

# Executive Summary

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## Introduction

This Proponent's Environmental Assessment (PEA) has been prepared to support an application by the Sacramento Natural Gas Storage, LLC (SNGS) to the California Public Utilities Commission (CPUC) for a Certificate of Public Convenience and Necessity (CPCN) for the Sacramento Natural Gas Storage Project, which is proposed to be located partly in the City of Sacramento and partly in the unincorporated area of the County of Sacramento. The application requests authorization to develop, construct, and operate an underground natural gas storage facility and associated mile-long pipeline connections.

For the purpose of this PEA, the natural gas facility and all associated components are referred to as the "proposed project." The PEA evaluates and analyzes the effects of the physical act of constructing the proposed project. The proposed project includes wells, pipelines, equipment, buildings, instrumentation, and other components required to support the moving, conditioning, and measuring of natural gas into and out of underground gas storage.

This PEA describes each of the proposed project components, construction methods, schedule, and best management practices (BMPs) that will be implemented as part of the proposed project to avoid and minimize long-term effects on environmental resources within and adjacent to the proposed project. The proposed project is comprised of the following four primary components, which are described in detail in Chapter 2 of this PEA:

- a) Wellhead site (Injection/withdrawal wells);
- b) Compressor station;
- c) Pipeline connections; and
- d) Morrison Creek Cross-tie metering and gas conditioning equipment site.

SNGS will implement the following BMPs, as part of the proposed project, to avoid and minimize long-term effects on environmental resources within and adjacent to the proposed project facilities. These are fully described in Chapter 2 of this PEA and include the following:

- Designate work zones to ensure avoidance of sensitive resources
- Implement air district guidelines for minimizing dust
- Prepare and conduct workers environmental awareness training program
- Prepare and implement an injection plan
- Prepare a seismic-resistant design
- Prepare and implement a paleontological resources discovery and management plan
- Design and implement construction maintenance and refueling restrictions
- Prepare and implement and Hazardous Materials Contingency Plan and Health and Safety Plan
- Prepare and implement an Emergency Response Plan, that includes measures for fire prevention
- Prepare and implement a Construction Traffic Control Plan
- Implement site reclamation measures, to restore construction related disturbance, particularly along the pipeline alignment

## **PEA Purpose and Approach**

The purpose of this PEA is to provide an adequate level of information to the CPUC to assist in determination of impacts that may be of concern and to facilitate preparation of a California Environmental Quality Act (CEQA) document.

The analysis conducted for this PEA indicates that no aspect of this project (as proposed with mitigation) would cause a significant and unavoidable impact on the environment. The analysis indicates that, without mitigations, the proposed project would potentially result in significant impacts related to, Biological Resources, Cultural Resources, Geology, Soils and Paleontological Resources, Hydrology and Water Quality, Noise, and Public Health and Safety. The mitigation measures that have been identified would reduce these potential impacts to less-than-significant levels. Table ES-1 presents a summary of potentially significant impacts and mitigation measures for the proposed project.

## **Organization of the PEA**

Chapter 1 of the PEA provides a general introduction and overview of the proposed project. Chapter 2 provides a detailed description of the project area, project background, pipeline routes selection and evaluation, project components, construction methods, operations and maintenance program, and required permits and approvals expected for the proposed project. Chapter 2 also describes the BMPs (listed above) that have been incorporated into the project to avoid or minimize project effects. Environmental issues are described and analyzed in Chapter 3 for this PEA. An environmental and regulatory setting section and impact analysis are presented for each of the environmental issues identified in the CEQA checklist. Each environmental issue is analyzed using the project information contained in Chapter 2 and based on resource-specific impact methodologies. Chapter 3 also provides conclusions on whether an impact would be considered significant under CEQA. The significance criteria are based on the CEQA Guidelines and are defined at the beginning of each impact analysis section. Chapter 4 of this PEA outlines the selection process and different pipeline alternatives considered for the proposed project.

**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
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**3.4 BIOLOGICAL RESOURCES**

BIO-1. The proposed project could result in potential impacts on Sanford's arrowhead. This impact would be less than significant with implementation of Mitigation Measure MM BIO-1.

PS MM BIO-1. Conduct Preconstruction Survey for Sanford's Arrowhead and Fence Any Populations Located During the Survey.

a) SNGS shall retain a qualified botanist to conduct focused surveys in Morrison Creek from Elder Creek Road to 250 feet upstream downstream from where the HDD would cross Morrison Creek, during the blooming period for Sanford's arrowhead (May through October). If Sanford's arrowhead is not located during the survey, no additional mitigation would be required.

b) If Sanford's arrowhead is located during the survey, it will need to be protected from construction activities. Prior to any pipeline construction activities, a protective fence shall be installed a minimum of one foot (or greater, if feasible) from the edge of all Sanford's arrowhead populations located during the survey. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all Sanford's arrowhead populations have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until pipeline construction activities have been completed.

BIO-2. The proposed project's potential impacts on vernal pool crustaceans and their habitat would be less than significant with implementation of Mitigation Measure MM BIO-2.

PS MM BIO-2. Mitigate for Potential Vernal Pool Crustacean Sensitive Habitat.

a) As a condition of project approval, SNGS, in consultation with USFWS, shall either (1) conduct a protocol-level survey for the federally listed vernal pool crustaceans or (2) assume presence of the federally-listed vernal pool crustaceans in all directly or indirectly affected wetlands that are suitable habitat. Surveys shall be conducted by qualified biologists in accordance with the most current USFWS guidelines or protocols to determine the time of

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BIO-4. Construction of the proposed project could adversely affect breeding or wintering burrowing owls. This impact would be less than significant with implementation of Mitigation Measure MM BIO-3.	PS	<p>year and survey methodology (survey timing for these species is dependent on yearly rainfall patterns, seasonal occurrences and breeding season, and is determined on a case-by-case basis).</p> <p>b) Compensation The following or equally effective compensation measures shall be implemented as determined in consultation with the USFWS. For every acre of habitat directly or indirectly affected, at least two vernal pool preservation credits shall be dedicated within a USFWS-approved ecosystem preservation bank, or, based on USFWS evaluation of site-specific conservation values, three acres of vernal pool habitat may be preserved on the project area.</p> <p>c) Avoidance If habitat is avoided on site, a USFWS-approved biologist (monitor) shall inspect any construction-related activities in or near suitable habitat at the proposed project area to ensure that no unpermitted take of listed species or destruction of their habitat occurs. The biologist shall have the authority to stop all activities that the biologist deems may result in such a take or destruction until appropriate corrective measures have been completed. The biologist also shall immediately report any unauthorized impacts to the USFWS.</p>	LTS
BIO-4. Construction of the proposed project could adversely affect breeding or wintering burrowing owls. This impact would be less than significant with implementation of Mitigation Measure MM BIO-3.	PS	<p>MM BIO-3. Conduct Preconstruction Surveys for Active Burrowing Owl Burrows and Implement the DFG Guidelines for Burrowing Owl Mitigation, if Burrows are Detected in the Project Area.</p> <p>a) Pre-construction surveys for burrowing owls shall be conducted by an experienced biologist within 30-days prior</p>	LTS

