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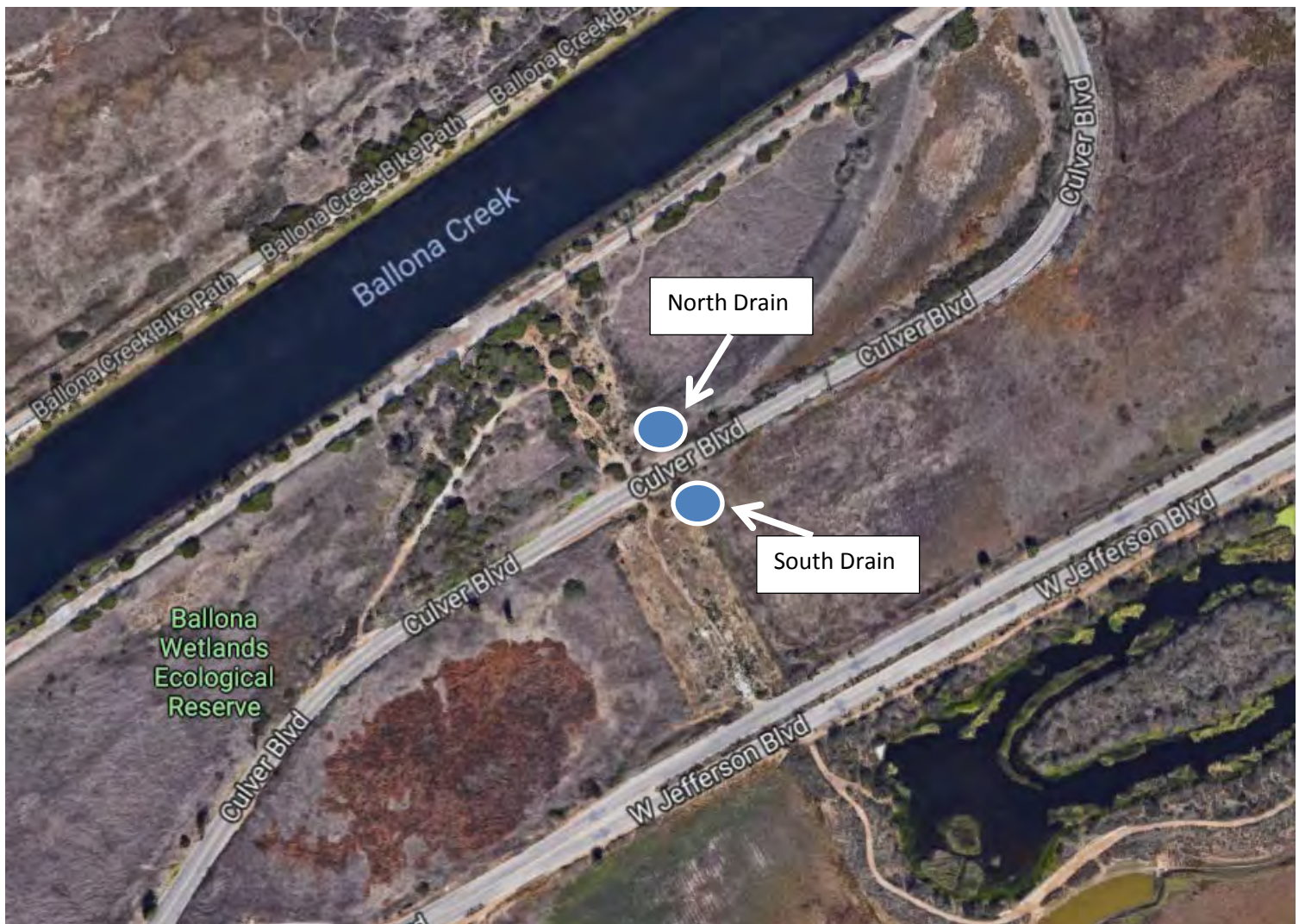
CDP 5-17-0253-A1 (CALIFORNIA DEPT. OF FISH &
WILDLIFE)
AUGUST 12, 2020

EXHIBITS

Exhibit 1 – Vicinity Map and Project Location

Exhibit 2 -- *Habitat Impacts Related to Ballona Wetlands Ecological Reserve, Playa Del Rey, CA*, prepared by Dr. Jonna Engel, CCC Senior Ecologist, July 23, 2020





