

Resilient water solutions

- Oil and gas
- Infrastructure
- Municipal
- Agricultural

For more information visit
slb.com/water

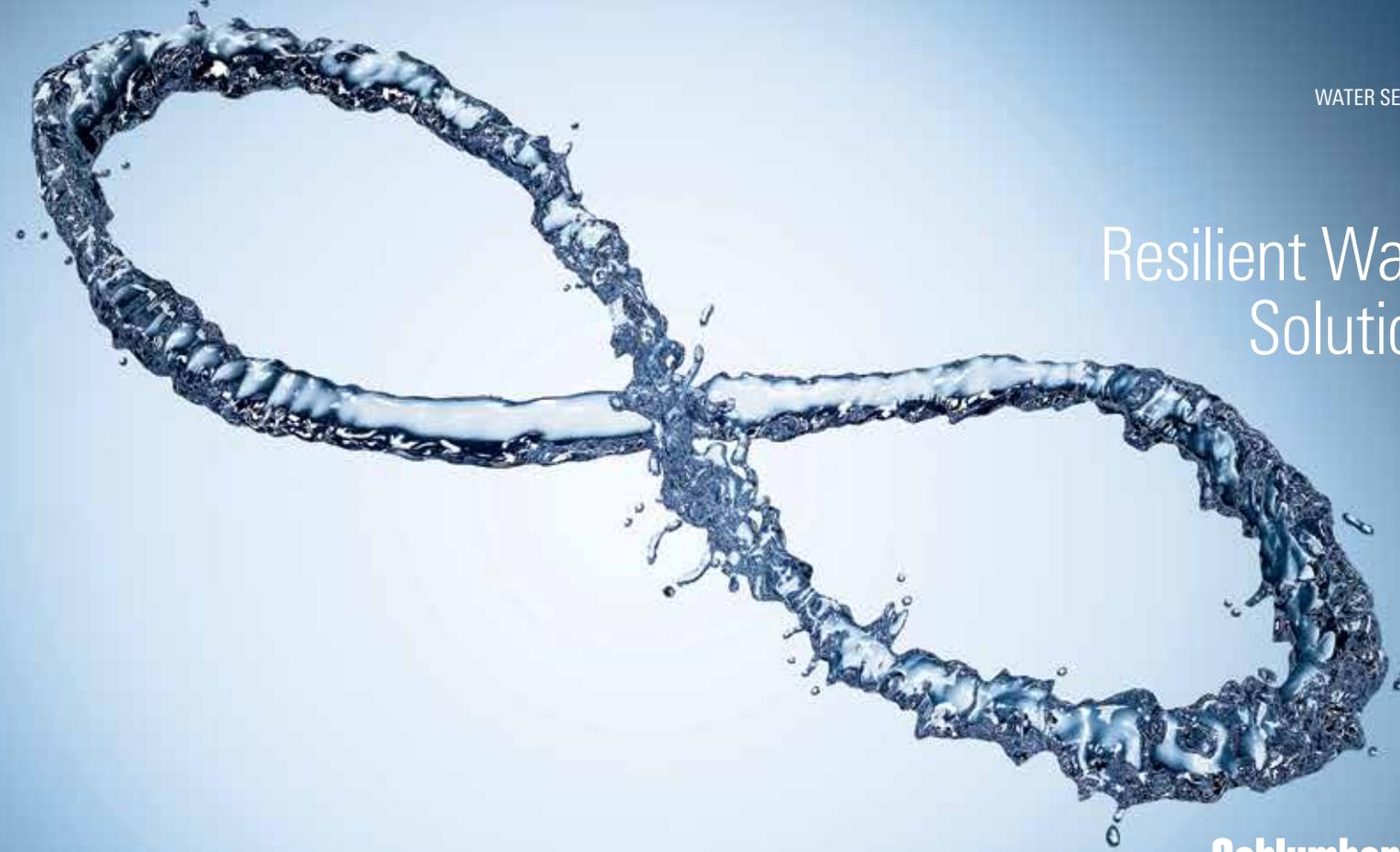
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Schlumberger

WATER SERVICES

Resilient Water
Solutions

Schlumberger



Resilient solutions engineered for dynamic water challenges

Schlumberger Water Services provides resilient solutions to four key sectors:

- Oil and gas
- Infrastructure
- Municipal
- Agricultural

Life, infrastructure, agriculture, and energy resources are underpinned by a sustainable water cycle. Stability and success are not otherwise possible. Water solutions must also be inherently flexible to meet a project or population's dynamic water demands and safeguard continuity at all costs.

