



Agenda Submittal

Agenda #:	2	Status:	PC-Regular
Type:	Ordinance	Department:	Human Resources
File #:	20-771	Contact:	Eric Wilberg, 784.6765
Agenda date:	3/24/2020	Final action:	
Title:	PUBIC HEARING to consider Use Permit Application No. U-19-02 and Marsh Development Permit MD-19-01 of Chevron Pipe Line Company to replace an approximately 2.5-mile portion of an 8-inch lateral pipeline that traverses an area located within the Suisun Marsh from Grizzly Island Road to Birds Landing Road within the Suisun Marsh Agriculture "A-SM-160" and Marsh Preservation "MP" Zoning Districts; APNs: 0046-230-010, 020, 030, 040, 0048-070-280, 0090-070-420, and 460. (Project Planner: Eric Wilberg) Staff Recommendation: Approval		
Governing body:	Planning Commission		
District:			
Attachments:	1. A - PC Draft Resolution, 2. B - Initial Study and Mitigated Negative Declaration, 3. C - Project Location Map, 4. D - Project Area Map, 5. E - Birds Landing Work Site, 6. F - Grizzly Island Work Site, 7. G - Pipeline Grouting Work Site, 8. H - Horizontal Directional Drilling Diagram, 9. I - Valve Station and BAPL Tie-in, 10. J - Pipeline Grout and Cap Segment		

Date	Ver.	Action By	Action	Result
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RECOMMENDATION:

1. Conduct a noticed public hearing to consider Use Permit application No. U-19-02 and Marsh Development permit MD-19-01 of Chevron Pipe Line Company to permit Utility Facilities and Infrastructure outside of County Right-of-Way within the Suisun Marsh; and
2. Adopt a resolution to Approve Use Permit U-19-02 and Marsh Development permit MD-19-01 subject to the mandatory and suggested findings and recommended conditions of approval (Attachment A, Resolution).

EXECUTIVE SUMMARY:

In 1966, the Chevron Pipe Line Company (CPL) constructed their Bay Area Products Line (BAPL) which runs from Pittsburg-to-Sacramento. Recent inspections performed on the pipeline identified anomalies (i.e., potential minor imperfections of the pipe's walls). To eliminate the anomalies, CPL proposes to replace an approximately 2.5-mile pipeline segment that runs through the Grizzly Island Wildlife and Birds Landing Areas within unincorporated Solano County. The project would not increase the capacity or throughput of the BAPL and be the same diameter as the existing pipe. The new pipe would be installed by using horizontal directional drilling (HDD) under Suisun Marsh from two entry points located at the Birds Landing Work Site (BLWS) and Grizzly Island Work Site (GIWS).

ENVIRONMENTAL ANALYSIS:

The California State Lands Commission acting as the Lead Agency has prepared and adopted an Initial Study and Mitigated Negative Declaration (IS/MND) for the project. The IS/MND identified certain potentially significant impacts together with proposed mitigations to reduce the impacts to less than significant along with other impacts determined to be less than significant.

Pursuant to the California Environmental Quality Act, CEQA Guidelines Section 21069, Solano County is acting as a Responsible Agency for the issuance of the Use Permit and Marsh Development Permit required for the project.

Reference Attachment B, Initial Study and Mitigated Negative Declaration.

BACKGROUND:

- A. Prior approvals:** n/a
- B. Applicant:**
Chevron Pipe Line Company
c/o Rand Reynolds
2360 Buchanan Road
Pittsburg, CA 94565
- C. General Plan Land Use Designation/Zoning:**
General Plan: Marsh, Agriculture
Zoning: Marsh Preservation, Agriculture Suisun Marsh
- D. Existing Use:** Non-irrigated farmland and grazing, wetlands, sloughs
- E. Adjacent Zoning and Uses:**
North: Suisun Marsh Agriculture "A-SM-160" Exclusive Agriculture "A-40", grazing
South: Marsh Preservation "MP", managed wetlands
East: Agriculture "A-160", grazing
West: Marsh Preservation "MP", managed wetlands

Project Location

The project is located within the Suisun Marsh approximately 8 miles southeast of Suisun City.

