

WASTEWATER MANAGEMENT SERVICES



Without adequate treatment, wastewater can be source of ground or surface water pollution. Wastewater carries pollutants including nutrients, petroleum products, pesticides, metals, pathogens and particulate matter. Wastewater management plans are required by state and federal agencies.



Haley and Ward's **Wastewater Management Services** includes planning, piloting, design, permitting, monitoring, modeling, regulatory compliance, peer review and construction services.



WASTEWATER DESIGNS

- Piloting of new treatment technologies
- Use of best technology matched to site constraints
- Compliance with stormwater performance standards
- Evaluation of existing infrastructure – collection, pumping and treatment
- Facility inspection, operation and maintenance plans
- Contract documents
- Cost opinions
- Construction management & operational services

REGULATORY & MONITORING

- Design and implementation of complete wastewater management plans
- Review of existing wastewater management plans for regulatory compliance
- EPA-approved sampling protocols
- Preparation of groundwater discharge permits and amendments
- Review for conformance to local, state and federal standards
- Review of wastewater treatment adequacy, needs & inventory
- Preparation of standards, and rules & regulations.

MODELING

- Pipe flow models for optimum pump and pipe sizing
- Water quality models designed to evaluate treatment efficiencies and alternative technologies
- Hydrogeologic analysis of groundwater mounding
- Mass balance analysis of nutrient loading
- Streamflow analysis
- Hydraulic analysis of flow gradients through treatment plant
- Collection system modeling and flow projections for master planning

