WORKSHEET 1.0
RECEIVING WATERS

This worksheet **is required** for all renewal, amendment, and new Marine Seawater Desalination permit applications that propose to discharge treated marine seawater to a natural stream, lake, reservoir, or other impoundment.

1. DOMESTIC DRINKING WATER SUPPLY (Instructions, Page 39)

Is there a surface water intake for domestic drinking water supply located within 5 (five) miles downstream from the point/proposed point of discharge?

☐ Yes ☐ No

If **yes**, identify owner of the drinking water supply, the distance and direction to the intake, and locate and identify the intake on the USGS map.

☐ Indicate by a check mark that the requested information is provided.

2. DISCHARGE INTO TIDALLY INFLUENCED WATERS (Instructions, Page 39)

a. Width of the receiving water at the outfall? _____ feet

b. Are there oyster reefs in the vicinity of the discharge?

☐ Yes ☐ No

If **yes**, indicate approximate distance and direction from outfall(s):

_____

c. Are there any sea grasses within the vicinity of the point of discharge?

☐ Yes ☐ No

If **yes**, provide the distance and direction to the grasses:

_____

3. CLASSIFIED SEGMENT (Instructions, Page 39)

Is the discharge directly into (or within 300 feet of) a classified segment?

☐ Yes ☐ No

If **yes, stop here**. It is not necessary to complete Items 4 and 5, and it is not necessary to complete Worksheet 1.1.

If **no**, complete Items 4 and 5.

4. DESCRIPTION OF IMMEDIATE RECEIVING WATERS (Instructions, Pages 39-40)

Name of the immediate receiving waters:

a. Check the appropriate description of the receiving waters

☐ Lake or Pond

Surface area (acres): _____

Average depth of the entire water body (feet): _____

Average depth of water body within a 500-foot radius of the discharge point (feet): _____

☐ Man-made Channel or Ditch

☐ Stream or Creek

☐ Freshwater Swamp or Marsh

☐ Tidal Stream, Bayou, or Marsh

☐ Open Bay

☐ Other: _____

If you checked "man-made channel or ditch" or "stream or creek" above, provide responses to items b - e below:

b. For existing discharges, check the description below that best characterizes the area upstream of the discharge.

For new discharges, check the description below that best characterizes the area downstream of the discharge.

☐ Intermittent (dry for at least one week during most years)

☐ Intermittent with Perennial Pools (enduring pools containing habitat to maintain aquatic life uses)

☐ Perennial (normally flowing)

Check the source(s) of the information used to characterize the area upstream (existing discharge) or downstream (new discharge):

☐ USGS flow records

☐ personal observation

☐ historical observation by adjacent landowner(s)

☐ others, specify: _____

c. List the names of all perennial streams that join the receiving water within three miles downstream of the discharge point:

d. Do the receiving water characteristics change within three miles downstream of the discharge? (e.g., natural or man-made dams, ponds, reservoirs, etc.)

☐ Yes ☐ No

If yes, discuss how:

e. Provide general observations of the water body during normal dry weather conditions:

Date and time of observation: _____

Was water body influenced by stormwater runoff during observations?

☐ Yes ☐ No

5. GENERAL CHARACTERISTICS OF WATER BODY (Instructions, Page 40)

a. Is the receiving water upstream of the existing discharge or proposed discharge site influenced by (check as appropriate):

☐ oil field activities
☐ urban runoff
☐ agricultural runoff
☐ septic tanks
☐ upstream discharges
☐ others, specify below: _____

b. Uses of water body observed or evidence of such uses (check as appropriate):

☐ livestock watering
☐ fishing
☐ picnic park activities
☐ non-contact recreation
☐ industrial water supply
☐ others, specify:
☐ domestic water supply
☐ irrigation withdrawal
☐ contact recreation
☐ navigation
_____

c. Check the description (only one) that best describes the aesthetics of the receiving water and the surrounding area:

☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area: water clarity exceptional

☐ Natural Area: trees or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ Common Setting: not offensive, developed but uncluttered; water may be colored or turbid

☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

WORKSHEET 1.1
STREAM PHYSICAL CHARACTERISTICS

The following information **is required** for all new applications and any applications requesting to add an outfall if the receiving waters are **perennial** or **intermittent with perennial pools**.

Date of study: _____ Time of study: _____

Stream name: _____

Location: _____

Type of stream upstream of existing discharge or downstream of proposed discharges, (check one):

☐ **perennial** ☐ **intermittent with perennial pools**

Complete the transects downstream of the existing or proposed discharges.