As stated in the Solano County Policies and Regulations Governing the Suisun Marsh:

The Suisun Marsh represents an area of significant aquatic and wildlife habitat and is an irreplaceable and unique resource to the residents of Solano County, the State, and Nation. The Marsh comprises approximately 85,000 acres of tidal marsh, managed wetlands, and waterways. It is the largest remaining wetland around San Francisco Bay and includes more than ten percent of California's remaining wetland area. The Marsh is also a wildlife habitat for waterfowl of the Pacific Flyway. Because of its size and estuarine location, it supports a diversity of plant communities which provide habitats for a variety of fish and wildlife, including several rare and endangered species.

In 1977, the California State Legislature enacted the Suisun Marsh Preservation Act which provides a mechanism to preserve and enhance the wildlife habitat of the Suisun Marsh and to assure retention of upland areas adjacent to the marsh. A key component of the Act is the classification of two management areas within the Suisun Marsh. The Primary Management Area is made up of tidal marshes, seasonal marshes, managed wetlands and lowland grasslands. The Secondary Management Area includes the adjacent agricultural and upland areas surrounding the marsh and serves as a buffer between the Primary Management Area and adjacent land uses. The project has features in both management areas of the Marsh.

The topography throughout the proposed project area is flat, exhibiting slopes of less than six percent (6%). The area generally drains south towards Suisun Bay. Unnamed drainage ditches utilized for water management by surrounding duck clubs and agricultural purposes are located throughout the project area. The project site, as well as the surrounding properties, is utilized mainly for seasonal outdoor recreation purposes, including boating, duck hunting, fishing, hiking, wildlife viewing as well as cattle grazing.

Reference Attachment C, Project Location Map

Background and Objective

Chevron owns and operates the Bay Area Products Line (BAPL). The BAPL pipeline system consists of a trunk line that originates at the Richmond Refinery in Richmond, California, and runs to Bethany Station near Brentwood. There are three pipeline legs that branch from the trunk line. One line begins in Pittsburg and travels north to Sacramento; a second line runs from Bethany Station south to the community of Banta in San Joaquin County; and the third line extends from Bethany Station to San Jose. The BAPL is used to transport refined products (e.g., gasoline, diesel, jet fuel) from the Richmond Refinery to the locations described above.

CPL performs regular maintenance on the pipeline to provide public safety, protect the environment through which the pipeline runs, and comply with the regulations and requirements established by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration. Recent inspections of the Pittsburg-to-Sacramento lateral pipeline, originally installed in 1966, show anomalies of the pipe's walls in the segment that traverses the Project location in Suisun Marsh. Until permits are obtained and the pipeline replacement completed, CPL is implementing measures to address these anomalies and protect the public and the environment, such as pressure reductions ("de-rates") to lower the operating pressure and flow rate of the line.

The objectives of the Project are:

- Protect people and the environment by maintaining near and long-term integrity and reliability of the pipeline.
- Minimize impacts on high-value wetlands that are part of the Suisun Marsh Preservation Agreement.
- Reduce the impacts from future maintenance and repairs in the Suisun Marsh primary and secondary management areas.

Project Description

Chevron Pipe Line Company is proposing to replace an approximately 2.5-mile portion of an 8-inch lateral pipeline that traverses an area within Suisun Marsh from Grizzly Island Road to Birds Landing Road. The Project would replace this portion of CPL's Pittsburg-to-Sacramento lateral pipeline with a new segment of the same diameter as the existing pipe to address anomalies in that portion of the pipeline and reduce the potential for impacts from future maintenance and repairs in Suisun Marsh.

The Project area would have two entry points from which the horizontal drilling would occur, located at the Birds Landing Work Site (BLWS) and Grizzly Island Work Site (GIWS) As described further below, the BLWS is located north of Birds Landing Road and is predominantly disturbed farmland. The GIWS is a predominantly upland area located north of Grizzly Island Road, within the Grizzly Island Wildlife Area. The wildlife area is under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and managed pursuant to the Suisun Marsh Preservation Agreement.

