File No. 180924

Petitions and Communications received from September 10, 2018, through September 17, 2018, for reference by the President to Committee considering related matters, or to be ordered filed by the Clerk on September 25, 2018.

Personal information that is provided in communications to the Board of Supervisors is subject to disclosure under the California Public Records Act and the San Francisco Sunshine Ordinance. Personal information will not be redacted.

From the California Fish and Game Commission, submitting Notice of Findings regarding the petitions to list coast yellow leptosiphon, Lassics lupine and tricolored blackbird as endangered/threatened under the California Endangered Species Act and notice of proposed regulatory action relative to amending Sections 1.53, 1.74 and 5.0, Tile, California Code of Regulations, relating to sport fishing annual regulations for 2019. 2 letters. Copy: Each Supervisor. (1)

From San Francisco International Airport, pursuant to Ordinance No. 62-18, regarding a plan for design and placement of artwork in Terminal 1 to memorialize the life and legacy of Harvey Milk. Copy: Each Supervisor. (2)

From the Office of the Treasurer & Tax Collector, submitting a CCSF Monthly Pooled Investment Report for August 2018. Copy: Each Supervisor. (3)

From the Capital Planning Committee, pursuant to Administrative Code, Section 3.21, submitting Approval of the Resolution and Ordinance Authorizing the Issuance and Sale of \$220,000,000 in Community Facilities District No. 2014-1 Transbay Transit Center Special Tax Bonds Series 2018A and Series 2018B. Copy: Each Supervisor. (4)

From the Office of the Controller, submitting notice of the addition of Finance to the new Benchmarking section on the Performance Scorecards website. Copy: Each Supervisor. (5)

From the Office of the Controller City Performance Unit, regarding creating a process to manage, and a registry to track, how patient data is being shared with partners outside of the Department of Public Health. (6)

From the Office of the Controller's City Services Auditor, submitting a memorandum on results of the SFMTA Cable Car Cash Fund Fare Collection Monitoring Program in FY2017-2018. (7)

From West Area California Public Utilities Commission, submitting CPUC Notification regarding Verizon Wireless San Francisco Small Cells 9-11-2018. Copy: Each Supervisor. (8)

From Phillip Babich, regarding the Central SOMA EIR. File No. 180651. Copy: Each Supervisor. (9)

From Dennis Hong, regarding wildfires in San Francisco. Copy: Each Supervisor. (10)

From Carol Denny, regarding mist anti-homeless generators. Copy: Each Supervisor. (11)

From Lawrence Wisne, regarding car break-ins. Copy: each Supervisor. (12)

From concerned citizens, regarding the RAB report. 1 letter. Copy: Each Supervisor. (13)

From Johnson Hor, regarding the appointment of Hanley Chan for the Veteran Affairs Commission. Copy: Each Supervisor. (14)

From Aaron Goodman, regarding transit in San Francisco. Copy: Each Supervisor. (15)

From concerned citizens, regarding pesticides in San Francisco. 3 letters. Copy: Each Supervisor. (16)

E/1

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Fish and Game Commission

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Wildlife Heritage and Conservation Since 1870

September 12, 2018

TO ALL INTERESTED AND AFFECTED PARTIES:

This is to provide you with Notice of Findings regarding the petitions to list coast yellow leptosiphon, Lassics lupine and tricolored blackbird as endangered/threatened under the California Endangered Species Act. The notices will be published in the California Regulatory Notice Register on September 14, 2018.

Sincerely,

Sheri Tiemann

Associate Governmental Program Analyst

Attachments



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California Fish and Game Commission NOTICE OF FINDINGS

Tricolored Blackbird (Agelaius tricolor)

NOTICE IS HEREBY GIVEN that the California Fish and Game Commission (Commission), at a meeting in Ventura, California on April 19, 2018, found pursuant to Fish and Game Code Section 2075.5, that the information contained in the petition to list tricolored blackbird (*Agelaius tricolor*) and other information in the record before the Commission, warrants adding tricolored blackbird to the list of threatened species under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). (see also Cal. Code Regs., tit. 14, § 670.1, subsec. (i).)

NOTICE IS ALSO GIVEN that, at its August 23, 2018 meeting in Fortuna California, the Commission adopted the following findings outlining the reasons for its determination.

I. Background and Procedural History

Petition History

On August 19, 2015, the California Fish and Game Commission (Commission) received "A Petition to List Tricolored Blackbird (*Agelaius tricolor*) as Endangered under the California Endangered Species Act and Request for Emergency Action to Protect the Species", as submitted by the Center for Biological Diversity. Commission staff transmitted the petition to the California Department of Fish and Wildlife (Department) pursuant to Fish and Game Code Section 2073 on August 20, 2015, and published a formal notice of receipt of the petition on September 4, 2015 (Cal. Reg. Notice Register 2015, No. 36-Z, p. 1514).

The Commission formally received the Department's petition evaluation and recommendation, "Evaluation of the Petition from the Center for Biological Diversity to List Tricolored Blackbird (*Agelaius tricolor*) as Endangered Under the California Endangered Species Act," at a meeting on October 8, 2015 in Los Angeles, California (Fish & G. Code, §§ 2073.5 & 2074.2; Cal. Code Regs., tit. 14, § 670.1, subsecs. (d) & (e)). At its public meeting on December 10, 2015, in San Diego, California, the Commission considered the petition, the Department's petition evaluation and recommendation, and comments received. The Commission determined that sufficient information existed to indicate the petitioned action may be warranted and accepted the petition for consideration. Upon publication of the Commission's notice of its findings, tricolored blackbird was designated a candidate species on January 8, 2016 (Cal. Reg. Notice Register 2016, No. 2-Z, p. 57).

Status Review Overview

The Commission's action designating tricolored blackbird as a candidate species triggered the Department's process for conducting a status review to inform the Commission's decision on whether to list the species. At its scheduled public meeting on December 8, 2016, in San Diego, California, the Commission granted the Department a six-month extension to complete the status review and facilitate external peer review. The Commission formally received the

Department's report to the Commission titled "A STATUS REVIEW OF THE TRICOLORED BLACKBIRD (*Agelaius tricolor*) IN CALIFORNIA" on February 8, 2018. On April 19, 2018, in Ventura, California, the Commission found that the information contained in the petition to list tricolored blackbird and the other information in the record before the Commission warrants listing tricolored blackbird as a threatened species under the CESA.

Species Description

Tricolored blackbird was first collected by Thomas Nuttall in 1836 near Santa Barbara, California (Nuttall 1840, Baird et al. 1874). A male specimen was sent to John James Audubon who described it as a unique form of blackbird in his well-known *Ornithological Biography* (Audubon 1839).

Tricolored blackbird is sexually dimorphic, with the breeding male plumage entirely black except for the bright red lesser wing coverts forming a conspicuous red patch ("shoulder" or "epaulets") on the wing and white median coverts forming a distinct border to the red. The black body plumage is glossed bluish when viewed in sunlight. The female is mostly dark brown dorsally and heavily streaked ventrally with dark brown streaks merging to form a largely solid dark brown belly. The head of the female is indistinctly patterned with a whitish supercilium, malar, chin, and throat (Beedy et al. 2017).

Although similar in appearance to the related red-winged blackbird (A. phoeniceus), several features can be used to distinguish the two species in breeding plumage (described by Nuttall 1840, Cooper 1870, Baird et al. 1874). The black plumage of the tricolored blackbird male has a soft bluish luster that is lacking in the red-winged blackbird. The lesser wing coverts (the red "shoulder") on the breeding male tricolored blackbird are a much deeper red (described as crimson, carmine, or the color of venous blood) compared to the brighter red with a tinge of orange (vermilion or scarlet) in the red-winged blackbird. The median coverts in tricolored blackbird are white (pale-yellowish when fresh) and create a stark contrast between the black and red feathers on the wing, whereas in the red-winged blackbird they are generally yellowish (or black in the subspecies that breeds in much of the Central Valley). The bill of tricolored blackbird averages thinner and can appear more sharply pointed. In flight, the wings of tricolored blackbird appear to have a more pointed shape (versus rounded in the red-winged blackbird) due to differences in length of the primary flight feathers. Female tricolored blackbirds have darker plumage than most female red-winged blackbirds, although this difference is less pronounced in the Central Valley where the subspecies of red-winged blackbird is relatively dark (Beedy et al. 2017)

II. Statutory and Legal Framework

The Commission, as established by the California Constitution, has exclusive statutory authority under California law to designate endangered, threatened, and candidate species under CESA (Cal. Const., art. IV, § 20, subd. (b); Fish & G. Code, § 2070). The CESA listing process for tricolored blackbird began in the present case with the Petitioners' submittal of the Petition to the Commission on August 19, 2015. The regulatory and legal process that ensued is described in some detail in the preceding section above, along with related references to the Fish and Game Code and controlling regulation. The CESA listing process generally is also described in some detail in published appellate case law in California, including:

- Mountain Lion Foundation v. California Fish and Game Commission (1997) 16 Cal.4th 105, 114-116;
- California Forestry Association v. California Fish and Game Commission (2007) 156
 Cal.App.4th 1535, 1541-1542;
- Center for Biological Diversity v. California Fish and Game Commission (2008) 166
 Cal.App.4th 597, 600; and
- Natural Resources Defense Council v. California Fish and Game Commission (1994) 28 Cal.App.4th 1104, 1111-1116.

The "is warranted" determination at issue here for tricolored blackbird stems from Commission obligations established by Fish and Game Code Section 2075.5. Under this provision, the Commission is required to make one of two findings for a candidate species at the end of the CESA listing process; namely, whether listing a species is warranted or is not warranted. Here, with respect to tricolored blackbird, the Commission made the finding under Section 2075.5(e)(2) that listing the species as threatened is warranted.

The Commission was guided in making these determinations by statutory provisions and other controlling law. The Fish and Game Code, for example, defines an endangered species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease." (Fish & G. Code, § 2062.) Similarly, the Fish and Game Code defines a threatened species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter." (*Id.*, § 2067.)

The Commission also considered Title 14, Section 670.1, subsection (i)(1)(A), of the California Code of Regulations in making its determination regarding tricolored blackbird. This provision provides, in pertinent part, that a species shall be listed as endangered or threatened under CESA if the Commission determines that the species' continued existence is in serious danger or is threatened by any one or any combination of the following factors:

- 1. Present or threatened modification or destruction of its habitat,
- 2. Overexploitation,
- Predation,
- 4. Competition,
- 5. Disease, or
- 6. Other natural occurrences or human-related activities.

Fish and Game Code Section 2070 provides similar guidance. This section provides that the Commission shall add or remove species from the list of endangered and threatened species under CESA only upon receipt of sufficient scientific information that the action is warranted. Similarly, CESA provides policy direction not specific to the Commission per se, indicating that all state agencies, boards, and commissions shall seek to conserve endangered and threatened species and shall utilize their authority in furtherance of the purposes of CESA.

(Fish & G. Code, § 2055.) This policy direction does not compel a particular determination by the Commission in the CESA listing context. Nevertheless, "'[I]aws providing for the conservation of natural resources' such as the CESA 'are of great remedial and public importance and thus should be construed liberally." (*California Forestry Association v. California Fish and Game Commission*, supra, 156 Cal. App.4th at pp. 1545-1546, citing *San Bernardino Valley Audubon Society v. City of Moreno Valley* (1996) 44 Cal.App.4th 593, 601; Fish & G. Code, §§ 2051, 2052.)

Finally in considering these factors, CESA and controlling regulations require the Commission to actively seek and consider related input from the public and any interested party (see, e.g., Id., §§ 2071, 2074.4, 2078; Cal. Code Regs., tit. 14, § 670.1, subsection (h)). The related notice obligations and public hearing opportunities before the Commission are also considerable (Fish & G. Code, §§ 2073.3, 2074, 2074.2, 2075, 2075.5, 2078; Cal. Code Regs., tit. 14, § 670.1, subsection (c), (e), (g), (i); see also Gov. Code, § 11120 et seq.). All of these obligations are in addition to the requirements prescribed for the Department in the CESA listing process, including an initial evaluation of the petition and a related recommendation regarding candidacy, and a review of the candidate species' status culminating with a report and recommendation to the Commission as to whether listing is warranted based on the best available science (Fish & G. Code, §§ 2073.4, 2073.5, 2074.4, 2074.6; Cal. Code Regs., tit. 14, § 670.1, subsection (d), (f), (h)).

III. Factual and Scientific Bases for the Commission's Final Determination

The factual and scientific bases for the Commission's determination that designating tricolored blackbird as a threatened species under CESA is warranted are set forth in detail in the Commission's record of proceedings including the Petition, the Department's Evaluation, the Department's status review, written and oral comments received from members of the public, the regulated community, tribal entities, the scientific community and other evidence included in the Commission's record of proceedings.

The Commission determines that the continued existence of tricolored blackbird in the state of California is in serious danger or threatened by one or a combination of the following factors as required by the California Code of Regulations Title 14, Section 670.1, subsection (i)(1)(A):

- 1. Present or threatened modification or destruction of its habitat,
- 2. Overexploitation,
- 3. Predation,
- 4. Competition,
- 5. Disease, or
- 6. Other natural occurrences or human-related activities.

The Commission also determines that the information in the Commission's record constitutes the best scientific information available and establishes that designating tricolored blackbird as a threatened species under CESA is warranted. Similarly, the Commission determines that tricolored blackbird, while not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by CESA.

The items highlighted here and detailed in the threats section represent only a portion of the complex issues aired and considered by the Commission during the CESA listing process for tricolored blackbird. Similarly, the issues addressed in these findings represent some, but not all of the evidence, issues, and considerations affecting the Commission's final determination. Other issues aired before and considered by the Commission are addressed in detail in the record before the Commission, which record is incorporated herein by reference.

Background

The Commission bases its "is warranted" finding for tricolored blackbird most fundamentally on the fact that tricolored blackbird nests and breeds in large colonies coupled with the current downward population trend influenced by a combination of other threats.

Social species might experience increased risk of population declines and extinction, and obligate colonial nesting birds may be especially vulnerable. In these species, there is generally a positive relationship between individual fitness (i.e., reproduction or survival) and population size or density, a concept which is broadly referred to as the Allee effect (Stephens and Sutherland 1999). In modern times, three colonial and highly social bird species have gone extinct in North America north of Mexico, including the Passenger Pigeon (*Ectopistes migratorius*), the Carolina Parakeet (*Conuropsis carolinensis*), and the Great Auk (*Pinguinus impennis*) (Cook and Toft 2005).

Tricolored blackbirds may benefit from social and colonial behaviors by reducing mortality due to predation during the nesting cycle and by facilitating food finding and information sharing. Smaller groups of birds would likely retain the ability to locate and use secure nesting substrates, but small colonies might lose the potential benefits of predator satiation and of social food finding and information sharing. (DFW Status Review 2018).

Although tricolored blackbird has been observed to nest in very small colonies (as few as 4 nests), the species has not been observed to nest as single pairs. Very small colonies (<100 birds) are quite rare, and although nesting success varies greatly across colonies of all sizes, there is evidence that small colonies are not as successful as larger colonies (Payne 1969), and that larger colonies produce more young per female (Hamilton 1993, Meese 2013, Weintraub et al. 2016). Reductions in population size may make tricolored blackbird more vulnerable to additional declines due to inherent natural history factors, but the degree to which a small population would limit the species' ability to survive and reproduce is not known.

The fact that half or more of the total tricolored blackbird population will often occur in a small number of large colonies in silage fields during the first nesting attempt makes the species vulnerable to losses of productivity (Cook and Toft 2005, Meese 2012, Beedy et al. 2017). In 2011, 65% of the total known population was located at only six colony sites in Merced, Kern, and Tulare counties (Kyle and Kelsey 2011). This concentration of large portions of the population makes the species vulnerable to a number of potential threats, especially colony destruction through harvest, predation, or extreme weather events (Weintraub et al. 2016).

Threats

Present or Threatened Modification or Destruction of Habitat

Of the estimated four million acres (16,187 square kilometers [km²]) of wetlands that existed in the Central Valley in the 1850s that could have been available to tricolored blackbirds as nesting substrate, only about 5% remain. The conversion of wetland nesting habitat to agricultural and urban uses has been implicated in the long-term decline of the species: Neff (1937) observed, "[t]he destruction of [tricolored blackbird] nesting habitats by man is of most importance," and cited reclamation and drainage as key factors in the loss of many favorable sites, along with "dredging or cleaning of reservoirs, marshes, and canals in order to destroy the growths of cattails and tules." Only about 15% of the four million acres (16,187 km²) of wetlands that existed in the Central Valley in the 1850s remained when Neff conducted his work in the 1930s, and about 40% of those remaining wetlands were lost between 1939 and the 1980s (Frayer et al. 1989). Of the freshwater emergent wetlands most likely to be used by breeding tricolored blackbirds in the Central Valley, 50% were lost between 1939 and the 1980s, with an average loss of 5,200 acres (2,104 hectares) per year (Frayer et al. 1989). These losses were primarily due to conversion of wetlands to agriculture.

DeHaven et al. (1975b) found no nesting substrate at several locations in Los Angeles, Kern, Sacramento, and Yolo counties where earlier researchers had studied the species. Subsequent investigators have continued to document habitat loss at known prior breeding colony locations through the present. For example, Beedy et al. (1991) found that 9.3% (n = 17) of the 183 known colony locations used in the 1980s were extirpated by 1990 through permanent removal of nesting habitat. Hamilton et al. (1999) observed the removal of a wetland that had supported a productive breeding colony in 1998. DeHaven (2000) noted the loss of several breeding colonies in Sacramento County to urban development and the expansion of vineyards. Humple and Churchwell (2002) reported on the draining of a wetland and the removal of Himalayan blackberry that had previously supported breeding colonies. Hamilton (2004b) documented the loss or destruction of cattail nesting substrates that had supported 90,000 breeding birds between 1994 and 2004. During the 2017 statewide survey, local experts and survey participants were asked to score the suitability of nesting substrate for all sites visited. Of the 636 sites for which scores were reported during the survey or during pre-survey site visits, 70 sites (11%) were scored as permanently unsuitable, usually due to development or conversion to permanent crops like orchards or vineyards; an additional 80 sites had no nesting substrate present during the survey and 101 sites had vegetation present. but were considered unsuitable by the survey participant. Based on this habitat assessment, about 60% of known historical breeding sites supported suitable nesting substrate during the 2017 season. (DFW Status Review 2018).

The majority of the wetlands in the Central Valley are managed lands that are maintained by application of water, and many areas undergo occasional land recontouring or vegetation control to maintain desired conditions. As of 2006, there were about 205,000 acres (830 km²) of managed wetlands in the Central Valley (CVJV 2006). Most managed wetlands (approximately 90%) are flooded primarily in the fall and winter for wintering waterfowl (i.e., seasonal wetlands) and are unlikely to provide suitable nesting substrate for tricolored blackbirds. A small proportion are managed as semi-permanent or permanent wetlands that hold water during the spring and summer (Iglecia and Kelsey 2012) and are often managed to support brood habitat for waterfowl. The small proportion of semi-permanent and permanent

wetlands may provide suitable nesting substrate for breeding tricolored blackbirds, depending on management practices.

The availability of novel, nonnative upland nesting substrates may have lessened the impact of the decline in Central Valley wetlands to the tricolored blackbirds population (Cook and Toft 2005). However, these nonnative vegetation types are often considered undesirable and are frequently removed (DFW Status Review 2018).

The extent of foraging habitat required for successful breeding is much greater than the extent of nesting substrate (DFW Status Review 2018). The abundance of insect prey in foraging habitat has been linked to reproductive success, and tricolored blackbirds may choose breeding locations in part based on the local prey populations (DFW Status Review 2018). Because insect populations are variable and unpredictable from year to year, the tricolored blackbird population likely requires much more foraging habitat on the landscape than is used in any given year, and once lost, large landscapes with suitable habitat are difficult to replace (DFW Status Review 2018). For these reasons, loss of foraging habitat is likely as important, or more so, than the documented losses of nesting substrate to the long-term viability of tricolored blackbirds (DFW Status Review 2018).

The loss of foraging habitat has been suggested as a likely cause of decline in southern California (Hamilton et al. 1995, Cook 2010). The extirpation of colonies from most of the coastal lowlands in southern California, despite the presence of more numerous marsh habitats relative to inland areas, suggests that foraging habitat sufficient to support breeding colonies is the population's limiting factor (Unitt 2004). Loss of habitat, particularly foraging habitat, has been suggested as the greatest threat to the survival of the species in southern California. In western Riverside County, where the majority of the southern California population occurs, large residential and commercial developments are planned for much of the San Jacinto Valley. This will likely result in substantial loss of dairy lands and the alfalfa fields used by tricolored blackbirds that nest both on and off the San Jacinto Wildlife Area (R. Cook pers. comm.).

Hamilton et al. (1992) reported on the pervasive loss of foraging habitat near breeding colony sites due to expansion of cultivated agriculture and the conversion of existing agriculture to incompatible crops in the Central Valley, and considered this the primary threat to population abundance. DeHaven (2000) observed widespread habitat loss due to urban expansion and agricultural conversions to vineyards and orchards relative to the 1970s when he and others conducted tricolored blackbird research across the state, and suggested that habitat loss was a primary driver of continued population declines. Conversion of pastures and crops suitable for foraging by tricolored blackbirds was observed in Placer, Sacramento, Stanislaus, and Tulare counties. DeHaven (2000) noted especially extensive losses in Sacramento County, where urban development and expansion of vineyards had removed thousands of acres of high-quality habitat. More than 5,000 acres (20 km²) of habitat had been converted to vineyards in just a two-year period from 1996 to 1998, resulting in the loss of known breeding colony locations.

Grasslands have been identified as one of the most vulnerable habitats across North America, and many grassland species have experienced steep population declines in recent decades (NABCI 2016). A great deal of effort has been expended on conserving the grasslands in the central part of North America from the Great Plains to northern Mexico (Knopf and Skagen

2012). The grasslands of California have not received the same level of conservation attention, although losses of grasslands in California have been extensive.

Soulard and Wilson (2015) used Landsat (satellite) data to analyze land-use and land-cover change in the Central Valley from 2000 to 2010, and compared this to changes in the valley since 1973. The largest land-cover trend from 2000 to 2010 occurred in grassland/shrubland habitats. During this 10-year period, an estimated 79,200 acres (321 km²) of grasslands and shrublands were lost, representing a 5% decrease in the Central Valley over 10 years. Over the longer period from 1973 to 2010, grasslands and shrublands declined by 22% (a loss of 476,900 acres [1,930 km²]), due mainly to conversions to more intensive agriculture and urban development. Although many of the grassland losses were due to agricultural intensification, losses of agriculture to urban development resulted in relatively little net change in area of agriculture in the Central Valley from 1973 to 2010. (DFW Status Review 2018).

Cameron et al. (2014) analyzed time series land cover data from the California Farmlands Mapping and Monitoring Program collected between 1984 and 2008 to evaluate rangeland habitat (grassland, shrubland, and woodland) conversion in California. The area evaluated covers much of the breeding range of tricolored blackbird except for southern California. About 483,000 acres (1,955 km²) of rangelands were converted during this 20+ year period, with urban and rural development and conversion to more intensive agricultural uses accounting for most (approximately 90%) of the rangeland loss. Agricultural intensification was primarily due to increases in vineyards and orchards, but smaller amounts of other agricultural crops that may provide foraging habitat for tricolored blackbirds were also responsible for grassland loss. The San Joaquin Valley region, which in recent decades has been the center of abundance for breeding tricolored blackbirds during the early nesting season, experienced the largest amount of rangeland conversion (DFW Status Review 2018).