CALIFORNIA COASTAL COMMISSION

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**M E M O R A N D U M**

FROM: Jonna D. Engel, Ph.D., Senior Ecologist
TO: Mandy Revell, Coastal Program Analyst
SUBJECT: Habitat Impacts Related to Unpermitted Drains in Ballona Wetlands Ecological Reserve
DATE: July 23, 2020

Documents Reviewed:

CDFW, South Coast Region. July 6, 2020. Draft Ballona Wetlands Ecological Reserve Willow Restoration Plan.

Burg, R. (CDFW, Environmental Program Manager, South Coast Region). February 11, 2019. Letter to Mandy Revell, Coastal Program Analyst. Re: Coastal Development Permit Application 5-18-0554.

Brody, R.C. (CDFW, Land Manager, Ballona Wetlands Ecological Reserve). December 18, 2018. Memorandum to: Concerned parties, Department of Fish and Wildlife. Subject: Sealing of Two Risers at the Ballona Wetlands Ecological Reserve.

E. Read and Associates, Inc. September 19, 2018. Addendum to Biological Evaluation of Two Drains Adjacent to Culver Boulevard. Letter Report to: Mr. Marc Huffman, Vice President of Planning and Entitlements.

PSOMAS. September 27, 2017. Hydrologic Analysis for Freshwater Outlet Drain Risers. Prepared for: Playa Capital Company, LLC.

E. Read and Associates, Inc. November 11, 2013. Biological Evaluation of Effects of Debris Drains on the Ballona Wetlands. Letter Report to: Mr. Marc Huffman, Vice President of Planning and Entitlements.

In approximately 1996 two debris drains were installed on either side of Culver Boulevard within the Ballona Wetlands in association with the freshwater marsh

(FWM) storm drain overflow outlet pipe (Figure 1). The debris drain risers were at the end of pipes connected to the FWM storm drain overflow outlet pipe (Figure 2). The debris drain risers and pipes were not permitted. I have been asked to evaluate the history and current conditions of the natural resources within the vicinity of the unpermitted debris drains. To do this I visited the site on February 1, 2019 and have reviewed aerial photos and the documents listed above.

E. Read and Assoc, Inc. (2013) reviewed vegetation maps from 1991 and 2006 reports respectively, and found that according to the 1991 map, vegetation in the vicinity of the debris drains consisted of roadside upland weeds dominated by non-native invasive black mustard with the only natives being weedy species of wide occurrence. E. Read reported that the 2006 vegetation map concurred with the 1991 vegetation map. E. Read visited the site on November 8, 2013 and found that the vegetation on-the-ground was similar to that depicted on the 1991 and 2006 vegetation maps except that small patches of saltmarsh vegetation occurred around the debris drain riser on the south side of Culver Boulevard:

Vegetation in the area of the drain north of Culver Blvd continues to be dominated by non-native weedy species, as it was prior to drain construction. Vegetation in the area of the drain south of Culver Blvd is now a mix of weedy species and saltmarsh vegetation (pickleweed).

In a 2018 addendum to the E. Read 2013 report, E. Read re-visited the site, surveyed the vegetation, and provided the following update regarding the area immediately around the north and south drains:

North Drain

*This area is occupied entirely by non-native weedy vegetation, primarily iceplant (*Carpobrotus edulis*), black mustard (*Brassica nigra*), and castor bean (*Ricinus communis*). This drain is about 15 feet north of Culver Boulevard below a stand of castor bean. (Figure 3)*

South Drain

*Unlike the north drain, this drain has patches of wetland-associated species growing in disturbed areas where black mustard is less prevalent. These species include pickleweed (*Salicornia pacifica*), spear oracle (*Atriplex patula*), and alkali mallow (*Malvella leprosa*). (Figure 4)*

