

OIL & GAS FIELD SYSTEMS

WASHING + CONTAINMENT + TREATMENT = GROUND WATER PROTECTION



RIVEERTM

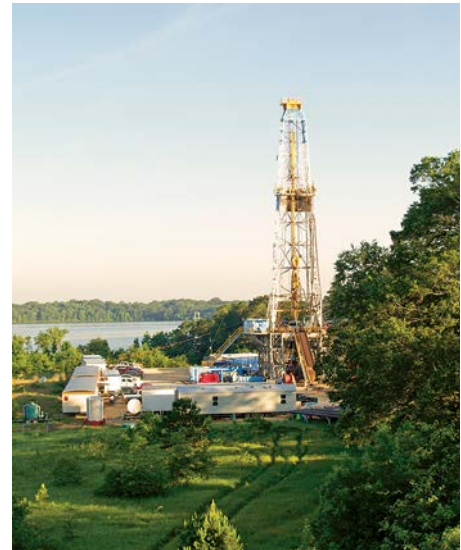
Engineered Wash Water
Recovery Systems

The Solution is Clear with RiveerSM

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- MODULAR SYSTEMS FOR RAPID DEPLOYMENT AND SET UP
- HEAVY DUTY LOAD CAPACITY AND 24/7 OPERATION
- PROVEN IN WORLDWIDE DRILLING AND FRACKING OPERATIONS
- BUILT IN THE U.S. TO YOUR SPECIFICATIONS
- EASY TO OPERATE; MINIMAL MAINTENANCE



EQUIPMENT WASH AND CONTAINMENT SYSTEMS

Riveer™ Wheel Washers, Wash Racks and Filtration Systems deliver unsurpassed performance in oil and gas equipment washing, wash water containment and containment particle separation and water recycling. Superior engineering proven across the Canadian oil sands to the deserts of Kuwait, and heavy-duty mechanical and hydraulic components, engineered to 3X field stress, assure 24/7 operational dependability in the harshest environments. Riveer helps you keep your equipment clean and corrosion free, and your operations in compliance while complementing your Best Management Practices.

Upstream operators value the mobility of Riveer Wheel Washers and Wash Racks. These systems are fully deployable, often designed to load into a standard ISO Container for efficient tear down, over the road transport and reinstall at your next drilling field.

As the U.S. works toward energy independence, Riveer Wash and Containment Equipment is the go-to system for obtaining reasonable and effective safeguards against surface contamination on and beyond the drilling pad. Riveer Oil & Gas Field Systems help minimize surface impact, preserve resources and mitigate secondary spill, corrosion and track out from first in to last out. Tapping America's shale offers tremendous opportunity to unleash the natural energy available while also taking measures to protect the environment.

FIELD O&M

“ Operators should evaluate potential water management options prior to the start of drilling.

- Prepare and implement a water management plan designed to:
 - Maximize efforts to recycle/reuse recovered water as reasonably practicable.
- Operators should consider the use of portable containment equipment. **”**



O&M WASH RACKS

Steel wash racks offer more control over containment during routine maintenance of equipment breakdown, capturing perforator and logging tool lubricators, flow lines, piping, and manifold oils. Wash racks are available in a wide range of sizes and wall heights, and can be equipped with the Riveer™ water cannon and drag conveyor if needed. Low profile ramp accommodates forklifts, backhoes, trailers and smaller equipment with ease. The containment rack can be placed on any flat substrate, supporting heavy loads without deflection. Wastewater is collected from the drain port to a wash water tank or sump area.



TRACK OUT PREVENTION

“ Operators should use best management practices designed to minimize tracking of mud by vehicles from well pad sites or other facilities onto public roads. **”**



DC X WHEEL WASHERS

Designed for universal use, Riveer™ wheel washers can be customized to suit your specific vehicle washing needs. With proper drainage, high flow, low pressure nozzles require up to 80% less water while delivering cleaning power for difficult clay, mud, chalk and shale dust on wheels, wheel wells, mud flaps and undercarriage areas. The system can either direct wash water to a settling area, or collect the water for recycling and reuse. Like Riveer Wash Racks, Wheel Washers indirectly serve as a construction mat and traffic funnel, helping assure a more stable, defined egress from the work site. Last but not least, wheel washers are far superior to rumble grates in both cleaning and adherence to *Reasonable and Prudent Practices for Stabilization (RAPPS) of Oil and Natural Gas Construction Sites*.