Due to the continued expansion of nut trees and vineyards that replace grasslands. shrublands, or agricultural crops that provide insects required for breeding (e.g., alfalfa), regions that were previously occupied by thousands of birds have now become permanently unsuitable for breeding because of insufficient foraging habitat (Meese 2016). For example, the acreage of pistachio orchards in the Central Valley has grown exponentially in recent years and the acreage of almonds continues to increase. The five leading pistachio producing counties in California have also supported a large proportion of the tricolored blackbird breeding population in recent years (Kern, Tulare, Kings, Fresno, and Madera counties), with Kern County alone supporting 42% of pistachio production in 2012 (Geisseler and Horwath 2016). These regions of habitat loss in the San Joaquin Valley have also experienced the largest regional declines in the tricolored blackbird breeding population. In the central Sierran foothills, many colony sites and the surrounding foraging landscape are zoned for development, and several development projects that may affect tricolored blackbird habitat have moved forward in recent years (Airola et al. 2015a, 2016). Statewide, the proportion of grasslands within 3 miles (4.8 km) of occupied breeding colony locations declined significantly from 2008 to 2014 (from about 30% to 25%; NAS 2017).

Future development in California is projected to be concentrated in several core areas of the tricolored blackbird range, including the Central Valley, the foothills of the Sierra Nevada, and on both sides of the Transverse Ranges in southern California (Jongsomjit et al. 2013), which would further reduce or degrade the available foraging landscape for breeding colonies. The proportion of grasslands in the landscape surrounding potential breeding sites has been shown

to be the most important land cover type in predicting the occurrence of breeding tricolored blackbirds, and the proportion of alfalfa in the foraging landscape is highly correlated with colony size during the early nesting season (NAS 2017). Combined with regular loss of nesting substrate, the ongoing loss of foraging habitat makes it less likely that these essential breeding habitat requirements will co-occur on the landscape, with the result being a reduced number of locations suitable for successful breeding and foraging by tricolored blackbird colonies (DFW Status Review 2018).

Overexploitation

The tricolored blackbird colonies that form on agricultural grain fields early in the breeding season are often the largest colonies formed each year, and the complete destruction of these colonies due to harvest can be especially damaging to annual blackbird productivity (Arthur 2015). Normal harvesting activities typically coincide with the breeding season and the harvest of fields that contain nesting colonies results in nest destruction and the loss of eggs or nestlings. The cutting of grain has also killed adult tricolored blackbirds but most adults appear to survive harvest operations.

Shortly after the discovery of grain colonies in the San Joaquin Valley, Hamilton et al. (1992) observed the loss of a 15,000-bird colony to harvest. As early as 1993, the USFWS intervened to encourage harvest delays and protect the largest known breeding colony (Hamilton 1993). Since then, colony protection through crop purchase or delayed harvest has been the primary conservation action implemented for the species (see Existing Management section), with mixed success. Despite annual attempts to locate and protect large colonies since the early 1990s, losses to harvest have occurred in most years, with 2010 and 2016 being the only years with no known losses to harvest. For context, a brief list of some of the known large losses follows. Two large colonies representing more than 60,000 breeding birds were lost due to harvest in 1994 (Hamilton et al. 1995). The two largest breeding colonies in 1995 were destroyed during harvest of the grain nesting substrate (Beedy and Hamilton 1997). At least one colony of 14,000 birds was harvested in 1999 and four colonies were lost to harvest operations in 2000 (Hamilton et al. 1999, Hamilton 2000). Two colonies totaling approximately 80,000 breeding birds were lost to harvest operations in 2003 (Cook and Toft 2005). Especially large losses occurred in 2004, 2006, 2007, and 2008, when the largest colonies or the majority of grain colonies were lost (Meese 2009b). In 2008, several of the largest known colonies were destroyed, with six colonies being cut that hosted 140,000 breeding birds (Meese 2008). At least three colonies were lost to harvest in 2011, including the largest known colony, which supported 17% of the total known population (Kyle and Kelsey 2011, Meese 2011). The largest colony in southern California in 2013, which contained most of the southern California population, suffered complete reproductive failure when the field was cut (WRC-MSHCP 2014). At least two colonies in grain fields were destroyed in 2014 during the harvest of nesting substrate and at least three colonies were partially or totally destroyed due to harvest in 2015 (Meese 2014a, 2015b). After a breeding season with no known harvest losses in 2016, a large colony (estimated at up to 12,500 birds) was mostly lost in 2017 when the grain nesting substrate was cut in preparation for harvest (Colibri 2017).

Beginning in 2016, a new partnership was created through a grant from the U.S. Department of Agriculture's Natural Resources Conservation Service, with Audubon California, dairy trade organizations, and agencies working together to conduct outreach to dairy owners and to detect and protect breeding colonies. The program succeeded in enrolling all landowners with

tricolored blackbird colonies identified on their property in 2016, and 100% of known agricultural colonies were protected through delay of harvest. In 2017, most colonies on grain fields at dairies were again protected, but at least one large colony in Madera County was destroyed when the grain was cut (Colibri 2017).

Clutch size has been observed to decline in second nesting attempts (Beedy et al. 2017). The only study to evaluate reproductive success over the course of a breeding season, which was carried out on silage and wetland colonies in the San Joaquin Valley, showed that reproductive success declined as the season progressed (Weintraub et al. 2016). The elimination of a first breeding attempt may cause breeding colonies to miss the period of peak prey abundance, thereby reducing seasonal reproductive success, as has been observed in other species (Martin 1987). Colony destruction through harvest typically occurs well after females have laid eggs and often after eggs have hatched, so the lost energetic input to a failed breeding attempt and the delay before a second attempt likely reduce total annual productivity, even if birds attempt to nest a second time (Meese 2008). Most adult tricolored blackbirds appear to nest at least twice during the breeding season, and destruction of colonies late in the nesting cycle could eliminate one of these attempts. In addition to the loss of eggs and nestlings, adult birds are known to have been killed when colonies are harvested. Because nest survival and reproductive success rates were similar in silage and wetland colonies in the San Joaquin Valley, Weintraub et al. (2016) suggested that payments to farmers who delay harvest is a viable conservation action for increasing productivity.

Tricolored blackbird was shown to have experienced low reproductive success from at least 2006 to 2011 (Meese 2013). A number of factors have been shown to influence reproductive success, including predation and shortage of food, but reproductive failures caused by harvest at breeding tricolored blackbird colonies on agricultural fields of the San Joaquin Valley may have contributed to population declines through loss of much of the annual reproductive potential of the species in several years. (DFW Status Review 2018).

Destruction of colonies in agricultural fields has been occurring since tricolored blackbirds were discovered nesting in this substrate type in the early 1990s. In recent years (2015–2017), the protections provided to tricolored blackbird as a candidate under CESA, the availability of funds to implement colony protection programs, law enforcement actions conducted by the Department, and a coordinated effort by agencies, the dairy and farming industries, and nonprofit groups, have led to a dramatic decline in this source of mortality (DFW Status Review 2018). These protections, and a resulting increase in productivity, may have contributed to population stability observed between 2014 and 2017 (DFW Status Review 2018). However, losses of large colonies to grain harvest have continued and the future success of breeding colonies on agricultural crops will depend on the availability of funds to continue programs that locate and monitor breeding colonies on grain fields early in the nesting season and compensate farmers for delaying harvest. If the recent reinterpretation of the MBTA by the U.S. Department of the Interior solicitor removes the prohibition on incidental take, protection under CESA may be necessary in order to ensure continued participation in colony protection programs.

Predation

In the early 1990s, Hamilton and others found that many breeding colonies in emergent wetland nesting substrates suffered partial or complete destruction by predation (primarily by

black-crowned night-herons; Hamilton et al. 1992, 1995, Hamilton 1993), resulting in consistently lower reproductive success in wetlands compared to other nesting substrates. Beedy and Hamilton (1997) reported that more recently, black-crowned night-herons eliminated all or most nests at several freshwater marsh breeding colonies. Hamilton (2000) later reported that wetland colonies with no black-crowned night-heron predation were highly successful. DeHaven (2000) reported that he also observed high rates of colony failure due to predation in the 1970s, a time when the majority of the population still bred in wetland substrates. Whether recent rates of loss to predation are similar to historical rates of loss is unknown.

In recent decades, complete nesting failures have been caused by novel predators on agricultural grain fields, and the increasing concentration of birds in mega-colonies may have increased their susceptibility to nest predation (Kelsey 2008). Cattle Egrets from a single rookery caused complete or near-complete failure of large breeding colonies in Tulare County from 2006 to 2011 (Meese 2012). White-faced ibis prey on the eggs of tricolored blackbird, and in 2016 caused the complete failure of a large breeding colony on a silage field in Tulare County (Meese 2016, Beedy et al. 2017).

Although many species have been documented as predators of tricolored blackbirds, most have not had severe effects on the population or on the breeding success at nesting colonies. However, a few species have caused the complete failure of entire breeding colonies through heavy predation on eggs and nestlings. In recent decades, the predators that have destroyed entire colonies have usually been wading birds that hunt in large groups (i.e., black-crowned night-heron, cattle egret, and white-faced ibis). These species have had significant negative impacts on the overall productivity rate of tricolored blackbirds in several years over the last three decades (Hamilton et al. 1995, Cook and Toft 2005, Meese 2012). A few other species, including common raven, raccoon, and coyote have had large effects on breeding success, but these predators have typically not caused complete colony failure or have had less widespread effects (DFW Status Review 2018).

Other Natural Events or Human-Related Activities

Contaminants—In the two decades since their introduction, neonicotinoid insecticides have become some of the most widely used insecticides in the world, including in California. (Goulson 2013). They are highly effective at killing insects and have relatively low mammal and bird toxicity; however, at higher concentrations they can have lethal and sublethal impacts to vertebrates (Mineau and Palmer 2013). Neonicotinoids have been implicated in the decline of invertebrate communities and, in a few cases, the decline of insectivorous birds. Ingestion of only a few neonicotinoid-coated seeds (a single seed in the case of corn) might be sufficient to kill a songbird, but there has been little work conducted on the availability and consumption of treated seeds by vertebrates, and no data are available on the acute toxicity of any neonicotinoid insecticide specifically to tricolored blackbirds (Goulson 2013, Mineau and Palmer 2013; DFW Status Review 2018). Neonicotinoids may also have chronic toxicity effects (exposure over longer time periods) on reproductive success, but chronic effects are even less studied than acute effects (Mineau and Palmer 2013).

Neonicotinoids have been shown to have adverse effects on a number of non-target invertebrate species, and may indirectly affect tricolored blackbirds through suppression of insect prey populations (DFW Status Review 2018). They have been shown to have adverse

effects on a number of non-target invertebrate species, with most studies focusing on bees (Hopwood et al. 2012, Godfray et al. 2014). In California, long-term observational data have revealed declines in the number of butterfly species and declines in abundance for many butterfly species in the Central Valley, both of which were negatively associated with annual application rates of neonicotinoid insecticides (Forister et al. 2016). Imidacloprid was shown to have a negative association with a wide variety of insectivorous bird populations in the Netherlands, suggesting that the pesticide may have led to food deprivation in birds (Hallmann et al. 2014).

Drought, Water Availablility, and Climate Change— Drought reduces water supply reliability and has far-reaching impacts on most habitat types in California (DWR 2014, 2015a). Several significant statewide droughts have occurred in California over the last century (1928–1934, 1976–1977, 1987–1992, and 2007–2009) (DWR 2015a), and California recently experienced the three driest consecutive years of statewide precipitation in the historical record between 2012 and 2014. The winter of 2015 produced a record low statewide mountain snowpack of only 5% of average.

Tricolored blackbirds have adapted to use a variety of novel vegetation types as nesting substrate, but wetlands continue to support the largest number of breeding colonies each year. Because of the need for wetlands that are flooded during the spring and summer breeding season, the various approaches to wetland management, and the dependence on water deliveries to maintain wetland habitats in most of the tricolored blackbird's range, assessing the availability of suitable wetland nesting substrate in a given year is difficult. A recent method applied reflectance to satellite imagery to identify areas of open surface water in the Central Valley (Reiter et al. 2015). Although not an ideal approach to quantifying and assessing distribution of wetlands, the method would identify wetlands with large amounts of open water. In addition, identification of open water on the landscape during the tricolored blackbird breeding season is likely a good proxy for the availability of water for wetland management. Reiter et al. (2015) showed that open surface water declined across the Central Valley between 2000 and 2011. Drought had a significant negative effect on open surface water in the late summer and early fall. Cumulative years of drought resulted in a noticeable reduction in surface water. Although not a direct measure of tricolored blackbird breeding habitat, declines in surface water during the drought likely resulted in reduced availability of wetlands with sufficient water to provide high quality nesting substrates.

Although more resilient to dry conditions than wetland vegetation, plants species that provide upland nesting substrate for tricolored blackbird colonies also experience negative effects due to drought. After several years of dry conditions during California's most recent drought, many Himalayan blackberry copses that have historically supported tricolored blackbird colonies were observed to be dry and mostly barren of leaves. In a few cases, extremely dry blackberry bushes continued to be used by breeding colonies, but many were unoccupied. Milk thistle, which provides high-quality nesting substrate across much of the tricolored blackbird range when annual precipitation patterns support vigorous growth, was largely absent from historically used areas until California experienced an average water year in the winter of 2015–2016 (Airola et al. 2016). The wetter weather created nesting substrate in areas that had not been used by tricolored blackbirds in several years, and breeding colonies once again occupied these areas.

The availability of large insect prey is an important factor in tricolored blackbird reproductive success, and may influence colony site selection. Large landscapes with suitable foraging habitat are strong drivers of colony site occupancy and abundance (NAS 2017).

Insect abundance is strongly related to biomass of herbaceous vegetation, including important tricolored blackbird prey items like grasshoppers in grasslands (Falcone 2010). Climate, especially drought, is thought to play a key role in abundance of grasshoppers and other insect species in grasslands (Vose et al. 2016). The response of insect populations can differ depending on drought severity. For example, non-severe drought and warm temperatures can have a positive effect on grasshopper populations through increased survival and faster population growth (Kemp and Cigliano 1994). However, extreme or prolonged drought can negatively affect grasshopper populations through desiccation of eggs or through decreased biomass of primary producer food sources (i.e., grasses and forbs) (Vose et al. 2016). Reductions in precipitation not only lead to reductions in the abundance of insects in grasslands, but may also make insect prey less accessible through changes in behavior (e.g., moving underground) (Barnett and Facey 2016). Severe droughts likely have strong negative effects on grasshoppers and insect prey in general (Kemp and Cigliano 1994, Vose et al. 2016).

The established impacts of precipitation on insect populations in grasslands, especially grasshoppers, suggests a mechanism for drought impacts on tricolored blackbird productivity. Research is needed that measures grasshopper and other prey abundance relative to precipitation and primary productivity around occupied tricolored blackbird colonies, and evaluates the effect on tricolored blackbird reproductive success.

Average annual temperatures have been rising in California in recent decades, and climate models are in broad agreement that temperatures in California will rise significantly over the next century (DWR 2015b). The average temperature is expected to rise by approximately 2.7°F (1.5°C) by 2050, and depending on the emissions scenario, average temperatures could increase by 4.1-8.6°F (2.3-4.8°C) by the year 2100 (Moser et al. 2012). Summer temperatures will rise more than winter temperatures, and the increases will be greater in inland California. As a result, the average number of extremely hot days (at least 105°F [41°C]) per year in Sacramento is expected to increase fivefold (up to 20 days) by the middle of the century, and may increase to as many as 50 days per year by 2100 (Moser et al. 2012). Tricolored blackbirds have been observed to cease initiation of breeding when temperatures exceeded 90°F (32°C), although care of existing nests continued in temperatures over 100°F (38°C) (Hamilton et al. 1995). Extremely high temperatures have also caused colony failure. Rising temperatures may directly affect annual tricolored blackbird productivity by truncating or interrupting the breeding season, although more work is needed on the effect of temperature on initiation and success of nesting attempts. Tricolored blackbirds have begun nesting earlier in the year, perhaps in response to climate change (e.g., see Tottrup et al. 2010, Mazerolle et al. 2011). Between 1939 and 2009, the mean date of first breeding date has shifted to occur about 22 days earlier (M. Holyoak pers. comm.).

Along with projected negative impacts to tricolored blackbird foraging habitat due to housing and agricultural development discussed above, the areas of California with the largest climate-projected effects on a variety of bird species are largely concentrated within the tricolored blackbird range in the Central Valley (Jongsomjit et al. 2013). A suite of analyses integrating the effects of climate change and land use changes in California's rangelands concluded that

grassland habitat loss in California could reach 37% by the year 2100 (Byrd et al. 2015). Thorne et al. (2016) estimated the vulnerability of California's natural communities to climate change by examining how a range of climate change scenarios would change the spatial distribution of those communities. Two important tricolored blackbird communities, grassland and freshwater marsh, were projected to be among the most affected natural communities in California, with freshwater marsh being one of only four communities receiving the highest vulnerability rank. Under multiple emission scenarios, the regions modeled as being most highly stressed by future climate change include much of the tricolored blackbird's core range in the Central Valley and surrounding foothills. The extent of freshwater marsh was projected to decrease by 71%–97% by year 2100. Of the area currently occupied by grassland in California, 16%–48% is expected to no longer be suitable, depending on the climate change scenario. The current level of emissions is on track with the higher-impact scenarios (Thorne et al. 2016).

The recent severe drought in California was at least partially due to, and made more severe by, climate change (Diffenbaugh et al. 2015). Climate change is projected to bring longer and more severe droughts to California in the future (Diffenbaugh et al. 2015, Williams et al. 2015), exacerbating the impacts to tricolored blackbird habitat described above. The Central Valley may be particularly vulnerable to warming-driven drought increases in the future (Williams et al. 2015), and water deliveries are projected to be reduced by 5.6% from 2013 to 2033 due to climate change effects on reliability (DWR 2014). Climate change effects on water supplies and stream flows are expected to increase competition among urban and agricultural water users and environmental needs (Moser et al. 2012). This competition may lead to decreases in available wetland nesting substrate provided by private and public land managers. Declines in the availability of water for agriculture may also reduce prey populations provided by high quality crops like alfalfa and rice.

IV. Final Determination by the Commission

The Commission has weighed and evaluated the information for and against designating tricolored blackbird as a threatened species under CESA. This information includes scientific and other general evidence in the Petition; the Department's Evaluation; the Department's status review; the Department's related recommendations; written and oral comments received from members of the public, the regulated community, various public agencies, and the scientific community; and other evidence included in the Commission's record of proceedings.

Based upon the evidence in the record the Commission has determined that the best scientific information available indicates that the continued existence of tricolored blackbird is in serious danger or threatened by present or threatened modifications or destruction of the species' habitat, predation, competition, disease, or other natural occurrences or human-related activities, where such factors are considered individually or in combination (see generally Cal. Code Regs., tit. 14, § 670.1, subsection (i)(1)(A); Fish & G. Code, §§ 2062, 2067).

The Commission determines that there is sufficient scientific information to indicate that designating tricolored blackbird as a threatened species under CESA is warranted at this time and that, with adoption and publication of these findings, tricolored blackbird for purposes of its legal status under CESA and further proceedings under the California Administrative Procedure Act, shall be listed as threatened.

Literature Cited

- Airola, D.A., B. Cousens, and D. Kopp. 2014. Accelerating decline of the Sacramento Purple Martin breeding population in 2014: What are the possible causes? Central Valley Bird Club Bulletin 17:12-22.
- Airola, D.A., R.J. Meese, and D. Krolick. 2015a. Tricolored Blackbird conservation status and opportunities in the Sierra Nevada foothills of California. Central Valley Bird Club Bulletin 17:57-78.
- Airola, D.A, R.J. Meese, E.C. Beedy, D. Ross, D. Lasprugato, W. Hall, ... and J. Pan. 2015b. Tricolored Blackbird breeding status in 2015 in the foothill grasslands of the Sierra Nevada, California. Central Valley Bird Club Bulletin 18:96-13.
- Airola, D.A., D. Ross, C.W. Swarth, D. Lasprugato, R.J. Meese, and M.C. Marshall. 2016. Breeding status of the Tricolored Blackbird in the grassland-dominated region of the Sierra Nevada, California in 2016. Central Valley Bird Club Bulletin 19:82-109.
- Aksland, G. and S. Wright. 2005. Trends in Cereal Forage Production. Proceedings of the 35th California Alfalfa & Forage Symposium, 12-14 December 2005, Visalia, California, Department of Agronomy and Range Science Extension, University of California, Davis, CA 95616.
- Allen, L.W., K.L. Garrett, and M.C. Wimer. 2016. Los Angeles County breeding bird atlas. Los Angeles Audubon Society, Los Angeles, CA.
- American Ornithologists' Union (AOU). 1957. Check-list of North American birds, 5th ed. American Ornithologists' Union, Baltimore, Maryland.
- Ammon, E.M. and J. Woods. 2008. Status of Tricolored Blackbirds in Nevada. Great Basin Birds 10:63-66.
- Arthur, S. 2015. Protecting, restoring, and enhancing Tricolored Blackbird habitat on agricultural lands through the Regional Conservation Partnership Program. Central Valley Bird Club Bulletin 17:122-125.
- Audubon, J.J. 1839. Ornithological Biography. Adam and Charles Black, Edinburgh.
- Avery, M.L., D.G. Decker, D.L. Fischer, and T.R. Stafford. 1993. Responses of Captive Blackbirds to a New Insecticidal Seed Treatment. Journal of Wildlife Management 57:652-656.
- Baird, S.F., T.M. Brewer, and R. Ridgway. 1874. A history of North American birds: Land birds, vol. 2. Little, Brown, and Co., Boston, MA.
- Barnett, K.L. and S.L. Facey. 2016. Grasslands, invertebrates, and precipitation: A review of the effects of climate change. Frontiers in Plant Science 7:1196.
- Beauchamp, G. 1999. The evolution of communal roosting in birds: origin and secondary losses. Behavioral Ecology 10:675-687.
- Beedy, E.C. 2008. Tricolored Blackbird species account *in* Shuford, W.D. and T. Gardali. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, CA and California Department of Fish and Game, Sacramento.
- Beedy, E.C. and A. Hayworth. 1992. Tricolored Blackbird (*Agelaius tricolor*) nesting failures in the Central Valley of California: general trends or isolated phenomena? In: Williams,

- D.F., S. Byrne and T.A. Rado, editors. Endangered and sensitive species of the San Joaquin Valley, California. Calif. Energy Comm., Sacramento, CA; pp. 33-46.
- Beedy, E.C. and W.J. Hamilton III. 1997. Tricolored blackbird status update and management guidelines. Jones & Stokes Assoc. Inc., Sacramento CA, Rep. 97-099. Prepared for U. S. Fish and Wildlife Service, Sacramento CA, and Calif. Dep. of Fish and Game, Sacramento, CA.
- Beedy, E.C., S.D. Sanders, and D. Bloom. 1991. Breeding status, distribution, and habitat associations of the tricolored blackbird (*Agelaius tricolor*), 1850-1989. Jones & Stokes Assoc. Inc., Sacramento CA, Rep. 88-187, ii + 42 pp. + tables, figures, append. Prepared for U. S. Fish and Wildlife Service, Sacramento, CA.
- Beedy, E.C., W.J. Hamilton, III, R.J. Meese, D.A. Airola and P. Pyle. 2017. Tricolored Blackbird (*Agelaius tricolor*), The Birds of North America (P.G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America: [https://] birdsna-org.bnaproxy.birds.cornell.edu/Species- Account/bna/species/tribal
- Belding, L. 1890. Land birds of the Pacific district. Occasional Papers of the California Academy of Sciences, II. San Francisco.
- Bendire, C. 1895. Life histories of North American Birds, from the parrots to the grackles, with special reference to their breeding habits and eggs. Government Printing Office, Washington, DC.
- Bent, A.C. 1958. Life histories of North American blackbirds, orioles, tanagers, and allies. Smithsonian Institution U.S. Natl. Mus. Bulletin 211. [The commonly-available Dover edition, first published in 1965, is an unaltered republication of the original museum bulletin; Dover Publications Inc., New York, NY]
- Berg, E.C., J.P. Pollinger, and T.B. Smith. 2010. Population structure of the Tricolored Blackbird (*Agelaius tricolor*) in California: Are northern and southern populations genetically distinct? Calif. Dept. Fish and Game, Nongame Wildlife Program Rpt. 2010-05 and Audubon California, Sacramento, CA. 25 pp.
- Bousman, W. G. 2007. Breeding Bird Atlas of Santa Clara County, California. Santa Clara Audubon Society, Cupertino, CA.
- Brown, C.R. 1988. Enhanced foraging efficiency through information centers: A benefit of coloniality in Cliff Swallows. Ecology 69:602-613.
- Bucher, E.H. 1992. The causes of extinction of the Passenger Pigeon. Current Ornithology 9:1-36.
- Butcher, G.S., D.K. Niven, and J.R. Sauer. 2006. Using Christmas Bird Count data to assess population dynamics and trends of waterbirds. The 105th Christmas Bird Count. American Birds 59:23-25.
- Butcher, G.S., M.R. Fuller, L.S. McAllister, and P.H. Geissler. 1990. An evaluation of the Christmas Bird Count for monitoring population trends of selected species. Wildlife Society Bulletin 18:129-134.
- Bryant, W.E. 1889. A catalogue of the birds of Lower California, Mexico. Proc. Calif. Acad. Sci., Series 2, 2:237-320.
- Byrd, K.B., L.E. Flint, P. Alvarez, C.F. Casey, B.M. Sleeter, C.E. Soulard, A.L. Flint, and T.L. Sohl. 2015. Integrated climate and land use change scenarios for California rangeland ecosystem services: wildlife habitat, soil carbon, and water supply. Landscape Ecology 30:729-750.

