



## Water Resources Services

Protecting people, infrastructure and property with sensible and cost-effective flood control systems; building resilient stormwater infrastructure; and preservation and enhancement of the water quality of our lakes, rivers and streams are the guiding principles of our approach to water resources engineering.

Water is a paradox – vital to life, yet a potentially destructive force. Effective stormwater management strategy requires careful assessment and planning for current and future conditions, innovative and sustainable design including best management practices, and development of a funding plan for implementation and ongoing maintenance.

Our award winning water resource team comprises of certified floodplain managers, planners, scientists and engineers to provide holistic solutions to our clients' diverse needs. We are passionate about what we do

and are motivated by the difference our work makes in improving the quality of life of people and communities we live and work in. Our services protect people and property from water damage, prevent degradation of water resources, and restore vital aquatic systems.

From small scale drainage studies to large and detailed stormwater master plans, hydrologic and hydraulic studies, design, permitting and assistance with grant funding, our diverse team of water resource professionals can provide solutions for your project.

We collaborate with our clients from project inception to successful completion, always seeking value driven solutions to your project needs.



## WATER RESOURCES SERVICES

### ► Stormwater + Floodplain Management

Continued stormwater problems have a detrimental effect on both public infrastructure and private properties. We have specialized experience in preparing detailed stormwater and watershed master plans, compliance with floodway and floodplain regulations, and design and construction phase services. We help clients develop and implement mitigation plans and assist with identifying grants and funding opportunities.

### ► Hydrologic and Hydraulic Modeling

Any water resource project typically starts with an assessment phase including Hydrologic and Hydraulic (H&H) analyses. Our water resource team is well versed in all facets of H&H modeling including 1D/2D and steady and unsteady state modeling. We have modeled small to large, and rural to urban watersheds including floodway and floodplain analyses utilizing state of the art and innovative software and accepted by regulatory agencies.

### ► Flood Control Systems

We have designed award winning flood control systems comprising of storm sewers, pump stations, detention facilities and levee design and certification. We've helped numerous communities protect critical infrastructure and public/private property.

### ► Restoration + Enhancement

Our services include field assessments, stream and riparian corridor restoration, bank and shoreline stabilization, natural channel design including custom urban stream solutions, restoration of wetland lakes and ponds, and detention basin retrofits.

### ► Green Infrastructure

Our team has extensive experience in the planning, design, and construction phase services of green infrastructure improvements and are recipients of Special Achievement and Sustainable Practices awards. We have successfully integrated green infrastructure practices with gray infrastructure design as part of an effective flood reduction strategy and water quality improvements.



### ► Highway Drainage

Demands placed on highway systems can cause or exacerbate flooding issues in receiving outfalls and downstream conveyance systems. We have worked with local agencies, Counties and State DOTs to prepare Location Drainage Studies for highway drainage systems and Hydraulic Reports for Bridge and Culvert improvements. We partner with transportation engineers to find low impact solutions to highway drainage including implementing green infrastructure BMPs.

### ► Permitting + Compliance

Early coordination with permitting agencies ensures a streamlined project and avoids surprises. Our water resource engineers remain current with emerging regulations. We provide permitting assistance with local, state and federal agencies including ACOE and FEMA. We have extensive experience in preparing CLOMRs/LOMRs.

### ► Grants + Funding Assistance

Our funding specialists partner with clients to identify sources of funding that meets the need. Strategies may range from tried-and-true sources including local, state and federal grants; state revolving loans; bonds; stormwater utility set up or rate adjustments; and today's emerging new alternatives, such as public-private partnerships (P3). We have assisted clients identify and secure local, state and federal funding for stormwater projects including FEMA HMGP grant funding, CDBG, and EPA 319(h) amongst others.

Scan the QR Code or follow the link below for your local contacts, project information, or industry insights.

► [www.hrgreen.com/water-resources](http://www.hrgreen.com/water-resources)

