



Proposed SoCalGas H2 System Pipeline Permit Identification, Strategy, and Risk

System 5 (Delta)

prepared by

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Brea, California 92821

prepared with the assistance of

Rincon Consultants, Inc.

180 North Ashwood Avenue

Ventura, California 93003

September 2021



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Environmental Scientists | Planners | Engineers

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Appendix A	Summary of Regulations, Agencies, and Permitting Role
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Acronyms and Abbreviations

Air Force Base	AFB
Alameda Corridor Transportation Authority	ACTA
Angeles National Forest	ANF
Antelope Valley Air Quality Management District	AVAQMD
Area of Critical Environmental Concern	ACEC
Bureau of Air Pollution Control	BAPC
Bureau of Land Management	BLM
Bureau of Reclamation	BOR
Burlington Northern Santa Fe Railroad	BNSF
California Air Resources Board	CARB
California Code of Regulations	CCR
California Department of Fish and Wildlife	CDFW
California Department of Transportation	Caltrans
California Endangered Species Act	CESA
California Energy Commission	CEC
California Environmental Quality Act	CEQA
California Public Utilities Commission	CPUC
California's Assembly Bill 8	AB-8
Categorical Exclusion	CATEX
Certificate of Public Convenience and Necessity	CPCN
Clean Air Act	CAA
Clean Water Act	CWA
Coastal California Gnatcatcher	CAGN
Code of Federal Regulations	CFR
Conditional Use Permit	CUP
Construction General Permit	CGP
Council on Environmental Quality	CEQ
Department of Conservation	DOC
Department of Defense	DOD
Department of Environmental Quality	DEQ

Department of Parks and Recreation	DPR
Department of the Interior	DOI
Department of Transportation	DOT
Department of Water Resources	DWR
Desert Energy Renewable Conservation Plan	DRECP
Division of Water Quality	DWQ
Eastern Kern County Air Pollution Control District	KCAPCD
Endangered Species Act	ESA
Environmental Impact Statement	EIS
Environmental Assessment	EA
Environmental Impact Report	EIR
Environmental Protection Agency	EPA
Federal Energy Regulatory Commission	FERC
Federal Highway Administration	FHWA
Federal Land Policy and Management Act	FLPMA
Final Environmental Impact Statement	Final EIS
Finding of No Significant Impacts	FONSI
Fixing America's Surface Transportation	FAST
Habitat Conservation Plan	HCPs
Horizontal directional drilling	HDD
Incidental Take Permit	ITP
Interagency Operating Procedures	IOPs
Lake and Streambed Alteration Agreement	LSAA
Los Angeles	L.A.
Master Special Use Permit	MSUP
Memorandum of Understanding	MOU
Mitigated Negative Declaration	MND
Mojave Desert Air Quality Management District	MDAQMD
National Environmental Policy Act	NEPA
National Historic Preservation Act	NHPA
National Marine Fisheries Service	NMFS
National Oceanic and Atmospheric Administration	NOAA
National Park Service	NPS

National Pollutant Discharge Elimination System	NPDES
Nationwide Permit	NWP
Native Plant Protection Act	NPPA
Natural Community Conservation Plan	NCCP
Nevada Department of Transportation	NDOT
Nevada Department of Wildlife	NDOW
Nevada Division of Environmental Protection	NDEP
Notice of Intent	NOI
Office of Pipeline Safety	OPS
Office of the State Fire Marshall	CAL FIRE
Open Space	OS
Pipeline and Hazardous Materials Safety Administration	PHMSA
Plan of Development	POD
pre-construction notification	PCN
Proponent's Environmental Assessment	PEA
Port of Los Angeles	POLA
Port of Long Beach	POLB
Public/Quasi Public	PQP
Public Utilities Commission of Nevada	NPUC
Railroad	RR
Record of Decision	ROD
Regional Water Quality Control Board	RWQCB
Rights-of-Way	ROW
San Bernardino National Forest	SBNF
Significant Ecological Areas	SEAs
Southern Nevada Regional Planning Coalition	SNRPC
South Coast Air Quality Management District	SCAQMD
Special Use Permit	SUP
Species of Special Concern	SSC
Standard Form	SF
State Historic Preservation Officer	SHPO
State Implementation Plans	SIPs
State of Utah School and Institutional Trust Land Administration	SITLA

State Water Resources Control Board	SWRCB
Stormwater Pollution Protection Plan	SWPPP
Surface Area Disturbance	SAD
Surface Transportation Board	STB
Transportation Security Administration	TSA
United States Army Corps of Engineers	USACE
United States Coast Guard	USCG
United States Fish and Wildlife Service	USFWS
United States Forest Service	USFS
Utah Department of Transportation	UDOT
Utah Division of Forestry, Fire and State Lands	UFFSL
Utah Division of Water Quality	UDWQ
Utah Division of Wildlife Resources	UDWR
Utah Pollutant Discharge Elimination System	UPDES
Water Discharge Requirements	WDRs
Waters of the United States	WOTUS
West Mojave Plan	WMP
Western Riverside County Multiple Species Habitat Conservation Plan	WRC-MSHCP
West-wide Energy Corridor	WWEC
Wildlife Management Area	WMA

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Executive Summary

This Hydrogen (H₂) Pipeline Feasibility Study Permit Identification and Strategy Report (H₂ Permit Report) has been completed for SPEC Services, Inc (SPEC) by D. Edwards, Inc. with the assistance of Rincon Consultants, Inc. (Rincon) in support of the Southern California Gas Company (SoCalGas) H₂ Hydrogen Pre-Feasibility Study (Study). The overarching H₂ Permit Report is divided into four stand-alone reports, each examining one specific pipeline System as provided by identify potential environmental permitting requirements and to inform a successful and efficient permitting strategy to deliver hydrogen gas for the “low,” “medium,” and “high” demand cases to the Los Angeles (L.A.) Basin of Southern California from central Utah. This Permit Report provides a summary of anticipated regulatory and permitting requirements and risks identified along System 5, consisting of the “Low Demand Alignment” (from near city of Delta (Delta), Utah southeast through the state of Nevada and the City of Los Angeles to the Port of L.A./Port of Long Beach area [POLA/POLB]); the “Medium Demand Alignment” (includes the Low Demand Alignment plus an additional alignment through the Counties of San Bernardino, Riverside, Orange, and Los Angeles); and the “High Demand Alignment” (includes the Medium Demand Alignment plus an additional alternative trunk route beginning in Delta through Nevada to the City of Adelanto in California [Adelanto]). Permitting and regulatory requirements have been identified at a conceptual level considering general federal, state and local jurisdictions, existing pipeline corridors or rights of way (ROW), other known existing ROW, or the need for new ROW. Environmental, land, and permitting considerations have been presented with descriptions and summaries of the conditions present. Permit risk is focused on environmental constraints that would render a system un-permittable or require long lead times. Appendix A provides additional detail regarding agency requirements and permitting discussions.

As discussed in the Permit Report below, the System 5 Low Demand Alignment, Medium Demand Alignment, and High Demand Alignment included consistent permitting constraints along applicable pipeline routes. Permitting Challenges will include Bureau of Land Management (BLM), United States Forest Service (USFS), Department of Defense (DOD), Bureau of Indian Affairs (BIA) and individual tribes, and National Park Service (NPS).

Within Utah and Nevada, the System 5 alignments are primarily located

Permit Identification and Strategy

System 5 includes three states : Utah, Nevada, and California. In Nevada a Certificate of Public Convenience and Necessity (CPCN) is anticipated, but not in Utah. Neither Nevada nor Utah requires state environmental review; however, California is anticipated to require an Environmental Impact Report (EIR) under the California Environment Quality Act (CEQA).

Within Utah the primary permitting obstacles include publicly owned lands (BLM) and state lands administered by the School and Institutional Trust Lands Administration (SITLA) and Utah Division of Wildlife Resources (UDWR).

In Nevada, the primary permitting obstacles would be related to crossing

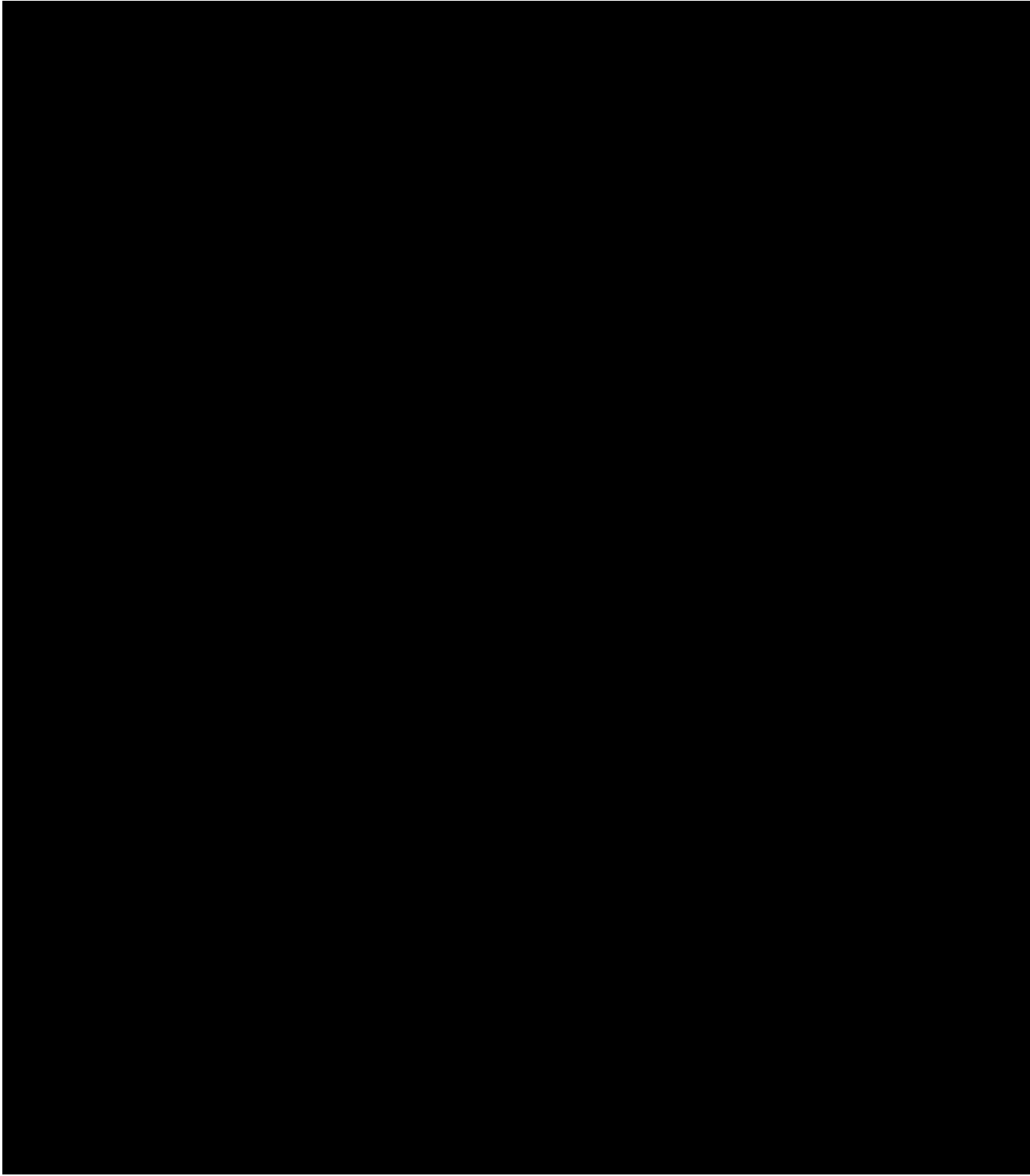
Activities affecting the environment on Indian lands often require the approval of both the BIA and the tribal government. For a ROW across tribal land, the applicant must obtain a grant of right-of-way across tribal land.

Several permits will be required for all potential System 5 routes including U.S. Army Corps of Engineers (USACE) 404 and Regional Water Quality Control Board (RWQCB) 401 Certification Individual Permits and a CDFW line-wide Lake and Streambed Alteration Agreement (LSAA) for construction. The Medium Demand Alignment and High Demand Alignment require additional permit lead times where the alignment bisects the SBNF and CHSP.

The Medium Demand Alignment and the High Demand Alignment also include additional local review by San Bernardino County and cities in Riverside and Orange Counties.

Permit Risk and Schedule

Permitting risks are those environmental constraints that would make a route potentially un-permittable and include constraints that increase lead times and permitting requirements. Table 1 provides a summary of anticipated permitting risks along with anticipated permitting lead times and avoidance strategies.



Permit Type	Schedule (Months)	Risk and Strategy

Introduction

This H2 Permit Report has been completed for SPEC Services, Inc. by D. Edwards, Inc. with the assistance of Rincon in support of the SoCalGas H2 Pipeline Feasibility Study. The overarching H2 Permit Report is divided into four stand-alone reports, each examining one specific pipeline System as provided by SPEC () to identify potential environmental permitting requirements and to inform a successful and efficient permitting strategy to deliver hydrogen gas for the “low,” “medium,” and “high” demand cases in the L.A. Basin of Southern California.

Reports will be provided for each Pipeline System below, with bold indicating the subject of this Report:

- System 1 – Five Points (Intrastate): California’s Central Valley to the L.A. Basin
- System 2 – Mojave (Intrastate): California’s Mojave Desert to the L.A. Basin
- System 3 – Whitewater (Intrastate): California’s Northern Coachella Valley to the L.A. Basin
- System 4 – Blythe (Intrastate): Eastern portion of Riverside County near the California border with Nevada to the L.A. Basin (combined)
- System 5 – Delta (Interstate): Central Utah through Nevada to the L.A. Basin in Southern California

This H2 Permit Report provides a summary of anticipated regulatory and permitting requirements identified along System 5, consisting of three alignments: the “Low Demand Alignment” (from near Delta in Central Utah through Nevada to the L.A. Basin via Palmdale through the City of Los Angeles to the POLA/POLB (Figure 1); the “Medium Demand Alignment” (including the Low Demand Alignment plus an additional alignment through the Counties of San Bernardino, Riverside, Orange, and Los Angeles) (Figure 2); and the “High Demand Alignment” (the Medium Demand Alignment plus an additional alternative trunk route beginning in Delta through the state of Nevada to Adelanto in California) (Figure 3).

Permitting and regulatory requirements have been identified at a conceptual level considering general federal, state and local jurisdictions, regional entities, existing pipeline corridors or rights of way, other known existing rights of way, or in some cases the need for new rights of way. Environmental, land, and permitting considerations have been presented with descriptions and summaries of the conditions present. Permit risk has focused on environmental regulations that would create unavoidable constraints to permitting of that pipeline route.