- California Department of Fish and Game (CDFG). August 2007. Findings of Fact under CEQ and NCCP Act, and NCCP permit 2835-2007-001-03 for East Contra Costa County NCCP.
- California Department of Fish and Wildlife (DFW) February 2018 Report to the Fish and Game Commission: A Status Review of the Tricolored Blackbird (Agelaius Tricolor) in California.
- California Department of Fish and Wildlife (CDFW). July 2013. Findings of Fact under CEQA and NCCP Act, and NCCP permit 2835-2012-002-03 for Santa Clara Valley Habitat Plan NCCP Permit.
- California Department of Fish and Wildlife (CDFW). 2015. California State Wildlife Action Plan, 2015 Update: A Conservation Legacy for Californians. Edited by Armand G. Gonzales and Junko Hoshi, PhD. Prepared with assistance from Ascent Environmental, Inc., Sacramento, CA.
- California Department of Water Resources (DWR). 2014. The State Water Project final delivery reliability report 2013. 57 pp. + appendices.
- California Department of Water Resources (DWR). 2015a. California's most significant droughts: Comparing historical and recent conditions. 80 pp. + appendix.
- California Department of Water Resources (DWR). 2015b. Drought in California. 2015 Drought brochure. 15 pp.
- Cameron, D.R., J. Marty, and R.F. Holland. 2014. Whither the rangeland?: Protection and conversion in California's rangeland ecosystems. PLoS ONE 9(8): e103468. doi:10.1371/journal.pone.0103468.
- Central Valley Joint Venture (CVJV). 2006. Central Valley Joint Venture Implementation Plan Conserving Bird Habitat. U.S. Fish and Wildlife Service, Sacramento, CA.
- Colibri Ecological Consulting, LLC. 2017. 2017 Tricolored Blackbird Monitoring Report. Report prepared for the California Department of Fish and Wildlife. 28 pp.
- Cook, L.F. and C.A. Toft. 2005. Dynamics of extinction: population decline in the colonially nesting Tricolored Blackbird (*Agelaius tricolor*). Bird Conservation International 15:73-88.
- Cook, R. 2010. Recent history and current status of the Tricolored Blackbird in southern California. A report of the Western Riverside County Multiple Species Habitat Conservation Plan. July 20, 2010.
- Cooper, J.G. 1870. Ornithology. Land birds, vol. 1. Geological survey of California. S.F. Baird (ed.). University Press: Welch, Bigelow, and Co., Cambridge, MA. Published by authority of the Legislature [of California].
- Crase, F.T. and R.W. DeHaven. 1977. Food of nestling tricolored blackbirds. Condor 79:265-269.
- Crase, F.T. and R.W. DeHaven. 1978. Food selection by five sympatric California blackbird species. California Fish and Game 64:255-267.
- Danchin, E., and R.H. Wagner. 1997. The evolution of coloniality: the emergence of new perspectives. Trends in Ecology & Evolution 12:342-347.
- Dawson, W.L. 1923. The birds of California. Vol. 1. South Moulton Co., San Francisco, CA.

- DeHaven, R.W. 2000. Breeding tricolored blackbirds in the Central Valley, California: A quarter-century perspective. Unpublished report to the U.S. Fish and Wildlife Service, Sacramento, CA. 22 pp.
- DeHaven, R.W. and J.A. Neff. 1973. Recoveries and returns of tricolored blackbirds, 1941-1964. Western Bird Bander 48:10-11.
- DeHaven, R.W., F.T. Crase, and P.D. Woronecki. 1975a. Breeding status of the tricolored blackbird, 1969- 1972. California Fish and Game 61:166-180.
- DeHaven, R.W., F.T. Crase, and P.D. Woronecki. 1975b. Movements of tricolored blackbirds banded in the Central Valley of California. Bird-Banding 46:220-229.
- Diffenbaugh, N.S., D.L. Swain, and D. Touma. 2015. Anthropogenic warming has increased drought risk in California. PNAS 112:3931-3936.
- Dudek and Associates, Inc. 2003. Western Riverside County Multi-Species Habitat Conservation Plan, Volume II-B: Species Accounts, BIRDS- Tricolored Blackbird (*Agelaius tricolor*).
- Dudek and Associates, Inc. July 2006. Draft Southern Orange County Subregional NCCP/MSAA/HCP (Southern NCCP/MSAA/HCP).
- East Contra Costa County NCCP/HCP (ECCC). Oct 2006. Species Accounts. Birds, Tricolored Blackbird. 10pp.
- East Contra Costa Habitat Conservancy (ECCHC). March 2011. East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, Annual Report 2010. 32 pp. + App.
- East Contra Costa Habitat Conservancy (ECCHC). June 2013. East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, Annual Report 2012. 26 pp. + App.
- East Contra Costa Habitat Conservancy (ECCHC). June 2016. East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan, Annual Report 2015. 58 pp. + App.
- eBird Basic Dataset. 2016. Version: EBD_relAug-2016. Cornell Lab of Ornithology, Ithaca, NY.
- Emlen, S.T. and N.J. DeLong. 1975. Adaptive significance of synchronized breeding in a colonial bird: A new hypothesis. Science 188:1029-1031.
- Erickson, R.A., H. de la Cueva, and M.J. Billings. 2007. Nesting Tricolored Blackbird survey: Baja California 2007. Report submitted to the U.S. Fish and Wildlife Service.
- Erickson, R.A. and H. de la Cueva. 2008. Nesting Tricolored Blackbird survey: Baja California 2008. Report submitted to the U.S. Fish and Wildlife Service.
- Erickson, R.A., H. de la Cueva, J.S. Feenstra, and E.D. Zamora-Hernández. 2016. On the edge of extinction: Can the Tricolored Blackbird (*Agelaius tricolor*) persist in Mexico? Poster session presented at: North American Ornithological Conference VI; Washington, DC.
- Evermann, B.W. 1919. A colony of Tricolored Blackbirds. Gull 1:2-3.
- Falcone C. 2010. Is orthoptera abundance and distribution across a small grassland area affected by plant biomass, plant species richness, and plant quality? Environmental Studies Undergraduate Thesis, University of Nebraska, 2010.
- Fankhauser, D.P. 1971. Annual adult survival rates of blackbirds and starlings. Bird-Banding 42:36-42.

- Feenstra, J.S. 2009. The status of the Tricolored Blackbird (*Agelaius tricolor*) in southern California. Results of the spring 2009 census. Report prepared for U.S. Fish and Wildlife Service. 18pp.
- Feenstra, J.S. 2013. Breeding survey of Tricolored Blackbirds in Baja California, Mexico, 2013. Report prepared for U.S. Fish and Wildlife Service and Sonoran Joint Venture. 12pp.
- Forister, M.L., B. Cousens, J.G. Harrison, K. Anderson, J.H. Thorne, D. Waetjen, ... and A.M. Shapiro. 2016. Increasing neonicotinoid use and the declining butterfly fauna of lowland California. Biology letters 12(8):20160475.
- Frayer, W.E., D.D. Peters, and H.R. Pywell. 1989. Wetlands of the California Central Valley: Status and trends 1939 to mid-1980s. U.S. Fish and Wildlife Service Region 1 report, Portland, OR.
- Frazer, S. 2016. Tricolored Blackbird 2016 Monitoring Report. Report prepared for the California Department of Fish and Wildlife. 19 pp. + maps.
- Garrett, K. and J. Dunn. 1981. Birds of southern California: Status and distribution. Los Angeles Audubon Society, Los Angeles, CA.
- Garrett, K.L., J.L. Dunn, and B.E. Small. 2012. Birds of southern California. R.W. Morse Company, Olympia, WA.
- Geisseler, D. and W.R. Horwath. 2016. Pistachio production in California. California Department of Food and Agriculture Fertilizer Research and Education Program. Available at: [https://] apps1.cdfa.ca.gov/FertilizerResearch/docs/Pistachio Production CA [dot] pdf.
- Gilligan, J., D. Rogers, M. Smith and A. Contreras. 1994. Birds of Oregon: Status and distribution. Cinclus Publications, McMinnville, OR.
- Glover, S. A. 2009. Breeding Bird Atlas of Contra Costa County. Mount Diablo Audubon Society, Walnut Creek, CA.
- Godfray, H.C.J., T. Blacquiere, L.M. Field, R.S. Hails, G. Petrokofsky, S.G. Potts, ... and A.R. McLean. 2014. A restatement of the natural science evidence base concerning neonicotinoid insecticides and insect pollinators. Proceedings of the Royal Society B 281:20140558.
- Goulson, D. 2013. Review: An overview of the environmental risks posed by neonicotinoid insecticides. Journal of Applied Ecology 50:977-987.
- Goulson, D. 2014. Pesticides linked to bird declines. Nature 511:295-296.
- Graves, E.E., M. Holyoak, T. Rodd Kelsey, and R.J. Meese. 2013. Understanding the contribution of habitats and regional variation to long-term population trends in tricolored blackbirds. Ecology and Evolution 3:2845-2858.
- Green, M. and L. Edson. 2004. The 2004 Tricolored Blackbird April survey. Central Valley Bird Club Bulletin 7:23-31.
- Gregory, R.D., D.W. Gibbons, and P.F. Donald. 2004. Bird census and survey techniques. Pages 17-56 in
- W.J. Sutherland, I. Newton and R.E. Green, editors. Bird Ecology and Conservation: A Handbook of Techniques. Oxford University Press, Oxford.
- Grinnell, J. 1898. Birds of the Pacific slope of Los Angeles County. Publ. no. 11, Pasadena Academy Sciences, Pasadena.

- Grinnell, J. 1928. A distributional summation of the ornithology of Lower California. University of California Publications in Zoology v. 32, no. 1.
- Grinnell, J. and A.H. Miller. 1944. The distribution of the birds of California. Pacific Coast Avifauna 27.
- Gustafson, J.R. and D.T. Steele. 2004. Evaluation of petition from Center for Biological Diversity to list Tricolored Blackbird (*Agelaius tricolor*) as endangered. Calif. Dep. of Fish and Game, Habitat Conservation Planning Branch, Sacramento, 42 pp. + append.
- Hallmann, C.A., R.P. Foppen, C.A. van Turnhout, H. de Kroon, and E. Jongejans. 2014. Declines in insectivorous birds are associated with high neonicotinoid concentrations. Nature 511:341-343.
- Hamilton, W.J., III. 1993. Tricolored Blackbird (*Agelaius tricolor*). Report prepared for the U.S. Fish and Wildlife Service, Portland OR, and California Department of Fish and Game, Sacramento. CA.
- Hamilton, W.J., III. 1998. Tricolored blackbird itinerant breeding in California. Condor 100:218-226.
- Hamilton, W.J., Ill. 2000. Tricolored blackbird 2000 breeding season census and survey observations and recommendations. Report prepared for U.S. Fish and Wildlife Service, Portland OR, 61 pp.
- Hamilton, W.J., III. 2004a. Management implications of the 2004 Central Valley Tricolored Blackbird Survey. Central Valley Bird Club Bulletin 7:32-46.
- Hamilton, W.J., III. 2004b. Tricolored Blackbird Management Recommendations and 2005 Survey Priorities. Report prepared for California Resource Management Institute. 15pp.
- Hamilton, W.J., III, K. Hunting, and L. Cook. 2000. Tricolored Blackbird status report for 1999. Central Valley Bird Club Bulletin 3:7-11.
- Hamilton, W.J., III, L. Cook, and K. Hunting. 1999. Tricolored blackbirds 1999 status report. Report prepared for California Department of Fish and Game, Sacramento CA, and U.S. Fish and Wildlife Service, Portland OR.
- Hamilton, W.J., III, L. Cook, and R. Grey. 1995. Tricolored blackbird project 1994. Report prepared for U.S. Fish and Wildlife Service, 69 pp. + append.
- Hamilton, W. J., III, R. Bowen, and L. Cook. 1992. Nesting activities of tricolored blackbirds, *Agelaius tricolor*, in the Central Valley, California, 1992. Report prepared for U.S. Fish and Wildlife Service. 23 pp.
- Hardt, D. June 27, 2011. Email to Cheryl Harding regarding comments from David Hardt, [Refuge Manager, Kern NWR Complex] regarding Tricolored Blackbird survey.
- Holyoak M., R.J. Meese, and E.E. Graves. 2014. Combining site occupancy, breeding population sizes and reproductive success to calculate time-averaged reproductive output of different habitat types: An application to Tricolored Blackbirds. PLoS ONE 9(5): e96980. doi:10.1371/journal.pone.0096980.
- Hopwood, J., M. Vaughan, M. Shepherd, D. Biddinger, E. Mader, S.H. Black, and C. Mazzacano. 2012. Are neonicotinoids killing bees? A review of research in the effects of neonicotinoid insecticides on bees, with recommendations for action. The Xerces Society for Invertebrate Conservation, Portland, OR.
- Hosea, R.C. 1986. A population census of the tricolored blackbird, *Agelaius tricolor* (Audubon), in four counties in the northern Central Valley of California. M.A. thesis, California State University, Sacramento, CA.

- Humple, D. and R. Churchwell. 2002. Tricolored blackbird survey report 2001. Point Reyes Bird Observatory draft report. Prepared for U.S. Fish and Wildlife Service. 13 pp.
- ICF International (ICF). August 2012. Final Santa Clara Valley Habitat Plan, Santa Clara County, California. Prepared by: ICF International, 620 Folsom Street, Suite 200, San Francisco, CA 94107.
- Iglecia, M. and R. Kelsey. 2012. Assessing the scope and scale of shorebird friendly management practices on managed wetlands in the Central Valley of California. Audubon California, Sacramento, CA.
- Jaeger, M.M., R.L. Bruggers, B.E. Johns, and W.A. Erickson. 1986. Evidence of itinerant breeding of the Red-billed Quelea (*Quelea quelea*) in the Ethiopian Rift Valley. Ibis 128:469-482.
- Jongsomjit, D., D. Stralberg, T. Gardali, L. Salas, and J. Wiens. 2013. Between a rock and a hard place: the impacts of climate change and housing development on breeding birds in California. Landscape Ecology 28:187-200.
- Kelsey, R. 2008. Results of the tricolored blackbird 2008 census. Report submitted to the U.S. Fish & Wildlife Service, Portland, OR.
- Kemp, W.P. and M.M. Cigliano. 1994. Drought and rangeland grasshopper species diversity. Canadian Entomologist 126:1075-1092.
- Kern Water Bank Authority. October 1997. Kern Water Bank HCP/NCCP. Kern County, Final. Kern Water Bank Authority. October 1997. Kern Water Bank HCP/NCCP. Kern County, Final. Appendix B, Species Accounts.
- Knopf, F.L and S.K. Skagen. 2012. North American Prairies: 21st Century Conservation Initiatives and Partnerships. The All-bird Bulletin, Summer 2012 Issue:1-2.
- Kyle, K. and R. Kelsey. 2011. Results of the 2011 Tricolored Blackbird Statewide Survey. Audubon California, Sacramento, CA.
- Lack, D. and J.T. Emlen, Jr. 1939. Observations on breeding behavior in tricolored red-wings. Condor 41:225-230.
- Lamb, C. and A.B. Howell. 1913. Notes from Buena Vista Lake and Fort Tejon. Condor 15:115-120. Lehman, P.E. 1994. The birds of Santa Barbara County, California. Allen Press, Lawrence, KS. Linton, C.B. 1908. Notes from Buena Vista Lake, May 20 to June 16, 1907. Condor 10:196-198. Mailliard, J. 1900. Breeding of *Agelaius tricolor* in Madera Co., Cal. Condor 2:122-124.
- Mailliard, J. 1914. Notes on a colony of tri-colored redwings. Condor 16:204-207.
- Martin, T.E. 1987. Food as a limit on breeding birds: A life-history perspective. Annual Review of Ecology and Systematics 18:453-487.
- Mazerolle D.F., S.G. Sealy, and K.A. Hobson. 2011. Interannual flexibility in breeding phenology of a Neotropical migrant songbird in response to weather conditions at breeding and wintering areas. Ecoscience 18:18-25.
- Meese, R.J. 2006. Settlement and Breeding Colony Characteristics of Tricolored Blackbirds in 2006 in the Central Valley of California. Report submitted to the U.S. Fish and Wildlife Service, Sacramento, CA, and Audubon California, Emeryville, CA. 34 pp. + appendix.
- Meese, R.J. 2008. Detection, monitoring, and fates of Tricolored Blackbird colonies in 2008 in the Central Valley of California. Calif. Dept. of Fish and Game, Wildlife Branch,

- Nongame Wildlife Program Report 2008-07 and the U.S. Fish and Wildlife Service, Portland, OR. 29 pp. + appendix.
- Meese, R.J. 2009a. Detection, monitoring, and fates of Tricolored Blackbird colonies in 2009 in the Central Valley of California. Report submitted to California Department of Fish and Game and U.S. Fish and Wildlife Service. 25pp.
- Meese, R.J. 2009b. Contribution of the conservation of silage colonies to Tricolored Blackbird conservation from 2005-2009. Report submitted to U.S. Fish and Wildlife Service. 10pp.
- Meese, R.J. 2010. Detection, monitoring, and fates of tricolored blackbird colonies in 2010 in the Central Valley of California. Calif. Dept. of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2010-06 and U.S. Fish and Wildlife Service, Sacramento, CA. 21 pp. + appendix.
- Meese, R.J. 2011. Reproductive success of tricolored blackbird colonies in 2011 in the Central Valley of California. Calif. Dep. of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2011-08, Sacramento, CA. 20 pp. + appendix.
- Meese, R.J. 2012. Cattle egret predation causing reproductive failures of nesting tricolored blackbirds. California Fish and Game 98:47-50.
- Meese, R.J. 2013. Chronic low reproductive success of the colonial tricolored blackbird from 2006 to 2011. Western Birds 44:98-113.
- Meese, R.J. 2014a. Results of the 2014 Tricolored Blackbird Statewide Survey. UC Davis.
- Meese, R.J. 2014b. Trapping and banding of tricolored blackbirds (*Agelaius tricolor*) from 2012 to 2014. Report submitted to the California Department of Fish and Wildlife. 8 pp.
- Meese, R.J. 2015a. Efforts to assess the status of the Tricolored Blackbird from 1931 to 2014. Central Valley Bird Club Bulletin. Special Issue on the Status, Ecology, and Conservation of the Tricolored Blackbird. 17:37-50.
- Meese, R.J. 2015b. Detection, monitoring, and fates of Tricolored Blackbird colonies in California in 2015. Calif. Dep. of Fish and Wildlife, Wildlife Branch, Nongame Wildlife Program Report 2015-03, Sacramento, CA. 13 pp. + appendices.
- Meese, R.J. 2016. Detection, monitoring, and fates of Tricolored Blackbird colonies in California in 2016. Calif. Dep. of Fish and Wildlife, Wildlife Branch, Nongame Wildlife Program Report 2016-05, Sacramento, CA. 14 pp. + appendix.
- Meese, R.J. 2017. Results of the 2017 Tricolored Blackbird statewide survey. Draft report.
- Meese, R.J., E.C. Beedy and W.J. Hamilton, III. 2014. Tricolored Blackbird (*Agelaius tricolor*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: [http://] bna.birds.cornell.edu/bna/species/423 doi:10.2173/bna.423.
- Meese, R.J., J.L. Yee, and M. Holyoak. 2015. Sampling to estimate population size and detect trends in Tricolored Blackbirds. Central Valley Bird Club Bulletin. Special Issue on the Status, Ecology, and Conservation of the Tricolored Blackbird. 17(2-4):51-56.
- Merkel and Associates, Inc. 1997. General Description and Overview of Biological Features of the San Miguel Conservation Bank an Associated 500 Acre Acquisition Parcel and 166 Acre Mitigation Site. August 19.
- Mineau, P. and C. Palmer. 2013. The impact of the nation's most widely used insecticides on birds. American Bird Conservancy, March 2013.

- Mineau, P. and M. Whiteside. 2013. Pesticide acute toxicity is a better correlate of U.S. grassland bird declines than agricultural intensification. PLoS ONE 8(2):e57457. doi:10.1371/journal.pone.0057457.
- Moser, S., J. Ekstrom, and G. Franco. 2012. Our Changing Climate 2012: Vulnerability and adaptation to the increasing risks from climate change in California. A summary report on the third assessment from the California Climate Change Center.
- National Audubon Society (NAS). 2017. Drought-related monitoring, habitat-use, and prioritization of conservation sites for Tricolored Blackbirds. Draft report 31 March 2017.
- Natomas Basin Habitat Conservation Plan Sacramento and Sutter counties, California (NBHCP). April 2003. Prepared By: City of Sacramento City Hall 915 I Street, Room 100 Sacramento, CA 95814 Sutter County P.O. Box 1555 Yuba City, CA 95992, The Natomas Basin Conservancy, 1750 Creekside Oaks Drive, Suite 290 Sacramento, CA 95833.
- Nebel, S., A. Mills, J.D. McCracken, and P.D. Taylor. 2010. Declines of Aerial Insectivores in North America Follow a Geographic Gradient. Avian Conservation and Ecology 5(2):1.
- Neff, J.A. 1933. The Tri-colored Red-wing in Oregon. Condor 35:234-235.

