

Services Supporting Mazama’s Newberry SuperHot Rock Geothermal Operations

(Oregon – Newberry Volcano)

Mazama EMPOWER - Economic Mobilization: Partnered Opportunity, Workforce & Enterprise Readiness

***Mazama EMPOWER** is Mazama Energy’s economic development program designed to help local businesses, service providers, and skilled trades participate directly in geothermal drilling and field operations, building durable in-state capacity and long-term economic benefits.*

Contents

Introduction.....	3
Supporting Local Providers: Certification Readiness & Bridging the Gaps	3
What Mazama Will Do to Help Local Providers Participate	3
Certification / Qualification Readiness (How Providers Get “Site-Ready”).....	3
Bridging the Gaps: Practical Support for Local Businesses	4
Why This Matters	4
Site Preparation & Civil Works	5
Pad Construction and Earthworks	5
Road Construction and Maintenance	5
Cellar Construction	5
Logistics, Equipment & Rentals	6
Equipment Rentals and Services	6
Cranes and Lifting Services.....	6
Trailers and Temporary Offices	6
Hydrovac Services (Hydrovac Truck)	6
Vacuum Tanker Trailer Services (Vac Tanker).....	6
Utilities & Site Services.....	7
Water Supply and Water Hauling.....	7
Drinking Water Supply	7

Services Supporting Mazama’s Newberry SuperHot Rock Geothermal Operations

Water Well Maintenance.....	7
Water Well Drilling.....	7
Fuel Supply and Fuel Management.....	7
Temporary Power and Utilities	7
Transportation & Material Handling	8
Trucking and Hauling Services	8
Hotshot Trucking Services	8
6x6 Truck Hauling (Winter Access)	8
Winch / Pole Truck Services	8
Casing Yards and Tubular Transport.....	9
Warehousing and Staging	9
Workforce & On-Site Support	10
Roustabout and General Labor Services.....	10
Gate Guard and Site Security	10
Man Camps and Workforce Accommodations.....	10
Portable Restrooms.....	10
Mechanical, Fabrication & Specialty Services	11
Machine Shop Services.....	11
Welding and Fabrication	11
Mechanics / Mobile Equipment Maintenance	11
BOP Testing and Pressure Testing	11
Casing Running Services.....	12
Drill Cuttings and Drilling Fluid Management	12
Environmental & Waste Services	13
Waste Management and Disposal.....	13
Water Treatment and Septic Services.....	13
Environmental Monitoring and Support	13
Stormwater Services	13
Communications & Data	14
Telecommunications and Connectivity	14
Data and Monitoring Support Services.....	14

Introduction

Supporting Local Providers: Certification Readiness & Bridging the Gaps

Mazama’s work at Newberry is expected to recur across multiple wells and field seasons - creating sustained demand for contractors and service providers rather than a one-time mobilization. To ensure Central Oregon businesses can participate meaningfully as this work scales, Mazama will use Mazama EMPOWER - our economic development framework designed to help local and regional providers build the readiness needed to support geothermal drilling and field operations over time.

What Mazama Will Do to Help Local Providers Participate

Mazama will actively support local providers in translating capability into job-ready qualification, with an emphasis on clear expectations, predictable onboarding, and safety alignment. This includes:

- **Clarifying requirements early** - We will communicate expected service scopes, field conditions, and operational interfaces so providers can plan staffing, equipment, and compliance investments with confidence as the project evolves.
- **Providing Health, Safety and Environment (HSE), and permit-to-work guidance** - Mazama maintains a Newberry Operations Permit to Work System and HSE Requirements framework that defines safety and environmental requirements for field operations. Mazama will guide providers in understanding these expectations as part of mobilization and site participation readiness
- **Reducing “readiness friction”** - Where local firms have strong operational capability but limited experience with energy-sector documentation, onboarding norms, or compliance workflows, Mazama will help bridge gaps by explaining what’s required, why it matters, and how to sequence readiness steps to avoid schedule delays.
- **Building durable in-state capacity** - Mazama EMPOWER is designed to help businesses participate directly in field operations while building long-term local capacity and economic benefit as Newberry advances.

Certification / Qualification Readiness (How Providers Get “Site-Ready”)

Many Newberry service categories require providers to be capable of operating in a safety-critical industrial environment with time-sensitive execution windows. Mazama will support local providers by offering a straightforward readiness pathway that typically includes:

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- Baseline compliance alignment to Mazama’s Newberry field requirements (including applicable HSE expectations and permit-to-work practices).
- Documentation readiness so vendors can respond quickly when scopes arise (e.g., safety plans, training records, insurance and licensing documentation, equipment inspection/maintenance records—exact requirements vary by scope). (Examples are illustrative; align to Mazama’s formal requirements during onboarding.)
- Operational fit & sequencing, ensuring the provider’s services can integrate with drilling milestones and field logistics (often short-notice, intermittent-but-recurring needs across a multi-well program).