The Project would also have a small work area, at approximately the midpoint of the total pipeline replacement that would support existing pipeline grouting operations.

Reference Attachment D, Project Area Map

Birds Landing Work Site

The BLWS is an approximately 20-acre work site located north of Birds Landing Road on privately owned predominantly disturbed farmland. Small portions of the site and access road are within the Primary Management Area of Suisun Marsh, with the majority of the work site in the Secondary Management Area. The work site would be created directly on the ground surface where vegetation trimming may be necessary. Construction mats, temporary fill or grading may be utilized, if needed, to provide a stable work surface to accommodate the drilling rig and other equipment and materials at the work site.

Equipment at the BLWS would include an approximately 50-foot long horizontal drilling rig driven by an approximately 1,700-horsepower diesel power unit, and has a 750,000-pound or greater pushing/ pulling capacity. A “dead-man” system consisting of steel road plates or similar for load distribution would be installed in front of the drilling rig for counterbalance. Other equipment stationed on the drill pad during construction would include equipment and tool containers, up to ten, 10,000 gallon tanks for mixing drilling fluid/drilling mud, a pump to transfer the drilling fluid through the system, and up to 30, 21,000-gallon water tanks. A system to separate the drilling fluid and soil cuttings would also be present to allow reuse (recycling) of the drilling fluid during drilling.

A control unit mounted on a drop deck trailer would provide housing for the drill operator and surveyor. All rig controls and monitoring gauges would be housed in the control unit, along with the equipment used to monitor and record the signals received from the directional drilling equipment. A diesel generator would supply power. Portable sanitary facilities for workers and secured trash receptacles would also be available on-site.

An approximately 150-foot-wide by approximately 4,500-foot-long, temporary work site for pipe string fabrication would be located north of the BLWS drilling rig. The pipe string would be assembled from 40-foot sections of pipe and laid out on rollers in three parallel segments along the pipe string layout area before installation in the borehole.

Reference Attachment E, Birds Landing Work Site

Grizzly Island Work Site

The GIWS is an existing work site that was previously used for the Mallard Farms HDD project. This pad would be left in place at the completion of the Mallard Farms project and would be reused for this Project before being removed and restored. The pad was constructed using clean fill material to provide a level, stable work surface for the drilling operation. The GIWS measures approximately 200 by 300 feet and is located north of Grizzly Island Road, within the boundaries of the Grizzly Island Wildlife Area. The wildlife area is under the jurisdiction of CDFW. The habitat in the immediate pad area is predominantly upland, with potentially jurisdictional wetlands in the lower lying areas.

An approximate 50-foot buffer of trimmed vegetation would be maintained from the completion of the Mallard Farms HDD project to discourage breeding by migratory birds close to the work area and avoid impacts on potentially nesting migratory birds.

Equipment at the GIWS would include a horizontal drilling rig with a “dead-man” system installed for counterbalance and lateral load support. The drilling rig would be the same as described for the BLWS. Other equipment stationed on the drill pad during construction would include equipment and tool containers, tanks for mixing drilling fluid/drilling mud, pumps to transfer the drilling fluid through the system, and water tanks, similar to those described for the BLWS. A system would be in place to separate the drilling fluid and soil cuttings so that the drilling fluid could be reused (recycled) during drilling. A control unit mounted on a drop deck trailer would provide housing for the drill operator and surveyor. All rig controls and monitoring gauges would be housed in the control unit, along with the equipment used to monitor and record the signals received from the directional drilling equipment. A diesel generator will supply power. Portable sanitary facilities for workers and secured trash receptacles would also be available on-site.

Reference Attachment F, Grizzly Island Work Site

Pipeline Grouting Vent Work Site

The existing segment of pipe between the BLWS and GIWS would no longer remain in operation and would be filled with grout. A temporary air vent would be placed onto the existing line to allow air to escape and grout to fill the line completely. The vent work site would be located north of Montezuma Slough, at approximately the midpoint between the BLWS and the GIWS, on California Department of Water Resources (DWR) property. This approximately 100-foot by 30-foot work site would include an excavation area to expose the existing pipeline and to install an air release vent. The excavation would be made by a light, tracked or rubber tired mini-excavator.