Figure 1 System 5 Low Demand Alignment

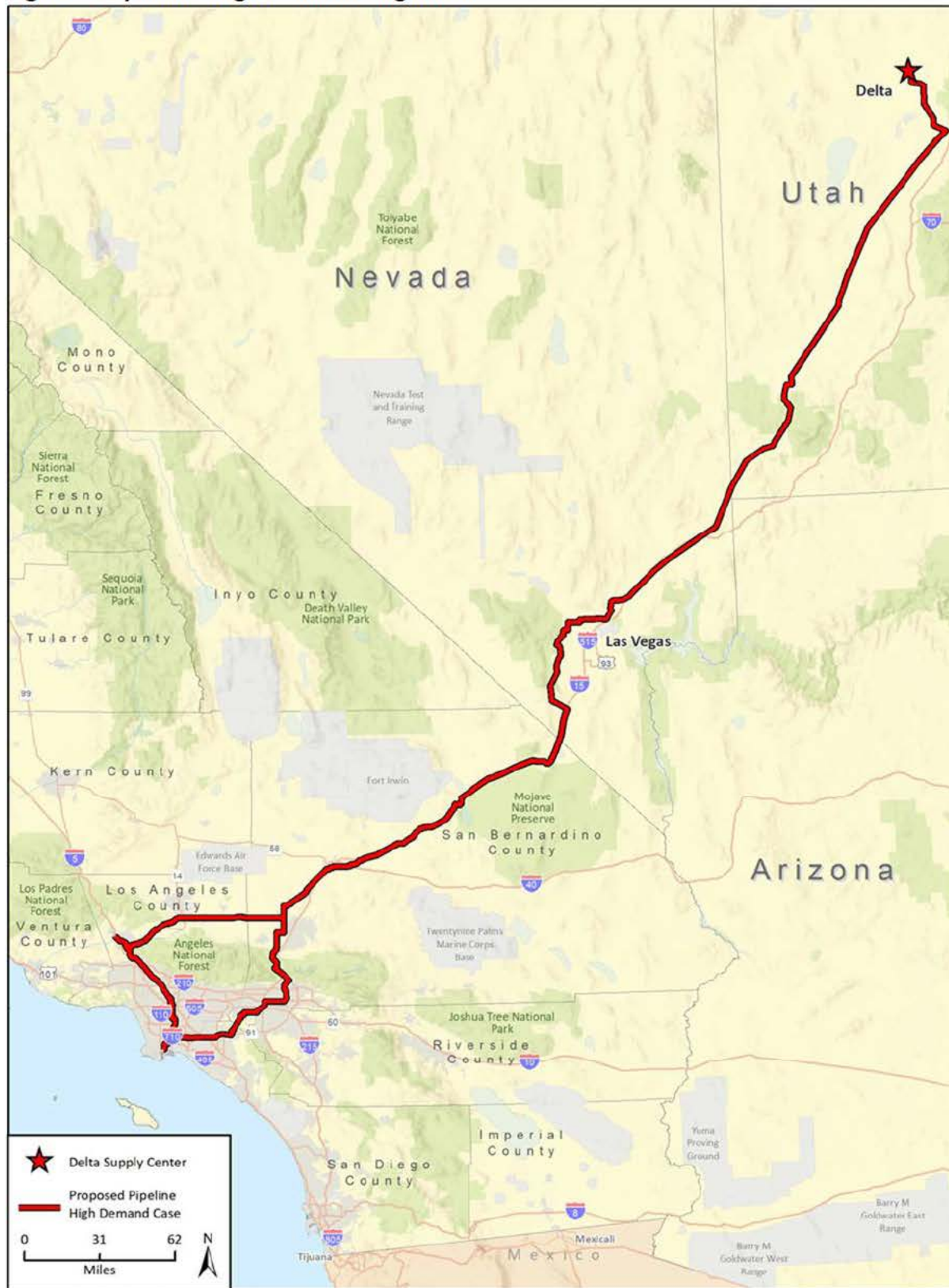


Fig X Proposed Pipelines DDP

Figure 2 System 5 Medium Demand Alignment



Figure 3 System 5 High Demand Alignment



1.1 Background

As of December 2020, there were 1,608 miles of hydrogen pipeline in the United States (U.S.), which nearly all occur in dedicated hydrogen infrastructure. However, some U.S. operators have initiated projects to blend hydrogen and methane in natural gas pipelines (CRS 2020). Regulatory authorities differ for dedicated hydrogen pipelines and for natural gas pipes carrying hydrogen blends. Federal regulation of hydrogen pipelines (including commercial service, delivery, security, and safety) is an emerging topic, and for the purposes of this report, it is assumed that it is not regulated the same way as natural gas and is therefore not covered by the Natural Gas Act (NGA).

Federal pipeline jurisdiction generally resides with the Surface Transportation Board (STB) (primarily for freight-train conveyance), the Federal Energy Regulatory Commission (FERC) (natural gas pipeline interstate siting, construction, and operation), the Transportation Security Administration (TSA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT) (safety). However, as discussed above existing regulations applicable to natural gas do not address the specific requirements and challenges of hydrogen. While FERC has not utilized this authority to regulate pipelines exclusively transporting hydrogen, and may not have jurisdiction to do so under the NGA or other existing statutes, it is possible that FERC could regulate the transportation of hydrogen if it is transported in a blended stream with natural gas.

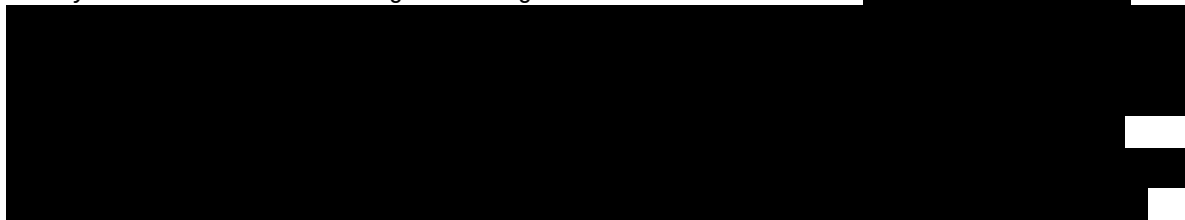
The Department of Energy (DOE) Hydrogen Program, led by the Hydrogen and Fuel Cell Technologies Office within the Office of Energy Efficiency and Renewable Energy, is conducting research and development into hydrogen production, delivery, infrastructure, storage, and multiple end uses. For transportation and delivery of hydrogen via pipeline, the DOE Hydrogen Program is currently rooted in the research and development phase and has not yet progressed into policy or rule-making. Similarly, state governments, regional entities, counties, and cities also lack specific permitting paths for pipeline transportation of hydrogen. As a result, the information within this Report is likely to change as the industry develops and agencies are prompted to provide hydrogen-specific regulation and/or guidance. Regular updates to the information provided within this Report is advised to accurately represent current laws, regulations, requirements and guidelines.

1.2 Pipeline Route Descriptions

The proposed Project includes regulatory and permitting overview of four potential pipeline alignments (System 1, 2, 3/4, and 5). This Report provides a summary of the System 5 – Delta (Interstate) Low Demand Alignment, Medium Demand Alignment, and High Demand Alignment located within Utah, Nevada, and California. Lateral routes and distribution lines are not addressed in this Report.

System 5 – Low Demand Alignment

The System 5 – Low Demand Alignment begins in Central Utah near the



[REDACTED]

System 5 – Medium Demand Alignment

The Medium Demand Alignment includes [REDACTED]

[REDACTED]

System 5 – High Demand Alignment

High Demand Alignment includes [REDACTED]

[REDACTED]

From a permitting and regulatory siting standpoint, there is no difference between the High Demand Alignment and the Low/Medium Demand Alignments. As a result, and for the purposes of this analysis, permitting and regulatory requirements and assumptions associated with the Low and Medium Demand Alignments are considered to be applicable to the High Demand Alignment. Construction and operation of the High Demand Alignment would require no additional permits nor would it require changes to the permitting strategies discussed within this Report. Therefore, no further discussion of the High Demand Alternative Alignment has been included.

2 Permit Identification

This Section provides an overview of the anticipated regulatory agencies, applicable permits and scheduling lead times associated with the System 5 – Delta (Interstate): Central Utah through Nevada to the L.A. Basin in Southern California.

2.1 Assumptions

The following list provides the assumptions used by Rincon during the evaluation of the proposed project's anticipated permit strategy and risks:

- [REDACTED]
- As a hydrogen pipeline, it is not expected to be subject to FERC's exclusive authority under the NGA.
- As an interstate hydrogen pipeline assumed to have overall federal oversight and a NEPA lead agency (agency not yet defined).
- Within California, the pipelines are not regulated as a public utility by the CPUC; the CPUC is not assumed to be the lead agency under CEQA.
- Where feasible, pipelines will be routed within established pipeline, transportation, or energy corridors or routes that may have been previously assessed on past projects.
- Pipelines will be constructed underground and impacts from installation will be temporary.
- Pipelines will be constructed in accordance with current regulatory specifications. Unforeseen changes in regulations often have rippling effects in multiple issue areas.
- State and local regulatory agencies may reduce or increase permit times provided in this analysis based on the hydrogen-related permitting procedures in place at the time of application submittal.
- Pipeline routes are generally designed to avoid areas that would be considered highly challenging for environmental reasons such as national parks. However, since only a cursory review of environmental permitting was made, this study cannot consider all permitting scenarios. Permitting risk for the pipelines would be considered high.
- Where possible, pipelines routes have been located within public land or city ROW, and private ROW avoided to the extent feasible. This analysis assumes the [REDACTED]-foot buffer provided can be reduced in constrained urban and regulated areas.
- [REDACTED]
- The space necessary to lay pipelines is available within the existing pipeline route corridor; corridors can accommodate pipeline size and design specifications.
- Risk and hazards associated with locating multiple large diameter hydrogen pipelines operating at high pressure within the same corridor is not evaluated in this analysis.
- Pipeline operation is not anticipated to result in regulated emissions (e.g., flares) and CARB or California's local air districts (either air quality management districts [AQMDs] or Air Pollution Control Districts [APCDs] operational permits are not required).

2.2 Jurisdictions and Anticipated Permits

A primary factor in the development of utility-scale hydrogen distribution is regulation of siting, safety, and security. Regulations for hydrogen pipelines may differ depending on whether a pipeline is designed for hydrogen transmission only, or whether it is designed for blended use with natural gas or methane. Regulatory authority for the transmission of hydrogen is unclear generally divided among federal and state agencies. Currently there is no specific federal authority to approve the siting of dedicated hydrogen pipelines, although federal approvals may be required for siting of specific pipeline segments (CRS 2021). As a result, the subsequent summary of agencies and permitting roles (Table 1) are based on current regulations and the latest information provided by agencies involved in hazardous or flammable pipeline permitting and oversight.

State environmental policy acts, which have been adopted by sixteen states, require that proposed state government actions (and in some states, local government or private actions) be evaluated for their potential impact on the environment or public health. CEQA is the California law providing state environmental policy, and will only apply to project components located within the state. No comparable laws requiring environmental review exist in Utah or Nevada. Utah allows an optional process to coordinate permitting requirements (9-UT-a). Project components located within Utah and Nevada will be analyzed under the Federal Environmental Policy Act (NEPA) only.

The list below shows applicable county and city jurisdictions within the System 5 (Delta) alignments.

Utah ¹		Nevada	
▪ Millard County ▪ Beaver County ▪ Iron County ▪ Washington County		▪ Lincoln County² ▪ Clark County ▫ City of North Las Vegas ▫ City of Las Vegas	
California			
Kern County		Riverside County	
▪ California City		▪ Jurupa Valley	
Orange County		San Bernardino County	
▪ Anaheim ▪ Buena Park ▪ Cypress ▪ La Palma	▪ Orange ▪ Placentia ▪ Yorba Linda	▪ Adelanto ▪ Chino Hills ▪ Fontana ▪ Ontario	▪ Rialto ▪ San Bernardino ▪ Victorville ▪ Yermo
Los Angeles County			
▪ Bell ▪ Burbank ▪ Carson ▪ Cerritos ▪ Compton	▪ Cudahy ▪ Eastvale ▪ Glendale ▪ Huntington Park ▪ Lakewood	▪ Lancaster ▪ Long Beach ▪ Los Angeles ▪ Lynwood ▪ Maywood	▪ Palmdale ▪ San Fernando ▪ Santa Clarita ▪ South Gate ▪ Vernon

¹ Alignment does not cross through any city jurisdictions within the Counties of Millard, Beaver, Iron and Washington (within Utah) or Lincoln (within Nevada)

² Alignment does not cross through any city jurisdictions within the County of Lincoln (within Nevada)

Table 2 below provides anticipated processing times by agency with areas shaded in gray indicated longest lead times. It is important to note that the timelines shown in Table 2 reflect a schedule

beginning once an application is deemed “complete” by the agency. Work conducted prior to an application being deemed complete will add to anticipated timelines and may include seasonal surveys, preparation of technical reports and applications, application submittal, and at least 30 days for agency completeness review. The permitting schedules may also require additional time to address agency letters of incompleteness or requests for additional information. For more detail on regulations and how they may affect the proposed Project, refer to Appendix A.

Table 2 Summary of Agencies and Permitting Role

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
Utah and Nevada (including local)							
Nevada Public Utilities Commission (PUCN)	Public Utility Regulation	Certificate of Public Convenience and Necessity (CPCN)	Utility-scale hydrogen has not yet been addressed by any agency in Nevada. A CPCN is required to own, control or operate a public utility within Nevada. Public utilities are defined as those that provide “delivery or furnishing for or to other persons, including private or municipal corporations, heat, gas, coal slurry, light, power in any form” (NRS 704.330). Based on the Nevada definition of public utility including “power in any form”, it is likely that a new SoCalGas hydrogen pipeline will require a CPCN. Review by the Nevada Department of Environmental Protection (NDEP) may be required. PUCN must either grant or deny the application within 150 days after the application is filed, or 120 days after an amended application is filed; however public information requests or appeals may extend the timeline after approval.	6-12	X	X	X
PUCN	Utility Environmental Protection Act (UEPA)	Authorization/ Permit	Utility facilities for which a permit is required include, but are not limited to, gas transmission lines, storage plants, compressor stations and associated facilities constructed outside an incorporated city.	5	X	X	X
Nevada Division of Environmental Protection (NDEP) Utah Division of Water Quality (DWQ)	State Component to 404 Certification	401 Certification	The Nevada state counterpart to 404 Certification For water discharge to land, Nevada requires 180 days prior to discharge if discharging pollutants.	2-6	X	X	X
Local Permits	Local Land Use Plans	Plan Amendments	Nevada: Counties of Clark and Lincoln, Cities of Las Vegas and North Las Vegas Utah: Counties of Millard, Beaver, Iron, and Washington; In order to develop renewable energy projects, the type of development must be allowed for or contemplated in the applicable land use plan (NRS 321.640(1), Utah Code § 10-9a-102).	6-18	X	X	X
Utah Division of Wildlife Resources (UDWR)	UDWR managed area	ROW Lease	ROW Lease from the UDWR for projects that cross a Wildlife Management Area (WMA) or other UDWR managed area (R657-28-23). Typically takes 180 days from application completeness. The division may approve a land use only if, in the opinion of the UDWR, such use does not unreasonably conflict with the intended use of the land or is not detrimental to wildlife or wildlife habitat; and the impacts can be avoided, minimized, rectified, or compensated.	6-9	X	X	X
Ministerial							
Utah and Nevada state owned lands	State Agency Encroachment approval on state-owned lands	Easement (Utah) Encroachment (Nevada)	In Utah a Pipeline Easement Permit is needed from State of Utah School and Institutional Trust Land Administration (SITLA). Nevada Division of State Lands requires ministerial use authorization (e.g., easement, permit, license) to use state owned lands for utilities including pipelines.	3-6 (Utah) 6-9 (Nevada)	X	X	X
Utah and Nevada Department of Transportation	Crossing or within State roadways	Encroachment Permit	Highway encroachments needed from each state Department of Transportation: Utah Division of Forestry, Fire and State Lands (UFFSL) easement application required on sovereign (submerged) lands and NDOT.	3-6	X	X	X
NDEP and Bureau of Air Pollution Control (BAPC) Clark County	Air Quality	Surface Area Disturbance (SAD) Operating Permit	Construction activities may require a Surface Area Disturbance (SAD) Operating Permit from the Nevada Division of Environmental Protection, Bureau of Air Pollution Control if the project disturbs or covers 5 or more acres of land (Nev. Admin. Code § 445B.22037(3)).	1-3	X	X	X

