

MITIGATION AND MONITORING PROGRAM Santa Rosa Groundwater Master Plan – Emergency Groundwater Well Easement at 4224 Highway 12					
Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring / Reporting Action & Schedule	Non-Compliance Sanction/ Activity	Monitoring Compliance Record (Name/Date)
Mitigation Measure AES-1: Emergency Well Siting Near State-Designated Scenic Highway 12. Placement of emergency wells within 200 feet of State-designated Scenic Highway 12 between Danielli Avenue and Pythian Drive shall be avoided, if feasible. If placement of an emergency well is necessary within 200 feet of Highway 12 in this area, the facilities shall be designed and implemented so that they do not detract from the scenic quality along Highway 12. Such design and implementation may include, but would not be limited to, designing emergency well facilities to incorporate building features and design elements that are compatible with the surroundings and designing landscaping plans to screen views of new structures and equipment from motorists along Highway 12.	Document that avoidance of 200-foot buffer is infeasible.	City of Santa Rosa Director of Utilities	Verify infeasibility prior to initiation of design	Design cannot begin	
	If well is sited within 200-foot buffer, incorporate design elements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	If landscaping is prescribed, it shall be completed within one year of completion of construction. Monitoring shall continue for five years.	City of Santa Rosa	Conduct field visit to verify success of plantings for 5 years	Replant, if needed	

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<p>Mitigation Measure AQ-1: BAAQMD Basic Construction Measures. To limit dust, criteria pollutants, and precursor emissions associated with the construction activity, the City shall include following BAAQMD-recommended Basic Construction Measures in all construction contract specifications for the proposed Project:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day; • All haul trucks transporting soil, sand, or other loose material off-site shall be covered; • All visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping shall be prohibited; • All vehicle speeds on unpaved areas shall be limited to 15 miles per hour; • All paving shall be completed as soon as possible after pipeline replacement work is finished; • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points; • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation; and <p>Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.</p>	Incorporate requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	

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Mitigation Measure AQ-2: Reduce Health Risk from Emergency Well Construction. The City shall require construction activities to utilize off-road diesel-powered equipment that meets the U.S. EPA Tier 2 engine requirements for particulate matter emissions, if emergency wells are located within the following distances of sensitive receptors (i.e., residential uses, schools, and overnight health care facilities): <ul style="list-style-type: none"> • Within 300 feet of sensitive receptors to the north of the emergency well, as defined as the area extending 300 feet to the north between the western and eastern limits of construction; and • Within 300 feet of sensitive receptors to the northeast of the construction site, as defined as the area within the northeast quadrant within 300 feet of the emergency well. 	Implement during construction	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	
	Determine if proposed wells are within specified distances.	City of Santa Rosa	Verify presence prior to beginning design	Design cannot begin	
	If wells are located within specified distances, incorporate requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Implement during construction.	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	

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<p>Mitigation Measure BIO-1a: Avoid Loss of Listed or CNPS List 1B Plants and their Habitats. The City shall avoid loss of state and federally listed or proposed plant species, state candidates for listing, CNPS List 1B species, and occupied or critical habitat for these species, to the extent feasible. Where avoidance of individuals or habitat is infeasible, the City shall compensate for loss as required by the U.S. Fish and Wildlife Service and/or CDFW. For ground disturbance within vegetated areas (excluding landscape and ruderal areas), reconnaissance-level surveys shall be performed to determine whether the area affected may contain suitable habitat. If habitat for listed or CNPS List 1B plants is not identified during the surveys, then no further mitigation for impacts to target species are necessary under this measure.</p> <p>If the area does contain potential suitable habitat, protocol-level surveys to determine presence or absence of target species shall be conducted prior to construction wherever habitats for these species would be impacted, unless the City assumes presence of the species and implements compensatory measures.</p> <p>The following measures are examples of those that would be required by the U.S. Fish and Wildlife Service and/or CDFW.</p> <ul style="list-style-type: none"> Where project activities result in impacts to vernal pool habitats, the conservation measures described in the Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects that May Affect Four Endangered Plant Species on the Santa Rosa Plain, California (Corps File # 22342N) may need to be implemented. Listed or List 1B plants within the project footprint may need to be transplanted to a mitigation site approved by the California Department of Fish and Game and U.S. Fish and Wildlife Service. Seed from plants unavoidably impacted may need to be collected and preserved for planting on an approved mitigation site. Where construction activities unavoidably affect a listed or List 1B plant species, corridor widths may need to be limited to a maximum of 30 feet through plant habitat. <p>All storage and staging areas may need to be located outside listed or List 1B plant habitat.</p>	Conduct reconnaissance-level surveys	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If habitat in reconnaissance-level surveys is identified, conduct protocol-level surveys or assume presence. If presence is assumed, consult with applicable State or federal agency.	City of Santa Rosa	Report of Findings. Possible consultation with State and federal agencies	Construction cannot begin	
	If specified plants are identified within work areas, avoid or incorporate agency requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	