1. DATA COLLECTION (Instructions, Pages 41-42)

No. of stream bends:

_____ well defined _____ moderately defined _____ poorly defined

No. of riffles:

Evidence of Flow fluctuations (check one):

_____ minor _____ moderate _____ severe

Indicate the observed stream uses and if there is evidence or flow fluctuations or channel obstructions/modifications:

Stream Transect Data

Transect Location	Habitat Type*	Water Surface Width (ft)	Stream Depths (ft)**								

* riffle, run, glide, or pool

** channel bed to water surface

2. SUMMARIZE MEASUREMENTS (Instructions, Page 42)

Streambed slope of entire reach (from USGS map in ft. /ft.): _____

Approximate drainage area above the most downstream transect from USGS map or county highway map (square miles) : _____

Length of stream evaluated (ft) : _____

Number of lateral transects made: _____

Average stream width (ft) : _____

Average stream depth (ft) : _____

Average stream velocity (ft/sec) : _____

Instantaneous stream flow (ft^3/sec) : _____

Indicate flow measurement method (VERY IMPORTANT – type of meter, floating chip timed over a fixed distance, etc.) : _____

Flow fluctuations (minor, moderate, severe) : _____

Size of pools (large, moderate, small, none): _____

Maximum pool depth (ft): _____

Total number of stream bends: _____

Number well defined: _____

Number moderately defined: _____

Number poorly defined: _____

Total number of riffles: _____

WORKSHEET 1.2
IMPOUNDMENTS

The following information **is required** for all new, renewal, or amendment permit applications that meet the conditions as outlined in Technical Report 1.0, Item 1.

1. IMPOUNDMENT INFORMATION (Instructions, Pages 43-45)

Please note: Surface impoundments may also require additional authorizations from the TCEQ Waste Permits Division.

a. Provide the following information in the table provided:

Use Designation: Indicate the appropriate use designation for each pond: Treatment **(T)**, Disposal **(D)**, Containment **(C)**, or Evaporation **(E)**.

Associated Outfall Number: If a discharge occurs from the impoundments, designate the outfall associated with the impoundment.

Liner Type: If the impoundments are lined to comply with specifications outlined for 1) a compacted clay liner (C), 2) an in-situ clay liner (I), or 3) a synthetic/plastic/rubber liner (S), indicate the liner type with the appropriate letter designation **(see instructions for further detail on liner specifications)**. If not, provide a reference to the attachment that provides a description of the alternate liner and any additional technical information necessary for an evaluation.

Dimensions: Provide the dimensions, freeboard, surface area, and storage capacity of the impoundments. For impoundments with irregular shapes, submit surface area (instead of length and width), the average depth, and the maximum depth below natural ground level.

Impoundment Information

Parameter	Pond #	Pond #	Pond #	Pond #
Use Designation: (T) (D) (C) or (E)				
Associated Outfall Number				
Liner Type (C) (I) or (S)				
Alt. Liner Attachment Reference				
Length (ft)				
Width (ft)				
Depth from Water Surface (ft)				
Avg Depth from Nat. Ground Level (ft)				
Max Depth from Nat. Ground Level (ft)				
Freeboard (ft)				
Surface Area (acres)				
Storage Capacity (gallons)				

The following information (b - g) is required only for **new or proposed** impoundments.

b. Indicate by a check mark if any of the following data was provided with the application:

☐ Compacted clay liner data

☐ Synthetic/plastic/rubber liner data

☐ In-situ clay liner data

Attachment: _____

c. Are there any leak detection systems or groundwater monitoring wells in place or planned?

☐ Yes ☐ No

If **yes**, attach information on the leak detection system for each pond and groundwater monitoring well data.

Attachment: _____

d. Is the bottom of the pond above the seasonal high water table in the shallowest waste-bearing zone?

☐ Yes ☐ No

If **no**, attach additional information describing the depth of the seasonal high water table in the shallowest waste-bearing zone in relation to the depth of the bottom of the new or proposed impoundment and how this may or may not impact groundwater.

Attachment: _____

e. Attach a USGS quadrangle map or a color copy of original quality and scale which accurately locates and identifies water supply wells and monitor wells within ½ mile radius of the impoundments

Attachment: _____

f. Attach copies of State Water Well Reports (driller's logs, completion data), and data on depths to groundwater for water supply wells including a description of how the depths to groundwater were obtained

Attachment: _____

g. Attach information pertaining to the groundwater, soils, geology, etc. used to assess the potential for migration of wastes from the impoundments or the potential for contamination of groundwater or surface water.

Attachment: _____

WORKSHEET 2.0
STORMWATER RUNOFF

This worksheet is required for all new, renewal, or amendment permit applications requesting individual permit coverage for discharges of stormwater runoff.

1. APPLICABILITY (Instructions, Page 46)

Do discharges from any of the proposed or existing outfalls consist of either 1) solely of stormwater runoff or 2) solely of stormwater runoff and one or more of the non-stormwater wastestreams listed on page 46 of the instructions?

☐ Yes ☐ No

2. STORMWATER OUTFALL COVERAGE (Instructions, Page 47)

Indicate by a check mark which type of authorization covers or is proposed to cover discharges from each stormwater outfall.

Authorization coverage

Outfall	Authorized Under MSGP	Authorized Under Individual Permit

If you have indicated that **all** existing or proposed stormwater outfalls are authorized under the MSGP, **stop here.** If you have indicated that you are seeking authorization for any stormwater outfall under an individual permit, **proceed as directed**.

