is impracticable, these changes must be implemented as soon as practicable. If necessary, modify your site map to reflect changes to your stormwater controls that are no longer accurately reflected on the current site map.

9. The SWP3 must identify and ensure the implementation of appropriate pollution prevention measures for all eligible non-stormwater components of the discharge, as listed in Part II.A.3. of this permit.

10. The SWP3 must include the information required in Part III.B. of this general permit.

11. The SWP3 must include pollution prevention procedures that comply with Part IV.D. of this general permit.

Part IV. Erosion and Sediment Control Requirements Applicable to All Sites

Except as provided in 40 CFR §§ 125.30-125.32, any discharge regulated under this general permit, with the exception of sites that obtained waivers based on low rainfall erosivity, must achieve, at a minimum, the following effluent limitations representing the degree of effluent reduction attainable by application of the best practicable control technology currently available (BPT). The BPT are also required by and must satisfy the Effluent Limitations Guideline (ELG) permitting requirement for application of 40 CFR § 450.24 New Source Performance Standards (NSPS), 40 CFR § 450.22 Best Available Technology Economically Achievable (BAT), and 40 CFR § 450.23 Best Conventional Pollutant Control Technology (BCT).

Section A. Erosion and Sediment Controls

Design, install, and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed, and maintained to:

1. control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges;
2. control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge point(s);
3. minimize the amount of soil exposed during construction activity;
4. minimize the disturbance of steep slopes;
5. minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
6. provide and maintain appropriate natural buffers around surface water in the state. Direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible. If providing buffers is infeasible, the permittee shall document the reason that natural buffers are infeasible and shall implement additional erosion and sediment controls to reduce sediment load;
7. preserve native topsoil at the site, unless the intended function of a specific area of the site dictates that the topsoil be disturbed or removed, or it is infeasible; and
8. minimize soil compaction. In areas of the construction site where final vegetative stabilization will occur or where infiltration practices will be installed, either:
   (a) restrict vehicle and equipment use to avoid soil compaction; or
   (b) prior to seeding or planting areas of exposed soil that have been compacted, use techniques that condition the soils to support vegetative growth, if necessary and feasible.

   Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted.
9. TCEQ does not consider stormwater control features (e.g., stormwater conveyance channels, storm drain inlets, sediment basins) to constitute “surface water” for the purposes of triggering the buffer requirement in Part IV.A.(6) above.

Section B. Soil Stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days. In the context of this requirement, "immediately" means as soon as practicable, but no later than the end of the next workday, following the day when the earth-disturbing activities have temporarily or permanently ceased. Temporary stabilization must be completed no more than fourteen (14) calendar days after initiation of soil stabilization measures, and final stabilization must be achieved prior to termination of permit coverage. In arid, semi-arid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative non-vegetative stabilization measures must be employed as soon as practicable. Refer to Part III.F.2.(b) for complete erosion control and stabilization practice requirements. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

Section C. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited, unless managed by appropriate controls to address sediment and prevent erosion. Operators must observe and evaluate the dewatering controls once per day while the dewatering discharge occurs as described in Part III.F.7. of this general permit.

Section D. Pollution Prevention Measures

Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented, and maintained to:

1. minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
2. minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials present on the site to precipitation and to stormwater;
3. minimize the exposure of waste materials by closing waste container lids at the end of the workday and during storm events. For waste containers that do not have lids, where the container itself is not sufficiently secure enough to prevent the discharge of pollutants absent a cover and could leak, the permittee must provide either a cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, stormwater, and wind, or a similarly effective means designed to minimize the discharge of pollutants (e.g., secondary containment). Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use);
4. minimize exposure of wastes by implementing good housekeeping measures. Wastes must be cleaned up and disposed of in designated waste containers on days of operation at the site. Wastes must be cleaned up immediately if containers overflow;

5. minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR Part 110, 40 CFR Part 117, or 40 CFR Part 302 occurs during a 24-hour period, you must notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as you have knowledge of the release. You must also, within seven (7) calendar days of knowledge of the release, provide a description of the release, the circumstances leading to the release, and the date of the release; and
6. minimize exposure of sanitary waste by positioning portable toilets so that they are secure and will not be tipped or knocked over, and so that they are located away from surface water in the state and stormwater inlets or conveyances.

Section E. Prohibited Discharges

The following discharges are prohibited:

1. wastewater from wash out of concrete, unless managed by an appropriate control;
2. wastewater from wash out and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;
3. fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
4. soaps or solvents used in vehicle and equipment washing; and
5. toxic or hazardous substances from a spill or other release.

Section F. Surface Outlets

When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible. If infeasible, the permittee must provide documentation in the SWP3 to support the determination, including the specific conditions or time periods when this exception will apply.

Part V. Stormwater Runoff from Concrete Batch Plants

Discharges of stormwater runoff from concrete batch plants present at regulated construction sites and operated as a construction support activity may be authorized under the provisions of this general permit, provided that the following requirements are met for concrete batch plant(s) authorized under this permit. Only the discharges of stormwater runoff and non-stormwater from concrete batch plants that meet the requirements of a construction support activity can be authorized under this permit (see the requirements for "Non-Stormwater Discharges" in Part II.A.3. and "Discharges of Stormwater Associated with Construction Support Activity" in Part II.A.2.).

If discharges of stormwater runoff or non-stormwater from concrete batch plants are not authorized under this general permit, then discharges must be authorized under an alternative general permit or individual permit [see the requirement in Part II.A.2.(c)].

This permit does not authorize the discharge or land disposal of any wastewater from concrete batch plants at regulated construction sites. Authorization for these wastes must be obtained under an individual permit or an alternative general permit.