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Mitigation Measure BIO-1b: Avoid Loss of Sensitive Plant Species. The City shall avoid loss of individuals of a CNPS List 2, 3, or 4 (sensitive) plant species if impacts exceed 10 percent of the known occurrences within Sonoma County. A qualified botanist or biologist shall evaluate proposed sites to determine the potential for CNPS List 2, 3, or 4 plants. If the botanist or biologist determines that the site could support special-status plant species, then surveys for sensitive plant species shall be conducted by a qualified botanist during the bloom period. If special-status plants are identified with the construction area, the City shall attempt to avoid loss by adjusting construction boundaries to avoid sensitive plants.	Conduct reconnaissance-level surveys	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If habitat in reconnaissance-level surveys is identified, conduct protocol-level surveys or assume presence.	City of Santa Rosa	Report of Findings.	Construction cannot begin	
	If specified plants are identified within work areas, avoid if feasible.	City of Santa Rosa	Adjust construction boundary if feasible	Construction cannot begin until avoidance attempted	
Mitigation Measure BIO-1d: Protect Special-Status Aquatic Species. Where pipelines must cross a creek, the City shall ensure that a qualified biologist conduct pre-construction surveys for special-status aquatic species before open-cut trenching across a creek. If any special-status species are found, the City shall avoid the creek, tunnel under the creek, or wait until the creek is dry. All temporarily impacted habitat shall be restored to pre-project conditions upon completion of construction activities.	Complete pre-construction surveys before installation of pipelines across a creek.	City of Santa Rosa	Report Findings	Construction cannot begin	
	If special-status aquatics species are identified, then tunnel under the channel or delay work until the creek is dry. Incorporate into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	If restoration of riparian vegetation is undertaken, conduct field visits to verify success for five years.	City of Santa Rosa	Field visits during construction	Replant, if necessary	

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Mitigation Measure BIO-1e: Protect Western Pond Turtle. Where pipelines must cross a creek, or where test wells or emergency wells are sited within 250 feet of a water body, the City shall ensure that preconstruction surveys for the western pond turtle shall be conducted by a qualified biologist. If western pond turtles are found during preconstruction surveys, CDFW shall be notified and individuals shall be captured by a qualified biologist and relocated to suitable areas. If preconstruction surveys identify active nests, a qualified biologist shall establish a no-disturbance buffer zone around the nest using temporary orange exclusion fencing. The radius of the buffer zone and the duration of the exclusion shall be determined in consultation with CDFW. The buffer zone and fencing shall remain in place until the young have left the nest, as determined by the biologist.	If pipeline crosses creek or wells located within 250 feet of a creek, conduct pre-construction surveys.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If individuals are found, notify agencies and relocate individuals if necessary.	City of Santa Rosa	Prior to construction	Construction cannot begin	
	Establish buffer zones with exclusion fencing.	City of Santa Rosa	Conduct field visit to verify that exclusion zones are clearly identified	Construction cannot begin	

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<p>Mitigation Measure BIO-1f: Protect Yellow-legged Frog. Where pipelines must cross a creek, or where test wells or emergency wells are sited within 250 feet of a water body, the City shall ensure that preconstruction surveys for yellow-legged frogs shall be conducted by a qualified biologist. If potential habitat for the frog is identified, construction activities shall be scheduled so that they do not interfere with the reproductive cycles of the foothill yellow-legged frog, by restricting work within the ordinary high water zone and riparian zone of creeks to the period from June 15 to October 15. Work periods shall be timed to avoid the breeding season of the foothill yellow-legged frog, as well as the majority of the incubation period of frog eggs.</p> <p>If work is required outside of the period from June 15 to October 15, the City shall retain a qualified wildlife biologist to conduct a pre-construction survey for foothill yellow-legged frog. The survey would be conducted within 24 hours prior to the start of construction activities in the creek. If a foothill yellow-legged frog or frog eggs are located in or adjacent to the construction zone, the biologist shall attempt to passively move the species out of the area or the biologist shall capture and move the yellow-legged frog or eggs downstream, out of the construction zone.</p>	If pipeline crosses creek or wells are located within 250 feet of a creek, conduct pre-construction surveys.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If potential habitat is identified, modify construction schedule and work periods to restrict work to between June 15 to October 15.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	If work within 250 feet of the creek is required outside June 15 to October 15 then conduct pre-construction survey 24 hours prior to work. Relocate frogs or frog eggs if found in the construction area. Install exclusion fencing around work area if feasible once frogs are relocated.	City of Santa Rosa	Report of Findings Conduct field visit to verify that exclusion zones are clearly identified.	Construction cannot begin	