During the February 1, 2019 site visit with Coastal Commission staff (Amber Dobson, Shannon Vaughn, and Mandy Revell) and CDFW staff (Richard Brody) I observed the physical and biological conditions surrounding the two drains. I found that the vegetation on-the-ground closely matched the descriptions of E. Read (2013 and 2018). The north drain was surrounded by upland non-native invasive species including iceplant, black mustard, and castor bean and the vegetation surrounding the south drain was dominated by black mustard with small patches of pickleweed and alkali mallow in close proximity to the drain riser. The area surrounding both drains was characterized by disturbed upland ruderal habitat. The area immediately

around the north drain was the same as the overall surrounding area; disturbed upland ruderal habitat. I observed that the north drain riser was not topographically situated to remove water from the area because it was not located in much of a perceptible depression. The area surrounding the south drain was in a slight depression that was enabling water to pond and I could envision water draining out of the area during and after big storms (Figure 5). My thought is that, along with residual salt in the soil, ponding storm water would facilitate and account for the occurrence of small patches of saltmarsh plants.

PSOMAS (Sept. 27, 2017) conducted a study “to review the hydrologic conditions surrounding, and function of, two debris risers that were installed on either side of Culver Boulevard west of Lincoln Boulevard; and, to determine to what extent the installation of these risers may have affected the surrounding hydrologic conditions prior to their installation.” PSOMAS described the drainage area of each drain as follows:

North of Culver

This debris riser is located at the upper end of a small drainage swale that runs between two higher areas. The swale is between the north side of the existing Culver Boulevard roadway, and the south edge of a dirt embankment that used to be the alignment of Culver Boulevard prior to the construction of the Ballona Creek in its current alignment. The elevation of the swale at the riser location is at an elevation of approximately 8.0 feet Above Mean Sea Level (AMSL) ... Only a small area immediately west of the debris riser drains toward it. This area is approximately 200 square feet...

South of Culver

This debris riser is located in a flat area between the higher ground of Culver Boulevard and the Ballona Channel levee to the north, Lincoln Boulevard to the east, Jefferson Boulevard to the south, and the dirt over the FWM Outlet Drain structure to the west. The elevation of the soil ten to twenty feet away from the riser location is at an elevation of approximately 6.8 feet AMSL. Only a small area immediately west of the debris riser drains toward the riser. This area is approximately 300 to 400 square feet. The ground immediately around the debris riser is about a foot lower than 6.8 feet AMSL...

PSOMAS analyzed the hydrology of the area surrounding the drains using a modeling program (‘Hydrocalc’, approved for use by the City of Los Angeles) that generates output based on numerous field parameters including drainage basin area, length of flow path, slope of flow path, intensity of runoff, soil type, storm frequency, etc. etc. Based on their modeling results PSOMAS concluded that:

A. The elevations of the debris risers are set at an elevation higher than surrounding ground and potential storm water ponding and therefore have not affected the hydrology of the area in any appreciable way. 53 cu-ft from 122,600 cu-ft is negligible (0.04%).

B. The elevations of the debris risers are set at an elevation higher than surrounding ground and potential storm water ponding and therefore have not affected groundwater elevations in any appreciable way.

C. Likewise, capping of the debris risers will have no appreciable effect on the hydrology or groundwater in the area.

While CDFW maintains, based on physical and biological evidence from several sources (including those described herein), that the debris drains were not significantly impacting the Ballona Wetlands Ecological Reserve (BWER) hydrologically or biologically, the Commission approved Coastal Development Permit 5-17-0253 to seal the drains. According to CDFW (Dec. 18, 2018 CDFW Letter):

Sealing the risers included applying epoxy sealant around the interior of each weep hole ..., sleeving the interior of the risers to cover all weep holes, applying epoxy sealant to the rim of the risers and caps..., and epoxying and bolting down L-brackets in an abundance of caution against lid removal. These steps were taken to ensure a watertight seal at every level of installation (sleeving, capping, and bracketing).

Currently at issue is whether to remove the debris drain risers and pipes now or to leave them in place for removal during the future large-scale Ballona Wetlands restoration. CDFW proposes that the least ecologically damaging approach is to leave the drains in place for removal during the large-scale wetland restoration. In his February 11, 2019 letter R. Burg states:

To bring in heavy equipment and conduct trenching activities to remove the risers and lateral pipes would cause unnecessary and unwarranted impacts in BWER...