The site would be accessed from the north levee road along Montezuma Slough. For any heavy equipment access, construction mats would be placed from the Montezuma Slough levee road along an existing road in the marsh out to the proposed work site.

Reference Attachment G, Pipeline Grouting Work Site

Site Access and Staging

Construction equipment would be transported to the BLWS using public roads, including Birds Landing Road and Shiloh Road. Access from Birds Landing Road to the BLWS would be via an existing dirt road in the field that traverses two wetland areas. Base rock would be spread over the road for stability, but the wetlands would be avoided.

Access to the pipe string layout area would be from Shiloh Road and an alternate existing private dirt road (unnamed). Equipment would be trucked to the GIWS via Grizzly Island Road, with access to the pad provided by the existing ramp between the road and the work pad created for the previous Mallard Farms project.

Work crews at the BLWS would park in an area south of Birds Landing Road. This area would also be used for staging. Workers at the GIWS would drive to Grizzly Island Wildlife Area and park at the hunter control station approximately 4 miles west of the GIWS. From there, they would use passenger vans to mobilize to the GIWS.

A barge loading/offloading area would be located to the east along Montezuma Slough. This would be used to mobilize and demobilize certain pieces of equipment and may also be used to offload certain materials for the GIWS. This area is a turnout in the constructed levee that has been previously graded, compacted, and graveled. Barges would temporarily moor in Montezuma Slough and load/offload equipment or materials using a crane mounted on the barge. When needed for water deliveries, a catwalk would be placed between the barge and shore and a hose would be placed on the catwalk to pump water to trucks on shore. No permanent infrastructure or ground-disturbing construction would be needed in Montezuma Slough or the turnout for this loading/offloading area.

Horizontal Directional Drilling

The project would use an “intersecting drill” method consisting of two entry points, one located at the BLWS and the other at the GIWS. Drilling would be completed in three stages, depicted in Attachment H (Horizontal Directional Drilling Diagram):

- The first stage would consist of directionally drilling a pilot hole adjacent to the existing pipeline alignment. Drilling of this hole would start from each end and meet at an intersection point along the drilling path.
- The second stage would involve reaming the smaller, conjoined pilot hole to the appropriate size for the outer diameter of the new pipe to be installed.
- In the third stage, the new section of pipe (also known as the pipe string or back string) would be pulled through the drilled hole, beginning from the BLWS and pulling southward to the GIWS.

Pilot Hole and Reaming

At the BLWS and GIWS, drill pits would be excavated in the work pad before the start of drilling. The pits would be approximately 12 feet wide by 12 feet long by 5 feet deep. Soils excavated from the pit would be stockpiled until construction is complete; upon completion, the soils would be backfilled into the pit. During drilling, fluid/mud returns from the borehole would be sent to a fluid/mud cleaning system, separating the solids from the drilling fluid/mud so the liquids could be recycled as much as possible to reduce freshwater usage. A steel conductor casing would be installed, using a pneumatic pipe ram, in the same line and grade as the HDD profile, and at an angle matching the entry angle of the pilot drill, down to a depth that would provide adequate lateral support for the anticipated installation loads. The conductor casing would aid in maintaining drilling fluid returns and would provide anchorage support for the drilling rig during drilling operations. The drill string would be inserted into this casing.

To begin the HDD, a pilot hole would be drilled starting from each entry location (BLWS and GIWS), continuing along the designed drill path, and eventually intersecting at approximately the midpoint location (approximately 1.25 miles from

each drill point). The borehole will be approximately 120 feet below the surface for most of its length. After the pilot hole is drilled, the second phase of drilling would enlarge the pilot hole to the final size by passing a larger cutting tool, known as a back reamer, through the pilot hole. Reaming would include connecting a 16-inch cutter on the south end of the drill and pulling it to the north end, using the drill rig for pulling and rotating the drill string and cutter. The drilling of the pilot hole and reaming may continue as a continuous (24/7) operation.

