WILD Equity
INSTITUTE
Building a healthy and sustainable global community for people and the plants and animals that accompany us on Earth

December 19, 2011

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U.S. Environmental Protection Agency
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Washington, DC 20460

California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Pacific Gas & Electric Company
Registered Agent for Service of Process
Linda Y. H. Cheng
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San Francisco, CA 94105

Secretary of Interior Ken Salazar
Department of the Interior
1849 C Street, N.W.
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Contra Costa Generating Station, LLC
145 Town and Country Drive
Danville, CA 94526

GenOn Energy Inc.
1000 Main St.
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Radback Energy, Inc.
CEO and Registered Agent for Service of Process
Bryan Bartacchi
145 Town & Country Dr., Suite 107
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RE: 60-Day Notice of Intent to Sue for Violations of Sections 7(a)(1), 7(a)(2), 7(d), and Section 9 of the Endangered Species Act—Unlawful Permitting and Operation of the Gateway Generating Station; Unlawful Operation of the Contra Costa Power Plant; Unlawful Permitting and Proposed Operation of the Oakley Generating Station; Unlawful Permitting and Proposed Operation of the Marsh Landing Generating Station

To Whom it May Concern:

We write to inform you that the Wild Equity Institute, Communities for a Better Environment, and the Center for Biological Diversity intend to commence an action under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, against the Environmental Protection Agency ("EPA") for illegally issuing federal Clean Air Act permits to the Gateway Generating Station; against Pacific Gas & Electric Company ("PG&E") for illegally operating the Gateway Generating Station and for illegally operating or proposing to operate the Oakley Generating Station; against Radback Energy, Inc. for illegally operating or proposing to operate the Oakley Generating Station; against Contra Costa Generating Station, LLC for illegally operating or proposing to operate the Oakley Generating Station; against GenOn Energy, Inc. for illegally operating or proposing to operate the

Marsh Landing Generating Station and the Contra Costa County Power Plant; and the California Energy Commission for illegally permitting the construction and operation of Gateway Generating Station, Contra Costa County Power Plant, Marsh Landing Generating Station, and the Oakley Generating Station (hereinafter "the Power Plants") in a manner that will cause take of species protected by the federal Endangered Species Act. This letter is provided to you pursuant to the 60-day notice requirement of the ESA's citizen suit provision, to the extent a court deems such notice necessary. 16 U.S.C. § 1540(g)(2).

The Wild Equity Institute.

The Wild Equity Institute unites the grassroots conservation movement and the environmental justice movement in campaigns that redress inequity, both across our human communities and towards the lands in which we live.

The Wild Equity Institute, its members, its staff, and its board of directors have long-standing interests in the Lange's Metalmark Butterfly, the Contra Costa Wallflower, and the Antioch Dunes Evening Primrose, and long-standing ties to the communities in Antioch, Oakley, and Pittsburg, California. Specifically, the Wild Equity Institute, its members, staff, and board of directors have interests in the Antioch Dunes National Wildlife Refuge and the species that depend on the refuge for survival. The Wild Equity Institute's members, staff, and Board of Directors regularly recreate at the Antioch Dunes National Wildlife Refuge when it is open for public use and participate in butterfly counts and restoration activities on the land. The Wild Equity Institute's members, staff, and board of directors also recreate, commute, and live at or near the Power Plants.

Communities for a Better Environment.

CBE is an environmental health and justice organization primarily concerned with protecting and enhancing the environment and public health by reducing air and water pollution and toxics, and equipping residents of California's urban areas, particularly low income communities and communities of color, with the tools to monitor and transform their immediate environment.

Communities for a Better Environment's members, its staff, and its board of directors have long-standing interests in improving the environment in the communities in Antioch, Oakley, and Pittsburg, California. Specifically, Communities for a Better Environment, its members, staff, and Board of Directors have interests in the Antioch Dunes National Wildlife Refuge and the species that depend on the refuge for survival, including the Lange's Metalmark Butterfly, the Contra Costa Wallflower, and the Antioch Dunes Evening Primrose. Communities for a Better Environment's members, staff, and board of directors recreate at the Antioch Dunes National Wildlife Refuge when it is open for public use. Communities for a Better Environment's members, staff, and board of directors also recreate, commute, work, go to school, and live at or near the Power Plants.

Center for Biological Diversity.

The Center for Biological Diversity works through science, law and creative media to secure a future for all species, great or small, hovering on the brink of extinction.

The Center for Biological Diversity, its members, its staff, and its board of directors have long-standing interests in the Lange's Metalmark Butterfly, the Contra Costa Wallflower, and the

Antioch Dunes Evening Primrose, and long-standing ties to the communities in Antioch, Oakley, and Pittsburg, California. Specifically, the Center for Biological Diversity, its members, staff, and board of directors have interests in the Antioch Dunes National Wildlife Refuge and the species that depend on the refuge for survival. The Center for Biological Diversity's members, staff, and Board of Directors regularly recreate at the Antioch Dunes National Wildlife Refuge when it is open for public use and participate in butterfly counts and restoration activities on the land. The Center for Biological Diversity's members, staff, and board of directors also recreate, commute, and live in or near the Power Plants.

The Antioch Dunes National Wildlife Refuge.

During an inter-glacial period approximately 140,000 years ago, a network of sand dunes and desert environments stretched from the location of the modern-day Mojave Desert across the Central Valley to the San Joaquin River. As California's climate changed the dunes retreated, but a stretch of desert-like habitat was left behind along the San Joaquin near Antioch, California.