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
Federal							
NEPA	Lead agency variable	EIS	While not specifically regulated, FERC or other federal agency expect to be the lead agency for NEPA. Required for work on federal land (USFS, NPS, BLM, Military) and for the issuance of federal permits (e.g., Section 404 Certification Individual Permit). NEPA is assumed to be triggered line-wide for System 5 since an interstate pipeline anticipated to have federal oversight. An EIS would be anticipated line-wide for a project of this scale and would satisfy the NEPA findings required for all other federal agencies.	12-24	X	X	X
National Historic Preservation Act (NHPA) Section 106	Historical Properties Consultation	Memorandum of Agreement/ Programmatic Agreement	Similar to NEPA, undertook when a federal nexus (permit, funding, federal land). Includes state and tribal consultation as well. Timeline should be the same as NEPA review and is assumed to be triggered line-wide since interstate.	12-24	X	X	X
BLM	ROW Grant	ROW Grant	Low Demand Alignment includes [REDACTED]	12-18	X	X	X
BLM	National Conservation Area (NCA)	ROW Grant	Project [REDACTED]	12-36	X	X	X
BLM	Areas of Critical Environmental Concern (ACEC)	ROW Grant	[REDACTED]	12-36	X	X	X
BIA Individual Tribes	Tribal Lands	Entry Agreement	[REDACTED] Federally recognized tribes have a preeminent right to be consulted on infrastructure projects, including pipelines, which potentially impact their lands, treaty rights, and protected resources. On January 26, 2021 President Biden issued a Presidential Memorandum that requires Federal agencies to prepare and periodically update a detailed plan of action to implement the policies and directives of Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments). Consultation will occur concurrently with the NEPA timeline and will likely be directed by agency-specific guidance. For a ROW across tribal land, the applicant must obtain tribal consent, in the form of a tribal authorization and a written agreement with the tribe, if the tribe so requires, to a grant of right-of-way across tribal land. The consent document may impose restrictions or conditions; any restrictions or conditions automatically become conditions and restrictions in the grant. [REDACTED] [REDACTED]	6-24	X	X	X
National Park Service (NPS)	Mojave National Preserve/Tule Springs Fossil Beds National Monument	ROW Permit	[REDACTED] Federal NPS regulations at 36 CFR 2.2 prohibit the take of wildlife in areas managed by the NPS with a few exceptions defined by federal statutory law for hunting and trapping (36 CFR 2.2).	12-36	X	X	X
NPS	National Historic Trails Association	Consultation	System 5 crosses [REDACTED] [REDACTED]	Variable	X	X	X
U.S. Forest Service (USFS)	National Forest	New SUP	System 5 enters [REDACTED] [REDACTED] Refer to discussion of WWECs in Appendix A for detail. Refer to risk and strategy discussion for detail. A SUP in federal lands would also trigger NEPA.	18-36	X	X	X
Federal Department of Defense (DOD)	Nellis AFB Small Arms Range Annex and two U.S. Marine Corps Logistic Bases (Barstow and Yermo Annex)	Military Base Approval	Military bases are separate entities that have their own method for implementing federal laws. Before private companies can access military bases, they must receive clearance from the base, and the base must clearly understand the scope of work, personnel who will be on-site, schedule, and all details associated with the project. It is important to understand military protocol to access the base, as base security is extremely strict.	6-18	X	X	X

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
U.S. Fish & Wildlife Service (USFWS)	Endangered Species Act (ESA)	Section 7 Consultation Biological Opinion	Process for take coverage where a federal nexus is present.	6-12	X	X	X
U.S. Army Corps of Engineers (USACE)	Clean Water Act	404 Certifications NWP 12	404 Certification required for any impacts to waters of the U.S., including jurisdictional wetlands, that could result in the discharge of dredged or fill materials into a waterbody or wetland. NWP 12 provides coverage for the construction, maintenance, repair, and removal of pipelines and associated facilities in Waters of the United States (WOTUS), provided the activity does not result in the permanent loss of greater than ½ acre of WOTUS (refer to Appendix A for details). New NEPA is not required for NWP 12. Some desert areas lack a nexus to a navigable waterway and coverage not needed. Recent guidance excludes ephemeral drainages.	6-12	X	X	
Section 368 WWEC Designated Areas	Relates to USFS SUP and BLM Right of entry	Variable by Federal agency	Section 368 of the Energy Policy Act of 2005 directs the Secretaries of Agriculture, Commerce, Defense, Energy, and Interior to designate corridors for oil, gas, and hydrogen pipelines on federal lands. The applicable federal agencies would adopt appropriate Interagency Operating Procedures (IOPs) to establish minimum requirements for management of individual energy transport projects. When evaluating a ROW application within a WWEC, the IOPs would assist the Agencies, project applicants, and others in evaluating applications for using the corridors by providing uniform processing and performance criteria for energy transport ROWs in the corridors. The Agencies have diagrammed each corridor using conflict criteria to depict areas where the corridor intersects low, medium, and high potential conflict areas to help the Agencies identify where a corridor revision, deletion, or addition could avoid environmentally sensitive areas. In practice, the coverage of WWECs is spotty and detail on specific IOPs would need to be obtained from the applicable agencies to determine whether streamlining would occur. Projects proposed within WWECs are still subject to appropriate site-specific environmental review pursuant to the requirements of NEPA and other applicable laws as applicable. Portions of System 5 are located within Region 1 and Region 3 WWECs designated as “High Potential Conflict Areas.”	Variable	X	X	X
California				12-24			
CEQA	Lead agency variable, to certify line-wide	EIR	Lead Agency currently undefined; may be CEC, Caltrans, CPUC or other local or state agency. The CPUC requires a Proponent's Environmental Assessment (PEA) which results in longer lead times. The CEC does not develop the EIR. However, for licensing thermal power plants with a net generating capacity of 50 megawatts (MW) (including all related facilities such as transmission lines, gas pipelines, water lines, access roads, etc.), the CEC develops a functionally equivalent document for the licensing process which includes staff assessments and committee reports. The timeline is 12 months from completeness. While the CEC currently does not have regulatory authority over hydrogen pipelines, it is anticipated that if they are designated as lead agency, a similar process and document may result.		X	X	X
California Department of Parks and Recreation (State Parks)	Chino Hills State Park	SUP	Discretionary permit for pipeline alignment through State Park. CEQA Responsible Agency.			X	X
California Department of Transportation (Caltrans)	All state highways	ROW Encroachment/Transportation Permit	[REDACTED]. CEQA Responsible Agency.		X	X	X
California Energy Commission (CEC)	Lead agency for thermal over 50kw or if funding provided	TBD	Not applicable to pipelines unless appurtenant to new thermal power plants. Potential involvement if funding is provided as a demonstration project.	n/a	n/a	n/a	n/a
California Department of Fish and Wildlife (CDFW)	CESA	CESA ITP	Required for impacts (even temporary) to state protected species and habitat, such as [REDACTED] [REDACTED] CEQA needed. Refer to Appendix A for details.	12-36	X	X	X
CDFW	Lake/Streambed Impacts	§1600 Programmatic Short-term LSAA	Requires seasonal surveys. CEQA Responsible or lead agency.	12-18	X	X	X

Agency or Entity	Subcategory (as applicable)	Authorization	Comments	Anticipated Lead Time (months) ¹	Low Demand Alignment	Medium Demand Alignment	High Demand Alignment
RWQCB	Waters of the Unites States/State	Individual 401 Certification and Waste Discharge Reequipment (WDR)	Two different permit types for waters of the state (WDR) and when coterminous with federal jurisdiction (401 Certification). CEQA Responsible Agency. [REDACTED]	12-24	X	X	X
Regional: County/City/Community Plan/Special District							
Special Districts	LADWP, Open Space Districts		[REDACTED]	6-12	X		X
Local Air District	Dust Control Plan	Clean Air Act	Project is located within multiple air districts including South Coast Air Quality Management District (SCAQMD), Mojave Desert Air Quality Management District (MDAQMD), Antelope Valley Air Quality Management District (AVAQMD) Eastern Kern County Air Pollution Control District (KCAPCD). Dust Control Plan may be required depending on air district.	1-3	X	X	X
Railroad (RR) Crossings	Including Alameda Corridor Transportation Authority (ACTA), Burlington Northern Santa Fe (BNSF), and Union Pacific (UP)	ROW, Encroachment potentially a SUP	[REDACTED]. According to the UP website, applications take a minimum of 45-60 days for engineering review once design standards are met and a valuation of the encroachment property is submitted. [REDACTED]	4-36	X	X	X
County (Orange and Riverside only in incorporated Cities) Refer to risk table for a discussion of Code or General Plan Amendments							
Kern and San Bernardino County	All unincorporated	Director Determination	Ministerial review for interstate pipeline (Kern County Code §19.08.230, San Bernardino County Code §85.02.050).	1-3	X	X	X
Los Angeles	A-2 and OS zone District, Antelope Valley and Santa Clarita Area Plan	CUP	Discretionary Action. May include protected tree permit or SEA CUP. CEQA Responsible and potential lead agency.	6-12	X	X	X
	Protected Trees	Protected Tree Permit	Requires specific findings.	6-12	X	X	
	Significant Ecological Areas (SEAs)	CUP	Biological impacts heavily scrutinized.	12-24	X	X	X
Cities (Note Separate Land Use Authority than the County)							
	City Governments	CUP Anticipated	Utility or crude oil pipelines not specifically regulated under the Zoning Code. If hydrogen pipeline not considered a “utility” or “public entity” then in the absence of an enumerated use most jurisdictions would default to requiring CUP (6-12 Months). CEQA Responsible Agency. Refer to risk table for a discussion of legislative Code or General Plan Amendments (12-36 months).	6-12	X	X	X
	All cities	Protected Tree Permit	Potential for Protected Tree Permits from all city agencies.	1-3	X	X	X
¹ Schedule from when application is deemed complete							

3 Permit Risk and Strategy

3.1 Potential Lead Agencies

As discussed above, System 5 is located within Utah, Nevada, and California. As a result, lead agencies need to be identified for interstate permitting and both CEQA and NEPA review. Note that under CEQA all project elements must be considered, so in addition to the proposed pipelines, CEQA review may require analysis of hydrogen production. Furthermore, the remaining four Demand Alignments discussed in Section 2 may also need to be included in the CEQA/NEPA review, which would affect the NEPA federal lead agency since federal holdings are more extensive for the other segments and interstate pipeline federal oversight is anticipated. Any alignment included in this analysis may become the basis for the required alternatives analysis even if it is not considered further as a viable option for System 5.

Potential Federal Lead Agencies

Under the current regulatory environment there is not a clear candidate for federal lead agency for hydrogen pipeline projects under NEPA. For interstate pipelines the DOT and FERC could act as NEPA lead agencies.

System 5 traverses federally-managed lands throughout the majority of its alignment in both Utah and Nevada including lands administered by the BLM, USFS, NPS, and DOD (military bases). The alignment is also located within Region 1 and Region 3 of the WWEC. Within the WWEC the BLM, USFS and DOE generally coordinate on a NEPA analysis under an IOP. Since the BLM is the majority land-administrator within the System 5 alignment and within the applicable WWEC, it is anticipated that it will act as a lead agency with other members of the IOP likely serving as cooperating agencies.

Potential State Lead Agencies

State environmental policy acts, which have been adopted by California (but not Nevada or Utah), require that proposed state government actions (and in California local government or private actions) be evaluated for their potential impact on the environment or public health. CEQA is the California law providing state environmental policy, and will only apply to project components located within the state. No comparable Utah or Nevada laws exist. Project components located within Utah and Nevada will be analyzed under NEPA only. The following discussion regarding CEQA will apply to Project components located within California.

There has not yet been state agency assigned responsibility for the oversight of intrastate hydrogen pipelines. While the existing state regulatory structure does not address hydrogen pipelines; the CPUC regulates natural gas pipelines (General Order 112-F), and the California Office of the State Fire Marshal (OSFM) regulates crude oil (hazardous liquid) pipelines.

Potential CEQA lead agencies tasked with energy projects include the California Energy Commission (CEC) and the CPUC. However, the CEC is generally limited to projects involving thermal power generation. Unless the proposed project includes electrical generation in excess of 50MW from a thermal source, the CEC would not be a CEQA lead agency.

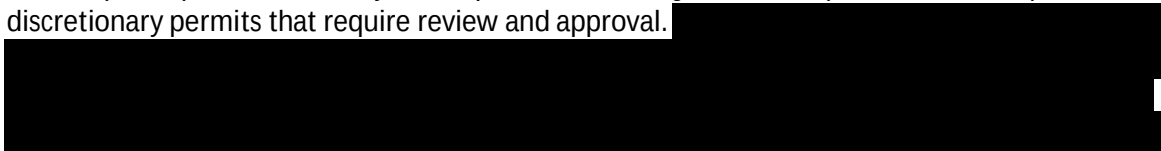
Under current California legislation, the CPUC is responsible for utility projects. Hydrogen pipelines are not currently classified as a utility by the state or CPUC. However, if regulatory oversight under the CPUC changes to include hydrogen transmission then the CPUC would likely serve as the CEQA lead. The CPUC CEQA process requires submittal of an application to complete the Certificate of Public Convenience and Necessity (CPCN) and the completion of a Proponent's Environmental Assessment (PEA). The PEA requirements are outlined in the PEA Guidelines (State of California Public Utilities Commission Information and Criteria List, Appendix B, Section V), as well as the CPUC's requirements for a Permit to Construct (PTC). The CPUC requires applicants to provide extensive information in support of the PEA for review in compliance with the mandates of CEQA. Typically, the PEA is a stringent process but once complete, results in a more streamlined CEQA process.

Without clear regulatory guidance or precedent, the CEQA lead agency remains unclear. The CDFW or counties (e.g., Los Angeles) have a lower potential to act as CEQA lead agency. Kern County issues only ministerial permits for inter and intra state pipelines and is not likely to be the CEQA lead. Neither the California Air Resources Board (CARB) or local air district is anticipated to take a lead agency role since pipeline operation is not anticipated to result in regulated emissions.

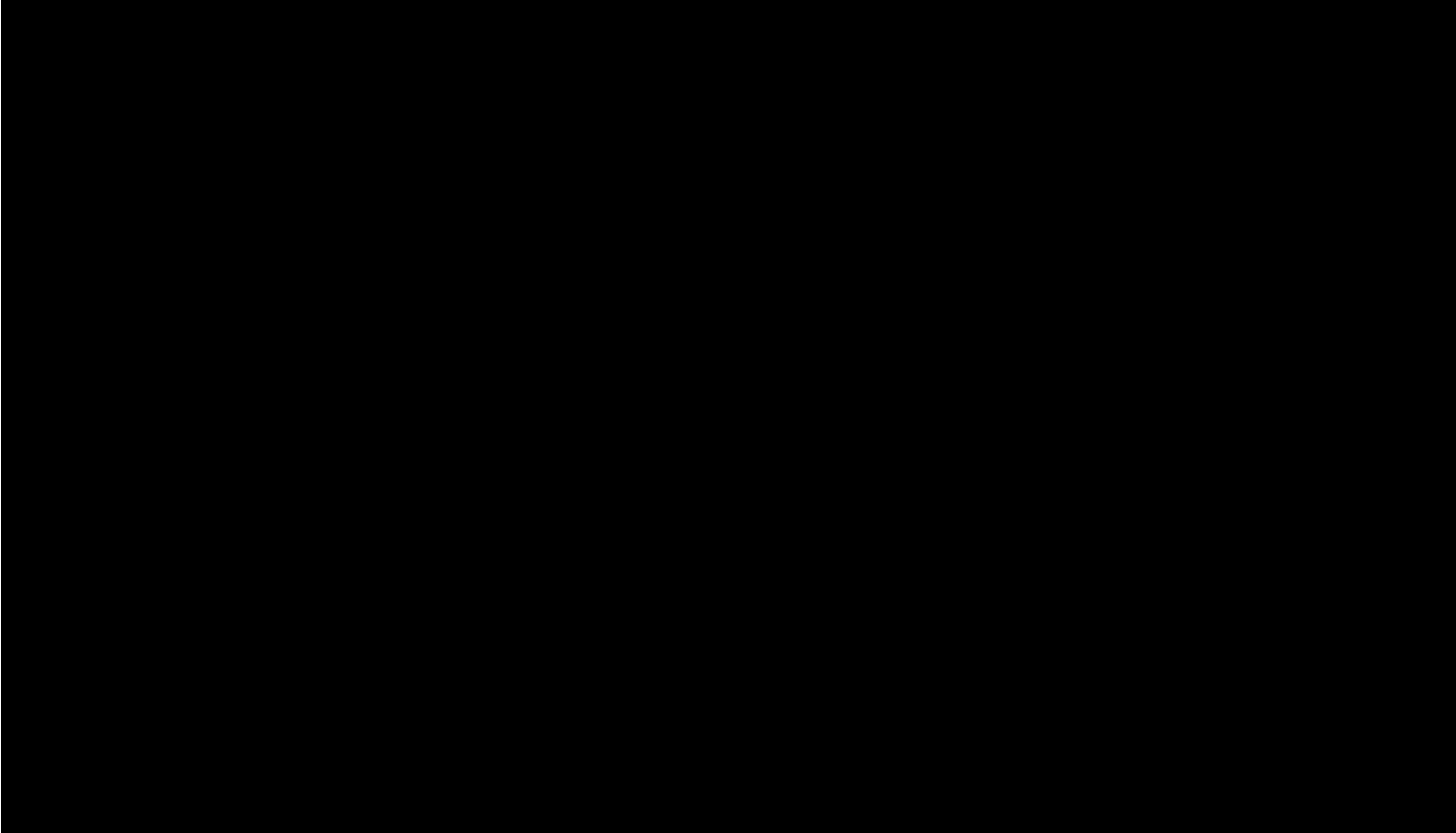
Without specific hydrogen regulations in effect, there is potential for long lead times associated with agency determination of CEQA lead. When more than one public agency has discretionary authority over a project and each has a substantial claim to be the CEQA Lead Agency, two agencies may meet to decide which should be the Lead Agency via mutual agreement. Generally, for private projects the lead agency is the agency "with general governmental powers" such as a city or county, as opposed to a single- or limited-purpose agency such as a school district, water district, or air pollution control district. Limited-purpose state agencies, such as the State Water Resources Control Board of the Department of Fish and Wildlife typically serve as Responsible Agencies when a local government is the lead agency (State CEQA Guidelines § 15051(b)(1)). However, in the absence of hydrogen project precedents it remains to be seen whether state agencies such as CPUC and CEC are likely to enter into such an understanding.