Section A. Benchmark Sampling Requirements

1. Operators of concrete batch plants authorized under this general permit shall sample the stormwater runoff from the concrete batch plants according to the requirements of this section of this general permit, and must conduct evaluations on the effectiveness of the SWP3 based on the following benchmark monitoring values:

Table 1. Benchmark Parameters

Benchmark Parameter	Benchmark Value	Sampling Frequency	Sample Type
Oil and Grease (*1)	15 mg/L	1/quarter (*2) (*3)	Grab (*4)
Total Suspended Solids (*1)	50 mg/L	1/quarter (*2) (*3)	Grab (*4)
pH	6.0 – 9.0 Standard Units	1/quarter (*2) (*3)	Grab (*4)
Total Iron (*1)	1.3 mg/L	1/quarter (*2) (*3)	Grab (*4)

(*1) All analytical results for these parameters must be obtained from a laboratory that is accredited based on rules located in 30 TAC § 25.4 (a) or through the National Environmental Laboratory Accreditation Program (NELAP). Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

(*2) When discharge occurs. Sampling is required within the first 30 minutes of discharge. If it is not practicable to take the sample, or to complete the sampling, within the first 30 minutes, sampling must be completed within the first hour of discharge. If sampling is not completed within the first 30 minutes of discharge, the reason must be documented and attached to all required reports and records of the sampling activity.

(*3) Sampling must be conducted at least once during each of the following periods. The first sample must be collected during the first full quarter that a stormwater discharge occurs from a concrete batch plant authorized under this general permit.

January through March
April through June
July through September
October through December

For projects lasting less than one full quarter, a minimum of one sample shall be collected, provided that a stormwater discharge occurred at least once following submission of the NOI or following the date that automatic authorization was obtained under Part II.E.2., and prior to terminating coverage.

(*4) A grab sample shall be collected from the stormwater discharge resulting from a storm event that is at least 0.1 inches of measured precipitation that occurs at least 72 hours from the previously measurable storm event. The sample shall be collected downstream of the concrete batch plant, and where the discharge exits any BMPs utilized to handle the runoff from the batch plant, prior to commingling with any other water authorized under this general permit.

2. The permittee must compare the results of sample analyses to the benchmark values above, and must include this comparison in the overall assessment of the SWP3's effectiveness. Analytical results that exceed a benchmark value are not a violation of this permit, as these values are not numeric effluent limitations. Results of analyses are indicators that modifications of the SWP3 should be assessed and may be necessary to protect water quality. The operator must investigate the cause for each exceedance and must document the results of this investigation in the SWP3 by the end of the quarter following the sampling event.

   The operator's investigation must identify the following:

   (a) any additional potential sources of pollution, such as spills that might have occurred;

   (b) necessary revisions to good housekeeping measures that are part of the SWP3;

   (c) additional BMPs, including a schedule to install or implement the BMPs; and

   (d) other parts of the SWP3 that may require revisions in order to meet the goal of the benchmark values.

   Background concentrations of specific pollutants may also be considered during the investigation. If the operator is able to relate the cause of the exceedance to background concentrations, then subsequent exceedances of benchmark values for that pollutant may be resolved by referencing earlier findings in the SWP3. Background concentrations may be identified by laboratory analyses of samples of stormwater run-on to the permitted facility, by laboratory analyses of samples of stormwater run-off from adjacent non-industrial areas, or by identifying the pollutant is a naturally occurring material in soils at the site.

Section B. Best Management Practices (BMPs) and SWP3 Requirements

Minimum SWP3 Requirements – The following are required in addition to other SWP3 requirements listed in this general permit, which include, but are not limited to the applicable requirements located in Part III.F.8. of this general permit, as follows:

1. Description of Potential Pollutant Sources – The SWP3 must provide a description of potential sources (activities and materials) that can cause, have a reasonable potential to cause or contribute to a violation of water quality standards or have been found to cause, or contribute to, the loss of a designated use of surface water in the state in stormwater discharges associated with concrete batch plants authorized under this permit. The SWP3 must describe the implementation of practices that will be used to minimize to the extent practicable the discharge of pollutants in stormwater discharges associated with industrial activity and non-stormwater discharges (described in Part II.A.3. of this general permit), in compliance with the terms and conditions of this general permit, including the protection of water quality, and must ensure the implementation of these practices.

   The following must be developed, at a minimum, in support of developing this description:

   (a) Drainage – The site map must include the following information:

      i. the location of all outfalls for stormwater discharges associated with concrete batch plants that are authorized under this permit;

      ii. a depiction of the drainage area and the direction of flow to the outfall(s);

      iii. structural controls used within the drainage area(s);

iv. the locations of the following areas associated with concrete batch plants that are exposed to precipitation: vehicle and equipment maintenance activities (including fueling, repair, and storage areas for vehicles and equipment scheduled for maintenance); areas used for the treatment, storage, or disposal of wastes; liquid storage tanks; material processing and storage areas; and loading and unloading areas; and

v. the locations of the following: any bag house or other dust control device(s); recycle/sedimentation pond, clarifier or other device used for the treatment of facility wastewater (including the areas that drain to the treatment device); areas with significant materials; and areas where major spills or leaks have occurred.

(b) Inventory of Exposed Materials – A list of materials handled at the concrete batch plant that may be exposed to stormwater and precipitation and that have a potential to affect the quality of stormwater discharges associated with concrete batch plants that are authorized under this general permit.

(c) Spills and Leaks – A list of significant spills and leaks of toxic or hazardous pollutants that occurred in areas exposed to stormwater and precipitation and that drain to stormwater outfalls associated with concrete batch plants authorized under this general permit must be developed, maintained, and updated as needed.

(d) Sampling Data – A summary of existing stormwater discharge sampling data must be maintained, if available.

