

# Status Update

## Oso Bay and Oso Creek

### TMDL Projects

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Larry Koenig, P.E.

TCEQ TMDL Project Manager

512-239-4533

[lkoenig@tceq.state.tx.us](mailto:lkoenig@tceq.state.tx.us)

# Summary Status

- Oso Bay TMDL – at EPA for approval
  - Oso Creek TMDL – awaiting study results
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# Oso Bay

- EPA questions regarding daily unit load allocation
- Oversight revealed while developing answer to EPA question
- Small change to TMDL Figure 12 and Table 17 to correct oversight

Figure 12

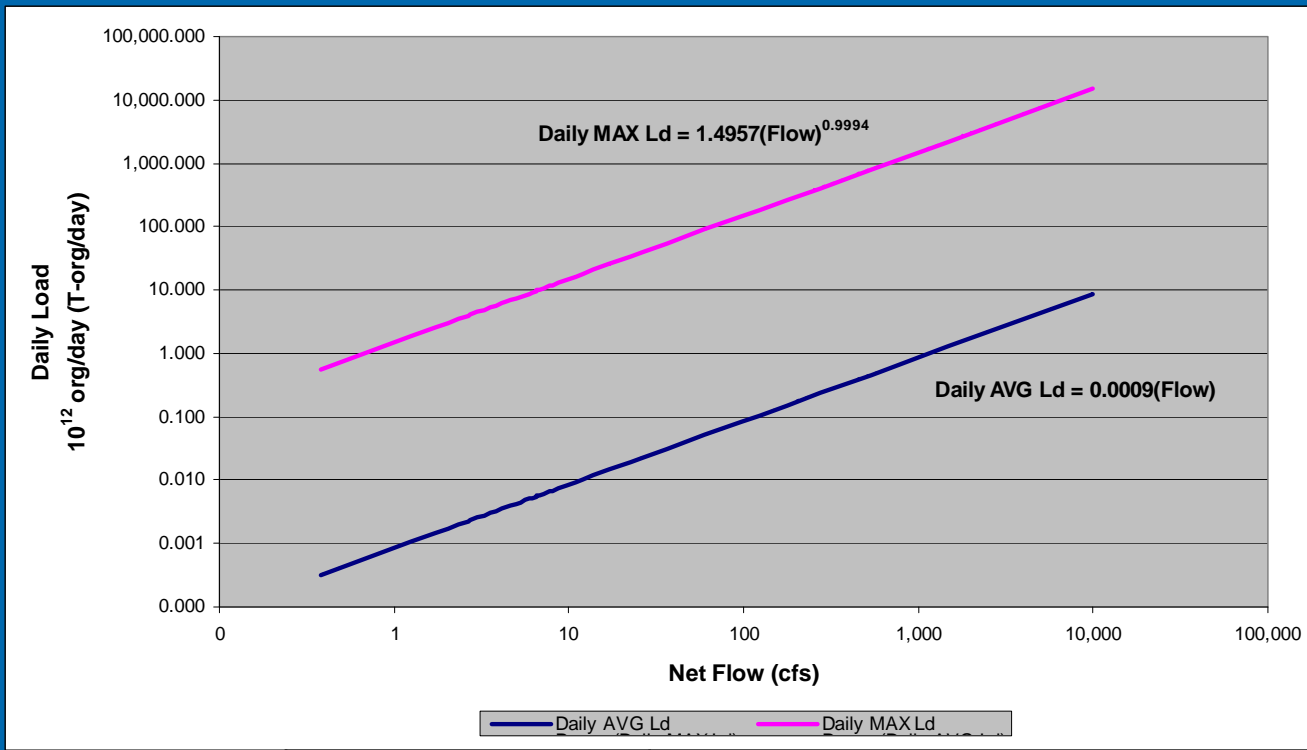



Table 17

Percent of days when net flow is less than or equal to selected value >>	Selected Flow Value (cubic feet/second)	Daily Avg Load (10 <sup>12</sup> org/day)	Daily Max Load (10 <sup>12</sup> org/day)
10 %	2.64	0.002375	3.94436
26%	3.55	0.003194	5.30326
50%	5.28	0.004753	7.89038
74%	9.78	0.008798	14.60087
90%	36.17	0.032554	53.98549
100%	10,009.90	9.00891	14,889.28952