Bridging the Gaps: Practical Support for Local Businesses

Mazama’s goal is to ensure that “local” does not mean “left out” due to preventable barriers. Through EMPOWER, Mazama will:

- Translate complex requirements into plain language so providers understand expectations without needing prior geothermal experience.
- Identify capability matches between local businesses and the service categories required at Newberry, helping firms target the most realistic near-term entry points (and identify what additional readiness steps may unlock future scopes).
- Promote continuity and learning across seasons, enabling local providers to build experience in phases - starting with achievable scopes and expanding over time as the project scales.

Why This Matters

Newberry is expected to support a sustained sequence of drilling and field operations as technical milestones are achieved and permits allow, creating recurring needs for skilled contractors and service partners. Mazama EMPOWER is intended to convert that long-duration trajectory into durable, local participation - supporting workforce continuity, business investment, and a stronger regional supply chain aligned with safe and efficient operations.

To make that participation practical, the next section outlines the key services required to support Newberry field activities, with brief descriptions and typical expectations. The service list is representative, not exhaustive, and other services may be required as the project progresses.

Site Preparation & Civil Works

Pad Construction and Earthworks

Geothermal drilling at Newberry requires the construction and maintenance of gravel well pads capable of supporting heavy drilling rigs, auxiliary equipment, and long duration operations. Civil contractors may support clearing, grading, excavation, drainage, and pad reinforcement, as well as periodic maintenance as drilling progresses across multiple wells over time. These activities are foundational to safe and efficient operations and may occur repeatedly as new pads or expansions are permitted duration operations.

At Newberry, pad construction must accommodate extended rig residence times, repeated heavy lift operations, and evolving site layouts as drilling progresses across multiple wells. Contractors may be required to support not only initial pad construction, but also resurfacing, drainage improvements, loadbearing reinforcement, and reconfiguration to support additional equipment or operational changes. Work is closely coordinated with access roads, crane operations, and environmental controls to maintain safe and efficient operations over multiple field seasons.

Road Construction and Maintenance

Access to the Newberry site depends on reliable all weather roads, capable of supporting heavy truck traffic, oversized loads, and year round operations. Services may include initial road construction, widening, gravel placement, snow management, and ongoing maintenance throughout drilling campaigns. As development expands, road maintenance becomes a recurring need tied to operational continuity.

Cellar Construction

Each geothermal well requires a cellar to house wellhead equipment and support drilling and completion activities. Cellar construction involves excavation, formwork, concrete placement, and coordination with drilling schedules. As additional wells are drilled, cellar construction may be required at multiple locations across the site.

Logistics, Equipment & Rentals

Equipment Rentals and Services

Equipment services at Newberry support a wide range of site activities and require 24-hour personnel availability to operate, maintain, and respond to equipment needs during active drilling. This service category typically includes hydrovac trucks, vacuum tankers, winch or pole trucks, forklifts, man lifts, loaders, light plants, generators, transfer pumps, and water treatment tanks. Providers must also be available on call to troubleshoot or service equipment to avoid operational delays. As drilling progresses across multiple wells and field seasons, general equipment services are expected to remain a continuous and adaptable support function essential to safe and efficient site operations. Rental providers may support initial rig up, daily operations, maintenance activities, and demobilization, with flexibility to scale equipment up or down as drilling progresses.

Cranes and Lifting Services

Cranes are needed for rig assembly, casing handling, heavy equipment placement, and specialized lifts throughout drilling and completion phases. Crane services may be required intermittently but repeatedly across a multi-well program, often on short notice and in coordination with drilling milestones.

Trailers and Temporary Offices

Drilling and field operations require temporary office space, meeting rooms, storage trailers, and safety facilities. These units support on-site management, engineering, regulatory coordination, and workforce needs over extended periods.

Hydrovac Services (Hydrovac Truck)

Hydrovac services support non-destructive excavation and cleanup tasks commonly needed during site preparation, utility work, and facility maintenance. At Newberry, hydrovac capability can be used to safely daylight or clear around buried infrastructure, manage localized excavation needs, and support field maintenance activities without disrupting surrounding ground conditions.

Vacuum Tanker Trailer Services (Vac Tanker)

Vac tanker services support the movement of fluids required for drilling and site operations, including transport between onsite tanks and approved disposal or treatment locations as applicable. This service helps maintain orderly site conditions and supports continuity during high volume operational periods.

Utilities & Site Services

Water Supply and Water Hauling

Geothermal drilling and site activities require consistent water supply for drilling, construction, dust control, and site services. Providers may support water sourcing, hauling, storage, and management in compliance with permits and site requirements.