Schlumberger has long been at the forefront of oil and gas subsurface innovation and surface facility engineering. Water is, and always has been, present in the oilfield, and for almost a century Schlumberger has been solving water-related operational challenges.

Our unsurpassed blend of technologies and experience deliver resilient, source-to-disposal water solutions. Applicable far beyond the oilfield, Schlumberger optimizes water resources via advanced sourcing, supply, storage, processing, and disposal.

A long-term, strategic water partner

Suitable for any project environment around the world, our trusted services range from aquifer characterization to wellfield rehabilitation. Our customers benefit from unrivalled subsurface expertise, world-class engineering capabilities, and our substantial resource base.

We offer field-proven technical solutions including evaluation, drilling, engineering, and monitoring. All are focused on helping customer organizations source water cost effectively, ensure long-term supply, and manage storage, treatment, and disposal compliantly.

Our water services include:

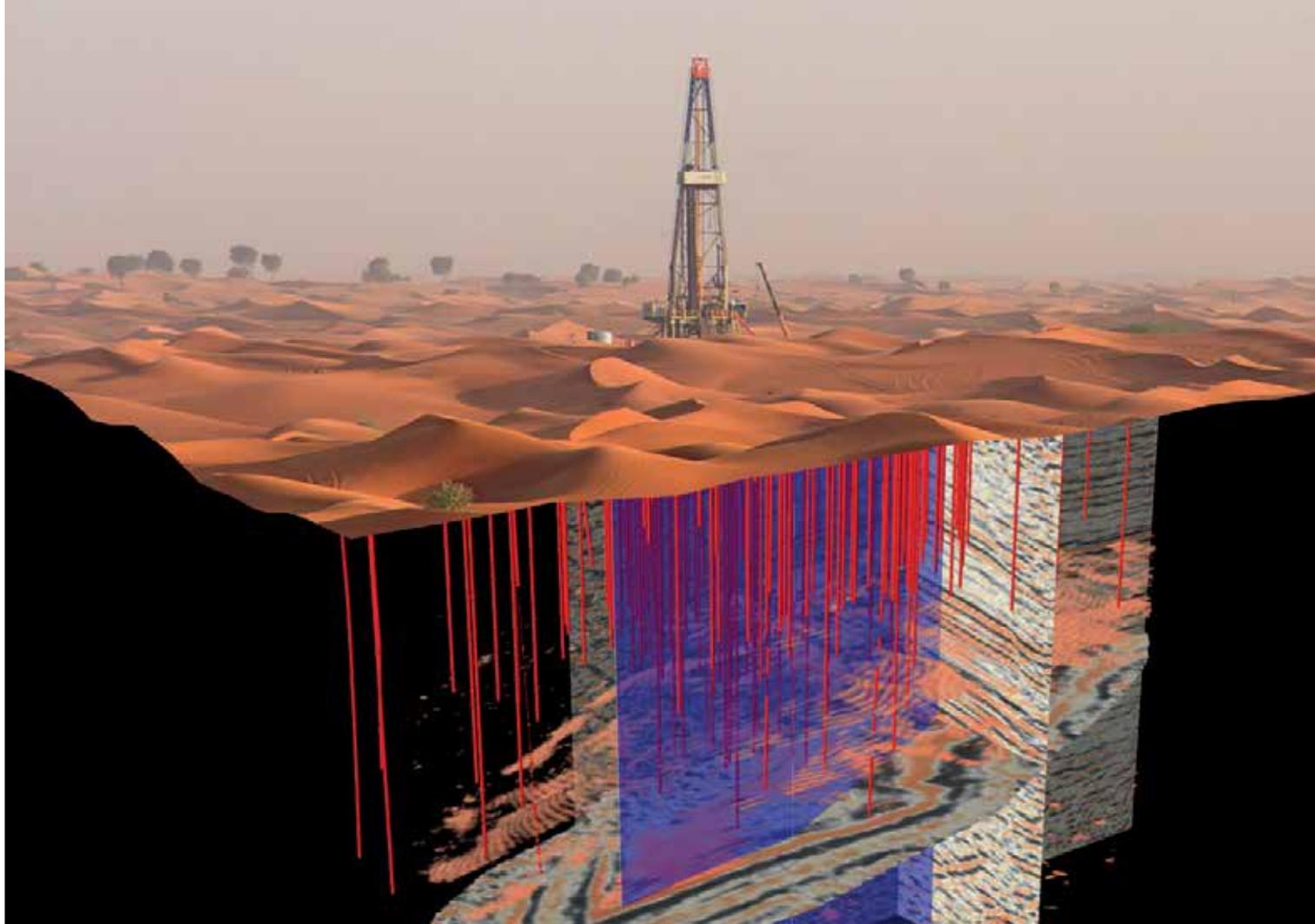
- water resources policy
- water resources evaluation
- water and injection-well drilling and development
- water resources engineering
- water supply and sanitation
- water monitoring
- environmental and compliance.