2. Measures and Controls – The SWP3 must include a description of management controls to regulate pollutants identified in the SWP3's "Description of Potential Pollutant Sources" from Part V.B.1. of this permit, and a schedule for implementation of the measures and controls. This must include, at a minimum:

(a) Good Housekeeping – Good housekeeping measures must be developed and implemented in the area(s) associated with concrete batch plants.

i. Operators must prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), settled dust, or other significant materials from paved portions of the site that are exposed to stormwater. Measures used to minimize the presence of these materials may include regular sweeping or other equivalent practices. These practices must be conducted at a frequency that is determined based on consideration of the amount of industrial activity occurring in the area and frequency of precipitation, and shall occur at least once per week when cement or aggregate is being handled or otherwise processed in the area.

ii. Operators must prevent the exposure of fine granular solids, such as cement, to stormwater. Where practicable, these materials must be stored in enclosed silos, hoppers or buildings, in covered areas, or under covering.

(b) Spill Prevention and Response Procedures – Areas where potential spills that can contribute pollutants to stormwater runoff and precipitation, and the drainage areas from these locations, must be identified in the SWP3. Where appropriate, the SWP3 must specify material handling procedures, storage requirements, and use of equipment. Procedures for cleaning up spills must be identified in the SWP3 and made available to the appropriate personnel.

(c) Inspections – Qualified facility personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) must be identified to inspect designated equipment and areas of the facility specified in the SWP3. Personnel conducting these inspections are not required to have signatory authority for inspection reports under 30 TAC § 305.128. Inspections of facilities in operation must be performed

once every seven (7) days. Inspections of facilities that are not in operation must be performed at a minimum of once per month. The current inspection frequency being implemented at the facility must be recorded in the SWP3. The inspection must take place while the facility is in operation and must, at a minimum, include all areas that are exposed to stormwater at the site, including material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down and equipment cleaning areas. Follow-up procedures must be used to ensure that appropriate actions are taken in response to the inspections. Records of inspections must be maintained and be made readily available for inspection upon request.

(d) Employee Training – An employee training program must be developed to educate personnel responsible for implementing any component of the SWP3, or personnel otherwise responsible for stormwater pollution prevention, with the provisions of the SWP3. The frequency of training must be documented in the SWP3, and at a minimum, must consist of one (1) training prior to the initiation of operation of the concrete batch plant.

(e) Record Keeping and Internal Reporting Procedures – A description of spills and similar incidents, plus additional information that is obtained regarding the quality and quantity of stormwater discharges, must be included in the SWP3. Inspection and maintenance activities must be documented and records of those inspection and maintenance activities must be incorporated in the SWP3.

(f) Management of Runoff – The SWP3 shall contain a narrative consideration for reducing the volume of runoff from concrete batch plants by diverting runoff or otherwise managing runoff, including use of infiltration, detention ponds, retention ponds, or reusing of runoff.

3. Comprehensive Compliance Evaluation – At least once per year, one or more qualified personnel (i.e., a person or persons with knowledge of this general permit, the concrete batch plant, and the SWP3 related to the concrete batch plant(s) for the site) shall conduct a compliance evaluation of the plant. The evaluation must include the following:

(a) visual examination of all areas draining stormwater associated with regulated concrete batch plants for evidence of, or the potential for, pollutants entering the drainage system. These include, but are not limited to: cleaning areas, material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, and truck wash down and equipment cleaning areas. Measures implemented to reduce pollutants in runoff (including structural controls and implementation of management practices) must be evaluated to determine if they are effective and if they are implemented in accordance with the terms of this permit and with the permittee's SWP3. The operator shall conduct a visual inspection of equipment needed to implement the SWP3, such as spill response equipment.

(b) based on the results of the evaluation, the following must be revised as appropriate within two (2) weeks of the evaluation: the description of potential pollutant sources identified in the SWP3 (as required in Part V.B.1., "Description of Potential Pollutant Sources"); and pollution prevention measures and controls identified in the SWP3 (as required in Part V.B.2., "Measures and Controls"). The revisions may include a schedule for implementing the necessary changes.

(c) the permittee shall prepare and include in the SWP3 a report summarizing the scope of the evaluation, the personnel making the evaluation, the date(s) of the evaluation, major observations relating to the implementation of the SWP3, and actions taken in response to the findings of the evaluation. The report must identify any incidents of noncompliance. Where the report does not identify incidences of noncompliance, the report must contain a statement that the evaluation did not identify any

incidence(s), and the report must be signed according to 30 TAC § 305.128 (relating to Signatories to Reports).

(d) the Comprehensive Compliance Evaluation may substitute for one of the required inspections delineated in Part V.B.2.(c) of this general permit.

Section C. Prohibition of Wastewater Discharges

Wastewater discharges associated with concrete production including wastewater disposal by land application are not authorized under this general permit. These wastewater discharges must be authorized under an alternative TCEQ water quality permit or otherwise disposed of in an authorized manner. Discharges of concrete truck wash out at construction sites may be authorized if conducted in accordance with the requirements of Part VI of this general permit.

Part VI. Concrete Truck Wash Out Requirements

This general permit authorizes the land disposal of wash out from concrete trucks at construction sites regulated under this general permit, provided the following requirements are met. Any discharge of concrete production wastewater to surface water in the state must be authorized under a separate TCEQ general permit or individual permit.

A. Discharge of concrete truck wash out water to surface water in the state, including discharge to storm sewers, is prohibited by this general permit.

B. Concrete truck wash out water shall be disposed in areas at the construction site where structural controls have been established to prevent discharge to surface water in the state, or to areas that have a minimal slope that allow infiltration and filtering of wash out water to prevent discharge to surface water in the state. Structural controls may consist of temporary berms, temporary shallow pits, temporary storage tanks with slow rate release, or other reasonable measures to prevent runoff from the construction site.

C. Wash out of concrete trucks during rainfall events shall be minimized. The discharge of concrete truck wash out water is prohibited at all times, and the operator shall insure that its BMPs are sufficient to prevent the discharge of concrete truck wash out as the result of rainfall or stormwater runoff.

D. The disposal of wash out water from concrete trucks, made under authorization of this general permit must not cause or contribute to groundwater contamination.