 Neff, J.A. 1942. Migration of the tricolored red-wing in central California. Condor 44:45-53.
- Neff, J. 1937. Nesting distribution of the tricolor-colored redwing. Condor 39:61-81.
- Niven, D.K., J.R. Sauer, G.S. Butcher, and W.A. Link. 2004. Christmas Bird Count provides insights into population change in land birds that breed in the boreal forest. The 104th Christmas Bird Count. American Birds 58:10-20.
- North American Bird Conservation Initiative (NABCI). 2016. The State of North America's Birds 2016. Environment and Climate Change Canada: Ottawa, Ontario. 8 pp.
- Nuttall, T. 1840. A manual of the ornithology of the United States and Canada. 2nd edition. Hilliard, Gray, and Co., Boston, MA.
- Ogden Environmental and Energy Services Co, Inc. August 1998. Final Multiple Species Conservation Program, MSCP Plan, [San Diego County], San Diego, CA.
- Orians, G.H. 1960. Autumnal breeding in the tricolored blackbird. Auk 77:379-398. Orians, G.H. 1961a. Social stimulation within blackbird colonies. Condor 63:330-337.
- Orians, G.H. 1961b. The ecology of blackbird (*Agelaius*) social systems. Ecological Monographs 31:285- 312.
- Payne, R.B. 1969. Breeding seasons and reproductive physiology of Tricolored Blackbirds and Redwinged Blackbirds. Univ. Calif. Publ. Zool., 90:1-137.
- Ray, M.S. 1906. A-birding in an auto. Auk 23:400-418.
- Reiter, M.E., N. Elliott, S. Veloz, D. Jongsomjit, C.M. Hickey, M. Merrifield, and M.D. Reynolds. 2015. Spatio-temporal patterns of open surface water in the Central Valley of California 2000-2011: Drought, land cover, and waterbirds. Journal of the American Water Resources Association 51:1722-1738.
- Remsen, J.V., Jr., J.I. Areta, C.D. Cadena, S. Claramunt, A. Jaramillo, J.F. Pacheco, J. Pérez-Emán, M.B. Robbins, F.G. Stiles, D.F. Stotz, and K.J. Zimmer. Version 21 January 2017. A classification of the bird species of South America. American Ornithologists' Union. Available from [http://www.] museum.lsu.edu/~Remsen/SACCBaseline [dot] htm

- Richardson, C. 1961. Tricolored Blackbirds nesting in Jackson County, Oregon. Condor 63:507-508.
- San Diego County Water Authority and RECON Environmental, Inc. (SDCWA and RECON) October 2010. San Diego County Water Authority Subregional Natural Community Conservation Plan Habitat Conservation Plan (NCCP/HCP). 4677 Overland Avenue, San Diego, CA 92123.
- San Diego Gas & Electric Company (SDG&E). December 15, 1995. San Diego Gas & Electric Subregional Natural Community Conservation Plan. 127 pp. + Apps.
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). November 14, 2000.
- Sanchez Johnson, Y., F. Hernandez, D.G. Hewitt, E.J. Redeker, G.L. Waggerman, H. Ortega Melendez, H.V. Zamora Trevino, and J.A. Roberson. 2009. Status of White-Winged Dove Nesting Colonies in Tamaulipas, Mexico. The Wilson Journal of Ornithology 121:338-346.
- Sauer, J.R., K.L. Pardieck, D.J. Ziolkowski, Jr., A.C. Smith, M.R. Hudson, V. Rodriguez, H. Berlanga, D.K. Niven, and W.A. Link. 2017a. The first 50 years of the North American Breeding Bird Survey. Condor 119:576-593.
- Sauer, J.R., D.K. Niven, J.E. Hines, D.J. Ziolkowski, Jr, K.L. Pardieck, J.E. Fallon, and W.A. Link. 2017b. The North American Breeding Bird Survey, Results and Analysis 1966 2015. Version 2.07.2017 USGS Patuxent Wildlife Research Center, Laurel, MD.
- Schwertner, T.W., H.A. Mathewson, J.A. Roberson and G.L. Waggerman. 2002. White-winged Dove (*Zenaida asiatica*), The Birds of North America (P.G. Rodewald, Ed.). Ithaca: Cornell Lab of Ornithology.
- Searcy, W.A. and K. Yasukawa. 1981. Sexual size dimorphism and survival of male and female blackbirds (Icteridae). Auk 98:457-465.
- Shuford, W.D., C.M. Hickey, R.J. Safran, and G.W. Page. 1996. A review of the status of the White-faced Ibis in winter in California. Western Birds 27:169-196.
- Shuford, W.D. and T. Gardali. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds No. 1. Western Field Ornithologists, Camarillo, CA and California Department of Fish and Game, Sacramento.
- Skorupa, J.P., R.L. Hothem, and R.W. DeHaven. 1980. Foods of breeding Tricolored Blackbirds in agricultural areas of Merced County, California. Condor 82:465-467.
- Skutch, A.F. 1996. Orioles, blackbirds, and their kin. University of Arizona Press, Tucson, AZ.
- Soulard, C.E. and T.S. Wilson. 2015. Recent land-use/land-cover change in the Central California Valley. Journal of Land Use Science 10:59-80.
- Soykan, C.U., J. Sauer, J.G. Schuetz, G.S. LeBaron, K. Dale, and G.M. Langham. 2016. Population trends for North American winter birds based on hierarchical models. Ecosphere 7(5):e01351.
- Spencer, K. 2003. Tricolored Blackbird. Pp. 578-580 *in* Birds of Oregon: A general reference. D.B. Marshall, M.G. Hunter, and A.L. Contreras, Eds. Oregon State University Press, Corvallis, OR.

- Stallcup, R. 2004. Late nesting Tricolored Blackbirds in western Marin County, California. Central Valley Bird Club Bulletin 7:51-52.
- Starner, K. and K.S. Goh. 2012. Detections of the neonicotinoid insecticide imidacloprid in surface waters of three agricultural regions of California, USA, 2010-2011. Bulletin of Environmental Contamination and Toxicology 88:316-321.
- Tottrup A.P., K. Rainio, T. Coppack, E. Lehikoinen, C. Rahbek, and K. Thorup. 2010. Local temperature fine-tunes the timing of spring migration in birds. Integrative and Comparative Biology 50:293-304.
- Tricolored Blackbird Portal. 2017. Information Center for the Environment, University of California, Davis, and U.S. Fish and Wildlife Service. Accessed online and data retrieved from the online database in January 2017: http://tricolor.ice.ucdavis.edu/.
- Tricolored Blackbird Working Group (TBWG). 2007. Conservation Plan for the Tricolored Blackbird (Agelaius tricolor). Susan Kester (ed.). Sustainable Conservation. San Francisco, CA. Available at: http://tricolor.ice.ucdavis.edu/node/579.
- Unitt, P. 2004. San Diego County bird atlas. Proc. San Diego Soc. Nat. Hist. 39.
- U.S. Fish and Wildlife Service (USFWS). April 2003. Natomas Basin Habitat Conservation Plan Final Environmental Impact Report/Environmental Impact Statement. State Clearinghouse No. 1997062064.
- U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA 95825.
- U.S. Fish and Wildlife Service (USFWS). June 24, 2003. Intra-Service Biological and Conference Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit to the City of Sacramento and Sutter County for Urban Development in the Natomas Basin, Sacramento and Sutter Counties, California. Reference number 1-1-03-F-0225. Field Office Supervisor, Sacramento Fish and Wildlife Office, Sacramento, CA.
- U. S. Fish and Wildlife Service (USFWS). January 10, 2007. Biological Opinion 1-6-07-F-812.8, Intra- Service Formal Section 7 Consultation/Conference for Issuance of an Endangered Species Act Section 10(a)(1)(B) Permit (TE144113-0, TE144140-0, and TE144105-0) for The Southern Orange Natural Community Conservation Plan/Master Streambed Alteration Agreement/Habitat Conservation Plan, Orange County, California. Carlsbad Fish and Wildlife Office, Carlsbad, CA.
- U.S. Fish and Wildlife Service (USFWS). December 4, 2007. Intra-Service Biological and Conference Opinion on Issuance of a Section 10(a)(I)(B) Incidental Take Permit to Pacific Gas & Electric Company (PG&E) for the San Joaquin Valley Operations and Maintenance Program Habitat Conservation Plan, for portions of Nine Counties in the San Joaquin Valley, California. Reference number 1-1-07-F-0445. Sacramento Fish and Wildlife Service Field Office, Sacramento, CA.
- U.S. Fish and Wildlife Service (USFWS). 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, Virginia. 87 pp.
- Vose, J.M., J.S. Clark, C.H. Luce, and T. Patel-Weynand, eds. 2016. Effects of drought on forests and rangelands in the United States: a comprehensive science synthesis. Gen. Tech. Rep. WO-93b. Washington, DC: U.S. Department of Agriculture, Forest Service, Washington Office. 289 p.
- Wahl, T.R., B. Tweit and S.G. Mlodinow. 2005. Birds of Washington: Status and distribution. Oregon State University Press, Corvallis, OR.

- Ward, P., and A. Zahavi. 1973. The importance of certain assemblages of birds as "information-centres" for food-finding. Ibis 115:517-534.
- Western Riverside County Multiple Species Habitat Conservation Plan (WRC-MSHCP), Biological Monitoring Program. March 28, 2011. Tricolored Blackbird (*Agelaius tricolor*), Survey Report 2010 with Overview of Recent History and Current Status in Southern California.
- Western Riverside County Multi-Species Habitat Conservation Plan (WRC-MSHCP), Biological Monitoring Program. April 27, 2012. Tricolored Blackbird (*Agelaius tricolor*), Survey Report 2011.
- Western Riverside County Multiple Species Habitat Conservation Plan (WRC-MSHCP), Biological Monitoring Program. April 22, 2013. 2012 Tricolored Blackbird (*Agelaius tricolor*), Survey Report.
- Western Riverside County Regional Conservation Authority (WRCRCA). May 2015. Western Riverside County Multiple Species Habitat Conservation, Annual Report for the period January 1, 2013 through December 31, 2013.
- Wheeler, S.S., C.M. Barker, Y. Fang, M.V. Armijos, B.D. Carroll, S. Husted, W.O. Johnson, and W.K. Reisen. 2009. Differential impact of West Nile virus on California birds. Condor 111:1-20.
- Wheelock, I.G. 1904. Birds of California. A.C. McClurg and Co., Chicago.
- Wilbur, S.R. 1987. Birds of Baja California. University of California Press, Berkeley, CA.
- Willett, G. 1912. Birds of the Pacific slope of southern California. Pac. Coast Avifauna No. 7, Cooper Ornithological Club, Hollywood, CA.
- Willett, G. 1933. A revised list of the birds of southwestern California. Pac. Coast Avifauna No. 21, Cooper Ornithological Club, Los Angeles.
- Williams, A.P., R. Seager, J.T. Abatzoglou, B.I. Cook, J.E. Smerdon, and E.R. Cook. 2015. Contribution of anthropogenic warming to California drought during 2012-2014. Geophysical Research Letters 42:6819-6828.
- Wilson, C.R., R.J. Meese, and A.C. Wyckoff. 2016. Breeding chronology, movements, and life history observations of tricolored blackbirds in the California Central Coast. California Fish and Game 102:162- 174.

NOTICE OF FINDINGS

Lassics lupine

(Lupinus constancei)

NOTICE IS HEREBY GIVEN that the California Fish and Game Commission (Commission), at a meeting in Ventura, California on April 19, 2018, found pursuant to Fish and Game Code Section 2075.5, that the information contained in the petition to list Lassics lupine (*Lupinus constancei*) and other information in the record before the Commission, warrants adding the Lassics lupine to the list of endangered species under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). (See also Cal. Code Regs., tit. 14, § 670.1, subd. (i).)

NOTICE IS ALSO GIVEN that, at its August 23, 2018 meeting in Fortuna California, the Commission adopted the following findings outlining the reasons for its determination.

I. Background and Procedural History

Petition History

On July 19, 2016, the Commission received a petition (Petition) from Mr. Dave Imper and Ms. Cynthia Elkins from the Center for Biological Diversity to list Lassics lupine as an endangered species pursuant to CESA (Fish & G. Code, § 2050 *et seq.*).

On July 29, 2016, the Commission referred the Petition to the Department for evaluation.

On August 12, 2016, as required by Fish and Game Code Section 2073.3, the Commission published notice of receipt of the Petition in the California Regulatory Notice Register. (Cal. Reg. Notice Register 2016, No. 33-Z, p. 1463). The Department on September 14, 2016, pursuant to Fish and Game Code Section 2073.5, requested a 30-day extension of time to complete its evaluation report. The Commission approved the extension at its October 20, 2016 meeting in Eureka, California.

On December 8, 2016, the Department provided the Commission with a report, "Evaluation of the Petition from Mr. David Imper and Ms. Cynthia Elkins to List Lassics Lupine (*Lupinus constancei*) as an Endangered Species under the California Endangered Species Act" (Evaluation). Based upon the information contained in the Petition, the Department concluded, pursuant to Fish and Game Code, Section 2073.5, subdivision (a), that sufficient information exists to indicate that the petitioned action may be warranted, and recommended to the Commission that the Petition should be accepted and considered.

On February 8, 2017, at its scheduled public meeting in Rohnert Park, California, the Commission considered the Petition, the Department's Evaluation and recommendation, and comments received. The Commission found that sufficient information existed to indicate the petitioned action may be warranted and accepted the Petition for consideration.

Subsequently, on February 24, 2017, the Commission published its Notice of Findings for Lassics lupine in the California Regulatory Notice Register, designating Lassics lupine as a candidate species (Cal. Reg. Notice Register 2017, No. 8-Z, p. 258).

Department Review

The Commission's action designating the Lassics lupine as a candidate species triggered the Department's process for conducting a status review to inform the Commission's decision on whether to list the species. The Commission received the Department's status review report at its February 7-8, 2018 meeting in Sacramento, California. On April 19, 2018, in Ventura, California, the Commission found that the information contained in the petition and the other information in the record before the Commission warrants listing Lassics lupine as an endangered species under the California Endangered Species Act.

Species Description

Lassics lupine is an herbaceous perennial plant of the legume family (*Fabaceae*) that was described as a new species in 1983. Lassics lupine is only found near the summits of remote mountains in northern California called the Lassics, which have unique serpentine-influenced soils. The Lassics are located in Humboldt and Trinity counties within the Six Rivers National Forest. There are two known populations of Lassics lupine, occupying a combined area of approximately 1.6 hectares (4 acres). The smaller of the two Lassics lupine populations is found on a southwest-facing slope of a mountain called Red Lassic. The larger Lassics lupine population is located entirely within Mt. Lassic Wilderness on adjoining peaks of Mt. Lassic.

II. STATUTORY AND LEGAL FRAMEWORK

The Commission, as established by the California Constitution, has exclusive statutory authority under California law to designate endangered, threatened, and candidate species under CESA. (Cal. Const., art. IV, § 20, subd. (b); Fish & G. Code, § 2070.) The CESA listing process for Lassics lupine began in the present case with the Petitioners' submittal of the Petition to the Commission on July 19, 2016. The regulatory and legal process that ensued is described in some detail in the preceding section above, along with related references to the Fish and Game Code and controlling regulation. The CESA listing process generally is also described in some detail in published appellate case law in California, including:

- Mountain Lion Foundation v. California Fish and Game Commission (1997) 16
 Cal.4th 105, 114-116;
- California Forestry Association v. California Fish and Game Commission (2007)
 156 Cal.App.4th 1535, 1541-1542;
- Center for Biological Diversity v. California Fish and Game Commission (2008)
 166 Cal.App.4th 597, 600; and
- Natural Resources Defense Council v. California Fish and Game Commission (1994) 28 Cal.App.4th 1104, 1111-1116.

The "is warranted" determination at issue here for Lassics lupine stems from Commission obligations established by Fish and Game Code Section 2075.5. Under this provision, the Commission is required to make one of two findings for a candidate species at the end of the CESA listing process; namely, whether the petitioned action is warranted or is not warranted. Here, with respect to the Lassics lupine, the Commission made the finding under Section 2075.5(e)(2) that the petitioned action is warranted.

The Commission was guided in making these determinations by statutory provisions and other controlling law. The Fish and Game Code, for example, defines an endangered species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease." (Fish & G. Code, § 2062.) Similarly, the Fish and Game Code defines a threatened species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter." (*Id.*, § 2067.)

The Commission also considered Title 14, Section 670.1, subdivision (i)(1)(A), of the California Code of Regulations in making its determination regarding Lassics lupine. This provision provides, in pertinent part, that a species shall be listed as endangered or threatened under CESA if the Commission determines that the species' continued existence is in serious danger or is threatened by any one or any combination of the following factors:

- 1. Present or threatened modification or destruction of its habitat;
- 2. Overexploitation;
- 3. Predation;
- 4. Competition;

- 5. Disease; or
- 6. Other natural occurrences or human-related activities.

Fish and Game Code Section 2070 provides similar guidance. This section provides that the Commission shall add or remove species from the list of endangered and threatened species under CESA only upon receipt of sufficient scientific information that the action is warranted. Similarly, CESA provides policy direction not specific to the Commission per se, indicating that all state agencies, boards, and commissions shall seek to conserve endangered and threatened species and shall utilize their authority in furtherance of the purposes of CESA. (Fish & G. Code, § 2055.) This policy direction does not compel a particular determination by the Commission in the CESA listing context. Nevertheless, "[I]aws providing for the conservation of natural resources' such as the CESA 'are of great remedial and public importance and thus should be construed liberally." (California Forestry Association v. California Fish and Game Commission, supra, 156 Cal. App.4th at pp. 1545-1546, citing San Bernardino Valley Audubon Society v. City of Moreno Valley (1996) 44 Cal.App.4th 593, 601; Fish & G. Code, §§ 2051, 2052.)

Finally in considering these factors, CESA and controlling regulations require the Commission to actively seek and consider related input from the public and any interested party. (See, e.g., Id., §§ 2071, 2074.4, 2078; Cal. Code Regs., tit. 14, § 670.1, subd. (h).) The related notice obligations and public hearing opportunities before the Commission are also considerable. (Fish & G. Code, §§ 2073.3, 2074, 2074.2, 2075, 2075.5, 2078; Cal. Code Regs., tit. 14, § 670.1, subds. (c), (e), (g), (i); see also Gov. Code, § 11120 et seq.) All of these obligations are in addition to the requirements prescribed for the Department in the CESA listing process, including an initial evaluation of the petition and a related recommendation regarding candidacy, and a review of the candidate species' status culminating with a report and recommendation to the Commission as to whether listing is warranted based on the best available science. (Fish & G. Code, §§ 2073.4, 2073.5, 2074.4, 2074.6; Cal. Code Regs., tit. 14, § 670.1, subds. (d), (f), (h).)

III. Factual and Scientific Bases for the Commission's Final Determination

The factual and scientific bases for the Commission's determination that designating the Lassics lupine as an endangered species under CESA is warranted are set forth in detail in the Commission's record of proceedings including the Petition, the Department's Petition Evaluation Report, the Department's status review, written and oral comments received from members of the public, the regulated community, tribal entities, the scientific community and other evidence included in the Commission's record of proceedings.

The Commission determines that the continued existence of the Lassics lupine in the State of California is in serious danger or threatened by one or a combination of the following factors as required by the California Code of Regulations Title 14, Section 670.1, subdivision (i)(1)(A):

- 1. Present or threatened modification or destruction of its habitat;
- 2. Overexploitation;
- 3. Predation;
- 4. Competition;
- 5. Disease; or
- 6. Other natural occurrences or human-related activities.

The Commission also determines that the information in the Commission's record constitutes the best scientific information available and establishes that designating the Lassics lupine as an endangered species under CESA is warranted. Similarly, the Commission determines that the Lassics lupine is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

The items highlighted here and detailed in the following section represent only a portion of the complex issues aired and considered by the Commission during the CESA listing process for the Lassics lupine. Similarly, the issues addressed in these findings represent some, but not all of the evidence, issues, and considerations affecting the Commission's final determination. Other issues aired before and considered by the Commission are addressed in detail in the record before the Commission, which record is incorporated herein by reference.

Background

The Commission bases its "is warranted" finding for the Lassics lupine most fundamentally on the rarity of the Lassics lupine in combination with the immediate impact of predation and the long-term impact of climate change.

Threats

Present or Threatened Modification or Destruction of Habitat

Lassics lupine habitat is threatened by climate change and, has been impacted by the 2015 Lassics Fire (particularly at the Red Lassic Population). The Mt. Lassic Population is subject to ongoing habitat degradation and loss from forest encroachment. Lassics lupine faces a particularly severe threat from climate change because as the climate system warms, potentially suitable habitat is expected to shift upwards in elevation, and suitable habitat for Lassics lupine is expected to disappear. Many trees in the vicinity of

the Red Lassic Population were killed by the 2015 Lassics Fire, including some of the large trees that provide canopy shading for the Red Lassic Population during hot summer afternoons. These trees, and the shade that they provide, appear to be critical for the Lassics lupine habitat at the Red Lassic Population. The aftermath of the 2015 Lassics Fire is therefore a serious threat to the continued existence of the Red Lassic Population. Aerial imagery clearly shows that the forest has become denser and has encroached into Lassics lupine habitat on Mt. Lassic since the 1930s, a likely result of historical fire suppression activities. Forest is less suitable for Lassics lupine survival and reproduction than the treeless upper terrace and north slope ecological settings. Approximately 0.8 to 1.2 hectares (2 to 3 acres) of habitat with soil that is suitable for Lassics lupine at the Mt. Lassic Population has been encroached upon by forest, and forest encroachment is expected to continue into Lassics lupine habitat in the future. The Department considers degradation and loss of habitat to be a significant threat to the continued existence of Lassics lupine.

Predation

Pre-dispersal seed predation by rodents has the potential to drive Lassics lupine to extinction, and post-dispersal seed predation and herbivory are also significant threats to the species. Deer mice, chipmunks, and California ground squirrels are the most abundant seed predators near Lassic lupine populations, and are responsible for most of the seed predation impacts on Lassics lupine. Lassics lupine plants closer to vegetation, particularly chaparral vegetation, appear to be at greatest risk from seed predation, and therefore encroaching vegetation is an important contributing factor to seed predation. The Department considers predation to be a significant threat to the continued existence of Lassics lupine.

Competition

Jeffrey pine and incense cedar forest trees, saplings, and seedlings compete with Lassics lupine for light and moisture, particularly in the encroaching forest on the north slope of Mt. Lassic. The Department considers competition with encroaching trees to be a significant threat to the continued existence of Lassics lupine.

Other Natural Occurrences or Human-related Activities

The climate of California is certain to change due to warming of the global climate system. Climate change scenarios for northern California in the vicinity of the Lassics generally include similar annual precipitation levels, higher temperatures, and less snow pack. Lassics lupine is sensitive to climate extremes, and mortality appears to be highest when summer rainfall is low and summer temperatures are high, with these effects exacerbated by early snowmelt. Furthermore, as the climate system warms, potentially suitable habitat for mountaintop species such as Lassics lupine is expected to shift upwards in elevation, and suitable habitat may be reduced or disappear. Climate change is therefore expected to increase Lassics lupine mortality, and reduce or

eliminate the amount of habitat that is suitable for the species.

Lassics lupine is also a narrowly distributed plant with only two populations and very low numbers of individuals (approximately 454 adult plants during 2017 monitoring). Lassics lupine's rarity and extremely limited distribution make the species very vulnerable to stochastic (chance) events such as landslide, drought or fire, and to all other threats. The loss of all or a significant

portion of either Lassics lupine population would represent the loss of a significant portion of Lassics lupine's total range.