3.2 Permit Strategy and Risk Reduction

Table 3 (below) discusses the System 5 permits with long lead times (shown in Table 2) or discretionary permits that require review and approval.



The content of Table 3 is redacted in the provided image.



Permit Type/Issue	Risk	Strategy and Risk Reduction

4 References

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- Los Angeles County Regional Planning. 2020. Significant Ecological Areas (SEA) Ordinance Implementation Guide.
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Appendix A

Summary of Regulations, Agencies, and Permitting Role

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Federal		
National Environmental Policy Act (NEPA)	Environmental Impact Review (anticipated to be an Environmental Impact Statement (EIS), NEPA Certification and Record of Decision (ROD)	Required for any federal action, approval, or funding. The NEPA of 1969 was created to ensure federal agencies consider the environmental impacts of their actions and decisions. Federal agencies are required to systematically assess the environmental impacts of their proposed actions and consider alternative ways of accomplishing their missions, which are less damaging to and protective of the environment. NEPA is implemented through the Environmental Quality Regulations for Implementing NEPA (40 CFR Parts 1500-1508) published by the Council on Environmental Quality (CEQ). NEPA applies to projects where a federal agency is asked to issue a discretionary permit. NEPA requires the lead federal agency to evaluate the impacts of the proposed action. If the impacts are not significant, the agency issues a Finding of No Significant Impacts (FONSI). If a Lead Agency decides that there are significant effects, then an Environmental Impact Statement (EIS) will be prepared by the Lead Agency. The Lead Agency solicits comments from other Government agencies and the public prior to making a decision. The EIS is certified, and a Record of Decision recorded. (40 Code of Federal Regulations (CFR) 1500 et seq.) Under the current regulatory environment there is not a clear candidate for federal lead agency for hydrogen pipeline projects under NEPA. For interstate pipelines the DOT and FERC could act as NEPA lead agencies; however, for intrastate pipelines that have no energy-related federal nexus neither DOT nor FERC has clear path to fulfil that role. Selection of a Federal Lead Agency may vary based on pipeline jurisdictions. Lead and responsible agencies may include Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), Department of Transportation (DOT) (generally for interstate), U.S. Army Corps of Engineers (USACE) and/or U.S. Fish and Wildlife Service (USFWS). It is anticipated that a Joint NEPA/CEQA document (an EIS/EIR) will be completed to address the Project as a whole as it traverses both federal and state jurisdictions. See the discussion on CEQA for detail on potential state Lead Agencies. NEPA is implemented through the Environmental Quality Regulations for Implementing NEPA (40 CFR Parts 1500-1508) published by the Council on Environmental Quality (CEQ). NEPA applies to projects where a federal agency is asked to issue a discretionary permit or receives federal funding. The role of a federal agency in the NEPA process depends on the agency's expertise and relationship to the proposed action and in some cases more than one federal agency may be involved in the proposed action. In this situation, a lead agency is designated to supervise the preparation of the environmental analysis. Federal agencies, together with state, tribal or local agencies, may then act as joint lead agencies. A federal, state, tribal, or local agency having special expertise with respect to an environmental issue or jurisdiction by law may be a cooperating agency. The NEPA Process generally consists of the following steps: - Determine Lead Agency (Difficult – most agencies do not want the Lead Agency Role). - Determine if project qualifies for a Categorical Exclusion (CATEX), which meets the definition contained in 40 CFR 1508.4 or the definition in the lead agency NEPA regulations (Due to the nature of the proposed Project, CATEX will not be likely). - Lead Agency prepares an Environmental Assessment (EA). If no significant effects identified, Finding of No Significant Impact (FONSI) is published. The EA/FONSI is then released for public comment. (Due to the nature of the proposed Project, it is anticipated that an Environmental Impact Study (EIS) will be required). - If Lead Agency decides after the EA that there are significant effects, then an EIS will be prepared by the Lead Agency. - Public and other agency comments are solicited for a minimum of 45 days. (Generally, more controversial projects are allotted a longer comment period). - The Lead Agency then responds to the comments in the Final EIS (FEIS) that is reviewed. - A decision is made on the Project and a Record of Decision published. In July 2020, under the Trump Administration, the CEQ released new regulations marking the first update to NEPA guidelines in over 40 years. The goal of the updates was to clarify existing regulations, streamline the NEPA review process, and facilitate inter-agency cooperation. New thresholds of significance were added and the list of potential NEPA exemptions expanded. The new rules set specific time frames for document completion. Federal agencies must complete the EIS, and sign the record of decision, within 2 years from the date of the issuance of the Notice Of Intent (NOI). An EIS may include no more than 150-300 pages depending on their complexity (40 C.F.R. §1502.7). These limits do not include graphics or appendices and can be waived via written authorization by a senior official of the lead agency. (§§1502.7, 1508.1(v).) The new regulations also no longer require agencies to engage in new studies or research for environmental analyses, further indicating an intent to simplify the environmental review process (§1502.23). As of April 2021, the Biden Administration is reworking the 2020 Trump-era environmental review standards. While revisions are crafted, the 2020 standards will remain in place, because they are not “causing any imminent harm to opponents.” On June 21, 2021, a federal district court in Virginia dismissed a lawsuit filed by environmental groups against the Trump-era overhaul of regulations under the NEPA. Additional court cases are pending or are on hold pending the anticipated CEQ revisions to the NEPA regulations under the Biden Administration.
Fixing America's Surface Transportation Act	Fast-41 No permit	In 2015, the Fixing America’s Surface Transportation (FAST) Act was signed into law. Title 41 of the FAST Act (FAST-41) (42 U.S.C. § 4370m) was designed to “improve the timeliness, predictability, and transparency of the Federal environmental review and authorization process for covered infrastructure projects”. FAST-41 establishes new procedures that standardize interagency consultation and coordination practices and creates a new authority for agencies to issue regulations for the collection of fees to direct resources to critical functions within the interagency review process. FAST-41 codifies into law the use of a federal Permitting Dashboard to track project timelines. Project sponsor participation in FAST-41 is voluntarily and designed for use for utility-scale eligible green renewable projects. It is not anticipated that Fast-41 will provide benefit to the project since intrastate and joint document times lines are CEQA dependent.
Pipeline and Energy Regulations		Currently, regulation of hydrogen siting, commercial service, security, and safety is divided among federal agencies and the states. Federal jurisdiction resides variously with the Surface Transportation Board (STB), the Federal Energy Regulatory Commission (FERC), the Transportation Security Administration (TSA), and the Pipeline and Hazardous Materials Safety Administration (PHMSA) within the Department of Transportation (DOT) (see below for detail) (CRS 2021).
Surface Transportation Board (STB)	NA	The STB is an independent federal agency charged with the economic regulation of various modes of surface transportation, primarily freight rail. However, since hydrogen distribution under the proposed Project is anticipated to be conducted via pipeline and not via rail, the SBT will not require a permit and is not anticipated to be a responsible agency under NEPA.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
FERC	Applicability to hydrogen currently unknown. Certification and siting of interstate natural gas pipelines	The FERC is an independent federal agency composed of five President-appointed Commissioners that regulate interstate transmission of electricity, natural gas, and oil. FERC reviews applications for construction and operation of interstate natural gas pipelines under the authority of Section 7 of the Natural Gas Act. FERC review ensures that applicants certify that they will comply with Department of Transportation safety standards. FERC’s approvals include terms and conditions designed to address impacts on the environmental resources including water and air quality, land use and recreation, erosion control, cultural resources, and wildlife and endangered species. For natural gas pipelines, FERC is often the Federal Lead Agency under NEPA. FERC’s Strategic Plan (2018 – 2022) currently includes an objective to streamline the permitting process through formal review of the Commission’s 1999 Certificate Policy Statement for Natural Gas Pipelines. However, the Federal government has yet to make a determination as to how the government will regulate the construction of hydrogen infrastructure.
Pipeline and Hazardous Materials Safety Administration (PHMSA) [Department of Transportation (DOT)]	Applicability to hydrogen currently unknown. Special Permit or Waiver may be required for transport of hydrogen within natural gas pipeline infrastructure in lieu of regulatory guidance	Under the DOT, PHMSA establishes national policy, sets and enforces safety standards, and conducts research for the “safe, reliable, and environmentally sound operation” of the U.S. pipeline system (49 CFR Parts 190-199). PHMSA currently regulates approximately 700 miles of hydrogen pipelines, primarily through 49 C.F.R. Part 192.31. The majority of existing pipeline regulations are focused on the transportation and distribution of natural gas. However, due to a broad definition of “flammable gas” hydrogen has historically been included within this overarching regulatory umbrella. 40 C.F.R. §§ 173.301 and 173.302 impose general requirements on the transportation of compressed gases, including compressed hydrogen. However, while these regulations provide some guidance on the use of hydrogen, they do not provide a comprehensive regulatory framework for hydrogen transport. Several hydrogen-specific transportation regulations under C.F.R. §§ 173.230, 173.301, and 173.302 focus primarily on the design, filling, and marking of hydrogen fuel cells and not with the design, construction, or operation of pipelines. As a result, PHMSA is currently using its research and development branch to address challenges associated with hydrogen delivery through local distribution infrastructure for refueling stations and stationary power sites. As the industry develops, it is anticipated that PHMSA may introduce hydrogen-specific storage and transportation requirements. Until then, the PHMSA may issue DOT special permits or waivers to a pipeline operator to satisfy federal pipeline safety regulations if they feel compliance would not be appropriate due to unique circumstances. PHMSA may grant a Special Permit, at its discretion, if sufficient alternative safeguards to the public safety are implemented. For on-land pipelines that cross state lines the DOT PHMSA would have primary jurisdiction and oversee the minimum safety standards for the design and installation of these types of pipelines. It is anticipated that PHMSA may play a Lead Agency Role in NEPA.
Federal Highway Administration (FHWA) (DOT)	Right-of-Way (ROW) Use Agreements	The FHWA Division Offices and State Departments of Transportation (DOTs) Federal Highway Administration (FHWA) works with State DOTs to permit renewable energy projects within highway ROWs. State DOTs may permit pipeline as utilities that require a specific Utility Accommodation Permit (UAP) (23 CFR part 645 A) or as non-utilities requiring a ROW agreement (23 CFR part 710 R). For non-Interstate projects, FHWA may assign approval authority to the state through their 23 U.S.C. 106(c) Stewardship and Oversight Agreement.
Section 368 West-Wide Energy Corridor Designated Areas	Relates to USFS SUP and BLM Right of entry	Section 368 of the Energy Policy Act of 2005 directs the Secretaries of Agriculture, Commerce, Defense, Energy, and Interior to designate corridors for oil, gas, and hydrogen pipelines on federal lands in the 11 contiguous Western States (including the Project States of Utah, Nevada, and California), to perform environmental reviews, and to incorporate the designated corridors into relevant agency land use and resource management plans. A primary goal of the Section 368 West-Wide Energy Corridors is to expedite regulatory processes for future projects in these energy corridors. Section 368 does not require that Agencies consider or approve specific projects, applications for ROWs, or other permits within designated energy corridors. Instead, agencies may use the information from siting reports associated with the corridors to inform their decision-making process in granting permits or authorizations. Under Section 368, the applicant would have to apply for a ROW authorization, and the Agencies would consider each application by applying appropriate project-specific reviews under requirements of laws and related regulations including, but not limited to, the NEPA, the Clean Water Act (CWA), the Clean Air Act (CAA), Section 7 of the Endangered Species Act (ESA), and Section 106 of the NHPA, etc. The applicable federal agencies would adopt appropriate Interagency Operating Procedures (IOPs) to establish minimum requirements for management of individual energy transport projects. When evaluating a ROW application within a Section 368 energy corridor. The IOPs would assist the Agencies, project applicants, and others in evaluating applications for using the corridors by providing uniform processing and performance criteria for energy transport ROWs in the corridors. The WWEC includes more than 6,000 miles of 3,500-foot-wide corridor on federal land; however, the corridor is not contiguous and does not extend onto interposing private and non-federal parcels. Despite the potential benefits of co-location within the WWEC, the non-contiguous nature of the WWEC can make utilizing the corridor for long projects across multiple federal parcels impractical.
Office of Pipeline Safety (OPS)	Pipeline safety requirements	The federal government has primary responsibility for the pipeline safety regulations for both interstate (pipelines that cross state boundaries) and intrastate pipelines (pipelines that are contained within the borders of a state) and has exclusive authority over interstate lines. Although OPS can designate a state to act as its agent in the inspection of interstate lines, OPS remains solely responsible for enforcement. That said, most states (primarily through their fire marshals) work with OPS in the oversight of the pipelines that run through their state in what OPS commonly refers to as the "federal/state partnership." Within DOT, the Pipeline and Hazardous Materials Safety Administration (PHMSA), through the OPS C.F.R. Parts 190-199. For additional detail on pipeline safety requirements see Office of the State Fire Marshall (CAL FIRE), below.
Federal Land and Right-of-Way (ROW) Regulation		
Bureau of Land Management (BLM) [Department of the Interior (DOI)]	ROW Application (SF-299)	The Bureau of Land Management (BLM) promotes multiple-use on public lands, consistent with Title V of the Federal Land Policy and Management Act of 1976, as amended (FLPMA) (43 USC 1763), 43 CFR 2800. A BLM ROW grant is required for an oil or gas pipeline to cross federal lands under BLM's jurisdiction or the jurisdiction of two or more federal agencies (43 CFR 2881.11). It is anticipated that the BLM will schedule and participate in at least two pre-application meetings prior to accepting a ROW application for a large-scale utility project. Generally, a ROW is granted for a term appropriate for the life of the project. To manage public lands, the BLM prepares land-use plans, also known as Resource Management Plans. Resource Management Plans serve as blueprints for keeping public landscapes healthy and productive for multiple-use (See DRCEP, below). Applications for proposed ROWs over, upon, under, or through public lands, including, but not limited to energy conveying pipelines require a ROW. The processing of ROW applications must comply with BLM regulatory requirements, including those for planning, environmental, and ROW. BLM may approve the application, approve the application with modifications, or deny the application. BLM ensures that if other permits are required from other agencies, they are obtained (i.e., biological opinion, water permits, etc.). BLM also ensures that NEPA is addressed. In California, the Desert Energy Renewable Conservation Plan (DRECP) is a collaborative, interagency landscape-scale planning effort covering 22.5 million acres in seven California counties—Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego. The DRECP has been developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife) to: ▪ Advance federal and state natural resource conservation goals and other federal land management goals; ▪ Meet the requirements of the Federal Endangered Species Act, California Endangered Species Act, Natural Community Conservation Planning Act, and FLPMA; and