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<p>Mitigation Measure BIO-1g: Protect Special-Status Birds, Migratory Birds and Raptors during Construction. The City shall ensure that preconstruction surveys for nesting special-status birds, migratory birds, or raptors are conducted for construction commencing between February 1 and October 15. Surveys shall be completed by a qualified wildlife biologist who is experienced in identifying birds and their habitat and surveys shall be completed within 14 days of construction. Trees within a minimum 300-foot radius of proposed construction shall be included in the survey.</p> <p>If the biologist detects no active nesting by special-status or migratory birds or raptors, then work may proceed without restrictions. If migratory bird and/or active raptor nests are identified, the biologist shall determine whether or not construction activities might impact the active nest or disrupt reproductive behavior. If it is determined that construction would not affect an active nest or disrupt breeding behavior, construction may proceed without any restriction.</p> <p>If the qualified biologist determines that construction activities would likely disrupt special-status birds, migratory birds, or raptor nesting activities, then a no-disturbance buffer around the nesting location shall be established to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (usually late June through mid-July). The extent of these buffers would be determined by a wildlife biologist in consultation with the CDFW and would depend on the species' sensitivity to disturbance (which can vary among species); the level of noise or construction disturbance; line of sight between the nest and the disturbance; ambient levels of noise and other disturbances; and consideration of other topographical or artificial barriers. Typically a 50-foot buffer shall be required for passerines and a 250-foot buffer for raptors; however the wildlife biologist shall analyze and use the above factors in making an appropriate decision on buffer distances.</p>	<p>If trees located within 300 of construction zone, conduct pre-construction surveys for nests within 14 days of construction for work between February 1 and October 15.</p>	City of Santa Rosa	Report of Findings	Construction cannot begin	
	<p>If nests are within 300 feet, determine if reproductive behavior may be disrupted.</p>	City of Santa Rosa	Report of Findings	Construction cannot begin	

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<p>Mitigation Measure BIO-1h: Protect Special-Status Bats during Tree or Structure Removal. Not more than two weeks prior to removal of a building or structure, the City shall ensure that a qualified biologist (i.e., one familiar with the identification of bats and signs of bats) survey the building or structure for the presence of roosting bats or evidence of bats. If no roosting bats or evidence of bats are found in the structure, demolition may proceed. If the biologist determines or presumes bats are present, the biologist shall exclude the bats from suitable spaces by installing one-way exclusion devices. After the bats vacate the space, the biologist shall close off the space to prevent recolonization. Building or structure demolition shall only commence after the biologist verifies seven to 10 days later that the exclusion methods have successfully prevented bats from returning. To avoid impacts on non-volant (i.e., non-flying) bats, the biologist shall only conduct bat exclusion and eviction from February 15 through April 15 and from August 15 through October 30.</p> <p>Prior to the removal of large trees scheduled during seasonal periods of bat activity (February 15 through April 15 and August 15 through October 30), a qualified bat biologist shall conduct a bat habitat assessment to determine the presence of suitable bat roosting habitat. No more than 30 days before removal of any large tree or snag, a biologist familiar with identification of bats and signs of bats will conduct a pre-construction survey for signs of bat activity. If construction is postponed or interrupted for more than 30 days from the date of the initial bat survey, the biologist shall repeat the pre-construction survey.</p> <p>If a tree provides potentially suitable roosting habitat, but bats are not present, bats shall be excluded by temporarily sealing cavities, pruning limbs, or removing the entire tree, in consultation with the qualified bat biologist. Trees and snags with cavities or loose bark that exhibit evidence of use by bats shall be scheduled for bat exclusion and/or eviction, conducted during appropriate seasons (i.e., February 15 through April 15 and August 15 through October 30) and supervised by the biologist.</p>	<p>If construction involves structure removal or if trees will be cut or trimmed at a site r between February 15 and April 15 or from August 15 to October 15, conduct pre-construction surveys for bats. Surveys must occur no more than 2 weeks in advance of structure removal or 30 days in advance of large tree or snag removal.</p>	City of Santa Rosa	Report of Findings	Construction cannot begin	
	<p>Implement bat exclusions as necessary</p>	City of Santa Rosa	Conduct field visit to verify that exclusion measures are effective.	Cannot begin construction	