The 2015 Lassics Fire killed many trees in the vicinity of the Red Lassic Population, including trees that provide canopy shading that is critical for the suitability of the habitat at this location for Lassics lupine. While these trees are still standing, they are leafless and at greater risk of falling over. The aftermath of the 2015 Lassics Fire is a threat to the ability of the Red Lassic Population of Lassics lupine to survive and reproduce.

IV. FINAL DETERMINATION BY THE COMMISSION

The Commission has weighed and evaluated the information for and against designating the Lassics lupine as an endangered species under CESA. This information includes scientific and other general evidence in the Petition; the Department's Petition Evaluation Report; the Department's status review; the Department's related recommendations; written and oral comments received from members of the public, the regulated community, various public agencies, and the scientific community; and other evidence included in the Commission's record of proceedings.

Based upon the evidence in the record the Commission has determined that the best scientific information available indicates that the continued existence of the Lassics lupine is in serious danger or threatened by present or threatened modifications or destruction of the species' habitat, predation, competition, disease, or other natural occurrences or human-related activities, where such factors are considered individually or in combination. (See generally Cal. Code Regs., tit. 14, § 670.1, subd. (i)(1)(A); Fish & G. Code, §§ 2062, 2067.) The Commission determines that there is sufficient scientific information to indicate that designating the Lassics lupine as an endangered species under CESA is warranted at this time and that with adoption and publication of these findings the Lassics lupine for purposes of its legal status under CESA and further proceedings under the California Administrative Procedure Act, shall be listed as endangered.

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California Fish and Game Commission NOTICE OF FINDINGS

Coast Yellow Leptosiphon (Leptosiphon croceus)

NOTICE IS HEREBY GIVEN that the California Fish and Game Commission (Commission), at a meeting in Ventura, California on April 19, 2018, found pursuant to Fish and Game Code Section 2075.5, that the information contained in the petition to list coast yellow leptosiphon (*Leptosiphon croceus*) and other information in the record before the Commission, warrants adding coast yellow leptosiphon to the list of endangered species under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.). (See also Cal. Code Regs., tit. 14, § 670.1, subs. (i).)

NOTICE IS ALSO GIVEN that, at its August 23, 2018 meeting in Fortuna, California, the Commission adopted the following findings outlining the reasons for its determination.

I. Background and Procedural History

Petition History

On May 25, 2016, the Commission received a petition (Petition) from Ms. Toni Corelli, cosponsored by the California Native Plant Society (CNPS), to list coast yellow leptosiphon as an endangered species pursuant to CESA (Fish & G. Code, § 2050 et seq.).

On May 27, 2016, the Commission referred the Petition to the California Department of Fish and Wildlife (Department) for evaluation.

On June 10, 2016, as required by Fish and Game Code Section 2073.3, the Commission published notice of receipt of the Petition in the California Regulatory Notice Register (Cal. Reg. Notice Register 2016, No. 24-Z, p.1002). The Department on July 25, 2016, pursuant to Fish and Game Code Section 2073.5, requested a 30-day extension of time to complete its evaluation report. The Commission approved the extension at its August 24-25, 2016 meeting in Folsom, California.

On September 26, 2016, the Department provided the Commission with a report, "Evaluation of the Petition from Ms. Toni Corelli and the California Native Plant Society to List Coast Yellow Leptosiphon (*Leptosiphon croceus*) as an Endangered Species under the California Endangered Species Act" (Evaluation). Based upon the information contained in the Petition, the Department concluded, pursuant to Fish and Game Code, Section 2073.5, subsection (a), that sufficient information exists to indicate that the petitioned action may be warranted, and recommended to the Commission that the Petition should be accepted and considered.

On December 8, 2016, at its scheduled public meeting in San Diego, California, the Commission considered the Petition, the Department's Evaluation and recommendation, and comments received. The Commission found that sufficient information existed to indicate the petitioned action may be warranted and accepted the Petition for consideration.

Subsequently, on December 23, 2016, the Commission published its Notice of Findings for coast yellow leptosiphon in the California Regulatory Notice Register, designating coast yellow leptosiphon as a candidate species (Cal. Reg. Notice Register 2016, No. 52-Z, p. 2197).

Department Review

The Commission's action designating coast yellow leptosiphon as a candidate species triggered the Department's process for conducting a status review to inform the Commission's decision on whether to list the species. The Commission received the Department's status review report at its February 7-8, 2018 meeting in Sacramento, California. On April 19, 2018, in Ventura, California, the Commission found that the information contained in the petition and the other information in the record before the Commission warrants listing coast yellow leptosiphon as an endangered species under the CESA.

Species Description

Coast yellow leptosiphon is a low-growing annual plant in the Phlox family (*Polemoniaceae*) that was first described in 1904. It is known from only one small population that occupies approximately 167 square meters (1,800 square feet), located on Vallemar Bluff in Moss Beach, San Mateo County, California. This population is located in coastal prairie habitat atop a sea bluff at the edge of the coastline.

II. Statutory and Legal Framework

The Commission, as established by the California Constitution, has exclusive statutory authority under California law to designate endangered, threatened, and candidate species under CESA. (Cal. Const., art. IV, § 20, subd. (b); Fish & G. Code, § 2070.) The CESA listing process for coast yellow leptosiphon began in the present case with the Petitioners' submittal of the Petition to the Commission on May 25, 2016. The regulatory and legal process that ensued is described in some detail in the preceding section above, along with related references to the Fish and Game Code and controlling regulation. The CESA listing process generally is also described in some detail in published appellate case law in California, including:

- Mountain Lion Foundation v. California Fish and Game Commission (1997) 16 Cal.4th 105, 114-116;
- California Forestry Association v. California Fish and Game Commission (2007) 156
 Cal.App.4th 1535, 1541-1542;
- Center for Biological Diversity v. California Fish and Game Commission (2008) 166 Cal.App.4th 597, 600; and
- Natural Resources Defense Council v. California Fish and Game Commission (1994) 28
 Cal.App.4th 1104, 1111-1116.

The "is warranted" determination at issue here for coast yellow leptosiphon stems from Commission obligations established by Fish and Game Code Section 2075.5. Under this provision, the Commission is required to make one of two findings for a candidate species at the end of the CESA listing process; namely, whether the petitioned action is warranted or is

not warranted. Here, with respect to coast yellow leptosiphon, the Commission made the finding under Section 2075.5(e)(2) that the petitioned action is warranted.

The Commission was guided in making its determinations by statutory provisions and other controlling law. The Fish and Game Code, for example, defines an endangered species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease." (Fish & G. Code, § 2062.) Similarly, the Fish and Game Code defines a threatened species under CESA as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter." (*Id.*, § 2067.)

The Commission also considered Title 14, Section 670.1, subsection (i)(1)(A), of the California Code of Regulations in making its determination regarding coast yellow leptosiphon. The provision provides, in pertinent part, that a species shall be listed as endangered or threatened under CESA if the Commission determines that the species' continued existence is in serious danger or is threatened by any one or any combination of the following factors:

- 1. Present or threatened modification or destruction of its habitat,
- 2. Overexploitation,
- 3. Predation,
- 4. Competition,
- 5. Disease, or
- 6. Other natural occurrences or human-related activities.

Fish and Game Code Section 2070 provides similar guidance. The section provides that the Commission shall add or remove species from the list of endangered and threatened species under CESA only upon receipt of sufficient scientific information that the action is warranted. Similarly, CESA provides policy direction not specific to the Commission per se, indicating that all state agencies, boards, and commissions shall seek to conserve endangered and threatened species and shall utilize their authority in furtherance of the purposes of CESA. (Fish & G. Code, § 2055.) This policy direction does not compel a particular determination by the Commission in the CESA listing context. Nevertheless, "[I]aws providing for the conservation of natural resources' such as the CESA 'are of great remedial and public importance and thus should be construed liberally." (California Forestry Association v. California Fish and Game Commission, supra, 156 Cal. App.4th at pp. 1545-1546, citing San Bernardino Valley Audubon Society v. City of Moreno Valley (1996) 44 Cal.App.4th 593, 601; Fish & G. Code, §§ 2051, 2052.)

Finally in considering these factors, CESA and controlling regulations require the Commission to actively seek and consider related input from the public and any interested party (see, e.g., Id., §§ 2071, 2074.4, 2078; Cal. Code Regs., tit. 14, § 670.1, subs. (h).). The related notice obligations and public hearing opportunities before the Commission are also considerable (Fish & G. Code, §§ 2073.3, 2074, 2074.2, 2075, 2075.5, 2078; Cal. Code Regs., tit. 14, § 670.1, subs. (c), (e), (g), (i); see also Gov. Code, § 11120 et seq.). All of these obligations

are in addition to the requirements prescribed for the Department in the CESA listing process, including an initial evaluation of the petition and a related recommendation regarding candidacy, and a review of the candidate species' status culminating with a report and recommendation to the Commission as to whether listing is warranted based on the best available science (Fish & G. Code, §§ 2073.4, 2073.5, 2074.4, 2074.6; Cal. Code Regs., tit. 14, § 670.1, subs. (d), (f), (h).).

III. Factual and Scientific Bases for the Commission's Final Determination

The factual and scientific bases for the Commission's determination that designating coast yellow leptosiphon as an endangered species under CESA is warranted are set forth in detail in the Commission's record of proceedings including the Petition, the Department's Evaluation; the Department's status review; written and oral comments received from members of the public, the regulated community, tribal entities, and the scientific community; and other evidence included in the Commission's record of proceedings.

The Commission determines that the continued existence of coast yellow leptosiphon in the state of California is in serious danger or threatened by one or a combination of the following factors as required by the California Code of Regulations, Title 14, Section 670.1, subsection (i)(1)(A):

- 1. Present or threatened modification or destruction of its habitat,
- 2. Overexploitation,
- 3. Predation,
- 4. Competition,
- 5. Disease, or
- 6. Other natural occurrences or human-related activities.

The Commission also determines that the information in the Commission's record constitutes the best scientific information available and establishes that designating the coast yellow leptosiphon as an endangered species under CESA is warranted. Similarly, the Commission determines that coast yellow leptosiphon is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

The items highlighted here and detailed in the threats section represent only a portion of the complex issues aired and considered by the Commission during the CESA listing process for coast yellow leptosiphon. Similarly, the issues addressed in these findings represent some, but not all of the evidence, issues, and considerations affecting the Commission's final determination. Other issues aired before and considered by the Commission are addressed in detail in the record before the Commission, which record is incorporated herein by reference.

Background

The Commission bases its "is warranted" finding for coast yellow leptosiphon most fundamentally on the rarity of coast yellow leptosiphon in combination with the threats identified in the next section.

Threats

Present or Threatened Modification or Destruction of Habitat

Habitat loss is considered the primary cause for species extinctions at local, regional, and global scales (Dirzo and Raven 2003). Most of the coastal prairie habitat, which provides potential habitat for coast yellow leptosiphon, has been destroyed or modified due to urban development, agriculture, and invasion of non-native plant species (Ford and Hayes 2007). Coast yellow leptosiphon was likely present over a larger geographic area prior to the development of the San Mateo coast and conversion of coastal prairie habitat. Most of the habitat surrounding the coast yellow leptosiphon population has been eliminated or altered due to road construction, residential development, and invasion by non-native plant species, particularly the invasive freeway iceplant which covers the coastal bluff adjacent to the coast yellow leptosiphon population (Departmental observation). Installation of hardscape and storm drainage systems related to urban development have altered runoff patterns and hydrology in and around occupied coast yellow leptosiphon habitat. Although it is likely that coast yellow leptosiphon has always been rare and restricted in range, past modification and destruction of habitat has contributed to the limited availability of suitable habitat for this species. These past changes affect the ability of coast yellow leptosiphon to survive and reproduce.

Development or changes in land use could directly destroy plants and living seeds in the seed bank and destroy both occupied and potential habitat. Threats to coast yellow leptosiphon may occur from development and changes in land use near the existing population. A residential development project is proposed on the parcels immediately adjacent to the coast yellow leptosiphon population (County of San Mateo 2017; Midcoast Community Council 2017). The area proposed for development consists of seven lots, which will be consolidated into four lots for the project. The proposed project will build four, three-story single-family residences, between 4,740 and 4,859 square feet in size, and is pending design review approval by the San Mateo County Coastside Design Review Committee (CDRC 2017).

Coast yellow leptosiphon has been buffered from impacts from the adjacent highway by the 1.0-hectare (2.5-acre) undeveloped coastal prairie that provides a natural buffer between Highway 1 and the coast yellow leptosiphon population. Habitat buffers provide protection from edge effects (Saunders et al. 1991; Given 1994), which are changes in community structure that occur at the boundary of two habitats. Habitat buffers also provide extra protection from human activities, allow for a more natural habitat boundary, slow the speed of water runoff, and filter sediments, fertilizers, pesticides, heavy metals, and pathogens from runoff (Given 1994;Godfrey 2015; USDA 2017).

Any change in land use on this adjacent property is expected to result in indirect impacts to the coast yellow leptosiphon population. The proposed development will alter the hydrologic regime of the site. This will involve increased, altered, and unseasonal runoff patterns resulting from addition of hard, impervious surfaces, installation of drainage features such as storm drains and drainage pipes (Mesiti-Miller Engineering, Inc. 2017), and installation and use of landscape irrigation systems. Development often leads to unseasonal summer moisture resulting from watering landscape plants, washing cars, and other human activities. In addition, residential development will lead to an increase in use of fertilizers and nutrients, herbicides, pesticides, and other household chemicals and products which will run off and disperse into habitat occupied by coast yellow leptosiphon and could impact the plants as well as alter the

soil chemistry. Increased nutrient load and unseasonal moisture resulting from human activities creates conditions that promote the spread of non-native plant species, which can outcompete the native plants for light, space, nutrients, water and other factors (Smil 1997; Vitousek et al.1997; Line and White 2007). Furthermore, development will increase the number of human visitors using the area, result in soil disturbance and compaction, increase garbage and pollution, and create conditions that are favorable for the spread of non-native plant species.

Construction of houses on the parcels adjacent to the coast yellow leptosiphon population will lead to an increase in human use of the area. Walking paths exist on the bluff, and one heavily used path exists immediately adjacent to the coast yellow leptosiphon population. Increased human use of the area will increase the impacts to the habitat from foot traffic, will increase the spread of weed seeds and introduce nutrients from dog walking, and will increase the risk of trampling and killing of coast yellow leptosiphon plants. In addition, development of the area will modify the aesthetics and accessibility of the bluff, potentially resulting in alterations of walking patterns in the area. People may create new paths through the remaining portions of the habitat accessible on Vallemar Bluff, potentially through the coast yellow leptosiphon population.

Predation

The introduction of non-native slugs into the area from neighboring residential landscapes could pose a threat to the coast yellow leptosiphon population (DFW 2017 Status Review). Non-native slugs are generalist herbivores that have been shown to negatively affect seedling survival of a wide range of plant species (Rathcke 1985; Buschmann et al. 2005; Strauss et al. 2009), and could potentially be grazing on coast yellow leptosiphon. Generalist herbivores such as slugs can reduce plant density and biomass, as well as alter species diversity within vegetation communities (Buschmann et al. 2005). The Department does not have any specific information on the impacts of non-native slugs to coast yellow leptosiphon, but it is possible that herbivory from slugs could negatively impact this species' survival.

Impacts from Invasive Species (Competition and other Factors)

Invading alien species cause major environmental damages and losses and are a significant risk factor leading to extinction of threatened and endangered species (Pimentel et al. 2004; Conser and Conner 2009), second only to habitat loss and fragmentation (Wilcove et al. 1998; Randall and Hoshovsky 2000). Compared to other threats to biodiversity, invasive non-native plants present a complex problem that is difficult to manage and has long-lasting effects. North America has accumulated the largest number of naturalized plants in the world (van Kleunen et al. 2015), and many non-native plant species have established within California, dramatically changing the state's ecological landscape (Conser and Connor 2009). Many studies hypothesize or suggest that competition is the process responsible for observed invasive species impacts to biodiversity; however, invasive species may also impact native ecosystems by altering environmental conditions and resource availability (D'Antonio and Vitousek 1992; Levine et al. 2003). Invasive species may threaten native populations through competition for light, water, or nutrients; allelopathic mechanisms; alteration of soil chemistry; thatch accumulation that inhibits seed germination and seedling recruitment; changes in natural fire frequency; disruptions to pollination or seed-dispersal mutualisms; changes in soil microorganisms; or other mechanisms. The magnitude of invasive species impacts in

Mediterranean habitats, such as those in California, largely depends on characteristics of the invading species and the habitat being invaded (Fried et al. 2014). The invader's life form and ability to form very dense stands have an effect on the magnitude of impacts, with creeping plant species such as freeway iceplant having greater effect (Gaertner et al. 2009; Fried et al. 2014). Invasive species may also influence native species colonization rates, and may thus lead to declines in local diversity over longer timescales (Yurkonis and Meiners 2004). Studies have not been conducted on the impact of invasive species on coast yellow leptosiphon specifically; however, negative impacts of plant invasions on Mediterranean ecosystems have been well demonstrated (Gaertner et al. 2009; Fried et al. 2014).

The coast yellow leptosiphon population is threatened by encroachment of non-native invasive plants, especially invasive freeway iceplant that is a highly-rated noxious weed by the California Invasive Plant Council (Cal-IPC 2017). Freeway iceplant is a low-growing, creeping succulent perennial plant that roots at the nodes and often forms deep mats covering large areas. Originating from South Africa, is one of the most widespread, non-native plants in the Mediterranean coastal ecosystems throughout the world, and is considered a severe threat to the native plant communities it invades (Albert 1995; Santoro et al. 2011). In California, it occurs along the coast and on the Channel Islands, especially in areas with a warm winter climate (Cal- IPC 2017). Originally introduced into California in the early 1900s to stabilize soil along railroad tracks, the California Department of Transportation soon began using it widely to line highways. It has also been widely promoted as an ornamental plant for home gardens (Albert 1995, 2000). Because this plant spreads easily by seed and vegetative means, it has spread beyond landscape plantings and has invaded coastal habitats, including the coastal prairie where coast yellow leptosiphon grows. Freeway iceplant forms nearly impenetrable mats that dominate the landscape, and it competes directly with native plant species for light, nutrients, water, and space (D'Antonio and Haubensak 1998). The fleshy fruits often bear more than one thousand small seeds (Bartomeus and Vilà 2009) that are eaten and widely dispersed by several mammals such as rabbits (D'Antonio 1990) and rats (Bourgeois et al. 2005). It competes aggressively with native plant species, achieving high rates of space colonization, which suppresses growth and establishment of other plants (D'Antonio and Mahall 1991; Albert 1995; Suehs et al. 2004; Vilà et al. 2006). Furthermore, it also interacts indirectly with native vegetation by altering soil chemistry by lowering pH (Conser and Connor 2009). Although freeway iceplant was originally used to stabilize soil and control erosion, it can actually contribute to erosion and landslides. It has shallow roots that do not hold soil well, and it absorbs ample water during rain events, becoming so heavy that it can slump off of steep hillsides and cliffs, pulling soil down with it (Spitzer 2002). Freeway iceplant covers the bluffs in much of the habitat near the coast yellow leptosiphon population, and it is growing on the bluff immediately adjacent to the coast yellow leptosiphon population and is encroaching into the population.

Other non-native plant species, such as rough cat's ear, rye grass, hare barley, and cut-leaved plantain, are also present growing in and around the coast yellow leptosiphon population. These invasive species may threaten the coast yellow leptosiphon population through a variety of mechanisms, including competition for light, water, or nutrients; thatch accumulation that inhibits seed germination and seedling recruitment; disruptions to pollination or seed-dispersal mutualisms; or other mechanisms (D'Antonio and Haubensak 1998).

The coast yellow leptosiphon population will likely continue to experience ongoing and increasing inputs of invasive plant propagules from nearby populations and other sources. The

area is frequently used by pedestrians, who can serve as vectors for invasive species into the area. Habitat disturbances resulting from the close proximity of the population to urban development also provides opportunities for invasive species populations to establish and expand. In addition, the proposed development on the adjacent property would likely increase the input of invasive plant species from the spread of landscape plants into the area, and will increase disturbance and habitat modification, providing favorable habitat for invasive species.

Other Natural Events or Human-Related Activities

Bluff-Top Erosion and Rising Ocean Levels—The coast yellow leptosiphon population is located on Vallemar Bluff, approximately 8 meters (27 feet) from the edge of the bluff, and bluff-top erosion and rising ocean levels pose a serious threat to this species. Rainfall and wave splash or spray cause erosion of the bluff face. Additionally, slope instability results in landslides along the coastal bluff face, resulting in landward recession of the top edge of the coastal bluff. Coastal bluff landslides are caused by undermining the base of the bluff or from saturation of the bluff edge or bluff face (Haro, Kasunich & Associates, Inc. 2015). A coastal bluff recession study was prepared by Haro, Kasunich & Associates, Inc., Consulting Geotechnical and Coastal Engineers (2015). Historical satellite photos and maps were reviewed and compared with the bluff edge position as surveyed in 2014. The results indicated that the coastal bluff had receded inland up to 14.6 meters (48 feet) between 1908 and 2014, which is a long term historical bluff recession rate of about 0.14 meter (0.45 foot) per year. Results of the study also indicated that about 3 to 5 meters (10 to 18 feet) of bluff recession occurred between 1986 and 2014, which is a long term historical bluff recession rate of about 0.11 to 0.20 meters (0.36 to 0.64 feet) per year. Future bluff and coastal recession risk was estimated using the long-term historical average annual erosion rates as a minimum. Results suggested that a minimum of 6.9 meters (22.5 feet) of bluff recession will occur at Vallemar Bluff in the next 50 years (by the year 2065). Mean sea level along the California coast is expected to rise between 1.0 to 1.4 meters (3.3 to 4.6 feet) by the year 2100 due to climate change (Heberger et al. 2009), and the accelerating rate of sea level rise will likely result in increased future recession rates compared to average historical rates (Haro, Kasunich & Associates, Inc. 2015). Accelerated future sea level rise is expected to result in an estimated additional 1.7 meters (5.5 feet) of recession over the next 50 years, for a total of 8.6 meters (28 feet) of recession (Haro, Kasunich & Associates, Inc. 2015).

Projected future bluff edge recession was measured from where the bluff is considered stable as determined by Haro, Kasunich & Associates, Inc. (2015). They used the projected stable edge to project future recession and arrived at an estimated 50-year coastal recession setback line for development on Vallemar Bluff using the projected rates of recession described above. The 50-year setback is considered the minimum distance necessary to provide a stable building site of a 50-year lifetime of a proposed structure. The portion of the bluff seaward of the 50-year setback line, which supports a large portion of the coast yellow leptosiphon population, is considered to be vulnerable to erosion over the next 50 years. It is likely that the coast yellow leptosiphon population, which is perched near the bluff edge, has been steadily reduced by cliff erosion. Based on the study conducted by Haro, Kasunich & Associates, Inc., the coast yellow leptosiphon population is located on a portion of the bluff that is highly susceptible to erosion over the next 50 years. If the bluff erodes to the 50-year setback line that accounts for rising sea level, approximately 80 percent of the coast yellow leptosiphon population will be destroyed. Erosion of the bluff presents a significant threat to coast yellow leptosiphon and could lead to the extinction of the species.

