General Firm Qualifications

2025



With the

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About Great Ecology

Great Ecology is a leading ecological consulting and landscape architecture firm that delivers innovative ecological solutions to complex environmental issues.

As consultants, we holistically analyze technical details and develop strategies where environmental, social, and business needs can all be met successfully. As ecologists and designers, we create more resilient and healthy habitats, open spaces, and parks that fit within the context of the landscape.

Founded in New York City in 2001, Great Ecology has completed over 1,200 projects in the United States and internationally. Great Ecology is now headquartered in San Diego, CA with regional offices in New York's Hudson Valley and California's Imperial Valley. We maintain over 40 staff throughout the continental United States.





About Our Promise

Repairing the World Through Ecology & Design

Providing Top Quality & Excellence in All Our Products

Innovation in Science & Design

Encouraging Individual Initiative, Creativity, & Entrepreneurial Spirit

Promoting Passion, Hard Work, & Teamwork



Great Ecology was founded as an ecologically-focused habitat restoration company at a time when the practice of ecology was little more than an afterthought. Two decades later, we continue to lead the way in applying ecological principles and designs to projects across the industry.

We envision a world with expanded ecological horizons in which environmental, social, and business goals can all be met. To achieve this, our team is dedicated to upholding our promise every day, on every project, without compromise.

Our commitment to excellence has made us the trusted advisors for leading corporations, organizations, and governments around the world.





About Core Services

Great Ecology brings higher ecological thinking to leading corporations, organizations, and governments throughout the world.

We consult on environmental projects of all scopes and scales from concept and planning through permitting, implementation, monitoring, and adaptive management - applying our ecological approach from start to finish.





Featured Projects

Spanning a wide variety of environmental services and sectors, Great Ecology's experience includes innovative habitat restoration and mitigation projects, landmark green spaces, urban living shorelines, renewable energy and real estate developments, environmental litigation, and more. The following pages include a select listing of projects from our portfolio.



Hell's Kitchen Geothermal Project

Salton Sea, CA | Controlled Thermal Resources (CTR)

Great Ecology is providing a broad suite of environmental services to CTR for the ecological, regulatory, and environmental planning components of the largest integrated lithium extraction and geothermal power project in North America. To better understand the project's impact on habitats and regional ecology, we are conducting thorough wildlife and vegetation assessments including for protected species such as Yuma Ridgway's rail, burrowing owl, and pupfish. These assessments will be used to quantify mitigation requirements and develop restoration plans to replace wetlands affected by the project. In addition, Great Ecology is leading the project team in completion of regulatory documents, including the California Environmental Quality Act (CEQA), that assess the project's effects on local air and water quality, noise, traffic, cultural resources, and more.

To offset early site development, Great Ecology is designing a 160-acre mitigation project to convert open desert playa to wetlands that will provide habitat for a broad suite of species, including migratory birds, and threatened and endangered species. The system itself is planned to have a variety of habitat types including cattail bulrush marsh, desert willow scrub thickets, Sonoran Desert upland, and open water.

Great Ecology is also working with CTR to develop a campus master plan for the 7,000-acre site as part of the Lithium Valley, a 50,000-acre region within Imperial County that will have other geothermal and lithium extraction facilities.



Conceptual rendering of the CTR Lithium Valley campus.



Pond 20 Wetland Mitigation Bank

San Diego, CA | Port of San Diego

The Port of San Diego engaged Great Ecology to determine the feasibility of developing a tidal wetland mitigation bank on the Pond 20 parcel and to develop the restoration plan for the site. Pond 20 is a 95-acre former salt evaporator pond located in southern San Diego Bay, adjacent to several restored tidal wetland complexes. In the Phase I feasibility assessment, Great Ecology developed a preliminary conceptual design and restoration plan, determined an initial cost estimate for the project, verified that the wetland credits produced would be fungible with market needs, and conducted a market analysis within Southern California to codify the business case for conversion of the Site to a mitigation bank.

As prime for Phase II of planning and permitting of the bank, Great Ecology developed the wetland restoration plan and coordinated with the Interagency Review Team (IRT) for development of the mitigation banking instrument. To inform the restoration plan and other project elements, we conducted baseline site condition surveys, a preliminary biological resources survey, soil sampling and characterization, and a wetland delineation. Restoration design included preliminary development of the planting, irrigation, and grading plans; and preparation of construction documents to the 60% design level.

When completed, Pond 20 will be one of the largest tidal wetland mitigation banks in California, providing critical habitat for migrating birds, numerous native tidal wetland species, eelgrass, and upland vegetation. In addition to providing over 70 acres of new habitat, Pond 20 provides benefits in the form of carbon sequestration and sea level rise and storm surge protection for the surrounding Imperial Beach community. Improved public access to native wetland habitat was also an important goal for this project, as the existing Bayshore Bikeway runs along the northern edge of the Pond 20 parcel with direct sight lines into the wetland.



Conceptual rendering of Pond 20 Wetlands.



Woodbridge Waterfront Park Restoration

Woodbridge, NJ | EPEC Polymers

Great Ecology served as the ecological consultant for a 185-acre brownfield to greenfield project in Woodbridge, NJ. The firm was involved in multiple aspects of the project, most notably leading the strategy, permitting, design, and adaptive management planning of a 50-acre wetland restoration and creation to offset wetland impacts incurred during site remediation. Prior to design development, Great Ecology performed extensive ecological investigations, including multiple functional analyses; wetland delineation; surface water monitoring; soil analysis; and avian, benthic, reptile and amphibian surveys. Our recommendations weighed potential ecological uplift, estimated construction and maintenance costs, and anticipated long-term success. We ultimately designed a complex habitat restoration program including freshwater wetland enhancement, creation and restoration, and tidal wetland enhancement.

Great Ecology also designed a system of trails and boardwalks for the restoration, providing Woodbridge Township with its first public access to the Raritan River in 100 years. In addition, Great Ecology worked with the local School District to implement greenhouse curricula. Our team obtained local, state, and federal permits for remedial and compensatory mitigation and conducted extensive stakeholder outreach with non-profit organizations, neighbors, multiple government agencies, and municipal planners.



Great Ecology staff at Woodbridge Waterfront Park during construction.



Gulf Coast Restoration Planning & Expert Witness Services

Gulf Coast | Confidential

Great Ecology's Founder and President, Dr. Mark Laska, was named a potential expert witness for legal counsel following natural resource injuries from an incident that occurred in the Gulf of Mexico. Dr. Laska's team provided ecological services for a range of restoration planning concepts and strategies, with particular focus on prioritization of Gulf Coast restoration projects to offset natural resource injuries; evaluation of cost, feasibility and functional uplift for multiple early restoration projects proposed across the Gulf Coast states; and identification of key success factors for Gulf Coast restoration, derived from Great Ecology's restoration prioritization evaluation of more than 550 potential Gulf Coast restoration projects. The team also developed a large-scale empirical study intended to support the client's litigation position regarding the amount and type of compensatory mitigation needed to offset natural resource injuries. The case has settled.



Map showing potential restoration sites along the Gulf Coast.



NRDA for Multiple Contaminated Industrial Sites

New Jersey | Confidential

Great Ecology was contracted to conduct Natural Resource Damages Assessments (NRDA) for multiple cases involving industrial sites that have been the source of ongoing contamination, spills, and injury to ecosystems along the waterways in northeastern New Jersey.

Great Ecology conducted thorough assessment of impacts to natural resources and wildlife throughout the region, collected extensive data to inform NRDA modeling, and compiled detailed reports of historic site conditions to quantify the ecological damages from contamination and specify the type and amount of habitat restoration required to offset those injuries. These cases are ongoing.