E. If a SWP3 is required to be implemented, the SWP3 shall include concrete wash out areas on the associated site map.

Part VII. Retention of Records

The permittee must retain the following records for a minimum period of three (3) years from the date that a NOT is submitted as required in Part II.F.1. and 2. of this permit. For activities in which an NOT is not required, records shall be retained for a minimum period of three (3) years from the date that the operator terminates coverage under Section II.F.3. of this permit. Records include:

A. a copy of the SWP3;

B. all reports and actions required by this permit, including a copy of the TCEQ construction site notice;

C. all data used to complete the NOI, if an NOI is required for coverage under this general permit; and

D. all records of submittal of forms submitted to the operator of any MS4 receiving the discharge and to the secondary operator of a large construction site, if applicable.

Part VIII. Standard Permit Conditions

A. The permittee has a duty to comply with all permit conditions. Failure to comply with any permit condition is a violation of the permit and statutes under which it was issued (CWA and TWC), and is grounds for enforcement action, for terminating, revoking and reissuance, or modification, or denying coverage under this general permit, or for requiring a discharger to apply for and obtain an individual TPDES permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (a).

B. Authorization under this general permit may be modified, suspended, revoked and reissued, terminated or otherwise suspended for cause, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41(f). Filing a notice of planned changes or anticipated non-compliance by the permittee does not stay any permit condition. The permittee must furnish to the executive director, upon request and within a reasonable time, any information necessary for the executive director to determine whether cause exists for modifying, revoking and reissuing, terminating or, otherwise suspending authorization under this permit, based on rules located in TWC § 23.086, 30 TAC § 305.66, and 40 CFR § 122.41 (h). Additionally, the permittee must provide to the executive director, upon request, copies of all records that the permittee is required to maintain as a condition of this general permit.

C. It is not a defense for a discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the permit conditions.

D. Inspection and entry shall be allowed under TWC Chapters 26-28, Texas Health and Safety Code §§ 361.032-361.033 and 361.037, and 40 CFR § 122.41(i). The statement in TWC § 26.014 that commission entry of a facility shall occur according to an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the facility or site, but merely describes the commission's duty to observe appropriate rules and regulations during an inspection.

E. The discharger is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including but not limited to the following:

1. negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under CWA § 402, or any requirement imposed in a pretreatment program approved under CWA §§ 402(a)(3) or 402(b)(8);
2. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under a permit, including monitoring reports or reports of compliance or noncompliance; and
3. knowingly violating CWA §303 and placing another person in imminent danger of death or serious bodily injury.

F. All reports and other information requested by the executive director must be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

G. Authorization under this general permit does not convey property or water rights of any sort and does not grant any exclusive privilege.

H. The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

I. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

J. The permittee shall comply with the monitoring and reporting requirements in 40 CFR § 122.41(j) and (l), as applicable.

K. Analysis must be performed using sufficiently sensitive methods for analysis that comply with the rules located in 40 CFR §§ 136.1(c) and 122.44(i)(1)(iv).

Part IX. Fees

A. A fee of must be submitted along with the NOI:

1. $225 if submitting an NOI electronically, or
2. $325 if submitting a paper NOI.

B. Fees are due upon submission of the NOI. An NOI will not be declared administratively complete unless the associated fee has been paid in full.

C. No separate annual fees will be assessed for this general permit. The Water Quality Annual Fee has been incorporated into the NOI fees as described above.

Appendix A: Automatic Authorization

Periods of Low Erosion Potential by County – Eligible Date Ranges

Andrews: Nov. 15 - Apr. 30

Archer: Dec. 15 - Feb. 14

Armstrong: Nov. 15 - Apr. 30

Bailey: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Baylor: Dec. 15 - Feb. 14

Borden: Nov. 15 - Apr. 30

Brewster: Nov. 15 - Apr. 30

Briscoe: Nov. 15 - Apr. 30

Brown: Dec. 15 - Feb. 14

Callahan: Dec. 15 - Feb. 14

Carson: Nov. 15 - Apr. 30

Castro: Nov. 15 - Apr. 30

Childress: Dec. 15 - Feb. 14

Cochran: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Coke: Dec. 15 - Feb. 14

Coleman: Dec. 15 - Feb. 14

Collingsworth: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Concho: Dec. 15 - Feb. 14

Cottle: Dec. 15 - Feb. 14

Crane: Nov. 15 - Apr. 30

Crockett: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Crosby: Nov. 15 - Apr. 30

Culberson: Nov. 1 - May 14

Dallam: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Dawson: Nov. 15 - Apr. 30

Deaf Smith: Nov. 15 - Apr. 30

Dickens: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Dimmit: Dec. 15 - Feb. 14

Donley: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28

Eastland: Dec. 15 - Feb. 14

Ector: Nov. 15 - Apr. 30

Edwards: Dec. 15 - Feb. 14

El Paso: Jan. 1 - Jul. 14, or May 15 - Jul. 31, or Jun. 1 - Aug. 14, or Jun. 15 - Sept. 14, or Jul. 1 - Oct. 14, or Jul. 15 - Oct. 31, or Aug. 1 - Apr. 30, or Aug. 15 - May 14, or Sept. 1 - May 30, or Oct. 1 - Jun. 14, or Nov. 1 - Jun. 30, or Nov. 15 - Jul. 14

Fisher: Dec. 15 - Feb. 14

Floyd: Nov. 15 - Apr. 30

Foard: Dec. 15 - Feb. 14

Gaines: Nov. 15 - Apr. 30

Garza: Nov. 15 - Apr. 30

Glasscock: Nov. 15 - Apr. 30

Hale: Nov. 15 - Apr. 30

Hall: Feb. 1 - Mar. 30

Hansford: Nov. 15 - Apr. 30

Hardeman: Dec. 15 - Feb. 14

Hartley: Nov. 15 - Apr. 30

Haskell: Dec. 15 - Feb. 14

Hockley: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Howard: Nov. 15 - Apr. 30