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
		▪ Facilitate the timely and streamlined permitting of renewable energy projects, all in the Mojave and Colorado/Sonoran desert regions of Southern California. The primary biological resources goals of the DRECP LUPA are landscape and habitat connectivity, ecosystem and ecological function, and species conservations. Through the DRECP, the BLM is adopting a variety of incentives to steer future renewable energy development to Development Focus Areas (DFAs). Under the LUPA, these incentives are applicable to solar, wind, and geothermal. Consistent with 43 CFR 1610.5(a) and 43 CFR 2804.26(a)(1), the BLM could deny renewable energy applications that do not conform to the land use plan.
United States Forest Service (USFS)	Special Use Permit (FS-2700-4)	Section 28(w)(2) of the Mineral Leasing Act of 1920 (30 U.S.C. 185(w)(2)) requires the USFS to notify the Senate Energy and Natural Resources Committee and the House of Representatives Resources Committee when a request has been made to use National Forest System lands for oil or gas pipelines 24 inches or larger in diameter. When a proposal for an oil or gas pipeline 24 inches or larger in diameter is accepted as a formal application, the Regional Office, Director of Lands or equivalent official, shall forward a copy of the application to the Washington Office, Director of Lands, to facilitate committee review. If a decision is made to approve the project, the Regional Office, Director of Lands or equivalent official, shall forward to the Washington Office, Director of Lands, a copy of the decision notice and proposed special use authorization to forward to the appropriate committee chairperson. The authorized officer must wait 60 days before issuing the authorization unless the waiting period is waived by the committee.
National Park Service (NPS)	NPS ROW Permit (SF-299)	The NPS does not have the general authority to issue permits for roads or oil or gas pipelines. New pipeline routes through NPS lands require Congressional approval and NEPA review. A ROW is a permit issued by the NPS to allow a utility to pass over, under, or through NPS property. The permit may be issued only pursuant to specific statutory authority and generally if there is no practicable alternative to the use of NPS lands, regardless of whether the equipment is serving the NPS and its visitors or crossing the park to reach other communities. A ROW permit is required for building or installation of a utility on NPS lands. (Utilities are generally defined as “canals, ditches, pipes and pipe lines, flumes, tunnels, or other water conduits and water plants, dams, and reservoirs used to promote irrigation or mining or quarrying, or the manufacturing or cutting of timber or lumber, or the supplying of water for domestic, public, or any other beneficial uses.”) As with other federal agencies including the BLM and BOR, Standard Form (SF) 299, “Application for Transportation and Utility Systems and Facilities on Federal Lands,” is the application required for submittal. While these authorities allow activities that adversely impact NPS resources, NPS Management Policies 2006, which set forth the NPS interpretation of the Organic Act, prohibit the NPS from taking any action that would result in impairment of park resources or values. Federal NPS regulations at 36 CFR 2.2 prohibit the take of wildlife in areas managed by the NPS with a few exceptions defined by federal statutory law for hunting and trapping (36 CFR 2.2). System 5 crosses Mojave National Preserve (CA) and Tule Springs Fossil Bed National Monument (NV).
Federal Department of Defense (DOD)	Military Base Approval	Military bases are separate entities that have their own method for implementing federal laws. Before private companies can access military bases, they must receive clearance from the base, and the base must clearly understand the scope of work, personnel who will be on-site, schedule, and all details associated with the project. It is important to understand military protocol to access the base, as base security is extremely strict.
Bureau of Reclamation (BOR)	Use Authorization (SF-299)	Project proponents proposing to develop or cross any public BOR land, facility, or water body are required to obtain a written land use authorization. The BOR will determine if the requested use is compatible with authorized project purposes, in the best interests of the public, and consistent with appropriate resources management and environmental considerations for the area. 43 CFR 429 and Reclamation Manual LND 08-01 provide guidance regarding the types of projects requiring use authorization including: “Infrastructure, such as transportation, telecommunications, utilities, and pipelines.” As with the BLM, Standard Form (SF) 299, “Application for Transportation and Utility Systems and Facilities on Federal Lands” is the application required for submittal.
Railroad (RR) Crossings and the Alameda Railway Corridor	ROW Permit, Encroachment Potentially a Special Use Permit (SUP)	. The southern California project region is generally served by two major rail operators, Burlington Northern Santa Fe (BNSF), and Union Pacific (UP). Both the BNSF and the UP require licensing agreements for pipeline crossings or encroachments within RR ROW. Generally, all pipelines carrying caustic, flammable, or explosive materials fall under the provisions for high-pressure gas and liquid fuel lines. According to the UP website, applications take a minimum of 45-60 days for engineering review once design standards are met, and a valuation of the encroachment property is submitted. Encroachment permits take a minimum of 6 months for engineering review plus an additional 30 days for delivery of the agreement. According to the BNSF website, agreement processing generally requires 30-60 days for agreement processing. The Alameda Corridor is a 20-mile freight rail "expressway" owned by the Alameda Corridor Transportation Authority (ACTA) that connects the national rail system near downtown Los Angeles, to the ports of Los Angeles and Long Beach, running below Alameda Street. The ACTA maintains over 65 miles of freight rail track, with 125 turnouts, 10 rail bridges, signals at 48 locations, seven grade crossings, and several storm water pump stations. Construction along the Alameda Corridor is on-going. Crossings and encroachments within the Alameda Corridor are less clear and procedures and permitting requirements would likely be based on the specific locations of the crossings and the proximity of the pipeline to the ROW.
Natural Resources		
U.S. Department of Interior (DOI), Fish and Wildlife Service (USFWS) National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS)	Endangered Species Act (ESA) Consultation Section 7 Informal/Formal Consultation (federal Nexus) Section 10 10(a)(1)(B) Habitat Conservation Plan (no federal nexus)	Species protected by federal law are listed as threatened or endangered and may have designated critical habitat. Any activity, such as displacement or habitat disturbance, that may affect listed or proposed Threatened and Endangered species requires consultation with either the USFWS or NOAA-NMFS. Generally, USWS manages land and freshwater species, and NOAA-NMFS is the lead agency for listed marine species (i.e., marine mammals, sea turtles, marine and anadromous fish and marine invertebrates and plants). Candidate species are not protected under the ESA but are subject to special review requirements under Section 7 of the ESA. The ESA prohibits "taking" of listed fish and wildlife species by any person and also prohibits malicious damage or destruction of listed plant species by federal actions. As defined in the ESA, to take means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Where a nonfederal entity (e.g., private individual, corporation, local agency, state agency) will be conducting an activity that would result in take of wildlife or fish species listed under ESA, that entity must obtain a permit from the Services for such taking or it will be in violation of ESA. Determination if the project will impact protected species or habitat is based upon a literature search of the project site, a review of the project site using the USFWS IPaC planning and consultation tool and/or a site visit by a qualified biologist. The USFWS IPaC map tool provides a list of critical habitat, listed species, migratory birds or other natural resources that may be affected by the project. Similarly, NOAA Fisheries can provide a list of species in the project area. Critical habitat includes areas identified under Section 7 of the FESA (15 U.S.C. § 1531–1544, FESA Section 3(5)(A)). Designated critical habitats are described in 50 C.F.R. Parts 17 and 226. Critical habitat consists of two types of specific areas for federally listed special-status species: (1) areas that fall within the geographic area occupied by the species at the time the species is listed in accordance with the provisions of Section 4 of

