Policy Imperative to Permanently Preserve Tesla in its Natural State with no OHV use

We, the undersigned educators, students, and scientists with expertise in botany, ecology, geology, zoology and related disciplines, endorse the overwhelming evidence that the State Parks-owned Alameda-Tesla Expansion Area in eastern Alameda County, also referred to as "Tesla", has rare ecological value and contains an abundance of highly sensitive natural resources. A long-established body of peer-reviewed studies shows that recreational off-highway vehicle (OHV) use causes irreparable damage to soils, vegetation and wildlife.¹⁻¹⁴ Because the evidence indicates that recreational OHV use will severely diminish its resources and ecological integrity, we support permanent protection of Tesla by managing the area as a preserve with no OHV recreation.

California's earliest naturalists, Joseph LeConte, Joseph Grinnell and John Muir, recognized the high conservation value of the Corral Hollow watershed,¹⁵ where Tesla is situated. Today, that remaining value is exceptional since much biodiversity in the region has been lost to development. The late Robert Stebbins, renowned UC Berkeley professor and herpetologist, began visiting with students to study the richness of reptiles and amphibians¹⁶⁻¹⁸ over 50 years ago and the area continues to be a magnet attracting scientists. The location, where the moist Coast Range meets the northern edge of the San Joaquin Desert, has produced unique species assemblages as well as evolutionary differentiation within species.^{19,20} In a 1980 letter to the California State Parks written to stop a previous threat of OHV expansion, Stebbins and his Museum of Vertebrate Zoology colleagues affirmed that this biodiversity hotspot is a treasure: "Because of its accessibility and unusual flora and fauna, Corral Hollow is an outstanding wildlife resource area for the people of the San Francisco Bay Area."²¹

Bruce Baldwin, UC Berkeley professor and head of the Jepson Herbarium reiterated that "The Tesla property harbors an unusual array of vegetation types, including rare assemblages such as desertolive shrubland, and the habitat quality is particularly notable. Grasslands there are highly diverse in native forbs and native grasses, as is the understory of blue oak woodland. Much of California's grassland and blue oak woodland habitat is highly degraded by non-native plants, but that is not the situation on the Tesla property. It is no surprise that such habitat integrity and diversity is also reflected by the richness of native animal life there. Generations of botanists and zoologists have known this area for its unusually intact flora and fauna. Sacrificing such a resource for OHV play is ill-conceived in the extreme and would be a particularly conspicuous failure of public land stewardship."²²

Tesla's biologic and cultural features include:

- 42 special status wildlife species including 8 Federally or State listed and Candidate species (Appendix I) such as California Tiger Salamanders whose upland habitat requirements^{23,24} around breeding ponds subsumes the entire Tesla area.
- 13 special status and 28 locally rare plant species; 7 sensitive communities (Appendix II)
- Designated Critical Habitat for California red-legged frog and Alameda whipsnake
- East Bay California Native Plant Society Botanical Priority Protection Area²⁵ (App. II, p.12)
- Critical Linkage Wildlife Habitat Corridor (multi-agency Upland Habitat Project, Appendix III)
- Golden Eagle Nesting/Foraging Area and Audubon Important Bird Area
- Native Californian sites of archeological, spiritual, and ceremonial importance
- Historic town site and coal mine of Tesla; other European settler era historic sites

The foundation of a scientific approach to measure environmental impact is to assess trends over time and compare controls to affected sites.²⁶ We know that Tesla requires OHV exclusion because of the overwhelming evidence of damage when comparisons are made between the existing

Carnegie State Vehicular Recreation Area (CSVRA) and Tesla (i.e., the control). CSVRA's own monitoring shows the harms of OHV riding on vegetative cover, aquatic breeding amphibians, aquatic reptiles, and birds. CSVRA's data (obtained via Public Records Act requests and independently analyzed^{27,28}) reveal that OHV riding has caused a shift in the species composition of bird assemblages and ten-fold declines in the abundance of key indicators for health of oak woodlands (e.g., Acorn Woodpeckers). Such declines will ensue at Tesla if opened to OHV use, even at a trails-only level, because strong effects occurred in areas exposed to trails-only riding. Noise alone is detrimental.^{29,30} Conservation target species, large and small, are present at Tesla but absent at OHV areas within the CSVRA. Tule Elk and Golden Eagles have territories on Tesla, but not in OHV areas. Foothill yellow-legged frogs which were historically abundant in Corral Hollow have been extirpated from CSVRA, yet persist at Tesla. Space limits the examples we provide here, but many contrasts show that OHV recreation is not compatible with conservation (Appendix IV).