Hudspeth: Nov. 1 - May 14

Hutchinson: Nov. 15 - Apr. 30

Irion: Dec. 15 - Feb. 14

Jeff Davis: Nov. 1 - Apr. 30 or Nov. 15 - May 14

Jones: Dec. 15 - Feb. 14

Kent: Nov. 15 - Jan. 14 or Feb. 1 - Mar. 30

Kerr: Dec. 15 - Feb. 14

Kimble: Dec. 15 - Feb. 14

King: Dec. 15 - Feb. 14

Kinney: Dec. 15 - Feb. 14

Knox: Dec. 15 - Feb. 14

Lamb: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30

Loving: Nov. 1 - Apr. 30, or Nov. 15 - May 14

Lubbock: Nov. 15 - Apr. 30

Lynn: Nov. 15 - Apr. 30

Martin: Nov. 15 - Apr. 30

Mason: Dec. 15 - Feb. 14

Maverick: Dec. 15 - Feb. 14

McCulloch: Dec. 15 - Feb. 14

Menard: Dec. 15 - Feb. 14

Midland: Nov. 15 - Apr. 30

Mitchell: Nov. 15 - Apr. 30

Moore: Nov. 15 - Apr. 30

Motley: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30

Nolan: Dec. 15 - Feb. 14

Oldham: Nov. 15 - Apr. 30

Parmer: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Pecos: Nov. 15 - Apr. 30
Potter: Nov. 15 - Apr. 30
Presidio: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Randall: Nov. 15 - Apr. 30
Reagan: Nov. 15 - Apr. 30
Real: Dec. 15 - Feb. 14
Reeves: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Runnels: Dec. 15 - Feb. 14
Schleicher: Dec. 15 - Feb. 14
Scurry: Nov. 15 - Apr. 30
Shackelford: Dec. 15 - Feb. 14
Sherman: Nov. 15 - Apr. 30
Stephens: Dec. 15 - Feb. 14
Sterling: Nov. 15 - Apr. 30
Stonewall: Dec. 15 - Feb. 14
Sutton: Dec. 15 - Feb. 14
Swisher: Nov. 15 - Apr. 30
Taylor: Dec. 15 - Feb. 14
Terrell: Nov. 15 - Apr. 30
Terry: Nov. 15 - Apr. 30
Throckmorton: Dec. 15 - Feb. 14
Tom Green: Dec. 15 - Feb. 14
Upton: Nov. 15 - Apr. 30
Uvalde: Dec. 15 - Feb. 14
Val Verde: Nov. 15 - Jan. 14, or Feb. 1 - Mar. 30
Ward: Nov. 1 - Apr. 14, or Nov. 15 - Apr. 30
Wichita: Dec. 15 - Feb. 14
Wilbarger: Dec. 15 - Feb. 14
Winkler: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Yoakum: Nov. 1 - Apr. 30, or Nov. 15 - May 14
Young: Dec. 15 - Feb. 14
Wheeler: Jan. 1 - Mar. 30, or Dec. 1 - Feb. 28
Zavala: Dec. 15 - Feb. 14