Great Ecology staff conducting sampling of waterways.



Howland Hook Marine Terminal Mitigation Planning

Staten Island, NY | Global Container Terminals New York

Global Container Terminals New York (GCT), formerly New York Container Terminal, engaged Great Ecology to develop mitigation strategies to offset wetland impacts incurred during the GCT's Howland Hook Marine Terminal expansion in the Arthur Kill tidal straight. Great Ecology conducted extensive impact assessments, site investigations, and mapping to identify and evaluate over 12 potential mitigation locations in the region, including the adjacent Arlington Marsh. Great Ecology also developed habitat restoration designs for specific sites and performed cost-benefit analyses for feasible mitigation projects in and around Staten Island. Our team led regulatory and stakeholder coordination with the Port Authority of New York and New Jersey, New York City Economic Development Corporation, and the New York State Department of Environmental Conservation along with regional planners and local citizens' groups.



Aerial photo of the expanded Howland Hook Terminal.



Del Mar Fairgrounds Constructed Treatment Wetlands

Del Mar, CA | 22nd District Agricultural Association (DAA)

Great Ecology was part of an interdisciplinary team led by Fuscoe Engineering to tackle a unique challenge of treating surface water runoff from areas of the Del Mar Fairgrounds where animals are housed. Stormwater leaving the Fairgrounds and entering the nearby San Dieguito Lagoon did not meet regulatory thresholds for bacteria, nutrients, metals, and other constituents. The Fairgrounds, as part of their commitment to environmental stewardship, worked cooperatively with regional stakeholders to develop and permit an innovative stormwater treatment system that ensured compliance with water quality standards.

As part of this project, Great Ecology and Fuscoe designed an innovative constructed treatment wetland that replaced existing water features within the Fairground's racetrack. Stormwater from the site is collected into a settling pond and then passively conveyed to a treatment wetland where aquatic vegetation removes metals, nitrogen, and phosphorus from water and sediments. The final stage is a wastewater treatment facility that "polishes" bacteria from the water and gauges water quality. Stormwater can then be re-circulated through the system to maximize nutrient removal or released into nearby waterways to reduce the overall system volume once regulatory thresholds are met. The treatment wetlands are estimated to remove up to 75% of nutrients from stormwater and they function at significant cost savings to the Fairgrounds compared to non-ecologically based systems.

Aesthetic design of the treatment wetlands was a key factor to the project's success given the Del Mar Fairgrounds' visibility to millions of visitors who come to enjoy equestrian shows and other events. Great Ecology continues to provide post-implementation monitoring and maintenance of the system to ensure optimal performance. This includes occasional harvesting of aquatic vegetation within the system to both maintain aesthetic appeal and "reset" the treatment wetland for continued nutrient extraction.



Great Ecology staff conducting harvesting at the wetland.



Select Ecological Restoration & Mitigation Projects



San Dieguito Lagoon Wetland Restoration

Del Mar, CA | California 22nd District Agricultural Association (DAA)

Great Ecology was engaged by Marathon Construction to assist in the implementation of an II-acre tidal salt marsh and upland habitat restoration plan for a former overflow dirt parking lot. Previously used by the Del Mar Fairgrounds, the site is now a key feature of the San Dieguito Lagoon along San Diego's Coast to Crest trail system. Our team of ecologists and landscape architects led multiple restoration activities and provided ecologicallyinformed modifications to the existing restoration plan that ultimately led to successful project implementation. This included development of solutions to improve the quality of highly saline soils prior to plant installation to ensure better plant establishment, collection of native vegetation seeds, oversight of non-native species removal, plant installation oversight, and construction oversight. Following implementation, Great Ecology is leading a 5-year adaptive maintenance and monitoring plan to ensure successful restoration of this sensitive habitat.



View of the wetlands after restoration.

Randall's Island Salt Marsh Baseline Monitoring & Mitigation Design

New York, NY | Champlain Hudson Power Express; Flycatcher

Great Ecology is providing environmental monitoring, habitat mitigation planning, and design services for the final segment of the Champlain Hudson Power Express (CHPE) power transmission project, intended to provide renewable energy to New York City. The project's impact area traverses a portion of the Bronx Kill and an adjacent tidal wetland, previously designed and constructed by Great Ecology in the mid-2000s.

Great Ecology's role in the project to date has included development of a concept-level design that depicts a series of environmental restoration interventions along with potential public access opportunities along the Bronx Kill, and preparation of a site restoration and monitoring plan. In addition, Great Ecology performed baseline ecological monitoring of the marsh in summer 2023. Monitoring parameters included elevation profiles, permanent photo-stations, vegetation community structure, porewater salinity, soil characteristics and the abundance of natant macrofauna (ribbed mussels and fiddler crabs). A wetland functional assessment was also performed using the Evaluation for Planned Wetlands (EPW) methodology. Anticipated future project tasks include advancing the conceptual restoration plan to construction drawings, performing onsite construction monitoring, and performing post-construction ecological monitoring. Great Ecology will also work with NYC Parks to conduct a feasibility-level assessment of potential on and offsite mitigation alternatives.





Concept restoration of Randall's Island Salt Marsh.

West Pond Living Shoreline

Queens, NY | Jamaica Bay-Rockaway Parks Conservancy

West Pond, and its neighboring impoundment East Pond, are one of the few remaining sources of fresh water within Jamaica Bay due to historic conversion of freshwater marshes to urban development over the last two centuries. They serve as critical habitat for local species and migrating birds along the Atlantic Flyway and are under increasing threat from rising sea levels. Great Ecology provided ecological guidance on the design and engineering of a living shoreline project at the Jamaica Bay Wildlife Refuge to restore and protect a stretch of eroding levee along the southern portion of West Pond. Great Ecology also led the regulatory approval process and provided construction oversight to ensure successful implementation.

The team developed a comprehensive, sustainable living shoreline design that restored almost 15 acres/2,600 linear feet of coastal salt marsh habitat which improved resiliency of the shorelines, protected sensitive habitat areas, and provided new habitat for local wildlife. Restoring and establishing coastal saltmarshes in a highly dynamic system such as Jamaica Bay has proved challenging in the past given the strong erosional forces that exist from wind and wave action. To solve this issue, the project team designed a pilot series of integrated and overlapping erosion control structures (coir logs, shell-bag breakwaters, and tree vanes) that protect the marsh and allowed newly planted vegetation to take root.

In 2022, the West Pond Living Shoreline project received an Honor Award for Design by both American Society of Landscape Architects (ASLA) National and the New York Chapter.



Aerial view of erosional control structures and newly planted wetland vegetation.

Sherman Creek Living Shoreline Design

New York, NY | New York Restoration Project (NYRP)

Sherman Creek Park, a collection of small urban green spaces along the Harlem River, is an important natural resource for the densely urbanized Washington Heights neighborhood. Great Ecology, along with Dirtworks Landscape Architecture and Rippled Waters Engineering, is developing conceptual designs for a living shoreline project to restore and protect wetland habitat along the park's riverfront. The project site provides critical habitat for a variety of estuarine and terrestrial wildlife, and is experiencing erosion and habitat loss.

Great Ecology is conducting environmental assessments, developing ecological guidance, and creating conceptual designs for the project. Ongoing and anticipated services include: data collection, field investigations, and analysis of sediments, topography, tides and salinity, hydrodynamics, and habitat; conceptual designs and budgeting; and community and stakeholder meetings/coordination.



Dr. David Yozzo and Chase Mathey organizing samples taken during site assessments.