FLEET MAINTENANCE



MUDMASTER™ 5000

MUDMASTER™ WASH RACKS

As the leading wash rack across the globe, MudMaster™ Wash Racks are designed to bear the load of fracking trucks, tanks, drilling rigs... you name it, we wash it clean. Customized to any length, width and handling capacity, MudMaster Wash Racks wash off and contain damaging debris from upstream operations, keeping contaminants where they belong... on the job site. These above ground steel wash racks collect dirty wash water and solids from vehicle and equipment washing, channeling solids for proper disposal. Installing MudMaster Wash Racks on grade is bolt-together easy, requires no infrastructure, site engineering or permitting. Semi-permanent for short or long term use, MudMaster Wash Racks are ideal for wash water containment on field operations, such as oil or gas exploration, as well as maintenance washing of commercial and military vehicles. Unlike concrete pads, MudMaster Wash Racks can be relocated, expanded or retrofitted with Riveer™ RTS filtration systems.



SPILL CONTAINMENT

- “ In addition to procedures for controlling flowback water, best management practices should also be established for properly treating, managing and accounting for liquid and solid wastes that are generated at well sites.
- Equipment fueling operations should be designed to minimize the risk of accidental spillage. ”



RIVEER RACK™

SECONDARY SPILL CONTAINMENT

The Riveer Rack™ is designed as a portable pad for fueling, washing or any other activity that requires capturing and channeling primary or secondary liquids to a container or sump for proper disposal. In addition to serving as a rigid maintenance pad, the Riveer Rack installs and breaks down quickly and easily. Solid footprint, no special site improvements required. Urethane coated deck provides positive slope to center drain.

SPILL RESPONSE TRAILER

Riveer's Spill Response Trailer is a self-contained all-weather unit for collecting liquid up to 75' from the trailer and 15' below trailer deck. A diesel generator supplies lighting and power, and the pumping system can recover 1000 gallons of oil, water, coolant, and/or chemistry in 25 minutes.



SPILL
RESPONSE
TRAILER



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UPSTREAM

Exploration operations deploying to new fields in North America or offshore leverage the mobility of Riveer Racks™, wheel washers and filtration equipment, including specially engineered deployable systems and off-grid systems designed to clean and recycle in areas of little or no utilities.



MIDSTREAM

Riveer Racks, wheel washers and RTS filtration equipment can be installed in more permanent facilities to accommodate the heavy equipment involved in transporting, refining, and storage.



DOWNSTREAM

Final mile distribution and end-use delivery vehicles undergoing daily cleaning or scheduled maintenance require cleaning, treatment and disposal of oily wash water, all with minimal fresh water consumption, ease of use, and reduced manpower.



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The EPA exempts stormwater discharges of sediment from construction activities at oil and gas exploration and production operations from the requirement to obtain a NPDES stormwater permit as long as stormwater runoff to waters under the jurisdiction of the CWA are not contaminated with oil, grease, or hazardous substances. Riveer™ wash water recovery systems contains these contaminants when equipment is properly washed.

The American Petroleum Institute (API) and the Independent Petroleum Association of America (IPAA), among others formed the Stormwater Technical Workgroup (SWTW), and include Reasonable and Prudent Practices for Stabilization (RAPPS) of Oil and Natural Gas Construction Sites as a Best Management Practice. Through field validation of the RAPPS, the SWTW guidance document serves as a readily applicable tool for operators to use in order to efficiently and effectively maximize control of stormwater discharges at oil and natural gas exploration and production activities. Riveer plays an active role in the proper implementation of these programs.

"Water Management Associated with Hydraulic Fracturing," American Petroleum Institute, API Guidance Document HF2, First Edition, June 2010, http://www.api.org/policy/exploration/hydraulicfracturing/upload/HF2_e1.pdf

"Practices for Mitigating Surface Impacts Associated with Hydraulic Fracturing," American Petroleum Institute, API Guidance Document HF3, First Edition, January 2011, http://www.api.org/policy/exploration/hydraulicfracturing/upload/HF3_e7.pdf

"Environmental Protection for Onshore Oil and Gas Production Operations and Leases," American Petroleum Institute, API Recommended Practice 51R, First Edition, July 2009, http://www.api.org/policy/exploration/hydraulicfracturing/upload/API_RP_51R.pdf

"Reasonable and Prudent Practices for Stabilization (RAPPS) of Oil and Gas Construction Sites," Independent Petroleum Producers Association of America, Terracon Consulting, September 2009.



Riveer employs a quality management system that is ISO 9001:2008 certified.
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Recovery Systems**