Direct physical impacts—The coast yellow leptosiphon population is threatened by other human-related activities, specifically trampling from foot traffic. People commonly walk on the bluff where the coast yellow leptosiphon population occurs, which may damage or kill coast yellow leptosiphon individuals through direct trampling of plants. In addition, there is nothing to prevent people from riding their bicycles on the bluff, which would further impact the coast yellow leptosiphon population. The property is easily accessible to the public, and a foot trail has been worn along the bluff that passes along the edge of the coast yellow leptosiphon population. A bench is present near the population overlooking the ocean, attracting visitors to cut through the coast yellow leptosiphon population to view the ocean. In addition to direct trampling of plants, human use of the site also increases disturbance and compaction of soil and facilitates the spread of invasive plant species. No barriers exist around the coast yellow leptosiphon population to protect plants from foot traffic and trampling. The proposed development will result in increased human activity in the area, thus increasing the threat to coast yellow leptosiphon from foot traffic and other human impacts.

Climate Change—Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia (IPCC 2014). Climate change presents a major challenge to the conservation of California's natural resources, and it will intensify existing threats and create new threats to natural systems. Department staff conducted an assessment of the vulnerability of coast yellow leptosiphon to climate change using the NatureServe Climate Change Vulnerability Index Version 3.02 (NatureServe 2016). Based upon the Department's assessment, coast yellow leptosiphon likely has a climate change vulnerability index value of Highly Vulnerable (HV), indicating that available evidence suggests that abundance and/or range extent within the geographical area of the species is likely to decrease significantly by the year 2050. However, some ecological and life history information used for the climate change vulnerability assessment is not yet known for coast yellow leptosiphon. In particular, the Department does not know the mechanisms or species required for effective pollination of coast yellow leptosiphon, the mechanisms used by coast yellow leptosiphon for seed dispersal, or coast yellow leptosiphon's seed dispersal distance. Furthermore, the Department does not know whether or to what extent competing plant species such as freeway iceplant will be favored by projected future climates. Despite the lack of information about some of the ecological and life history information for coast yellow leptosiphon, the confidence in the vulnerability index score is very high based on the results of the Monte Carlo simulation used in the index (Young et al. 2015).

Vulnerability of Small Populations—Coast yellow leptosiphon has an exceptionally limited distribution, with only one population that occupies a very small area. The Department recognizes that species with small numbers of populations and small population sizes are highly vulnerable to extinction due to stochastic (chance) demographic, environmental, and genetic events (Shaffer 1981, 1987; Dirzo and Raven 2003; Groom et al. 2006; Primack 2006). Chance events such as a landslide at the bluff edge could result in the loss of all or a significant part of the coast yellow leptosiphon population. Species with small numbers of populations or small populations may also be subject to increased genetic drift and inbreeding, which can affect population viability (Menges 1991; Ellstrand and Elam 1993). Due to the vulnerability and rarity of coast yellow leptosiphon, the loss of any portion of the population would represent the loss of a significant portion of this species' genetic diversity and total range, and could result in its extinction.

IV. Final Determination by the Commission

The Commission has weighed and evaluated the information for and against designating coast yellow leptosiphon as an endangered species under CESA. The information includes scientific and other general evidence in the Petition; the Department's Evaluation; the Department's status review; the Department's related recommendations; written and oral comments received from members of the public, the regulated community, various public agencies, and the scientific community; and other evidence included in the Commission's record of proceedings.

Based upon the evidence in the record, the Commission has determined that the best scientific information available indicates that the continued existence of coast yellow leptosiphon is in serious danger or threatened by present or threatened modifications or destruction of the species' habitat, predation, competition, disease, or other natural occurrences or human-related activities, where such factors are considered individually or in combination. (see generally Cal. Code Regs., tit. 14, § 670.1, subs. (i)(1)(A); Fish & G. Code, §§ 2062, 2067.)

The Commission determines that there is sufficient scientific information to indicate that designating coast yellow leptosiphon as an endangered species under CESA is warranted at this time and that, with adoption and publication of these findings, coast yellow leptosiphon for purposes of its legal status under CESA and further proceedings under the California Administrative Procedure Act, shall be listed as endangered.

Literature Cited

- Albert, M. 2000. Carpobrotus edulis (L.) N.E. Br. Pages 90-94 in C.C. Bossard, J.M. Randall, and M.C. Hoshovsky. Invasive Plants of California's Wildlands. University of California Press, Berkeley, CA. Albert, M.E. 1995. Portrait of an invader II: the ecology and management of Carpobrotus edulis.
- Albert, M.E. 1995. Portrait of an invader II: the ecology and management of Carpobrotus edulis. CalEPPC News 3(2):4-6.
- Bartomeus, I., and M. Vilà. 2009. Breeding system and pollen limitation in two supergeneralist alien plants invading Mediterranean shrublands. Australian Journal of Botany 67:109-115.
- Buschmann, H., M. Keller, N. Porret, H. Dietz, and P.J. Edwards. 2005. The effect of slug grazing on vegetation development and plant species diversity in an experimental grassland. Functional Ecology 19:291-298.
- California Department of Fish and Wildlife (DFW) December 2017 Report to the Fish and Game Commission Status Review of Coast Yellow Leptosiphon (*Leptosiphon croceus*).
- Cal-IPC (California Invasive Plant Council). 2017. California Invasive Plant Inventory Database. Available online at: [http://www.] cal-ipc.org/paf/. [accessed 2017 August 2].
- CDRC (Coastside Design Review Committee). 2017. Letter to Moss Beach Associates, LLC dated July 25, 2017. Available from: [http://www.] midcoastcommunitycouncil.org/vallemar-bluff/ [accessed 8 August 2017].
- Conser, C., and E.F. Connor. 2009. Assessing the residual effects of Carpobrotus edulis invasion, implications for restoration. Biological Invasions 11:349-358.
- County of San Mateo, Planning and Building. 2017. Four Residences at Juliana & Vallemar, Moss Beach. Website: http://planning.smcgov.org/four-residences-juliana-vallemar-moss-beach [accessed 3 August 2017].
- D'Antonio, C.M. 1990. Seed production and dispersal in the non-native, invasive succulent Carpobrotus edulis (Aizoaceae) in coastal strand communities of central California. Journal of Applied Ecology 27:693-702.
- D'Antonio, C.M., and K. Haubensak. 1998. Community and ecosystem impacts of introduced species. Fremontia 26(4):13-18.
- D'Antonio, C.M., and B.E. Mahall. 1991. Root profiles and competition between the invasive, exotic perennial, Carpobrotus edulis, and two native shrub species in California coastal scrub. American Journal of Botany 78: 885-894.
- D'Antonio, C.M., and P.M. Vitousek. 1992. Biological invasions by exotic grasses, the grass/fire cycle, and global change. Annual Review of Ecology and Systematics 23(1992):63-87.
- Dirzo, R., and P. Raven. 2003. Global state of biodiversity and loss. Annual Review of Environment and Resources 28:137-167.
- Ellstrand, N.C., and D.R. Elam. 1993. Population Genetic Consequences of Small Population Size: Implications for Plant Conservation. Annual Review of Ecology and Systematics 24: pp. 217-242.
- Ford, L. D., and G. F. Hayes. 2007. Northern Coastal Scrub and Coastal Prairie. Pages 180-207 in M.G. Barbour, T. Keeler-Wolf, and A. Schoenherr, eds. Terrestrial Vegetation of California. 3rd edition. University of California Press, Berkeley.

- Fried, G, B. Laitung, C. Pierre, N. Chagué, and F.D. Panetta. 2014. Impact of Invasive Plants in Mediterranean Habitats: Disentangling the Effects of Characteristics of Invaders and Recipient Communities. Biological Invasions 16:1639-1658.
- Gaertner, M., A.D. Breeyen, C. Hui, and D.M. Richardson. 2009. Impacts of Alien Plant Invasions on Species Richness in Mediterranean-type Ecosystems: A Meta-analysis. Progress in Physical Geography 33:319–338.
- Given, D.R. 1994. Principles and Practice of Plant Conservation. Timber Press, Portland, Oregon.
- Godfrey, M. 2015. Ecological Buffers. Reducing Ecological Impacts of Shale Development: Recommended practices for the Appalachians. Available from: [https://www.] nature.org/media/centralapps/recommended-shale-practices-ecological-buffers [dot] pdf?redirect=https-301 [accessed 14 August 2017].
- Groom, M.J., Meffe, G.K., and C.R. Carroll. 2006. Principles of Conservation Biology, Third Edition. Sinauer Associates, Inc., Sunderland, MA.
- Haro, Kasunich & Associates, Inc. 2015. Coastal Bluff Recession Study, Juliana Avenue and Vallemar Street. Report prepared for Moss Beach Associates LLC. Available from: [http://www.] midcoastcommunitycouncil.org/vallemar-bluff/ [accessed 8 August 2017].
- IPCC. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland. 151 pp.
- Levine J.M., M. Vilà, C.M. D'Antonio, J.S. Dukes, K. Grigulis, and S. Lavorel. 2003. Mechanisms Underlying the Impacts of Exotic Plant Invasions. Proceedings of the Royal Society of London B 270:775-781.
- Line, D.E., and N.M. White. 2007. Effects of development on runoff and pollutant export. Water Environment Research 79:185-190.
- Menges, E.S. 1991. The Application of Minimum Viable Population Theory to Plants. pp. 45-61 in D.A Falk and K.E. Holsinger (eds.). Genetics and Conservation of Rare Plants. Oxford University Press, New York, NY.
- Mesiti-Miller Engineering, Inc. 2017. Utility and Drainage Plan, Vallemar Street & Juliana Avenue, Moss Beach California. Available from: [http://www.] midcoastcommunitycouncil.org/vallemar-bluff/ [accessed 3 August 2017].
- Midcoast Community Council. 2017. Vallemar Bluff. Website: [http://www.] midcoastcommunitycouncil.org/vallemar-bluff/ [accessed 3 August 2017].
- NatureServe. 2012. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. NatureServe Report Revised Edition June 2012. Available online at [http://www.] natureserve.org/sites/default/files/publications/files/natureserveconservationstatusmetho dology_jun12_0 [dot] pdf [accessed 10 August 2017].
- Pimentel, D., R. Zuniga, and D. Morrison. 2004. Update on the Environmental and Economic Costs Associated with Alien-invasive Species in the United States. Ecological Economics 52:273-288.
- Primack, R.B. 2006. Essentials of Conservation Biology, Fourth Edition. Sinauer Associates, Sunderland, MA.

- Rathcke, B. 1985. Slugs as generalist herbivores: Tests of three hypotheses on plant choices. Ecology 66:828-836.
- Saunders, D.A., R.J. Hobbs, and C.R. Margules. 1991. Consequences of ecosystem fragmentation: a review. Conservation Biology 5(1):18-32.
- Smil, V. 1997. Global population and the nitrogen cycle. Scientific American 277(1):76-81.
- Spitzer, G. 2002. Ice plant getting cold reception from naturalists. Los Angeles Times, May 04, 2002. Available online at [http://] articles.latimes.com/2002/may/04/local/me-outthere4 [accessed 4 August 2017].
- Strauss, S.Y., M.L. Stanton, N.C. Emery, C.A. Bradley, A. Carleton, D.R. Dittrich-Reed, O.A. Ervin, L.N. Gray, A.M. Hamilton, J.H. Rogge, S.D. Harper, K.C. Law, V.Q. Pham, M.E. Putnam, T.M. Roth, J.H. Theil, L.M. Wells, and E.M. Yoshizuka. 2009. Cryptic seedling herbivory by nocturnal introduced generalists impacts survival, performance of native and exotic plants. Ecology 90:419-429.
- Suehs, C.M., E. Medail, and L. Affre. 2004. Invasion dynamics of two alien Carpobrotus (Aizoaceae) taxa on a Mediterranean island: I. Genetic diversity and introgression. Heredity (2004) 92:31-40.
- USDA (United States Department of Agriculture), Natural Resources Conservation Service. 2017. Buffer Strips: Common Sense Conservation. Webpage: https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/home/?cid=nrcs143_023568 [accessed 14 August 2017].
- Vilà, M., M. Tessier, G.M. Suehs, G. Brundu, L. Carta, A. Galanidis, P. Lambdon, M. Manca, F. Médail, E. Moragues, A. Traveset, A.Y. Troumbis, and P.E. Hulme. 2006. Local and regional assessment of the impacts of plant invaders on vegetation structure and soil properties of Mediterranean islands. Journal of Biogeography 33:853-861.
- Vitousek, P.M., J.D. Aber, R.W. Howarth, G.E. Likens, P.A. Matson, D.W. Schindler, W.H. Schlesinger, and D.G. Tilman. 1997. Human alteration of the global Nitrogen cycle: sources and consequences. Ecological Applications 7:737–750.
- Young B.E., E. Byers, G. Hammerson, A. Frances, L. Oliver, and A. Treher. 2015. Guidelines for using the NatureServe Climate Change Vulnerability Index Release 3.0. Arlington, VA: NatureServe.
- Yurkonis, K.A., and S.J. Meiners. 2004. Invasion Impacts Local Species Turnover in a Successional System. Ecology Letters 7:764-769.

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BOX

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Fish and Game Commission



Wildlife Heritage and Conservation Since 1870 Valerie Termini, Executive Director P.O. Box 944209 Sacramento, CA 94244-2090 (916) 653-4899 fgc@fgc.ca.gov www.fgc.ca.gov

September 12, 2018

This is to provide you with a copy of the notice of proposed regulatory action relative to amending Sections 1.53, 1.74 and 5.00, Title 14, California Code of Regulations, relating to sport fishing annual regulations for 2019, which is published in the California Regulatory Notice Register on September 14, 2018.

Please note the dates of the public hearings related to this matter and associated deadlines for receipt of written comments.

Additional information and all associated documents may be found on the Fish and Game Commission website at http://www.fgc.ca.gov/regulations/.

Kevin Shaffer, Chief, Fisheries Division, Department of Fish and Wildlife at (916) 327-8841, has been designated to respond to questions on the substance of the proposed regulations.

Sincerely,

Jon D. Snellstrom

Associate Gøvernmental Program Analyst

Attachment

BOARD OF SUPERVISORS
2018 SEP 14 PM 4: 11

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TITLE 14. Fish and Game Commission Notice of Proposed Changes in Regulations

NOTICE IS HEREBY GIVEN that the Fish and Game Commission (Commission), pursuant to the authority vested by sections 200, 205, 265, 270, 275, 1050, 1053.1, 1055.1, 7380 and 8491 of the Fish and Game Code and to implement, interpret or make specific sections 110, 200, 205, 255, 265, 270, 275, 713, 1050, 1053.1, 1055.1, 7149.8, 7380, 7381 and 7382 of said Code, proposes to Amend Sections 1.53, 1.74 and 5.00, Title 14, California Code of Regulations, relating to Freshwater Sport Fishing Amendments and Sport Fishing Report Card Requirements – Sport Fishing.

Informative Digest/Policy Statement Overview - Sections 1.53 & 5.00, Title 14, CCR

This California Department of Fish and Wildlife (Department) proposal combines Department and public requests for changes to Title 14, California Code of Regulations (CCR), for the Annual Sport Fishing Regulations review cycle. This proposal will clarify that inland waters do not include bays, increase fishing opportunities for black bass in Perris Lake, and make needed corrections to existing regulations. The proposed regulatory changes are needed to reduce public confusion and improve regulatory enforcement.

Inland Waters Definition

The current definition of inland waters can be confusing to anglers who want to fish two rods in a bay but are not sure if a second rod validation is required. A second-rod validation is only required in inland waters. However, the current definition of Inland Waters (Title 14, Section 1.53) is not clear if inland waters include or exclude bays. The definition reads, "Inland waters exclude the waters of San Francisco Bay and the waters of Elkhorn Slough..." The definition only excludes San Francisco Bay. Title 14, Section 27.00, Definition of the Ocean and San Francisco Bay District reads, "The ocean is...the waters of open or enclosed bays contiguous to the ocean." This definition clearly states that all bays are considered waters of the ocean. To be consistent and clear, the definition of inland waters should state that all bays are excluded, not just San Francisco Bay. Amending the definition will clarify that inland waters do not include bays and, therefore, a second rod validation is not required in a bay.

Lake Perris Largemouth Bass Size and Bag Limit

The current regulations were changed in 2009 to protect the fishery when the lake was drawn down by 43% to repair the dam. DFW placed 1,484 brush habitat structures into the remnant lake from 2008-2016 and built 109 rock reefs with approximately 109,000 square feet of gravel/cobble rock areas. The dam repair has been completed and the water is restored to an 80% pool. DFW proposes to re-establish the bass regulations to the statewide standard of 5 fish at 12 inches.

Updates to Authority and Reference Citations Based on Recent Legislation

Senate Bill 1473 (Stats. 2016, Ch. 546) made organizational changes to the Fish and Game Code that became effective January 1, 2017. The changes included moving the Commission's exemptions from specified Administrative Procedure Act time frames from Section 202 to Section 265 of the Fish and Game Code, moving the Commission's effective date procedures from Section 215 to Section 270 of the Fish and Game Code, moving the Commission's effective period procedures from Section 220 to Section 275 of the Fish and Game Code, and

moving the Commission's authority to adopt emergency regulations from Section 240 to Section 399 of the Fish and Game Code. In accordance with these changes to the Fish and Game Code, sections 202, 215, and 220 are removed from, and sections 265, 270, and 275 are added to, the authority and reference citations for this rulemaking.

Goals and Benefits of the above Proposed Regulations

It is the policy of this state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the state for the benefit of all the citizens of the State. In addition, it is the policy of this state to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction and influence of the State. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based trout and salmon seasons, size limits, and bag and possession limits provide for the maintenance of sufficient populations of trout and salmon to ensure their continued existence.

The benefits of the proposed regulations are concurrence with Federal law, sustainable management of California's trout and salmon resources, and promotion of businesses that rely on recreational sport fishing in California.

Informative Digest/Policy Statement - Section 1.74, Title 14, CCR

This proposal will update the sport fishing report card requirements and make needed corrections to existing regulations. The proposed regulatory changes are needed to reduce public confusion and improve regulatory enforcement.

Sport Fishing Report Card Requirements

Section 1.74 establishes guidelines for report card regulations including reporting harvest authorized by a report card; however, this section does not include a mechanism for confirmation that data from a report card has been reported. This proposal requires report card holders who submit data online to write the provided confirmation number on their report card and retain the report card until 90 days after the reporting deadline.

When a report card is lost, a licensee may wish to obtain a replacement report card or may simply need to fulfill the harvest reporting requirement before the reporting deadline. Section 1.74 does not currently provide guidelines for licensees who have lost their report card and need to report their harvest, but do not need to obtain a replacement report card. This proposal updates procedures regarding lost report cards to provide guidelines for obtaining a replacement report card, and for reporting harvest from a lost report card without obtaining a replacement report card.

Goals and Benefits of this Proposed Regulations

It is the policy of this state to encourage the conservation, maintenance, and utilization of the living resources of the ocean and inland waters under the jurisdiction and influence of the state for the benefit of all the citizens of the State. In addition, it is the policy of this state to promote the development of local California fisheries in harmony with federal law respecting fishing and the conservation of the living resources of the ocean and inland waters under the jurisdiction

and influence of the State. The objectives of this policy include, but are not limited to, the maintenance of sufficient populations of all species of aquatic organisms to ensure their continued existence and the maintenance of a sufficient resource to support a reasonable sport use. Adoption of scientifically-based trout and salmon seasons, size limits, and bag and possession limits provide for the maintenance of sufficient populations of trout and salmon to ensure their continued existence.

The benefits of this proposed regulation are concurrence with Federal law, sustainable management of California's trout and salmon resources, and promotion of businesses that rely on recreational sport fishing in California.

Consistency and Compatibility with State Regulations

The Commission has reviewed its own regulations and finds that the proposed regulations are neither inconsistent nor incompatible with existing State regulations. The Commission has searched the California Code of Regulations and finds no other State agency regulations pertaining to fresh and marine sport fisheries as well as the establishment of guidelines for reporting harvest.

NOTICE IS GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held in the Radisson Fresno Conference Center, 1055 Van Ness Avenue, Fresno, California, on Thursday, October 18, 2018, at 8:00 a.m., or as soon thereafter as the matter may be heard.

NOTICE IS ALSO GIVEN that any person interested may present statements, orally or in writing, relevant to this action at a hearing to be held in QLN Conference Center, 1938 Avenida del Oro, Oceanside, California, on Thursday, December 13, 2018, at 8:00 a.m., or as soon thereafter as the matter may be heard. It is requested, but not required, that written comments be submitted on or before 5:00 p.m. on November 29, 2018, at the address given below, or by email to FGC@fgc.ca.gov. Written comments mailed (to Fish and Game Commission, PO Box 944209, Sacramento, CA 94244-2090), or emailed to the Commission office, must be received before 12:00 noon on December 7, 2018. All comments must be received no later than December 13, 2018, at the hearing in Oceana, California. If you would like copies of any modifications to this proposal, please include your name and mailing address.

It is requested, but not required, that written comments be submitted on or before 5:00 p.m. on October 4, 2018, at the address given below, or by email to FGC@fgc.ca.gov. Written comments mailed (to Fish and Game Commission, PO Box 944209, Sacramento, CA 94244-2090), or emailed to the Commission office, must be received before 12:00 noon on October 12, 2018. All comments must be received no later than October 17, 2018, at the hearing in Fresno, California. If you would like copies of any modifications to this proposal, please include your name and mailing address.

Availability of Documents

Copies of the Notice of Proposed Action, the Initial Statement of Reasons, and the text of the regulation in underline and strikeout format can be accessed through the Commission website at www.fgc.ca.gov. The regulations as well as all related documents upon which the proposal is based (rulemaking file), are on file and available for public review from the agency representative, Valerie Termini, Executive Director, Fish and Game Commission, 1416 Ninth Street, Box 944209, Sacramento, California 94244-2090, phone (916) 653-4899. Please direct requests for the above mentioned documents and inquiries concerning the regulatory process to Valerie Termini or Jon

Snellstrom at the preceding address or phone number. **Kevin Shaffer, Chief, Fisheries Division, (916) 327-8841**, has been designated to respond to questions on the substance of the proposed sport fishing regulations. Copies of the Notice of Proposed Action, the Initial Statement of Reasons, and the text of the regulation in underline and strikeout can be accessed through our website at http://www.fgc.ca.gov.

Availability of Modified Text

If the regulations adopted by the Commission differ from but are sufficiently related to the action proposed, they will be available to the public for at least 15 days prior to the date of adoption. Any person interested may obtain a copy of said regulations prior to the date of adoption by contacting the agency representative named herein.

If the regulatory proposal is adopted, the final statement of reasons may be obtained from the address above when it has been received from the agency program staff.

Impact of Regulatory Action/Results of the Economic Impact Assessment

The Department assessed the potential for significant statewide adverse economic impacts that might result from the proposed regulatory action, and made the following initial determinations relative to the required statutory categories:

(a) Significant Statewide Adverse Economic Impact Directly Affecting Businesses, Including the Ability of California Businesses to Compete with Businesses in Other States:

The proposed action is not anticipated to have a significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states because the expected impact of the proposed regulations on the amount of fishing activity is anticipated to be minimal relative to recreational angling effort statewide.

(b) Impact on the Creation or Elimination of Jobs Within the State, the Creation of New Businesses or the Elimination of Existing Businesses, or the Expansion of Businesses in California; Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment:

The expected impact of the proposed regulations on the amount of fishing activity is anticipated to be minimal relative to recreational angling effort statewide. Therefore, the Commission does not anticipate any impacts on the creation or elimination of jobs, the creation of new business, the elimination of existing business or the expansion of businesses in California.

The Commission anticipates benefits to the health and welfare of California residents. Sport fishing contributes to increased mental health of its practitioners as fishing is a hobby and form of relaxation for many. Sport fishing also provides opportunities for multi-generational family activities and promotes respect for California's environment by younger generations, the future stewards of California's natural resources.