California Central Coast Habitat Restoration & Mitigation Bank Planning

California | Chevron

Great Ecology led the development of a beneficial site re-use program for Chevron, assessing dozens of degraded surplus and buffer properties along the central California coast, ranging in size from 300 to 3,200 acres. Using extensive ecological knowledge and experience in habitat restoration, Great Ecology developed a strategy to generate mitigation and conservation banking credits from their land portfolio through habitat restoration, development of publicly accessible hiking and biking trails, creation of viewpoints, and other key features. Evaluations involved in-depth assessment of regional ecosystem markets and preliminary analysis of site conditions and potential for ecological uplift at the site-specific and landscape level. Mitigation options were ranked based on project feasibility, habitat type, mitigation credit type, and other key factors.

Great Ecology's evaluations and restoration planning informed Chevron's decisions regarding mitigation banking as a strategy to monetize their surplus and buffer properties onsite. The program concluded with development of a support document to guide the project managers and decision-makers in identifying the highest and best use of their degraded surplus sites across the region.



Potential mitigation bank site.

Little Thompson River Riparian Restoration

Lyons, CO | Big Elk Meadows Community Association

Great Ecology provided ecological design and Section 404 permitting services for the restoration of over one mile of riparian corridor along the Little Thompson River near Lyons, CO. Following devastating floods of September 2013, the Big Elk Meadows community faced a major infrastructure reconstruction process, including the reconstruction of earthen dams and the community's water supply system. The floods scoured the ponds, loosened sediment, wiped out wetland and riparian habitat, and eroded banks adjacent to residential property and roads.

Big Elk Meadows Association engaged Great Ecology to develop riparian and wetland restoration plans to address the unstable banks, abundance of mobile sediment, and reestablishment of riparian and wetland habitat along the Little Thompson. Great Ecology developed schematic alternatives that proposed a range of improvements, from native planting and seeding to regrading banks and employing bioengineering stabilization measures. Great Ecology ultimately worked with Big Elk Meadows to develop a preferred schematic design that addressed project objectives within the available and anticipated construction budget.

The proposed restoration design would reestablish wetlands and riparian habitat, reshape and stabilize eroded banks, reduce sedimentation of ponds, reduce sediment entering the community's water supply intake, and restore the corridor's natural aesthetic. The reestablished habitat would provide a multitude of ecosystem services that benefit water quality, terrestrial and aquatic wildlife, and the Big Elk Meadows community.

Great Ecology's work on this project won the ASLA-Colorado Merit Award for Flood Restoration in 2015.





Conceptual design of the riparian restoration.

Chatfield Reservoir Expansion Offsite Mitigation

Douglas County, CO | Chatfield Reservoir Mitigation Company, Inc.

Great Ecology served as the offsite habitat mitigation consultant for a water storage expansion project at the Chatfield Reservoir in Douglas County, CO. The project was expected to impact wetland, tree, and bird resources, as well as critical habitat for the federally endangered Preble's Meadow Jumping Mouse. Great Ecology conducted thorough assessments to identify potentially suitable mitigation properties, reached out to property owners to understand property availability, and conducted vegetation assessments and ecological functional assessments for stream channels, riparian, and upland areas within the Douglas County-designated Riparian Conservation Zone. We also conducted Phase I Environmental Site Assessments and developed baseline documentation for the priority mitigation sites. The project required extensive coordination with Douglas County Open Spaces and Natural Resources, the US Army Corps of Engineers (USACE), and multiple other organizations and regulatory agencies.

Ultimately, two properties totaling more than 2,500 acres of habitat in Douglas County were permanently protected as part of the mitigation project. Great Ecology developed habitat management plans for these sites and conducted mitigation site monitoring for a threeyear period.



Great Ecology staff conducting an assessment of a potential mitigation site.

Roeliff Jansen Kill Riparian Corridor Restoration

Taconic State Park, NY | MKW + Associates

Great Ecology, in collaboration with MKW + Associates, prepared a set of conceptual design alternatives for stream corridor and riparian buffer enhancement within a section of the Roeliff-Jansen Kill, one of the Hudson River's largest tributaries, located within the Taconic State Park. Great Ecology's tasks included performing a data gap analysis for the Roeliff-Jansen Kill watershed and conducting field surveys of the three-mile study area. This included water quality measurements, a visual assessment analysis (using NYSDEC's "WAVE" protocol), a riparian and streambank vegetation survey (with emphasis on nonnative, invasive species), and a preliminary assessment of stream macroinvertebrate assemblages. Great Ecology also reviewed conceptual designs for riparian buffer and stream corridor enhancement alternatives, developed project implementation cost estimates, and developed a matrix of anticipated permits.

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Riparian corridor restoration plan.

Brooklyn Bridge Park Ecological Design

Brooklyn, NY | Brooklyn Bridge Park Development Corporation

Great Ecology served as the ecological designer on the Michael Van Valkenburgh Associates team, contributing strategic design and technical expertise to the conversion of the East River industrial piers into recreational areas, which provide public access to restored native coastal and intertidal coastal habitats. This included an evaluation of similar restored habitats; a vegetative survey of the pre-restoration park site; and an ecological summit that covered a variety of topics including the current vegetative conditions, the growing medium and hydrological conditions, and proposed improvements for creating ecological uplift.

As part of this uplift, Great Ecology was integral to the planning and design of freshwater wetlands, tidal wetlands, and tidal pool features. Additionally, Great Ecology helped design a cove that utilized white cedar stumps for aesthetic appeal and habitat creation. Careful analysis was done on appropriate placement of these stumps to enhance depositional structure on the shoreline. To better manage stormwater and inundation, Great Ecology helped design the swale system throughout the park, including determining elevations, dimensions, planting substrate, and plant species. Some of these swales are specifically designed to retain stormwater, and allow it to be filtered by plants, before it enters the East River.

Brooklyn Bridge Park represents one of the most important interfaces between ecology and urban public space in the United States, and is one of the City's most spectacular public spaces.



View of the wetlands at Brooklyn Bridge Park.

Sanderson Gulch Redesign

Denver, CO | ICON; Valerian Landscape Architecture

Great Ecology provided ecological design to the ICON team in redesigning a reach of Sanderson Gulch from the confluence with the South Platte River upstream past Lipan Street in southwest Denver. Sanderson Gulch has a 9.7 square mile drainage area with 100-year flows exceeding 3,200 cubic feet per second (CFS). The drainageway was redesigned to remove nearly 100 homes and businesses from the FEMA regulated floodplain, improve ecological function of the channel, and contribute to water quality improvements for the watershed. Additionally, local public infrastructure is better protected and public safety during storm events has improved.

Great Ecology led the ecological stream and wetland design, planting plan and plant palette development, as well as maintenance strategies and construction administration support for the project. This involved designing the open channel and wetland system to include overbank, vegetated bioswales that assist with water quality improvements in conjunction with a water quality vault. Great Ecology also implemented a pilot study of the use of wood chips as a weed control mechanism by altering soil chemistry to favor native species. The pilot study included a series of test plots to successfully demonstrate the effect, ultimately offering a new weed control tool to Denver Parks and Recreation that uses a forestry by-product to help establish native seeded areas.



Restored natural channel and new drainage area post-implementation.



Ecological Restoration of NYC Parks -McGuire Field & Four Sparrow Marsh

New York, NY | MKW + Associates

Great Ecology provided ecological guidance and technical services for a suite of habitat restoration, planting, and design plans along a portion of the Belt Parkway system in New York City. Areas of focus included salt marsh and upland areas of significant ecological and cultural value. The plans included protection and restoration of natural resources, opportunities for habitat connectivity, restoration of hydrologic function, and salt marsh and adjacent upland restoration. Great Ecology led multiple environmental components including completing a wetland delineation; developing an understanding of current site ecology through two season plant and focal species surveys within the study area; and developing an ecological framework for the restoration of upland forest and coastal salt marsh communities. Great Ecology also worked with team landscape architects in the development of design plans for the project, including providing design input and preparing plan and design specifications based on data collection and analysis; invasive species management; and planting plans.