Drilling Fluid

Directional drilling would use a nonhazardous bentonite clay-based drilling fluid/drilling mud to coat and lubricate the drill stem, drill bit, and borehole during drilling; stabilize the borehole from collapse; and remove the drill cuttings. Bentonite is inert, nontoxic, and naturally occurring clay that is used for conventional drilling projects. During drilling, the drilling fluid would be pumped from the fluid/mud system tanks through the drill stem (drill pipe) to the drill bit. The fluid would then return up the annulus to the fluid/mud system tanks on the work site. A centrifugal transfer pump would send the drilling slurry to the cleaning equipment (reclaimer), where the soil and solids would be separated from the drilling fluid before being pumped back through to the drill stem. After the completion of drilling, excess drilling fluid (approximately 9,000 gallons) would be removed via vacuum trucks located at both work sites and transported to an appropriately permitted landfill (Class II or Class III) for disposal.

During drilling, the drilling fluid would be pumped into the borehole under pressure. If cracks or fissures exist in the underground substrate, drilling fluid/mud could move through these cracks and potentially exit at the ground surface. This release at the ground surface is known as an “inadvertent return” of drilling fluid with a surface expression. The potential for inadvertent returns would be reduced by establishing the proper borehole depth and target operating pressures during the design phase, using information collected from prior geotechnical studies completed for the project.

To promote safe, low-impact project execution, additional precautions would include conducting continuous monitoring of drilling fluid pressures by the driller and having a contingency plan in place to immediately initiate inspections of the drill path for potential inadvertent returns.

Water Use during Drilling

Water required for mixing the drilling fluid/mud would be obtained from the City of Fairfield or another municipal supplier with sufficient capacity. The water would be trucked to the BLWS and either trucked or barged to the GIWS. Portable storage tanks at the work sites would be used to store the water. Approximately 12,000 cubic yards of water would be used for drilling and construction.

Pipe String Assembly

The approximately 2.5-mile pipe string would be assembled from 40-foot sections of pipe (delivered by flatbed truck) and laid out on rollers in three parallel segments along the pipe string layout area. To level the rollers, they would be dug into place on bare ground or placed on shims. The three sections would be welded together in stages as one continuous pipeline segment during the installation of the pipe string into the borehole.

Hydrostatic Testing

After the completion of welding and weld joint inspection of the new pipe segments, the segments would be individually hydrostatically pressure-tested to ensure the integrity of all weld points. Before installation in the ground, the pipe would be tested hydrostatically for 4 continuous hours to ensure that no leaks are in the new pipe. Water used for hydrostatic testing would come from the same municipal source as water for the drilling fluid. After installation of the new pipe in the ground, a second hydrostatic test would be completed (as described above, but for a total of 8 hours) to ensure that the pipe string maintained its integrity during the pullback. Water used in the first test would be captured in a portable storage tank and contained on-site to be reused for the second test. The hydrostatic test would use approximately 34,000 gallons of water.

After the completion of hydrostatic testing, the test water would be contained in portable storage tanks and tested. The water would then be discharged to the surrounding uplands, in accordance with the appropriate state agencies water discharge requirements. This would include the Regional Water Quality Control Board’s discharge requirements for surface waters. If the testing indicates that the water contains contaminants higher than permitted levels, the water would be transported off-site for disposal at a permitted commercial disposal facility.

Pullback

In preparation for the installation of the pipe in the drilled hole (pullback), the new pipe string would be lifted by crane into alignment with the borehole, fed along rollers, and connected to the back reamer (previously used to enlarge the borehole) with a swivel connection. It would then be pulled back through the hole, using the drilling rig stationed at the GIWS. During the pullback operation, the three pipe segments in the layout string would be welded together into one continuous pipeline segment. As the first segment is nearly pulled into the borehole, the second segment would be welded on and pulled through. The third segment would be welded on in a similar fashion. The pullback operation must be completed as a continuous, uninterrupted process to prevent the borehole from collapsing; thus, this process would entail night work.