Complete water management

Water-related spending must be optimized, given the significant proportion of operational expenditure it often commands. Multidisciplinary teams of Schlumberger water professionals help clients minimize water-related costs using specific technologies. We understand that water management solutions must be inherently flexible to meet a project's dynamic demands, reduce risk, and safeguard continuity.

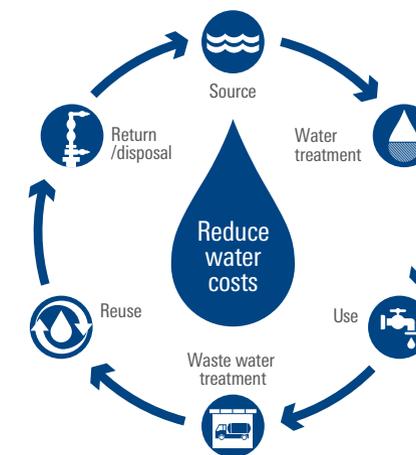
Blending surface and sub-surface expertise

We blend subsurface and surface expertise to solve water-related operational challenges and have done so for almost a century. Schlumberger can deliver every aspect of a modern water sourcing or management project from exploration and evaluation—where our experts can help clients extract further valuable insight from their existing data, and reuse it to find viable water sources—to drilling, engineering, and monitoring as well as integrated project management.



Holistic water cycles for optimal efficiency

Every stage of the operational water cycle is designed and integrated to maximize efficiency, and minimize local and environmental impact—from sustainable sourcing, efficient reuse, and responsible disposal. Our technology and services also allow operators to treat and process used water for recycling in other applications. In addition, the option of safely returning appropriately treated water assets to existing aquifers, or freshwater sources such as rivers, can be exercised in confidence and safeguard continuity.



Sustain cost-effective oilfield operations

Sourcing and managing the significant volumes of water necessary for oilfield operations accounts for a large proportion of field development spend. At the same time, a changing regulatory environment places new levels of scrutiny on water consumption and wastewater discharge.

Our sustainable water management solutions reduce these risks and costs, as well as minimize local and environmental impact. Multidisciplinary teams of Schlumberger water professionals deliver schemes that emphasize interruption free operations—regardless of geographical location.

Optimizing water assets to lower water costs

Schlumberger empowers clients to extract further value from their own hydrocarbon exploration data, reusing it to identify suitable local water sources. Our teams then have the engineering capability and subsurface knowledge necessary to extract and mobilize high volumes of water.

Proprietary technology allows our clients to harness any input water source for operations, whether that means treating locally sourced water or reusing frac fluids and produced water. This flexibility of supply further mitigates the economic and environmental burden of freshwater sourcing, transportation, and processing, as well as the disposal of produced water.

We help clients recycle produced water for use in industry or agriculture. In addition, the option of safely returning appropriately treated water assets to existing aquifers, or freshwater sources such as rivers, can be exercised in confidence.

Our key oil and gas water solutions:

- water sourcing
- operational water
- water management
- environmental monitoring and compliance
- remediation.



Put water to work

Schlumberger Water Services helps keep infrastructure running. We understand that water supply and disposal can be a significant issue for manufacturers and engineering companies. Our solutions can be applied to any setup: from lighter water users to processes that require a frequent, if not uninterrupted, water supply to continue running. We know that any disruption in this regard has the potential to cause significant loss of productivity and revenue.