The isolation of this area in Antioch allowed the species found there to evolve into unique life forms found nowhere else on Earth. Today the Antioch Dunes National Wildlife Refuge protects the remnants of these habitats, upon which three federally protected species depend: the Contra Costa Wallflower, the Antioch Dunes Evening Primrose, and the Lange's Metalmark Butterfly.

Prior to European settlement, the Antioch Dunes were probably several hundred acres in size. Currently, because of past sand mining, agriculture, and urban development, only about 70 acres of the sand dune habitat remains, all within the Antioch Dunes National Wildlife Refuge.

The Lange's Metalmark Butterfly.

The Lange's Metalmark Butterfly is a brightly colored, fragile, and highly endangered butterfly that has been protected by the Federal Endangered Species Act since 1976. 41 Fed. Reg. 22,041 (June 1, 1976). The species is endemic to the Antioch Dunes in Contra Costa County, and the only known extant population today is found at the Antioch Dunes.

Between 50 to 100 years ago, the population size of the Lange's metalmark butterfly at the Antioch Dunes is estimated to have been approximately 25,000 individuals. However, by 2006, the number had plummeted to a total of 45 adults. For the past five years, the number of adults observed in the wild has continued to remain at critically low levels. Surveys from 2009 to 2011 revealed an average population for the species of 35 individuals in the wild.

The sole food plant for the larval (caterpillar) stage of the butterfly is the naked-stemmed buckwheat (*Eriogonum nudum* ssp. *auriculatum*), which grows best in areas with good drainage. The health of this species is entirely dependent on the population of naked-stemmed buckwheat, and there is a direct positive correlation between the population size of this plant and the population of the butterfly.

However, today the buckwheat is only found in a limited portion of the Antioch Dunes National Wildlife Refuge, and this remaining area is threatened with extirpation due to the prolific overgrowth of non-native, invasive plant species, none of which provide food for the butterfly's caterpillar stage. Although the naked-stemmed buckwheat is not threatened with global

extinction, the loss of this essential host plant at the Antioch Dunes National Wildlife Refuge will surely lead to the extinction of the Lange's Metalmark Butterfly because of the butterfly's limited range.

The Antioch Dunes Evening Primrose and the Contra Costa Wallflower.

The Antioch Dunes Evening Primrose is a beautiful perennial plant. It has white flower petals with long yellow stamens, and is host to a rare sweat bee species, *Sphecodogastra antiochensis*. The Contra Costa Wallflower is a fragrant and highly structured wildflower with yellow petals. Both species have been protected as endangered under the Federal Endangered Species Act since 1978, 43 Fed. Reg. 7,972 (April 26, 1978), and critical habitat has been protected for both species since 1978 as well. 43 Fed. Reg. 39,042 (Aug. 31, 1978).

Like the Lange's Metalmark Butterfly, the Contra Costa Wallflower and the Antioch Dunes Evening Primrose are endemic to the Antioch Dunes National Wildlife Refuge. Although the population of these plants fluctuates greatly, the long-term trend indicates both species are in decline. In both cases, the overgrowth of invasive non-native plant species is reducing the available area for colonization and growth of these endangered species.

Nitrogen Emissions Jeopardize the Lange's Metalmark Butterfly, the Antioch Dunes Evening Primrose and the Contra Costa Wallflower, and Adversely Affects Their Critical Habitats.

The Power Plants have and will have significant nitrogen emissions. The long term chronic adverse biological effects of nitrogen deposition on native ecosystems and associated animals have been described in a number of papers (Huenneke et al. 1990; Inouye and Tilman 1995; Brooks 2003). Sand dunes like the Antioch Dunes are nitrogen deficient, and the changes in plant and microbial communities resulting from increased amounts of the airborne deposition of this chemical has been documented to cause cascading negative effects on ecosystem processes and the species that depend upon the structure of the existing native plant community. One of the primary adverse effects is the enhancement of environmental conditions for the invasion of non-native weeds, which outcompete native plants (Allen et al. 1998; Padgett & Allen 1999).

Currently, the Antioch Dunes National Wildlife Refuge receives nitrogen deposition from the surrounding atmosphere at a rate of 6.51 kg-N/ha/year (Tonnesen 2007). This is above the level at which nitrogen deposition effects must be assessed for impacts on species and ecological communities (Weiss 2006; CEC 2007). In nutrient-poor soils and deserts like those found at the Antioch Dunes this level is around 4-6 kg-N/ha/year (Fenn 2010); *see also* Exhibit A. The Power Plants are roughly within one mile of the Antioch Dunes, and will deposit nitrogen into the Wildlife Refuge.

The Lange's Metalmark Butterfly, the Antioch Dunes Evening Primrose, and the Contra Costa Wildflower are all highly endangered, and even small changes in the plant distribution at the dunes could take these species, adversely modify critical habitat, impede recovery, and even cause the species to go extinct. In particular, the Lange's Metalmark Butterfly is so critically endangered that a single failure in the productivity of the species host plant could lead to the permanent extinction of the species.

Violations of Section 7 Consultation Provisions of the Endangered Species Act.

Section 7(a)(2) of the ESA states:

> Each Federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior or Commerce], insure that any action authorized, funded or carried out by such agency…is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat . . . .

16 U.S.C. § 1536(a)(2). "Its very words affirmatively command all federal agencies to insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of an endangered species." *TVA v. Hill*, 437 U.S. 153, 173 (1978). The EPA must review its actions through the consultation process at the earliest possible time to determine whether any action may affected listed species or critical habitat, 50 C.F.R. § 402.14(a), and it must avoid making any irreversible or irretrievable commitment of resources that might limit the effectiveness of the consultation process. 16 U.S.C. § 1536(d). Reinitiation of consultation is required and must be requested by EPA where discretionary federal involvement or control over the action has been retained or is authorized by law and new information reveals effects of the action that may affect listed species or critical habitat in a manner not previously considered during consultation. 50 C.F.R. § 402.16(b).

The EPA Must Reinitiate Consultation on the Gateway Generation Station Permit.

The EPA has issued a Prevention of Significant Deterioration permit under the Clean Air Act for Gateway Generating Station, and recently modified the terms of this permit through a settlement agreement with PG&E. The EPA's Prevention of Significant Deterioration permit and agreements with PG&E are federal actions over which the EPA retains discretionary control. In 2001, the EPA initiated consultation with the National Marine Fisheries Service and the Fish and Wildlife Service regarding impacts from the *construction* of the Gateway Generating Station, but it has never conducted any consultation with the United States Fish and Wildlife Service to determine the *effects of nitrogen deposition* from the Gateway Generating Station on the endangered species at the Antioch Dunes National Wildlife Refuge.

Although the EPA may not have had the requisite information to conduct consultation at the time this permit was originally issued, it has this information now and had this information before it entered into a settlement agreement with PG&E: this information has been developed in the scientific literature and has been presented to the EPA by the Fish and Wildlife Service and other sources since the Gateway Generating Station was initially permitted. Yet to date, the EPA has failed to reinitiate consultation with the Fish and Wildlife Service over the impacts of nitrogen deposition on the endangered species endemic to the Antioch Dunes National Wildlife Refuge, nor has it considered the cumulative impacts of nitrogen deposition for projects the EPA is proposing and/or has already approved in the vicinity of the Antioch Dunes National Wildlife Refuge.

This is a clear violation of the regulations implementing the ESA, 50 C.F.R. § 402.16(b), and the ESA itself, 16 U.S.C. § 1536. When faced with new information describing impacts to listed species not previously considered during the consultation process, action agencies like the EPA are

required to reinitiate consultation with the expert agency: in this case, the Fish and Wildlife Service. The consultation process may result in new or different restrictions on the project that will ensure that these species will not be harmed. But these conditions can only be implemented if the consultation process is completed. Because the EPA has not reinitiated consultation, it is in violation of Section 7 of the Endangered Species Act.

Violation of Section 7(d) of the Endangered Species Act.

Section 7(d) of the ESA mandates that no "irreversible and irretrievable commitment of resources" that would foreclose the agency's ability to implement reasonable and prudent alternatives. 16 U.S.C. § 1536(d); 50 C.F.R. § 402.09. The purpose of this section is to insure that the existing environmental status quo is maintained during the consultation process so as not to foreclose consideration and adoption of alternatives to the proposed federal agency action. *Connor v. Burford*, 848 F.2d 1441, 1445 n. 34 (9th Cir. 1988). This prohibition on irreversible and irretrievable commitment of resources applies throughout consultation and continues until the requirements of Section 7 are completed. Because the ongoing emissions of nitrogen that impact listed species pursuant to an EPA permit constitutes "agency action" triggering the consultation process, by entering into settlement agreements and issuing permits the EPA is deploying irreversible and irretrievable commitments of resources without the benefit of the consultation process, in clear violation of the Endangered Species Act.

Violation of Section 7(a)(1) of the Endangered Species Act.

Section 7(a)(1) of the ESA states:

> The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this chapter. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title.

16 U.S.C. § 1536(a)(2). The ESA defines "conserve" as "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary." 16 U.S.C. § 1532(3).

The EPA has violated and is continuing to violate its duty under this section to utilize its authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of the Lange's Metalmark Butterfly, the Contra Costa Wallflower, and the Antioch Dunes Evening Primrose in consultation with the Secretary of the Interior.

Violation of Section 9 of the Endangered Species Act.

Section 9 of the ESA prohibits the take of any species listed under the ESA. 16 U.S.C. § 1538. The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." By regulation, the Fish and Wildlife Service has further defined the term "harm" to include "significant habitat modification or degradation" that

"actually kills or injures wildlife by significantly impairing essential behavioral patterns." 50 C.F.R. § 17.3.

Currently, the Antioch Dunes National Wildlife Refuge receives nitrogen deposition from the surrounding atmosphere at a rate of 6.51 kg-N/ha/year. This is above the critical load for deposition—which in nutrient-poor soils and deserts like those found at the Antioch Dunes is around 4-6 kg-N/ha/year, (Fenn 2010)—beyond which the impacts of additional nitrogen deposition must at least be assessed. The Power Plants are roughly one mile from the Antioch Dunes, and it is undisputed that the Power Plants do and will continue to deposit nitrogen into the Wildlife Refuge—even though critical loads of nitrogen have already been exceeded. The Fish and Wildlife Service has provided testimony before the California Energy Commission that continued nitrogen deposition is "virtually certain" to not only take individual Lange's Metalmark Butterflies, but also jeopardize the continued existence of the entire species. *See* Exhibit B. This is a clear violation of Section 9 of the ESA.

Conclusion.