New Pipe Tie-In

The “new pipe tie-in” refers to connecting the newly installed pipe to the existing Bay Area Products Line (BAPL). The existing BAPL would be shut down, emptied of any product, and purged with nitrogen before cutting for the tie-in.

To connect the new pipe to the BAPL at the BLWS, an open trench would be excavated from the end of the new pipe northwest to the BAPL. This trench would pass through upland habitat (farmland) and would be approximately 800 feet long, 30 feet wide, and 8 feet deep. Appropriate shoring or trench boxes may be used. During excavation of the trench, the upper 6 inches of soil (topsoil) would be removed and stockpiled separately from the deeper soils. The new pipe would be “tied in” or welded to the existing pipeline. After welding of the new pipeline to the existing pipeline, the welds would be x-rayed to allow inspection of the weld points for quality and integrity. After completion of the tie-in, the trench would be backfilled with the soils excavated from the deeper portions, and the original topsoil would be spread evenly over the top.

Reference Attachment I, Valve Station and BAPL Tie-in

At the GIWS, the newly installed pipe would be connected with the new pipe previously installed as part of the Mallard Farms project at the same pad location, and the existing BAPL between the Mallard Farms project and the HDD3 project HDD exit locations would be removed. To accomplish this, the HDD equipment would be demobilized from the site. An approximately 200-foot-long by 30-foot-wide trench would be created by first removing the rock material used to create the pad. Topsoil would be excavated and stockpiled separately. Soils would then be excavated to approximately 8 feet deep between the two pipe segments. The pipe would be tied in as described above, the old pipe will be removed, and the excavation would be backfilled with the soils, with the topsoil material placed on the surface. Given the location of the GIWS in the Suisun Marsh, dewatering of the trench may be necessary.

A permanent cathodic protection test station would be installed on both the GIWS and the BLWS to monitor protection of the pipeline against corrosion. This system would consist of an approximately 3-inch-diameter polyvinyl chloride (PVC) pipe, or similar, installed vertically in the ground near the installed pipeline. Within this cathodic protection test station pipe, metal wires would connect to the pipeline, allowing testing with a slight electrical current that would indicate effective cathodic protection of the pipeline from corrosion. Four guard posts would be installed at each location to mark the location and protect the cathodic protection system from damage.

Relocation of Existing Valve Station

When installed, the proposed replacement pipeline would bypass an existing valve station currently located on Birds Landing Road. These valves are required for the safe operation of the pipeline; therefore, to accommodate the new pipe tie-in, the existing valve station would be relocated approximately 650 feet northward to the proposed BLWS drill site. The existing valve station would be dismantled by excavating an area approximately 55 feet by 25 feet wide and 6 feet deep with a backhoe to remove the below-ground features of the valve station. The excavation would be refilled, and the site would be restored in accordance with right of way and landowner agreements.

The new valve station would be approximately 40 feet by 35 feet and would contain several aboveground valves for pipeline operation. The aboveground pipeline and valves would be surrounded by chain-link security fencing and the area within the fencing would be graveled. To support regular maintenance access to the valve site, the approximately 12-foot-wide access road to the BLWS would be connected to the valve site location. This would be an extension of the existing road through the property that would be used for access to the temporary work area. Construction may include vegetation clearing, grading of the road surface, and placement of base rock to provide all-weather access to the valve

station.

The decommissioned portion of the existing BAPL between the old valve site and the new tie-in location, approximately 1,200 feet, would be removed by creating an approximately 30-foot-wide trench. As with other excavations at the BLWS, the trench would be refilled, and the site would be restored in accordance with right of way and landowner agreements.

Grouting of the Existing Bay Area Products Line Segment

The replaced existing segment of pipe between the BLWS and GIWS would no longer remain in operation. The existing 8-inch line would be filled with grout from both ends of the pipeline toward the middle of the line. Once filled with grout, the pipeline segment would be capped at each end.

