Representative Projects

River Corridor and Flood Hazard Analysis
Wetlands Hydrology
Coastal Processes and Analysis

Applied Geomorphology

Implementation
Water Resources Planning and Analysis

Russian River Resource Enhancement and Management Plan

For the California Coastal Conservancy, Sonoma County and Mendocino County Water Agency, 1996-97. PWA analyzed historic changes in river morphology associated with gravel mining using historic hydrologic and geomorphic data and determined the impacts of mining on groundwater resources using the MODFLOW model. Development of the plan required close collaboration with team biologists and local agency staff to determine sustainable gravel yield and a management approach to minimize mining impacts on the river.

Miller Creek Stabilization and Restoration

For the site developer, 1980-85. PWA developed a stabilization and restoration plan for Miller Creek, where historical cattle overgrazing and logging activities had resulted in a severely incised channel with over-steepened and collapsing banks. The resulting project recreated a low flow channel and adjacent floodplain (the first example of this approach in California) providing excellent riparian habitat and remaining stable during a series of major flood events over the past 15 years.

Alamo Creek Restoration Plan

For Lennar Communities, 1998. PWA performed an assessment of existing channel conditions and stability in the mainstem and east branch of Alamo Creek. A restoration plan was developed with consideration of the causes of instability. The plan included the redevelopment of an active floodplain overbank area, incorporation of grade controls and riparian re-vegetation.

Feather River Sediment Management Plan

For Plumas County, 1992-93. PWA staff prepared the hydrologic and sediment sections of an EIR/EIS on the proposed sediment pass-through operation for a series of reservoirs on the North Fork of the Feather River.

Teign/Bovey River Diversion Public Inquiry

For the village of Teigngrace, Devon, UK, 1998. PWA provided expert witness services in the public inquiry for a proposed river diversion in southern England. PWA performed a review of existing conditions and technical analysis of proposed channel design criteria, stabilization plans and the hydraulic analysis used to evaluate the effects of the project.

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Martin Canyon Creek Stability Enhancement Project

For Warmington Homes, 1996-1998. PWA performed an analysis of channel stability and sediment sources in the mainstem of Martin Canyon Creek in Dublin, California. Results from the analysis were used to develop a plan for the enhancement of stability through the implementation of bank stabilization and grade control best management practices. PWA carried out formal construction observation services and provided on-site recommendations during construction of the project to maximize opportunities for the development of the appropriate channel conditions and aquatic habitat protection.

Castro Valley Creek and Strawberry Creek Restoration Projects

For Alameda County Flood Control District, 1989-94 and U.C. Berkeley, 1988. PWA developed and analyzed channel design alternatives for flood management, bank stabilization and riparian corridor enhancement to restore sections of Castro Valley Creek in Castro Valley, CA and Strawberry Creek, U.C. Berkeley Campus, CA. The use of innovative log cribwalls, replanted with native plants, was selected to provide attractive and ecologically beneficial bank protection. The firm coordinated the preparation of design materials, cost estimates and construction assistance.

Chorro Flats Restoration

For the San Luis RCD and California Coastal Conservancy, 1988-96. A 1988 study by PWA indicated that Morro Bay—the most valuable estuary along the South Central California—was threatened by excess sedimentation originating in the surrounding watershed. PWA developed an innovative plan to trap sediment upstream of the Bay by restoring former agricultural land to a riparian forest and enhancing the sediment trapping capacity. PWA led a team that prepared final design construction drawings, specifications and estimates for the 100-acre stream and flood plain restoration. In conjunction with a comprehensive watershed management plan to address the sediment production problems, threats to the Bay have been greatly reduced.

Green Valley Creek

For the City of Fairfield, 1990-95. PWA assisted a design team of biologists and civil engineers to develop a combined flood management and stream restoration plan on the degraded Green Valley Creek in Fairfield. PWA developed an innovative terrace design which preserved and expanded creekside vegetation, while excavating a wide, grassed terrace to convey overbank flood flows. The project includes numerous environmental benefits, including structures to allow fish passage, seasonal freshwater wetlands and extensive public trails and access.

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Klamath Lake Water Quality Model

For the Bureau of Indian Affairs, 1996-97. PWA—working with a team of limnologists and fisheries experts—developed a water quality model for the 96-square mile Upper Klamath and Agency Lakes. PWA used the model to better understand the effect of lake level on sediment resuspension and the resulting phosphorous concentration that is influencing eutrophication and the subsequent water quality parameters of pH and D.O.

