



#### INDUSTRIES SERVED

- Biogas
- Chemicals
- Energy
- Manufacturing
- Metals/Minerals
- Microelectronics
- Oil/Gas
- Petrochemicals
- Power
- Utilities

#### TREATMENT TYPES

- Pretreatment
  - Surface Water
  - Ground Water
  - Desalinization
  - Grey Water
  - Wastewater
  - Industrial Wastewater
- Process Water
  - IX/DI/RO/UPW
- Industrial Waste
  - DFD
  - ZLD
  - Cooling Tower Water
  - Mine Drainage
  - Frac Water



## Industrial Wastewater Services

CSD provides Industrial Wastewater Treatment services ranging from permitting and conceptual engineering through commissioning, operator training and start-up. Our customized approach to provide technically innovative and cost-effective solutions is our focus - and our business. We understand manufacturing processes and can apply the most suitable technologies to minimize the impact to your bottom line. We listen to the needs of our clients and design systems that will comply with all regulatory requirements.



Our services include:

- /// Permitting/Regulatory Negotiations
- /// Wastewater Compliance Audits
- /// Water Quality/Bioassay Characterization
- /// Conceptual Engineering
- /// Feasibility Studies
- /// Innovative WWTP Process Development and Design
- /// Engineering, Procurement Assistance, and Construction Management
- /// Detail design, Specifications, Estimating, Expediting
- /// Vendor Inspections and Observation
- /// Contract Operations/Operations Consulting
- /// Commissioning, Start-up, and Operator Training
- /// Troubleshooting
- /// *Existing Facility Retrofits*



CSD is a full-service engineering consulting company with a seasoned staff of professionals experienced in providing industrial, environmental, infrastructure, and construction engineering services. CSD has the resources to perform virtually any scope of work, regardless of size or complexity.

***Our Clients tell us we are: Responsive and Reliable with Proven Results***

For years, CSD has been providing industry with innovative treatment system designs and system upgrades. In addition to conventional systems, we thrive on unique problems that require inventive solutions. Our diversified staff is also adept at regulatory negotiations and providing our clients with first class service.

CSD understands the importance of lowering client costs. Our strategic experience can help identify cost-reduction opportunities including:

- /// Instrumentation/Automation Optimization
- /// Plant Water/Wastewater Minimization
- /// Reuse/Recycle Identification and Implementation
- /// Chemical Treatment Use Reduction
- /// Cooling Tower Blowdown Reduction
- /// Countercurrent Rinsing Techniques
- /// Process Coolant Recovery
- /// Acid Regeneration/Recovery Systems
- /// System ROI Studies

**For More Information Contact**  
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## TECHNOLOGIES

- Equalization
- Neutralization
  - Acid/Caustic/Lime
  - Oxidation
  - High Density
- Coagulation/Foccculation
- Clarification
  - Solids Contact
  - Flocculation
  - Thickening
  - DA Flotation
  - Lamella
  - Dewatering
  - Plant & Frame Press
  - Vacuum Press
  - Belt Press
  - Centrifuge
- Filtration
  - Cartridge
  - Multimedia
  - Activated Carbon
  - Ultrafiltration
  - Reverse Osmosis
- Ion Exchange
  - SAC
  - SBA
  - WAC
  - WBA
  - Mixed Bed
  - Deionization
  - Softening
- Chemical Injection/Storage
  - Acid
  - Base
  - Oxidizers
  - Reducing Agents
  - Slurry Make Up Systems
  - Flocculants
  - Polymer
  - Precipitators
  - Biocide
- Ultrapure Water
  - Electro-Deionization