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Mitigation Measure BIO-1i: Minimize Impacts to American Badger. The City shall ensure that a qualified biologist conduct a pre-construction survey for badger burrows for disturbance in annual grasslands. In the event that a badger burrow is identified within the limits of construction prior to ground-disturbing construction activities (e.g., grading, excavation, trenching), CDFW shall be contacted to determine if any setback requirements would be needed during construction or if active trapping and relocation is an option. If a suspected badger burrow is identified during construction, construction shall temporarily cease in the immediate area, until the CDFW has been contacted. The City shall relocate any badgers as directed by CDFW.	If annual grasslands are present in the construction area, conduct preconstruction surveys.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If burrows found, notify CDFW and implement setbacks or relocate badgers.	City of Santa Rosa	Report of Findings Verify setback clearly identified prior to construction	Construction cannot begin	
Mitigation Measure BIO-2: Avoid or Compensate for Loss of Sensitive Natural Communities. If oaks or evergreen trees greater than 5 inches dbh (diameter at breast height) or chaparral need to be removed for construction of the facility, the City shall retain a qualified biologist to determine if the trees or chaparral is part of a sensitive natural community. Any loss of oak woodland, mixed evergreen forest or chaparral sensitive natural communities shall be avoided. If test wells or emergency wells are located within potential riparian vegetation, or if pipelines are installed across creeks, and open-trench alignments or tunneling pits are located within riparian vegetation, then the City shall conduct pre-construction surveys to identify the extent of riparian vegetation. If the location of the wells or pipelines would cause loss of riparian vegetation, the City shall retain a licensed landscape architect or qualified field biologist to develop a riparian revegetation plan. The riparian revegetation plan shall be based on guidelines maintained by the City and shall include replanting (either on-site or off-site). The goal of such a plan is to ensure no net loss of acreage or of functional value of riparian habitat. The plan shall include planting requirements, monitoring requirements, and an adaptive management strategy, and the City shall implement the plan's provisions.	Determine if oaks, evergreen trees or chaparral need to be removed and if the vegetation is part of a sensitive natural community.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If an oak, evergreen or chaparral natural community will be impacted then revise the construction boundary or revise the plans to avoid loss.	City of Santa Rosa	Verify in 90% design plan.	Construction cannot begin	
	Determine if construction will impact riparian vegetation, if so, and conduct a pre-construction survey to identify the extent of the riparian vegetation.	City of Santa Rosa	Report of Finding	Construction cannot begin	

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	Develop a revegetation plan to replace/restore riparian vegetation.	City of Santa Rosa	Verify in 90% design plan set	Construction cannot be completed	
	Implement revegetation/ restoration plan within 30 days of completion of construction. Monitoring shall occur for five years.	City of Santa Rosa	Conduct field visit to verify success of planting annually for five years.	Replant, if needed	
Mitigation Measure BIO-4: Comply with City of Santa Rosa Tree Ordinance. The City shall replace any protected or heritage trees in accordance with tree replanting requirements indicated in Santa Rosa Municipal Code Chapter 17-24. Replacement trees shall be planted on the Project site; however, if the Project site is inadequate in size to accommodate the replacement trees, the trees shall be planted on public property with the approval of the Director of the City's Community Development Department.	Conduct survey to determine if protected or heritage trees will be removed.	City of Santa Rosa	Report of Findings.	Construction cannot begin	
	Plant replacement trees if protected and heritage trees must be removed, and conduct field visits to verify success for 3 years.	City of Santa Rosa	Verify in 90% design plan set for tree planting on site or Report of Compliance for trees planted off site.	Construction cannot begin Replant as needed.	

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<p>Mitigation Measure CR-1: Identify and Avoid or Minimize Impacts to Historical Resources. Prior to ground-disturbing activities, a literature and archival records search shall be conducted to identify known historical resources within or near the Project facility. If potentially historic resources or buildings older than 45 years are located within 100 feet of the Project facility, then a qualified historian or historical architect shall be retained to perform an evaluation of the potential historical resource and determine whether the Project facility would materially impair the resource. If the resource is determined to qualify as a historical resource under CEQA Guidelines section 15064.5(a) and the Project facility would materially impair the resource, such impacts to the historical resource shall be avoided. The improvement shall be designed, constructed, and operated to avoid material impairment of the historical resource. Measures may include, for example, temporary protective barriers, construction worker training, movement of the facility, architectural design changes, or landscape screening.</p> <p>If subsurface historical materials are encountered during construction activities, the piece of equipment that encounters the materials shall be stopped, and the find inspected by a qualified historian/archaeologist. Project personnel shall not collect historical materials. If the historian/archaeologist determines that the find qualifies as a unique historical resource for purposes of CEQA (CEQA Guidelines Section 15064.5(c)(3)), all work must be stopped in the immediate vicinity to allow the archaeologist to evaluate any materials and recommend appropriate treatment. Such treatment and resolution shall include either modifying the Project to allow the materials to be left in place or undertaking data recovery of the materials in accordance with standard archaeological methods. The preferred treatment of the resource is protection and preservation.</p>	Conduct records search	City of Santa Rosa	Verify presence prior to beginning design	Design cannot begin	
	If potentially historic resources are present, then conduct evaluation.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If resource qualifies as historic, incorporate requirements from evaluation into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	On-site observation and notification as prescribed in evaluation.	City of Santa Rosa	Field visits during construction	Stop use of specific piece of equipment if subsurface historical materials are encountered	
	Inspect find and evaluate materials.	City of Santa Rosa	Report of Findings	Specific piece of equipment or all work in immediate vicinity cannot continue	
	Implement treatment procedure as described in evaluation.	City of Santa Rosa	Field visits during construction	Construction cannot continue	