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
		the FESA, and that contain physical or biological features (constituent elements) essential to the conservation of the species and that may require special management consideration or protection; and (2) specific areas outside of the geographical area occupied by the species at the time it is listed in accordance with the provisions of Section 7 of the FESA, if the Secretary of the Department of Interior determines that such areas are essential for the conservation of the species. Where other federal permits are present Section 7 of the FESA requires the federal permitting entity to consult with USFWS/NMFS when the federal permit "may affect" listed species or designated critical habitat. A Biological Assessment should be submitted with the federal permit application, describing the effects on the species along with a finding as to whether the effects are "adverse." If the BA finds that the effects are not adverse ("May affect, but is not likely to adversely affect") and the USFWS/NMFS concurs, a concurrence letter is provided, and consultation is concluded. If effects are adverse ("May affect, and is likely to adversely affect"), then formal consultation is initiated and a Biological Opinion granting take coverage is typically issued. In extreme cases, the Biological Opinion may find that the project would jeopardize the continued existence of a listed species or result in the destruction or adverse modification of critical habitat; in these instances, alternatives will need to be explored and adopted. Habitat Conservation Plans (HCPs) are required as part of an application for an Incidental Take Permit under Section 10 of the FESA if not within an area covered by a programmatic or other existing permit. HCPs also include Natural Communities Conservation Plans, which identify measures necessary to conserve and manage natural biological diversity within the planning area while allowing compatible and appropriate economic development, growth, and other human uses. Each HCP describes the anticipated effects of the proposed taking, how those impacts would be minimized or mitigated, and how the HCP is to be funded. Most moderate-scale projects can avoid take of species through seasonal or spatial restrictions of work; biologists can assist project designers in avoidance methods. If there is no federal permit, and no potential to avoid species (rare in most proposed actions), use existing HCPs if possible. If no existing HCP applies, the Applicant must prepare and file an HCP to demonstrate how impacts to species will be mitigated by long-term conservation measures. An HCP fits the DOI and USFWS categorical exclusion criteria if the effects of the HCP are minor or negligible on federally listed, proposed or candidate species and their habitats, if the effects of the HCP are minor or negligible on all other components of the human environment, including environmental values and environmental resources after implementation of the minimization and mitigation measures and if the incremental impacts of this HCP, considered together with the impacts of other past, present and reasonably foreseeable future actions not result, over time, in cumulative significant effects to the human environment. If an HCP does not fit the above criteria, the permit action cannot be categorically excluded from additional NEPA analysis (EA/EIS).
Variable	Regional Habitat Conservation Plans (HCPs)	Conservation areas include areas that have been identified as part of HCPs, Natural Communities Conservation Plan (in California)s, or other approved local, regional, state, or federal HCPs. Regional habitat conservation planning is a proactive approach to addressing species conservation and economic growth and development over a large geographic area. Regional conservation planning can encompass many other biological objectives beyond threatened and endangered species issues, such as the conservation of wetlands, biodiversity, watersheds, and ecosystems. This form of proactive planning is in contrast to project-specific permitting that takes place reactive to proposed projects in compliance with the ESA.
BLM	West Mojave Plan (Federal Take)	The West Mojave Plan (WMP) is “a habitat conservation plan and federal land use plan amendment that presents a strategy to conserve and protect the desert tortoise, the Mohave ground squirrel and nearly 100 other plants and animals and natural communities and provides a streamlined program for complying with the requirements of the California and federal endangered species acts”. The habitat conservation plan has not been completed and would require greater specificity for local governments to obtain incidental take permits under the state and federal endangered species acts. The WMP is currently only applicable on public lands managed by the BLM and does not apply to private property within the city of Lancaster or on lands under Los Angeles County jurisdiction
USFW/NOAA	Fish and Wildlife Coordination Act Review	The Fish and Wildlife Coordination Act authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. The amendments enacted in 1946 require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of states where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted or otherwise controlled or modified" by any agency under a federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."
US Fish and Wildlife Service (USFWS) Section 10	Habitat Conservation Plan (HCP)	Not anticipated to be required for intrastate alignments where FERC or other federal agency takes jurisdiction and serves as lead agency. May be required where there is a lack of federal nexus.
Area of Critical Environmental Concern (ACEC)	Relates to USFS SUP and BLM ROW	ACEC designations highlight areas where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. ACECs can also be designated to protect human life and safety from natural hazards. Specific findings considered and restrictions imposed as part of federal ROW approvals.
National Conservation Area (NCA)	BLM ROW Grant	The BLM’s National Conservation Lands include National Conservation Areas and Similar Designations. Congress designates National Conservation Areas (NCAs) and similarly designated lands to conserve, protect, enhance, and manage the public lands for the benefit and enjoyment of present and future generations. The BLM’s National Conservation Lands include 17 NCAs and six similarly designated lands in 10 states. These lands offer exceptional scientific, cultural, ecological, historical, and recreational value. System 5 crosses Red Rock Canyon National Conservation Area.
Waters Permits and Regulation		
U.S. Army Corps of Engineers (USACE) EPA	Clean Water Act (CWA)	The CWA (Title 33 USC § 1251 through 1376) provides guidance for restoration and maintenance of the chemical, physical, and biological integrity of the nation’s waters.
USACE / RWQCB	CWA Section 401	CWA Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to WOTUS (i.e., Section 404 Certification) must obtain a state certification that the discharge complies with other provisions of the CWA. In California, Regional Water Quality Control Boards (RWQCBs) administer the certification program.
EPA / SWRCB	CWA Section 402	CWA Section 402 establishes a permitting system for the discharge of any pollutant (except dredge or fill material) from a point source into WOTUS. all point-source discharges, including, but not limited to, construction-related stormwater discharges to surface waters, are regulated through the National Pollutant Discharge Elimination System program. Project sponsors must obtain a National Pollutant Discharge Elimination System permit from the SWRCB. Refer to the SWRCB discussion of SWPPP, below.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
USACE	CWA Section 404 Certification	CWA Section 404 establishes a permit program administered by USACE for discharge of dredged or fill material into WOTUS, including wetlands. The Navigable Waters Protections Rule (NWPR) finalized a revised definition of “waters of the United States,” as regulated under CWA Section 404, and became effective in June 2020. The NWPR aims to streamline the definition so that it includes simple categories of jurisdictional waters, provides clear exclusions for water features that traditionally have not been regulated, and defines terms in the regulatory text that were previously undefined in statute. The NWPR regulates the nation’s navigable waters and the core tributary systems that provide perennial or intermittent flow into them. The new definition eliminated the application of a significant nexus test and relies more explicitly on surface water connectivity to determine jurisdiction. Perennial and intermittent creeks are considered WOTUS if they are hydrologically connected to other jurisdictional waters (typically a navigable water). The ephemeral drainages and isolated desert drainages no longer fall under USACE jurisdiction. Nationwide Permit (NWP) 12 (a general permit) covers the construction, maintenance, repair, and removal of utility lines and associated facilities in WOTUS, provided the activity does not result in the loss of greater than ½-acre of WOTUS for each single and complete project. There must be no change in pre-construction contours of WOTUS. Material resulting from trench excavation may be temporarily side cast in WOTUS for no more than three months 404 Certification Required for the construction, maintenance, repair, and removal of pipelines and associated facilities in WOTUS, provided the activity does not result in the permanent loss of greater than ½ acre of WOTUS for each single and complete project. There must be no change in pre-construction contours of WOTUS. Material resulting from trench excavation may be temporarily sidecast in WOTUS for no more than three months.
USACE	Section 10 of the Rivers and Harbors Act, DA Permit/Authorization	Section 10 of the Rivers and Harbors Act requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the U.S. Structures or work outside the limits defined for navigable WOTUS require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable WOTUS, and applies to all structures, from the smallest floating dock to the largest commercial undertaking. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal, boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. (33 U.S.C. 403.). Section 10 of the Rivers and Harbors Act requires authorization from the USACE for the construction of any structure in or over any navigable WOTUS.
USACE and the U.S. Coast Guard (USCG)	Rivers and Harbors Act Section 408 Permit	Section 9 of the Rivers and Harbors Act and Section 9 of the General Bridge Act requires a permit for the construction of bridges and causeways over certain navigable WOTUS to ensure that marine traffic is not adversely affected. Navigable waters are defined as those water bodies subject to the ebb and flow of the tide and that are utilized currently, potentially, or historically in their natural condition or by reasonable improvements as means to transport interstate or foreign commerce. Section 9 bridge permits are only required for waters that are currently or potentially navigable for commerce; general recreational boating is typically not sufficient to establish jurisdiction. Section 9 bridge permits are issued by the United States Coast Guard. Section 14 of the Rivers and Harbors Act requires permission for the use, including modifications or alterations, of any flood control facility built by the U.S. to ensure that the usefulness of the federal facility is not impaired. The permission for occupation or use is to be granted by “appropriate real estate instrument in accordance with existing real estate regulations.” For USACE facilities, the Section 408 approval, known as a Section 408 permit, is required. Not applicable since Alignment not classified as civil works and modification to a flood control facility are not required for an underground pipeline.
Cultural and Historic Resources		
BLM	Section 106 of the NHPA Consultation and H-1780 Guidelines for Improving and Sustaining BLM-Tribal Relations	In accordance with the NHPA , Section 106 consultations are required when a project involving federal action, approval, or funding may affect properties that qualify for the National Register of Historic Places.
National Park Service (NPS) National Historic Trails Association	Consultation [Old Spanish National Historic Trail and National Trails Highway (Route 66)]	Consultation should be provided to the National Historic Trails Association describing potential impacts to nearby trails and allowing the Agency to submit any comments.
BIA Individual Tribes	Entry Agreement	Activities affecting the environment on Indian lands often require the approval of both the BIA and the tribal government. Federally recognized tribes have a preeminent right to be consulted on infrastructure projects, including pipelines, which potentially impact their lands, treaty rights, and protected resources. On January 26, 2021 President Biden issued a Presidential Memorandum that requires Federal agencies to prepare and periodically update a detailed plan of action to implement the policies and directives of Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments). Consultation will occur concurrently with the NEPA timeline and will likely be directed by agency-specific guidance provided under this Memo. For a ROW across tribal land, the applicant must obtain tribal consent, in the form of a tribal authorization and a written agreement with the tribe, if the tribe so requires, to a grant of right-of-way across tribal land. The consent document may impose restrictions or conditions; any restrictions or conditions automatically become conditions and restrictions in the grant.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Miscellaneous Resources		
U.S. Environmental Protection Agency (EPA)/California Air Resources Board (CARB)	Air Quality regulation; permits issued at state level from local air districts	Under the Greenhouse Gas Reporting Program, owners or operators of facilities that produce hydrogen must report emissions from hydrogen production processes and all other source categories located at the facility for which methods are defined in the rule. Owners and operators are required to collect emission data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting per the requirements of 40 CFR Part 98 Subpart P – Hydrogen Production. The EPA issues no permits in relation to hydrogen production or transport via pipeline. Permitting associated with the EPA generally has to do with construction and criteria pollutants. U.S. EPA has set National Ambient Air Quality Standards for six air pollutants, including ozone and particulate matter. These are referred to as the “criteria” pollutants.
State of California		
Pipeline and Energy Regulations		
California Environmental Quality Act (CEQA) Various state agencies, depends on the discretionary actions required for the project		CEQA (Res. Code §21000 et seq.) was promulgated in 1970 to (1) inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities, (2) identify the ways that environmental damage can be avoided or significantly reduced, (3) prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible, and (4) disclose to the public the reasons why a governmental agency approved the project. CEQA is implemented through the CEQA Guidelines in CCR Title 14 Chapter 3. CEQA applies to projects undertaken by state and local agencies or private entities which require some discretionary approval. Where a project is to be carried out or approved by more than one public agency, one public agency (termed the Lead Agency) is responsible for preparing the appropriate environmental document. If a project subject to CEQA will not cause any adverse environmental impacts, a Negative Declaration (ND) is prepared. If the project may cause adverse environmental impacts, the Lead Agency must prepare a more detailed Environmental Impact Report (EIR). An EIR contains in-depth studies of potential impacts, measures to reduce or avoid those impacts, and an analysis of alternatives to the project. The CEQA process provides the opportunity for the public to review and provide input on both NDs and EIRs. It is anticipated that all pipeline routes will result in discretionary actions and potential effects necessitating an EIR. Selection of a CEQA Lead Agency may vary based on jurisdictions. Lead agencies and responsible agencies may include the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), with the lesser potential California Department of Fish and Wildlife (CDFW), Counties, or Southern California Association of Governments (SCAG). The California Air Resources Board (CARB) or the South Coast Air Quality Management District (SCAQMD) are not anticipated to take a lead agency role since pipeline operation would not result in emissions. - Once the review is complete, if the impacts are determined to be acceptable, the agency issues a Negative Declaration (ND). If the lead agency determines that mitigation measures are required, then it issues a Mitigated Negative Declaration (MND). If the project may cause adverse environmental impacts, the Lead Agency must prepare a more detailed study called an Environmental Impact Report (EIR). An EIR contains in-depth studies of potential impacts, measures to reduce or avoid those impacts and an analysis of alternatives to the proposed project. The public is then given opportunity to review and provide input on NDs and EIRs. It is anticipated that all pipeline routes associated with the proposed project will result in discretionary actions that trigger the CEQA process and necessitate completion of an EIR. The EIR will be based on the most recent CEQA Guidelines when the project is initiated. For completion of an EIR, a timeline of at least 24 months is generally anticipated; however, unlike NEPA, there is no specific time frame for which CEQA must be completed, and more complex or controversial projects generally take longer as the proponent provides relevant studies and information to the Lead Agency. - The CEQA Process generally consists of the following steps: - Determine Lead Agency (difficult – most agencies do not want the Lead Agency role). If Lead Agency is CPUC, CPUC's Rules of Practice and Procedure Rule 2.4 (CEQA) will apply. - Determine if project is exempt (Categorical Exemption [CE]) per CEQA Guidelines. (Due to the nature of the proposed Project, CE is not anticipated). - Prepare Initial Study (IS) and submit to Lead Agency for Review (IS a detailed report that addresses the impacts of the project). It is important to note that in some cases, where a Project is already known to cause potential impacts, the Lead Agency will forgo the IS and opt instead to directly complete an EIR. (Skip to #7 below). - If project does not result in significant impacts, a ND is prepared, and public notice is provided. (Due to the nature of the proposed Project, a ND will not be applicable). - Public comment period lasts 30 days (may be extended in some circumstances for controversial projects under some circumstances). - Comments addressed. If there are no further issues, Lead Agency issues a decision on the project through ND or MND (Due to the nature of the proposed Project, it is anticipated that an EIR will be required). - If Lead Agency decides after the IS that there are significant impacts, then a draft Environmental Impact Report (EIR) is prepared by the Lead Agency. - Notice of Completion, public notice, and public review period. - Responses to the comments are reviewed and included in the final EIR that is reviewed, and a decision is then made on the project. It is anticipated that a Joint NEPA/CEQA document (and EIS/EIR) will be completed to address the project as a whole as it traverses both federal and state jurisdictions. See the discussion on NEPA for detail on potential Federal Lead Agencies. NEPA and CEQA are similar both in intent and in the review process. As a result, both statutes encourage a joint federal and state review for projects requiring both federal and state approvals. A joint review process, in theory, avoids redundancy, improves efficiency, and allows for interagency cooperation. However, there are several differences between NEPA and CEQA statues that may complicate the coordination between the Federal and state agencies in practice. To avoid these pitfalls, the NEPA and CEQA Handbook for Integrating Federal and State Environmental Reviews (Office of the President and California Governor’s Office of Planning and Research 2014) was published to provide guidance to lead agencies to facilitate cooperation on projects that are subject to both NEPA and CEQA. The handbook provides a framework for establishing the Memorandum of Understanding (MOU) between two or more agencies entering a joint NEPA/CEQA review process. Since its publication in 2014, the MOU guidance has allowed Federal, state and local agencies to cooperate in the environmental review of projects ranging from infrastructure to renewable energy permitting. It is important to note, however, that few Joint EIS/EIR documents have been completed in the past 2 years under the revisions to the CEQ NEPA Guidelines promulgated by the Trump Administration. It has yet to be seen how lead agencies will navigate these new NEPA policy regulations, and whether joint EIR/EIS documents will continue to be completed as a comprehensive single report or whether new procedures for permitting under NEPA/CEQA will result.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
California Public Utilities Commission (CPUC)	Permitting potential unknown, Potential Lead Agency under CEQA	The CPUC is the agency authorized to oversee intrastate gas pipeline facilities in California. Gas pipelines are subject to the federal requirements of Title 49 Parts 190 through 192 and administered by the Federal Office of Pipeline Safety (OPS). California is certified under 49 USC Subtitle VIII, Chapter 601, §60105 to oversee the Federal OPS requirements. CPUC guidelines generally enhance the Federal OPS requirements. General Order No. 112-F, “State of California Rules Governing Design, Construction, Testing, Operation, and Maintenance of Gas Gathering, Transmission, and Distribution Piping Systems,” provides additional state requirements for gas pipelines. While the CPUC is responsible for implementation of the federal and state regulations and guidelines, currently no specific regulation regarding the transport of utility scale hydrogen has been drafted. Regulatory agencies at the federal level are funding programs to identify safety standards and design requirements for hydrogen pipelines, but these programs remain in the research and development phase and are not yet at a stage to inform policy. As a result, hydrogen is not currently specifically regulated as a public utility regulated by the CPUC. CPUC may act as a CEQA lead agency for pipeline routes within California, but at this time it is unknown what permitting would act as a trigger. As a lead agency, the CPUC requires Proponent's Environmental Assessment (PEA) which results in longer lead times than other agencies. Since not CPUC regulated, counties (and to a lesser extent cities) may determine that a non-utility pipeline use needs to be defined and regulated separately in their code and general plan.
California Energy Commission (CEC)	No permit, approval, or clearance required	In accordance with California’s Assembly Bill 8 (AB-8), the CEC is responsible for the administration of funds in support of the Clean Transportation Program, dedicating up to \$20 million per year to the development of hydrogen fueling stations in California. The CEC develops its funding programs in cooperation with the California Air Resources Board (CARB). AB-8 requires CEC and CARB to regularly analyze historical and projected progress for the current and future needs of the hydrogen fueling network development. The CEC role is as permitting agency is not currently defined for utility scale hydrogen (except where includes thermal energy over 50 kilowatt hours). Hydrogen pipelines may be regulated by the CEC if the agency provides funding allocated under AB-8.
Office of the State Fire Marshall (CAL FIRE)	No permit required. OSFM receives hydrostatic pressure test results within 30 days of the test	The California State Fire Marshal has jurisdiction for hazardous liquid pipelines. In 1987, the State Fire Marshal and PHMSA entered into a Hazardous Liquid Pipeline Safety Program Interstate Agent Agreement. The agreement divides pipeline safety between federal and state. The U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) has exclusive federal authority over interstate pipeline facilities (49 USC § 60101, et seq.) while CAL FIRE - Office of the State Fire Marshal, Pipeline Safety Division has sole authority for the inspection and enforcement of federal and state regulations for intrastate pipelines within California. State and federal laws outlining the Pipeline Safety Division’s authority include: Elder Pipeline Safety Act of 1981 (California Government Code §51010-51019.1); California Code of Regulations, Title 19 §2000-2075; Federal Law 49 U.S.C. §60101-60141; and Code of Federal Regulations, Title 49 Part 195. OSFM provides regulation regarding hydrotesting requirements for new construction, relocations, and replacement pipelines and provides standards for notification and results submittal. OSFM is also one of five state organizations involved in the Unified Program and is responsible for ensuring the implementation of the California Fire Code Hazardous Materials Management Plan/Hazardous Materials Inventory Statement (HMMP/HMIS) and the Aboveground Petroleum Storage Act (APSA) program elements. The HMMP/HMIS program consolidates the administration, permits, inspections, and enforcement activities of several programs; CALFIRE administers the Hazardous Release Response Plan and Inventory (HMRRP) or Hazardous Materials Business Plan (HMBP) program.
Land and Right-of-Way (ROW) Regulation		
State of California Department of Parks and Recreation (DPR)	Special Use Permit (SUP)	Projects that impact a State Park must receive permission to enter the Park. If the project results in the construction of new infrastructure, an SUP may be required as well. DPR may act as a CEQA Responsible Agency under California Public Resources Code 501.5, 5003, 500, 14 CCR 4003. SoCalGas has an agreement DPR called the Chino Hills State Park Access Plan, which facilitates the existing easement rights of SoCalGas and the duty of CHSP to protect sensitive resources and protect users of CHSP. The agreement provides for SoCalGas the right to lay, construct, maintain, operate, repair, replace, and change the size of and remove one or more pipelines, with metering, regulating and other equipment for the transportation of gas over and through, under, along, and across the specified land within their easements. In addition, the easements provide SoCalGas with certain rights to construct, operate, and maintain patrol roads along the right-of-way (ROW), with the right of reasonable ingress and egress over CHSP lands. Only activities within the SoCalGas’ existing easements would be covered by this agreement. Any procedure for maintenance actions outside the terms of the existing ROW easements would be required to comply with all state and federal environmental laws and regulations, including CEQA review if applicable, which will be coordinated with DPR.
California Department of Transportation (Caltrans)	ROW Encroachment Permit or Transportation Permit	Caltrans is responsible for the oversight of state highways, inter-city rail services, and public-use airports within California. Streets and Highways Code Section 117 grants Caltrans the authority to issue permits, under Chapter 3 (commencing with § 660), for the location in the ROW of any structures or fixtures necessary to telegraph, telephone, or electric power lines or of any ditches, pipes, drains, sewers, or underground structures. An encroachment permit must be obtained from Caltrans for all work done within a state highway ROW. Caltrans is likely to serve as a responsible or Lead Agency under CEQA.
California Department of Conservation (DOC)	Clearance	Clearance is required if the proposed development encroaches or impacts an existing oil or gas well, or if the project calls for the abandonment of a gas or oil well.
California Department of Water Resources (DWR)	Encroachment Permit (Ministerial)	The California DWR manages the California aqueduct, which crosses the project pipeline near several areas. Pursuant to California Code of Regulations, an encroachment permit is required for utility work in or on DWR ROW (Title 23, Division 2, Chapter 6, Article 1, § 612.6, Utility Crossings). Approval of an encroachment permit generally requires consistency with design requirements specified under § 612.70. California Code of Regulations(CCR) § 610.1(c), Environmental Review, requires encroachment applications to be evaluated for CEQA compliance.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Endangered Species Act		
California Department of Fish and Wildlife (CDFW)	California Endangered Species Act (CESA) Incidental Take Permit (ITP)	The CESA is a state environmental law that conserves and protects plant and animal species at risk of extinction. The CDFW works with agencies, organizations, and other interested persons to study, protect, and preserve CESA-listed species and their habitats. The CDFW derives its authority from the Fish and Game Code of California. CESA (Fish and Game Code § 2050 et. seq.) prohibits “take” of state listed threatened, endangered or fully protected species. Take of individual listed species is defined differently on a federal or state level. Under the CESA, “take” is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as fully protected under the Code. Incidental Take Permits (ITPs) allow a permittee to take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. These permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects. Permittees must implement species-specific minimization and avoidance measures, and fully mitigate the impacts of the project. CDFW’s issuance of an ITP is considered a discretionary action as defined in Title 14 of the California Code of Regulations, under CEQA. Therefore, before CDFW can issue the permit the applicant must have completed the necessary steps under CEQA. For species that are jointly listed under federal and state ESAs, CDFW may grant take coverage via a Section 2080.1 consistency determination rather than an ITP. For this to apply, CDFW must concur that the federal permit is stringent enough to meet the criteria for permit issuance under CESA. The process takes 30 days and is non-discretionary (no CEQA required). However, the federal permit must be final before the 2080.1 review can commence, and CDFW cannot amend or add measures to the federal permit when evaluating whether CESA standards are met. California Fish and Game Code § 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (§ 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction.
CDFW	Native Plant Protection Act (NPPA)	The CDFW also has authority to administer the NPPA (Fish and Game Code § 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under § 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant.
CDFW	Natural Community Conservation Planning (NCCP) Act	A NCCP is the state counterpart to the federal habitat conservation plan (HCP). It provides a means of complying with the NCCP Act (California Fish and Game Code, §§ 2800–2835) that was enacted to encourage broad-based planning to provide for effective protection and conservation of the state’s wildlife resources while continuing to allow appropriate development and growth. and securing take authorization at the state level. The NCCP Act is broader than FESA and the CESA. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. To be approved by the CDFW, an NCCP must provide for the conservation of species and protection and management of natural communities in perpetuity within the area covered by permits NCCPs may be implemented that identify measures necessary to conserve and manage natural biological diversity within the planning area while allowing compatible and appropriate economic development, growth, and other human uses.
Waters		
CDFW	§1600 Lake and Streambed Alteration Agreement (LSAA)	Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. § 1600 et seq. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream, or lake. An LSAA regulates Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. SSC do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands.
Regional Water Quality Control Board (RWQCB)	Individual 401 Certification	The State Water Resources Control Board (SWRCB) and the local RWQCB have jurisdiction over “waters of the State,” pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the state (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The project may be covered by Pre-Certified NWP 12 when co-terminus with federal jurisdiction.
RWQCB	Waste Discharge Requirement (WDR)	The Porter-Cologne Water Quality Control Act regulates discharges that could affect the quality of waters of the state and requires that a waste discharge requirements form be obtained for discharges, including fill of wetlands that are not otherwise authorized by Section 404 or Section 402 of the Federal CWA. Application under waste discharge requirements requires filing of a report of waste discharge. See Appendix A for more detail. Any entity proposing to discharge a waste must file a Report of Waste Discharge with the appropriate Regional Water Quality Control Board or SWRCB. The Regional Water Quality Control Boards are responsible for implementing CWA Sections 401, 402, and 303(d). CCR Title 23, § 3855(b)(1) states that "an application for water quality certification shall be filed with the state board executive director [...] whenever a potential discharge from a proposed activity: (A) may fall under the jurisdiction of more than one regional board." Porter-Cologne also provides for the development and periodic reviews of basin plans that designate beneficial uses of California’s major rivers and groundwater basins and establish water quality objectives for those waters. In 2019, the SWRCB adopted its proposed State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State (Procedures). Among other provisions, the Procedures define certain “wetlands” as “waters of the State” under Porter-Cologne. The Procedures also provide a jurisdictional framework for the determination of aquatic features as “wetlands.” Such wetland features under the Procedures are identified and analyzed as “aquatic resources” throughout this document. The SWRCB has published the “State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State”, which became effective in 2020.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
State Water Resources Control Board (SWRCB)	Notice of Intent (NOI) for a Stormwater Protection Plan (SWPPP)	This permit is applicable to projects that have 1 or more acres of soil disturbance by themselves or in conjunction with any common plan of development. This permit applies to both traditional and linear projects. Flow charts of how to make this determination are included in Environmental Standard 104.073/G8714. SWRCB Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ. Not discretionary and CEQA is not required. Some cities have adopted local ordinances regulating stormwater. If a project is in a city with a local ordinance, a Stormwater Management Plan (SWMP) may be required. A SWMP may also be required to accompany the Caltrans Encroachment Permit application for projects that are 1 acre or more and that encroach upon Caltrans ROW.
California Regional Agencies and Entities		
CEQA/NEPA Lead Agency	Tribal Consultations	For proposed actions with potential impacts on Tribes, regulations implementing NEPA require an agency to consult with Tribes. Federal agencies including the BLM provide communication and notification to Tribes on behalf of projects; however, early outreach to Tribes is recommended for any construction activities that will traverse tribal lands. Depending on the Tribe, early outreach may be beneficial prior to or during the NEPA process.
South Coast Air Quality Management District (SCAQMD)	A facility survey and report will be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal. 10-day notification CEQA Review (Air Quality)	The SCAQMD encompasses 10,473 square miles and includes portions of Los Angeles, Riverside and San Bernardino counties and all of Orange County. The SCAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: ▪ Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants ▪ Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons ▪ Rule 403. Fugitive Dust: Requires the implementation of best available dust control measures (BACM) during active operations capable of generating fugitive dust ▪ Rule 1166 and/or Rule 1466. Minimizes emissions from contaminated soils ▪ Rule 1403. Asbestos Emissions from Demolition/Renovation: Mandates asbestos surveying, reporting, removal, handling, disposal, labeling, and documentation. Applicable for construction work within existing facilities such as vaults, or within areas where existing pipelines are present.
Mojave Desert Air Quality Management District (MDAQMD)	A facility survey and report may be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal. 10-day notification CEQA Review (Air Quality)	The Mojave Desert Air Quality Management District is geographically the second largest of the state’s 35 air districts and includes portions of Kern and San Bernardino County. The MDAQMD encompasses approximately [REDACTED] of the project pipeline and will have primarily responsible for implementing non-discretionary duties, approving air quality permits, and reviewing the air quality sections of CEQA documents within its jurisdiction. MDAQMD Rule 403 regulates fugitive dust emissions and requires standard dust control measures on all Projects involving construction or demolition of structures. Fugitive dust emissions from grading, excavation, and loading will be subject to this rule, which prohibits visible dust with specific opacity requirements at the property line in a given time period. However, a Dust Control Plan is not required. The MDAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: ▪ Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it ▪ Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants ▪ Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons ▪ Rule 403. Fugitive Dust: Requires the implementation of BACM during active operations capable of generating fugitive dust (see MDAQMD description below for detail)
Antelope Valley Air Quality Management District (AVAQMD)	A facility survey and report will be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal. 10-day notification CEQA Review (Air Quality)	The Antelope Valley Air Quality Management District (AVAQMD) includes the northern desert portion of Los Angeles County. The District’s boundaries start on the south just outside of Acton, north to the Kern County line, east to the San Bernardino County line, and west to the Quail Lake area. Approximately [REDACTED] of project pipeline are located within the AVAQMD. The AVAQMD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: ▪ Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it. ▪ Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants ▪ Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons ▪ Rule 403. Fugitive Dust: Requires the implementation of BACM during active operations capable of generating fugitive dust (see MDAQMD description below for detail)
Eastern Kern County Air Pollution Control District (KCAPCD)	A facility survey and report will be required for any asphalt, concrete pads/foundations, and buildings planned for demolition or removal. 10-day notification CEQA Review (Air Quality)	The Eastern Kern Air Pollution Control District (KCAPCD) boundary is that portion of Kern County which lies east of the Sierra Nevada Mountain Range and north of Rosamond to near the San Bernardino County Line. Approximately [REDACTED] of project pipeline are located within the KCAPCD. The KCAPCD has rules and regulations that would apply to the proposed project. These include the following along with a brief description of what the rule addresses: ▪ Rule 302. Asbestos Survey Requirements. Asbestos surveys are required prior to renovation and demolition. Asbestos must be removed prior to activities that may disturb it. ▪ Rule 401. Visible Emissions: Restricts the level of opacity of discharged air contaminants ▪ Rule 402. Nuisance: Prohibits discharge from any source where such quantities of air contaminants or other material cause injury, detriment, nuisance, or annoyance to any considerable number of persons ▪ Rule 403. Fugitive Dust: Requires the implementation of BACM during active operations capable of generating fugitive dust (see MDAQMD description below for detail)