Great Ecology will provide construction administration services when the projects move to the construction phase in 2024.



Great Ecology & project team staff performing an analysis of current marsh conditions.

Cleveland Harbor Eastern Embayment Resilience Study (CHEERS)

Cleveland, OH | Cleveland Metroparks

The Cleveland Harbor Eastern Embayment Resilience Study (CHEERS) sought to transform Cleveland's Lake Erie shoreline by leveraging nature-based solutions to improve the environment, reconnect communities to the waterfront, enhance public health and wellness, bolster the economy, and improve Lake Erie's natural resources. A year-long feasibility study, completed in 2022, evaluated the feasibility of several proposed alternatives for the redevelopment and ecological enhancement of a former industrial waterfront space.

Great Ecology provided ecological guidance to WRT for this feasibility study on the conceptual design, engineering constraints, and permitting strategies. Specific project tasks undertaken by Great Ecology included an environmental/ecological data gap analysis, participation in community-based shoreline visioning events, and identification of site-specific approaches to increase shoreline resilience and improve aquatic and shoreline habitat, while also maintaining/improving public access. The CHEERS project is currently in the Public Engagement Phase (as of Fall 2023) and moving towards implementation along with parallel efforts to improve transportation networks and increase public access to Lake Erie.





CHEERS conceptual design, courtesy WRT.

Select Landscape Architecture Projects



La Lomita Park Ecological Design

Denver, CO | Studio CPG; Enginuity

Great Ecology led the full redesign of La Lomita Park in southwest Denver, previously known as Asbury & Tejon Park, in collaboration with Denver Parks and Recreation. The former small neighborhood park included a recreational grass area and contained a concrete swale stormwater detention facility. The redesign focused on creating an ecological space residents feel connected to, while updating existing playground features and implementing a nature-based stormwater system.

To improve site stormwater quality before it entered the South Platte River, our design replaced the existing concrete system with a vegetated detention basin and trickle channels. These features utilize a plant palette of native vegetation that naturally improves water quality of runoff and can withstand significant water collection in the case of largescale rain/snowstorms. The new system also improves the park's aesthetics, enhancing the green space and providing additional habitat for local species.

In line with the ecological and community goals of the project, La Lomita's redesign provided additional playable space for park users by introducing nature play features such as a rock pathway across the trickle channel, log stairs, "ghost grove" log mound, and a bear cub climbing sculpture. Nature play encourages park users to enliven their senses and promotes exploration and imagination. Additionally, by improving sightlines and lighting throughout the park, upgrading play structures, and installing water quality monitoring stations, Great Ecology created a public space that meets multiple, sometimes competing objectives.

La Lomita Park, recipient of awards for both sustainability and innovation, demonstrates the effectiveness of resilient, low-maintenance park design in urban areas.



Vegetated detention basin at La Lomita Park., courtesy Denver Parks.

Schwartzwalder Visioning

Golden, CO | Private Owner

The Great Ecology team developed a conceptual ecological restoration strategy for over 500 acres of land surrounding the former Schwartzwalder Mine, once the largest uranium mine in the United States. This strategy focuses on ecological vitality, beauty, and richness, while encouraging adaptive and low impact development. Great Ecology developed renderings that included planned features such as restored wetlands and a natural surface walking path alongside Ralston Creek. Previous redevelopment plans envisioned by Great Ecology for the site included a potential luxury residence and ranch with habitat restoration plans identified throughout the site.





Conceptual restoration design.

Hunter's Point South Waterfront Park Wetland Design & Permitting

Long Island City, NY | NYC Economic Development Corporation

Great Ecology served as the ecological consultant on the Arup and SWA/Balsley team for Phase II of the Hunter's Point South Infrastructure and Waterfront Park Project. The 37.5-acre former industrial site was revitalized into a landmark green space and commercial area in the heart of New York's urban area.

In support of Phase II, Great Ecology designed the approximately ~1-acre tidal wetland mitigation and habitat creation in addition to extensive permitting support, including a Wetlands Functional Analysis. The wetlands were designed to fit seamlessly into the park and serve as both a functional and aesthetic focal point, connecting visitors with the native wetland habitat while providing storm surge and sea-level-rise buffering.

Our staff conducted an Evaluation of Planned Wetlands to quantify the wetland functional capacity of the pre-existing wetlands. The EPW informed design modifications to enhance ecological function and uplift of the proposed wetlands, resulting in a reduced amount of compensatory acreage required by the U.S. Army Corps of Engineers. The project required extensive coordination between stakeholders and city, state, and federal agencies including the NYC Department of Transportation, NYS Department of Environmental Conservation, and the U.S. Army Corps of Engineers



Wetlands at Hunter's Point South Waterfront Park, courtesy NYC Parks.

Globeville Landing Park Stream Restoration & Outfall Ecological Design

Denver, CO | Denver Parks & Recreation

Great Ecology served as the ecological consultant on the Merrick & Company team for the design and restoration of the Montclair Creek stormwater outfall as part of the Globeville Landing Park redesign project. The Creek lost most of its ecological function due to decades of impacts from urbanization and had mostly served as a concrete stormwater conveyance system. The Park is located in a dense, urban historically marginalized neighborhood and part of the Vasquez Boulevard and I-70 Superfund Site.

Great Ecology provided ecological and design expertise, as well as construction oversight, on the daylighting of the stormwater system. This included creation of the stream open channel to replace the concrete stormwater system, park integration, and floodplain reconnectivity that restored the ecological function of the Creek within Globeville Landing Park. The open channel features native vegetation and provides natural filtration for stormwater as it meanders through the stream before entering the South Platte River. The revegetation approach within the channel included an innovative strategy that modified soil chemistry to minimize the establishment of invasive weeds and encourage native species growth. The new channel design was based on the ecological functionality of native streams and rivers, and provides the local historically-marginalized community with a valuable natural resource.

The Park is now frequently used by residents of nearby communities as well as those who utilize the South Platte River trail for recreational and commuting purposes.





View of the restored natural channel at Globeville Landing Park.

Town of Rico Long-Range Planning

Rico, CO | Confidential

Great Ecology was contracted in 2020 by a confidential client to prepare a planning document that encapsulates a long-range vision for potential recreation and habitat restoration opportunities within and near the Town of Rico, CO. Great Ecology's role included data gathering, site analysis, program definition, field reconnaissance, and onsite meetings, culminating in the development of the Town of Rico, Colorado Land Use Study & Conceptual Plan. To support implementation and expansion of the 2020 long-range vision, Great Ecology returned to Rico in 2023 to conduct ecological site assessments on properties surrounding the Town. Our interdisciplinary team developed a comprehensive evaluation and prioritization matrix to guide strategic development in alignment with the 2020 conceptual plan. As of 2024, Great Ecology continues to advise strategic planning, design, and ecological decisions for this project.



Great Ecology staff in the field near Rico, CO.

Croton Water Filtration Plant Wetland Design

Bronx, NY | NYC Dept of Environmental Protection

The Croton Water Filtration Plant is a landmark water infrastructure project in Bronx, NY built 80-feet underground and topped with a nine-acre green roof, the largest in the United States. Great Ecology served as the ecological consultants on the Grimshaw Architects team for the planning and design of a green infrastructure project to treat stormwater and groundwater onsite for irrigation use. The resulting design features multiple constructed wetland habitat cells around the perimeter of the facility that utilize native plants to naturally improve water quality. The wetland habitat designs were influenced by the natural landscapes of the Bronx and surrounding New York region. In addition, Great Ecology provided design support and plant palette recommendations for swale located around the site.