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		<p>to the start of work activities where land construction is planned in known or suitable habitat areas. If construction activities are delayed for more than 30 days after the preconstruction surveys, then a new preconstruction survey shall be required. All surveys shall be conducted in accordance with the CDFG/California Burrowing Owl Consortium survey protocols.<sup>1</sup></p>	
b)		<p>If burrowing owls are observed within the project area during the breeding season (February 1 to August 31), a 250-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until all young have fledged and are able to feed on their own, as determined by monitoring surveys conducted by a qualified biologist.</p>	
c)		<p>If burrowing owls are observed within the project area or areas adjacent to it during the non-breeding season (September to January), a 160-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until the owls have vacated the occupied burrow, as determined by monitoring surveys conducted by a qualified biologist.</p>	
d)		<p>Where maintenance of a minimum 250-foot buffer zone around active burrowing owls nests (160 feet when owls are not nesting) is not practical, SNGS shall retain an experienced burrowing owl biologist to recommend project/site-specific construction techniques to avoid violating California Fish and Game Codes Section 3503 and Section 3503.5 and the MBTA, which could include the following or equally effective measures:</p>	
		<p>i) Modification of construction procedures so critical pipeline construction tasks could be completed in as</p>	

<sup>1</sup> California Burrowing Owl Consortium, "Burrowing Owl Survey Protocol and Mitigation Guidelines", *Raptor Research Report No. 9, The Burrowing Owl, Its Biology and Management, including the Proceedings of the First International Burrowing Owl Symposium, 1997.*

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BIO-5. The proposed project could result in the loss of foraging habitat for Swainson's hawk. This impact would be less than significant with implementation of Mitigation Measure MM BIO-4.	PS	<p>short a time as possible; and</p> <p>ii) Close monitoring of the owls' behavior before and during construction so any significant changes in the owls' behavior would be apparent. Construction would be stopped if, based on the biologists' assessment, the owls appear sufficiently agitated to abandon the nest.</p> <p>e) If the proposed project would result in direct impacts to active burrows (i.e. trenching), passive relocation/exclusion shall be allowed during the non-breeding season (September to January). CDFG shall be consulted on current passive relocation methodology before relocation of owls is attempted. Breeding burrowing owls and their young shall not be relocated. Following exclusion, the burrows can be destroyed to prevent the birds from returning to the site.</p> <p>f) Following the passive exclusion, burrows within 250 feet of the project area shall be seasonally blocked (anchored plywood or other similar mechanism) to prevent burrowing owls from establishing new burrows in the project area. Monitoring shall occur from prior to the nesting season through construction of the proposed project, as determined in consultation with the CDFG, to ensure that owls do not return to the project area during the construction season. The burrows will be unblocked prior to the beginning of the next breeding season.</p>	LTS
		<p>MM BIO-4. Mitigate for Loss of Swainson's Hawk Foraging Habitat.</p> <p>a) SNGS shall consult with CDFG to determine if the project area represents important suitable foraging habitat for Swainson's hawk. If CDFG concurs that the project area is not important habitat by virtue of its small size, disturbed nature and surrounded industrial uses, no additional mitigation would be required.</p>	

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<p>BIO-6. Construction of the proposed project could result in the loss of nesting habitat for Swainson's hawk, birds of prey, and migratory birds. This impact would be less than significant with implementation of Mitigation Measure MM BIO-5.</p>	PS	<p>b) If CDFG determines that the project area is important Swainson's hawk foraging habitat then SNGS shall mitigate for its loss. SNGS shall ensure that impacts are mitigated at a 0.75:1 ratio. Preservation may occur through either:</p> <ul style="list-style-type: none"> <li>i) Purchase of mitigation credits in an approved CDFG mitigation bank that is within the service area of the project area; or</li> <li>ii) Payment of a mitigation fee to a habitat development and management company, through a negotiated agreement between said company, SNGS, and CDFG. The lands must be within 10 miles of the project area (consistent with CDFG guidelines); or</li> <li>iii) Purchase of conservation easements or fee title in Sacramento County. This mitigation must occur within ten miles of the project area, unless otherwise approved by CDFG (consistent with CDFG guidelines).</li> </ul>	LTS
<ul style="list-style-type: none"> <li>a) SNGS shall conduct a pre-construction breeding-season survey (approximately February 1 through August 30) within one-half mile of the project area. The survey shall be conducted by a qualified biologist to determine if any birds, including raptors are nesting on or directly adjacent to the project area. If the above survey does not identify any nesting birds of prey and migratory bird species on the project area, no additional mitigation would be required.</li> <li>b) Should any active bird nests be located on the project area, the following mitigation measures shall be implemented: <ul style="list-style-type: none"> <li>i) SNGS shall avoid all birds nest sites located in the project area during the breeding season (approximately February 1 through August 30) while the nest is occupied with adults and/or young. This avoidance</li> </ul> </li> </ul>	(PS)		(SU)

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<p>BIO-8. Construction of the proposed project could result in the loss of wetlands and waters of the U.S. This impact would be less than significant with implementation of Mitigation Measure MM BIO-6.</p>	PS	<p>could consist of delaying construction to avoid the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer in use. If construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the CDFG and USFWS. The buffer zone shall be delineated by highly visible temporary construction fencing.</p> <p>ii) Every effort should be made to preserve Swainson's hawk nest trees through project design or avoidance measures. However, if removal of the nest tree during the nesting season is unavoidable, a Section 2081 permit would be required from the CDFG. Mitigation for the loss of active Swainson's hawk nest trees at any time of year would be determined in consultation with the CDFG and could include the replacement of trees at a CDFG approved mitigation site and ratio.</p>	LTS
		<p>MM BIO-6. Conduct Preliminary Jurisdictional Delineation for Wetlands and Waters of the U.S. and Mitigate for Potential Effects.</p> <p>a) A preliminary jurisdictional wetland delineation shall be conducted to determine the location and extent of Corps regulated wetlands and waters of the U.S. in the project area.</p> <p>b) SNGS shall prepare a Wetlands Mitigation Plan that ensures no net loss of wetlands, consistent with federal policy. The Wetlands Mitigation Plan shall be based on the level of project impacts to wetlands identified in the wetland delineation report. The plan shall include the following or equally effective components:</p> <p>i) Horizontal direction drilling technique shall be used to install the pipeline under Morrison Creek.</p>	

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		<ul style="list-style-type: none"> <li>ii) Construction will occur during the dry season to the extent feasible.</li> <li>iii) Prior to any construction activities on the site, a protective fence (silt fence or equivalent) shall be installed a minimum of one foot (or greater, if feasible) from the edge of all wetland habitat to be avoided in the immediate vicinity of the proposed construction areas. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all wetland features have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until construction activities in the immediate vicinity of the wetland habitat have been completed.</li> </ul>	
		<ul style="list-style-type: none"> <li>c) Water quality of the wetlands not directly affected by construction activities shall be protected using BMP erosion control techniques. Appropriate sediment control measures shall be in place prior to the onset of project construction and shall be monitored and maintained until construction activities have ceased.</li> </ul>	
		<ul style="list-style-type: none"> <li>d) Staging areas shall be located 100 feet from any wetland habitat. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be disposed of at a regional landfill or at another approved and/or properly permitted location. Stockpiles that are to remain on the site throughout the wet season shall be protected to prevent erosion (e.g. silt fences, straw bales).</li> </ul>	
		<ul style="list-style-type: none"> <li>e) Stormwater runoff and erosion from overburden and aggregate stockpiles, quarrying areas, construction activities, and any other ground disturbing activities shall be controlled through the implementation of a program of erosion control BMPs and engineered sediment control structures. Erosion control BMPs may include, but are not limited to, the</li> </ul>	