By permitting facilities that deposit nitrogen in the vicinity of the Antioch Dunes National Wildlife Refuge—which is the home of three endangered species and constitutes the species' critical habitats—the EPA is violating Section 7 of the ESA in regards to Gateway Generating Station. By operating or proposing to operate facilities that deposit nitrogen in the vicinity of the Antioch Dunes National Wildlife Refuge, PG&E is violating Section 9 of the ESA in regards to its operation of Gateway Generating Station and its proposed operation of Oakley Generating Station; Radback Energy is violating Section 9 of the ESA in regards to its proposed operation of the Oakley Generating Station; Contra Costa Generating Station, LLC is violating Section 9 of the ESA in regards to its proposed operation of the Oakley Generating Station; GenOn is violating Section 9 of the ESA in regards to its proposed operation of the Marsh Landing Generating Station and the operation of the Contra Costa County Power Plant; and the California Energy Commission is violating Section 9 of the ESA in regards to all of these Power Plants.

An appropriate response to this letter would be (1) for the EPA to reinitiate consultation with the Fish and Wildlife Service on the Gateway Generating Station to address the affects caused by the deposition of nitrogen at the Antioch Dunes National Wildlife Refuge; (2) for the Power Plant owners, operators, and the CEC to obtain a Habitat Conservation Plan ("HCP") that ensures listed species at the Antioch Dunes are not jeopardized; and (3) prohibit nitrogen emissions from the Power Plants until the terms and conditions of the consultation and HCP are implemented. These terms and conditions will likely reduce harmful pollution from the Power Plants.

If such a response is not provided, the Wild Equity Institute, Communities for a Better Environment, and the Center for Biological Diversity intend to file suit in the United States District Court in order to obtain the relief required by the Endangered Species Act.

Very truly yours,

Brent Plater

Brent Plater

References.

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EXHIBIT A

Stuart B. Weiss, Ph.D.

Testimony on Oakley Powerplant proposal

I have been investigating nitrogen deposition in California since the mind-1990s (Weiss 1999, 2006, Fenn et al 2010), and have been involved in developing mitigation plans in Santa Clara County (Metcalf Energy Center, Los Esteros Critical Energy Facility, and Silicon Valley Power, and Highway 85-101 widening/improvements).

I have reviewed information pertaining to the Oakley power plant, including staff testimony, environmental documentation, consultant reports, and letters from the US Fish and Wildlife Service pertaining to this and other power plants that will have nitrogen deposition impacts on the Antioch Dunes National Wildlife Refuge. I offer the following professional expert observations.

The habitat at the refuge is suffering from invasive annual grasses that are growing vigorously in nutrient poor sands, and degrading habitat for the Endangered Lange's Metalmark Butterfly. This is an expected response to increased N-deposition from upwind sources of NO_x and NH_3. The vigor of the grass growth indicates that the Refuge is well above the critical load for N-deposition, which in nutrient-poor soils and deserts is around 4-6 kg-N/ha/year (Fenn et al. 2010).

The Oakley power plant will emit NO_x and NH_3 that will lead to increased deposition on the Refuge. This has been established by the applicant studies, and reported by the Staff testimony. It is important to realize and consider the cumulative impacts of the other power plants and developments in the area that result in increased NO_x and NH_3 emissions.

The USFWS has responsibility under the Endangered Species Act to protect the butterfly and its habitat. Their letters and comments on the impacts of this and other local power plant projects are based on the best available science, and cover in much detail the current dire straits of the butterfly and the impacts of N-deposition. I agree with their assessments and comments.

There are massive needs for restoration of the habitat and intensive care for the butterfly itself. Having been involved in restoration of degraded habitats, I can attest that substantial long-term resources and rigorous adaptive management plans are needed as long as N-deposition is elevated above the critical load. The proposed $5,000/year is inadequate for effective habitat management on the scale needed, even if supplemented by resources from other projects. The mitigation should be a series of specific projects, as proposed by USFWS including captive breeding, buckwheat and other endangered plant propagation, and weed control, rather than a set amount of money, so that real actions are accountable.

Fenn, M.E., E.B. Allen, S.B. Weiss, S. Jovan , L.H. Geiser , G.S. Tonnesen, R.F. Johnson, L.E. Rao, B.S. Gimeno, F. Yuan, T. Meixner, A. Bytnerowicz. 2010. Nitrogen critical loads and management alternatives for N-impacted ecosystems in California. Journal of Environmental Management 91:2402-2423.

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EXHIBIT B

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2010-TA-0306-1

AUG 17 2010

DOCKET
08-AFC-3
DATE AUG 17 2010
RECD. AUG 19 2010

Chairman
Energy Commission Docket Unit
1516 Ninth Street MS-4
Sacramento, California 95814

Subject: Endangered Species and the Proposed Marsh Landing Generating Station Project in Contra Costa County, California (Docket No. 08-AFC-3)

Dear Sir:

This responds to the proposed Marsh Landing Generating Station Project in Contra Costa County, California. At issue are the potential adverse effects of the proposed project on the endangered Lange's metalmark butterfly (*Apodemia mormo langei*), endangered Antioch Dunes Evening primrose (*Oenothera deltoides* ssp. *howellii*), endangered Contra Costa wallflower (*Erysium capitalium* var. *angustatum*), and the designated critical habitat of the Contra Costa wallflower and the Antioch Dunes evening primrose. The U.S. Fish and Wildlife Service (Service) is issuing this letter under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act). Our comments and recommendations are provided to assist you with your environmental review of the project and are not intended to preclude future comments from Service.

The comments and recommendations in this letter are based on 1) *Marsh Landing Generating Station Presiding Member's Proposed Decision* dated July 2010 that was prepared by the California Energy Commission; 2) *Biological Resources Testimony of Heather Blair* (Biological Report) dated June 2010; and 3) other information available to the Service.