Mono Lake Water Balance

For National Audubon Society, 1979-93. PWA developed a basin-wide water balance model to predict future levels of Mono Lake, a terminal desert lake in the Eastern Sierra. PWA used the model to evaluate management alternatives for both lake preservation and water export to Los Angeles.

Rice Wetlands Study

For The Nature Conservancy, 1992. PWA carried out hydrologic modeling to investigate the feasibility of managing rice fields in the Sacramento Valley for significant enhancement of waterfowl habitat and rice production. Since 1992, this practice has been adopted on a widespread basis in the Sacramento Valley.

Impacts of Climate Change in California Water Resources

For the U.S. EPA, 1988. As the potential for global warming and sea-level rise from the "greenhouse effect" increases, the U.S. EPA assembled a team of national experts to assess the likely effects. Using our expertise in estuarine processes, PWA determined the potential changes in San Francisco Bay circulation and salinity.

Santa Margarita

For the California State Coastal Conservancy and Riverside County, 1997-present. The Santa Margarita River, which drains a 744-square mile watershed and flows through San Diego and Riverside counties, includes some of the most pristine river stretches in Southern California. The study assessed the effects of urbanization, dam construction and other projects on the hydrology of the river system using HEC-1 model and a comprehensive GIS analysis. Based on the results of these analyses, a series of management options will be developed which can be used to reduce the impacts of ongoing urban development.

Representative Clients

Since our inception in 1976, PWA has been involved in more than 1,200 projects for a variety of clients, including:

Federal Agencies

U.S. Army Corps of Engineers
Department of Justice
Environmental Protection Agency
Federal Emergency Management Agency
Fish & Wildlife Service
National Park Service
Bureau of Indian Affairs

State Agencies

California Attorney General's Office
California Coastal Conservancy
California Department of Fish & Game
California Department of Parks & Recreation
California Department of Transportation
California Department of Water Resources
California State Lands Commission
Oregon Division of State Lands
San Francisco Bay Conservation and Development Commission
Tahoe Regional Planning Agency
University of California
University of Washington
Washington Department of Fish & Wildlife Service

Local Agencies

Alameda County, CA
Contra Costa County, CA
Los Angeles County, CA
Napa County, CA
Inyo County, CA
Marin County, CA
Orange County, CA
Placer County, CA
Sonoma County, CA
Clark County, WA
City of Portland, OR
City of Pasadena, CA
City of San Diego, CA
City of Santa Cruz, CA
City of Santa Rosa, CA
City of South Lake Tahoe, CA
City of Stockton, CA
Riverside County Flood Control District
East Bay Regional Park District
Golden Gate Bridge Highway & Transportation District
Mendocino County Water Agency
Port of San Francisco
Port of Oakland
Yurok Tribal Council

Representative Clients (continued)

Engineering Consultants

Brown & Caldwell
CH_2MHill
Dames & Moore
Geomatrix
George Nolte & Associates
IT Corporation
Moffatt & Nichol Engineers
RBF Associates
Woodward-Clyde Consultants

Landscape Architects

Ian McHarg
ROMA Design Group
Gary Hyden Associates
Hargreaves Associates
Royston, Hanamoto, Alley & Abey
Wallace, Roberts and Todd
EDAW, Inc

Environmental Planning and Ecological Consultants

Jones & Stokes
EIP Associates
Environmental Science Associates
H.T. Harvey & Associates
Brady / LSA
MEC Analytical Systems, Inc.
Michael Brandman Associates
Northwest Biological Consulting
Wetlands Research Associates, Inc.

Attorneys

Atchison, Anderson, Hurley and Barisone
Hanson, Bridgett, Marcus, Vlahos, Rudy, LLP
Morrison & Foerster
Remy and Thomas
Shute, Mihaly & Weinberger
York & Smith

Land Development Companies

Citation Homes Central
Lincoln Properties
Marathon U.S. Realties, Inc.
Ponderosa Homes, Inc.