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<p>Mitigation Measure CR-2: Identify and Avoid or Minimize Impacts to Archaeological Resources. Prior to ground-disturbing activities, a literature and archival records search shall be conducted with the Northwest Information Center to identify known archaeological resources within the vicinity of the Project facility. If archaeological resources are located within the vicinity of the Project site, then a qualified archaeologist shall be retained to perform an evaluation of the potential resource. If the resource is determined to qualify as an archaeological resource for purposes of CEQA (CEQA Guidelines Section 15064.5(c)) and the Project facility has the potential to adversely affect the resource, such impacts to the archaeological resource shall be avoided. The improvement shall be designed, constructed, and operated to avoid material impairment of the resource. Measures may include, for example, temporary protective barriers, construction worker training, Native American monitoring, or movement of the facility. The City shall notify interested Native American tribes of the siting of specific project facilities, the records search results obtained for each of them, and consult with interested tribes regarding the measures recommended for avoidance of known resources.</p> <p>If archaeological materials are encountered during construction activities, construction in the immediate vicinity shall be stopped, until the find is inspected by a qualified archaeologist. Project personnel shall not collect cultural materials. If the archaeologist determines that the find potentially qualifies as a unique archaeological resource for purposes of CEQA (CEQA Guidelines Section 15064.5(c)(3)), all work must remain stopped in the immediate vicinity to allow the archaeologist to evaluate any materials and recommend appropriate treatment. The City shall notify interested Native American tribes of such discoveries and consult with the tribe from which the resources originated, according to the Native American Heritage Commission. Such treatment and resolution shall include either modifying the Project to allow the materials to be left in place or undertaking data recovery of the materials in accordance with standard archaeological methods. The preferred treatment of the resource is protection and preservation.</p>	Conduct records search	City of Santa Rosa	Verify presence prior to beginning design	Design cannot begin	
	If potential archaeological resources are present, then conduct evaluation.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	If resource qualifies as unique archaeological resource under CEQA, incorporate requirements from evaluation into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	On-site observation and notification as prescribed in evaluation.	City of Santa Rosa	Field visits during construction	Stop use of specific piece of equipment if subsurface historical materials are encountered	
	Inspect, find, and evaluate materials.	City of Santa Rosa	Report of Findings	Specific piece of equipment or all work in immediate vicinity cannot continue	
	Implement treatment procedure as described in evaluation.	City of Santa Rosa	Field visits during construction	Construction cannot continue	

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Mitigation Measure CR-3: Procedures for Encountering Human Remains. California Health and Safety Code Section 7050.5 states that it is a misdemeanor to knowingly disturb a human grave. If human graves are encountered, the City and its Contractor shall ensure that work shall halt in the vicinity and the County Coroner shall be notified. At the same time, a qualified archaeologist shall be contacted to evaluate the situation. If human remains are of Native American origin, the Coroner shall notify the Native American Heritage Commission within 24 hours of identification, pursuant to Public Resources Code 5097.98. The Native American Heritage Commission will identify the person or persons most likely descended from the deceased. The City shall notify the tribe(s) and coordinate with them regarding the Most Likely Descendant and preferred treatment of the remains with appropriate dignity. A Tribal Treatment Plan covering reburial of human remains and disposition of the artifacts and other cultural resources should be agreed to by all parties.	On-site observation	City of Santa Rosa	Field visits during construction	Stop work in vicinity if human remains are encountered	
	Notify County Coroner	City of Santa Rosa	Field visits during construction	Construction cannot continue	
	Conduct evaluation	City of Santa Rosa	Report of Findings	Construction cannot continue	
	Notify Native American Heritage Commission within 24-hours of identification pursuant to PRC 5097.98.	City of Santa Rosa	Field visits during construction	Construction cannot continue	
Mitigation Measure CR-4: Avoid or Document Unknown Paleontological Resources. If a paleontological resource is discovered during construction, all ground disturbing activities within 50 feet of the find shall be temporarily halted but may be diverted to areas beyond 50 feet from the discovery to continue working. An appointed representative of the City shall notify a qualified paleontologist, who will document the discovery as needed, evaluate the potential resource, and assess the nature and significance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the material, if the City determines that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices.	On-site observation	City of Santa Rosa	Field visits during construction	Stop or divert ground-disturbing work within 50 feet if paleontological resources are discovered	
	Notify qualified palaeontologist	City of Santa Rosa	Field visits during construction	Construction cannot continue	
	Conduct evaluation	City of Santa Rosa	Report of Findings	Construction cannot continue	
	Implement treatment procedure as described in evaluation.	City of Santa Rosa	Field visits during construction	Construction cannot continue	