Furthermore, CSVRA management activities do not meet statutory requirements, are below scientific standards, and promote OHV recreation rather than protect resources.^{31,32} For example, a 'play area' for 4x4 vehicles was built in a vernal pool wetland used by spadefoot toads. CSVRA data and research from other areas show that OHV use causes soil compaction, erosion, subsequent filling of wetlands, and aggradation of stream channels when sediment is transported from eroded hillslopes to lowlands.^{5,13,14} Vehicular disturbance of soils in landscapes such as CSVRA increases sediment yield during rainfall events 10-25 times above background rates.^{33,34} Water quality and air quality are impaired; vegetation is destroyed;³² habitats are fragmented.³⁵ Disruptive noise and direct mortality from high-speed, high-volume activity harms wildlife.³⁶⁻⁴⁰

There is considerable risk that OHV use will increase human contact with a pathogenic fungus, *Coccidioides immitis*. As John Taylor, UC Berkeley professor and an expert on this pathogen, has communicated to State Parks⁴¹, workers across the Tesla Road at Lawrence Livermore National Lab's site 300, have contracted coccidioidomycosis (a.k.a Valley Fever), a potentially fatal disease caused by the fungus.^{42,43} The fungus lives in soil and is associated with small mammal colonies which dwell in Tesla and CSVRA as at Site 300. When soils are disturbed, spores are aerosolized and inhalation can lead to infection. Construction of roads, trails and facilities, and the dust from OHV use thus pose a health hazard. The California Dept. of Public Health recommends that people wear Powered Air Purifying Respirators with HEPA filters when digging in soil or working in dusty conditions unless in an enclosed cab with HEPA air filtration.⁴⁴ In the case of the Tesla Area, this would apply to workers developing the site and citizens using it for OHV recreation.

Based on the presence of sensitive plants, animals and soils, and the convincing data that OHV use has already damaged the ecosystem at neighboring CSVRA, we conclude that opening Tesla to OHV recreation will seriously harm its natural resources. Low impact non-motorized uses that protect the vitality of the landscape should be the centerpiece of any management strategy for Tesla.

Some of the best and most forward-thinking work of our State – in research, education, and government – has resulted in the preservation of the natural wonders of California for the future. For reasons that extend across generations, for its extraordinary natural and cultural resource values, and because of the immediate, scientifically documented threat to Tesla from proposed recreational OHV use, we ask the State Legislature, Governor, State Resources Agency, and State Parks and Recreation Department to take immediate action to ensure permanent preservation of the Alameda-Tesla Expansion Area. The ecological integrity, rich biological diversity, and historic relevance of Tesla are too important to sacrifice.

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Appendix I. Special-status animals (42 species) documented at CSVRA in existing or proposed Tesla expansion area.

Scientific name	Common name	Highest ranks	
Ambystoma californiense	California tiger salamander	Federal threatened, State threatened	
Spea hammondii	Western spadefoot	CA Species of Special Concern; under review as Federal threatened	
Rana boylii	Foothill yellow-legged frog	CA Species of Special Concern; under review State, Federal threatened	
Rana draytonii	California red-legged frog	Federal threatened	
Emys marmorata	Western pond turtle	CA Species of Special Concern; under review as Federal threatened	
Phrynosoma blainvillii	Coast horned lizard	CA Species of Special Concern	
Anniella pulchra pulchra	Silvery legless lizard	CA Species of Special Concern	
Masticophis flagellum ruddocki	San Joaquin coachwhip	CA Species of Special Concern	
Masticophis lateralis euryxanthus	Alameda whipsnake	Federal threatened, State threatened	
Accipiter cooperii	Cooper's hawk	CDFW Watch List	
Accipiter striatus	Sharp-shinned hawk	CDFW Watch List	
Aquila chrysaetos	Golden eagle	Eagle Act, USFWS Bird of Conservation Concern, CDFW Watch List and Fully Protected	
Buteo regalis	Ferruginous hawk	USFWS Bird of Conservation Concern, CDFW Watch List	
Buteo swainsoni	Swainson's hawk	State threatened	
Circus cyaneus	Northern harrier	CA Species of Special Concern	
Elanus leucurus	White-tailed kite	CDFW Fully Protected	
Falco columbarius	merlin	CDFW Watch List	
Falco mexicanus	Prairie falcon	USFWS Bird of Conservation Concern, CDFW Watch List	
Athene cunicularia	Burrowing owl	CA Species of Special Concern; USFWS Bird of Conservation Concern	
Calypte costae	Costa's hummingbird	USFWS Bird of Conservation Concern	
Selasphorus rufus	Rufous hummingbird	USFWS Bird of Conservation Concern	
Melanerpes lewis	Lewis' woodpecker	USFWS Bird of Conservation Concern	

