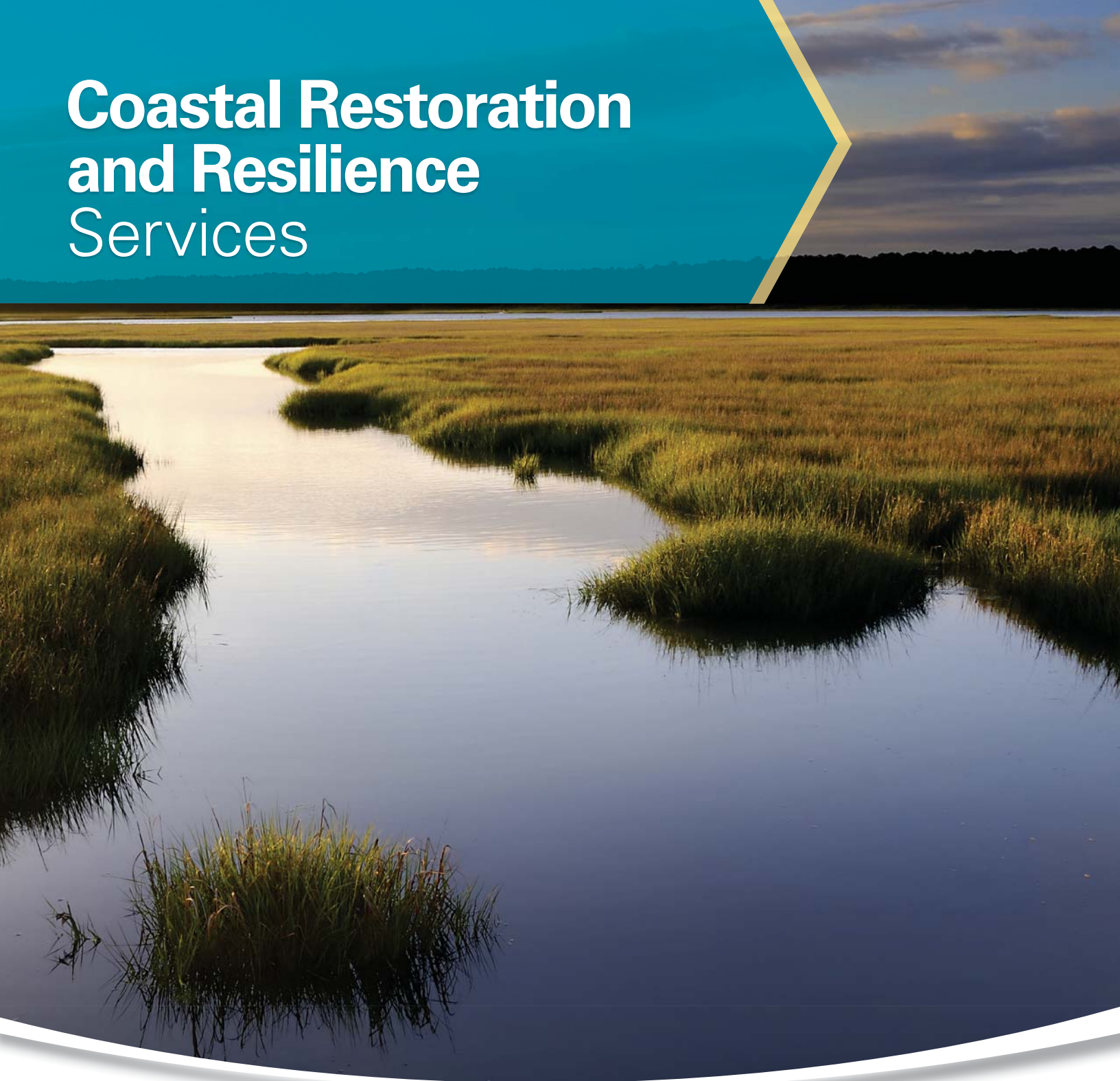


Coastal Restoration and Resilience Services

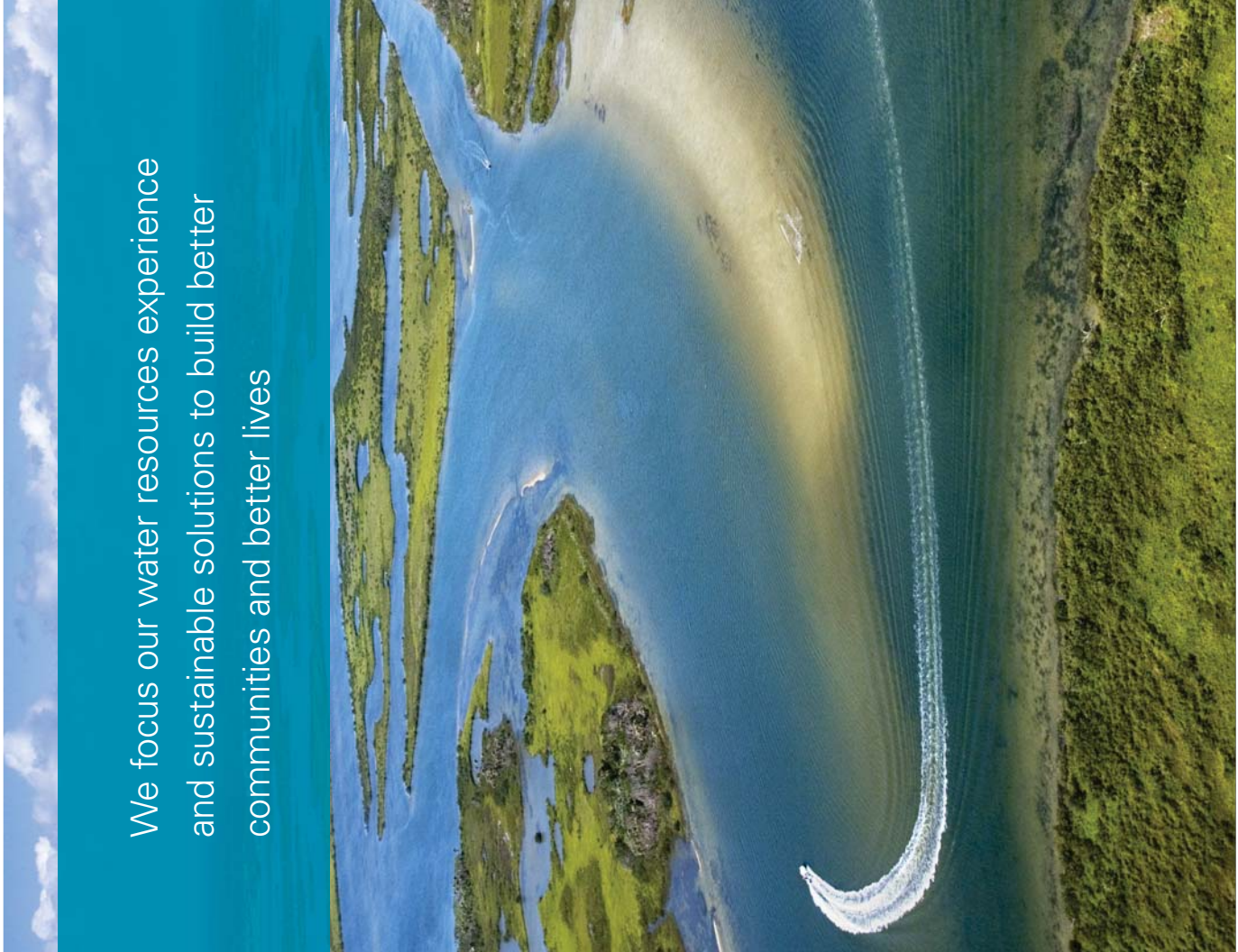


MWH®

now
part of



Stantec



We focus our water resources experience
and sustainable solutions to build better
communities and better lives

MWH, now part of Stantec, is committed to making the world's cities and coastal communities better places to live, work and invest. We apply our vast global knowledge and experience to provide innovative, sustainable and cost effective solutions for communities threatened by climate change and coastal land loss.

The increased demands on coastal landscapes and the fisheries bounty they produce will present unique management challenges for generations to come. This, coupled with relative sea level rise, will affect food security, regional stability and community resilience in many places around the world.

*Effectively managing
water is the issue that
will determine our future
quality of life and the
condition of the world we
leave for our children and
grandchildren.*

Protection and Restoration Experience

We are experienced in all aspects of protection and restoration of coastal habitats – from planning to implementation.

We bring exceptional expertise - covering every facet of the water cycle and all forms of water use – to our coastal restoration and resilience services. From the development of new water management regimes, to the preservation and restoration of coastal ecosystems, our skilled technical staff assures that we are a global leader in water resource management.

Local and Global

We utilize our global water resources management and ecosystem restoration expertise to support local partnerships and provide exceptional project results.

We value local experts and small businesses and the contributions they make. We work closely with communities on our projects to help foster their sustainability and growth. These trusted partnerships combined with past performance help us to solve water resource problems locally, and then share these successes nationally and globally.

Coastal landscapes are extremely productive areas from environmental, cultural and economic perspectives.

Climate Change and Hydrologic Variability

We can expect that larger floods and deeper droughts will be the norm going forward. Planning for and adapting to those changes – especially long-term water supply reliability – will be among the most significant challenges facing water and flood managers this century. Cities and areas that have reliable freshwater will thrive and grow. Those that don't, will struggle.

It is estimated that only 20 percent of cities around the world have developed some type of climate change adaptation plan. Most of these are overreaching, big picture documents, and much more work and detail is needed. We have the experience and the knowledge to help communities effectively plan for and adapt to future climate change.

We offer a diverse team of experts who each offer relevant experience in planning, environmental science, economic analysis, and project and program management services.