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Mitigation Measure GEO-2: Reduce Risk of Damage from Unstable Soils, Liquefaction, Landslides and Slope Stability, and Expansive Slopes. If emergency well facilities are constructed in areas with slopes exceeding ten percent, as shown on Figure 7-3 of the Santa Rosa General Plan 2035, or in areas of high liquefaction potential, as shown on USGS Open File Report 06-1037, Liquefaction Susceptibility, or in an area with soils with high shrink-swell potential, as indicated in the Sonoma County Soil Survey, then the City shall require a design-level geotechnical study be prepared for the emergency well facility. Such well facilities shall be designed and constructed in conformance with the specific recommendations contained in the design-level geotechnical study, including recommendations for grading, ground improvement, and foundation support. The recommendations made in the geotechnical study shall be incorporated into the final plans and specifications and implemented during construction. The geotechnical study shall identify and propose measures for any soils or geological problems that may affect site stability or structural integrity, including landslide risk, liquefaction potential, seismically-induced landsliding, or weak and expansive soils. This may include, but would not be limited to, one or more of the following: <ul style="list-style-type: none"> • Removal and replacement of unstable materials in an existing landslide or in an actively eroding area with a stronger material. • Retaining walls or other external applications to strengthen slopes. • Removal of native soil and replacement with an engineered fill material not prone to shrinking and swelling or liquefaction. Soil stabilization, such as lime treatment to alter soil properties to reduce shrink-swell potential to an acceptable level	If wells are within specified areas, conduct design-level geotechnical study.	City of Santa Rosa	Report of Findings	Construction cannot begin	
	Incorporate recommendations from geotechnical study into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	

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<p>Mitigation Measure GHG-1: Reduce Emissions from Construction Activities. The City and its contractors shall implement actions 9.2.1 through 9.2.3 of the City's CAP during construction, as follows:</p> <ul style="list-style-type: none"> Action 9.2.1 - Minimize idling times either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes or less (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Provide clear signage at all access points to remind employees of idling restrictions. Action 9.2.2 - Construction equipment shall be maintained in accordance with manufacturer's specifications. Action 9.2.3 - Work with project applicants to limit GHG emissions from construction equipment by selecting one of the following measures, as feasible and appropriate to the construction project: <ol style="list-style-type: none"> Substitute electrified equipment for diesel- and gasoline-powered equipment where practical. Use alternative fuels for construction equipment on-site, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel. <p>Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.</p>	<p>Incorporate requirements into plans and specifications.</p> <p>Implement during construction</p>	<p>City of Santa Rosa</p> <p>City of Santa Rosa</p>	<p>Verify in 90% plan set</p> <p>Field visits during construction</p>	<p>Construction cannot begin</p> <p>Stop construction until compliance is achieved</p>	

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Mitigation Measure HYD-1a: Management of Well Development and Pump Testing Discharges. During well development and pump testing, if discharging to a local surface water or storm drain, the City shall first obtain coverage under North Coast Regional Water Quality Control Board Order No. R1-2009-0045, Waste Discharge Requirements for Low Threat Discharges to Surface Waters in the North Coast Region. The City shall submit permit registration documents to the North Coast Regional Water Quality Control Board, including development of a Best Management Practices/Pollution Prevention Plan to characterize the discharge and to identify specific measures to control the discharge, such as sediment controls to ensure that excessive sediment is not discharged, and flow controls to prevent erosion and flooding downstream of the discharge. The City shall ensure that the Contractor oversees implementation of the Best Management Practices/Pollution Prevention Plan during well development and pump testing activities, including visual inspections and ensuring overall compliance.	If discharging to local surface water or storm drain, obtain required permits.	City of Santa Rosa	Prior to beginning construction	Construction cannot begin	
	Incorporate requirements, including those described in best management practices/pollution prevention plan, into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Implement measures during construction.	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	
Mitigation Measure HYD-1b: Locate Emergency Wells to Protect Groundwater Quality. Where the City identifies a potential emergency well site within 1,000 feet of a known area of soil or groundwater contamination, the City shall retain a certified hydrogeologist or professional geologist to evaluate the contamination site(s) to determine the nature and status of the contamination and to evaluate the potential water quality impacts from emergency pumping. The hydrogeologist or geologist shall review records from the North Coast Regional Water Quality Control Board and other databases with relevant contamination information. If a known site is identified as “Closed”, “Not Active”, or “No Remediation Required” then the City can install the emergency well without further evaluation of potential groundwater impacts. If open cases are identified within 1,000 feet of the proposed well site, the City’s hydrogeologist or geologist shall prepare a Drinking Water Source Assessment according to the Program outlined by the California Department of Public Health. In accordance with the Department’s policies, if the Assessment indicates a vulnerability score of 7 or less, the well may proceed at that location. If the vulnerability score is 8 or more, then the well site must be relocated.	Determine if wells are located within 1,000 feet of known soil or groundwater contamination.	City of Santa Rosa	Verify prior to initiation of design	Design cannot begin	
	If wells are located within specified area, conduct study and review records.	City of Santa Rosa	Report of Findings	Design cannot begin	
	Determine status of known sites.	City of Santa Rosa	Verify prior to construction	Design cannot begin	
	If open cases are identified within 1,000 feet of wells, prepare Drinking Water Source Assessment and determine vulnerability score.	City of Santa Rosa	Report of Findings	Design cannot begin	
	If Assessment indicates vulnerability score of 8 or more, relocate well.	City of Santa Rosa	Relocate prior to design	Design cannot begin	