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<p>application of straw mulch; seeding with fast growing grasses; and the construction of berms, silt fences, hay bale dikes, stormwater detention basins, and other energy dissipaters.</p>			
<b>3.5 CULTURAL RESOURCES</b>			
<p>CUL-2. As determined pursuant to Section 15064.5 of the State CEQA Guidelines, the proposed project's potential impacts on archaeological resources, or potential disturbance of human remains, including those interred outside of formal cemeteries, would be less than significant with the implementation of Mitigation Measures CUL-1, CUL-2, and CUL-3.</p>	PS	MM CUL-1.	LTS
<p>a) SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to peer review all existing documentation that pertains to cultural resources on the proposed project area to determine the sufficiency of the studies. Based on the results of the review, a brief report addressing the adequacy of the previous studies and discussing any deficiencies shall be prepared by the archaeologist. Any areas deemed inadequately studied shall be resurveyed by the archaeologist per MM CUL-1(b).</p>			
<p>b) SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to survey any areas within the project site that were not previously surveyed or were found to be inadequately studied, per mitigation measure MM CUL-1(a) above, to determine if any resources are present that qualify as unique archaeological resource as defined in CEQA Section 21083.2 of the State CEQA Guidelines. A report shall be prepared containing the findings of the survey and shall meet the requirements for Section 106 of the National Historic Preservation Act. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation.</p>			

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		MM CUL-2.	
		<p>a) SNGS shall a qualified archaeologist to monitor all earthmoving activities. If resources are discovered during construction the protocol established in MM CUL-2(b) shall be implemented.</p> <p>b) SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to prepare a Recovery, Recordation, and Preservation Plan. In the event that any prehistoric or historic subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian, and/or mortar are discovered during construction-related earthmoving activities, all ground-disturbing activity within 100 feet of the resources shall be halted and the City of Sacramento Community Development Department shall be notified if the discovery is made within the City limits and the County of Sacramento shall be notified if the discovery is made in the unincorporated County. The appropriate Department shall consult with a qualified archeologist to assess the significance of the find. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation, as outlined in the Recovery, Recordation, and Preservation Plan.</p> <p>MM CUL-3. If human remains are discovered at any project construction sites during any phase of construction, all ground-disturbing activity within 50 feet of the remains shall be halted immediately, and the City of Sacramento Planning Services Department and the County coroner shall be notified immediately. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC)</p>	

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shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The County shall be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of state law, as set forth in CEQA Guidelines Section 15064.5(e) and Public Resources Code section 5097.98. The project applicant shall implement approved mitigation, to be verified by the City of Sacramento Planning Services Department, before the resumption of ground-disturbing activities within 50 feet of where the remains were discovered.

**3.8 HYDROLOGY AND WATER QUALITY**

HWQ-4. The proposed project would alter the site(s) drainage patterns, which may result in substantial erosion or siltation on- or off-site. Implementation of Mitigation Measure MM HWQ-1 and existing regulations would, however, reduce potential impacts to the less-than-significant level.

MM HWQ-1. Prepare a compressor station site Grading Plan. SNGS shall prepare a Grading Plan for the compressor site, prior to obtaining a grading permit, and submit the Grading Plan to the City of Sacramento Engineer. urvey contour lines to a 50-foot extent around the compressor station site at a 2-foot contour intervals. The Grading Plan shall also include the post-project topography, including all cut and fill areas. Preparation of the Grading Plan will allow the City Engineer to determine where and to what extent any drainage features are directly altered by the proposed project.

If the City Engineer determines that the Grading Plan shows there are potential drainage features that are affected by cut or fill activities:

- SNGS will consult with the California Department of Fish and Game (CDFG) to determine if these drainage features would require a Department of Fish and Game 1602 Streambed

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		Alteration Agreement (SAA). The SAA would include discussion of potential impacts and mitigation.	
	<ul style="list-style-type: none"> <li>If the CDFG determines there are no drainage features requiring an SAA, the City Engineer will assess whether or not any direct alteration is likely to substantially alter the drainage feature flow rate and amount in a manner that would contribute to an increase in off-site erosion and/or siltation. If the City Engineer determines that changes in the drainage conditions would contribute to more erosion and siltation, the City Engineer shall require that SNGS incorporate additional mitigation to avoid any substantial alteration of drainage conditions.</li> </ul>	<p>MM HWQ-2 Prepare a Compressor Station Site Drainage Plan. T SNGS shall prepare a site Drainage Plan prior to obtaining a grading permit to show the City and CPUC that drainage is adequate for the 100-year storm event and storm sewer design storm event to prevent flooding, erosion, and drainage system capacity exceedence. The Drainage Plan shall include:</p> <ul style="list-style-type: none"> <li>Identification of the amount and peak rate of stormwater runoff for the 10-year and 100-year storm event.</li> <li>Storm drainage routing and discharge location(s)</li> <li>Drainage conditions that do not exceed existing or planned stormwater drainage system capacities. Sufficient evidence that this condition will be met shall be included in the Drainage Plan.</li> </ul> <p>Design characteristics and features to prevent off-site runoff from exceeding existing conditions and causing or contributing to an increase in erosion. Potential options to meet these requirements include:</p> <ol style="list-style-type: none"> <li>On-site runoff detention or retention features, with discharge occurring off-site to overland flow areas or through infiltration systems. Energy dissipaters would also be required if runoff flow is concentrated at the discharge location(s). Because</li> </ol>	

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<p>HWQ-5. The proposed project would alter the compressor station and wellhead site drainage patterns that could result in flooding on- or off-site. However, implementation of mitigation measures to control runoff would reduce potential impacts to less-than-significant levels.</p>	PS	<p>proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities.</p> <p>2. Discharge to the Morrison Creek channel through the Depot Park storm drain system. The Depot Park storm drain system is permitted for stormwater discharge under an Industrial NPDES permit. SNGS would therefore have to meet any requirements for stormwater discharge imposed by the Depot Park.</p> <p>3. Discharge to the Morrison Creek channel through a new, constructed storm drain system. The Sacramento Area Flood Control Agency (SAFCA) controls the Morrison Creek channel and any modifications (e.g., a new outfall to the channel) would require approval by SAFCA. Furthermore, this option would require a reanalysis of potential impact to include construction and installation of the new storm drain.</p> <ul style="list-style-type: none"> <li>Design features to prevent on-site flooding.</li> </ul> <p>MM HWQ-3. Prepare a Wellhead Site Drainage Plan. Prior to receiving a grading permit, SNGS shall prepare a Drainage Plan to show the City of Sacramento and CPUC that the project design provides sufficient stormwater detention for the 100-year storm event for both the developed wellhead site runoff and for storm event from areas including, but not limited to, the section of Power Inn Road adjacent to the project area.</p> <p>The Drainage Plan shall include:</p> <ul style="list-style-type: none"> <li>Identification of the amount and peak rate of stormwater runoff for the 10-year and 100-year storm event (including runoff from off-site areas);</li> <li>Storm drainage routing and collection location(s) (including runoff from off-site areas);</li> <li>Design characteristics and features to prevent off-site runoff from exceeding existing conditions and causing or contributing</li> </ul>	LTS

