

Statement of Qualifications

Core Competencies

Mach 8 Biological Consulting Inc. is a restoration contractor located near Yosemite National Park. We specialize in Hazard Tree Removal, Fuels Reduction, BMP installation, Right-of-Way Vegetation Management, Environmental Permitting and Compliance.

Table of Contents

Company Overview Hydroseed Application & BMP Installation Invasive Plant & Right-of-Way Vegetation Management Plant Salvage, Installation, & Maintenance Site Preparation & Topsoil Management Tree Removal and Hazard Fuel Reduction Special Status Species Surveys Special Status Species Surveys (Continued) & Additional Construction Services

Company Information

CA DGS—Micro Business2021083CPUC, MBEVON 22000003San Francisco PUC- LBECMD1221000451CUCP DBE20990799SBA 8(a)(In Processing)HUBZone(In Processing)

CA Contractor's License 1072061 (B- General, D49—Tree Service, D-59 Hydroseed) Qualified Applicator License 143554 ISA Certified Arborist WE-13663A EIN: 38-3851040 DIR: PWR-LR-1000580920

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Company Overview

Who We Are

Mach 8 Biological Consulting, Inc. (*Mach8Bio*) is located 35 miles west of the Yosemite National Park entrance along Highway 120. We also have a Southern California office to serve the Mojave Desert Region. Our equipment operators and sub-contractors have been working on mountain roads in the Sierra Nevada and Mojave Desert for over 15 years. We are familiar with the mountainous roads, local traffic conditions, inclement weather, and logistical challenges that stem from the lack of communications in mountainous terrain.

Conservation of the resource is our top priority. We understand the importance of controlling the spread of exotic weeds on linear infrastructure. We maintain a rigorous training program to educate our sub-contractors and operators how vehicles and equipment in addition to personal gear can spread invasive species. We have established protocols that prevent Mach8Bio employees and our sub-contractors from becoming a vector for non-native species.

Mach8Bio is signatory to Local 1130 Laborer, and Local 3 Operating Engineer Unions. We have the administrative capabilities to comply with McNamara-O'Hara Service Contract Act's certified payroll reporting requirements and pay the required prevailing wage and fringe benefits in all California localities.

Project Team

Our management team has collectively worked in the Sierra Nevada Mountains and Mojave Desert for over 15 years as seasonal wilderness, wildlife or backcountry rangers, and has experience conducting presence absence desert tortoise surveys. Each staff member and subcontractor has an intimate knowledge of the National Park Service (NPS) mission to preserve the resource untrammeled for future generations.

Potential Subcontractors

Force Traffic Control, Inc. (Flaggers, signage, and pilot cars) Vern Welbaum: Point of Contact for the traffic control company

Force Traffic Control, Inc. has worked with Mach8Bio controlling traffic for the recent resurfacing of Highway 120, the Valley Loop Road construction, and, with Mach8Bio's team on the 2016 Tioga Road Seeding projects in the Park. Their knowledge and experience makes Force Traffic Control's flaggers, and pilot car drivers an integral part of our team.

<u>LaMar Construction Equipment Services</u> (Semi Truck owner/operator) Lance Marchetti: Local equipment owner and operator in Groveland, CA

His company will provide the trucks and trailers to provide heavy haul services for Mach8Bio. LaMar Construction and Mach8Bio have worked together in the Park to load and haul 710 yards of fill from the old Lower River Campground to South Landing in 2016,

Bezak Liquid Transport (Water Truck owner/Operator)

Ben Youngren: Local Potable/non-potable water delivery service in Mariposa CA

Bezak will provide the necessary trucks to provide water transport. We have worked together to transport sufficient water from a distant source for remote hydroseeding along Hwy 120 for the Big Oak Flat Rd Repair.

<u>Mills Tree Management</u> (Licensed Timber Operator - Commercial Timber Cutting and Hauling) Dillon and Shane Mills: Local Loggers from Groveland, CA

Mills Tree Management and Mach8Bio worked together to cut, load, haul and deck saw log from US Forest Service Land for a timber sale in Tahoe National Forest.

<u>1 of 8</u>

Hydroseed Application & BMP Installation

Mach8Bio consults and advises clients to design and implement post construction SWPPP Best Management Practices (BMPs) to control soil erosion and combat the growth of non-native plant species. Two step hydroseeding methods in combination with straw wattles, and or Jute netting are our usual recommended specifications. We work together with client resource managers, and our local native seed / plant suppliers to establish effective seeding and mulch rates to meet the goals of post construction erosion control and establish a seed bank of native seeds to compete with the non-native species and ensure SWPPP compliance throughout the life of a project.