Utilities Companies

Southern California Edison
Pacific Gas & Electric

Public Interest Organizations

Environmental Defense Fund
Friends of the River Foundation
International Rivers Network
Mono Lake Committee
National Audubon Society
The Nature Conservancy
Natural Heritage Institute
Sierra Club Legal Defense Fund
Urban Creeks Council

WRT

wrtdesign.com

PHILADELPHIA
215 732-5215

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305 448-0788

DALLAS
214 220-2028

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518 523-0224

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perspective

WRT Planning & Design

Cities & Regions

Transit

Urban Centers & Civic Spaces

Waterfronts

Destinations & Attractions

Parks & Open Space

Communities

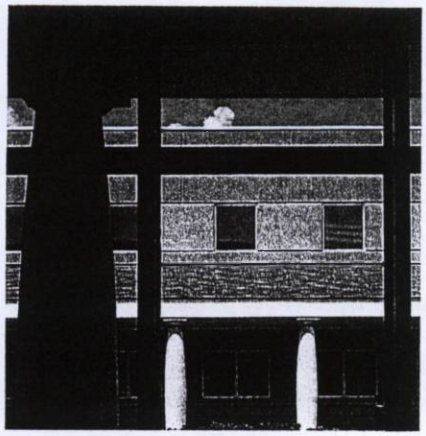
Campus

City and Regional Planning

Urban Design

Landscape Architecture

Architecture



In practice, WRT's philosophy has the effect of reinforcing the integrity of places – conserving natural environments, invigorating urban ones. A master plan for Amelia Island, an ecologically sensitive resort community (below) remains a model for sustainable development. Buildings, such as Burnham Brook Community Center (above) in Battle Creek, Michigan, are designed to reflect their use and complement their setting.

Places

The word conjures up myriad images and associations: The familiar places that provide the settings for our daily existence. The memorable places that have framed important events or times in our lives. The enticing places that we yearn to discover – for an afternoon, a vacation, or even retirement. And the places we hope to create to nurture our individual spirits, as well as celebrate our community.

Yet the importance of places extends beyond providing the contexts for our personal and collective experiences. Places comprise valuable resources – economic and environmental – that require careful consideration and stewardship.

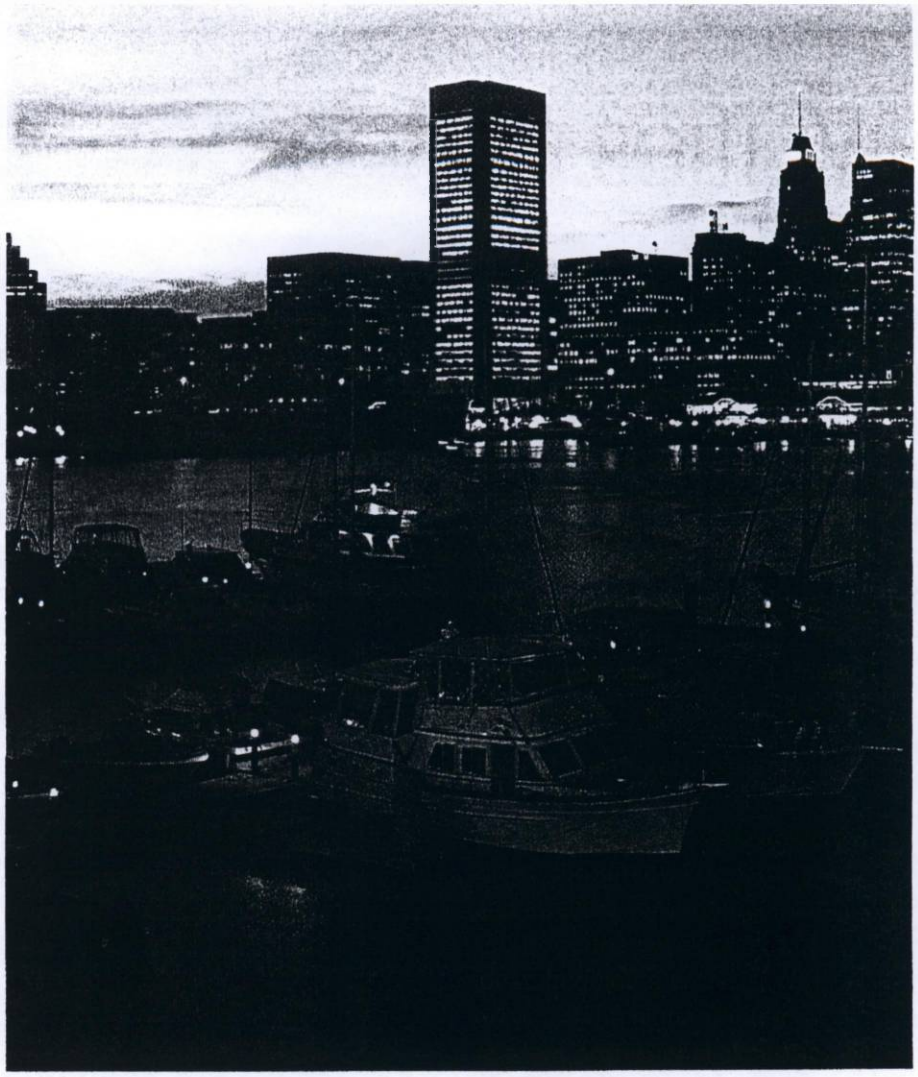
With a global economy, growing world population, and accelerating technology transformations, the cumulative impacts of human activity increasingly touch every aspect of the environment. Planning and design must address today's social and economic needs, while also fulfilling a wider obligation to pass on livable communities and a healthy environment to future generations. In this context, thoughtful planning and design of the places where we live, work, learn, and play have never been more important. As our clients forge the new places that enable them to further their mission, they seek us for our conscientious, inspired, and pragmatic approach to place-making.