# The Questions

- 1. Which selected flow represents critical conditions?
  - 2. How should we allocate this total maximum daily load between point sources (WLA) and the nonpoint sources (LA)?
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- The background of the slide features several faint, concentric circular ripples in a lighter shade of blue, resembling water droplets or ripples on a pond, positioned primarily in the lower half of the slide.

# The Oversight

Method used to develop the daily unit allocation was based on watershed runoff flow, and did not account for flow from continuous permitted discharges.

Total permitted continuous discharge flow approximates the 98<sup>th</sup> percentile runoff flow. So, permit load could exceed daily average allocation under some flow conditions.

# The Correction

- Estimated WLAs for the Oso Bay permits were developed.
- Continuous discharges were allocated loads based on permitted flow and assumed effluent concentrations.
- Non-continuous MS4 discharge was allocated load based on percent of bay watershed covered.

Name	Type	Permit Number	Permitted Discharge (MGD)
City of Corpus Christi – Oso WWTF	Municipal domestic waste	10401-003	16.2
Barney Davis Electric Power Generation	Industrial (cooling water)	01490-000	540.0
Texas A&M University Shoreline Env Res Facility	Industrial	03646-000	0.99 *
City of Corpus Christi – Stormwater	MS4	04200-000	NA

Total permitted continuous discharge = 557.19 MGD = 862 cfs

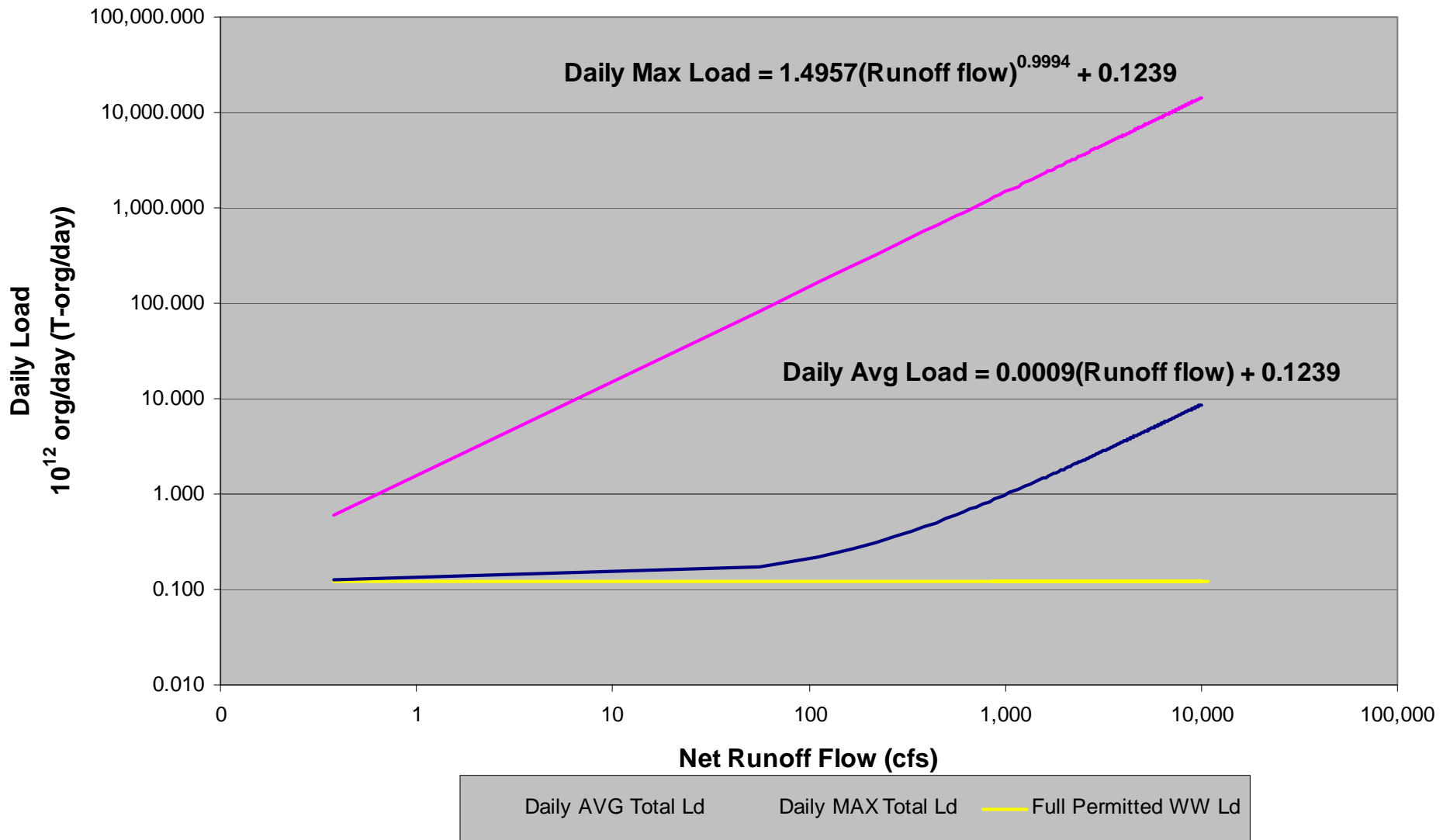
\* Permitted flow amount may have changed