The Commission anticipates benefits to the environment by the sustainable management of California's sport fishing resources.

(c) Cost Impacts on a Representative Private Person or Business:

The Commission is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

- (d) Costs or Savings to State Agencies or Costs/Savings in Federal Funding to the State:None.
- (e) Nondiscretionary Costs/Savings to Local Agencies: None.
- (f) Programs Mandated on Local Agencies or School Districts: None.
- (g) Costs Imposed on Any Local Agency or School District that is Required to be Reimbursed Under Part 7 (commencing with Section 17500) of Division 4, Government Code:

None.

(h) Effect on Housing Costs: None.

Effect on Small Business

It has been determined that the adoption of these regulations may affect small business. The Commission has drafted the regulations in Plain English pursuant to Government Code Sections 11342.580 and 11346.2(a)(1).

Consideration of Alternatives

The Commission must determine that no reasonable alternative considered by the Commission, or that has otherwise been identified and brought to the attention of the Commission, would be more effective in carrying out the purpose for which the action is proposed, would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

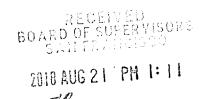
FISH AND GAME COMMISSION

Valerie Termini Executive Director

Dated: September 4, 2018

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San Francisco International Airport

August 13, 2018

Ms. Angela Calvillo Clerk of the Board of Supervisors City and County of San Francisco City Hall, Room 244 1 Dr. Carlton B. Goodlett Place San Francisco, CA 94102 BY EMAIL & US MAIL Angela.Calvillo@sfgov.org

Subject:

TERMINAL 1 – HARVEY MILK TERMINAL ORDINANCE NO. 62-18 ACTION ITEM

Dear Ms. Calvillo:

I am writing to apprise you of recent action taken to approve a plan for design and placement of artwork in Terminal 1 to memorialize the life and legacy of Harvey Milk.

On April 10, 2018, the San Francisco Board of Supervisors passed Ordinance No. 62-18 naming Terminal 1 at the San Francisco International Airport for Harvey Milk and requiring the Airport Director to submit to the Arts Commission for the Commission's approval a plan for artwork honoring Harvey Milk's legacy no later than September 1, 2018.

At the August 6, 2018 meeting of the Arts Commission, a plan including two pieces of public art, an Airport Museum Inglenook space pre-security and post-security, and a crowd sourced photography exhibit on a terminal-long construction wall honoring Supervisor Milk's legacy in Terminal 1 was approved.

I will also submit a follow-up report by December 1, 2018 to the Board of Supervisors and Mayor London N. Breed, describing the steps that the Airport has taken to implement the ordinance, as required.

truly yours,

Airport Director

Please feel free to contact me if you need any further details on the action taken by the Arts Commission approving the Terminal 1 artwork plan on August 6, 2018.

2

MAYOR

From: Board of Supervisors, (BOS)

To: <u>BOS-Supervisors</u>

Subject: FW: CCSF Monthly Pooled Investment Report for August 2018

Date: Friday, September 14, 2018 10:57:00 AM

Attachments: CCSF Monthly Pooled Investment Report for August 2018.pdf

From: Dion, Ichieh (TTX)

Sent: Friday, September 14, 2018 9:38 AM **To:** Dion, Ichieh (TTX) <ichieh.dion@sfgov.org>

Subject: CCSF Monthly Pooled Investment Report for August 2018

All-

Please find the CCSF Pooled Investment Report for the month of August attached for your use.

Regards,

Ichieh Dion City and County of San Francisco 1 Dr. Carlton B. Goodlett Place, Room 140 San Francisco, CA 94102 415-554-5433



Capital Planning Committee

tee

Naomi M. Kelly, City Administrator, Chair

MEMORANDUM

September 10, 2018

To:

Members of the Board of Supervisors

From:

Naomi Kelly, City Administrator and Capital Planning Committee Chair

Copy:

Angela Calvillo, Clerk of the Board

Capital Planning Committee

Regarding: Approval of the Resolution and Ordinance Authorizing the Issuance and

Sale of \$220,000,000 in Community Facilities District No. 2014-1 Transbay

Transit Center Special Tax Bonds Series 2018A an Series 2018B.

In accordance with Section 3.21 of the Administrative Code, on September 10, 2018, the Capital Planning Committee (CPC) approved the following action item to be considered by the Board of Supervisors. The CPC's recommendations are set forth below.

1. Board File Number: TBD Approval of the resolution authorizing the issuance and

sale of Special Tax Bonds Series 2018A and Series 2018B for Community Facilities District No. 2014-1 Transbay

Transit Center not to exceed \$220,000,000.

Recommendation:

Recommend the Board of Supervisors approve the

resolution.

Comments: CPC recommends approval of this item by a vote of 11-0.

Committee members or representatives in favor: Naomi Kelly, City Administrator; Mohammed Nuru,

Director of Public Works; Sophia Kittler; Board President Malia Cohen's Office; Ben Rosenfield, Controller; Kelly Kirkpatrick, Mayor's Budget Director; Jonathan Rewers, SFMTA; John Rahaim, Planning Director; Elaine Forbes, Port Director; Kathy

How, SFPUC; Toks Ajike, Recreation and Parks Department; Ivar Satero, Director of the Airport.

2. Board File Number: TBD Approval of the ordinance appropriating \$220,000,000 of

Special Tax Bonds, Series 2018A and Series 2018B for financing related to the Transbay Transit Center Project and Transbay Plan Infrastructure Project in Fiscal Year

2018-19.

Recommendation: Recommend the Board of Supervisors approve the

resolution.

4

Comments:

CPC recommends approval of this item by a vote of 11-0.

Committee members or representatives in favor:
Naomi Kelly, City Administrator; Mohammed Nuru,
Director of Public Works; Sophia Kittler; Board
President Malia Cohen's Office; Ben Rosenfield,
Controller; Kelly Kirkpatrick, Mayor's Budget
Director; Jonathan Rewers, SFMTA; John Rahaim,
Planning Director; Elaine Forbes, Port Director; Kathy
How, SFPUC; Toks Ajike, Recreation and Parks
Department; Ivar Satero, Director of the Airport.



Reports, Controller (CON) From:

Calvillo, Angela (BOS); Mchugh, Eileen (BOS); BOS-Legislative Aides; BOS-Supervisors; Philhour, Marjan (MYR); Bruss, Andrea (MYR); Power, Andres (MYR); Kirkpatrick, Kelly (MYR); Cretan, Jeff (MYR); Kanunaratne, Kanishka (MYR); Rose, Harvey (BUD); Newman, Debra (BUD); Campbell, Severin To:

(BUD): Docs, SF (LIB); CON-EVERYONE; CON-Finance Officers; MYR-ALL Department Heads; Mitton, Michael (CON); Allersma, Michael (CON); Pereira, Tully, Marisa (MYR); Van Degna, Anna (CON); Trivedi, Vishal (CON)

Issued: Finance Benchmarking Website Subject: Wednesday, September 12, 2018 1:58:13 PM Date:

Today the Controller's Office is adding Finance to the new Benchmarking section on the Performance Scorecards website. The Finance interactive dashboards cover revenue and expenditures, GO bond ratings, debt service ratio, available fund balance, pension, and retiree health obligations.

We have already published benchmarking pages about Transportation, Livability, Public Safety, Demographics, Safety Net, Homelessness, and Public Health in San Francisco.

Visit https://sfgov.org/scorecards/benchmarking/finance to learn more.

For questions about benchmarking, please contact Natasha Mihal at natasha.mihal@sfgov.org or 415-554-7429.

Follow us on Twitter @SFController and @SFCityScorecard This is a send-only e-mail address.

Actual vs. Budgeted Revenues and Expenditures

The purpose of comparing actual versus budgeted revenues and expenditures is to track how well a city is able to plan for and manage its finances and fiscal health. Generally, the goal is to minimize variances between budget and actual performance for both revenues and spending - drastic movement in either direction would indicate overly conservative or optimisitic projections. Actual revenue is reliant on outside economic forces that impact payroll, property, and

San Francisco was 2.7% above its budgeted revenues and expenditures, respectively. This is below the peer average for expenditure variance and is above the peer average for revenue variance.

Actual vs. Budgeted Revenues and Expenditures



Other Financial Health Indicators Please refer to supporting pages for

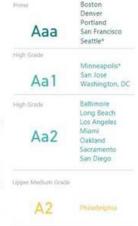
additional financial indicators Debt Service Ratio Available Fund Balance

General Obligation Bonds

A general obligation bond rating acts as a city's credit rating and indicates how safe of an investment the city's bonds are to potential purchasers. These bonds help finance large capital projects. There are three main municipal bond rating agencies: Moody's, Standard & Poor's, and Fitch, each with its own proprietary rating system. The provided ratings are issued by Moody's, which rates bonds on a scale from Aaa (Prime) to C (Default).

San Francisco's rating is currently Aaa, indicating an exceptional degree of creditworthiness.

Moody's Ratings



Ba1 Chicago*

Credit ratings reflect 2017 data except

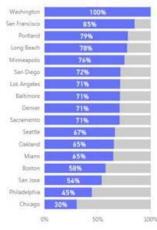
Pension Liability Funding

Funding ratios of retirement benefits are a key measure of the overall health of a government's financial health. Cities can have multiple pension programs covering different employee classes, making direct comparison difficult. For example, Los Angeles has three programs covering general, public utilities, and public safety employees. Other cities have stopped enrolling new employees into pension plans in favor of other deferred compensation programs.

Many cities in California (including Sacramento, Oakland, and Long Beach) contract with the California Public Employees' Retirement System (CalPERS) to cover their employees. The CalPERS Public Employee Retirement Fund (PERF) is 66.2% funded for local public agencies overall. The data to the right compares the general employee pension plans from peer cities when available for FY 2016. Funding ratios are calculated by comparing asset valuation to unfunded liabilities.

In FY 2016, San Francisco's pension liabilities were 85% funded. This has increased to 86% funded in San Francisco's most recently available FY2017 data. Pension Funding - 2016





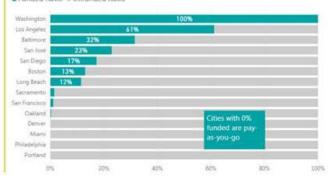
Retiree Health Liability Funding

Another metric of the fiscal health of retirement systems is the funded ratio of Other Post-Employment Benefits (OPEB), comprised of mostly health-related retirement benefits. Before new reporting standards were enacted in 2015, there was not as much scrutiny on these liabilities. Many cities proceed on a pay-as-you-go basis and have no long-term funding strategy.

San Francisco's most recent 2017 funded ratio of 1.1% as reported by Moody's is based on a 2014 valuation of obligations and funding level. The Controller's office estimates that it has gone up several percentage points since, and an updated valuation is expected in the next several months. In 2013, voters passed Prop A, which shifted the City's retiree health care fund from a pay-as-you-go funding model to one that is expected to fully cover obligations by 2043.

Retiree Health Liabilities Funding (OPEB) - 2017

• Funded Ratio @ Unfunded Ratio



From: Reports, Controller (CON)

To: Calvillo, Angela (BOS); Mchugh, Eileen (BOS); BOS-Supervisors; BOS-Legislative Aides; Philhour, Marjan (MYR);

Bruss, Andrea (MYR); Kirkpatrick, Kelly (MYR); Cretan, Jeff (MYR); Karunaratne, Kanishka (MYR); Campbell, Severin (BUD); Newman, Debra (BUD); Rose, Harvey (BUD); Docs, SF (LIB); CON-EVERYONE; Rykowski, Maggie (DPH); Williams, Spencer (DPH); Mindolovich, Winona (DPH); Guimaraes, Almir (DPH); Wagner, Greg (DPH);

Pickens, Roland (DPH); Chen, Alice (DPH)

Subject: Issued: Protecting Health Data: Improving How the Department of Public Health Manages the Sharing of

Protected Health Information

Date: Tuesday, September 11, 2018 2:13:59 PM

The Controller's Office City Performance Unit worked with the Department of Public Health's (DPH's) Office of Compliance and Privacy Affairs (OCPA) to create processes to manage, and a registry to track, how patient data is being shared with partners outside of DPH.

Through interviews of staff and meetings with key stakeholders throughout the department, City Performance helped DPH clarify roles, formalize processes, and create documentation to support the legal, appropriate and secure sharing of data.

With hundreds of data sharing partners working with DPH to support patient care, these tools will help DPH better protect patient information.

To view the full summary, please visit our Web site at: http://openbook.sfgov.org/webreports/details3.aspx?id=2621
This is a send-only e-mail address.

For questions about the summary, please contact Carla Beak at carla.beak@sfgov.org

Follow us on Twitter @SFController

From: Reports, Controller (CON)

To: Calvillo, Angela (BOS): Mchugh, Eileen (BOS); BOS-Supervisors; BOS-Legislative Aides; Elliott, Jason (MYR);

Bruss, Andrea (MYR); Power, Andres (MYR); Kirkpatrick, Kelly (MYR); Cretan, Jeff (MYR); Quetone, Tal (ADM); Karunaratne, Kanishka (MYR); alubos@sftc.org; pkilkenny@sftc.org; Campbell, Severin (BUD); Newman, Debra (BUD); Rose, Harvey (BUD); Docs, SF (LIB); CON-EVERYONE; Bose, Sonali (MTA); Haley, John (MTA); Sakelaris, Kathleen (MTA); Hammons, Diana (MTA); Schouten, Fred (MTA); Jones, Brent (MTA); Reiskin, Ed (MTA)

Subject: Issued: Results of SFMTA Cable Car Cash Fare Collection Monitoring Program in Fiscal Year 2017-18

Date: Monday, September 17, 2018 9:20:36 AM

The Office of the Controller's City Services Auditor (CSA) today issued a memorandum on its Results of SFMTA Cable Car Cash Fare Collection Monitoring Program in Fiscal Year 2017-18. The assessment found that the cable car cash fare collection procedures have improved since they were audited in 2017, but further improvement is needed.

To view the memorandum, please visit our website at: http://openbook.sfgov.org/webreports/details3.aspx?id=2626

This is a send-only e-mail address. For questions about the memorandum, please contact Chief Audit Executive Tonia Lediju at tonia.lediju@sfgov.org or 415-554-5393 or the CSA Audits Division at 415-554-7469.

Follow us on Twitter @SFController.

From: Board of Supervisors, (BOS)

To: <u>BOS-Supervisors</u>

Subject: FW: CPUC Notification - Verizon Wireless - San Francisco Small Cells 9-11-18

Date: Tuesday, September 11, 2018 6:09:00 PM

Attachments: <u>CPUC Notification - Verizon Wireless - San Francisco Small Cells 9-11-18.pdf</u>

From: West Area CPUC [mailto:WestAreaCPUC@VerizonWireless.com]

Sent: Tuesday, September 11, 2018 4:39 PM

To: CPC.Wireless < CPC.Wireless@sfgov.org>; Administrator, City (ADM)

<city.administrator@sfgov.org>; Board of Supervisors, (BOS) <board.of.supervisors@sfgov.org>
Cc: GO159Areports@cpuc.ca.gov; West Area CPUC <WestAreaCPUC@VerizonWireless.com>

Subject: CPUC Notification - Verizon Wireless - San Francisco Small Cells 9-11-18

This is to provide your agency with notice according to the provisions of General Order No. 159A of the Public Utilities Commission of the State of California ("CPUC"). This notice is being provided pursuant to Section IV.C.2.

If you prefer to receive these notices by US Mail, please reply to this email stating your jurisdiction's preference.

Thank you



September 11, 2018

Ms. Anna Hom
Consumer Protection and Enforcement Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
GO159Areports@cpuc.ca.gov

RE: Notification Letter for San Francisco Small Cells 9-11-18
San Francisco-Oakland, CA / GTE Mobilnet of California Limited Partnership / U-3002-C

This is to provide the Commission with notice according to the provisions of General Order No. 159A of the Public Utilities Commission of the State of California ("CPUC") for the projects described in Attachment A.

A copy of this notification letter is also being provided to the appropriate local government agency for its information. Should there be any questions regarding this project, or if you disagree with any of the information contained herein, please contact the representative below.

Sincerely,

Melinda Salem
Engr IV Spec-RE/Regulatory
15505 Sand Canyon Avenue, Irvine, CA 92618
WestAreaCPUC@VerizonWireless.com

VZW LEGAL ENTITY	JURISDICTION	PLANNING DIRECTOR	CITY ADMINISTRATOR	CLERK OF THE BOARD	COUNTY
GTE Mobilnet of CA Limited Partnership	City of San Francisco 1 Dr. Carlton B. Goodlett Pl San Francisco. CA 94102	CPC.Wireless@sfgov.org	city.administrator@sfgov.org	Board.of.Supervisors@sfgov.org	San Francisco





Site Name	Site Address	Site APN	Site Coordinates (NAD 83)	Project Description	Number & type of Antennas	Tower Design	Tower Appearance	Tower Height (in feet)	Size of Building or NA	Type of Approval	Approval Issue Date	Approval Effective Date	Approval Permit Number	Resolution Number
SF LM PH2 SC 94	926 Howard St San Francisco, CA 94103	N/A - public right-of-way	37 46 51.79 N 122, 24 20.40 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN (N) ANCHOR POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Anchor Pole	RAD of 31'- 11"	32'-11	N/A	Wireless Box Permit	11/16/2017	11/16/2017	17WR-0244	N/A
SF LM PH3 SC 135	1505 04TH ST SAN FRANCISCO, CA 94158	N/A - public right-of-way	37 46 9.07 N 122 23 28.19 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING STEEL POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Steel Light Pole	Antenna RAD of 22'-1"	23'-6"	N/A	Wireless Box Permit	12/28/2017	12/28/2017	17WR-0326	N/A
SF LM PH3 SC 140	409 ILLINOIS ST SAN FRANCISCO, CA 94158	N/A - public right-of-way	37 46 00.53 N 122, 23 16.97 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING STEEL POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Steel Pole	Antenna RAD of 22'-1"	23'-6	N/A	Encroachment Port Permit	9/21/2017	11/15/2017	E-2017-0113	N/A
SF LM PH3 SC 153	499 ILLINOIS ST SAN FRANCISCO, CA 94158	N/A - public right-of-way	37 45 57.92 N 122, 23 16.72 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING STEEL POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Steel Pole	Antenna RAD of 23'-6"	24'-11	N/A	Encroachment Port Permit	9/21/2017	11/15/2017	E-2017-0113	N/A
SF LM PH3 SC 154	555 MISSION BAY BLVD S SAN FRANCISCO, CA 94143	N/A - public right-of-way	37 46 14.03 N 122 23 26.67 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING STEEL POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Steel Light Pole	Antenna RAD of 33'-4"	34'-8"	N/A	Wireless Box Permit	12/28/2017	12/28/2017	17WR-0327	N/A
SF LM SC 210	2 FOLSOM ST SAN FRANCISCO, CA 94105	N/A - public right-of-way	37 47 26.52 N 122, 23 29.81 W	INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING SAN FRANCISCO PUBLIC UTILITIES COMMISSION LIGHT POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Light Pole	Antenna RAD of 30'-8"	31'-10	N/A	Wireless Box Permit	10/5/2017	10/6/2017	17WR-0141	N/A
SF LM SC 212	1 BRYANT ST SAN FRANCISCO, CA 94133	N/A - public right-of-way	37 47 12.42 N 122, 23 19.68 W	INSTALL A NEW WIRELESS COMMUNICATION SITE ON A WOODEN UTILITY POLE IN THE PUBLIC RIGHT OF WAY	1 cylindrical antenna	Wooden Utility Pole	Antenna RAD of 33'-6"	34'-8	N/A	Encroachment Port Permit	6/5/2018	6/6/2018	E-2018-0032	N/A
SF LM SC 214	200 FOLSOM ST San Francisco, CA 94105	N/A - public right-of-way	37 47 23.93 N 122 23 33.88 W	INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING LIGHT POLE IN THE PUBLIC RIGHT OF WAY. EXISTING LIGHT POLE CONCRETE FOUNDATION TO BE REMOVED AND REPLACED.	1 cylindrical antenna	City Street Steel Light Pole	Antenna RAD of 30'-10"	31'-11"	N/A	Wireless Box Permit	10/18/2017	11/6/2017	17WR-0184	N/A
SF LM SC 215	201 MISSION ST SAN FRANCISCO, CA 94105	N/A - public right-of-way	37 47 27.14 N 122 23 37.91 W	INSTALLATION AND OPERATION OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN (E) STREET LIGHT POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	City Street Steel Light Pole	Antenna RAD of 31'-7"	32'-7"	N/A	Wireless Box Permit	12/5/2017	12/5/2017	17WR-0185	N/A

Site Name	Site Address	Site APN	Site Coordinates (NAD 83)	Project Description	Number & type of Antennas	Tower Design	Tower Appearance	Tower Height (in feet)	Size of Building or NA	Type of Approval	Approval Issue Date	Approval Effective Date	Approval Permit Number	Resolution Number
SF LM SC 217	405 Howard St. San Francisco, CA 94105	N/A - public right-of-way	37 47 18.89 N 122, 23 40.20 W	INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING SAN FRANCISCO PUBLIC UTILITIES COMMISSION LIGHT POLE IN THE PUBLIC RIGHT OF WAY. EXISTING LIGHT POLE CONCRETE FOUNDATION TO BE REMOVED AND REPLACED.	1 cylindrical antenna	City Street Steel Light Pole	Antenna RAD of 30'-8"	31'-10	N/A	Wireless Box Permit	10/26/2017	11/11/2017	17WR-0187	N/A
SF LM SC 218	401 Beale St San Francisco, CA 94105	N/A - public right-of-way	37 47 12.79 N 122, 23 25.10 W	INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING SAN FRANCISCO PUBLIC UTILITIES COMMISSION LIGHT POLE IN THE PUBLIC RIGHT OF WAY.	1 cylindrical antenna	Steel Light Pole	Antenna RAD of 30'-8"	31'-10	N/A	Wireless Box Permit	11/14/2017	11/30/2017	17WR-0188	N/A
SF LM SC 219	321 FREMONT ST SAN FRANCISCO, CA 94105	N/A - public right-of-way	37 47 15.78 N 122, 23 35.13 W	INSTALLATION OF AN UNMANNED WIRELESS TELECOMMUNICATION FACILITY CONSISTING OF AN ANTENNA AND ASSOCIATED EQUIPMENT ON AN EXISTING SAN FRANCISCO PUBLIC UTILITIES COMMISSION LIGHT POLE IN THE PUBLIC RIGHT OF WAY. EXISTING LIGHT POLE CONCRETE FOUNDATION TO BE REMOVED AND REPLACED.	1 cylindrical antenna	City Street Steel Light Pole	Antenna RAD of 30'-10"	31'-11	N/A	Wireless Box Permit	10/23/2017	11/8/2017	17WR-0189	N/A

To: <u>BOS-Supervisors</u>; <u>BOS Legislation</u>, (BOS)

Subject: FW: Supplemental Letter from One Vassar LLC re Central SoMA EIR

Date: Wednesday, September 12, 2018 11:18:00 AM

Attachments: Supplemental Letter from One Vassar LLC (Sep. 10, 2018).pdf

From: Babich, Phillip H. [mailto:PBabich@ReedSmith.com]

Sent: Monday, September 10, 2018 5:24 PM

To: Board of Supervisors, (BOS) <board.of.supervisors@sfgov.org>; Gibson, Lisa (CPC)

<lisa.gibson@sfgov.org>

Subject: Supplemental Letter from One Vassar LLC re Central SoMA EIR

Dear Clerk of the Board of Supervisors:

Please find attached a letter for the Board's consideration. Thank you.