Endangered Species Act of 1973, as amended

Section 9 of the Act prohibits the take of the endangered Lange's metalmark butterfly, and other federally listed species by any person subject to the jurisdiction of the United States. As defined in the Act, take is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harass means an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to breeding,

PROOF OF SERVICE (REVISED 7/14/10) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 8/19/10
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feeding, or sheltering." "Harm has been further defined to include habitat destruction when it injures or kills a listed species by interfering with essential behavioral patterns, such as breeding, foraging, or resting. Thus, not only is Lange's metalmark butterfly protected from such activities as collecting and hunting, but also from actions that result in injury or death due to the damage or destruction of its habitat. The Act prohibits activities that "...remove and reduce to possession any listed plant from areas under Federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law." The term "person" is defined as "...an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal government, of any State, municipality, or political subdivision of a State, or any other entity subject to the jurisdiction of the United States."

Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding, or carrying out of the project and a listed species is going to be adversely affected, then initiation of formal consultation between that agency and the Service pursuant to section 7 of the Act is required. Such consultation would result in a biological opinion addressing the anticipated effects of the project to the listed species and may authorize a limited level of incidental take. If a Federal agency is not involved in the project, and federally listed species may be taken as part of the project, then an incidental take permit pursuant to section 10(a)(1)(B) of the Act should be obtained. The Service may issue such a permit upon completion of a satisfactory conservation plan for the listed species that would be taken by the project.

Lange's Metalmark Butterfly

Lange's metalmark butterfly is endemic to the Antioch Dunes in Contra Costa County, and the only known extant population inhabits the Antioch Dunes National Wildlife Refuge. This species is sedentary and does not migrate. Prior to European settlement, the Antioch Dunes were probably several hundred acres in size. Currently, because of past sand mining, agriculture, and urban development, only about 70 acres of the sand dune habitat remains, which is located within the Antioch Dunes National Wildlife Refuge. Between 50 to 100 years ago, the population size of the Lange's metalmark butterfly at the Antioch Dunes is estimated to have been approximately 25,000 individuals, but after many years of destruction and degradation of the unique sand dune habitat, the numbers dropped to about 5,000 individuals in 1972 (Arnold and Powell 1983). For the past 20 years, peak count population surveys have been conducted annually at the Antioch Dunes National Wildlife Refuge. The number of animals observed in 2000 was 1,185 individuals, but by 2006, the number had plummeted to a total of 45 adults. For the past four years, the number of adults observed in the wild has continued to remain at critically low levels. The Service has implemented a captive breeding program and habitat enhancement program in an attempt to prevent the extinction of Lange's metalmark butterfly.

The foodplant for this animal is the naked-stemmed buckwheat (*Eriogonum nudum* ssp. *auriculatum*), which grows best in areas with good drainage and are dry and open. This plant species is the sole food source for the caterpillar of this endangered species. Lange's metalmark

butterfly is dependent on the health and abundance of the naked-stemmed buckwheat. There is a direct positive correlation between the numbers of the foodplant at the Antioch Dunes National Wildlife Refuge and the population size of this animal (Arnold and Powell 1983). The naked-stemmed buckwheat plant occupies a limited area within the Antioch Dunes National Wildlife Refuge and is imperiled with extirpation from this location due to the prolific overgrowth of invasive non-native plants, particularly rip-gut brome (*Bromus diandrus*), vetch (*Vicia villosa*), and star thistle (*Centaurea solstitalis*). The non-native plants out compete the naked-stemmed buckwheat and/or eliminate its habitat. Nitrogen from powerplants, automobiles, and other sources provides a major source of fertilizer for exotic vegetation and non-native weeds which are then able to invade natural habitats and outcompete and eliminate native plant species (Weiss 1999), including the Antioch Dunes National Wildlife Refuge. If the naked-stemmed buckwheat is eliminated from the Refuge, or its numbers are reduced to a level that are unable to support Lange's metalmark butterfly, currently at critically low numbers, then this species likely will become extinct in the wild.

Contra Costa Wallflower

Like Lange's metalmark butterfly, the Contra Costa wallflower is endemic to the Antioch Dunes, The majority of individuals are found within the Antioch Dunes National Wildlife Refuge, but a few plants have been found in the immediate vicinity of this area. In 1978, the population of the Contra Costa wallflower at the Antioch Dunes National Wildlife Refuge was growing on only 27 acres and it consisted of 174 fruiting plants and 60 rosettes or seedlings (Service 1984). In 1982, the estimated number of plants had increased to 700 individuals. The highest population size recorded to date was in 1999, when 11,567 individual plants were counted, however, there has been a steady decline in the overall population size of the Contra Costa wallflower. A count in 2006 revealed the population had declined to 4,581 individuals.

The greatest threat to the Contra Costa wallflower is the overgrowth of invasive non-native plant species at the Antioch Dunes National Wildlife Refuge, particularly rip-gut brome, vetch, and star thistle. These invasive plants stabilize the sand dunes, "choke out" native plants through extensive proliferation, and reduce the available area for colonization and growth of this listed plant.

Antioch Dunes Evening Primrose

The Antioch Dunes Evening Primrose is found only on the riverine dune habitat located on and immediately adjacent to the Antioch Dunes National Wildlife Refuge (Service 1984). This species has been introduced to other locales within the Bay area but persists only at the Antioch Dunes National Wildlife Refuge, and perhaps several other locations: Tilden Regional Park in Alameda County, within some low riverine dunes at Brannan Island State Recreational Area just east of the Refuge in Sacramento County, two small colonies on Brown's Island in Contra Costa County, and the most recently discovered population is located on private property north of Oakley.