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<p>HWQ-6. The proposed project would not exceed the capacity of any planned stormwater drainage system, however it might exceed the capacity of existing systems. Implementation of mitigation measures to prevent flooding and other impacts would also ensure that stormwater drainage system capacity impacts are reduced to less-than-significant levels.</p>	PS	<p>to an increase in erosion. This may include, but is not limited to runoff detention or retention features with discharge occurring off-site to overland flow areas, adjacent roads, or infiltration systems. Energy dissipaters would also be required if runoff flow is concentrated at the discharge location(s). Because proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities; and</p> <ul style="list-style-type: none"> <li>• Design features, such as flow routing and detention, to prevent on-site flooding. Because proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities.</li> <li>• Design features to prevent impediment of drainage from Power Inn Road and other areas that produce runoff to the site.</li> </ul>	LTS
<p>HWQ-7. The proposed project could provide substantial additional sources of polluted runoff during general construction activities, drilling and boring operations, and operation of the proposed project facilities. However, existing regulatory requirements and implementation of Mitigation Measure MM HWQ-4 would ensure that potential project effects would be minimal and impacts would be less than significant with mitigation.</p>	PS	<p>Implementation of Mitigation Measure MM HWQ-2 would include preparation of a Drainage Plan that incorporates features for insuring the Depot Park stormwater drainage system capacity is not exceeded, which would reduce potential proposed project impacts to less-than-significant levels.</p> <p>Implementation of Mitigation Measure MM HWQ-3, however, would include development of a wellhead site Drainage Plan that would ensure adequate drainage for the off-site areas that run onto the wellhead site and reduce potential impacts to less-than-significant levels.</p> <p>MM HWQ-4. Soil testing and soil cuttings disposal. Prior to receiving a drilling permit, SNGS shall prepare procedures for testing of soil cuttings and drilling fluids and incorporate these procedures in the HSP and HWCP. The test procedures shall include the constituents to be tested, waste material sampling methods, sample handling and storage methods, reporting limits, not-to-exceed concentrations, and methods for disposal, depending</p>	LTS

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Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
	<p>upon test concentration(s). The soil cuttings and drilling fluid test procedure for waste disposal shall be approved by the CVRWQCB.</p> <p>Following testing of soil cuttings and drilling fluid waste materials, SNGS shall consult with the CVRWQCB to determine if the disposal tests indicate compliance with Resolution R5-2003-0008 conditions or if an individual Waste Discharge Report application is required. Following consultation with the CVRWQCB, SNGS shall comply with the CVRWQCB required waste disposal process, methods, and/or locations.</p>		

**3.10 NOISE**

NOI-1. Operational activities would not exceed the existing daytime ambient noise levels or the City of Sacramento daytime and nighttime noise standards. Nighttime construction activities could result in noise levels above the standards established in the noise ordinance at nearby receptors. However, with implementation of Mitigation Measures MM NOI-1 through MM NOI-3 this potential impact would be reduced to less than significant.

MM NOI-1. Install temporary noise barriers between drilling equipment and sensitive receptors. SNGS shall install temporary noise barriers between the drilling rig and nearby receptors, such that noise levels at the receiving property would be minimized to the extent feasible. Depending on the length of the barrier, the barrier may need to be repositioned after drilling of each well had been completed and the drilling rig is repositioned. The height and location(s) of the noise barrier shall be determined based on the size of the drilling rig to be used and the locations of the proposed wells, and shall be included in a drilling plan and submitted to CPUC and the City for review and approval.

LTS

If this does not reduce, the noise levels below the City's 50 dBA standard or existing nighttime ambient noise levels (whichever is greater) then SNGS shall implement the following mitigation measures to reduce impacts to less than significant.

MM NOI-2. Provide prior notification to nearby residents of nighttime construction activities. SNGS shall provide notification to residents within 300 feet of the wellhead site at least 30 days in advance of nighttime construction activities and provide an estimate of the hours of operation and duration of the activities. SNGS shall also post signs on the site pertaining to the

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
<p>construction days and hours, complaint procedures, and who to notify in the event of a problem.</p> <p>MM NOI-3. Designate a noise disturbance coordinator. SNGS shall designate a noise disturbance coordinator who will be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the City.</p>			

**3.12 PUBLIC HEALTH AND SAFETY**

PHS-2. Construction and operation of the proposed project could expose construction workers to significant health and safety hazards through the earthmoving activities that could result in the release of unknown hazardous materials to the environment through reasonably foreseeable upset and accident conditions. This impact would be reduced to less than significant with the implementation of Mitigation Measures MM PHS-1 and MM PHS-2.

PS

MM PHS-1. If evidence of soil contamination is encountered during construction, work shall cease until the area can be tested, and, if necessary, remediated. As part of this process, the County shall ensure that any necessary investigation and/or remediation activities conducted in the project area are coordinated with the County Fire Department, the Sacramento County Environmental Management Department, and, if needed, other appropriate state agencies (e.g. State Water Resources Control Board or Department of Toxic Substances Control). Once the site is remediated, construction can continue.

LTS

MM PHS-2. SNGS shall develop a monitoring plan to conduct well surface gas monitoring and vegetation inspections, and testing and leak surveys for each abandoned well in the field. The plan shall include procedures for when indications of gas leaks are present, such as collection of samples to determine the source or origin of any gas leaks. The plan shall also include procedures for when a leak is indicated by the data, and the necessary remedial actions that would be implemented. Remedial actions shall be consistent with DOGGR procedures outlined in California Code of Regulations Section 1723 et. seq. The monitoring plan and all monitoring and sampling results will be submitted to the DOGGR.

