

Appendix K
**Biological Impact Analysis for
Pipeline Crossing Option 1B
and Pipeline Alignment
Option 2B**



MEMORANDUM

GLENN LUKOS ASSOCIATES

Regulatory Services



PROJECT NUMBER: 10320002MITI

TO: Christopher Koontz
City of Long Beach

FROM: Thienan Pfeiffer
Tony Bomkamp

DATE: July 13, 2017

SUBJECT: Biological Impact Analysis for Pipeline Crossing Option 1B and Pipeline Alignment Option 2B, Los Cerritos Wetlands Oil Consolidation and Restoration, Long Beach, California

The June 22, 2017 Biological Technical Report (BTR) prepared by Glenn Lukos Associates (GLA) describes the pipeline corridor that connects the LCWA site to the Pumpkin Patch site as part of the proposed project. The proposed project describes what is referred to herein as Road Crossing Option 1A, a diagonal crossing of the Studebaker Road and 2nd Street Intersection from the LCWA site directly onto the City Property, and Pipeline Alignment Option 2A, which traverses the City Property on an existing narrow access road.

This memorandum provides an impact analysis for Road Crossing Option 1B, which proposes a perpendicular crossing of Studebaker Road from the LCWA site to the Synergy site and a second perpendicular crossing of 2nd Street from the Synergy site to the City Property. For both Road Crossing Options 1A and 1B, the pipelines would traverse the roadways through 42-inch “bored” crossings and therefore the only impacts associated with the crossings are related to the 80-square-foot work area needed to conduct the boring necessary to install the pipelines.

This memorandum also provides an impact analysis of Pipeline Alignment Option 2B, which traverses an alternative alignment on the City Property on an existing wider access road located east of the Pipeline Alignment Option 2A. Both Pipeline Alignment Options 2A and 2B traverse a short distance across an offsite area upon which the City holds a right-of-way easement after leaving the City Property and ultimately terminate on the Pumpkin Patch site. Road Crossing Options 1A and 1B and Pipeline Alignment Options 2A and 2B are shown on Exhibit 1.

The impacts associated with Road Crossing Option 1B and Pipeline Alignment Option 2B are summarized in Tables 1 and 2 below. Following the north to south direction of the proposed pipeline options, the order of the properties is LCWA, Synergy, City Parcel, offsite City right-of-way, and Pumpkin Patch.

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LCWA SITE

Impacts at the LCWA site are limited to the extreme southwest corner where an 80-square-foot pit for directional boring would be installed. Impacts would be limited to non-native grassland, non-native ornamentals, and disturbed areas, *and have already been accounted for in the 4-acre LCWA site impacts associated with the overall project in the BTR.* There is no special-status vegetation within the areas impacted and there would be no significant impacts associated with either pipeline alignment option. Furthermore, there are no areas that meet the Coastal Commission definition of ESHA and thus there would be no impacts to ESHA. Impacts for both Road Crossing Options 1A and 1B are identical and have already been accounted for in the LCWA impacts associated with the overall project; therefore, the impact acreages for these road crossing options are not re-counted here.

SYNERGY SITE

Impacts at the Synergy site are limited to the extreme southeast corner of the site where an 80-square-foot pit for directional boring would be installed for Road Crossing Option 1B. Impacts would be limited to non-native grassland, non-native ornamentals, and disturbed areas. There is no special-status vegetation within the areas impacted and there would be no significant impacts associated with this road crossing option. Furthermore, there are no areas that meet the Coastal Commission definition of ESHA and thus there would be no impacts to ESHA.

Table 1. Summary of Direct Vegetation Impacts Synergy Site – Road Crossing Option 1B	
<i>Upland Alliances:</i>	<i>Acres</i>
Ornamental	0.04
Annual Non-native Grassland	0.11
Grand Total	0.15

CITY PARCEL

Pipeline Alignment Options 2A and 2B enter the City Parcel at roughly the same location at the northeast corner of the City Parcel. The alignment for each option is proposed in existing access roads to minimize potential impacts to wetlands and/or special-status vegetation types to the maximum extent possible.

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Pipeline Alignment Option 2A

As described in the BTR for Pipeline Alignment Option 2A (referred to as the “pipeline corridor” in the BTR), this alignment extends to the south for approximately 225 feet, then makes two 90-degree turns to the west and south on existing narrow access roads through the City Parcel. Once it leaves the City Parcel, the alignment continues offsite for approximately 125 feet on an existing access road before entering the Pumpkin Patch site [Exhibit 1].