*Both the South Coast marsh vole (*Microtus californicus stephensi*), a CDFW species of special concern, and the imperiled wandering skipper (*Panoquina errans*) are known to occur within or adjacent to the project area. The project site is adjacent to or within potentially suitable or known occupied habitat for the burrowing owl (*Athene cunicularia*), south coast marsh vole (*Microtus californicus stephensi*), wandering skipper (*Panoquina errans*), and San Bernardino ring-necked snake (*Diadophis punctatus modestus*)...*

Removing the risers and lateral culverts now would duplicate impacts to BWER when the same area is disturbed as part of the Department's planned restoration of BWER...In addition, because the Department is not aware of any evidence that the currently sealed risers have any impact on the biology, hydrology, or any methane gas at BWER, the Department maintains its position that abandonment in place would be less impactful as compared to removing the risers and lateral pipes.

I concur with CDFW that the drains currently are not significantly impacting BWER based on the 1991 and 2006 vegetation maps, E. Read's biology surveys and reports, the PSOMAS hydrology report, current and historical aerial photographs, my observations, and the 2018 sealing and capping of the drain risers. Based on the location of the debris drains within the BWER, the presence of patches of saltmarsh species around the south drain riser, and the potential occupation of the area surrounding both drains by sensitive species (Feb. 11, 2019 CDFW Letter) including the South Coast marsh vole, burrowing owl, San Bernardino ring-necked snake, and wandering skipper, much of the area would likely rise to the level of environmentally sensitive habitat (ESHA) and wetland as defined by the Coastal Act¹. Section 30240² and Section 30233³ of the Coastal Act are ESHA and wetland policies, respectively, that significantly limit the type of allowable uses in these areas. Restoration is one of the few types of allowable uses. Given that removing the debris drain risers and pipes now would mean that the area would be disturbed twice and that I find that the drains are not currently adversely impacting BWER, I agree with CDFW that leaving the drains in place for future removal during the large-scale restoration is the most parsimonious and least environmentally damaging approach. In addition, CDFW has agreed to mitigate for the construction impacts caused by the installation of the drains and wetland impacts at the south drain riser site as described below. Furthermore, the EIR⁴ for the BWER restoration acknowledges that the drain risers and pipes will be removed during the restoration project. Finally, if the drain risers and pipes are not required to be removed immediately pursuant to Coastal Development Permit No. 5-18-0554, this permit includes a condition that the debris drain risers and pipes be removed during the BWER restoration project or within 5 years, whichever comes first.

I worked with Commission staff and CDFW staff on an appropriate mitigation acreage and approach for the drain installation and wetland impacts. We used the dimensions of the CDFW Wetlands Pipe Removal Project (Figure 2) for the

¹ Section 30107.5: "Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Section 30121: "Wetland" means lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

² Section 30240: Environmentally sensitive habitat areas; adjacent developments

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

³ Section 30233 Diking, filling or dredging; continued movement of sediment and nutrients

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited...

⁴ ESA. December 2019. Final Ballona Wetlands Restoration Project. Environmental Impact Report, State Clearing House No. 2012071090. Prepared for California Department of Fish and Wildlife, South Coast Region (Region 5).

north and south drains to calculate the mitigation area owed for the initial drain installation and the hydrology analysis report to estimate the mitigation area owed for wetland impacts at the south drain riser. We calculated the total mitigation area owed to be 0.53 acres⁵.

During our February 1, 2019 site visit we discussed mitigation options and visited potential mitigation sites. We coalesced on a nearby area of BWER invaded by a near monoculture of non-native invasive pampas grass (*Cortaderia selloana*) adjacent to the freshwater marsh (Figures 6). Many considerations go into determining what constitutes an appropriate mitigation site; Is the mitigation area in-kind?, Is it proximal to the impact area?, Is it within the same watershed? Does it make sense regarding future development plans, etc. etc. In this case the mitigation site is located in habitat invaded by non-native invasive species, proximal to the impact site (apprx. 0.35 miles away), and within the BWER and watershed. While the drains are located primarily in upland habitat, much of which is fill from building Culver Boulevard, that is invaded by several non-native invasive species (described above), the mitigation site is lower in elevation and is invaded by non-native pampas grass that is within wetland habitat that supports arroyo willow (*Salix lasiolepis*) and saltmarsh species and numerous wildlife species including the state and federally endangered least Bell's vireo (*Vireo bellii pusillus*) (Figures 7 and 8).

