



WATER RESOURCES

Ulteig's water resources professionals assist public- and private-sector clients in managing stormwater runoff and surface water resources to sustain or improve water quality, minimize flooding, and address regulatory challenges. We are experts in the field of hydrology and hydraulics, working on projects from simple drainage designs to major flood control works. We integrate natural elements into civil design and look to natural hydrologic systems as inspiration for our constructed solutions.

WATERSHED MANAGEMENT

- Stormwater and surface water management plans
- Comprehensive sewer plans
- Development review and code compliance
- Operation and maintenance plans
- Risk assessment
- GIS mapping

HYDROLOGIC & HYDRAULIC MODELING

- Urban stormwater modeling
- Rural drainage modeling
- Stream modeling
- Lake and reservoir modeling
- Sanitary sewer hydraulic modeling
- Dam and levee failure analysis

STORMWATER COMPLIANCE & WATER QUALITY

- Project permitting
- MS4 Permit, SWPPP, and program development
- Construction stormwater permit and SWPPP
- Antidegradation compliance
- Impaired waters and special waters
- Water quality management plans

FLOODPLAIN MANAGEMENT & ANALYSIS

- Flood insurance rate studies
- Conditional letters of map revision (CLOMR)
- Letters of map revision (LOMR)
- FEMA mapping
- Digital flood insurance rate maps (DFIRMs)
- Flood elevation certificates
- Post event urban flood studies
- Flood damage reduction
- Flood control projects
- Flood preparation and planning
- Post event recovery and analysis

STORMWATER CONVEYANCE & STORAGE

- Pond and storm sewer design
- Rate control, extended detention, and hydrograph management
- Energy dissipation
- Overland conveyance design
- Bank stabilization

WETLAND SERVICES

- Wetland delineation
- Wetland mitigation design and replacement plans
- Wetland studies/wetland hydrology
- GIS wetland mapping

BEST MANAGEMENT PRACTICE (BMP) ANALYSIS & DESIGN

- BMP implementation planning
- BMP performance calculations and permitting
- Runoff water recycling strategies
- Erosion and sediment control

HYDRAULIC & CONTROL STRUCTURES

- Stormwater pumping stations
- Multistage outlets, control structures, and diversions
- Bridge and culvert hydraulic assessment
- Agricultural control structures
- Dams, levees, and flood walls

ECONOMIC STUDIES & GRANTS

- Water resource grant applications
- Benefit/cost for hazard mitigation grants
- Stormwater utilities and rate studies
- Area and connection charges
- Capital improvement planning and budgeting