Appendix B: Storm Erosivity (EI) Zones in Texas

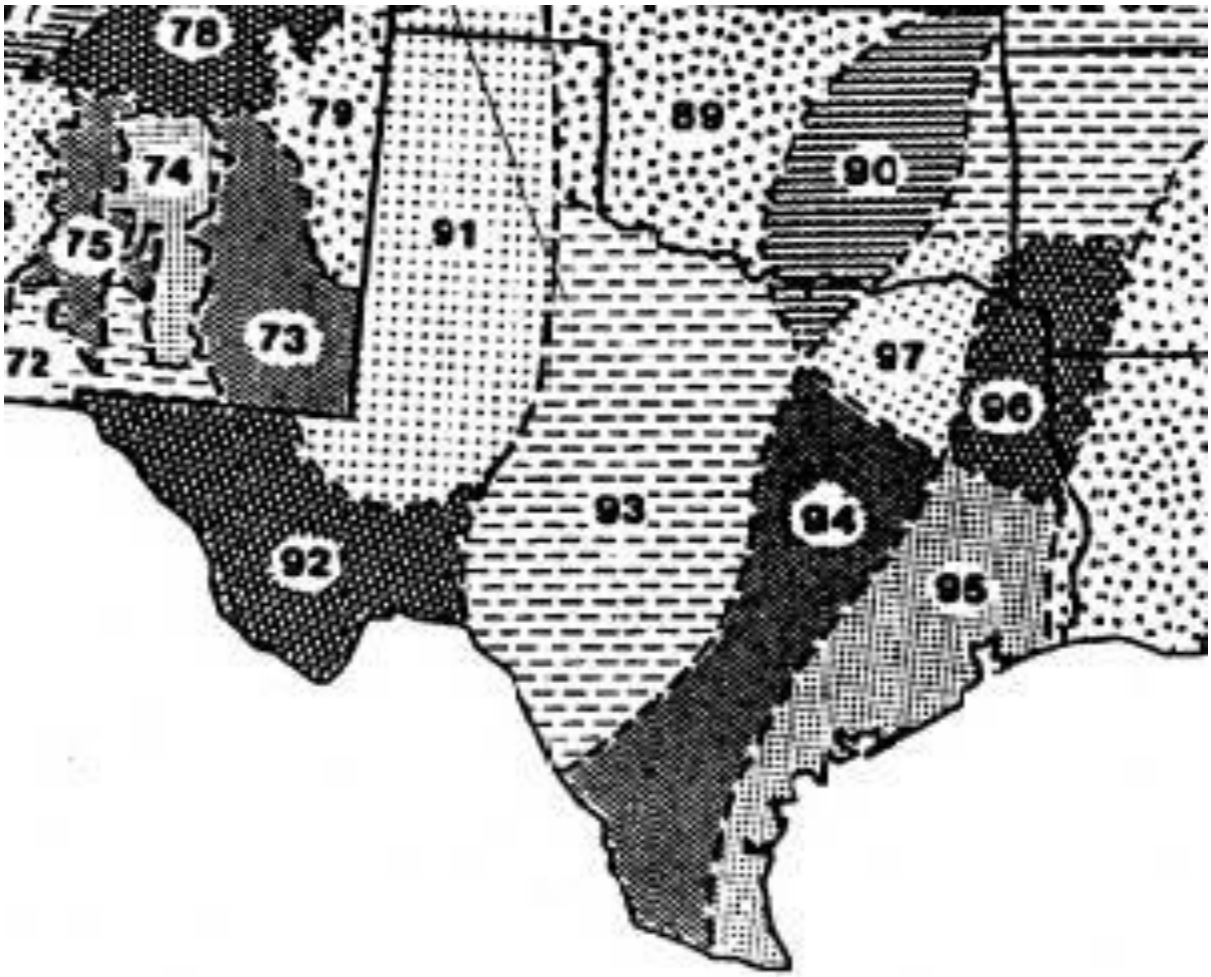


Figure B. EI Distribution Zones

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix C: Isoerodent Map

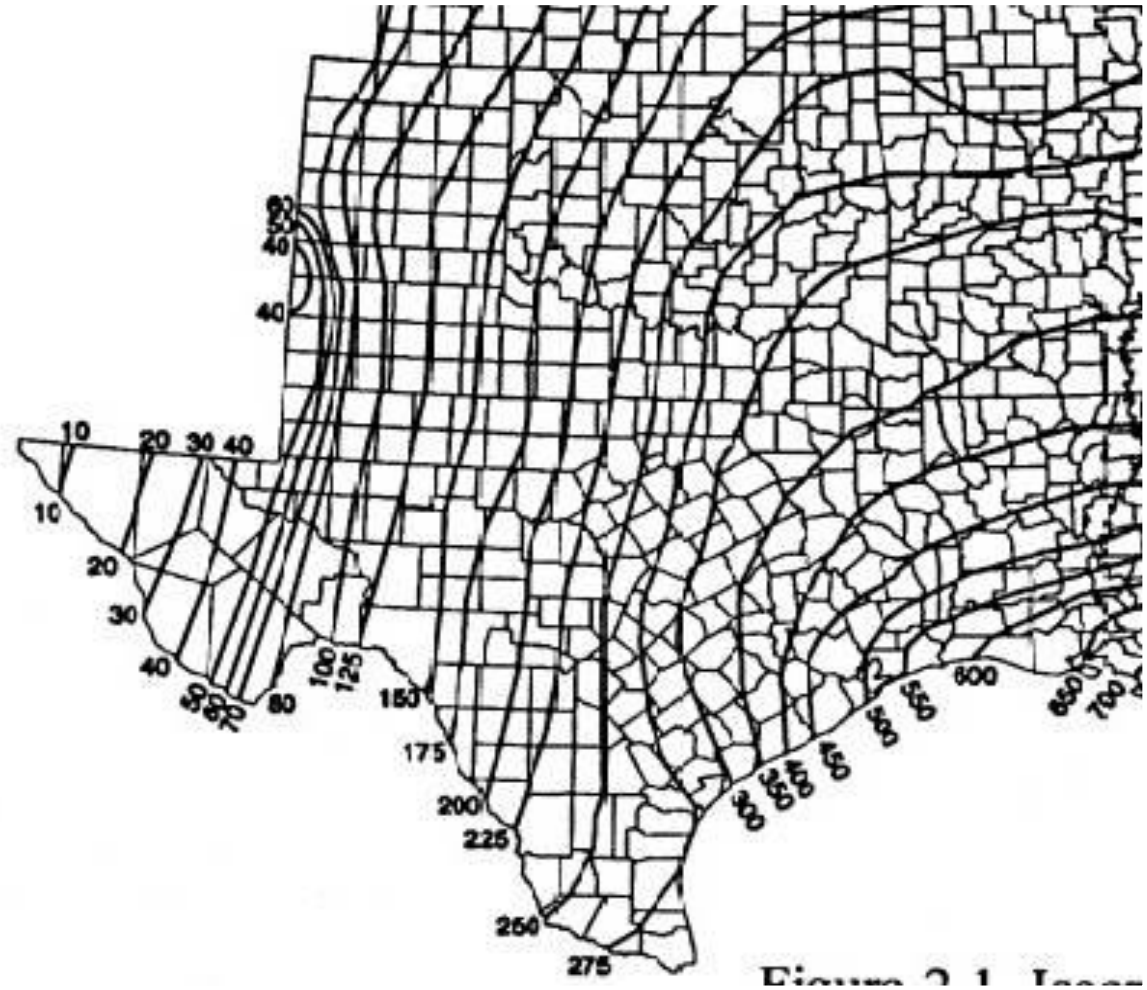


Figure C. Isoerodent Map of Texas. Units are hundreds ft*tonf*in(ac*h*yr)$^{-1}$

Adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service

Appendix D: Erosivity Indices for EI Zones in Texas

Table D. EI as percentage of average annual computed selected geographic areas (EI number) by date period (month/day).