Scientific name	Common name	Highest ranks
Contopus cooperi	Olive-sided flycatcher	CA Species of Special Concern; USFWS
Lanius ludovicianus	Loggerhead shrike	Bird of Conservation Concern CA Species of Special Concern; USFWS
Diag nuttalli	Vollow hilled magnie	Bird of Conservation Concern
Pica nuttalli	Yellow-billed magpie	USFWS Bird of Conservation Concern
Eremophila alpestris actia	California horned lark	CDFW Watch List
Baeolophus inornatus	Oak titmouse	USFWS Bird of Conservation Concern
Icteria virens	Yellow-breasted chat	CA Species of Special Concern
Setophaga petechia	Yellow warbler	CA Species of Special Concern; USFWS
Ammodramus savannarum	Grasshopper sparrow	Bird of Conservation Concern CA Species of Special Concern
ninnour annus suvannur ann		· ·
Artemisiospiza belli belli	Bell's sage sparrow	CDFW Watch List; USFWS Bird of Conservation Concern
Agelaius tricolor	Tricolored blackbird	State Candidate Species
Spinus lawrencei	Lawrence's goldfinch	USFWS Bird of Conservation Concern
Antrozous pallidus	Pallid bat	CA Species of Special Concern
Corynorhinus townsendii	Townsend's big-eared bat	State Candidate Species
Myotis evotis	Long-eared myotis	Western Bat Working Group – Medium Priority Species
Myotis thysanodes	Fringed myotis	Western Bat Working Group – High
Myotis yumanensis	Yuma myotis	Priority Species Western Bat Working Group –
hiyous yumanensis	i unia myötis	Low/Medium Priority Species
Eumops perotis californicus	Western mastiff bat	CA Species of Special Concern
Perognathus inornatus	San Joaquin pocket mouse	BLM Sensitive
Taxidea taxus	American badger	CA Species of Special Concern
San Joaquin Vulpes macrotis	San Joaquin kit fox	Federal endangered, State threatened (one old sighting, habitat)

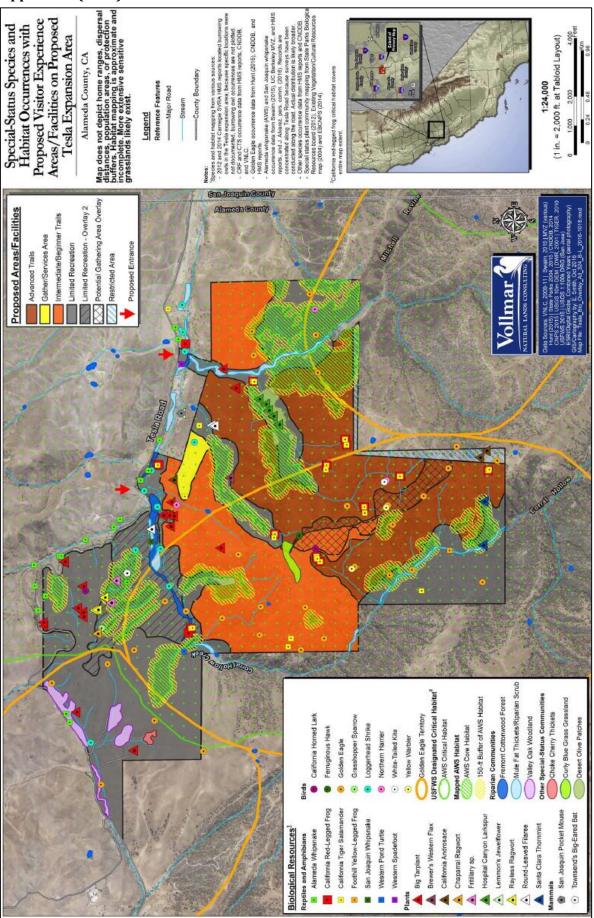
Summary:

