

## Oil/Water Separator Design Selection Top 10 List!

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Every railroad has oil/water separator (OWS) for treatment of industrial wastewater. Conceptually, OWS's are simple wastewater process units of ordinary costs. In railroad practice, these "simple" units are critical to effective wastewater treatment and for establishing and maintaining discharge compliance and managing risk. OWS's require attentive Operation & Maintenance (O &M). Their simplicity belies their importance, O & M demand, management demand, and associated life-cycle cost.

All OWS's are not created equal. However, their differences may not be apparent to those with limited or no experience with OWS design selection. As they say, "The devil is in the details," and in the case of OWS's, varying details can greatly increase the life-cycle cost and operational risk of these seemingly "simple" process units.

This paper presents and discusses the "Top 10" most critical considerations for designing or selecting an OWS based the authors' experience and best practices from North Americas Class I railroads.

### Top Ten List:

1. Influent wastewater flow rate and character
2. OWS Sizing
3. Grit Settling & Removal
4. Trash Collection & Removal
5. Inlet and Outlet Hydraulics
6. Laminar Plug flow
7. Coalescing Media
8. Oil Collection & Removal
9. Sludge Collection & Removal
10. Access

This presentation includes examples of associated lesson learned.

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