From 1984 to 1991, the total population of the Antioch Dunes evening primrose was estimated to range from 4,300 to 5,800 plants. Population numbers fluctuate annually, but the long term trend

is clearly declining. The population number in 2006 was estimated to be 776 individuals. Like the other two endangered species found at the Antioch Dunes National Wildlife Refuge, the greatest threat to the Antioch Dunes evening primrose is the overgrowth of invasive non-native plant species, particularly rip-gut brome, vetch, and star thistle. These invasive plants stabilize the sand dunes, "choke out" native plants through extensive proliferation, and reduce the available area for colonization and growth of this listed plant.

Critical habitat for the Antioch Dunes evening primrose and the Contra Costa wallflower

Critical habitat for the Antioch Dunes evening primrose and the Contra Costa wallflower was designated on August 31, 1978. The critical habitat is defined as an area of land, water, and airspace in the Antioch Dunes National Wildlife Refuge (T.2 N.R. 2 E. SW ¼ section 17, E 2/3 of S 1/3 of section 18). Critical habitat is defined in the Act as the specific geographic area(s) occupied by a species at the time it was listed, on which are found the physical or biological features that are essential to their conservation and which may require special management considerations or protections.

Potential Impacts and Effects to the Listed Species

The Service concurs with the Biological Report and the *Presiding Member's Proposed Decision* that the proposed Marsh Landing Generating Station will have a significant adverse effect on the Lange's metalmark butterfly, Contra Costa wallflower, Antioch Dunes evening primrose, and the designated critical habitat for the two listed plants as well, because it will encourage and exacerbate the noxious weed proliferation at the Antioch Dunes National Wildlife Refuge and result in cascading adverse impacts on these three endangered species. However, it appears that the baseline nitrogen deposition levels and the additional 0.04 kilogram of nitrogen per hectare per year that will be deposited from the Marsh Landing Generating Station as described in these two California Energy Commission documents does not take into account the cumulative effect on the three listed species and the designated critical habitat over the life of the project.

Because of the fact that the only population in the World of the Lange's metalmark butterfly is restricted to the Antioch Dunes National Wildlife Refuge and its current low numbers place it in danger of extinction in the foreseeable future, the Service is concerned that the additional adverse effects of the proposed Marsh Landing Generating Station are likely to push this endangered species over the edge. The increased numbers and amount of exotic weeds caused by the deposition of nitrogen from the proposed project could eliminate the butterfly and possibly the Contra Costa wallflower because of competition and habitat loss or the reduction or loss of the caterpillar's foodplant. Although the Antioch Dunes evening primrose is found at a few other locations, nearly all of them likely are located in the areas where nitrogen from this project likely will be deposited. The adverse effects of the proposed project also are likely to result in adverse modification or destruction of the critical habitat for the two endangered plants.

The Service disagrees with the Findings of Fact on page 75 in the *Presiding Member's Proposed Decision* that with the implementation of BIO-8, the effects of nitrogen deposition on the three endangered species and the designated critical habitat for the two listed plants will not be significant. The proposed BIO-8 mitigation of $2000.00 per year is inadequate for mitigating the

adverse effects of nitrogen from the Marsh Landing Generating Station on the three endangered species. It is unclear what specific actions would be implemented using these funds nor do there appear to be success criteria or reporting requirements. In addition, the cumulative effects of the project, as proposed, on the three endangered species are unlikely to be mitigated to levels that are less than significant, as described on page 76 of the *Presiding Member's Proposed Decision.* The Service is concerned that in contradiction to the conclusion on page 76 of the *Presiding Member's Proposed Decision*, the Marsh Landing Generating Station, as proposed, will not be compliance with laws, ordinances, regulations, and standards, specifically the Endangered Species Act of 1973, as amended, because take or adverse impacts to the Lange's metalmark butterfly, and adverse effects on the Antioch Dunes evening primrose and the Contra Costa wallflower are virtually certain to occur as result of this project.

Therefore, we recommend that: (1) the California Energy Commission and/or the applicant ensure the proposed Marsh Landing Generating Station does not jeopardize the Contra Costa wallflower and Antioch Dunes evening primrose, or result in adverse modification or destruction of critical habitat for these two endangered plants; and (2) the California Energy Commission and/or the applicant obtain authorization for incidental take of the endangered Lange's metalmark butterfly pursuant to sections 7 or 10(a) of the Act prior to adoption of the *Presiding Member's Proposed Decision.*

We are interested in assisting the California Energy Commission and/or the applicant in the development of a project that conserves Lange's metalmark butterfly, Contra Costa wallflower, Antioch Dunes evening primrose, and the critical habitat for these two endangered plants, while meeting California's energy needs. Please contact Stephanie Jentsch, Ryan Olah, or Chris Nagano at the letterhead address, via electronic mail (Stephanie Jentsch,@fws.gov; Ryan_Olah@fws.gov; Chris_Nagano@fws.gov), or at telephone (916) 414-6600 if you have any questions regarding this response on the proposed Marsh Landing Generating Station Project.