Continuous and confident compliance

From supply studies to facility construction, Schlumberger delivers integrated and resilient water solutions designed to meet infrastructure requirements and process parameters. Our surface facility design expertise regularly helps organizations meet stringent wastewater regulations, that demand the tightest in controls.

With environmental monitoring and treatment options built in, Schlumberger Water Solutions protects uptime, control water-related costs, reduces waste and minimizes any liabilities. We also have significant experience in helping companies with critical water and environmental issues, particularly at contaminated sites.

Infrastructure water solutions:

- infrastructure water resources evaluation
- infrastructure water and injection well drilling
- infrastructure water systems engineering
- infrastructure water monitoring
- environmental compliance.

Secure water where it matters

The modern trend towards increased urbanization poses a number of new challenges for municipal bodies and policy makers. Population shifts call for the reassessment and rebalancing of crucial resources, with water high on the priority list.

Sustainable water resources appropriate for growing urban populations must be sourced, accessed, and replenished. These activities should also be considered with the wider environmental impact in mind. Every urban water strategy must maintain natural habitats, combat the potential for localized groundwater rise and flood risk, and tackle the higher wastewater volumes produced.

Resilient partnerships

Schlumberger engineers have developed resilient solutions for the successful exploration, development, management, and long-term protection of strategic municipal water resources. We help institutions and stakeholders around the globe secure water where it matters.

Healthy water resources and sanitation services are directly linked to sustained economic growth in developing regions. We have significant experience with international sanitation projects as well as the management of water for economic and social development where themes such as gender, sustainable livelihoods, and human rights regularly impact project planning.

Water supply solutions:

- river basin and watershed management
- groundwater management.

Aquifer water supply solutions:

- aquifer storage and recovery
- coastal zone aquifer management solutions.

Water disposal solutions:

- water injection.

Urban water monitoring and assessment solutions:

- environmental monitoring
- flood risk management
- water stainability.

Obtain water for growth

The increase in global population continues to exert pressure on agribusiness to meet food production needs. As well as working to scale-up output, this sector is challenged with managing water resources with greater precision and predictability against a backdrop of rising global concerns around water scarcity.

Studies suggest that up to 80% of fresh water from rivers and groundwater is used for agriculture. Every agribusiness needs a dynamic and sustainable water strategy that balances its production and commercial imperatives with environmental and social responsibilities.

Meeting dynamic demands

By delivering resilient and sustainable water solutions, Schlumberger enables agricultural businesses to meet the changing demands of population and industry. Whether that's by planning for specialized livestock holding or large-scale crop plantation, sustaining plants and animals during dry seasons, or combatting flooding while safeguarding local supplies from pollution and depletion.

Our diverse portfolio of engineered services range from evaluating and accessing new water supplies, to managing high volumes of liquid waste. Schlumberger helps agribusinesses gain the level of control needed to scale up and sustain vital operations for future food security.

Agricultural water solutions:

- resource evaluation
- production well drilling
- system engineering
- monitoring
- environmental compliance.



WHO WE ARE

Trusted global service provider

Schlumberger is the world's leading provider of technology for reservoir characterization, drilling, production, and processing to the oil and gas industry.

Working in more than 85 countries and employing approximately 100,000 people who represent over 140 nationalities, Schlumberger supplies the industry's most comprehensive range of products and services, from exploration through production, and integrated pore to pipeline solutions that optimize hydrocarbon recovery to deliver reservoir performance.

Commitment to innovation

The founders of Schlumberger, brothers Conrad and Marcel Schlumberger, invented wireline logging as a technique for obtaining downhole data in oil and gas wells. Today, Schlumberger continues to invest in and build on the industry's longest track record of providing leading-edge E&P technology to develop new advancements—from reservoir to surface.

Expert support networks

Strong technical and operational support to the field is vital to the success of any complex global operation that includes remote locations. Schlumberger uses knowledge management tools to deliver realtime linkage with world-class experts and information, enabling the latest and best problem-solving capabilities to be deployed anywhere, anytime.

A responsible partner

Our approach to sustainability is rooted in a long-standing culture of global social and environmental stewardship. For nearly 90 years, Schlumberger's technological innovations have provided value for oil and gas operators by helping them increase production and recovery from nonrenewable resources—efficiently and with lower environmental impact. We strive to be a unifying voice for social and environmental stewardship in the communities where we and our customers live and work.