Featured Projects

Post Construction Reseeding and Hydromulch

CLIENT: Yosemite National Park

DATES: 09/15/2016-12/30/2019

Hydraulically applied native seed, mulch, and fertilizer along highway 120 and within Yosemite Valley Loop roads in Yosemite National Park. Work was performed under peak visitor use utilizing appropriate traffic control measures. NPS weed inspections were completed for all equipment before entering the park. Applied herbicides along public roads using boom truck sprayer and spot spraying in remote areas.

Post Re-contouring Meadow Restoration

CLIENT: Yosemite National Park

DATES: 10/2018 - 12/2018

Consult with National Park Service Qualified SWPPP Developers (QSD) to design and implement post construction SWPPP Best Management Practices (BMPs) to control soil erosion and combat the growth of non-native plant species in the Ahwahnee Meadow as part of the Merced River Plan. Two step hydroseeding methods in combination with straw wattles were installed as part of a larger meadow restoration project to re-establish a more natural hydrology.

Mountain Tunnel Improvements

CLIENT: San Francisco Public Utilities Commission (owner), Michels (Prime)

DATES: 2/2021—Present

Clear and Grub hazard trees (up to 36" DBH), and shrubs along roadsides to increase visibility along the roadsides, prepare ground for building pads, retaining walls, power lines, and road curve widenings. Utilized chainsaws excavators and chippers to remove all slash, stumps and debris.

Install, inspect and maintain SWPPP BMPs for erosion control (silt fence, wattles, gravel bags, watering for dust control, hydroseeding etc.) Install inspect and maintain Environmental Boundary Fence (ESA fencing)

<u>2 of 8</u>

Invasive Plant & ROW Vegetation Management

Mach8Bio is licensed to apply herbicides commercially in California. Our botanists and experience applicators regularyly make recommendations of timely herbicide applications specific to the target species. Our recommended approach to weed management is a combination of mechanical and chemical treatments. Follow-up monitoring and reporting are crucial in our integrated pest management planning.

Featured Projects

Post Construction Weed Abatement

CLIENT: Yosemite National Park

DATES: 09/15/2016-12/30/2019

Provide weed-abatement services along newly constructed roadsides, parking lots and islands in Yosemite National Park. This requirement called for repeated site visits utilizing a combination of timely herbicide application, hand-pulling/collection of noxious weeds, and disposal offsite. We also utilized mechanical methods of removal using a combination of weed whackers and shredder/vacs (see image). Additionally, this requirement called for two-step hydroseeding to control soil erosion and combat the growth of non-native plant species in the project areas.

Post COD Environmental Permit Compliance

CLIENT: Palen and Desert Harvest Solar Facilities

DATES: 6/2021-12/2021

Vegetation surveys to identify any non-native weeds and develop a pesticide use plan for submittal to the BLM as part of a greater Integrated Pest Management Plan for the operations and maintenance of the completed solar facility.

Weed and Pest Abatement Services New Melones Recreation Area

CLIENT: Bureau of Reclamation

DATES: 5/2018—Present

Provide weed abatement along the roadsides, parking lots and islands as well as provide pest abatement around the restrooms and outbuildings in various locations at the New Melones Lake Recreational Complex for the Bureau of Reclamation. This abatement requirement calls for repeated mowing and spraying of herbicides on all thistle infested fields adjacent to all recreation areas including day use and campgrounds next to parking lots, buildings and 200 miles of roadside. Nesting bird surveys are required during the migratory bird season.

<u>3 of 8</u>

Plant Salvage, Installation & Maintenance

Our experienced project managers will work with clients to design native seed mixes and plant selections for your specific sites. We have a long standing relationship with CA native plant nurseries to start contract grows for non commercially available seeds or plants. Our skilled staff of laborers and operators understand the importance of careful plant extraction to preserve root mass for later replanting in properly dug holes. Additionally, we are experienced with implementing temporary irrigation features in remote sites for successful installation and maintenance of salvaged or containerized plants.

Featured Projects

Trinity River Restoration Project

CLIENT: Bureau of Reclamation

DATES: 09/15/2019- present

Consult with the BOR resource specialists to advise native species selection and installation methodology. Worked with local Native straw, seed, and containerized plant suppliers to establish a contract grow for this specific project for non-commercially viable species. This included all procurement and timely delivery. This multi year contract requires establishing contract grows every spring and timely fall delivery for installation.