A temporary air vent would need to be placed onto the existing line to allow air to escape and grout to fill the line completely. The location would be accessed using the north levee road along Montezuma Slough. Construction mats would be laid down along an existing road on the marsh out to the vent location, approximately 400 feet from the levee. At the vent location, an approximately 40-foot-long by 20-foot-wide by 8-foot deep pit would be excavated to expose the existing pipe. Topsoil would be stockpiled separately and would be replaced when the excavation is refilled at the completion of construction. The total work area including the pit, equipment, and room to stockpile soil would be approximately 100 feet long by 30 feet wide.

Reference Attachment J, Pipeline Grout and Cap Segment

Demobilization and Site Restoration

After construction activities are completed, all equipment and materials would be removed from the work sites, vent location, and construction staging areas. All temporary fill used to create the work areas, including any construction mats, rock fill, and filter fabric would be removed. Areas of disturbed ground at the BLWS, GIWS, and grouting vent work site would be restored in accordance with Project Revegetation Plan (**MM BIO-4**) and any landowner and right of way agreements and regulatory permit conditions, as applicable. All wastes would be hauled by truck from the work sites for disposal at an appropriate, permitted disposal facility consistent with a waste management plan that would be developed to support the Project.

Proposed Schedule

Grizzly Island Wildlife Area, where the GIWS is located, has active hunting seasons when construction generally must be avoided. Elk hunting season begins in late July and runs through late September; waterfowl hunting season begins in October and runs through February. During these hunting seasons, CDFW restricts access to Grizzly Island Wildlife Area.

Because of these access restrictions, the only periods available with no hunting restrictions at the GIWS are during the spring and early summer months. Project construction is anticipated to last approximately four months, if no unanticipated delays occur. Any potential delays, due to events such as equipment malfunction, could extend the project construction duration. Table 1, below shows the approximate activity durations, with no delays.

Equipment, Workforce, and Construction Hours

Construction would include the following types of equipment: diesel-powered drilling rigs, control units, fluid/mud cleaner systems, desilters, generators, forklifts, backhoes, a pipe trailer, cranes, supply trailers, dewatering tanks and pumps, a track excavator, and interlocking all-weather mats.

Drilling of the HDD borehole would require about 50 workers, with about 35 workers in the BLWS and 15 in the GIWS. Separate work crews would work simultaneously in both locations.

Construction activities are expected to occur at both work sites 7 days a week, typically from 30 minutes after sunrise to 30 minutes before sunset. Certain activities, such as drilling, reaming, pullback, hydrostatic testing, and pipe tie-ins, would proceed as continuous activities and would require night work. Other tasks may need to be performed during night shifts to maintain the schedule. The estimated duration of construction activities is shown in Table 1.

Table 1. Project Construction Duration

Activity	Duration (days)
Access Improvements and Mobilization (including	20
Horizontal Directional Drilling	73
Pipe String Assembly (timing simultaneous with	73
Pullback	2
New Pipe Tie-In	14
Demobilization and Site Restoration	14
Total Duration	123*

Note: *Some activities would occur simultaneously. All durations are estimates.

C. General Plan Consistency:

The project site is designated Marsh and Agriculture by the Solano County General Plan Land Use Diagram; however a majority of the pipeline route is designated Marsh. General Plan Policy RS.P-55 allows for the responsible extraction, storage, and transportation of natural resources that minimize the impact on the natural environment. The transmission and distribution of natural resources are consistent with the General Plan's goals and policies within the Suisun Marsh.

D. Zoning Consistency:

Utility facilities and infrastructure for the transmission or distribution of gas, oil, gasoline, or other utility services are a conditionally permitted land use within the Marsh Preservation 'MP' and Suisun Marsh Agriculture 'ASM-160' Zoning Districts pursuant to Section 28.78.20(B)(9) of the County Zoning Regulations.

E. Suisun Marsh Management Area:

The County's Policies and Regulations Governing the Suisun Marsh consolidate the policies and regulation contained in the County's Local Component of the Suisun Marsh Local Protection Program as certified by the Bay Conservation and Development Commission (BCDC). The local marsh protection policies set forth provisions and standards for the construction of utilities, facilities, and transportation systems for natural resources in and immediately adjacent to the Suisun Marsh. These policies are designed to minimize any potential disturbance to the sensitive habitat of the Suisun Marsh. Utilization of existing pipeline infrastructure, pipeline design, construction methods, and time periods for construction are established in the SMPP that accomplish this goal.

