

Technical Service Center

Cost effectively developing innovative solutions to Reclamation's water and power challenges



— BUREAU OF —
RECLAMATION

Who We Are

The TSC is a world-class engineering and science organization that provides specialized services to protect the American public and support the efficient operation of Reclamation projects and facilities. Operating successfully as a fee-for-service business unit for the last 30 years, the TSC brings cost effective, efficient technical solutions to Reclamation and external partners.



TSC Delivers Solutions

Challenges like aging infrastructure, increased need for water storage, and changing technologies require innovative solutions to protect the public's investment in dams, hydropower plants, canals, pipelines, pumping plants, and water passage facilities. The TSC works with Reclamation offices to provide unique services not available in private industry. The TSC:

- Has expert knowledge, premier laboratories, and decades of design solutions specific to our water and power facilities lowering O&M and capital costs.
- Fosters an internal network with operational staff, delivering timely technical solutions with rapid emergency response time.
- Provides specialized, on-call, field services that increase water delivery and reduce hydroelectric outages, boosting revenue.
- Employs nationally recognized technical experts, leading industry design standards across multiple disciplines for water and related resources.
- Shares a common goal of success with our customers because we are part of the Reclamation team.

Proven Business Model

Our Reclamation clients rely on the TSC to provide focused solutions to complex water resources challenges affecting the nation's infrastructure. The TSC establishes direct service agreements, eliminating procurement costs and delays (hours/days vs. months/years) in comparison to hiring external contractors. This business model creates accountability and efficiency which allows us to be adaptable to changes in Reclamation budget. TSC ensures that appropriate project scope, budget, and schedule for each job are monitored and measured as critical success factors. Decades of experience creates technical solutions that efficiently navigate government requirements, eliminating expensive contractor charge orders and overhead. The TSC operates with a cost recovery structure through agreements from Reclamation and external clients: we maintain competitive billable rates by using fiscally responsible spending and thoughtful reinvestment in our technical staff and unique laboratory facilities.

Reclamation by the numbers:

Hydropower

- 2nd largest producer of hydroelectric power
- 40 billion kilowatt hours of power generation
- \$1 billion in power revenues

Water storage

- 600+ dams and reservoirs
- 364 High-hazard Dams
- 75+ Dam Safety modifications to lower the risk to the public

Water deliveries

- No.1 largest wholesaler of water
- 8,000+ miles of canals
- 31 million people receive water
- 10 million acres of farmland
- 60% of the nation's vegetables
- 25% of the nation's fruits and nuts

TSC by the numbers:

Our Business Model

- Moved to working capital organization in 1993 as part of workforce reshaping effort
- Fee for Service and self-sustained
- No "right of refusal"; revenue is earned
- \$150M+ Annual Revenue
- 1900+ Annual Service Agreements
- 106,000+ Billable Staff Days
- 97% through service agreements

Projects

- Nation's most critical infrastructure
- Specialized engineering and science
- Technical expertise offered to Reclamation and Other Government Agency clients

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We Are Reclamation

The TSC is home to world class engineers and scientists with novel expertise working on Reclamation iconic dams and the water and power conveyance features connecting western America. Many TSC staff have dual roles on the Rope Access Team or Dive Team, ensuring the nations inaccessible features are operated and maintained for the safety of the American public.

Hydropower

With 77 Reclamation-owned hydropower facilities, the TSC provides both design and field engineering support to maintain and improve plant performance. Having on-call, in-house knowledge and support is imperative for these facilities that provide critical power generation and black-start capabilities to the nation's power grid. TSC can also cost-effectively provide the highly specialized support to ensure compliance with power regulatory requirements.

Dam Engineering

The TSC specializes in design and analysis of large high-hazard embankment and concrete dams. Specialized analyses are used to assess the existing conditions of Reclamation dams to meet public safety protection guidelines. The TSC is the primary technical service provider for executing the Dam Safety Risk-Informed Decision-Making Process. We support programmatic functions and are on call to respond to dam safety incidents/emergencies. In pursuit of dam safety risk reduction, the TSC performs planning studies, design, and construction support for Dam Safety modifications. Currently, there are 12 dams being studied or actively being designed and/or modified to decrease the risk to the American public.

Water Deliveries

TSC water conveyance experts design and provide construction support for pumping plants, pipelines, canals, and associated water infrastructure to bring water to farmers, businesses, municipalities, and rural areas. TSC's recent advance in water treatment is crucial in bringing clean drinking water to areas of the country with compromised water quality. The TSC provides unique solutions for water storage and delivery that include expertise on mitigative measures to meet multi-mission objects including hydropower, water quality, fish passage, recreation and creative engineering and science innovations to protecting and improving watersheds.

Premier Laboratories

TSC laboratories specialize in unique and highly technical laboratory testing, analyses, training, and field exploration support needed to ensure safe and reliable delivery of water and hydropower at Reclamation's facilities. TSC laboratories supply crucial design data, construction support, engineering services, and cutting edge applied research necessary to solve challenges for Reclamation, state or local governments, private entities and other governmental agencies. TSC laboratories have one-of-a kind specialized equipment and industry experts which provide laboratory and field testing for concrete, soil/rock, coatings and corrosion, hydraulic modeling, water treatment, invasive species, and hydropower.

Water Resource Studies

The TSC uses state of the art technology and leverages our deep knowledge of western water systems to conduct hydraulic and hydrologic studies that ensure public safety, inform efficient reservoir operations and power generation, and assess how changing needs affect the supply and demand of water and power.

Our work guides the nation on complex technical water and power projects