ON Line Transmission Project

CLIENT: NV Energy

DATES: 9/2011-12/2012

Use back hoe and hand tools to carefully salvage cacti and Yucca from a new powerline construction in the Mojave Desert. Construct a fenced and shaded temporary nursery to stage plants until project completion. Utilized time release water bags for remote water delivery as irrigation. Decommission access roads and replant cacti and yucca in restoration areas after deep ripping/de-compaction.

Berkeley Camp Landscaping Plant Sourcing

CLIENT: City of Berkeley (owner), Boyer Construction (prime)

DATES: 2/2020—Present

Design native seed mix, establish contract grows for timely seed and containerized plant delivery. Hydroseed and mulch disturbed areas around newly constructed cabins. Protect newly planted tree saplings from herbivores with hardware cloth.

Wondernut Farm (Start-up Off Grid Farm in Groveland, CA)

Alex Mach (Former Farm Owner)

DATES: 2/2013-2/2017

Alex Mach started an off-grid organic farm from the ground up. Solar Panel installation and small powerline construction, contoured ditch and swale orchard, gravity fed drip irrigation, 4 acre fenced in garden construction including green house, live-stock and deer fencing.

<u>4 of 8</u>

Site Preparation & Topsoil Management

Mach8Bio has a staff of skilled heavy equipment operators and owns/maintains specialty landscaping attachments to complete deep ripping and earthmoving projects in remote, sensitive habitats. We have a staff of hydrologists, botanists and wildlife professionals to help design proper ditch or meadow re-contouring to establish more natural hydrology or decommission access roads such that the normal hydrology is restored to the pre construction conditions.

Featured Projects

Loading and Hauling Fill to South Landing

CLIENT: Yosemite National Park

DATES: 10/2016-12/2016

Load and haul ~1000 cubic yards of road base and fill from the old Lower Pines campground to South Landing. Strict weed control protocols were maintained: all equipment was inspected by a park representative before entering the park.

Enhancing Desert Tortoise Habitat Through Select Piosphere Restoration

CLIENT: Mojave National Preserve

DATES: 10/2020-12/2020

Mach8Bio and NPS resource managers worked together to establish an effective native seed mix, seeding rate to meet the goals of decommissioning impacted sites throughout the Preserve. Our project methods included deep ripping compacted soil down 18" followed by a single step hydroseed. The planting containerized plants protected by herbivore exclusion fencing followed with a round of deep watering.

ON Line Transmission Project

CLIENT: NV Energy

DATES: 9/2011-12/2012

Use a D6 CAT dozer to blade the top 3 inches of topsoil to the side of 28 miles of new access road and 16 acres of powerline pole construction pad and staging areas. This topsoil was clearly marked and protected to prevent mixing with fill dirt from other excavation activities on the project. Access roads and pads were ripped, and re-contoured to the preconstruction hydrology then topsoil spread over the reclaimed area

Post COD Environmental Permit Compliance

CLIENT: Palen and Desert Harvest Solar Facilities

DATES: 6/2021-12/2021

Rehabilitate land disturbed from construction activities involved in solar facility in the Mojave Desert. Rehabilitation occurred in Desert Tortoise Habitat. Rip and hydroseed with a CA native desert seed mix, and re plant with native containerized stock protected from herbivores with hardware cloth

<u>5 of 8</u>

Tree Removal & Hazard Fuel Reduction

Mach 8 Biological's experienced team has a for finding safe and creative solutions to long history of providing tree and fuel remov- unique problems in remote construction sites. al solutions for construction and ecological restoration contracts for the federal, state and private sectors. We have a reputation

In many cases these solutions have developed into new lines of business.

Featured Projects

Merced Grove Hazard Fuel Reduction

CLIENT: Yosemite National Park

DATES: 10/2021-12/2021

Selectively thin small pines (<20" DBH) in a Giant Seguoia Grove in Yosemite National Park for hazard fuel reduction. Hand fall and mechanically pile or chip for offsite disposal. Work is conducted in an extremely sensitive resource habitat and utmost care is given to prevent the spread of non-native weeds.