⁵ The following calculations are based on CDFW's wetland pipe removal project exhibit (see Figure 2) and the PSOMAS hydrology report (Sept. 27, 2017):

Mitigation for Debris Drain and Pipe Installation

-North Culver Drain

Total area = 10,019 sq. ft. (non-native annual grassland/non-native invasive species)

Mitigation Ratio – 0.5:1, therefore, $10,019 \times 0.5 = 5,009.5$ sq. ft.

-South Culver Drain

Total area = 11,761 sq. ft. (8,761 sq. ft. of annual non-native grassland/non-native invasive species; 3,000 sq. ft. of wetland (saltmarsh))

Mitigation Ratio = 0.5:1 for annual non-native grassland/non-native invasive species, therefore, $8,761 \times 0.5 = 4,380.5$ sq. ft.

Mitigation Ratio = 4:1 for wetland (saltmarsh), therefore, $3,000 \times 4 = 12,000$ sq. ft.

Total for Installation Impacts

Mitigation Area for initial debris drain and pipe installation = $5,009.5 + 4,380.5 + 12,000 = \mathbf{21,390}$ sq. ft.

Mitigation for Wetland (saltmarsh) Temporal Impacts

From PSOMAS hydrology report, 400 sq. ft. of wetland (saltmarsh) immediately around the South Culver debris drain riser was subject to impacts (subject to water removal).

Total for Temporal Impacts

Mitigation Ratio = 4:1 for wetlands, therefore $400 \times 4 = \mathbf{1600}$ sq. ft.

Total Mitigation Required for Debris Drain and Pipe Impacts

$21,390$ sq. ft. + 1600 sq. ft. = $22,990$ sq. ft. or **0.53 acres**

The mitigation site is a 0.6 acre (larger than the required 0.53 acres) area that was strategically chosen for its position regarding prevailing wind and as the outer boundary of pampas grass invasion in the area to facilitate invasive non-native species eradication, prevent re-invasion, and complement future large scale invasive non-native species removal efforts (Figure 9). Furthermore, the mitigation site is in an area of BWER that is outside the footprint of the large-scale restoration so it will not be disturbed in the future.

The mitigation plan (CDFW, July 6, 2020) involves removing pampas grass and any other invasive non-native species and planting native arroyo willow, mule fat (*Baccharis salicifolia*), and California blackberry (*Rubus ursinus*). The long-term goal of the mitigation is to sustain native vegetation and provide suitable habitat for native wildlife including the least Bell's vireo (CDFW, July 6, 2020). It is my professional opinion that the proposed mitigation is in-kind, proximal, practical, and compensates for the original installation of the debris drain risers and pipes and temporal wetland impacts at the south drain riser.



Exhibit A. Drain Locations

Figure 1. Exhibit A of E Read and Assc., Inc. September 19, 2018 Addendum showing the location of the drain risers on either side of Culver Boulevard and the area surveyed for vegetation mapping.



Figure 2. CDFW, Engineering Section, BWER Wetlands Pipe Removal Project exhibit (page number T -) that depicts the approximated areal extent of impact for removing the debris drain risers and pipes north and south of Culver Boulevard (that was used to calculate the mitigation acreage) and shows how the debris drain risers and pipes are connected with the freshwater marsh storm drain.