There are many aspects of the proposal that are influenced by these Policies which have been incorporated into the project either by design or through mitigation measures and re-enforced through appropriate conditions of approval. For example, the project is consistent with Chapter II - Utility, Facility, and Transportation policy 2(c) in that whenever construction occurs within wetland areas, it is confined to the dry months (generally April 15 through October 15) to minimize disturbance of wetland vegetation, wintering migratory waterfowl, and other avian activity. In addition, a qualified biologist will be involved in many aspects of the proposal, including: conducting pre-construction surveys for special status species, providing environmental awareness training for construction personnel, and providing environmental monitoring throughout the construction process of the two staging areas, access roadway, and installation of the pipeline and related components. Throughout these activities the biological monitor will ensure that conservation, avoidance, minimization, and mitigation measures are adhered to. Implementation of project buffer(s) to special status species and/or habitat, proper installation of barrier fencing, and consultation with the CA

Department of Fish & Wildlife are examples of how the biological monitor will ensure impact minimization remains consistent with Suisun Marsh policies and a less than significant environmental impact is achieved.

Consistent with Chapter II - Utility, Facility, and Transportation policy 2(d), the project also includes the use of construction pads to be laid on wetland areas within the construction zones to support heavy machinery and provide a stable work surface to accommodate the drilling rig and other equipment and materials at the work site to prevent it from sinking into the soft marsh soil. In addition, transportation of equipment and vehicles to the construction sites are limited primarily to existing roads within the immediate vicinity of the replacement pipeline. The construction sites will be well defined and clearly marked so that workers do not disturb adjacent Marsh areas.

Pursuant to Chapter II policy 2(f) the project will minimize potential damage to wetland areas by utilizing horizontal directional drilling to install the replacement pipeline. This construction method, is least damaging to wetlands because it avoids the need for heavy equipment alongside any trench to install the pipe.

Pursuant to Chapter II policy 2(g) the project incorporates mitigation measures which include a revegetation and monitoring plan to restore disturbed areas to pre-project conditions primarily through the reuse of excavated top soil.

F. Agency Review:

In addition to Solano County, the project is subject to the review and approval of other federal, state, and local entities with statutory and/or regulatory jurisdiction over various aspects of the project. As outlined in the environmental document prepared for the project by the California State Lands Commission and included in the table below, the following permitting agencies have jurisdiction over the project.

Permitting Agency		Anticipated Approvals/ Regulatory Requirements
Local	Solano County	• Land use permit • Marsh development permit • Grading permit • Encroachment permit
State	California State Lands Commission	• CEQA lead agency • Lease amendment
	San Francisco Bay Conservation and Development Commission	• Suisun Marsh development permit amendment for the Primary Management Area
	California Department of Resources	• Plan review notice
	California Department of Fish and Wildlife	• Temporary entry permit • Incidental take permit
	San Francisco Bay Regional Water Quality Control Board	• Water quality certification pursuant to Clean Water Act Section 401 • Construction general permit
Federal	U.S. Army Corps of Engineers San Francisco District	• Clean Water Act Section 404 permit; Nationwide Permit #12 to place temporary fill within waters of United States, including wetlands
	U.S. Fish and Wildlife	• Endangered Species Act Section 7 consultation

FINDINGS and CONDITIONS OF APPROVAL:

Staff recommends that the Planning Commission make the findings contained in the attached resolution in support of approving Use Permit application U-19-02 and Marsh Development Permit application MD-19-01 and subject to the recommended conditions of approval. *Reference Attachment A, Draft Resolution*

ATTACHMENTS

- A - Draft Resolution
- B - Initial Study/Mitigated Negative Declaration
- C - Project Location Map
- D - Project Area Map
- E - Birds Landing Work Site
- F - Grizzly Island Work Site
- G - Pipeline Grouting Work Site
- H - Horizontal Directional Drilling Diagram
- I - Valve Station and BAPL Tie-in
- J - Pipeline Grout and Cap Segment