Our Coastal Restoration and Resilience Services Focus on:

- Climate Change Adaptation and Community Resilience
- Ecosystem Restoration
- Water Resources
- Vulnerability Assessment
- Regulatory Compliance and Support
- Riverine, Estuarine and Coastal Numerical Modeling
- Hydraulic and Coastal Structures
- Dredged Material Management – Beneficial Use

Signature Projects



San Joaquin River Restoration Program
US Department of the Interior,
Bureau of Reclamation
San Joaquin Valley, CA

We have provided planning, permitting, and implementation support to Reclamation for the San Joaquin River Restoration Program (SJRRP) since its inception. This historic effort to restore naturally producing and self-sustaining salmon to over 150 miles of the San Joaquin River in the California Central Valley is one of the largest and most ambitious ecosystem restoration projects in the US.

We led preparation of the Programmatic Environmental Impact Statement/Report to enable SJRRP implementation, assisted in a water right amendment process, prepared fisheries management and water management plans, and prepared an Environmental Assessment for the release of initial restoration flows to the San Joaquin River. Our team continues to support a complex stakeholder engagement program and provides landowner coordination for all SJRRP activities. We are also helping develop creative approaches to manage restoration water supplies and reduce or avoid water delivery impacts resulting from SJRRP implementation, including an assessment and prioritization of over 150 water supply projects.

The Department of Interior recognized our contributions to this program through a "Farmers in Conservation" award.



Comprehensive Everglades Restoration Program
South Florida Water
Management District (SFWMD)
West Palm Beach, FL

On behalf of South Florida Water Management District, we and our joint venture partner executed a 7-year, \$54M Comprehensive Everglades Restoration Plan (CERP) Program Management Support Project.

Through the Everglades program, we demonstrated its systems approach and program management expertise in planning and implementing a complicated water resources and ecosystem project. This was accomplished through our oversight of scheduling and technical design for more than 40 discrete projects. The team provided program management, real estate and land management, procurement services, engineering design review, public outreach, permitting, cultural resources and construction support.



Chicago Shoreline Protection Project
City of Chicago, Department of Transportation
Chicago, IL

Our team has provided multi-disciplinary planning, design, and construction services for over 10 years in support of the City's ambitious \$400M waterfront reconstruction program. Included in the program are amenity improvements such as new beaches, expanded harbor facilities, piers, habitat restoration and creation, accessibility improvements, and natural resource management.

Our proven experience included flood risk management. The waterfront experienced over wash and flooding associated with significant wave generated impacts. We provided review and oversight of the physical modeling to develop site specific overtopping coefficients for vertical sheet pile walls with stepped concrete revetments. We also optimized flood protection and provided user friendly recreational areas as part of the shore protection project alternatives.



Central Valley Flood Management Program
California Department of Water Resources (DWR)
Central Valley, CA

We led the preparation of the State of California's Central Valley Flood Protection Plan (CVFPP), a first-ever comprehensive framework to guide investments and policy changes needed to modernize a State-Federal flood management system that protects more than one million people and over \$70B in assets.

As the lead planning consultant, we helped DWR design a strategy to address legislative intent and implementation requirements, and developed

sustainable floodplain land use policies and regulations. In support of these policies, we conducted detailed technical analyses of existing conditions and alternative modifications to a flood management system comprised of thousands of miles of levees and channels within a watershed of about 42,000 square miles. We prepared a program-level environmental review document and engaged thousands of stakeholders to solicit input on policy development, program design, and implementation strategies.



East Timbalier Island Restoration Project
Louisiana Coastal Protection and Restoration
Authority (CPRA)
Lafourche Parish, LA

East Timbalier Island is part of the Louisiana barrier island chain that separates Terrebonne and Timbalier Bays from the Gulf of Mexico. The region has experienced significant loss of land due to multiple hurricanes, subsidence, and reduced sediment input and has significant oil and gas infrastructure in place which is still expanding.

Traditional structural engineering solutions to stabilize the island have been proven ineffective and previously placed rock shorelines, which are now submerged and located south of the island, negatively impacted the regional sediment transport patterns and contributed to an unstable steep shore-face.

Based on these unique challenges, we were selected to lead a team implementing an alternative design approach involving the integration of natural physical and system processes to achieve resilient features for the region instead of focusing on an individual location.



We're active members of the communities we serve. That's why at MWH, now part of Stantec, we always design with community in mind.

The MWH community, now part of Stantec, unites approximately 22,000 employees working in over 400 locations across six continents. We collaborate across disciplines and industries to bring water and infrastructure projects to life. Our work as architects, engineers, and consultants from initial project concept and planning through design, construction, and commissioning begins at the intersection of community, creativity, and client relationships. This work is built on a nearly 200-year history. With a heritage in water, our world's most precious resource, we safeguard and sustain lives, communities, and businesses worldwide.

Our local knowledge and relationships, coupled with our global expertise, qualify us to go anywhere to solve our clients' challenges in more creative and personalized ways. With a long-term commitment to the people and places we serve, we have the unique ability to connect to projects on a personal level and advance the quality of life in communities around the globe. Stantec trades on the TSX and the NYSE under the symbol STN. Visit us at mwhglobal.com and stantec.com, or find us on social media.



We provide responsive service and expertise from offices around the globe:

North America, Latin America, Europe, Africa, India, the Middle East, Asia and the Pacific



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