Drinking Water Supply

Drinking water services support workforce health and safe operations during long duration field campaigns. Providers may supply potable water delivery, refill services, and associated equipment needed to support rotating crews on site.

Water Well Maintenance

Water well maintenance services support reliable site water systems by providing inspection, repair and upkeep of pumps, and related infrastructure. Reliable water systems are important for drilling support, dust control, and general site services, particularly during sustained field campaigns.

Water Well Drilling

Water well drilling services may be required for future site needs as operations expand or as additional water sources are developed under applicable approvals. This includes drilling, completion, and commissioning of water wells and related site water infrastructure.

Fuel Supply and Fuel Management

Continuous fuel supply is essential for drilling rigs, generators, and site equipment. Fuel services may include delivery, on-site storage management, spill prevention measures, and regular monitoring over long operating periods.

Beyond general fuel management, Newberry operations require reliable delivery of fuel and consumables such as DEF to support continuous operation of rigs, generators, and heavy equipment. Vendors providing scheduled deliveries and responsive replenishment can help reduce operational risk during multi-day and multi-week field activity.

Temporary Power and Utilities

In addition to drilling rigs, the site may require temporary power generation, lighting, and utility systems to support offices, safety systems, and auxiliary equipment, particularly during early development phases.

Transportation & Material Handling

Trucking and Hauling Services

Trucking providers support the movement of drilling equipment, casing, consumables, and waste materials to and from the site. These services are essential throughout all phases of development and may scale significantly as drilling activity increases.

Trucking and hauling services at Newberry support the continuous movement of tubulars, drilling chemicals, sand, equipment, and other materials required for drilling and completion operations. Providers must be capable of operating 24 hours a day with appropriately equipped tractors and a range of trailers, including step decks, high beds, and heavy haul configurations suitable for remote access and winter conditions. As development expands, trucking services are expected to remain a core logistical function supporting both active drilling and long term site operations.

Hotshot Trucking Services

Hotshot trucking supports time critical deliveries to and from the Newberry site, including small equipment, parts, specialty tools, and urgent consumables needed to prevent downtime during 24/7 operations. These services are especially valuable during active drilling and completion periods when schedule impacts can be significant and rapid turnaround is required.

6x6 Truck Hauling (Winter Access)

During winter conditions, specialized hauling capability may be required to reliably move equipment and supplies to and from the site when traction, grade, or snowpack limit standard trucking access. 6x6 hauling services can support continuity of operations by enabling transport of priority materials and equipment in challenging weather and road conditions.

Winch / Pole Truck Services

Winch or pole truck services may be required for specialized moves, recovery support, or transport of long or awkward loads that benefit from integrated winch capability. These services help maintain safe site logistics and can support rapid response for equipment moves during changing operational conditions.

Casing Yards and Tubular Transport

Local or regional casing yards and transport services support staging, inspection, handling, and delivery of tubulars. Proximity to site can reduce lead times and improve operational efficiency as multiple wells are drilled.

Warehousing and Staging

Warehousing and laydown yards near the site enable storage and staging of equipment, spare parts, and consumables, supporting rapid response and reducing logistical delays during active drilling.

Storage facility services for Newberry operations require a secure, well-organized yard or shop facility in the La Pine area with 24-hour access to support continuous drilling activity. Facilities are used to stage and store drill pipe, casing, sand boxes, fishing tools, drilling fluid chemicals, and other critical equipment and consumables. Providers must be capable of handling large and heavy materials, typically requiring high-capacity forklifts and appropriate laydown areas. Local storage capacity improves logistics efficiency, reduces transport delays, and supports rapid response as drilling operations scale across multiple wells.

Workforce & On-Site Support

Roustabout and General Labor Services

General labor crews support rig operations, equipment handling, site upkeep, and maintenance tasks. These roles are critical for day-to-day operations and offer repeat opportunities as drilling continues.

Roustabout services provide essential day-to-day support for Newberry drilling operations and require crews to be available on a 24-hour basis. Typical duties include site management, solids handling, fueling and water transfers, equipment offloading, pipe handling, snow removal, waste transport, and general housekeeping. Roustabouts also support operation of forklifts, man lifts, pumps, and hammer union assemblies. These services are foundational to safe and efficient operations and scale directly with drilling activity, crew size, and the number of active wells on site.

Gate Guard and Site Security

Site access control and security services help manage traffic, enforce safety protocols, and maintain secure operations, particularly during periods of heightened activity or multiple crews on site.

Man Camps and Workforce Accommodations

Extended drilling campaigns require housing, catering, sanitation, and support services for rotating crews. These services may be needed over multiple seasons as development progresses.

Portable Restrooms

Portable restroom services support workforce health and site sanitation during extended operations. Vendors may provide delivery, maintenance/servicing, and removal of portable sanitation units sized to crew and activity levels across multiweek drilling periods.