- 3 Federally and State listed
- 1 Federally listed only
- 1 State listed only
- 2 State Candidate Species
- 16 CA Species of Special Concern
- 1 species protected by Eagle Act
- 18 species with other designations

Species with high potential to be present:

- Valley elderberry longhorn beetle Federal threatened (Plant in both CSVRA and Tesla, but no record of CSRA surveys for beetles)
- Western red bat CA Species of Special Concern

Appendix I (cont.)



Appendix II. Special-status plant species and sensitive vegetation communities documented at CSVRA (in existing and/or proposed Tesla expansion area).

Scientific Name	Common Name	Rare Plant Rank
Acanthomintha lanceolata	Santa Clara thorn-mint	4.2
Androsace elongata ssp. acuta	California androsace	4.2
Blepharizonia plumosa	Big tarplant	1B.1
California macrophylla	round-leaved filaree	1B.1
Delphinium californicum ssp. interius	Hospital Canyon larkspur	1B.2
Eriophyllum jepsonii	Jepson's woolly sunflower	4.3
Eschscholzia rhombipetala	diamond-petaled Ca. poppy	1B.1
Fritillaria agrestis	Stinkbells	4.2
Fritillaria sp.	Undescribed fritillaria	
Hesperolinon breweri	Brewer's western flax	1B.2
Microseris sylvatica	sylvan microseris	4.2
Senecio aphanactis	chaparral ragwort	2B.2
Caulanthus lemmonii	Lemmon's jewelflower	1B.2

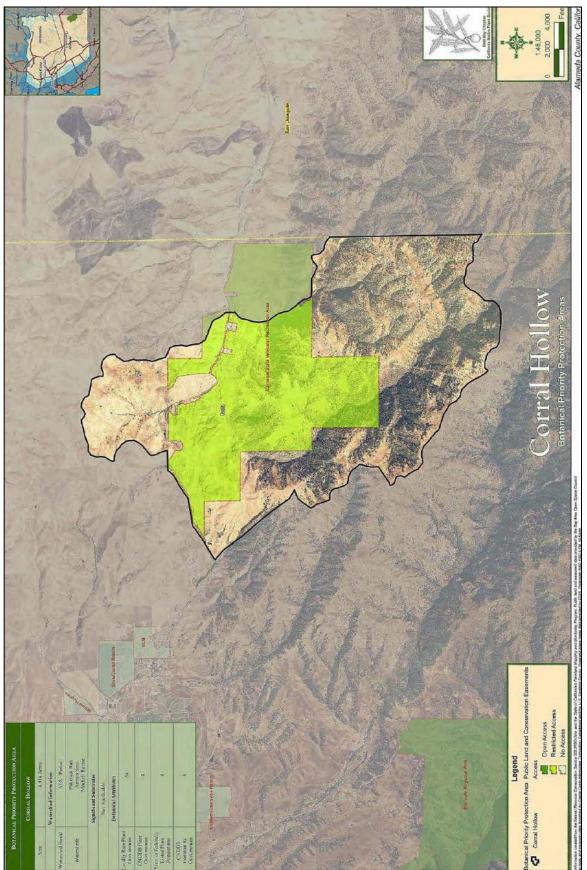
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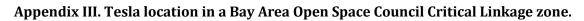
+ 28 species considered locally rare by East Bay Chapter Native Plant Society.