As part of this work, Great Ecology produced construction drawings, participated in value engineering and construction scheduling, designed an operations and maintenance program for the client, and interfaced extensively with the NYC client stakeholders.

Great Ecology provided construction oversight of the wetland cells, and as of January 2024, is performing post-construction monitoring to ensure the wetland cells meet success criteria.





Chase Mathey conducting monitoring of the wetlands cells.

First Creek Nature Play Park

Denver, CO | Denver Parks & Recreation; Mile High Flood District

Great Ecology provided ecological design support to the Jacobs Engineering project team for the redesign of a reach of First Creek into a six-acre nature play themed park, the first of its kind in Denver. Great Ecology developed habitat restoration designs that function within the context of the landscape and create natural spaces that engage park users in a way that enlivens the senses and encourages out-of-the-box play. This included a native planting plan that is conducive to exploration and imagination while still being resilient and low maintenance considering over half of the park sits within the floodplain. Great Ecology also provided guidance on the creation and placement of nature play features throughout the park, from strategically placed rocks for hopping to shallow streams for wading. Nature play features help bring children and adults closer to nature in a fun and sustainable way.

During project implementation, Great Ecology provided construction oversight and led the post-construction adaptive management program to ensure the ecological goals of the project were met. This included invasive species management and wetland mitigation establishment.



View of First Creek after restoration.

Winter Harbor Eco-Community Master Plan

Winter Harbor, ME | Winter Harbor Development Corporation

Great Ecology developed an ecological master plan and ecological education program for a 3,300-acre eco-community planned near Winter Harbor, adjacent to Acadia National Park. Our designers conceptualized a site plan that included innovative environmental centers designed to provide hands-on educational opportunities while generating a positive impact on the ecological integrity of the region. Great Ecology also developed educational programming for the centers with activities focused on marine intertidal and wetland habitat, beaver ecology, raptor species identification, forest restoration, and realtime wildlife tracking. The educational programs would support the rehabilitation of injured birds, re-establishment of jack pine ecological communities, and the creation of a large dataset on the movements and interaction of wildlife and humans. Our team led numerous stakeholder discussions and presented the eco-community plan to Governor John Baldacci.





Select Planning & Permitting Projects



Phosphate Mine Permitting, Mitigation, & NRD Strategy

Soda Springs, ID | Agrium

Great Ecology served as the lead consultant on the novel application of Habitat Equivalency Analysis (HEA) to National Environmental Policy Act (NEPA) permitting of a large phosphate mine in Idaho. Great Ecology was part of a large project team including the Bureau of Land Management (BLM), other consultants, and mining companies to develop the unique HEA application - which may be replicated on other projects across the country. Great Ecology validated the BLM's HEA model and utilized HEA and other functional assessments to evaluate and identify onsite mitigation and offsite habitat restoration alternatives that offset potential mining impacts. Mitigation projects were designed and implemented following the Record of Decision in 2016. Additionally, Great Ecology conducted the wetland delineation and permitting in compliance with the mine permitting process. Great Ecology also evaluated remedial sites and potential mitigation properties to determine the value of natural resource services across the region.

Solar Facility Permitting & Visual Impact Study

Anaheim, CA | Confidential

Great Ecology led site research on the potential land use and environmental impacts of a proposed 30-acre solar facility development in Anaheim, CA in support of an Initial Study for California Environmental Quality Act. To inform site design, permitting plans, and improve community outreach efforts, Great Ecology conducted a visual impact study to determine the level of viewshed impact from the solar array. Utilizing GIS analysis and 3D modeling software, we created scale accurate renderings to determine ideal locations for plant installations to reduce viewshed impacts and serve as outreach materials to inform the surrounding communities.



View of potential mitigation site.





Aerial rendering of solar facility.

El Monte Valley Aggregate Mine Permitting & Mitigation Planning

Lakeside, CA | Confidential

Great Ecology is leading the development of an environmental permitting pathway, including an initial CEQA consultation and writing, and mitigation planning for a proposed aggregate mine in eastern San Diego County. Our team has coordinated with the appropriate regulatory agencies, including the County of San Diego, for development of this pathway. Great Ecology has conducted extensive environmental assessments onsite including wetland delineations, vegetation mapping, and other geospatial and drone mapping to inform permitting and mitigation planning. This mitigation addresses potential impacts to riparian and upland habitat at the roughly 400-acre site along the San Diego River.

Cottonwood Sand Mine Revegetation Visioning

El Cajon, CA | Confidential

Great Ecology was engaged by a confidential client to develop conceptual plans that address habitat mitigation requirements for a proposed sand mine in San Diego County both during mine operations and post reclamation. The landscape concepts developed would promote visual and auditory buffering during mining operations, while also increasing perimeter biodiversity. After mining operations were complete, Great Ecology proposed a sculptural restoration concept that would increase habitat value and community access to the restored site. This featured an undulating landscape design that proposes several different high-low elevation planting communities, with fire strategic species embedded in each zone. As of 2024, Great Ecology continues to provide ecological and design consultation services as the project advances.



Aerial view of the El Monte Valley.



Conceptual rendering of Cottonwood Sand Mine mitigation plan, post-implementation.



Pelham Bay Bridge NEPA Environmental Assessment

Bronx, NY | WSP USA

Great Ecology, under contract to WSP USA, completed the natural resources component of the National Environmental Policy Act (NEPA) Environmental Assessment for Amtrak's replacement of the Pelham Bay Bridge over the Hutchinson River. The existing rail bridge has been in service for 110 years, well past the normal life span of a movable bridge and is prone to operational failures. The proposed bridge replacement project will improve passenger rail service on Amtrak's Northeast Corridor by eliminating bridge-related delays and increasing train travel speeds, while improving navigation and maritime safety in the lower Hutchinson River.

Great Ecology's role included updating a 2014 wetland delineation within the project's Limits of Disturbance (LOD), including both tidal and non-tidal wetland resources; updating a 2014 threatened and endangered species screening and sites assessment, including file searches and coordination with the New York State (NYS) Natural Heritage Program; and initiating consultation with the U.S. Fish and Wildlife Service (USFWS) for Endangered Species Act (ESA) Section 7 Permitting, and National Oceanic and Atmospheric Administration's (NOAA) Fishery Service for Essential Fish Habitat (EFH) assessments, including preparation of an EFH worksheet and supporting documentation. The results of the above assessments and field surveys culminated in an "Effects Determination" memorandum, which formed the basis of the Natural Resources section of the Environmental Assessment.

As of May 2024, Great Ecology continues to provide ongoing support for this project including environmental assessments, permitting, and mitigation planning.



Great Ecology staff conducting a site assessment.

Valley Center Solar Facility Permitting Plan

Valley Center, CA | Summit Renewables

Great Ecology prepared a permitting plan for a proposed 139-acre solar photovoltaic facility in northern San Diego County. The plan provided detailed steps and potential cost estimates to receive all the necessary land use and environmental permits required for a solar development. Great Ecology also prepared a preliminary initial study of the subject areas covered under CEQA to identify opportunities and constraints for the project design and engineering process, including evaluation of the site's natural resources and an onsite biological assessment. Using this information, Great Ecology and the client consulted with the CEQA lead agency and land use permitting authority to identify the pathway to line of sight for the project. To garner support and streamline the permitting process, Great Ecology included a stakeholder engagement strategy as a component of the permitting plan.