Mechanical, Fabrication & Specialty Services

Machine Shop Services

Machine shops may support cutting, threading, inspection, and repair of drilling components and related equipment. Local access to machining capabilities can reduce downtime and shipping delays during operations.

Machine shop support for Newberry operations requires facilities capable of cutting and repairing API certified and proprietary threads on drill pipe, collars, and casing, often on a 24/7 basis. Shops must be equipped with CNC lathes capable of handling large diameter tubulars and long lengths, bucking machines for makeup operations, forklifts for material handling, and covered workspace suitable for precision machining. Local access to qualified machine shop services can significantly reduce downtime and logistics delays as drilling and completion activities progress across multiple wells.

Welding and Fabrication

Welders and fabricators support onsite modifications, repairs, and custom components needed to address site specific conditions and evolving operational needs.

Mechanics / Mobile Equipment Maintenance

Mobile mechanic services support uptime of site vehicles and equipment by providing responsive maintenance and repair capability near the project area. As drilling and support activity scales, rapid maintenance response can reduce downtime and help maintain safe and efficient operations.

BOP Testing and Pressure Testing

Blowout preventer (BOP) testing and other pressure critical services are essential for safety and regulatory compliance. These services may be required repeatedly across wells and drilling phases.

Blowout preventer (BOP) testing at Newberry requires trained crews capable of mobilizing to the drilling site to nipple up and pressure test multiple BOP configurations, including large diameter systems such as 13 5/8" and 21 1/4" stacks. Testing operations are safety critical and must be executed in accordance with approved procedures and regulatory requirements. Service providers must be equipped with high pressure test pumps, rated hoses (15,000 PSI), pressure recording systems, torque equipment, and specialty subs to interface with drilling assemblies. As drilling activity expands, BOP testing is expected to recur across wells and phases, often on short notice and at all hours.

Casing Running Services

Casing running services are a critical component of geothermal well construction at the Newberry site, supporting the safe installation of multiple casing strings required to maintain well integrity at high temperatures and depths. These services involve specialized crews and equipment capable of running large diameter and heavy wall casing under continuous, 24-hour drilling operations, often on compressed schedules tied directly to rig activity. Reliable casing running is essential to maintaining drilling momentum, ensuring well control, and enabling subsequent drilling and completion phases as Newberry development progresses across multiple wells.

Casing running at Newberry involves the installation of multiple casing sizes - commonly including 20", 13 3/8", 9 5/8", 7", and 5 1/2" - and requires experienced crews available around the clock, including nights, weekends, and holidays. Operations must be executed efficiently to minimize rig downtime and ensure well integrity. Service providers are expected to supply power tongs, elevators, slips, hydraulic units, and transport vehicles with sufficient redundancy to support continuous operations. As additional wells are drilled, casing running services will be required repeatedly throughout the development sequence.

Drill Cuttings and Drilling Fluid Management

Drill cuttings and drilling fluid management services are essential to maintaining safe, compliant, and efficient geothermal drilling operations at the Newberry site. Effective cuttings and fluid management is critical to keeping the drilling location orderly, minimizing environmental risk, and ensuring uninterrupted operations as wells are drilled over extended periods and across multiple phases.

Drill cuttings and fluid management at Newberry requires continuous, 24-hour support during active drilling. Personnel are responsible for handling, loading, transporting, and disposing of drill cuttings and excess drilling fluids in compliance with environmental and operational requirements. Services typically include operation of frontend loaders, management of roll off bins with watertight lids, vacuum truck operations, and offsite disposal at approved facilities. As drilling progresses across multiple wells, cuttings and fluid management remains an ongoing, high volume service essential to maintaining safe and orderly site conditions.

Environmental & Waste Services

Waste Management and Disposal

Geothermal operations generate solid, liquid, and general waste streams that must be handled, transported, and disposed of in compliance with environmental requirements.

Water Treatment and Septic Services

Sanitation and wastewater services support workforce health and environmental compliance during extended field operations.

Environmental Monitoring and Support

Environmental services may include monitoring, reporting, and support activities required by permits or project conditions, evolving as the project scales.

Stormwater Services

Stormwater services support compliance and site protection during construction and drilling activities, including measures that reduce erosion, manage runoff, and maintain site conditions during precipitation and snowmelt periods. This can include implementation and maintenance support for stormwater controls as required by project scope and permits.

Communications & Data

Telecommunications and Connectivity

Reliable communications are critical for safety, operations, data transfer, and coordination with off-site teams. Services may include internet connectivity, site networks, and communications infrastructure.

Data and Monitoring Support Services

Certain project phases may require support for data systems, monitoring equipment, or instrumentation associated with drilling and site operations.