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

<b>Impacts</b>	<b>Impact Significance Without Mitigation</b>	<b>Mitigation Measures</b>	<b>Impact Significance With Mitigation</b>
<p>PHS-4. The compressor station site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and as a result, could create a significant hazard to the public or the environment. Implementation of Mitigation Measure MM PHS-1 would reduce this impact to a less-than-significant level.</p>	PS	<p>Implementation of the identified Mitigation Measure MM PHS-1 would minimize impacts to a less-than-significant level.</p>	LTS
<p><b>3.13 PUBLIC SERVICES AND UTILITIES</b></p>			
<p>PSU-4. The proposed project could result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. This would be a less-than-significant impact with mitigation incorporated.</p>	PS	<p>MM HWQ-1. Prepare a compressor station site Grading Plan. SNGS shall prepare a Grading Plan for the compressor site, prior to obtaining a grading permit, and submit the Grading Plan to the City of Sacramento Engineer. urvey contour lines to a 50-foot extent around the compressor station site at a 2-foot contour intervals. The Grading Plan shall also include the post-project topography, including all cut and fill areas. Preparation of the Grading Plan will allow the City Engineer to determine where and to what extent any drainage features are directly altered by the proposed project.</p>	LTS
<p>If the City Engineer determines that the Grading Plan shows there are potential drainage features that are affected by cut or fill activities:</p>			
<ul style="list-style-type: none"> <li>• SNGS will consult with the California Department of Fish and Game (CDFG) to determine if these drainage features would require a Department of Fish and Game 1602 Streambed Alteration Agreement (SAA). The SAA would include discussion of potential impacts and mitigation.</li> </ul>			
<ul style="list-style-type: none"> <li>• If the CDFG determines there are no drainage features requiring an SAA, the City Engineer will assess whether or not any direct alteration is likely to substantially alter the drainage feature flow rate and amount in a manner that would contribute to an increase in off-site erosion and/or siltation. If the City Engineer determines that changes in the drainage conditions would contribute to more erosion and siltation, the City Engineer shall require that SNGS incorporate additional</li> </ul>			
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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		mitigation to avoid any substantial alteration of drainage conditions.	
		<p>MM HWQ-2 Prepare a Compressor Station Site Drainage Plan. T SNGS shall prepare a site Drainage Plan prior to obtaining a grading permit to show the City and CPUC that drainage is adequate for the 100-year storm event and storm sewer design storm event to prevent flooding, erosion, and drainage system capacity exceedence. The Drainage Plan shall include:</p> <ul style="list-style-type: none"> <li>• Identification of the amount and peak rate of stormwater runoff for the 10-year and 100-year storm event.</li> <li>• Storm drainage routing and discharge location(s)</li> <li>• Drainage conditions that do not exceed existing or planned stormwater drainage system capacities. Sufficient evidence that this condition will be met shall be included in the Drainage Plan.</li> </ul> <p>Design characteristics and features to prevent off-site runoff from exceeding existing conditions and causing or contributing to an increase in erosion. Potential options to meet these requirements include:</p> <ol style="list-style-type: none"> <li>1. On-site runoff detention or retention features, with discharge occurring off-site to overland flow areas or through infiltration systems. Energy dissipaters would also be required if runoff flow is concentrated at the discharge location(s). Because proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities.</li> <li>2. Discharge to the Morrison Creek channel through the Depot Park storm drain system. The Depot Park storm drain system is permitted for stormwater discharge under an Industrial NPDES permit. SNGS would therefore have to meet any requirements for stormwater discharge imposed by the Depot Park.</li> </ol>	

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
	3. Discharge to the Morrison Creek channel through a new, constructed storm drain system. The Sacramento Area Flood Control Agency (SAFCA) controls the Morrison Creek channel and any modifications (e.g., a new outfall to the channel) would require approval by SAFCA. Furthermore, this option would require a reanalysis of potential impact to include construction and installation of the new storm drain.	<ul style="list-style-type: none"> <li>Design features to prevent on-site flooding.</li> </ul> <p>MM HWQ-3. Prepare a Wellhead Site Drainage Plan. Prior to receiving a grading permit, SNGS shall prepare a Drainage Plan to show the City of Sacramento and CPUC that the project design provides sufficient stormwater detention for the 100-year storm event for both the developed wellhead site runoff and for runoff from areas including, but not limited to, the section of Power Inn Road adjacent to the project area.</p> <p>The Drainage Plan shall include:</p> <ul style="list-style-type: none"> <li>Identification of the amount and peak rate of stormwater runoff for the 10-year and 100-year storm event (including runoff from off-site areas);</li> <li>Storm drainage routing and collection location(s) (including runoff from off-site areas);</li> <li>Design characteristics and features to prevent off-site runoff from exceeding existing conditions and causing or contributing to an increase in erosion. This may include, but is not limited to runoff detention or retention features with discharge occurring off-site to overlain flow areas, adjacent roads, or infiltration systems. Energy dissipaters would also be required if runoff flow is concentrated at the discharge location(s). Because proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities; and</li> </ul>	

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
<p><b>3.15 MANDATORY FINDINGS OF SIGNIFICANCE</b></p> <p>MFS-1. The proposed project could degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. This would be a less-than-significant impact with mitigation.</p>	PS	<ul style="list-style-type: none"> <li>Design features, such as flow routing and detention, to prevent on-site flooding. Because proposed project features cover less than half the project site, it is expected that sufficient area is available on-site to provide adequate detention facilities.</li> <li>Design features to prevent impediment of drainage from Power Inn Road and other areas that produce runoff to the site.</li> </ul>	LTS
<p>MM BIO-1. Conduct Preconstruction Survey for Sanford's Arrowhead and Fence Any Populations Located During the Survey.</p> <p>a) SNGS shall retain a qualified botanist to conduct focused surveys in Morrison Creek from Elder Creek Road to 250 feet upstream and downstream from where the HDD would cross Morrison Creek, during the blooming period for Sanford's arrowhead (May through October). If Sanford's arrowhead is not located during the survey, no additional mitigation would be required.</p> <p>b) If Sanford's arrowhead is located during the survey, it will need to be protected from construction activities. Prior to any pipeline construction activities, a protective fence shall be installed a minimum of one foot (or greater, if feasible) from the edge of all Sanford's arrowhead populations located during the survey. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all Sanford arrowhead populations have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until pipeline construction activities have been completed.</p>	PS		

<sup>2</sup> California Burrowing Owl Consortium, "Burrowing Owl Survey Protocol and Mitigation Guidelines", *Raptor Research Report No. 9, The Burrowing Owl, Its Biology and Management, including the Proceedings of the First International Burrowing Owl Symposium, 1997.*

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Impact Significance With Mitigation
MM BIO-2.	Mitigate for Potential Vernal Pool Crustacean Sensitive Habitat.	Mitigation Measures
a)	As a condition of project approval, SNGS, in consultation with USFWS, shall either (1) conduct a protocol-level survey for the federally listed vernal pool crustaceans or (2) assume presence of the federally-listed vernal pool crustaceans in all directly or indirectly affected wetlands that are suitable habitat. Surveys shall be conducted by qualified biologists in accordance with the most current USFWS guidelines or protocols to determine the time of year and survey methodology (survey timing for these species is dependent on yearly rainfall patterns, seasonal occurrences and breeding season, and is determined on a case-by-case basis).	
b)	Compensation	The following or equally effective compensation measures shall be implemented as determined in consultation with the USFWS.
c)	Avoidance	For every acre of habitat directly or indirectly affected, at least two vernal pool preservation credits shall be dedicated within a USFWS-approved ecosystem preservation bank, or, based on USFWS evaluation of site-specific conservation values, three acres of vernal pool habitat may be preserved on the project area.
		If habitat is avoided on site, a USFWS-approved biologist (monitor) shall inspect any construction-related activities in or near suitable habitat at the proposed project area to ensure that no unpermitted take of listed species or destruction of their habitat occurs. The biologist shall have the authority to stop all activities that the biologist deems may result in such a take or destruction until appropriate corrective measures have been completed. The biologist also shall immediately report any unauthorized impacts to the USFWS.