The following information **is required** for each outfall that discharges stormwater for which you are seeking individual authorization under this permit application.

3. SITE MAP (Instructions, Page 47)

Attach a site map or maps (drawn to scale) of the entire facility with the following information.

- the location of each stormwater outfall to be covered by the permit
- an outline of the drainage area that is within the facility's boundary and that contributes stormwater to each outfall to be covered by the permit
- connections or discharge points to municipal separate storm sewer systems
- locations of all structures (e.g. buildings, garages, storage tanks)
- structural control devices that are designed to reduce pollution in stormwater runoff
- process wastewater treatment units (including ponds)
- bag house and other air treatment units exposed to precipitation or runoff
- landfills; scrapyards; surface water bodies (including wetlands)
- vehicle and equipment maintenance areas
- physical features of the site that may influence stormwater runoff or contribute a dry weather flow

- locations where spills or leaks of reportable quality (as defined in 30 TAC § 327.4) have occurred during the three years before this application was submitted to obtain coverage under an individual permit
- processing areas, storage areas, material loading/unloading areas, and other locations where significant materials are exposed to precipitation or runoff

☐ Indicate by checkmark that all the above information was provided on the facility site map(s).

Attachment: _____

4. FACILITY/SITE INFORMATION (Instructions, Pages 47-48)

a. Provide the area of impervious surface and the total area drained by each outfall that discharges stormwater for which you are seeking individual authorization under this permit application.

Impervious Surfaces

Outfall	Area of Impervious Surface (include units)	Total Area Drained (include units)

b. Provide the following local area rainfall information and the source of the information.

Wettest month: _____

Average rainfall for wettest month (total inches): _____

25-year, 24-hour rainfall (inches): _____

Source: _____

c. Provide an inventory, or list, of materials currently handled at the facility that may be exposed to precipitation.

d. Provide narrative descriptions of the industrial processes and activities involving the materials in the above-listed inventory that occur outdoors or in some manner that may result in exposure of the materials to precipitation or runoff.

e. Describe any best management practices and controls that you are using to prevent or effectively reduce pollution in stormwater discharges from the facility.

5. POLLUTANT ANALYSIS (Instructions, Pages 48-50)

a. Complete Table 1 as directed on page 48 of the Instructions.

Table 1 Pollutant Analysis for Outfall No. _____

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled	MAL (mg/L)
pH (standard units)	(max)	—	(min)	—		—
Total suspended solids						—
Chemical oxygen demand						—
Total organic carbon						—
Oil and grease						—
Arsenic, total						0.0005
Barium, total						0.003
Cadmium, total						0.001
Chromium, total						0.003
Chromium, trivalent						—
Chromium, hexavalent						0.003
Copper, total						0.002
Lead, total						0.0005
Mercury, total						0.000005
Nickel, total						0.002
Selenium, total						0.005
Silver, total						0.0005
Zinc, total						0.005

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

b. Complete Table 2 as directed on pages 48-49 of the Instructions.

Table 2 Pollutant Analysis for Outfall No. _____

Pollutant	Grab Sample* Maximum (mg/L)	Composite Sample** Maximum (mg/L)	Grab Sample* Average (mg/L)	Composite Sample** Average (mg/L)	Number of Storm Events Sampled

* Taken during first 30 minutes of storm event

** Flow-weighted composite sample

6. STORM EVENT DATA (Instructions, Page 50)

Provide the following data for the storm event(s) which resulted in the maximum values for the analytical data submitted:

Date of storm event: _____

Duration of storm event (minutes): _____

Total rainfall during storm event (inches): _____

Number of hours between beginning of storm measured and end of previous measurable rain event (hours): _____

Maximum flow rate during rain event (gallons/minute): _____

Total stormwater flow from rain event (gallons): _____

Provide a description of the method of flow measurement or estimate: _____

WORKSHEET 3.0
RADIOACTIVE MATERIALS

The following information **is required** for all new, renewal, or amendment permit applications that meet the conditions as outlined in Technical Report 1.0, Item 8.

1. RADIOACTIVE MATERIALS (Instructions, Page 47)

a. Are radioactive materials mined, used, stored, or processed at this facility?

☐ Yes ☐ No

If **yes**, use the following table to provide the results of one analysis of your effluent for all radioactive materials that may be present. Provide results in picocuries per liter (pCi/L).

Radioactive Materials Mined, Used, Stored, or Processed

Radioactive Material	Concentration (pCi/L)

b. Do you have any knowledge or reason to believe that radioactive materials may be present in the discharge, including naturally occurring radioactive materials in the source waters or on the facility property?

☐ Yes ☐ No

If **yes**, use the following table to provide the results of one analysis of your effluent for all radioactive materials that may be present. Provide results in picocuries per liter (pCi/L). Do not include information provided in response to Item 1.a.

Radioactive Materials Present in the Discharge

Radioactive Material	Concentration (pCi/L)