As described in the BTR, Pipeline Alignment Option 2A would result in impacts to both upland and wetland vegetation alliances. The impacts to wetlands would occur because portions of the narrow access roads would require widening to accommodate both the pipeline corridor and vehicular access. There is no special-status vegetation areas or areas that meet the Coastal Commission definition of ESHA within the impact footprint. Impacts to each vegetation alliance are described in the BTR and restated below in Table 2.

Pipeline Alignment Option 2B

From the northeast corner of the City Parcel, Pipeline Alignment Option 2B extends to the south for approximately 2,600 feet on an existing access road, then makes two 90-degree turns to the west and south on existing access roads through the City Parcel. Once it leaves the City Parcel, the alignment continues offsite for approximately 125 feet on an existing access road before entering the Pumpkin Patch site [Exhibit 1].

The primary difference between Pipeline Alignment Options 2A and 2B is that Option 2B would not require any widening of existing access roads to accommodate the pipeline and vehicular access. The primary access road for Option 2B is currently wide enough to support both uses.

Pipeline Alignment Option 2B would result in impacts to ruderal uplands and vegetation free zones only. There is no special-status vegetation areas or areas that meet the Coastal Commission definition of ESHA within the impact footprint. Impacts to each vegetation alliance associated with Pipeline Alignment Option 2B are described below in Table 2.

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Table 2. Summary of Direct Vegetation Impacts (Acres) City Property Site		
<i>Upland Alliances:</i>	<i>Pipeline Alignment Option 2A (from BTR)</i>	<i>Pipeline Alignment Option 2B</i>
Development	0.12	0.00
Ornamental	0.05	0.08
Ice Plant Mats	0.01	0.00
Annual Non-native Grassland	0.01	0.02
Ruderal Uplands (e.g., <i>Carpobrotus edulis</i> or Other Ice Plants Semi-Natural Herbaceous Stands (Ice plant mats and/or <i>Bassia hyssopifolia</i> Semi-Natural Herbaceous Stands Five-horn smotherweed thickets)	0.30	0.33
Vegetation Free Zone (Unvegetated Flats (Upland))	1.14	1.46
<i>Upland Alliances Subtotal</i>	1.63	1.89
<i>Wetland Alliances:</i>		
Mulefat Scrub (<i>Baccharis salicifolia</i> Shrubland Alliance (Mulefat Thickets))(G5S4)	0.02	0.00
Ruderal Wetlands (<i>Bassia hyssopifolia</i> Semi-Natural Herbaceous Stands Five-horn smotherweed thickets). In addition, some areas mapped as Ruderal Wetlands consist of <i>Cress truxillensis</i> - <i>Distichlis spicata</i> Herbaceous Alliance (Alkali weed – saltgrass flats)(G4S4)	0.14	0.00
Southern Coastal Brackish Marsh (<i>Typha domingensis</i> – Herbaceous Alliance (Cattail Marshes))(G5S5). Includes areas also containing pickleweed mats and saltgrass flats.	0.001	0.00
Alkali Meadow (<i>Frankenia salina</i> Herbaceous Alliance (Alkali heath marsh)(G4S3) and or <i>Distichlis spicata</i> Herbaceous Alliance (Saltgrass Flats))(G5S4)	0.15	0.00
<i>Wetland Alliances Subtotal</i>	0.31	0.00
Grand Total	1.94	1.89

OFFSITE AREA

Impacts to the offsite area within the City right-of-way occur for approximately 125 feet along an existing access road connecting the City Property to the Pumpkin Patch and are identical for either