Calaveras Big Trees Fuel Reduction

CLIENT: Calaveras Big Trees State Park

DATES: 11/2021—Present

Hand cut and pile small trees and brush in 155 acres in Calaveras Big Trees State Park. This work is being conducted to prepare for a larger broadcast burn later. Limbing and clearing around big heritage trees and good pile construction was paramount to prevent higher tree mortality when the consecutive burns are conducted

Eagle Meadow Restoration—Encroaching Conifer Removal

CLIENT: Yosemite National Park

DATES: 11/2018

Consult with National Park Resource Managers to identify the most efficient, least impactful method to remove encroaching conifers or high hazard fuels from historic Yosemite Valley meadows to restore them to a pre-fire suppression ecological state by hand felling and broadcast chip in place. Sensitive species (Black Oaks) were identified and avoided.

Sugar Pine Reservoir Recreation Complex Hazard Tree Mitigation

CLIENT: Tahoe National Forest

DATES: 2/2018-4/2018

Hand-fell, transport, and treat over 700 designated hazard trees from campgrounds and day-use areas within the Sugar Pine Reservoir Recreation Complex to identified disposal areas. Additional treatment requirements include: end-lining, skidding, transporting of included timber and slash to identified disposal sites, applying a borate compound to stumps, stump grinding designated stumps and restoring recreation sites.

6 of 8

Special Status Species Surveys

Mach8Bio has access to the industry's most diverse network of qualified independent biologists in the state. If you need an expert with current permit, then we can reach out to our network and provide any number of specialty biologists that your project requires.

Featured Projects

Marine Core Air-Ground Combat Center

CLIENT: Dept. Of Defense

DATES: 9/2013 - 2/2017

Translocated over 1,200 desert tortoises as part of a larger team of consultants. Translocation methods included transport by hand, vehicle, or helicopter as approved by USFW protocols identified in the Biological Opinion. Assisted authorized biologists in conducting health assessments on desert tortoises found on and around MCAGCC training grounds. Health assessments included taking subcarapacial blood samples, visual assessment of symptoms of URTD, oral cavity examinations, re-hydration via nares, affixed/remove transmitters and morphometric measurements (weight, MCL...)

Supervised desert tortoise (DT) staff of 5-9 independent biologists while conducting clearance surveys.

Upper Tuolumne River Ecosystem Program

CLIENT: San Francisco Public Utilities Commission & Yosemite National Park

DATES: 10/2018 - 12/2018

Worked as part of a collaborative team to assess the historical / current river conditions downstream of the Hetch Hetchy Dam operations. Data collected included: visual encounter surveys for foothill yellow-legged frog; western pond turtle; and other reptile and amphibian species; point counts for migratory birds; and stream temperature monitoring. Data were used to develop flow recommendations and resource management priorities in the Upper Tuolumne River.

Peregrine Falcon Prey Remains Collection

CLIENT: Big Basin, California State Park

DATES: 7/2018, 7/2019, 7/2020

Climb or rappel into Peregrine Falcon nesting cliffs to collect prey remains at any nesting or pecking ledges to confirm if Peregrine Falcons are depredating Marbled Murrelet by identifying any feathers, beaks, bills, feet, or any other remains indicative of Marbled Murrelet presence

Special Status Species Surveys (Continued)

Yosemite Toad / Mountain Yellow Legged Frog Presence Absence Surveys

CLIENT: Yosemite National Park

DATES: 2009-2014

Mach8Bio's Restoration Specialist trained incoming seasonal NPS field personnel to familiarize them with the research protocol and methods in backcountry wilderness setting and successfully deployed multiple backcountry crews to collect data each field season. Fieldwork required: extensive backpacking experience over rugged (often cross-country) terrain for 8-9 day tours carrying ~50 lb packs; ability to work in a small crew with limited human contact in remote environments under inclement weather conditions for prolonged periods; and aptitude to work in and around cold water.

ADDITIONAL CONSTRUCTION SERVICES

- Certified Arborist Tree Health Assessments
- Tree Care and Pruning (climbing)
- Rock Slope Scaling, Rope Access Tech
- Wildlife Exclusion Fencing
- Mastication
- Mowing
- Endangered Species Permitting
- USACE CWA Section 404 Permitting

- Sensitive Plant and Wildlife Surveys
- Nesting Bird Surveys and Monitoring
- Habitat Assessment
- GIS Analysis and Mapping
- Backcountry non native trout removal
- Construction Monitoring-biological/cultural
- UAS/UAV Services
- Radio Telemetry
- SWPPP Preparation, Rain Event Action Plans