Date Periods* (Month/Day)

EI #	1/1	1/16	1/31	2/15	3/1	3/16	3/31	4/15	4/30	5/15	5/30	6/14	6/29	7/14	7/29	8/13	8/28	9/12	9/27	10/12	10/27	11/11	11/26	12/11	12/31
89	0	1	1	2	3	4	7	2	8	27	38	48	55	62	69	76	83	90	94	97	98	99	100	100	100
90	0	1	2	3	4	6	8	13	21	29	37	46	54	60	65	69	74	81	87	92	95	97	98	99	100
91	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
92	0	0	0	0	1	1	1	2	6	16	29	39	46	53	60	67	74	81	88	95	99	99	100	100	100
93	0	1	1	2	3	4	6	8	13	25	40	49	56	62	67	72	76	80	85	91	97	98	99	99	100
94	0	1	2	4	6	8	10	15	21	29	38	47	53	57	61	65	70	76	83	88	91	94	96	98	100
95	0	1	3	5	7	9	11	14	18	27	35	41	46	51	57	62	68	73	79	84	89	93	96	98	100
96	0	2	4	6	9	12	17	23	30	37	43	49	54	58	62	66	70	74	78	82	86	90	94	97	100
97	0	1	3	5	7	10	14	20	28	37	48	56	61	64	68	72	77	81	86	89	92	95	98	99	100
106	0	3	6	9	13	17	21	27	33	38	44	49	55	61	67	71	75	78	81	84	86	90	94	97	100

*Each period begins on the date listed in the table above and lasts until the day before the following period. The final period begins on December 11 and ends on December 31.

Table adapted from Chapter 2 of USDA Agriculture Handbook 703: "Predicting Soil Erosion by Water: A Guide to Conservation Planning With the Revised Universal Soil Loss Equation (RUSLE)," U.S. Department of Agriculture, Agricultural Research Service.

Texas Commission on Environmental Quality

P.O. Box 13087 Austin, Texas 78711-3087

GENERAL PERMIT TO DISCHARGE UNDER THE

TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM

under provisions of Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

This permit supersedes and replaces
TPDES General Permit No. TXR050000, issued August 14, 2016.

Facilities that discharge stormwater associated with industrial activity

located in the state of Texas

may discharge to surface water in the state

only according to effluent limitations, monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the Commission of the TCEQ (Commission). The issuance of this general permit does not grant to the permittee(s) the right to use private or public property for conveyance of wastewater along the discharge route. This includes property belonging to but not limited to any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee(s) to acquire property rights as may be necessary to use the discharge route.

This permit and the authorization contained herein shall expire at midnight, five years from the permit effective date.

EFFECTIVE DATE: August 14, 2021

ISSUED DATE: July 16, 2021

Digitally signed by Jon Niermann
Date: 2021.07.16 10:00:54 -05'00'

For the Commission

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Part I. DEFINITIONS

All definitions in the Texas Water Code (TWC) §26.001 and Title 30 Texas Administrative Code (TAC) Chapter 305 apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

Arid Areas. Areas with an average annual rainfall of less than ten (10) inches.

Benchmark. A benchmark pollutant concentration is a guidance level indicator that helps determine the effectiveness of chosen best management practices (BMPs). This type of monitoring differs from "compliance monitoring" in that exceedances of the indicator or benchmark level are not permit violations, but rather indicators that can help identify problems at the site with exposed or unidentified pollutant sources; or control measures that are either not working correctly, whose effectiveness need to be re-considered, or who need to be supplemented with additional BMP(s).

Best Management Practices (BMPs). Schedules of activities, prohibitions of practices, maintenance procedures, and other techniques to control, prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spills or leaks, sludge or waste disposal, or drainage from raw material storage areas.

Co-located Industrial Activities. Industrial activities conducted at a facility that are described by two or more SIC codes listed in this general permit.

Co-located Industrial Facilities. Industrial facilities, having different operators, that are located on a common property or adjoining property and that conduct industrial activities described by one or more sectors of this general permit.

Composite Sample. A sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9 (b).

Construction Activity. Includes soil disturbance activities, including clearing, grading, and excavating; and does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g., the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

- **Small Construction Activity** is construction activity that results in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land.
- **Large Construction Activity** is construction activity that results in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land.

Control Measure. Any BMP, including structural and non-structural controls, or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to water in the state.

Daily Average Concentration. The arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements. When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month must be used as the daily average concentration.

Daily Maximum Concentration. The maximum concentration measured on a single day, as determined by laboratory analysis of a grab sample or a composite sample.

Diffuse Point Source. A conveyance from which pollutants are or may be discharged that results from grading land for the purpose of adding parking lots, roads, and buildings so as to collect and convey stormwater off-site to prevent flooding (i.e. without a single point of origin or not introduced into a receiving stream from a specific outlet). Diffuse point sources include any identifiable conveyance from which pollutants might enter surface water in the state. By changing the surface or establishing grading patterns of the land, runoff is conveyed along the resulting drainage or grading patterns. A diffuse point source is not true sheet flow.

Discharge. For the purpose of this permit, the drainage, release, or disposal of stormwater associated with industrial activity and certain allowable non-stormwater sources listed in this general permit to surface water in the state.

Drought. For the purpose of this permit, an extended period of no precipitation in which a stormwater discharge does not occur during a monitoring or reporting period.

Edwards Aquifer. As defined under 30 TAC §213.3 (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone. Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the TCEQ and the appropriate underground water conservation district.

Existing Discharge. For the purpose of this permit, this term applies to the discharge of stormwater associated with industrial activity and certain allowable non-stormwater sources listed in this general permit that has been authorized previously under a National Pollutant Discharge Elimination System (NPDES) or Texas Pollutant Discharge Elimination System (TPDES) general or individual permit.

Facility. For the purpose of this permit, all contiguous land and fixtures (including ponds and lagoons), structures, or appurtenances used at an industrial facility described by one or more of Sectors A through AD of this general permit.

Grab Sample. An individual sample collected in less than 15 minutes.

General Permit. A permit issued to authorize the discharge of waste into or adjacent to water in the state for one or more categories of waste discharge within a geographical area of the state or the entire state as provided by TWC §26.040.

Hyperchlorinated Water. Water resulting from hyperchlorination of waterlines or vessels, with a chlorine concentration greater than 10 milligrams per liter (mg/L).

Hyperchlorination of Waterlines or Vessels. Treatment of potable water lines or tanks with chlorine for disinfection purposes, typically following repair or partial replacement of the waterline or tank, and subsequently flushing the contents.