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		<p>MM BIO-3. Conduct Preconstruction Surveys for Active Burrowing Owl Burrows and Implement the DFG Guidelines for Burrowing Owl Mitigation, if Burrows are detected in the Project Area.</p>	
a)		<p>Pre-construction surveys for burrowing owls shall be conducted by an experienced biologist within 30-days prior to the start of work activities where land construction is planned in known or suitable habitat areas. If construction activities are delayed for more than 30 days after the preconstruction surveys, then a new preconstruction survey shall be required. All surveys shall be conducted in accordance with the CDFG/California Burrowing Owl Consortium survey protocols.<sup>2</sup></p>	
b)		<p>If burrowing owls are observed within the project area during the breeding season (February 1 to August 31), a 250-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until all young have fledged and are able to feed on their own, as determined by monitoring surveys conducted by a qualified biologist.</p>	
c)		<p>If burrowing owls are observed within the project area or areas adjacent to it during the non-breeding season (September to January), a 160-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until the owls have vacated the occupied burrow, as determined by monitoring conducted by a qualified biologist.</p>	
d)		<p>Where maintenance of a minimum 250-foot buffer zone around active burrowing owls nests (160 feet when owls are not nesting) is not practical, SNGS shall retain an experienced burrowing owl biologist to recommend project/site-specific construction techniques to avoid violating California Fish and Game Codes Section 3503 and Section 3503.5 and the MBTA, which could include the following or equally effective measures:</p>	

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
<ul style="list-style-type: none"> <li>i) Modification of construction procedures so critical pipeline construction tasks could be completed in as short a time as possible; and</li> <li>ii) Close monitoring of the owls' behavior before and during construction so any significant changes in the owls' behavior would be apparent. Construction would be stopped if, based on the biologists' assessment, the owls appear sufficiently agitated to abandon the nest.</li> <li>e) If the proposed project would result in direct impacts to active burrows (i.e. trenching), passive relocation/exclusion shall be allowed during the non-breeding season (September to January). CDFG shall be consulted on current passive relocation methodology before relocation of owls is attempted. Breeding burrowing owls and their young shall not be relocated. Following exclusion, the burrows can be destroyed to prevent the birds from returning to the site.</li> <li>f) Following the passive exclusion, burrows within 250 feet of the project area shall be seasonally blocked (anchored plywood or other similar mechanism) to prevent burrowing owls from establishing new burrows in the project area. Monitoring shall occur from prior to the nesting season through construction of the proposed project, as determined in consultation with the CDFG, to ensure that owls do not return to the project area during the construction season. The burrows will be unblocked prior to the beginning of the next breeding season.</li> </ul>			
<p><b>MM BIO-4. Mitigate for Loss of Swainson's Hawk Foraging Habitat.</b></p> <ul style="list-style-type: none"> <li>a) SNGS shall consult with CDFG to determine if the project area represents important suitable foraging habitat for Swainson's hawk. If CDFG concurs that the project area is not important habitat by virtue of its small size, disturbed</li> </ul>			

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		nature and surrounded industrial uses, no additional mitigation would be required.	
	b) If CDFG determines that the project area is important Swainson's hawk foraging habitat then SNGS shall mitigate for its loss. SNGS shall ensure that impacts are mitigated at a 0.75:1 ratio. Preservation may occur through either:	<ul style="list-style-type: none"> <li>i) Purchase of mitigation credits in an approved CDFG mitigation bank that is within the service area of the project area; or</li> <li>ii) Payment of a mitigation fee to a habitat development and management company, through a negotiated agreement between said company, SNGS, and CDFG. The lands must be within 10 miles of the project area (consistent with CDFG guidelines); or</li> <li>iii) Purchase of conservation easements or fee title in Sacramento County. This mitigation must occur within ten miles of the project area, unless otherwise approved by CDFG (consistent with CDFG guidelines).</li> </ul>	
		MM BIO-5. Avoid Disturbance of Active Nests of Swainson's Hawk, White-tailed Kite, other Birds of Prey, and Migratory Birds.	
	a) SNGS shall conduct a pre-construction breeding-season survey (approximately February 1 through August 30) within one-half mile of the project area. The survey shall be conducted by a qualified biologist to determine if any birds, including raptors are nesting on or directly adjacent to the project area. If the above survey does not identify any nesting birds of prey and migratory bird species on the project area, no additional mitigation would be required.		
	b) Should any active bird nests be located on the project area, the following mitigation measures shall be implemented:		

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		<p>i) SNGS shall avoid all birds nest sites located in the project area during the breeding season (approximately February 1 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer in use. If construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the CDFG and USFWS. The buffer zone shall be delineated by highly visible temporary construction fencing.</p>	
		<p>ii) Every effort should be made to preserve Swainson's hawk nest trees through project design or avoidance measures. However, if removal of the nest tree during the nesting season is unavoidable, a Section 2081 permit would be required from the CDFG. Mitigation for the loss of active Swainson's hawk nest trees at any time of year would be determined in consultation with the CDFG and could include the replacement of trees at a CDFG approved mitigation site and ratio.</p>	
		<p>MM BIO-6. Conduct Preliminary Jurisdictional Delineation for Wetlands and Waters of the U.S. and Mitigate for Potential Effects.</p>	
		<p>a) A preliminary jurisdictional wetland delineation shall be conducted to determine the location and extent of Corps regulated wetlands and waters of the U.S. in the project area.</p>	
		<p>b) SNGS shall prepare a Wetlands Mitigation Plan that ensures no net loss of wetlands, consistent with federal policy. The Wetlands Mitigation Plan shall be based on the level of project impacts to wetlands identified in the wetland delineation report. The plan shall include the following or</p>	
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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		<p>equally effective components:</p>	
i)	Horizontal direction drilling technique shall be used to install the pipeline under Morrison Creek.		
ii)	Construction will occur during the dry season to the extent feasible.		
iii)	Prior to any construction activities on the site, a protective fence (silt fence or equivalent) shall be installed a minimum of one foot (or greater, if feasible) from the edge of all wetland habitat to be avoided in the immediate vicinity of the proposed construction areas. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all wetland features have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until construction activities in the immediate vicinity of the wetland habitat have been completed.		
c)	Water quality of the wetlands not directly affected by construction activities shall be protected using BMP erosion control techniques. Appropriate sediment control measures shall be in place prior to the onset of project construction and shall be monitored and maintained until construction activities have ceased.		
d)	Staging areas shall be located 100 feet from any wetland habitat. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be disposed of at a regional landfill or at another approved and/or properly permitted location. Stockpiles that are to remain on the site throughout the wet season shall be protected to prevent erosion (e.g. silt fences, straw bales).		
e)	Stormwater runoff and erosion from overburden and aggregate stockpiles, quarrying areas, construction activities, and any other ground disturbing activities shall be controlled		

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Summary of Impacts and Mitigation Measures**

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		<p>through the implementation of a program of erosion control BMPs and engineered sediment control structures. Erosion control BMPs may include, but are not limited to, the application of straw mulch; seeding with fast growing grasses; and the construction of berms, silt fences, hay bale dikes, stormwater detention basins, and other energy dissipaters.</p>	
		MM CUL-1.	
		<p>a) SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to peer review all existing documentation that pertains to cultural resources on the proposed project area to determine the sufficiency of the studies. Based on the results of the review, a brief report addressing the adequacy of the previous studies and discussing any deficiencies shall be prepared by the archaeologist. Any areas deemed inadequately studied shall be resurveyed by the archaeologist per MM CUL-1(b).</p>	
		<p>b) SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to survey any areas within the project site that were not previously surveyed or were found to be inadequately studied, per mitigation measure MM CUL-1(a) above, to determine if any resources are present that qualify as unique archaeological resource as defined in CEQA Section 21083.2 of the State CEQA Guidelines. A report shall be prepared containing the findings of the survey and shall meet the requirements for Section 106 of the National Historic Preservation Act. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation.</p>	