Sincerely,

Cay C. Goude
Assistant Field Supervisor

cc:
Scott Wilson, Liam Davis, Randi Adair, California Department of Fish and Game, Yountville, California
Mendel Stewart, Louie Terrazas, Susan Euing, SFBNWR, Newark, California

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Arnold, R.A. and J.A. Powell. 1983. *Apodemia mormo langei*. Pages 98-128 *in* R.A. Arnold (editor). Ecological studies of endangered butterflies (Leipidoptera: Lycaenidae): island biogeography, patch dynamics, and the design of habitat preserves. University of California Publications in Entomology 99.

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2009-TA-1107-2

February 14, 2011

Chairman
California Energy Commission
1516 Ninth Street
Sacramento, California 95814

Subject: Endangered Species and the Oakley Generating Station in Contra Costa County, California

Dear Mr. Chairman:

This letter concerns the proposed Oakley Generating Station in the City of Oakley in Contra Costa County, California. At issue are the potential adverse effects of this facility on the endangered Lange's metalmark butterfly (*Apodemia mormo langei*), endangered Contra Costa wallflower (*Erysimum capitatum* var. *angustatum*), endangered Antioch Dunes evening primrose (*Oenothera deltoides* ssp. *howellii*), and designated critical habitat for these two listed plants. This letter is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*)(Act).

The comments and recommendations in this letter are based on the *Oakley Generating Station Preliminary Staff Assessment – Part B* dated January 2011 (Assessment) that was prepared by the California Energy Commission, and other information available to the U.S. Fish and Wildlife Service (Service).

Section 9 of the Act prohibits the take of the Lange's metalmark butterfly by any person subject to the jurisdiction of the United States. As defined in the Act, take is defined as "...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" has been further defined to include habitat destruction when it injures or kills a listed species by interfering with essential behavioral patterns, such as breeding, foraging, or resting. Thus, not only is Lange's metalmark butterfly protected from activities such as collecting, but also from actions that result in its death or injury due to the damage or destruction of its habitat. The Act prohibits activities that "...remove and reduce to possession any listed

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plant from areas under Federal jurisdiction; maliciously damage or destroy any such species on any such area; or remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any law or regulation of any State or in the course of any violation of a State criminal trespass law." The term "person" is defined as "...an individual, corporation, partnership, trust, association, or any other private entity; or any officer, employee, agent, department, or instrumentality of the Federal government, of any State, municipality, or political subdivision of a State, or any other entity subject to the jurisdiction of the United States."

Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding, or carrying out of the project and a listed species and/or critical habitat are going to be adversely affected, then initiation of formal consultation between that agency and the Service pursuant to section 7 of the Act is required. Such consultation would result in a biological opinion addressing the anticipated effects of the project to the listed species and/or critical habitat, and may authorize a limited level of incidental take. If a Federal agency is not involved in the project, and listed species may be taken as part of the project, then an incidental take permit pursuant to section 10(a)(1)(B) of the Act should be obtained. The Service may issue such a permit upon completion of a satisfactory conservation plan for the listed species that would be taken by the project. We request clarification from the California Energy Commission on the level of involvement in this project by the U.S. Environmental Protection Agency and the delegation of their authority under the Clean Air Act to the State.

The endangered Lange's metalmark butterfly is in imminent danger of extinction due to the loss of its habitat caused primarily by a menagerie of invasive exotic plants which are eliminating naked stemmed buckwheat (*Eriogonum nudum* var. *auriculatum*), its foodplant. Deposition of nitrogen from air pollution is a significant threat to California grasslands (Weiss 1999) and likely other native habitats, such as the Antioch Dunes, which contains the only population of this endangered butterfly. Invasive species are often better competitors for soil nutrients than native plants (Allen *et al.* 2000a). The result of high nitrogen deposition for Lange's metalmark butterfly, Contra Costa wallflower, and Antioch Dunes evening primrose likely is the accelerated invasion of weedy grass and herb species, particularly rip-gut brome (*Bromus diandrus*), vetch (*Vicia villosa*), and star thistle (*Centaurea solstitalis*), that displace native host plants and nectar sources, These invasive non-native plants stabilize the nutrient-poor sand dunes, "choke out" native plants through extensive proliferation, and significantly reduce the available area for colonization of the two listed plants and the naked stemmed buckwheat. Weeds also grow so densely that the host plant is not easily found by adult female Lange's metalmark butterflies. Historically, before the occurrence of high levels of airborne nitrogen, habitat at the Antioch Dunes was lost from human activities that included at one time or another, sand removal, agricultural and industrial practices, and recreational use of the riverine dunes (Service 1984).

The long term chronic adverse biological effects of nitrogen deposition on native ecosystems and associated animals have been described in a number of papers (Huennneke *et al.* 1990; Inouye and Tilman 1995; Brooks 2003). Habitats, such as sand dunes like the Antioch Dunes, are nitrogen deficient, and the changes in plant and microbial communities resulting from increased amounts of the airborne deposition of this chemical have been documented to cause cascading

negative effects on the ecosystem processes and the species that depend upon the native plant community. Increased nitrogen deposition initially causes ecological perturbations by altering microbial and plant communities. One of the primary adverse effects is the enhancement of environmental conditions for the invasion of non-native weeds, which outcompete native plants (Allen *et al.* 1998; Padgett *et al.* 1999). Nitrogen deposition also affects the natural fire cycle because of greater fuel loads caused by the excess growth of non-native grasses and weeds (D'Antonio and Vitousek 1992). The biological effects of airborne nitrogen deposition have been documented to be adversely affecting a listed animal and its habitat in the San Francisco Bay Area, the threatened bay checkerspot butterfly (*Euphydryas editha bayensis*)(Weiss 1999).

