Discharge Limits for Wastewater
Biochemical Oxygen Demand (BOD)

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Pretreatment Program Manager
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Managing Wastewater System Capacity

- Essential for growth and economic development
- Important for meeting water quality standards
- Protects wastewater system
Managing Wastewater System Capacity

- Expand wastewater systems
- Revise standards for incoming industrial streams

El Paso Water is in the process of doing both.
EPWater Wastewater Treatment Facilities

- Operate under TPDES permits or TCEQ Permit (Hervey)
- BOD treated through activated sludge and aeration systems
- Discharge into the Rio Grande, or the Hueco Bolson (Hervey)
- Some effluent used as reclaimed water
Definition of Biochemical Oxygen Demand (BOD)

The amount of dissolved oxygen needed (i.e. demanded) by aerobic biological organisms to break down organic material present in a given water sample at certain temperature over a specific time period.
Wastewater Treatment
EPWater must act to ensure compliance

- Potential violation
- Enforcement
- New requirements
- Permit revoked or denied
Inadequately treated wastewater poses a biological contaminants risk—A health hazard if discharged into the environment.

<table>
<thead>
<tr>
<th>Common BOD Concentrations</th>
</tr>
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<tbody>
<tr>
<td>Weak</td>
</tr>
<tr>
<td>Medium</td>
</tr>
<tr>
<td>Strong</td>
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## Wastewater Treatment Facilities
### Current Capacities

<table>
<thead>
<tr>
<th>Plant</th>
<th>BOD Average Loading (lbs/day)</th>
<th>TCEQ 317 Design Standard (lbs/day)</th>
<th>BOD Design Standard (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>John T. Hickerson WRF</td>
<td>19,400</td>
<td>21,000</td>
<td>92%</td>
</tr>
<tr>
<td>Haskell R. Street WWTP</td>
<td>29,400</td>
<td>29,700</td>
<td>99%</td>
</tr>
<tr>
<td>Roberto R. Bustamante WWTP</td>
<td>52,800</td>
<td>38,700</td>
<td>136%</td>
</tr>
<tr>
<td>Fred Hervey WRP</td>
<td>12,000</td>
<td>21,400</td>
<td>56%</td>
</tr>
</tbody>
</table>
Most municipal wastewater treatment facilities are not designed to treat wastewater from industrial sources.
The Pretreatment Program requires discharges of nondomestic wastewater to comply with standards to ensure the goals of the Clean Water Act are attained.
Pretreatment Program

- Prevent interference
- Prevent pass through
- Improve opportunities to recycle and reclaim
- Protect human health & safety and the environment
Pretreatment Program

- Permit
- Inspection
- Sample Collection & Lab Analysis
- Enforcement
Pretreatment Program

- Continuous evaluation
- Revision to local limits
Treatment or process changes will be needed.

Industrial sectors most impacted by BOD:

- Dairy products processing
- Other foods processing
- Industrial Laundry facilities
- Waste dewatering processes
Actions needed by Industrial Customers

- Identify source(s) of high BOD
- Evaluate BMPs to reduce BOD
- Identify the type of treatment equipment required
- Plan for treatment to reduce BOD below 300 mg/L and implement before August 2020 to be compliant

RESOURCES: Companies are encouraged to seek guidance from trade associations, The Water Environment Federation, engineering consultants, and The TCEQ to learn more and identify facility specific solutions.
Timeline

- **AUG 2019**: Change to BOD planned
- **DEC 2019**: Surcharge rate for BOD is amended
- **MAR 2020**: New Surcharge rate in effect
- **JUL 2020**: Industrial customers must meet BOD Limit (surcharge will cease)

Exceedances will be subject to enforcement.
A national challenge
Expansions and new limits to manage capacity

Cities that have recently set BOD and/or TSS limits
- City of Temple, TX
- City of Melbourne, Florida
- City of Flagstaff, AZ
Mission Linen & Uniform Services has been treating their wastewater for over 20 years.
“We’d rather put money into our infrastructure than paying surcharges.”- Brandon Wellette, Production Manager.

Mark Saposnik, Environmental Compliance Engineer, said the system benefits their bottom line, but “It is also the right thing to do for the environment.”
The cooperation of our industrial customers will help us to meet future demand and continue to protect the environment and our systems.
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