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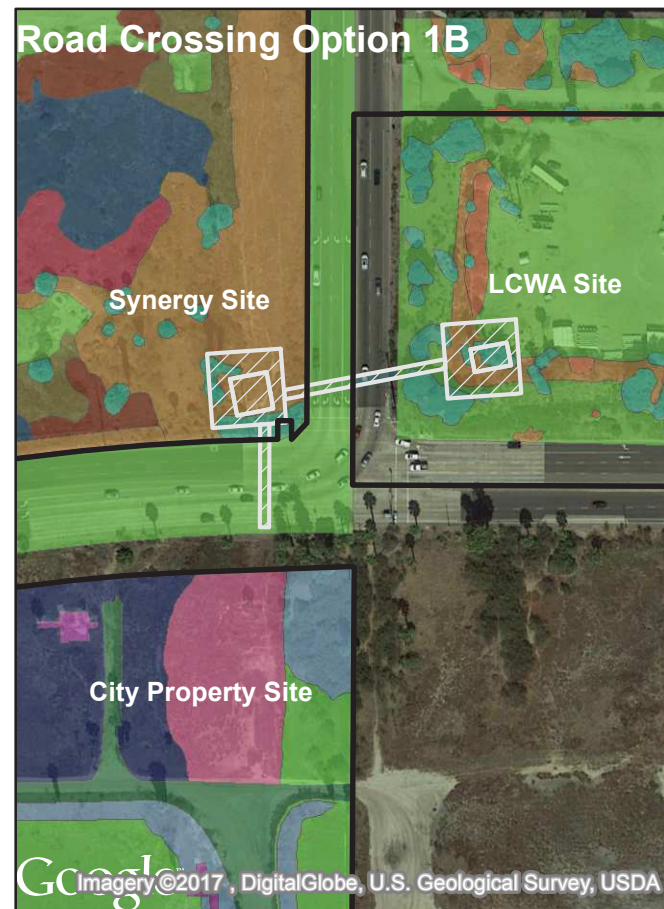
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Pipeline Alignment Option 2A or 2B [Exhibit 1]. Impacts would be limited to non-native grassland, non-native ornamentals, ruderal uplands, and vegetation free areas, *and have already been accounted for in the City Property site impacts associated with the overall project in the BTR.* There is no special-status vegetation within the areas impacted; furthermore, there are no areas that meet the Coastal Commission definition of ESHA and thus there would be no impacts to ESHA. Impacts associated with the offsite City right-of-way area for both Pipeline Alignment Options 2A and 2B are identical and have already been accounted for in the City Property impacts associated with the overall project; therefore, the impact acreages for the offsite area are not re-counted here.

PUMPKIN PATCH

Impacts at the Pumpkin Patch site are limited to the extreme northwest corner. Impacts would be limited to non-native grassland, non-native ornamentals, ice plant mats, and disturbed areas, *and have already been accounted for in the Pumpkin Patch site impacts associated with the overall project in the BTR.* There is no special-status vegetation within the areas impacted and there would be no significant impacts associated with either pipeline option. Furthermore, there are no areas that meet the Coastal Commission definition of ESHA and thus there would be no impacts to ESHA. Impacts for both Pipeline Alignment Options 2A and 2B are identical and have already been accounted for in the Pumpkin Patch impacts associated with the overall project; therefore, the impact acreages for these road crossing options are not re-counted here.

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Legend

Project Boundaries	Menzie's Golden Bush Scrub
Pipeline Corridor Options	Mudflats - Tidal
Alkali Heath Flats	Mulefat Thickets
Alkali Weed-Saltgrass Flats	Non-Native Grassland
Bassia Thicket	Ornamental
Black Willow	Pampas Grass Patches
California Cordgrass Marsh	Parish's Glasswort Patches
Cattail Marshes	Pickleweed Mats
Coyote Brush Scrub	Saltgrass Flats
Disturbed	Shoregrass Flats
Disturbed/Developed	Tidal Channel
Emory's Baccharis Thickets	Unvegetated Flats-Upland
Fountaingrass	Unvegetated Flats-Wetland
Ice Plant Mats	Yellow Star-Thistle Fields
Iceplant/Pickleweed	Yellow Sweet Clover Fields
London Rocket Fields	Development
	Mulefat Scrub
	Ruderal Uplands
	Ruderal Wetlands
	Salt Flat
	Southern Coastal Brackish Marsh
	Southern Coastal Salt Marsh
	Southern Willow Scrub
	Vegetation Free Zone
	alkali meadow

GIS Data Source: VCS Environmental

Coordinate System: State Plane 5 NAD 83
 Projection: Lambert Conformal Conic
 Datum: NAD83
 Map Prepared by: C. Lukos, GLA
 Date Prepared: July 11, 2017

LCW OIL CONSOLIDATION AND RESTORATION PROJECT

Pipeline Corridor Alternatives

GLENN LUKOS ASSOCIATES



Exhibit 1