Wallace Roberts & Todd, LLC is an interdisciplinary practice of planners, urban designers, architects, and landscape architects dedicated to creating sustainable cities and regions, and a range of distinct places within them: communities, educational institutions, transit-related facilities, parks and open spaces, downtowns, and waterfronts.

We believe that design should celebrate the unique qualities of each project and its surroundings to provide satisfying and meaningful settings for human activity. Our mission is to apply our collective skills, knowledge, and experience to help clients create exceptional places – places that achieve our clients' objectives and expectations, and that also respect the ecological web and social fabric that connect the world as a living system. At WRT, we envision the world as a better place – for people and for the environment – and are driven to realize it, one project at a time.

Each of our projects benefits from an iterative dialogue in which the voices of stakeholders – client, consultant, key participants, and affected constituents – contribute to the development of ideas. In guiding projects, WRT draws on the highest and most relevant professional expertise, wherever that skill may reside in our offices nationwide. This focus on project-specific collaboration also extends outside the firm to a network of specialized consultants, allied professionals, and leading academic institutions.

Our goal as a company has always been to practice in accordance with our values, to maintain a learning outlook that continually tests project boundaries, and to encourage innovation at every level of thinking. This culture attracts ambitious clients with challenging assignments and leads to award-winning solutions that create value for our clients while also making the world a better place.



Master plans for the redevelopment of downtown Baltimore and the reinvention of its Inner Harbor (above) as a commercial and entertainment destination have served as the basis for reviving a decaying city. Parks and open space, such as the J. Graham Brown Park (below) contribute to the quality of life that enables communities to attract and retain a residential population.

Cities & Regions

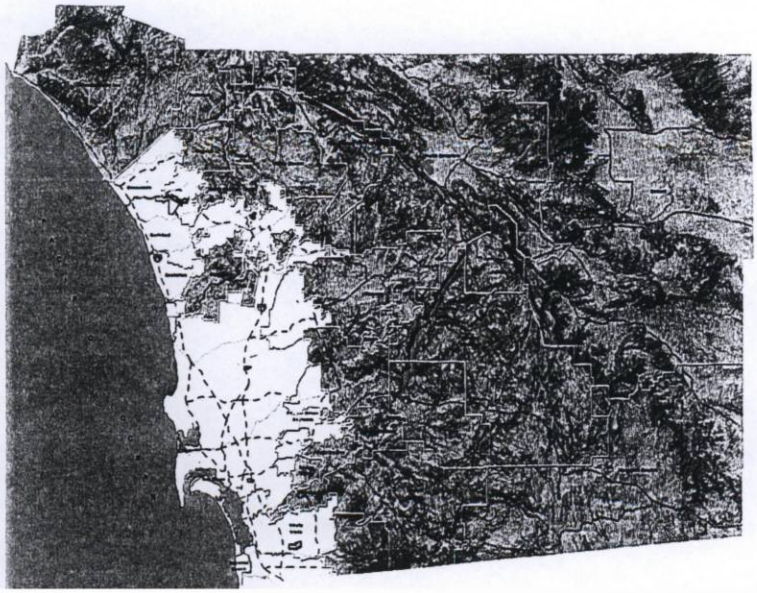
WRT's master plan for Fairmount Park guides the long-term integrity of Philadelphia's renowned open space system.