Impaired Water. For the purposes of this permit, water bodies identified as impaired on the latest approved CWA Section 303(d) List, or waters with an EPA-approved or established total maximum daily load (TMDL) that are found on the latest EPA approved Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d) as not meeting applicable state water quality standards.

Inactive Industrial Facilities. A facility where all industrial activities that are described in Part II, Section A.1. of this permit are suspended, and authorization under this general permit is required to be maintained. Also see sector-specific definitions for Inactive facilities in Part V, Sections G, H, J, and L of this general permit.

Industrial Activity. Any of the ten (10) categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 Code of Federal Regulations (CFR) §122.26(b)(14)(i)-(ix) and (xi).

Infeasible. For the purpose of this permit, infeasible means not technologically possible or not economically practicable and achievable in light of best industry practices. The TCEQ notes that it does not intend for any MSGP permit requirement to conflict with state water right laws.

Inland Waters. All surface water in the state other than those defined as tidal waters.

Minimize. For the purposes of this permit, minimize means to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practices.

Municipal Separate Storm Sewer System (MS4). A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

(a) owned or operated by the United States , a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under CWA §208 that discharges to surface water in the state;

(b) that is designed or used for collecting or conveying stormwater;

(c) that is not a combined sewer; and

(d) that is not part of a publicly owned treatment works (POTW) as defined in 40 CFR §122.2.

NAICS – North American Industry Classification System

National Pollutant Discharge Elimination System (NPDES) (from 40 CFR §122.2). The national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §§307, 402, 318, and 405. The term includes an "approved program."

New Discharge. For the purpose of this permit, this term applies to the discharge of stormwater associated with industrial activity that did not commence prior to August 13, 1979, that is not a new source, and that has never received an NPDES or TPDES water quality permit for the stormwater discharge from the site. See 40 CFR §122.2.

Non-structural Controls. Pollution prevention methods that are not physically constructed, including BMPs used to prevent or reduce the discharge of pollutants.

No Exposure. A condition at an industrial facility where all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product.

No Exposure Certification (NEC). A written submission to the executive director from an applicant notifying that they intend to obtain a conditional exclusion from permit requirements by certifying that there is no exposure of industrial materials or activities to rain, snow, snowmelt, or stormwater runoff.

Notice of Change (NOC). Written notification from the permittee to the executive director providing changes to information that was previously provided to the agency in a notice of intent or no exposure certification (NEC) form.

Notice of Intent (NOI). A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT). A written submission to the executive director from a discharger authorized under a general permit requesting termination of coverage.

Operator. A person responsible for the management of an industrial facility subject to the provisions of this general permit. Industrial facility operators include entities with operational control over industrial activities, including the ability to modify those activities; or entities with day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).

Outfall. For the purpose of this permit, a point source at the point where stormwater runoff associated with industrial activity, and certain non-stormwater discharges listed in this permit, exits the facility and discharge(s) to surface water in the state or a municipal or private separate storm sewer system. An outfall from a diffuse point source includes the point or points where the diffuse point source discharges to surface water in the state or a municipal or private separate storm sewer system.

Permittee. An operator authorized under this general permit to discharge stormwater runoff associated with industrial activity and certain non-stormwater discharges to surface water in the state.

Point Source. Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. For the purpose of this permit, a point source includes any identifiable conveyance from which pollutants might enter surface water in the state, including a diffuse point source as defined in this section.

Pollutant. (from TWC §26.001(13)) Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any water in the state. The term: (A) includes: (i) tail water or runoff water from irrigation associated with an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone as defined by TWC §26.502; or (ii) rainwater runoff from the confinement area of an animal feeding operation or concentrated animal feeding operation that is located in a major sole source impairment zone, as defined by TWC §26.502; and (B) does not include tail water or runoff water from irrigation or rainwater runoff from other cultivated or uncultivated rangeland, pastureland, and farmland or rainwater runoff from an area of land located in a major sole source impairment zone, as defined by TWC §26.502, that is not owned or controlled by an operator of an animal feeding operation or concentrated animal feeding operation on which agricultural waste is applied.

Pollutant of Concern (POC). For the purpose of this permit, a pollutant of concern (POC) includes biochemical oxygen demand (BOD), sediment, or a parameter that addresses sediment (such as total suspended solids (TSS), turbidity, or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from an MS4 (*See* 40 CFR § 122.32(e)(3)).

Qualified Personnel. A person or persons who are knowledgeable of the requirements of this general permit, familiar with the industrial facility, knowledgeable of the stormwater pollution prevention plan (SWP3) at the industrial facility, able to assess conditions and activities that could impact stormwater quality at the facility, and able to evaluate the effectiveness of control measures.

Reportable Quantity Spill or Release. A discharge or spill of oil, petroleum product, used oil, industrial solid waste, hazardous substances including mixtures, streams, or solutions, or other substances into the environment in a quantity equal to or greater than the reportable quantity listed in 30 TAC §327.4 (relating to Reportable Quantities) in any 24-hour period and subject to 30 TAC §327.3 (relating to Notification Requirements).

Semiarid Areas. Areas with an average annual rainfall of at least ten (10) inches but less than 20 inches.

Separate storm sewer system. A conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), designed or used for collecting or conveying stormwater; that is not a combined sewer, and that is not part of a publicly owned treatment works (POTW).

Sheet Flow. An overland flow or downslope movement of water taking the form of a thin, continuous film over relatively smooth soil or rock surfaces that have not been changed or graded, where there are no defined channels, and the flood water spreads out over a large area at a uniform depth. This definition does not include changing the surface of land or establishing grading patterns on land where a facility described in this permit is located, which would result in a point source as defined in this permit.

Significant Materials. Including, but not limited to: raw materials; fuels; materials (e.g., solvents, detergents, and plastic pellets); final products that are not designed for outdoor use; raw materials that are used for food processing or production; hazardous substances designated under CERCLA §101(14) of; any chemical the operator is required to report pursuant to Emergency Planning & Community Right-To-Know Act (EPCRA) §313, also known as Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste