



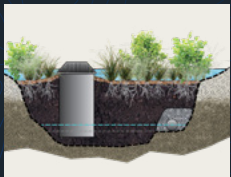
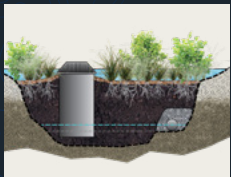
MAUL
FOSTER
ALONGI



FUEL INDUSTRY



CONTENTS





WHO WE ARE

Solving problems to improve our communities

Maul Foster & Alongi is an employee-owned multidisciplinary consulting firm rooted in and serving the Pacific Northwest and beyond. Since our founding in 1996, we have attracted skilled professionals who offer a full spectrum of services to help our clients succeed. Our clients choose us for our high standards, project discipline, and collaborative approach. We choose this work because we are driven to serve our communities and improve the environments in which we live and work.



WHAT WE DO

Fuel Industry Overview

MFA offers a strategic approach to assessment and cleanup at petroleum sites. Our team members have devoted their careers to cleaning up sites through a reasonable, pragmatic, and efficient approach to remediation. We distill complex technical issues to develop efficient, cost-effective cleanup actions, and we have strong relationships with the Oregon Department of Environmental Quality (DEQ), the Washington State Department of Ecology (Ecology), and the Pollution Liability Insurance Agency (PLIA) that are based on credibility, mutual respect, and project success.

PHASE I AND II ENVIRONMENTAL SITE ASSESSMENTS | CONTAMINATED-SITE COMPLIANCE | REGULATORY COMPLIANCE

BROWNFIELD REDEVELOPMENT | SEDIMENT CHARACTERIZATION AND REMEDIATION | CIVIL ENGINEERING

STORMWATER | COMMUNITY EXPOSURE ASSESSMENTS | ENVIRONMENTAL DATA MANAGEMENT | GIS AND DATA ANALYTICS





PHASE I AND II ENVIRONMENTAL SITE ASSESSMENTS

We've conducted hundreds of Phase I and Phase II environmental site assessments (ESAs) at a wide range of sites, including vacant properties; commercial fueling stations; and large, complex industrial sites, timberlands, and landfills. We conduct all Phase I ESAs consistent with the requirements of the ASTM International Standard Practice for Environmental Site Assessments, including the bona fide prospective purchaser and innocent purchaser defense. Our team can also provide a range of supplemental services to further assess environmental risk, such as ground penetrating radar surveys, prospective purchaser agreement coordination, and hazardous building materials assessments.



CONTAMINATED-SITE CLOSURE

Our contaminated-site closure services include remedial investigation, risk assessment, feasibility study, remedial design, and remedy implementation. We work collaboratively with regulators to ensure that our proposed path efficiently moves projects toward site closure. We design investigations by building on a solid foundation of site knowledge and tailoring each assessment to efficiently meet the objectives of each project.





REGULATORY COMPLIANCE

Our comprehensive regulatory compliance services can help your industrial facility meet the permitting, monitoring, recordkeeping, and reporting needs of your organization and the compliance demands of federal, state, and local regulations. We have strong relationships with DEQ, Ecology, and PLIA that are based on credibility, mutual respect, and project success.



BROWNFIELD REDEVELOPMENT

With population growth and rising property costs, land reuse is at the forefront of development. Thorough assessment of environmental issues enables clients to transform contaminated properties into community assets. We design and implement effective brownfield solutions that maximize your return on investment while minimizing liability. We work collaboratively with regulatory agencies and property owners to produce successful transactions.





SEDIMENT CHARACTERIZATION AND REMEDIATION

We have extensive experience sampling sediment in marine and freshwater environments throughout the Pacific Northwest. Our expertise includes sampling under the Sediment Cleanup User's Manual; the Sediment Evaluation Framework; and the Comprehensive Environmental Response, Compensation, and Liability Act, and subsequently obtaining work plan and report approval from federal and state regulators. MFA has served as a sediment characterization and cleanup consultant for both Ecology and DEQ.



CIVIL ENGINEERING

We provide reliable site infrastructure and designs that effectively translate concepts to construction. We apply practical, science-based approaches to our clients' engineering concerns, while keeping cost, constructability, operation, and maintenance in mind. Our years of successfully implementing these approaches have led us to be seen as experts in the civil engineering field.





STORMWATER

MFA's civil engineers design stormwater infrastructure that protects our watersheds; becomes an asset to the site; and meets federal, state, and local requirements. We navigate considerations from permitting to design and produce solutions that integrate with facility operations and add value. We create stormwater pollution prevention plans (SWPPPs); stormwater pollution control plans (SWPCPs); best management practices (BMPs); level 1, 2, and 3 corrective action responses; and tier I and II corrective action responses. We also provide technical support and expert witness services for Clean Water Act lawsuits.



COMMUNITY EXPOSURE ASSESSMENTS

Community assessments span disciplines including occupational exposure, environmental risk, and community engagement. And they often require engaging with environmental regulators, public health officials, attorneys, occupational safety regulators, community members, and other stakeholders. MFA's multidisciplinary expertise allows us to provide clients with an integrated approach that saves time when engaging with multiple regulatory frameworks and regulators. In addressing concerns such as chemical exposure, noise, and odor, we bring diverse stakeholders to a shared understanding of facts so that disputes can be resolved in a timely and reasonable manner.





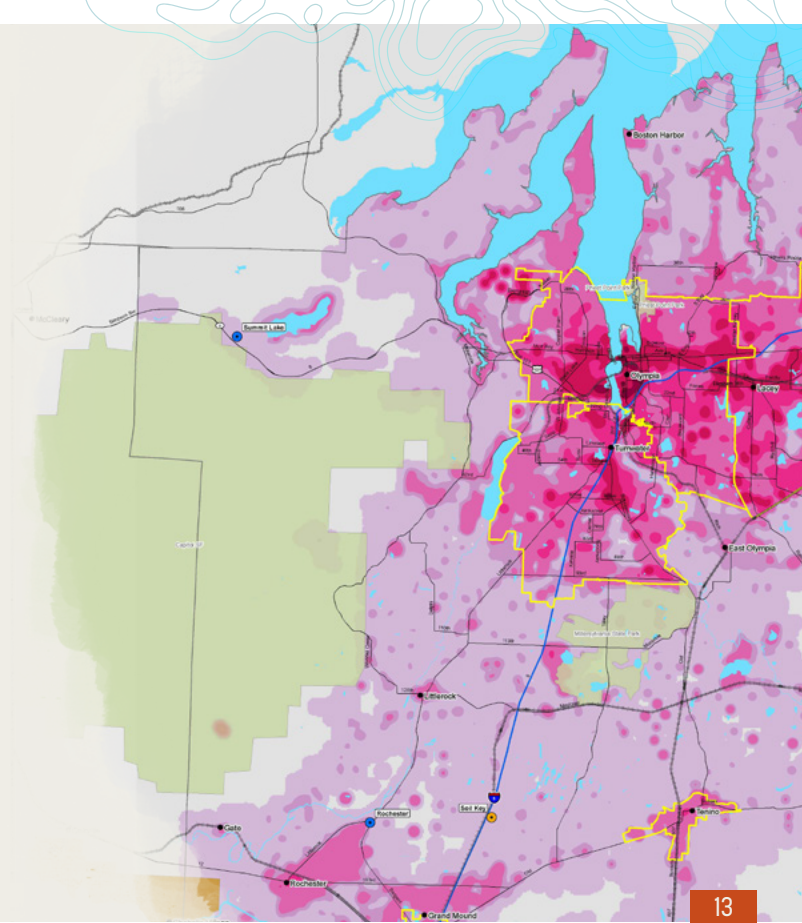
ENVIRONMENTAL DATA MANAGEMENT

Our environmental data management solutions provide a streamlined data workflow process. We use the latest relational database management system technology to organize your data. Our process starts in the field, where we use mobile devices to automate data input, and it continues as we combine data with laboratories' analytical results. Our practices and procedures ensure that your data are quantifiable, sufficient, and of legally defensible quality.



GIS AND DATA ANALYTICS

GIS is a powerful tool that provides data visualization and analysis to help in making better-informed decisions. MFA's team is proficient in harnessing the power of GIS to help clients understand complex environmental-contaminant patterns. We also offer a robust suite of environmental data management services and solutions that are designed to provide clients with high-quality, legally defensible data. Our goal is to streamline the data workflow process from preplanning through collection, analysis, validation, and reporting. From start to finish, MFA's GIS and data analytics services—field logistics, data management, environmental chemistry, and environmental analysis and visualization services—provide the most integrated and cost-effective handling of project data.





PROJECT EXAMPLES

The following examples demonstrate MFA's overall approach — we start by understanding what our client wants to accomplish, including the regulatory drivers, then we apply time-tested and innovative approaches to achieve desired outcomes.



PetroCard, Inc

INVESTIGATION AND CLEANUP OF CARDLOCK FUELING STATIONS

PetroCard engaged MFA to investigate and remediate a fuel release from underground storage tanks at its South Kent headquarters. The release, which included both diesel and gasoline, extended near the property boundary, requiring a strategic and phased response.

MFA conducted targeted investigations, including off-site areas, and developed a remedial action plan. MFA secured permits and approvals, including a grading permit and SEPA determination, and led a large-scale removal of petroleum-contaminated soil.

During excavation, MFA discovered a failing stormwater system and quickly designed a new layout compatible with the site's post-excavation grade and traffic needs. To expedite resolution, PetroCard pursued an independent cleanup action. Once most contamination was addressed through insurance, MFA developed a final plan for remaining impacts. Ecology ultimately issued a No Further Action opinion, marking successful project completion.

Cain Petroleum, Inc.

REMEDIAL ACTION AND VAPOR TREATMENT SYSTEM

Since 2004, MFA has supported environmental compliance, investigation, and remediation at a retail fuel facility in Hillsboro, Oregon. Leaking underground storage tanks (USTs) released gasoline, placing the site on the DEQ's Leaking UST list. MFA managed remediation system operations, groundwater and vapor monitoring, and reporting—all while enabling site redevelopment and uninterrupted business operations.

Monitoring confirmed the extent of contamination and effectiveness of remedial actions. MFA revised the monitoring network to focus on residual impacts, with hydrocarbon levels generally declining. Benzene remained elevated in a few southern wells, prompting a pilot study using in situ chemical oxidation. Results supported continued use of this remedy.

MFA conducted an interim risk assessment per DEQ request and coordinated with property owners, consultants, attorneys, and DEQ. Support for insurance cost recovery helped fund remediation. Settlement agreements established a trust to manage cleanup and pursue a No Further Action determination. MFA continues to lead remedial efforts in alignment with regulatory and settlement requirements.



VSF Properties

NORTH CASCADE FORD CHARACTERIZATION AND CLEANUP

MFA led the investigation and cleanup of a former auto dealership and repair shop impacted by leaking underground storage tanks, vehicle maintenance operations, and historical coal storage. Site characterization and remediation was completed through coordinating the use of historical insurance recovery funds and securing access to adjacent BNSF Railway property. Characterization and closure were navigated through the Ecology's Voluntary Cleanup Program.

MFA conducted subsurface investigations, risk evaluations, and interim remedial actions including tank decommissioning, soil and groundwater treatment, and in situ bioremediation—all while the facility remained operational. Cleanup included excavation and off-site disposal of 4,100+ tons of contaminated soil, treatment of 142,000+ gallons of water, and preparation of an environmental covenant to support long-term compliance.

Extensive coordination among property owners, leasees, attorneys, and insurers led to a trust fund supporting remediation and a No Further Action opinion from Ecology in January 2023. When unauthorized use triggered a compliance notice, MFA resolved the issue swiftly. The site is now under long-term groundwater monitoring to ensure cleanup sustainability.





PetroCard, Inc

REMEDIATION AND CLOSURE OF CARDLOCK FUELING FACILITY

At PetroCard's Granite Falls facility, petroleum-contaminated soil (PCS) was discovered during upgrades. MFA directed remediation alongside construction, reducing costs and streamlining project delivery.

The site is located near busy roads, a high school, and commercial buildings, requiring a precise coordination with Ecology, contractors, labs, and the client. MFA planned efficient excavation, direct truck loading, and rapid analytical turnaround. Confirmation sampling verified successful PCS removal.