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Mitigation Measure HYD-2: Locate Emergency Wells to Reduce Well Interference Impacts at Existing Potable Wells. The City shall site emergency wells to avoid or reduce potential impacts to existing potable water wells where the existing domestic well screen extends into the same intermediate or deep aquifer from which the emergency well would draw groundwater. On the west side of the Rodgers Creek fault zone, the City shall locate emergency wells at least 250 feet away from such existing wells, if feasible. On the east side of the Rodgers Creek fault zone, the City shall locate emergency wells at least 75 feet away from such existing wells, if feasible. If a City emergency well must be located within 250 feet of a such a well on the west side of the Rodgers Creek fault zone, or within 75 feet of such a well on the east side of the fault zone, and the existing well is impacted during emergency pumping, the City shall provide a temporary water supply to the existing well owner equivalent to the water supply made available to City residents during the emergency conditions. Impacts to such an existing well are considered to occur if the existing well production capacity declines to below levels needed to supply potable water for health and safety purposes during operation of the City's emergency well. The City shall continue to provide a temporary water supply until the pre-emergency pumping capacity of the existing potable well resumes following shutdown of the City's emergency well.	Document that avoidance of 250-foot buffer (west side of Rodgers Creek fault zone) or 75- foot buffer (east side of Rodgers Creek fault zone) is infeasible.	City of Santa Rosa Utilities Director	Verify infeasibility prior to initiation of design	Design cannot begin	
	If wells are located within specified distances, determine if existing wells are impacted during operation of emergency wells.	City of Santa Rosa	Verify during operation of emergency wells	Operation cannot continue	
	If existing wells are impacted, provide temporary water supply to well owners as described.	City of Santa Rosa	During operation until pre-emergency pumping capacity of existing potable well resumes following shutdown of City's emergency well	Operation cannot continue	

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Mitigation Measure NOI-1: Reduce Daytime Construction-Related Noise. Construction of a test well or emergency well on a school shall be scheduled to occur when the school is not in session. Daytime construction activities associated with well facility construction occurring within 80 feet of a residential, school, or overnight health care land use shall implement construction noise control measures. Noise control measures may include, but would not be limited to the following: <ul style="list-style-type: none"> • All equipment driven by internal combustion engines shall be equipped with mufflers which are in good condition and appropriate for the equipment. • The construction contractor shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists. • Unnecessary idling of internal combustion engines shall be prohibited. • At all times during project grading and construction, stationary noise-generating equipment shall be located as far as practicable from sensitive receptors. • All stationary construction equipment shall be placed so that the emitted noise is directed away from sensitive receptors nearest the project site. • Construction staging areas shall be established at locations that will create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. The construction contractor shall designate a “noise disturbance coordinator” who will be responsible for responding to any local complaints about construction noise. The disturbance coordinator would determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and institute reasonable measures as warranted to correct the problem (e.g., to ensure that the measures above are implemented). A telephone number for the disturbance coordinator shall be conspicuously posted at the construction site.	Determine if wells are on school grounds or within 80 feet of a residential, school or overnight health care land use.	City of Santa Rosa	Verify prior to beginning construction	Construction cannot begin	
	If wells are located within specified distances, incorporate noise control requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Implement noise control measures during construction.	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	

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<p>Mitigation Measure NOI-2: Reduce Nighttime Construction-Related Noise. Nighttime construction activities associated with emergency well or test well construction occurring within 450 feet of a residential or overnight health care land use shall implement construction noise control measures to further reduce noise.</p> <p>The City shall provide a minimum 24-hour advance notice to residents within 450 feet of a well site prior to nighttime work. The advance notice shall provide information regarding anticipated schedule, hours of operation and a designated project contact person.</p> <p>The designated project contact shall be responsible for responding to noise complaints during the construction phases. The name and phone number of the liaison shall be posted at construction areas and on advanced notifications. This person shall take steps to resolve complaints, including periodic noise monitoring, if necessary. Results of noise monitoring shall be presented at regular Project meetings with the contractor. A reporting program shall be required that documents complaints received, actions taken to resolve problems, and effectiveness of these actions.</p> <p>Additional measures to reduce nighttime construction noise shall also be implemented, which may include, but would not be limited to the following:</p> <ul style="list-style-type: none"> To the extent consistent with applicable regulations and safety considerations, operation of vehicles requiring use of back-up beepers shall be avoided near sensitive receptors during nighttime hours and/or the work sites shall be arranged in a way that avoids the need for any reverse motions of large trucks or the sounding of any reverse motion alarms during nighttime work. If these measures are not feasible, trucks operating during the nighttime hours with reverse motion alarms shall be outfitted with SAE J994 Class D alarms (ambient-adjusting, or “smart alarms” that automatically adjust the alarm to 5 dBA above the ambient near the operating equipment). Maintain orderly conduct among workers, including worker conversation noise during nighttime hours. Schedule work and deliveries to minimize noise-generating activities during nighttime hours at work sites (e.g., no deliveries or non-essential work). 	Determine if wells are within 450 feet of a residential or overnight health care land use.	City of Santa Rosa	Verify prior to beginning construction	Construction cannot begin	
	If wells are located within specified distances, incorporate noise control requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Provide notices to residents within 450 feet within designated time frame.	City of Santa Rosa	Minimum of 24-hours prior to starting nighttime construction work	Nighttime construction cannot begin	
	Designate a project contact, and post their contact information at construction areas and on advanced notifications.	City of Santa Rosa	Prior to starting nighttime construction	Nighttime construction cannot begin	
	Develop reporting program for noise complaints.	City of Santa Rosa	Prior to starting nighttime construction	Nighttime construction cannot begin	
	Implement nighttime noise control measures during construction.	City of Santa Rosa	Field visits during construction		
	Field noise complaints and monitor noise levels.	City of Santa Rosa	Field visits during construction		