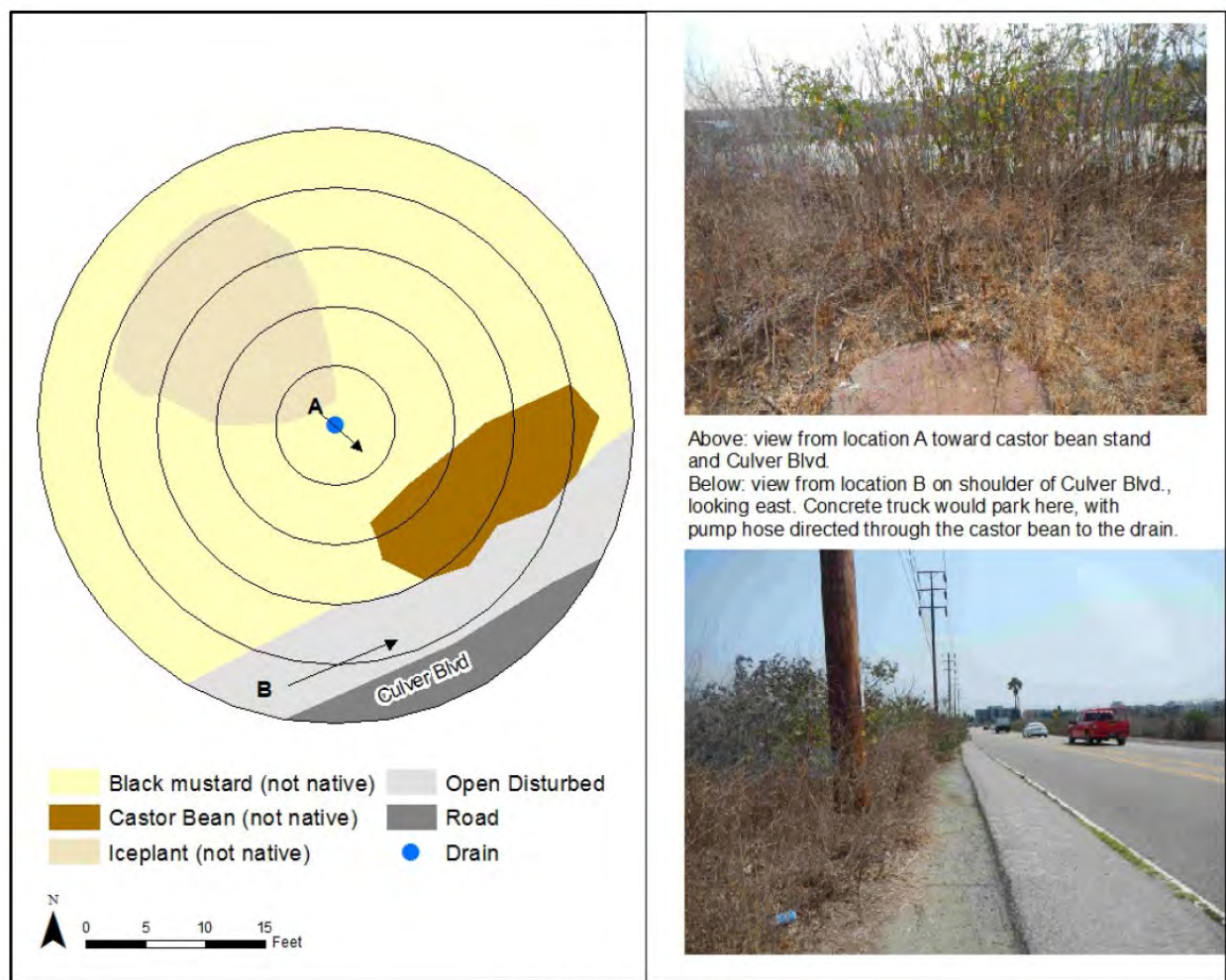


Exhibit B. North Drain Vegetation

Figure 3. Exhibit B of E Read and Assc., Inc. September 19, 2018 Addendum. Survey of the Vegetation within a 25 foot radius around the North Culver Boulevard Drain. The vegetation is ruderal; comprised of non-native invasives including iceplant, mustard, and castor bean.