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Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		MM CUL-2.	
	a)	SNGS shall a qualified archaeologist to monitor all earthmoving activities. If resources are discovered during construction the protocol established in MM CUL-2(b) shall be implemented.	
	b)	SNGS shall retain a qualified archaeologist, who meets the Secretary of the Interior's Professional Qualifications for Archaeology, to prepare a Recovery, Recordation, and Preservation Plan. In the event that any prehistoric or historic subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian, and/or mortar are discovered during construction-related earthmoving activities, all ground-disturbing activity within 100 feet of the resources shall be halted and the City of Sacramento Community Development Department shall be notified if the discovery is made within the City limits and the County of Sacramento shall be notified if the discovery is made in the unincorporated County. The appropriate Department shall consult with a qualified archeologist to assess the significance of the find. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation, as outlined in the Recovery, Recordation, and Preservation Plan.	
		MM CUL-3. If human remains are discovered at any project construction sites during any phase of construction, all ground-disturbing activity within 50 feet of the remains shall be halted immediately, and the City of Sacramento Planning Services Department and the County coroner shall be notified immediately. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC)	

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<p>MFS-2. The proposed project could have impacts that are individually limited, but cumulatively considerable. This impact would be reduced to less than significant with mitigation.</p>	PS	<p>shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The County shall be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of state law, as set forth in CEQA Guidelines Section 15064.5(e) and Public Resources Code section 5097.98. The project applicant shall implement approved mitigation, to be verified by the City of Sacramento Planning Services Department, before the resumption of ground-disturbing activities within 50 feet of where the remains were discovered.</p>	LTS
		<p>MM BIO-1. Conduct Preconstruction Survey for Sanford's Arrowhead and Fence Any Populations Located During the Survey.</p> <p>a) SNGS shall retain a qualified botanist to conduct focused surveys in Morrison Creek from Elder Creek Road to 250 feet upstream and downstream from where the HDD would cross Morrison Creek, during the blooming period for Sanford's arrowhead (May through October). If Sanford's arrowhead is not located during the survey, no additional mitigation would be required.</p> <p>b) If Sanford's arrowhead is located during the survey, it will need to be protected from construction activities. Prior to any pipeline construction activities, a protective fence shall be installed a minimum of one foot (or greater, if feasible) from the edge of all Sanford's arrowhead populations located during the survey. Prior to initiation of construction activities, a</p>	

<sup>3</sup> California Burrowing Owl Consortium, "Burrowing Owl Survey Protocol and Mitigation Guidelines", *Raptor Research Report No. 9, The Burrowing Owl, Its Biology and Management, including the Proceedings of the First International Burrowing Owl Symposium, 1997.*

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
	qualified biologist shall inspect the protective fencing to ensure that all Sanford arrowhead populations have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until pipeline construction activities have been completed.	MM BIO-2. Mitigate for Potential Vernal Pool Crustacean Sensitive Habitat. a) As a condition of project approval, SNGS, in consultation with USFWS, shall either (1) conduct a protocol-level survey for the federally listed vernal pool crustaceans or (2) assume presence of the federally-listed vernal pool crustaceans in all directly or indirectly affected wetlands that are suitable habitat. Surveys shall be conducted by qualified biologists in accordance with the most current USFWS guidelines or protocols to determine the time of year and survey methodology (survey timing for these species is dependent on yearly rainfall patterns, seasonal occurrences and breeding season, and is determined on a case-by-case basis). b) Compensation The following or equally effective compensation measures shall be implemented as determined in consultation with the USFWS. For every acre of habitat directly or indirectly affected, at least two vernal pool preservation credits shall be dedicated within a USFWS-approved ecosystem preservation bank, or, based on USFWS evaluation of site-specific conservation values, three acres of vernal pool habitat may be preserved on the project area. c) Avoidance If habitat is avoided on site, a USFWS-approved biologist (monitor) shall inspect any construction-related activities in or near suitable habitat at the proposed project area to ensure that no unpermitted take of listed species or destruction of their	

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		<p>habitat occurs. The biologist shall have the authority to stop all activities that the biologist deems may result in such a take or destruction until appropriate corrective measures have been completed. The biologist also shall immediately report any unauthorized impacts to the USFWS.</p>	
		<p>MM BIO-3. Conduct Preconstruction Surveys for Active Burrowing Owl Burrows and Implement the DFG Guidelines for Burrowing Owl Mitigation, if Burrows are detected in the Project Area.</p>	
		<p>a) Pre-construction surveys for burrowing owls shall be conducted by an experienced biologist within 30-days prior to the start of work activities where land construction is planned in known or suitable habitat areas. If construction activities are delayed for more than 30 days after the preconstruction surveys, then a new preconstruction survey shall be required. All surveys shall be conducted in accordance with the CDFG/California Burrowing Owl Consortium survey protocols.<sup>3</sup></p>	
		<p>b) If burrowing owls are observed within the project area during the breeding season (February 1 to August 31), a 250-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until all young have fledged and are able to feed on their own, as determined by monitoring surveys conducted by a qualified biologist.</p>	
		<p>c) If burrowing owls are observed within the project area or areas adjacent to it during the non-breeding season (September to January), a 160-foot buffer zone shall be established around the occupied burrow(s) and construction delayed in that buffer zone until the owls have vacated the occupied burrow, as determined by monitoring conducted by a qualified biologist.</p>	
		<p>d) Where maintenance of a minimum 250-foot buffer zone around active burrowing owls nests (160 feet when owls are</p>	

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		<p>not nesting) is not practical, SNGS shall retain an experienced burrowing owl biologist to recommend project/site-specific construction techniques to avoid violating California Fish and Game Codes Section 3503 and Section 3503.5 and the MBTA, which could include the following or equally effective measures:</p>	
		<p>i) Modification of construction procedures so critical pipeline construction tasks could be completed in as short a time as possible; and</p>	
		<p>ii) Close monitoring of the owls' behavior before and during construction so any significant changes in the owls' behavior would be apparent. Construction would be stopped if, based on the biologists' assessment, the owls appear sufficiently agitated to abandon the nest.</p>	
		<p>e) If the proposed project would result in direct impacts to active burrows (i.e. trenching), passive relocation/exclusion shall be allowed during the non-breeding season (September to January). CDFG shall be consulted on current passive relocation methodology before relocation of owls is attempted. Breeding burrowing owls and their young shall not be relocated. Following exclusion, the burrows can be destroyed to prevent the birds from returning to the site.</p>	
		<p>f) Following the passive exclusion, burrows within 250 feet of the project area shall be seasonally blocked (anchored plywood or other similar mechanism) to prevent burrowing owls from establishing new burrows in the project area. Monitoring shall occur from prior to the nesting season through construction of the proposed project, as determined in consultation with the CDFG, to ensure that owls do not return to the project area during the construction season. The burrows will be unblocked prior to the beginning of the next breeding season.</p>	