Conceptual site plan.

Lamar Street Apartments Wetland Delineation & Section 404 Permitting

Lakewood, CO | RPDG Lamar Street, LLC

Great Ecology was engaged by RPDG Lamar Street, LLC to conduct a wetland delineation and Section 404 permitting on a 3.88-acre property for the proposed construction of a four-story, 293-unit multi-family apartment complex. The proposed design included a stormwater outfall system that would drain into the adjacent Dry Gulch, a perennial waterbody that flows into the South Platte River. In total, 119.6 linear feet of Dry Gulch was assessed. Additional project features included utilities, offsite street improvements, and a stormwater conveyance network.



View of existing perennial waterbody.

Ooms Conservation Area Wetlands Delineation & Permitting

Chatham, NY | Dirtworks Landscape Architecture

The Ooms Conservation Area, located just outside of the Village of Chatham, Columbia County, NY, includes three miles of trails on 180 acres of land and offers visitors year-round opportunities to enjoy the rolling grasslands around Sutherland Pond. An existing boardwalk connecting trail segments encircling the pond has fallen into disrepair and is in need of replacement, to ensure the safety of visitors to the area. Great Ecology performed a jurisdictional wetlands delineation and led the environmental permitting effort, in collaboration with the Columbia Land Conservancy and Dirtworks.

Great Ecology's role in the project was to conduct a jurisdictional wetlands delineation, in accordance with the 1987 U.S Army Corps of Engineers Wetland Delineation Manual and Regional Supplement, and to review design plans and specifications for the replacement boardwalk. In addition, Great Ecology coordinated the environmental permitting effort with the New York State Department of Environmental Conservation (NYSDEC), which included preparation of a NYS Article 24 Freshwater Wetlands Permit application.





Great Ecology staff performing wetland delineation.

Select Natural Resource & Assessment Projects



Hudson Highlands Fjord Trail Master Plan **Ecological Surveys & Review**

Beacon, NY | About the Work

Great Ecology is providing ecological restoration consulting services for the Hudson Highlands Fjord Trail (HHFT) project, a proposed 7.5-mile linear park located between Beacon and Cold Spring, NY that will run parallel to the Hudson River. The goal of the project is to provide greater access to the Hudson River and Highlands by creating a park and trail system that connects to existing trails, designed with a focus on ecological restoration and resilience.

Our team is conducting natural resources assessments, wetland delineations, and tree surveys and assessments to document the existing habitats and site conditions. In addition, Great Ecology is reviewing the proposed master plan documents to recommend strategies to protect, enhance, and restore the habitat and natural resources within the park. These activities contribute to the overall park design and implementation of the Master Plan for the HHFT.



View of the Hudson Highlands Fjord Trail.

Oakdale Lake Water Quality & Community **Education Program**

Hudson, NY | Friends of Oakdale Lake; Columbia Land Conservancy

Great Ecology was contracted by the Columbia Land Conservancy and the Friends of Oakdale Lake to develop a water quality improvement plan for the five-acre Oakdale Lake in Hudson, NY. Great Ecology managed extensive water quality assessments and developed a citizen- scientist led water sampling program to understand existing conditions, track water quality changes on an annual basis, and collect other important data points such as mapping previously unknown stormwater outfalls in the watershed.

Data collected by volunteers was merged with additional sediment and benthic invertebrate sampling completed by Great Ecology to understand existing conditions and potential sources of water impairments. These studies revealed that Oakdale Lake contained excess nutrient loads as a result of runoff from the surrounding watershed, resulting in significant algae blooms leading to die-off of submerged aquatic vegetation (SAV) and depletion of oxygen. To address these issues, Great Ecology developed, and continues to support the implementation of, a multiple-year water quality management plan utilizing various methods such as barley straw application, SAV harvesting, and air diffuser usage.

As part of this project, Great Ecology has had the opportunity to connect with the Hudson community through educational sessions, town halls, and interactive field trips for local schools. This includes developing informational signage regarding lake conditions and management actions. Additionally, we have helped the Friends of Oakdale Lake coordinate with local public and private stakeholders to improve and maintain water quality, and identify future project opportunities for projects that may be eligible for public and private grant support.





Citizen-scientist performing water sampling at Oakdale Lake.

Denver Parks & Recreation Landscape Typology

Denver, CO | Denver Parks & Recreation

Great Ecology was contracted by the City of Denver Department of Parks & Recreation (DPR) to develop a digital tool that identifies the various landscape types over thousands of acres of DPR managed lands for the purpose of asset tracking and management. DPR's goal was to understand the total acreage, landscape attributes, and maintenance costs of different landscape types on DPR properties to help inform restoration priorities and maintenance actions, improve resiliency and biodiversity amongst park spaces, and guide new park and greenway design with data-driven decision making.

Great Ecology utilized a Landscape Typology process that included gathering information for the development of a geodatabase covering 4,095 acres across Denver, including information on nine different landscape types and 15 sub-types. The process of Landscape Typology involved categorizing landscape and vegetation types using a combination of geospatial desktop analysis (mapped at the 0.25 acre scale) and in-person field surveys. The range of data collected and scored for overall health includes: diversity of species, wildlife presence, site aesthetic, public access, ecological connectivity, water quality, and streambank/shoreline condition and type, to name a few. The geodatabase allows DPR and Denver Mile High Flood District (MHFD) to pull detailed, site-specific data on a scale ranging from an individual landscape typology to city-wide data in aggregate. DPR and MHFD are using these data to determine basic statistics like acres by habitat type, to more complex analyses, such as the average typology function overlaid with an area's irrigation input or levels of maintenance to determine water conservation opportunities.

In addition to development of the Landscape Typology geodatabase, Great Ecology developed maps that highlighted landscape type(s) within parks and created a publicfacing manual to inform the public about Landscape Typology, native landscape types, and benefits of implementing Landscape Typology. The manual is also used by DPR and MHFD staff to inform updates for the geodatabase, specific management techniques to best manage different landscape types, and the implications of a parkscape moving from "high functioning" to a lower level of functioning.



Graphic developed for the Landscape Typology manual showing a cross section of park typology.

Cherry Creek Greenway

Denver, CO | Mile High Flood District

Great Ecology provided ecological guidance for the redesign and stabilization of a onemile reach of Cherry Creek in Denver, CO. The reach from Iliff Avenue to Quebec Street had experienced significant vertical and horizontal movement as the result of increased urbanization and routinely high flows resulting from U.S. Army Corps of Engineers maintenance of Cherry Creek Dam upstream from the project site. The substrate in the reach is predominantly sand which further complicates stabilization options.

Great Ecology provided an ecological assessment of the corridor, including collecting soil samples, provided ecological design recommendations, develop seed and plant mixes, soil recommendations based on existing site conditions, and biostabilization and revegetation construction oversight.

The final Cherry Creek Greenway design reconnected the redesigned floodplain with the channel and added water quality stilling basins at stormwater outfalls to further reduce peak flood events and improve water quality by infiltration and plant uptake. It also added new trails and bridge crossings to increase recreational uses of the corridor.





Aerial view of the Cherry Creek Greenway, courtesy Stream LA.

South Platte River Vision Ecological Planning & Assessment

Adams County CO | Mile High Flood District; Adams County

The Adams County South Platte River Vision and Implementation Plan, led by the Mile High Flood District (MHFD) and Adams County, developed a long-term vision for the South Platte River's regionally significant river corridor with emphasis on defining strategies to address both the needs of the river and the local community through river restoration and recreation projects.