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Significant Ecological Areas (SEAs)	County SEA CUP	Significant Ecological Areas (SEA) are officially designated areas within Los Angeles County with irreplaceable biological resources. The SEA Program objective is to conserve genetic and physical diversity within Los Angeles County by designating biological resource areas that are capable of sustaining themselves into the future. The SEA Ordinance establishes the permitting, design standards, and review process for development within SEAs, balancing preservation of the county’s natural biodiversity with private property rights. The SEA Program, through goals and policies of the General Plan and the SEA ordinance (Title 22 zoning regulations) help guide development within SEAs. The General Plan goals and policies are intended to ensure that privately held lands within the SEAs retain the right of reasonable use, while avoiding activities and developments that are incompatible with the ability of SEAs to thrive in the long term. <u>Antelope Valley Significant Ecological Area.</u> The Antelope Valley SEA extends from the Angeles National Forest to the playa lakes within Edwards Air Force Base, encompassing the whole of the two largest drainages exiting the northern slope of the San Gabriel Mountain range, and its geographical features serve as a major habitat linkage and movement corridor for all wildlife species within its vicinity. Ecologically “generalist” species have the ability to move across such vast areas and through changing habitat types. For such species, the SEA may serve as an important system for long-term inter-population genetic exchange. For smaller or less-mobile species, or taxa which are more narrowly restricted in their habitat needs, the SEA can serve as a broad linkage zone, in which individual movement can take place during seasonal or population dispersal. This provides essential genetic exchange within and between metapopulations. The two drainages, combined with the upland terrestrial desert-montane transect portion of the SEA, ensure linkage values and direct movement zones for all of the wildlife species present within the Los Angeles County portion of the Antelope Valley. <u>San Andreas Significant Ecological Area.</u> The San Andreas SEA includes several important linkages for wildlife movement. The Fault Zone connects with the Santa Clara River drainage in the Lake Hughes area, linking with this large, free-flowing watershed that extends to the Pacific Ocean in Ventura County. The foothills and grassland in the westernmost segment of the SEA are part of an important linkage between the San Gabriel Mountains and the Tehachapi Mountains. This linkage to the Tehachapi Mountains is important because it connects the southernmost extent of the Sierra Nevada Mountains with the San Gabriel Mountains and with the southern Coast Ranges. The Tehachapi Mountains are the only mountain linkage between the Transverse Ranges and the southern Coast Ranges to the Sierra Nevada Range. This largely natural area is an important topographic reference for migrating birds and bats, functioning as essential high elevation foraging grounds along their migration route. The Tehachapi Mountains further provide a valuable link for gene flow between divergent populations of many species, including plants. The SEA includes several large drainages that extend from the San Gabriel and Tehachapi Mountains to the western end of the Mojave Desert, flowing toward the Antelope Valley floor. These washes provide an important linkage for animals traveling between the mountains (all the ranges mentioned above) and the Mojave Desert. In addition, the sag ponds along the San Andreas fault zone and Amargosa Creek facilitates east-west wildlife movement through Liebre Mountain, Portal Ridge, and Ritter Ridge to Barrel Springs in the Antelope Valley near Palmdale. The frequency of valuable riparian communities along this travel route located within an otherwise arid climate, further indicates the importance of this area, which is one of the busiest natural wildlife linkages in the region. <u>Santa Clara River Significant Ecological Area.</u> Historically, the riparian corridor along the Santa Clara River has served as the primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Transverse and Tehachapi range). Animals moving through the Santa Clara River at one time had unobstructed passage along the river and within its tributaries. The present configuration of the tributary drainages has reduced connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones considered essential to ensuring connectivity and resource values within the historic movement zones for all of the wildlife species present within the Los Angeles County portion of the Santa Clara River. <u>Santa Susana Mountains Significant Ecological Area.</u> The Santa Susana Mountains/Simi Hills SEA includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains are part of a vast open space that fosters wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the SEA provides excellent opportunities for concealment and water sources while the grasslands provide an abundance of prey.
Local Ministerial (County or City)	Ministerial Permits	Local ministerial permits are those that are granted based upon determinations that the proposed project complies with established standards set forth in local plans or ordinances such and building permits, road crossing permits, franchise agreements. Ministerial permits also include those that may be required by a Planning Department where new development or introduction of a use requires staff (not decision maker) review and approval. Public Works Departments may require permits for encroachment into ROWs, grading, traffic or other ministerial actions.
Local Discretionary (County or City)	Conditional Use Permit (CUP)	Direct use project requirements are based on the end use(s), which are resource and location specific (i.e., district heating, spa/pool, aquaculture, greenhouses, etc.). Crude oil pipelines usually require a CUP. For uses or development not enumerated is the zoning/municipal code, such as a hydrogen pipelines not considered at utility by the CPUC, the County/City will often default to a discretionary CUP. Generally Natural Gas pipelines regulated by the CPUC are exempt from local land use controls that are in conflict with “the paramount authority of the State.” Article XI, Section 7 of the California Constitution says: “A County or City may make and enforce within its limits all local, police, sanitary and other ordinances and regulations not in conflict with general laws. If otherwise valid local legislation conflicts with state law, the local law is preempted by State law and is void as applied to the particular project.” Additionally, Constitution Article XII, Section 8 states that “[a] city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the [Public Utilities] Commission.” The Public Utilities Code authorizes the CPUC to “do all things, whether specifically designated in this act or in addition thereto, which, are necessary and convenient in the exercise of such power and jurisdiction” (California Public 7 Utilities Code § 701). Other Public Utilities Code provisions generally authorize the CPUC to modify facilities, secure adequate service or facilities, and operate so as to promote health and safety.
County or City as applicable	Protected tree permit (ministerial or discretionary)	Protected trees are trees or tree communities that have special significance and are afforded protection by, and specifically identified in, County and City ordinances, codes, or general plans. The types of trees and specific physical characteristics that meet the local definitions vary by city and county. Protected tree permits (either ministerial or discretionary) may be required for removal, cutting, trimming, or encroachment upon root zones of protected trees.
Riverside	WRC MSHCP Take Coverage	The Western Riverside County Multiple Species Habitat Conservation Plan (WRC-MSHCP) allow the participating jurisdictions to authorize "Take" and serve as an HCP pursuant to Section 10(a)(1)(B) of FESA, as well as a provide State CESA coverage as an NCCP. It allows Riverside County and its cities to better control local land-use decisions and maintain a strong economic climate in the region while addressing the requirements of CESA/FESA [REDACTED] [REDACTED] [REDACTED] Coverage under the WRC-MSHCP is not anticipated, but if needed (e.g., Delhi Sands Flower loving sand fly) coverage available via the Western Riverside MSHCP via the Participating Special Entity process.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
State of Nevada		
Pipeline and Energy Regulations		
Public Utilities Commission of Nevada (PUCN)	Certificate of Public Convenience and Necessity (CPCN)	Any person who will own, control, operate, or maintain a public utility must obtain a CPCN from the NPUC before constructing the facility (NRS 704.330). If the facility is not a public utility, or if it is exempt under NRS 704.021 or NRS 730.340, a CPCN is not required. The term “public utility” includes “[a]ny plant or equipment, or any part of a plant or equipment, within this State for the production, delivery or furnishing for or to other persons, including private or municipal corporations, heat, gas, coal slurry, light, power in any form or by any agency, water for business, manufacturing, agricultural or household use, or sewerage service, whether or not within the limits of municipalities.” (NRS 704.020) Based on this definition, it is likely that a new hydrogen pipeline will require a CPCN. A Siting Permit is not required for public utilities.
Nevada Division of State Lands, State Land Use Planning Agency	N/A	Approximately 86% of Nevada land area is managed by the federal government. The Nevada Division of State Lands has a State Land Use Planning Agency that acts to assist local government planning agencies, especially in scenarios that involve federal public land. Regardless, the legislature declared it to be in the public interest for local governments to be the primary authority for the land use planning process (NRS 321.640(1)). State participation in land use planning is limited to: ▪ The coordination of information and data; ▪ The acquisition and use of federal lands within the state; ▪ Providing land use planning assistance in areas of critical environmental concern when directed by the Governor or requested by local governments; and ▪ Providing assistance in resolving inconsistencies between the land use plans of local governmental entities when requested to do so by one of the entities. Entitlements from the State Land Use Planning Agency are not required, but may be of assistance if local permitting is needed.
Southern Nevada Regional Planning Coalition (SNRPC).	Master plan Amendment (not applicable)	Nevada requires the establishment of a regional planning coalition in counties whose population is 700,000 or more. Currently, there is only one county (Clark) that has an established regional planning coalition, the Southern Nevada Regional Planning Coalition (SNRPC). The SNRPC prepares a report every two years that summarizes adopted land use policies and submits the report to the Nevada Division of State Lands, among others (NRS 278.02584(4)). Nevada also requires the establishment of regional planning commissions in counties whose population is between 100,000 and 700,000. NRS 278.0261. Counties whose population is less than 100,000 may voluntarily choose to establish regional planning commissions. If proposed by a person other than a public utility, “projects of regional significance” include different criteria including increased environmental impacts, housing, and services. NRS 704.020 defines a public utility as “delivery or furnishing [...] power in any form or by any agency”. Regional planning commissions meet once annually, at which time they must consider any proposed amendments to the 20-year regional plan that may either be necessary for the health and welfare of the community or otherwise substantially benefits the community in general (NRS 278.0272(8)). Regional planning commissions will consider amending the regional plan when triggered by master plan amendments that allow for “projects of regional significance.” For regional planning commissions, the definition depends on whether the project is being proposed by a public utility, as opposed to a project proposed by any person other than a public utility. If proposed by a public utility, “projects of regional significance” include: ▪ An electric substation; ▪ A transmission line that carries 60 kilovolts or more; and ▪ A facility that generates electricity greater than 5 megawatts. A SoCalGas hydrogen pipeline would likely qualify as public utility, however the pipeline use is not a project of regional significance
Local Permits County of Clark and Lincoln Cities of Las Vegas and North Las Vegas	Land Use Plan Amendment	To develop renewable energy projects, the type of development must be allowed for or contemplated in the applicable land use plan. The Nevada legislature directs local government planning agencies to develop master plans for cities/counties that include a land use plan (NRS 321.640(1)). In some cases, depending on population size, the county must establish a regional planning coalition that then develops and administers a comprehensive regional land use policy plan. If the applicable land use plan does not allow for or contemplate the desired type of renewable energy project, the developer may amend the land use plan. Generally, local government planning agencies include: ▪ The planning commission for the city in which the land is entirely located; ▪ A county or regional planning commission; Depending on the project location, land use plans are administered by a city/county planning commission, regional planning commission, or regional planning coalition. Regardless of the administering entity, the applicable land use plan may already contemplate and allow for the desired type of development. In such cases, the land use plan does not need to be amended and the developer may continue with the project. Where the land use plan does not contemplate and/or allow for the desired type of project, the developer must continue with the process. County planning commissions are required to meet once a month (NRS 278.050). Developers may request an amendment to the land use plan at the monthly meeting. The planning commission will determine whether or not to consider the amendment at a subsequent meeting. The land use plan cannot be amended unless the planning commission agrees to consider the amendment.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Water and Natural Resources		
Nevada Department of Wildlife (NDOW)	HCP (Optional)	The Nevada Department of Wildlife (NDOW) oversees implementation of state biological resources considerations. NDOW sponsors an incidental take program that is similar to the federal program under the Endangered Species Act. The developer has the option to apply for an incidental take permit in the event the developer anticipates the possibility of an unintended harm to a protected species. State threatened and sensitive animals are listed in Nevada Administrative Code (NAC) 503. Developers may also choose to establish a Habitat Conservation Plan for their project to facilitate cooperation with NDOW. The habitat conservation plan is voluntary but could serve as good faith in the event an unanticipated impact on a species occurs. If the project will disturb wildlife, then the developer may be required to obtain an Incidental Take Permit from NDOW. State notification and review process for wildlife considerations is required for all energy projects 10 megawatts or greater (NRS § 701.600 et seq.). If the developer files an application with the federal government for a lease or easement for a right-of-way for an energy development project or an application with the Public Utilities Commission of Nevada or any county in relating to the construction of an energy development project must, concurrently with the filing of the application, file a Notice of Energy Development Project with and provide an initial fee to the NDOW. NRS 701.610(1). If the project is under 10 MW, then the developer is not required to provide notice to NDOW. A standalone hydrogen pipeline is not anticipated to require review by NDOW.
Nevada Division of Environmental Protection (NDEP)	401 Certification	Section 401 of the Clean Water Act (CWA) requires a Water Quality Certification for any federal license or permit that is issued to construct or operate a facility, which may result in any fill or discharge into the navigable waters of the United States. The Utah Division of Water Quality oversees the 401 Water Quality Certification process. NDEP handles the nuances of the permitting process.
NDEP	SWPPP	A Construction Stormwater Permit is required from the Nevada Bureau of Water Pollution Control within the NDEP if the project will discharge stormwater into waters of the U.S. and will disturb one or more acres.(Nev. Rev. Stat. Ann. § 445A; Nev. Admin. Code § 445A).
NDEP	Water Discharge	NDEP protects groundwater quality through issuing groundwater discharge permits under for activities that impact groundwater quality such as surface disposal, septic systems, unlined ponds, overland flow, reuse and irrigation (NAC 445A, § 228). Groundwater discharge should not be confused with non-point source discharges. Groundwater discharges impact underground sources of water such as drinking water supplies, while non-point source discharges impact surface water bodies such as rivers or streams through runoff. A developer seeking to discharge pollutants into waters of the state of Nevada (including groundwater) must complete a Groundwater Discharge Permit Application provided by the NDEP no less than 180 days before the discharge of such pollutants.
NDEP Bureau of Air Pollution Control (BAPC) Clark County Department of Air Quality	Surface Area Disturbance (SAD) Operating Permit Air Quality Permit	The federal Clean Air Act is administered by the United States Environmental Protection Agency at the federal level. However, Nevada have been granted authority to administer the various parts of the CAA within the state boundaries through State Implementation Plans (SIPs). The Nevada Division of Environmental Protection (NDEP) and, more specifically, its Bureau of Air Pollution Control (BAPC) is the entity tasked with permitting the CAA within the state. BAPC has jurisdiction over all air quality programs in all counties in the state except for Washoe and Clark Counties. These counties have their own Air Quality jurisdictions over which BAPC retains jurisdiction over only fossil fuel-fired units that generate steam for electricity generation. Disturbing 5 acres or more of surface area not related to agriculture is required to have a Surface Area Disturbance (SAD) permit. The BAPC issues air quality operating permits to stationary and temporary mobile sources that emit regulated pollutants. Construction activities may require a SAD Operating Permit from the Nevada Division of Environmental Protection, Bureau of Air Pollution Control if the project disturbs or covers 5 or more acres of land. [Nev. Admin. Code § 445B.22037(3)]. Equipment used for the construction pipeline projects, however, typically does not require an Air Quality Permit. The temporary use of a portable diesel generator that qualify as a “nonroad engine” under Nev. Admin. Code § 445B.113 does not require an Air Quality Permit (Nev. Admin. Code § 445B.287). All projects must also comply with fugitive dust rules, which require a developer to prevent controllable particulate matter from becoming airborne and implement an ongoing program using the best practical methods to prevent particulate matter from becoming airborne (Nev. Admin. Code § 445B.22037(1)–(2)).
Nevada State Historic Preservation Office (SHPO)	Permission to Proceed (NHPA) Section 106 Consultation (16 U.S.C. 470)	When required under a federal action, Nevada State Office of Energy must forward the application to SHPO for review. SHPO reviews the application for potential impact on cultural resource. The SHPO may also consult with any tribal authorities as well to ascertain the cultural significance of the area. SHPO will document any comments or concerns and forward them to NSOE. NSOE is responsible for balancing the potential cultural impacts against the utility of the project. NSOE will issue permission to proceed, request further information, or notify the developer of the need for further consultation. Typically, any potential impact may be mitigated through a mitigation plan with the developer.
Land and Right-of Way (ROW) Regulation		
Nevada Department of Transportation (NDOT)	Occupancy Permit	An Occupancy Permit is needed from the NDOT if a project requires a permanent encroachment (an encroachment of one year or longer) on any Nevada streets, highways or other right-of-way. (Nev. Rev. Stat. § 408.423(1)). Depending on the requested encroachment and duration of any necessary construction, the NDOT may require a traffic control plan, and/or drainage report.
Nevada Division of State Lands	Encroachment	The State Land Registrar is charged with keeping records of all lands and interests in lands held by the state of Nevada. However, persons wishing to use public lands should apply for authorization with the State Land Registrar (NAC § 321.030). All applications are sent out for a mandatory 30-day review and comment period to other state agencies. Maximum a minimum of 120 days for processing permits and authorizations and minimum of 6 months for processing leases and easements. (Leases must be approved by the Board of Examiners & the Interim Finance Committee, a minimal 90-day process.)
State of Utah		
Pipeline and Energy Regulations		
Utah State Environmental Review, Department of Environmental Quality (DEQ)	9-UT-a (Optional)	Utah does not have a mandatory state environmental review process for development projects. However, DEQA has an optional Energy Pre-Design Meeting (9-UT-a) process for early consultation to coordinate permitting requirements to assist with obtaining air, land, and water permits quickly and efficiently.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Utah Public Service Commission	(not applicable)	In general, regulates transmission lines. Permits not anticipated for a hydrogen pipeline.
Utah Local Agencies: Millard, Beaver, Iron, and Washington Counties	Special permit, Special Exception, or Variance	An approval may be needed from the municipal planning commission where a project is located prior to commencing construction (Utah Code § 10-9a-102). Land use planning is primarily delegated to local and municipal governments. A developer should ensure that a proposed project complies with the adopted land use plans and zoning regulations of the municipality in which the proposed project is located (Utah Code § 10-9a-102). Municipalities may prepare or amend and adopt a plan of conservation and development for the municipality (Utah Code § 10-9a-102(2)). Review the local government website, or contact the municipal clerk, or planning board to identify any applicable conservation and development plans and zoning regulations, and if they have been updated specific to utility-scale hydrogen. If a project does not comply with applicable municipal plans and/or zoning regulations, a developer may need a special permit, special exception, or variance from a municipal plan or zoning regulation. The special permit, special exception, or variance application or request required may vary by municipality.
Water and Natural Resources		
Utah Division of Water Quality (UDWQ)	401 Certification	Section 401 of the Clean Water Act (CWA) requires a Water Quality Certification for any federal license or permit that is issued to construct or operate a facility, which may result in any fill or discharge into the navigable waters of the United States. The Utah Division of Water Quality oversees the 401 Water Quality Certification process. The director of the Utah Division of Water Quality handles the nuances of the permitting process.
UDWQ	UPDES Permit (SWPPP)	Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. Under the Clean Water Act, the United States Environmental Protection Agency (EPA) has delegated authority to the Utah Division of Water Quality (UDWQ) for the permit program controls under the National Pollutant Discharge Elimination System. This program is called the Utah Pollutant Discharge Elimination System (UPDES). A UPDES General Permit is needed for Discharges from Construction Activities (Permit No. UTRC00000), also known as a Construction General Permit (CGP), from the Utah Division of Water Quality (DWQ) for construction activities that will discharge stormwater into waters of the state and will disturb one or more acres of land or are part of a common plan of development or sale that will disturb one or more acres of land. UPDES Permit No. UTRC00000, § 1.1.2; Utah Code Ann. § 19-5-107. The DWQ issues UPDES permits in accordance with Utah Code Ann. §§ 19-5-107, 108 and U.A.C. R317-8. DWQ, within the Utah DEQ , controls water pollution by regulating point sources that discharge pollutants into the waters of the United States through the UPDES system. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.
UDWQ	Hydrostatic discharge Notice of Intent	Program discharge DWQ-2013-011660
Utah State Historic Preservation Office, Utah Antiquities Section, Utah Public Lands Policy Coordination Office	NHPA Section 106 Consultation (16 U.S.C. 470)	Utah law requires state agencies and developers using state funds to take into account how their expenditures or undertakings will affect historic properties. They must also provide the State Historic Preservation Officer (SHPO) with a written evaluation of the project and an opportunity to comment. Consulted as part of federal Section 106 Consultation
UDWR	9-UT-a (Optional)	Utah does not have an incidental take permit process. Typically, the UDWR becomes involved during the 9-UT-a: Energy Pre-Design Meeting Process. Utah has entered into several mitigation agreements with energy proponents on big projects and even a few on small projects. Parties have mitigated direct and indirect impacts to mule deer winter range (protected habitat) and some state sensitive species.
Utah Public Lands Policy and Coordinating Office	Utah Greater Sage-Grouse Land Use Plan Amendment (not applicable)	Areas identified by the State as habitat on federal and state lands should be managed to avoid permanent surface disturbance to the greatest degree possible. Consultation with the DWR should occur at the earliest opportunity when land use which may result in a disturbance is contemplated. This protocol may be applied by private landowners, or on SITLA property, through a voluntary incentive-based agreement, to minimize impacts from permanent disturbance on private and SITLA property. Project proponents should apply Utah DWR protocol upon federal, state, SITLA and private lands in Sage Grouse Management Areas (SGMAs), consistent with Utah Administrative Rule R634-3 (Compensatory Mitigation Program), as amended. The project crosses through SGMAs. However, given the pipeline is proposed underground, no permanent impacts to Utah sage grouse habitat are anticipated. Compensatory mitigation will not be required.