Sincerely, Phillip

Phillip H. Babich Reed Smith LLP 101 2nd St., #1800

San Francisco, CA - 94105-3659

Ph: (415) 659-5654 Cell: (213) 999-5749 Fax: (415) 391-8269

Email: pbabich@reedsmith.com

* * *

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Disclaimer Version RS.US.201.407.01



Phillip Babich

Direct Phone: +1 415 659 5654 Mobile: +1 213 999 5749 Email: pbabich@reedsmith.com Reed Smith LLP 101 Second Street Suite 1800 San Francisco, CA 94105-3659 +1 415 543 8700 Fax +1 415 391 8269 reedsmith.com

September 10, 2018

By Electronic Mail By US Mail

San Francisco Board of Supervisors Clerk of the San Francisco Board of Supervisors 1 Dr. Carlton B. Goodlett Place City Hall, Room 244 San Francisco, CA 94102-4689

Lisa M. Gibson Environmental Review Officer 1650 Mission Street, Suite 400 San Francisco, CA 94103

Supplemental Comment re Central SoMa Plan's Environmental Impact Report

Dear Honorable Members of the Board of Supervisors and Clerk of the Board:

I am writing on behalf of One Vassar LLC (One Vassar) and in further support of its appeal of the certification of the Central SoMa Plan's Environmental Impact Report (EIR). Specifically, One Vassar is submitting the attached letter from our air quality expert, James Reyff of the environmental consulting firm Illingworth & Rodkin, Inc. Mr. Reyff has analyzed claims by appellants Central SoMa Neighbors (CSN) and SFBlu that the Central SoMa Plan *will* increase cancer risk by 226 per million.

This claim is misleading. As Mr. Reyff discusses in his letter, this cancer risk is under a "worst case scenario" which results for taking the then-existing conditions in 2014 and adding on top of that the entirety of environmental effects (traffic, transit, and air quality) from the fully built out plan, under 2014 emissions regulations, for 70 years. A more realistic number for cancer risk, which the DEIR also included, but which CSN and SFBlu, ignore, is the cumulative cancer risk increase of 8.1 per one million by 2040. Thank you for your consideration.

Sincerely,

Phillip Babich

Phillips H Babich



1 Willowbrook Court, Suite 120 Petaluma, California 94954

Tel: 707-794-0400 www.Illingworthrodkin.com Fax: 707-794-0405 illro@illingworthrodkin.com

September 10, 2018

Phillip H. Babich Reed Smith LLP 101 2nd St., #1800 San Francisco, CA - 94105-3659 Email: pbabich@reedsmith.com

RE: Response to Supplemental Comments by Central SoMa Neighbors (CSN) and SFBlu regarding the Central SoMa Plan's Environmental Impact Report (EIR) (SCH No. 2013042070)

Dear Phillip:

The purpose of this letter is to clarify the contention by CSN and SFBlu that the Central SoMa Plan *will* increase cancer risk by 226 per million. While the EIR reports a cancer risk increase under a "worst case scenario" of 226 per million, it also reports that the cumulative cancer risk increase, once the Plan is fully built out, as 8.1 per million.

I am a Senior Consultant at *Illingworth & Rodkin, Inc.* who has 30 years' experience studying air quality impacts from projects and land use developments in the Bay Area. My comments here are based on my review of the Central SoMa Plan's Environmental Impact Report (EIR) air quality section and the supporting Air Quality Technical Analysis Report (referenced in the DEIR, page IV.F-46)¹.

This worst-case scenario, presented in the DEIR and noted by commenters, contemplates an increase that is the maximum increase from Plan traffic and would occur at the worst spot in the plan area that is next to the I-80 freeway. This is a hypothetical figure that results from taking the then-existing conditions in 2014 and adding on top of that the entirety of environmental effects (traffic, transit, and air quality) from the fully built out plan, under 2014 without the effect of reduced emissions from vehicle standards and regulations, for a 70-year exposure period. This is not a realistic scenario, nor does the EIR intend it to be, and it results in an excessive over-prediction of cancer risk for several reasons.

First, emissions of toxic air contaminants (TACs) from traffic have been decreasing substantially since 2014, and even before then. The State's Air Toxic Control Measure (ACTM) that regulates

¹ Environ International. 2014. Air Ouality Technical Report, Central SoMa Plan, San Francisco, CA. October.

diesel truck fleets took effect in 2014, and it aggressively reduces toxic air contaminants from traffic (note diesel exhaust accounts for much of the toxic air contaminant cancer risk in the Bay Area). There have also been significant reductions in emissions from other on-road vehicles that U.S. Environmental Protection Agency and the State are continuously requiring through implementation of laws, regulations, and policies (i.e., standards that affect vehicle emissions and fuel efficiency).

Second, cancer risk assessments are based on nearly continuous exposure of sensitive persons to these contaminants over 70-years. The worst-case scenario assumes the exposure level with the plan traffic overlaid on 2014 conditions will not decrease over time.

When reductions in emissions from traffic are considered, the DEIR found that the maximum cumulative cancer risk increase will be 8.1 per one million by 2040. Much of the reductions in vehicle emission rates will be in place by the time construction of initial projects in the Plan area are completed and their traffic becomes operational. Operational traffic will gradually increase—not ramp up instantaneously in 2014 as contemplated in the worst-case scenario—between the initial stages of Plan development and 2040. Thus, the cancer risk caused by the plan is better represented by the predicted 8.1 per million increase in cancer risk predicted for 2040 because much of the reduction in traffic emissions has or will have occurred by the time the project begins operation and that the project will only gradually increase traffic over time.

In contrast, the "Existing Plus Plan" cancer risk scenario presented in the DEIR portrays a purely hypothetical scenario that is unrealistically conservative. In addition, the DEIR only reported the maximum increase, which would occur immediately adjacent to the I-80 freeway and ramps. Based on our review of the modeling analysis supporting the DEIR, risks would be lower further away from these sources. However, the risk is being portrayed as uniformly at 226 per million. Indeed, the Planning Department clarified that point today in a Supplemental Appeal Response released today. "Within the Plan Area only, the average increase (under Existing Plus Plan) in cancer risk is 32 per one million persons exposed." (Supp. App. Resp. at p. 4.)

In conclusion, the Board should avoid giving significant weight to the worst-case scenario cancer risk increase because the figure does not properly depict the actual cancer risk presented by the Plan, which is quite low.

Sincerely,

Senior Consultant, Principal

Illingworth & Rodkin, Inc.

JOB #18-163

To: <u>BOS-Supervisors</u>

Subject: FW: URGENT I need your help or direction life safety related issue

Date: Wednesday, September 12, 2018 11:19:00 AM

From: Dennis Hong [mailto:dennisj.gov88@yahoo.com]

Sent: Monday, September 10, 2018 3:27 PM

To: Supervisor Norman Yee <norman@normanyee.com>; Mandelman, Rafael (BOS) <rafael.mandelman@sfgov.org>; Breed, London (MYR) <london.breed@sfgov.org>

Club <miralomapark@gmail.com>; Maybaum, Erica (BOS) <erica.maybaum@sfgov.org>

Subject: URGENT I need your help or direction life safety related issue

Good afternoon Honorable Mayor London Breed, Honorable Supervisor Normal Yee, Honorable Supervisor Rafael Mandelman and full board members. I live in District 7/Mount Davidson above Glen Park, have been a resident of for 70+ years, **I urgently need your help** as well as many others in my neighborhood and all of San Francisco needs it too. In fact right now. The other day I came across a disturbing article in the SF Chronicle. I'm sure you too seen it. It was front page. This included several of our NextDoor App - POST/s on this very issue. I hope the links/(?) below work, it's only a click away, it says it all:

......that the SFFP is prepared to fight a wildfire in San Francisco. The link is: <a href="https://www.sfchronicle.com/politics/article/Could-a-wildfire-sweep-into-San-Francisco-13210803.php?utm_campaign=email-premium&utm_source=CMS%20Sharing%20Button&utm_medium=social Fire

Could a wildfire sweep into San Francisco? Residents seek assurance as state burns

Most people who stumble upon areas like San Francisco's Glen Canyon Park or Billy Goat Hill see an escape from a bustling downtown — a scenic running path, a patch of grass friendly to dogs or a spot to unwind. But some Diamond Heights residents have begun to view such areas as tinder boxes, where a spark from a discarded cigarette or the unpermitted use of fire pits could take hold on a windy night, spit into the surrounding neighborhood, and level homes and take lives as the Wine Country fires did last year in Santa Rosa.

sfchronicle.com

I'm truly this time looking forward to anyone's response that could shed some light on this critical / issue. If you can not help me; please forward this email and or direct me in the right direction. This is a real life safety issue to all of San Francisco. Can you please get back to me so I can be assured this is another one of your top priorities facing our wonderful city and it is being resolved. Can I help?

As usual, thanks for continuing to read and responding to my emails, Should anyone have any questions please reach out to me at the above email. I can not over stress how important this issue is.

Best, Dennis

To: <u>BOS-Supervisors</u>

Subject: FW: anti-homeless mist generator

Date: Monday, September 17, 2018 8:00:00 AM

----Original Message-----

From: Carol Denney [mailto:cdenney@igc.org] Sent: Sunday, September 16, 2018 8:02 AM

To: SFPD Tenderloin Station, (POL) <SFPDTenderloinStation@sfgov.org>

Subject: anti-homeless mist generator

The Gibson Hotel at Mason and Eddy is spraying the sidewalk near the Empress Hotel constantly with a wet mist in what I assume is an effort to discourage people from hanging out there.

I got soaked getting to and from my SF Fringe festival show, and so did all the attendees who took the Eddy Street route from the BART station.

The street was soaking wet on a sunny day, and slippery, but my additional concern is that my instrument, a very valuable old Wheatstone, was hosed as well.

Could the police please advise them that it is not legal for them to hose people on a public sidewalk for any reason, ruining their clothing, their property, etc? This sidewalk belongs to all of us. It is absurd to hose theater-goers, cast members, etc.

Thank you,

Carol Denney

1970 San Pablo Avenue #4

Berkeley, CA 94702

510-548-1512

To: <u>BOS-Supervisors</u>

Subject: FW: Car break-ins on national TV

Date: Friday, September 14, 2018 11:01:00 AM

----Original Message-----

From: Lawrence Wisne [mailto:lwisne@gmail.com] Sent: Thursday, September 13, 2018 11:32 AM

To: Board of Supervisors, (BOS) <board.of.supervisors@sfgov.org>; Mayor London Breed (MYR)

<mayorlondonbreed@sfgov.org> Subject: Car break-ins on national TV

I hope you all have seen this:

https://www.insideedition.com/inside-wave-smash-and-grab-car-robberies-plaguing-san-francisco-46736

It's a video on a nationally syndicated show where someone has her car broken into twice in one day.

This is how bad it's gotten here in the city. You all should be ashamed that this is happening to residents under your watch. You refuse to make an honest attempt to catch and prosecute people who do this, and they operate with almost zero restraint. A news program, in one day, was able to easily bait two car break-ins. Our law enforcement could be doing the same thing, recording it, and prosecuting, but instead you do things like try to pass bans on workplace cafeterias.

It is infuriating that the norm for SF residents now is to expect this kind of behavior because our city government doesn't seem to care at all.

Lawrence Wisne Resident, District 5

SF Board of Supervisors

Dear Supervisors

Subject: RAB and DTX

It is our understanding that the SFBOS will shortly be called upon to approve the RAB Report. As you evaluate it, please consider the following:

The RAB planners have been planning the full build-out of Mission Bay for over four years. They have used up their \$1.7 million budget and are now looking for add-on work. Most of the RAB proposals, first revealed by the Chronicle's Matier and Ross on May 18, 2015 and first publicly presented by RAB on February 23, 2016, have since been dropped. Two remain:

- o The RAB planners still want to relocate Caltrain's existing train storage yard to a distant and undisclosed location, thereby significantly increasing Caltrain's operating costs and interfering with regular train service. This proposal is completely unworkable. To ensure an efficient and undisrupted flow of trains in and out of the new SF Terminal it is essential that a north end train staging and storage yard be linked to the new SF Terminal by a short three-track approach section. The best place for the yard is right where it is, either at grade enclosed in an attractive building, or depressed 30 feet to free up the current site for ground level use.
- o Second, the planners still want to shift the main line tracks from the environmentally cleared atgrade location under I-280 to RAB's proposed multi-billion dollar subway under Pennsylvania Avenue. This would greatly increase the costs of and further delay the already approved Downtown Extension of Caltrain (DTX). Although a tunnel under Pennsylvania may at some point offer benefits it should not be used as a reason for delaying DTX, a project long needed to efficiently connect the South Bay, Peninsula and downtown San Francisco. When trainloads of travelers finally begin arriving at the now empty train level of San Francisco's new SF Transit Center, they will bring new life to that vast structure and greatly increase Caltrain's usefulness and value to San Francisco and the Region. Unfortunately the RAB planners do not seem to recognize the overriding importance of creating a high class rail alternative to the continuous flooding San Francisco streets with northbound cars. This is not something that can wait. The Downtown Extenstion of Caltrain (Phase II of the TTC/DTX project) should proceed without further delay. If needed, a Phase III tunnel under Pennsylvania Avenue could be added at some future date.

Instead of pushing up the costs of and unnecessarily delaying DTX, the focus should be on looking for practical opportunities of cutting DTX costs and accelerating the DTX project. It is necessary that the City and County of San Francisco assume a leadership role in making certain that Caltrain is extended without further delay. If there are questions or a need for additional information we will strive to provide it.

Sincerely yours,

Angelo Figone, for the Transportation Alliance of San Francisco
Bob Feinbaum, for SaveMuni
George Wooding, for the Coalition for San Francisco Neighborhoods
Gerald Cauthen, for the Bay Area Transportation Working Group
Howard Wong, AIA
Howard Strassner, PE
Michael O'Rourke, for the Transportation Alliance of San Francisco
Paul Dyson, for the Rail Passenger Association of California and Nevada





RAB v DTX





www.railpac.org

www.savemuni.org



September 4, 2018

To: <u>BOS-Supervisors</u>
Cc: <u>Young, Victor</u>

Subject: FW: Letter of Recommendation of Hanley Chan for the Veterans Affairs Commission

Date: Tuesday, September 11, 2018 5:11:00 PM

From: Johnson Hor [mailto:jhor@shoeboxventures.com]

Sent: Sunday, September 09, 2018 5:09 PM

To: Somera, Alisa (BOS) <alisa.somera@sfgov.org>; Board of Supervisors, (BOS)

<board.of.supervisors@sfgov.org>

Subject: Letter of Recommendation of Hanley Chan for the Veterans Affairs Commission

Dear Alisa and The Board:

My Name is Johnson Hor. San Francisco is my hometown. I am recommending another San Francisco native - Hanley Chan who I've learned is a fellow Civil Grand Jury past participant as me. He cares for San Francisco and our residents. He understands what it means to serve the community from serving on the Sunshine Ordinance Task Force to being a former Aviation Ordinancemen for the US Navy and a Army Tanker for The California National Guard. He would be a good selection to be on the Veteran Affairs Commission as he would be an advocate for those who need assistance and an attentive ear. He was appointed by President Obama to the Selective Service District Appeals Board, was a board member of the American Legion chapter and a life member of the American Legion. I often see him at the Cathay Post events volunteering his time.

Plus, I've known Hanley for well-over a decade. And find him to be trustworthy, and a friend indeed. Thank you for your time. He will serve San Francisco and the veterans who call San Francisco home as well as those who are transient to San Francisco as the gateway to other communities.

	Johnson Hor, CFS, CAMS, MSCIS, JD, etc Director of Something at Shoebox Ventures
	 P 415-858-0269 M 415-779-0779 W http://www.shoeboxventures.org

To: <u>BOS-Supervisors</u>

Subject: FW: SOMCAN / SFBOS hearing today... What about "tomorrow" / Transit solutions still missing... Across the city!

Date: Wednesday, September 12, 2018 11:17:00 AM

----Original Message-----

From: Aaron Goodman [mailto:amgodman@yahoo.com]

Sent: Tuesday, September 11, 2018 7:05 AM

To: Board of Supervisors, (BOS) <box/>board.of.supervisors@sfgov.org>

Subject: SOMCAN / SFBOS hearing today... What about "tomorrow" / Transit solutions still missing... Across the

city!

SFBOS

I read the article below again with the same concerns for how development and planning always appears to ignore the mass transportation impacts of 10's to 100's of thousands of new people in a densely populated area. Call it a super or mega tsunami of domino effect induced impacts. The transportation systems are breaking and the plans and process for completing and fixing the transportation links loops and connections are still way back in the Stone Age..... The DTX is not complete but plans are underway to revamp it without completing the basic fix of the DTX promised long ago. 19th ave has gone nowhere. Sunset and the great highway are clotted systems only to become more clotted, and city streets bogged down with people avoiding highways or refusing to take public transit. D10/D11/D7 are seeing huge new pressures and redevelopment that requires bi-county solutions and major planning and investments.

Schools pools libraries and public ammenities such as public parks are not sized and maintained for the populations. When garbage and overcrowded streets result and lacking housing. There are many reasons impacts are not addressed (\$) is always cited but here you have the opportunity to ensure that mass transit fixes are somewhat more supported and increased in priority to prevent gridlock. You did not enforce other major redevelopments and some sit having not acted on the issues they make. taking a stronger stance on public amenity helps the planning process by showing where you start negotiating from. Don't start 50-50 start at 100% and than negotiate what is needed.

Too often lately when I board public transit the people who rely on public systems seem quite forgotten by city hall planners. Let's make sure when you embark on another "masterplanned" effort te development agreements have teeth that really take a bite out of the cities major problems and solve for them 100% from the start of negotiations through final agreement...

A.Goodman D11

Article below points to that missing component PUBLIC BENEFIT in mass transit solutions aka DTX and other new fixed systems that can get you from any point in the city to here in 20 min or less....

https://www.sfchronicle.com/politics/article/SF-groups-to-push-for-changes-to-major-rezoning-13219608.php? utm_source=email&utm_email&utm_content=newsletter&utm_campaign=sfc_morningreport

Sent from my iPhone

From: Eugene Bachmanov
To: Valdez, Anthony (ENV)

Cc: Board of Supervisors, (BOS); BrownStaff; Kim, Jane (BOS); Safai, Ahsha (BOS); Tang, Katy (BOS);

MandelmanStaff, [BOS]; Cohen, Malia (BOS); Fewer, Sandra (BOS); Peskin, Aaron (BOS); Ronen, Hillary; Stefani, Catherine (BOS); Yee, Norman (BOS); Mayor London Breed (MYR); Geiger, Chris (ENV); Raphael, Deborah (ENV)

Subject: Reduced Risk Pesticide List - 9-17-2018 meeting, item 6 on the agenda,

Date: Friday, September 14, 2018 9:30:35 PM

Dear Commissioners,

Here is a quote from a recent "Nature News from Jake Sigg" blog:

"People are concerned about the massive spraying of agricultural fields but they don't connect that to the need to feed 8 billion of us.

What bothers me is that the there is wide condemnation of chemicals (mostly by urban dwellers), much of which is not based on fact or understanding of need. Herbicides and other chemicals are used for a wide variety of purposes that are considered as necessary or desirable."

It is reassuring to read that the local oracle for worshipers of "native" plants and "biodiversity" sides wholeheartedly with big agriculture and chemical industry.

I understand that SF Department of the Environment and the Commission on the Environment do so too.

It is disgusting, though, that you speak about adhering to the precautionary principle and about "reduced" risk pesticides, while making contribution to poisoning the environment and killing our children - smaller than big agriculture, but a contribution, nevertheless.

Please do remember that more than 50 years ago Rachel Carson in her book Silent Spring outlined the insanity of poisoning our environment.

If anything, the things are worse now than they were then.

Dr. Jane Goodall recently said: "How could we have ever believed that it is a good idea to grow our food with poisons?"

How can anybody believe that it is a good idea to use these poisons in our parks or on watershed is an equally valid question.

It seems that being "national leaders in integrated pest management" means putting a good spin on unjustifiable practice.

I'm in total agreement with the SF Forest Alliance letter about SF pesticide use - ban high hazard herbicides immediately!

Sincerely,

Eugene Bachmanov

From: susanna klebaner
To: Valdez, Anthony (ENV)

Cc: Board of Supervisors, (BOS); BrownStaff; Kim, Jane (BOS); Safai, Ahsha (BOS); Tang, Katy (BOS);

MandelmanStaff, [BOS]; Cohen, Malia (BOS); Fewer, Sandra (BOS); Peskin, Aaron (BOS); Ronen, Hillary; Stefani, Catherine (BOS); Yee, Norman (BOS); Mayor London Breed (MYR); Geiger, Chris (ENV); Raphael, Deborah (ENV)

Subject:Reduced Risk Pesticide List - 9-17-2018Date:Friday, September 14, 2018 4:22:33 PM

Dear Commissioners,

There are many reasons not to use pesticides:

- Pesticides don't solve pest problems.
- Pesticides are hazardous to our health.
- Pesticides cause special problems for children.
- Pesticides contaminate our food, water, and air.
- Pesticides are dangerous to pets.
- Pesticides are not good for pollinators, fish, birds, wildlife.
- Pesticide "Health & Safety Testing" is conducted by chemical companies.
- Pesticides have too many secrets.

Herbicides hold a special place among pesticides - it is particularly inane to use them - since, while the "pest" plants pose no threat to our health and well-being, the poisons used against these "pests" most certainly do.

Our land can and must be maintained organically. The high hazard herbicides must be banned.

Please include my letter into the meeting minutes.

Sincerely, Susanna Klebaner From: Anastasia Glikshtern
To: Valdez, Anthony (ENV)

Cc: Board of Supervisors, (BOS); BrownStaff; Peskin, Aaron (BOS); Safai, Ahsha (BOS); Stefani, Catherine (BOS);

Ronen, Hillary; Kim, Jane (BOS); Tang, Katy (BOS); Cohen, Malia (BOS); Yee, Norman (BOS); MandelmanStaff, [BOS]; Fewer, Sandra (BOS); Brown, Vallie (BOS); Mayor London Breed (MYR); Raphael, Deborah (ENV); Geiger,

Chris (ENV)

Subject: Reduced Risk Pesticide List

Date: Friday, September 14, 2018 5:02:25 PM

Commissioners,

As you know, this August Monsanto was ordered to pay \$289.2 millions in damages to Dewayne Lee Johnson, a former Benicia School District groundskeeper with terminal non-Hodgkins Lymphoma. The jury decided that the company knew about the carcinogenicity of Roundup/glyphosate all along and purposely deceived the public.

Here is YouTube recording of the verdict:

https://www.youtube.com/watch?v=um00x2ElTWs&feature=youtu.be

And more about the trial:

https://www.organicconsumers.org/blog/monsanto-roundup-trial-verdict

At the same time Roundup is considered by our Department of the Environment to be one of the "safest effective options" to eliminate "invasive" plants.

In city of Fairfax ordinance one of the reason of NOT TO USE PESTICIDES is cost: such use is very expensive.

Non Toxic Irvine also noted that switching from toxins to the organic management of the schools' sport fields resulted in lesser cost even with the original expenditures to heal the land. More cost savings are expected in the future and the city is positioned to scale the trial project up to all schools and city parks.

But SF claims it is cheap - and the money savings are the reason good enough to poison the environment.

Please drop your addiction to the toxins, stop supporting chemical companies, stop using high toxicity herbicides.

Thank you,

Anastasia Glikshtern