As part of the consultant team, led by Design Workshop, Great Ecology provided ecological assessment and planning services with the goal of creating a more connected and ecologically functional river corridor. This included conducting field and desktop-based habitat surveys, vegetation typology, wetland delineations, and guidance for restoration opportunities and constraints.

Grape & Fir Biological Resources Survey

San Diego, CA | F&F Inc

Great Ecology prepared a biological resources report for a proposed residential development project in the City of San Diego. The project is located within the San Diego Multiple Habitat Planning Area (MHPA) and the San Diego Multiple Species Conservation Plan (MSCP) Subarea Plan; as such, the City required a biological resources survey for the project developer to obtain a construction permit. Great Ecology reviewed pertinent local and regional documentation to ensure reporting compliance with the MHPA and MSCP, determining any onsite or nearby biological resources would not require mitigation. The biological resources report was used as support for the project to move forward without any required mitigation measures.



Great Ecology staff along the South Platte River.





Great Ecology staff determining biological resources.

Lake San Marcos Biological Investigations & Litigation Support

San Marcos, CA | Citizen's Development Corporation

For more than nine years, Great Ecology conducted biological and hydrological investigations of Lake San Marcos, a 303(d)-listed nutrient-impaired water body in Southern California, in fulfillment of Investigative Order. No. R9-2011-0033 and in support of litigation.

Great Ecology staff worked closely with the lake owner, Regional Water Quality Control Board, public agency defendants, and the lake homeowner community to characterize the site through field sampling and laboratory analyses as part of an agency-approved monitoring plan. This included collecting water quality and dry and wet stormwater data; conducting bathymetric surveys and sediment nutrient flux surveys; and evaluating watershed hydrology and nutrient sources. In addition, Great Ecology used various approaches to evaluate the phytoplankton community, fish populations, and the potential for toxic algal blooms within the lake. With this data, our team developed a lake management strategy to address both water and nutrient-associated issues.

Great Ecology also developed the Investigation Work Plan, Sampling and Analysis Plan (SAP), Quality Assurance Program Plan (QAPP), and Health and Safety Plan (HASP) associated with the Investigative Order. From 2020-2021, Great Ecology performed extensive watershed modeling to support outside experts with ongoing litigation and identified potential habitat restoration sites within the watershed. Several Great Ecology staff also served as expert witnesses during litigation.



Great Ecology staff evaluating fish populations.

Central Park Woodlands Restoration

New York, NY | Central Park Conservancy

Great Ecology was engaged by the Central Park Conservancy to conduct a feasibility study to inform the Conservancy's restoration and management planning for Central Park's iconic woodlands habitat. This included a baseline ecological health assessment focused on the Ramble and North Woods watercourses within the Park, which ultimately informed the design of the Conservancy's subsequent restoration projects for both park areas. Specifically, Great Ecology recommended strategies that enhance both the ecological functionality and scenic character of the woodlands, balancing the impacts of heavy visitor usage and habitat degradation for one of the world's most iconic urban parks.



Great Ecology staff performing an ecological health assessment at Central Park.



Select Environmental Litigation Support Projects



Land Loss Litigation Support & Habitat Restoration Planning

Hackberry, LA | Confidential

Great Ecology provided multiple ecological services to a confidential client in support of ongoing environmental litigation and habitat restoration planning related to coastal land loss in Louisiana. Dr. Mark Laska was retained as an expert witness by legal counsel to review the State's proposed wetland restoration plan. As part of this effort, Great Ecology conducted detailed analyses to understand the environmental impact of proposed restoration plans to offset coastal erosion in Louisiana. In addition, our team prepared an overview of historical sites and ecological conditions to inform the development of regional wetland restoration opportunities and a conceptual master plan near the Sabine National Wildlife Refuge and the Calcasieu Estuary. The case settled in 2023.



Associate Ecologist, Chase Mathey conducting a site visit in Louisiana.

Private Land Wildfire Damage Assessment

Sonoma County, CA | Confidential

Great Ecology was engaged by legal counsel to assess the environmental impact to a nearly 8,000-acre private ranch that suffered extensive wildfire damage. Through onsite vegetation assessments, aerial surveys, and desktop modeling, our team quantified ecosystem service loss and habitat restoration costs attributable to the potentially responsible party. Dr. Mark Laska served as a testifying expert witness for this case.

Great Ecology's work included an arborist report covering tree mortality and observations of damage and disease in native oak trees. In addition, we developed a land management tool to inform the post-fire habitat restoration planning.





Great Ecology staff conducting a tree survey.

Ethylene Oxide (EtO) Emissions Litigation

New Mexico | Confidential

Great Ecology was retained to conduct data collection and analyses, provide litigation strategy support, and develop an expert report for litigation purposes related to air emission violations in multiple New Mexico cities. In 2021 and 2023, Great Ecology's Dr. Mark Laska was deposed as part of the ongoing case.

Air Emissions Expert Witness

Albuquerque, NM | Confidential

Great Ecology was retained on a matter regarding air pollution from the commercial sale and use of a faulty automotive product. Great Ecology evaluated how the release of specific emissions violated New Mexico air quality regulations, and whether the effects could be mitigated using habitat restoration. The expert opinion report was submitted to the court in defense of the case, and Dr. Laska was deposed as an expert to the case. The case has settled.



New Mexico landscape.





Landscape near Albuquerque.

Litigation Strategy Related to the Release of PFAS

New Mexico | Confidential

Great Ecology assisted a confidential legal client in developing strategy related to the release of per- and polyfluoroalkyl substances (PFAS) at United States Air Force bases located in the southwestern United States. PFAS are a group of man-made chemicals used for firefighting training in military installations, among many other uses. PFAS have been released into groundwater and drinking water at the installations, and there is evidence that exposure to PFAS can lead to adverse health risks in humans and ecological systems. Litigation commensed due to the Air Force's lack of action to address the contamination, and Great Ecology was engaged to provide certification in support of the motion for preliminary injunction filed in federal court.

Great Ecology's expert team was engaged to compile and evaluate data collected from the air force bases and adjacent properties, to assess potential environmental impacts from the release of PFAS. Great Ecology assisted with development of ongoing litigation strategy, including investigations to assess potential risk to drinking water from PFAS contamination.



Air Force jets in flights.

Litigation Strategy & Erosion Control Plan

Riverside County, CA | Confidential

Dr. Laska was the named expert witness to prepare an inorganic waste material extraction and disposal plan in conjunction with a long-term erosion plan for a remote, rural site located in Riverside County. Owners of the site were suing various parties for distributing a thick layer of contaminated mulch over the property, which had the potential to migrate towards and contaminate a nearby creek. Great Ecology developed a cost-effective plan to remove and dispose of the source of contamination and establish best management practices to protect the neighboring water bodies. Great Ecology's Long-term Erosion Control Plan and Inorganic Material Extraction and Disposal Plan were submitted, accepted by the Water Board, and implemented in 2018.





View of rural site in Riverside County.

Raritan River Dam Removal Assessment

New Jersey | Confidential

Great Ecology conducted a Cost-Benefit Analysis (CBA) to assess the anticipated ecological and economic uplift following the removal of three dams from the Raritan River and its tributaries in New Jersey. The dams were removed as compensation for Natural Resource Damage (NRD) claims to surface waters elsewhere in the watershed. Great Ecology used biological surveys, GIS data and published economic valuation data to evaluate existing conditions in aquatic habitats along the river corridor, and referenced the outcomes of comparable dam removals to predict the ecological costs and benefits of the three dam removals. The CBA identified an expected benefit to diadromous fish species such as American shad through the restoration of access to historic spawning areas, and additional benefits such as the flushing of sediments and improved conditions for microbial aquatic organisms.