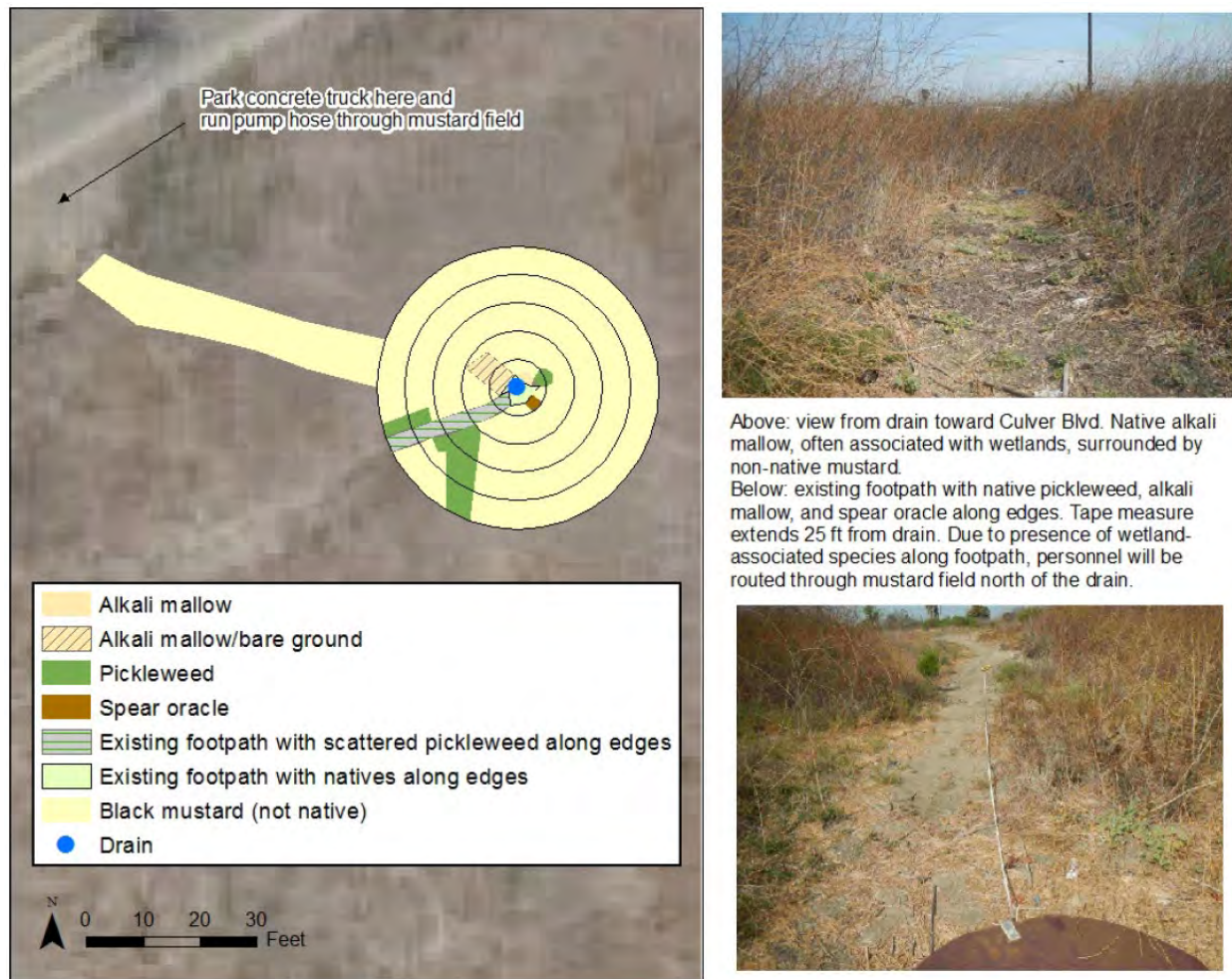


Exhibit C. South Drain Vegetation

Figure 4. Exhibit C of E Read and Assoc., Inc. September 19, 2018 Addendum. Survey of the Vegetation within a 25 foot radius around the South Culver Boulevard Drain. The dominant vegetation is ruderal; comprised of mustard with a small portion of the area by salt marsh species including pickleweed and alkali mallow.



Figure 5. February 1, 2019 photograph of the south drain riser showing small amount of ponded water.



Figure 6. Figure 1, July 7, 2020 CDFW, BWER Willow Restoration Project. The left panel shows the proximal location of the drains and the pampas grass/willow mitigation area (approximately 0.35 acres apart). The right panel is a close up of the freshwater marsh and 0.6 acre pampas grass removal/willow restoration mitigation area outlined in yellow.



Figure 7. February 1, 2019 photograph facing east and showing the pampas grass mitigation site on the right and the freshwater marsh habitat on the left.



Figure 8. February 1, 2019 photograph facing north-west showing the pampas grass mitigation site on the left and the freshwater marsh habitat on the right.



Figure 9. Excerpt from Figure 1, July 7, 2020 CDFW, BWER Willow Restoration Project, depicting the 0.6 acre pampas grass removal/willow mitigation area outlined in yellow.