- Domestic WWTP effluent concentration assumed to be 35 org/100-mL (the contact recreation criterion)
- Industrial effluent concentration assumed to be 5 org/100-mL
- Any volume of continuous discharge at these concentrations will attain standards, so WLA portion of TMDL can vary based on permitted flows.
- Continuous WLA can be added to the daily maximum allocation and equation.

# Resulting Refined Allocation

Source Type	Maximum Daily Load (T-org/day)	Notes or comments
WLA continuous	0.1239	3 permits included; WLA applies for any stream flow condition; amount may be recalculated to fit permit flows, and is not capped by TMDL
WLA discontinuous	3.99325	Corpus Christi MS4; represents only the Oso Bay watershed portion of permit area
LA headwater	1.9870	Oso Creek inflow load
LA bay	8.62062	Non-MS4 area
Overall Total Load	14.72477	

# Revised Figure 12



# Revised Table 17

Add 0.1239 to each load value

Identify 74<sup>th</sup> percentile flow as the “critical condition” for EPA purpose

<b>Percent of days when net flow is less than or equal to selected value &gt;&gt;</b>	<b>Selected Flow Value (cubic feet/second)</b>	<b>Daily Avg Load (10<sup>12</sup> org/day)</b>	<b>Daily Max Load (10<sup>12</sup> org/day)</b>
<b>10 %</b>	<b>2.64</b>	<b>0.126275</b>	<b>4.06826</b>
<b>26%</b>	<b>3.55</b>	<b>0.127094</b>	<b>5.42716</b>
<b>50%</b>	<b>5.28</b>	<b>0.128653</b>	<b>8.01428</b>
<b>74%</b>	<b>9.78</b>	<b>0.132698</b>	<b>14.72477</b>
<b>90%</b>	<b>36.17</b>	<b>0.156454</b>	<b>54.10939</b>
<b>100%</b>	<b>10,009.90</b>	<b>9.13281</b>	<b>14,889.41342</b>

# Response from EPA

TMDL was approved by EPA on

June 6, 2008



# Oso Creek TMDL

- TMDL development will wait until pending studies provide enough information to proceed

## Oso Implementation Plan

- One implementation plan will be developed for the Oso watershed, creek and bay, after the creek TMDL is done.