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**Table ES-1  
Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
		MM BIO-4. Mitigate for Loss of Swainson's Hawk Foraging Habitat.	
	a) SNGS shall consult with CDFG to determine if the project area represents important suitable foraging habitat for Swainson's hawk. If CDFG concurs that the project area is not important habitat by virtue of its small size, disturbed nature and surrounded industrial uses, no additional mitigation would be required.		
	b) If CDFG determines that the project area is important Swainson's hawk foraging habitat then SNGS shall mitigate for its loss. SNGS shall ensure that impacts are mitigated at a 0.75:1 ratio. Preservation may occur through either:		
	i) Purchase of mitigation credits in an approved CDFG mitigation bank that is within the service area of the project area; or		
	ii) Payment of a mitigation fee to a habitat development and management company, through a negotiated agreement between said company, SNGS, and CDFG. The lands must be within 10 miles of the project area (consistent with CDFG guidelines); or		
	iii) Purchase of conservation easements or fee title in Sacramento County. This mitigation must occur within ten miles of the project area, unless otherwise approved by CDFG (consistent with CDFG guidelines).		
	MM BIO-5. Avoid Disturbance of Active Nests of Swainson's Hawk, White-tailed Kite, other Birds of Prey, and Migratory Birds.		
	a) SNGS shall conduct a pre-construction breeding-season survey (approximately February 1 through August 30) within one-half mile of the project area. The survey shall be conducted by a qualified biologist to determine if any birds, including raptors are nesting on or directly adjacent to the project area. If the above survey does not identify any		

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
	nesting birds of prey and migratory bird species on the project area, no additional mitigation would be required.		
b)	Should any active bird nests be located on the project area, the following mitigation measures shall be implemented:	<ul style="list-style-type: none"> <li>i) SNGS shall avoid all birds nest sites located in the project area during the breeding season (approximately February 1 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer in use. If construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the CDFG and USFWS. The buffer zone shall be delineated by highly visible temporary construction fencing.</li> <li>ii) Every effort should be made to preserve Swainson's hawk nest trees through project design or avoidance measures. However, if removal of the nest tree during the nesting season is unavoidable, a Section 2081 permit would be required from the CDFG. Mitigation for the loss of active Swainson's hawk nest trees at any time of year would be determined in consultation with the CDFG and could include the replacement of trees at a CDFG approved mitigation site and ratio.</li> </ul>	
MM BIO-6.	Conduct Preliminary Jurisdictional Delineation for Wetlands and Waters of the U.S. and Mitigate for Potential Effects.	<ul style="list-style-type: none"> <li>a) A preliminary jurisdictional wetland delineation shall be conducted to determine the location and extent of Corps regulated wetlands and waters of the U.S. in the project area.</li> </ul>	

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Summary of Impacts and Mitigation Measures**

Impacts	Impact Significance Without Mitigation	Mitigation Measures	Impact Significance With Mitigation
	b)	<p>SNGS shall prepare a Wetlands Mitigation Plan that ensures no net loss of wetlands, consistent with federal policy. The Wetlands Mitigation Plan shall be based on the level of project impacts to wetlands identified in the wetland delineation report. The plan shall include the following or equally effective components:</p> <ul style="list-style-type: none"> <li>i) Horizontal direction drilling technique shall be used to install the pipeline under Morrison Creek.</li> <li>ii) Construction will occur during the dry season to the extent feasible.</li> <li>iii) Prior to any construction activities on the site, a protective fence (silt fence or equivalent) shall be installed a minimum of one foot (or greater, if feasible) from the edge of all wetland habitat to be avoided in the immediate vicinity of the proposed construction areas. Prior to initiation of construction activities, a qualified biologist shall inspect the protective fencing to ensure that all wetland features have been appropriately protected. No encroachment into fenced areas shall be permitted during construction and the fence shall remain in place until construction activities in the immediate vicinity of the wetland habitat have been completed.</li> </ul>	
c)		<p>Water quality of the wetlands not directly affected by construction activities shall be protected using BMP erosion control techniques. Appropriate sediment control measures shall be in place prior to the onset of project construction and shall be monitored and maintained until construction activities have ceased.</p>	
d)		<p>Staging areas shall be located 100 feet from any wetland habitat. Temporary stockpiling of excavated or imported material shall occur only in approved construction staging areas. Excess excavated soil shall be disposed of at a regional landfill or at another approved and/or properly</p>	

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Summary of Impacts and Mitigation Measures**

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<p>MFS-3. The proposed project could have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. This would be a less-than-significant impact with implementation of Mitigation Measures MM NOI-1 through MM NOI-3 and MM PHS-1 through MM PHS-2.</p>	PS	<p>permitted location. Stockpiles that are to remain on the site throughout the wet season shall be protected to prevent erosion (e.g. silt fences, straw bales).</p> <p>e) Stormwater runoff and erosion from overburden and aggregate stockpiles, quarrying areas, construction activities, and any other ground disturbing activities shall be controlled through the implementation of a program of erosion control BMPs and engineered sediment control structures. Erosion control BMPs may include, but are not limited to, the application of straw mulch; seeding with fast growing grasses; and the construction of berms, silt fences, hay bale dikes, stormwater detention basins, and other energy dissipaters.</p>	LTS
<p>MM NOI-1. Install temporary noise barriers between drilling equipment and sensitive receptors. SNGS shall install temporary noise barriers between the drilling rig and nearby receptors, such that noise levels at the receiving property would be minimized to the extent feasible. Depending on the length of the barrier, the barrier may need to be repositioned after drilling of each well had been completed and the drilling rig is repositioned. The height and location(s) of the noise barrier shall be determined based on the size of the drilling rig to be used and the locations of the proposed wells, and shall be included in a drilling plan and submitted to CPUC and the City for review and approval.</p> <p>If this does not reduce the noise levels below the City's 50 dBA standard or existing nighttime ambient noise levels (whichever is greater) then SNGS shall implement the following mitigation measures to reduce impacts to less than significant.</p> <p>MM NOI-2. Provide prior notification to nearby residents of nighttime construction activities. SNGS shall provide notification to residents within 300 feet of the wellhead site at least 30 days in advance of nighttime construction activities and provide an estimate of the hours of operation and duration of the activities.</p>	PS		LTS

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	<p>SNGS shall also post signs on the site pertaining to the construction days and hours, complaint procedures, and who to notify in the event of a problem.</p> <p>MM NOI-3. Designate a noise disturbance coordinator. SNGS shall designate a noise disturbance coordinator who will be responsible for responding to complaints about noise during construction. The telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site and shall be provided to the City.</p>	<p>MM PHS-1. If evidence of soil contamination is encountered during construction, work shall cease until the area can be tested, and, if necessary, remediated. As part of this process, the County shall ensure that any necessary investigation and/or remediation activities conducted in the project area are coordinated with the County Fire Department, the Sacramento County Environmental Management Department, and, if needed, other appropriate state agencies (e.g. State Water Resources Control Board or Department of Toxic Substances Control). Once the site is remediated, construction can continue.</p> <p>MM PHS-2. SNGS shall develop a monitoring plan to conduct well surface gas monitoring and vegetation inspections, and testing and leak surveys for each abandoned well in the field. The plan shall include procedures for when indications of gas leaks are present, such as collection of samples to determine the source or origin of any gas leaks. The plan shall also include procedures for when a leak is indicated by the data, and the necessary remedial actions that would be implemented. Remedial actions shall be consistent with DOGGR procedures outlined in California Code of Regulations Section 1723 et. seq. The monitoring plan and all monitoring and sampling results will be submitted to the DOGGR.</p>	

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