MFA then led a subsurface investigation to assess groundwater impacts and establish a monitoring network. After four quarters of sampling, petroleum levels were undetectable or well below cleanup thresholds. The project was conducted as an independent cleanup to meet PetroCard's expedited timeline and was enrolled in the Washington State PLIA. Following compliance monitoring, PLIA issued a No Further Action determination, confirming successful remediation and closure of the site.



Les Schwab

SITE ASSESSMENT AND UST DECOMMISSIONING OF TIRE CENTER

MFA conducted environmental due diligence for the property, beginning with a Phase I ESA in accordance with ASTM and CERCLA AAI standards. The assessment identified a historical Leaking UST case and potential concerns including trench drains and surface staining. MFA followed with a limited Phase II ESA, collecting soil, groundwater, and sediment samples to evaluate contamination.

During utility upgrades, diesel-impacted soil and an unregistered underground storage tank were discovered. MFA oversaw excavation, dewatering, and disposal of the tank, piping, and contaminated soil. Additional sampling helped delineate impacts and guide disposal decisions.

MFA prepared detailed reports summarizing findings and recommendations, submitted to the DEQ to support regulatory compliance and inform property management. Coordination with DEQ and stakeholders ensured timely response and effective risk management.

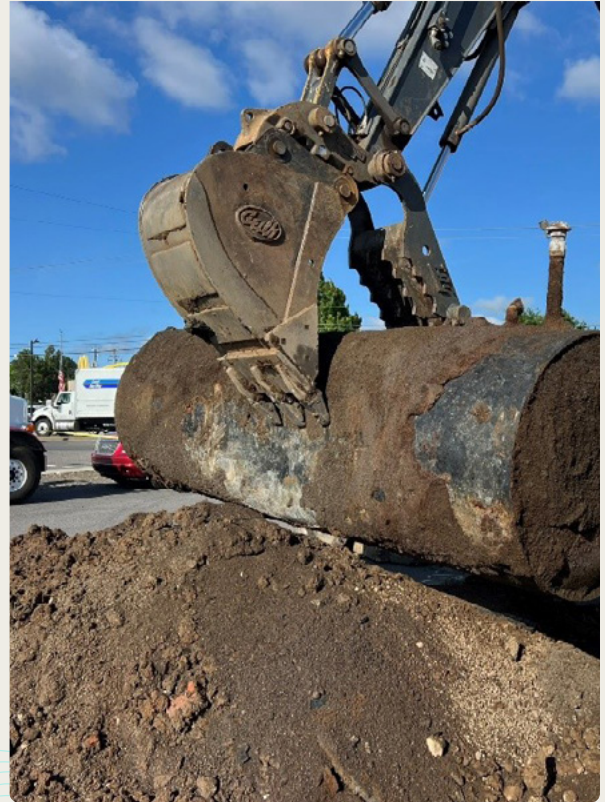
PetroCard, Inc

UST ASSESSMENT AND DECOMMISSIONING OF FUELING STATION

In preparation for decommissioning the PetroCard station on MLK Boulevard in Portland, Oregon, MFA provided permitting support for the removal of five USTs and associated cardlock equipment. MFA coordinated with the City of Portland Bureau of Development Services to clarify permit requirements and assembled a comprehensive Site Development Permit Application Package, including site plans, grading and drainage details, erosion control documentation, and construction specifications.

During permitting, MFA inspected five monitoring wells and identified damage and stormwater intrusion. With client approval, MFA coordinated well replacements, managing fieldwork with a driller, utility locator, and traffic control vendor. MFA oversaw installation, curing protection, and final inspection to ensure compliance.

This project highlights MFA's ability to manage complex permitting and field operations efficiently, supporting PetroCard's shutdown timeline while maintaining environmental compliance.



CONTACT

Thanks for your interest in MFA. Whether you are looking to start a project, get support, or just have a general question, we'd like to hear from you.

Please reach out and we will get back to you.

Contact:

Andrew Vidourek, RG, LG

Senior Geologist
(360) 837-9701

Meaghan Pollock, LG, RG

Project Geologist
(360) 947-2206

VANCOUVER, WA | SEATTLE, WA | SPOKANE, WA | BELLINGHAM, WA | BEND, OR | THE DALLES, OR | LAKE OSWEGO, OR
| PORTLAND, OR | COEUR D'ALENE, ID | KELLOGG, ID

MAULFOSTER.COM