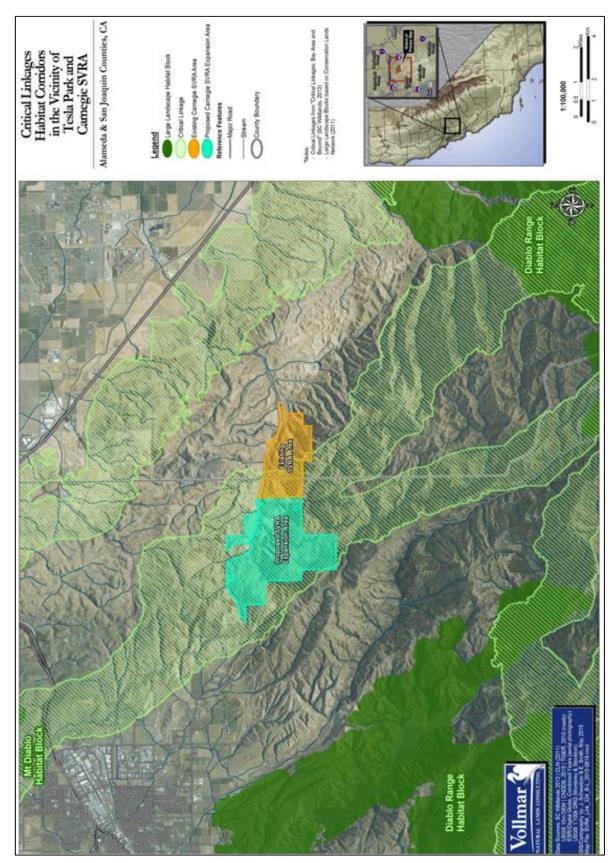
+ at least 7 sensitive plant communities:

- 1. Desert olive
- 2. Choke cherry
- 3. Fremont cottonwood
- 4. Valley oak
- 5. Blue oak woodlands
- 6. Curly blue grass
- 7. Purple needlegrass grassland (potentially present, but needs further investigation)
- 8. Riparian scrub

Appendix II (cont.)







Appendix IV. Executive Summary of Kupferberg and Furey, 2015 (reference 27 above).

Differences in animal assemblages between the existing Carnegie State Vehicular Recreation Area and proposed Expansion Area can be used to predict impacts to biological resources from OHV recreation because the two properties, which share similar topography, elevations, soils, and habitat types, differ primarily in land use. Here we provide examples of the types of existing condition and impact analyses that should have been conducted, but were not included in the DEIR.

Birds: CSVRA's point-count data (collected 2010-2014) demonstrate that OHV impacts are especially severe on birds that use oak woodlands and riparian zones. This is exemplified by dissimilarity in species composition and relative abundances in the total bird assemblage and significantly lower abundances of key indicator species in OHV riding areas relative to controls (e.g., Acorn Woodpeckers are ten times more abundant in control oak woodlands). These differences are consistent with other studies depicting negative impacts of OHV use on birds. Comparisons to CSVRA's historic data (collected 1989-90) show that the Common Raven has begun to dominate the landscape. This is significant because ravens are voracious predators that can threaten the persistence of several rare species.

Aquatic Amphibians and Reptiles: HMS data indicate that special status species such as California Red-legged Frogs have 3 times higher annual presence rates in control water bodies; California Tiger Salamanders are 5 times more frequently present in Expansion Area ponds than in the generally more shallow and sediment filled basins of the OHV riding area. Comparison of historic data (collected 1995) to most recent HMS data (2011, 2012, 2014) shows that common species such as Western Toads which were observed in most detention basins are now rare or absent in the OHV area, but persist in the control sites. Western aquatic garter snakes, a species which capitalizes on the explosive breeding events of amphibians and relies on tadpoles and metamorphs as a primary prey source, were not reported from any OHV site, but were found in 9 control ponds. This pattern suggests that declines in amphibian presence have food-web consequences for consumers at higher trophic levels in OHV areas.

These results illustrate that the lead agency, State Parks, is not in compliance with their mandate from the Public Resources Code 5090.35(c) to "sustain a viable species composition specific to each SVRA". The altered landscape and anthropogenic environmental changes are associated with deletions and shifts in the composition of the species pool at CSVRA in the riding area relative to non-riding control areas. The DEIR failed to adequately describe this aspect of the present setting, and recognize how the ongoing OHV impacts are predictive of future impacts in the planning area (i.e., Tesla).