Missouri River NRD Site Assessment & Restoration Plan

Great Falls, MT | Confidential

Great Ecology was retained as the ecological consultant by a confidential client to evaluate NRD liability and develop a strategy to reduce the client's liability through development of a site use visioning plan for the reuse and restoration of a brownfield site adjacent to the Missouri River. Great Ecology assessed upland, riparian, and riverine habitat resources for the 535-acre former refinery and smelting site and developed a vision plan including a regional park and open space that might include passive and active recreation areas and trails, scenic overlooks, picnic areas, and cultural heritage interpretive signage. Located along the Lewis & Clark trail and at the site of a famous encounter with Sacagawea, the open space area holds significant historical value.



Concept rendering showing the river post-dam removal.





Conceptual vision plan.

Our Team

Great Ecology is proud to present our highly experienced team of ecologists, environmental scientists, landscape architects, and other technical experts. Our staff combine sound ecological principles with innovative strategies to develop cutting-edge environmental solutions.

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Leadership

Mark Laska, Ph.D.

Founder & President

Dr. Laska is a leading authority in the environmental industry and a pioneer of ecological consulting, with over 30 years of experience as an expert technical consultant on over 1,400 projects across the United States and nearly a dozen countries. Dr. Laska's technical specialization includes habitat restoration, ecological planning and design, and environmental strategy. Additional focus areas include mitigation banking and supporting environmental litigation for both defense and plaintiff's legal counsel as both a testifying and non-testifying expert witness. Dr. Laska is highly experienced in taking projects of all scopes and scales from the conceptual stage through post-construction monitoring. His innovative ecological approach addresses ecological challenges and regulations while maximizing ecosystem services in a variety of ecosystem types. He has published numerous scientific papers, articles, and book chapters and frequently presents at leading environmental industry conferences.

Jill McGrady, Ph.D.

Chief Technical Officer

Dr. McGrady has over 15 years of consulting experience in ecological restoration, where she specializes in Natural Resource Damage Assessment and Restoration (NRDAR), natural resource evaluations, and natural capital investment strategies. She oversees a number of Great Ecology's restoration and mitigation projects, which focus on assessment of natural resource service losses, evaluation of mitigation alternatives, planning to fulfill mitigation requirements, and environmental studies following impacts from mining, refinery, oil spill, and other contamination events. Dr. McGrady has managed several projects with an expert witness component and leads the administrative and confidential aspects of the firm's litigation support projects. She brings extensive knowledge of project management and technical expertise in aquatic ecosystem structure and function. She has multiple publications in leading academic journals.

Mark Myers

Vice President

A seasoned environmental consultant with over 30 years of experience, Mark specializes in managing complex, large-scale environmental projects and programs for private sector, municipal, and government entities. He brings considerable experience with client services, developing and growing relationships through the delivery of successful projects that are directly aligned with client objectives, critical success factors, and best interests. Mark's technical skill set spans several areas crucial to environmental consulting including expertise in water quality, environmental compliance, asbestos, soil and groundwater remediation, and stormwater management.

Leadership

David Yozzo, Ph.D.

Vice President, Habitat Restoration Program

Dr. Yozzo is a nationally recognized environmental scientist with nearly 30 years of experience in ecosystem restoration, urban ecology, wetland community ecology, and resiliency. He has designed and conducted environmental assessments for habitat restoration, compensatory mitigation, navigation, transportation, and power delivery programs throughout the United States. He also brings extensive experience as a wetland expert for the design and implementation of habitat restoration projects, waterfront parks, and other related projects. Dr. Yozzo is an Adjunct Associate Professor of Environmental Studies at Purchase College, SUNY, and serves on the editorial board of The Northeastern Naturalist. He is Past-President of the Atlantic Estuarine Research Society and has served on the Governing Boards of the Coastal and Estuarine Research Federation and the Hudson River Environmental Society.

Julie Johnstone, PLA

Director of Design & Planning

Julie is a landscape architect with nearly 10 years of experience. With a dual master's degree in Landscape Architecture and Regional Planning, her background has allowed her to excel on projects of multiple scales. The majority of Julie's project experience has included master plans, feasibility studies, K-12/Higher Education campus and site design, park and trail planning/design, and commercial campus landscapes. Her present focus is on developing landscape designs and master plans which simultaneously address diverse community needs while promoting ecological balance and restoration. She has designed and implemented public participation strategies for comprehensive plans, waterfront master plans, and sport and recreation feasibility studies. While the practical elements of design and planning are on the forefront of her mind, Julie has a keen eye for excellent design and enjoys conceptual design iterations.





Leadership

Jennie Shield, MEM

Director of Western Region Environmental Program

Jennie is an environmental professional with nearly two decades experience in environmental planning and design through ecology-based conservation and restoration activities and natural resource assessments. She provides strategic environmental planning and support through a combination of collaborative leadership, project management, and technical expertise. Jennie's professional history is rooted in her experience as a civil servant with the Department of the Navy. Most recently, as a Senior Researcher and Marine Resource Specialist, she supported the Navy's At-Sea environmental compliance and permitting process by analyzing anthropogenic impacts to marine species and habitats and potential mitigation strategies. Jennie has authored and peer-reviewed regulatory documents such as Environmental Impact Statements and Biological Assessments under the National Environmental Policy Act, Endangered Species Act, and Marine Mammal Protection Act.

Carolyn Matthews, MA, CE

Eastern Regional Director

Carolyn has over ten years of experience as an ecological consultant in New York and New England and seven years in leadership positions. She regularly collaborates with project team members and stakeholders to develop restoration and management plans for natural resources. She is a certified ecologist and has performed a range of ecological assessments in coastal and inland areas to prepare site feasibility analyses, develop mitigation plans, and prepare permit applications for local, state and federal agencies. She is also a certified arborist and has managed various urban forestry projects throughout the NYC metro area such invasive species eradication programs, tree inventories, tree risk assessments, storm damage response, and developing priority tree maintenance plans.



Technical Staff

Rex Bergamini, Ph.D. Senior Managing Ecologist

Joey Peters, Ph.D. Senior Quantitative Ecologist

Emily Hazelwood, MAS Senior Marine Ecologist

Beyhan Maybach, Ph.D. Senior Ecologist & Soil Scientist

Mike Gonzales Senior Ecologist

Emily Khazan, Ph.D. Senior Conservation Ecologist

David Osgood, Ph.D. Senior Ecologist

Melissa Tu Senior Ecologist

Alejandro Baladron, Ph.D. Senior Hydrologist

Geana Ayala, MS Associate Ecologist

Jon Green Associate Ecologist

Yani Pohl, MESM Associate Ecologist

Leslie Fisher Associate Ecologist

Liz Hartel, MS Associate Ecologist & GIS Specialist

Chase Mathey Associate Ecologist & Botanist

Jessica Druze, WPIT Associate Coastal Ecologist



Ryan Morrison, MPS, CPESC-IT Associate Coastal Ecologist

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Brittany Dell Ecologist

Courtney Horn Ecologist

Hannah Jugar Ecologist

Mitch Jenkins, MS Ecologist

Diana Navarro, MEDS Ecologist

Drake Stasyshyn Ecologist

Ellia Simmons Ecologist & Environmental Planner

Esme Faneuff Ecologist & Geologist

Kathleen Haas, PLA Associate Landscape Architect

William Stratton, MLA Associate Landscape Designer

Dongni Ma, MLA Landscape Designer

Hilary Mulford Landscape Designer

ÿ GREATECOLOGY a TETRUE ENVIRONMENTAL COMPANY

- William

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