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<p>Maintain the equipment properly to minimize extraneous noise due to squeaking or rubbing machinery parts, damaged mufflers, or misfiring engines.</p> <ul style="list-style-type: none"> Locate equipment at the work area to maximize the distance to noise-Stationary noise sources shall be located as far from sensitive noise receptors as feasible. If they must be located near receptors, adequate muffling (with enclosures where feasible and appropriate) shall be used. Enclosure openings or venting shall face away from sensitive noise receptors. sensitive receptors and to take advantage of any shielding that may be provided by other on-site equipment. <p>Utilize sound blankets to reduce noise from the drilling rig.</p>	Hold regular Project meetings with contractor.	City of Santa Rosa	Field visits during construction		
<p>Mitigation Measure TR-1: Traffic Control Plan. The City shall prepare and implement a traffic control plan for construction activities. The traffic control plan shall be prepared in accordance with the City's Standard Conditions of Approval Section C(7)(e) and Caltrans standards, including the latest edition of the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones, and shall be coordinated with local transit service providers.</p> <p>The traffic control plan shall identify designated truck routes, construction site access, address any impacts to the circulation system (including pedestrian and bicycle access and safety), and address construction detours and lane closures as necessary. The traffic control plan shall also identify construction staging and worker parking areas, and consider restrictions on truck trips during peak morning and evening commute hours, if necessary.</p> <p>The traffic control plan shall also ensure that fire truck and emergency vehicle access be maintained to all buildings during construction. Any detours shall be clearly marked in all areas potentially affected by construction to avoid confusion. The City shall coordinate any required construction detours with the fire and police departments to ensure compatibility with emergency response plans and to maintain continued access for emergency vehicles. The City and its contractor(s) shall be required to have ready at all times the means necessary to accommodate access by emergency vehicles to the site and surrounding areas and through intersections, such as plating over excavations, as needed.</p>	Prepare traffic control plan in accordance with requirements.	City of Santa Rosa	Prepare prior to construction	Construction cannot begin	
	Incorporate requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Implement during construction.	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	

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Mitigation Measure TR-2: Minimize Impacts to Bicycle, Pedestrian and Transit Facilities. Construction shall be coordinated with local transit service providers to arrange the temporary relocation of bus routes or bus stops in work zones, if necessary. Pedestrian and bicycle access and circulation shall be maintained during Project construction where safe to do so. If construction activities encroach on a bicycle lane, warning signs shall be posted that indicate bicycles and vehicles are sharing the lane. Detours shall be included for bicycles and pedestrians in all areas potentially affected by construction. Notices shall be provided to advise bicyclists and pedestrians of any temporary detours around construction zones. If bicycle, pedestrian or transit facilities are permanently impacted by construction of test well or emergency well sites, the City shall permanently relocate or reroute these facilities such that the original performance objectives of the facilities are met.	Determine if well construction would temporarily or permanently impact bicycle, pedestrian or transit facilities.	City of Santa Rosa	Make determination prior to start of construction	Construction cannot begin	
	If well construction would affect transit facilities, coordinate with local transit service providers.	City of Santa Rosa	Coordinate prior to start of construction	Construction cannot begin	
	Temporarily relocate transit facilities impacted by well construction.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Incorporate requirements into plans and specifications.	City of Santa Rosa	Verify in 90% plan set	Construction cannot begin	
	Post warning signs and notices.	City of Santa Rosa	Post prior to beginning construction	Construction cannot begin	
	Implement requirements during construction.	City of Santa Rosa	Field visits during construction	Stop construction until compliance is achieved	
	Permanently relocate or reroute bicycle, pedestrian and transit facilities permanently impacted by well sites.	City of Santa Rosa	Verify in 90% plan set	Construction cannot be completed	