Administering Agency or Regulation	Permit, Approval, or Clearance	Project Applicability
Land and Right-of-Way (ROW) Regulation		
UDWR	Rights-of-Way Lease	Rights-of-Way Lease from the UDWR for projects that cross a Wildlife Management Area (WMA) or other DWR managed area (R657-28-23). The following information is required as part of the application to obtain a Right-of-Way Lease as it pertains to biological resources: ▪ Identification of adverse impacts to wildlife and wildlife habitat associated with the proposed use and how they will be avoided, minimized, or mitigated. ▪ Before final approval is granted the DWR may require the applicant to provide the following additional information: ▫ A certified copy of a survey of the area affected by the proposed project prepared by a licensed surveyor. A centerline survey describing the proposed right-of-way lease and its width is adequate for a pipeline, road, power line, or similar use. ▫ A biological assessment, including an analysis of the potential direct, indirect, and cumulative effects the proposed project may have on wildlife, wildlife habitat, and public recreational use opportunities. ▪ A survey of threatened, endangered and candidate plant and animal species, Utah wildlife sensitive species, and Utah species of special concern conducted on and adjacent to the proposed project. ▪ Proof that the applicant has complied with the provisions of NEPA, where applicable, including preparation of all environmental assessments, environmental impact statements, or other reports required by the administering federal agency. Project crosses Pahvant WMA. Anticipated permitting time period is 180 days from application completeness.
State of Utah School and Institutional Trust Land Administration (SITLA)	Pipeline Easement Permits	SITLA grants pipeline easements through its Surface Business Group. Permits are issues for a maximum term of 30 years. The following information is required as part of the application to obtain an easement: ▪ A cover letter, map, and legal description of the project prepared by a licensed land surveyor. ▪ Typical processing requirements include: ▫ Cultural resources surveys. ▫ Review by local government. ▫ A 30-day review by the Resource Development Coordinating Committee Easement fees apply, dependent on parameters of project.
Utah Department of Transportation (UDOT)	Encroachment Permit Grant of Access Permit	A permit from the <u>Utah Department of Transportation</u> (UDOT) may be needed if a project requires access to a state highway Right-of-Way for construction, modification or relocation of an existing state highway. <u>Utah Admin. Code § R930-6.8(2)(a)-(b)</u>. UDOT's regional offices protect the State's right-of-way and facilitate and coordinate other highway users and provide for safe and efficient operation of Utah's highways. The regional offices are responsible for accommodating utility facilities for public service and work zone safety by issuing permits for access, encroachment, outdoor advertising, junkyard, filming, and special events. An Encroachment Permit may be needed from the UDOT if a project requires construction, installation, and repair-related activities to take place within the state right-of-way [Utah Admin. Code § R930-6-8(1)(g); Utah Admin. Code § R930-7-6(6)(a)]. A Grant of Access Permit may be needed from the UDOT for any project that requires a new, modified, or relocated driveway, other curb cut, or local street connection on a State Highway. Utah Admin. Code r. 930-6. A new Grant of Access Permit is also required when there is a change in land use or a change in the use of an existing Access Permit. The Grant of Access Permit process can be found in more specific detail in the Manual on the Accommodation of Utilities and the Control and Protection of State Highway Rights of Way in section 7.2.6 (incorporated by reference in the Utah Administrative Rule R930-6). A Grant of Access Permit does not carry a right of construction.
Utah Division of Forestry, Fire and State Lands (UFFSL)	Utah State Easement	An easement may be needed from the Utah Division of Forestry, Fire and State Lands (UFFSL) if a project requires access on, through, or over any state land. Utah Code § 65A-7-8. The UFFSL administers the issuance of easements on or over any state lands (Utah Code § 65A-7-8). UFFSL has established regulations and price schedules for easements.