Throughout history, patterns of settlement and land development have reflected the culture and technology of the time. The choices we make with respect to density, scale, and building form and their relationship to the natural enviroment; the types of land uses and their degree of integration; circulation and the nature, amount and disposition of open space – all combine to affect the sustainability of our cities, suburbs, and regions.

WRT's planning and design work reinforces the integrity of regions and cities and seeks to enhance their quality of life – whether retaining a community's identity and sense of place, promoting more sustainable suburban patterns, protecting rural communities from sprawl, integrating nature into urban patterns, or revitalizing city centers.

Land Development or Preservation? Finding an acceptable compromise was the challenge for this rural community located at the fringe of the rapidly growing San Francisco Bay Area. The South Livermore Valley Specific Plan created an innovative and detailed exchange mechanism that allows limited growth and preserves the community's rustic character and agricultural heritage: for every unit or acre developed, an acre of land is planted and set in permanent agricultural easement.

An ethic of land stewardship coupled with advanced GIS technology enabled the recreation of native prairie habitats for Iowa's Neal Smith National Wildlife Refuge.



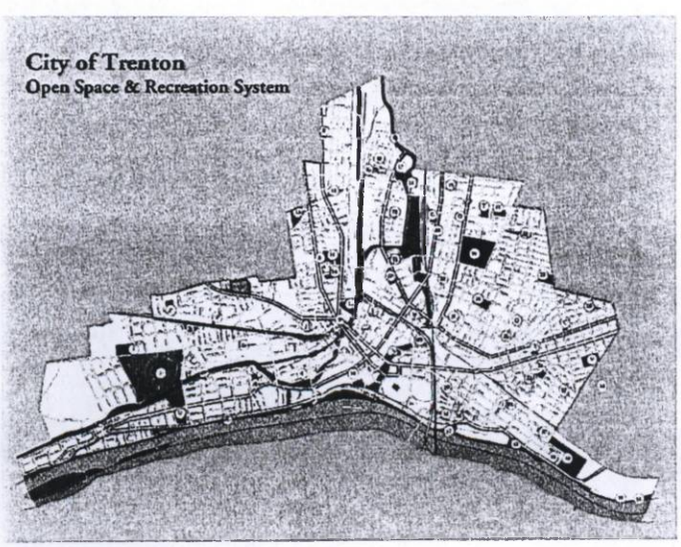
A healthy economy, protected natural systems, and an enhanced community identity and quality of life are the goals for the General Plan that guides land use patterns for rapidly growing San Diego County. GIS enables planners, citizens, and decision-makers to better understand choices and build consensus.

The master plan for the metro-region of Panama City and Colon guides regional growth to integrate fragmented settlements, improve the quality of life, and protect the vast natural resources of the Panama Canal Basin.

Parks & Open Space

WRT has developed design approaches for open space and park systems that address the complex array of open space functions, including active and passive recreation, natural resource conservation, and protection of historic resources and distinctive landscapes. Our experience ranges from planning regional and municipal systems to designing individual parks and community recreation buildings. As national practitioners, WRT addresses the unique characteristics of parks and open space in areas of established and developing communities, whether in arid, temperate, or subtropical zones.

The philosophy of natural balance underlying *Design with Nature,* the seminal environmental planning and design text authored by one of WRT's founders, Ian McHarg, remains as alive in our work today as in the 1960s, when the firm's projects served as its case-studies. As planners and designers, WRT always considers the natural environment as a determinant and strives to balance its needs with those of humankind, a particularly salient challenge with parks – whether the nation's most treasured landscapes, regional and metropolitan park systems, urban open space networks, or eco-resorts.



LEFT The interconnected strands of open space in urban areas are an essential ingredient of a city's health. WRT's open space plan for Trenton, New Jersey, enabled the city to evaluate the amount, condition, and usage patterns of their open space system and to determine and realize appropriate improvements.

RIGHT The J. Graham Brown Park in St. Matthews, Kentucky, explores and interprets the form, function, and spirit of nature to create a park that brings delight, prompts thought, and promotes inquiry. The design draws its inspiration from the valley's geology and hydrology, as well as the natural and cultural history of the 30-acre site. One design element, for instance, is a series of limestone columns erected at varying heights to record the 10-year, 25-year, 50-year, and 100-year predicted storm flood levels.