The status of Lange's metalmark butterfly has dramatically declined in the last few years. Between 50 to 100 years ago, the number of butterflies was estimated to be about 25,000 individuals, but after many years of destruction and degradation of its sand dune habitat, the number dropped to about 5,000 individuals in 1972 (Arnold and Powell 1983). For the past 20 years, peak count population surveys have been conducted annually at the Antioch Dunes National Wildlife Refuge. The number of animals observed in 2000 was 1,185 individuals, but by 2006, the number had dropped to a total of 45 adults.

The low number of Lange's metalmark butterflies observed during last year's flight season is of concern to the Service. No individuals were seen during the first two weeks of the survey period in early August 2010; 6 individuals were observed during the third week; 26 individuals were observed during the last week of August, which normally is the peak of the flight season; a total of 28 animals were seen during the first week of September, and 20 animals were during the last week of its flight season.

Increased nitrogen levels have been demonstrated to exacerbate the growth of exotic invasive weeds (Huenneke *et al.* 1990; Inouye and Tilman 1995; Weiss 1999). Based on current scientific literature (Weiss 2006), a value of 5 kilograms per hectare (kg/ha/yr) recently has been utilized by the California Energy Commission as the level above which effects of nitrogen deposition should be analyzed (California Energy Commission 2010). According to the best available estimates for the Antioch Dunes National Wildlife Refuge area, that are based on 2002 data, the baseline nitrogen deposition is estimated to be approximately 6.39 kg/ha/yr (Tonneson *et al.* 2007). This baseline, which does not include nitrogen deposition from new sources in the Antioch area that have come on-line since 2002, such as the Gateway Generating Station, or the nitrogen deposition that will result from the CEC-approved Marsh Landing Generating Station, already exceeds the 5 kg/ha/yr threshold above which nitrogen deposition can result in adverse impacts to plant communities. Due to the precarious status of the endangered Lange's metalmark butterfly, and because the Antioch Dunes National Wildlife Refuge is currently suffering from significant habitat degradation, the additional nitrogen deposition from the Oakley Generating Station above the baseline likely will cause additional stresses to the butterfly, as well as the Antioch Dunes evening primrose, Contra Costa wallflower, and the designated critical habitat for these two endangered plants. We are concerned any additional environmental stresses on this animal could be the factor that pushes the animal into extinction.

electronic mail (Stephanie_Jentsch@fws.gov; Ryan_Olah@fws.gov; Chris_Nagano@fws.gov), or at telephone 916/414-6600 if you have any questions regarding this letter.

Sincerely,

for Cay C. Goude
Assistant Field Supervisor
Endangered Species Program

cc:
Scott Wilson, Liam Davis, Randi Adair, California Department of Fish and Game, Yountville, California
Rick York, California Energy Commission, Sacramento, California
Louie Terrazas, Don Brubaker, Mendel Stewart, San Francisco Bay National Wildlife Refuge, Newark, California

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
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In Reply Refer To:
81420-2011-TA-0173

JUN 29 2011

Mr. Jared Blumenfeld
Regional Administrator, Region 9
U. S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105-3901

Subject: Effects of Nitrogen Deposition at Antioch Dunes National Wildlife Refuge Resulting from Existing and Proposed Power Generating Stations in Contra Costa County, California

Dear Mr. Blumenfeld:

This letter conveys the U.S. Fish and Wildlife Service's (Service) concerns regarding the effects of nitrogen deposition from existing and proposed power generating stations located in Contra Costa County, California, on federally listed species at the Antioch Dunes National Wildlife Refuge (ADNWR). At issue are the potential adverse effects of the operational Gateway Generating Station (GGS), the proposed Marsh Landing Generating Station (MLGS), and the proposed Oakley Generating Station (OGS) on the endangered Lange's metalmark butterfly (*Apodemia mormo langei*), endangered Contra Costa wallflower (*Erysimum capitatum* var. *angustatum*), endangered Antioch Dunes evening primrose (*Oenothera deltoides* ssp. *howellii*), and designated critical habitat for these two listed plants. This letter is issued under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. § 1531 *et seq.*)(Act).

The Lange's metalmark butterfly, the Contra Costa wallflower, and the Antioch Dunes evening primrose occur almost exclusively on the ADNWR. The primary threat to these species is the overgrowth of non-native plant species that displace the wallflower, primrose, and host plants and nectar sources for the Lange's metalmark butterfly. The GGS and the proposed MLGS and OGS are all located less than two miles from the ADNWR and operation of these power generating stations will result in the deposition of nitrogen at ADNWR. Nitrogen deposition is known to exacerbate the growth of non-native weeds; these effects are particularly problematic in nitrogen deficient habitats, such as the sand dunes at ADNWR, where changes in plant and microbial communities resulting from increased nitrogen deposition can result in cascading negative effects on the ecosystem processes and the species that depend upon the native plant community.

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The Service is concerned that the indirect and cumulative effects of the deposition of additional nitrogen at ADNWR resulting from operation of these power generating stations will result in adverse effects to the Contra Costa wallflower and the Antioch Dunes evening primrose and their critical habitat and in take of the Lange's metalmark butterfly. Adverse effects to the Lange's metalmark butterfly are of particular concern. The status of this species has declined dramatically in the last few years and because the ADNWR supports the only existing population of Lange's metalmark butterfly, any adverse effects to habitat at ADNWR may place the butterfly in danger of extinction in the foreseeable future.

Gateway Generating Station

On May 30, 2001, the U.S. Environmental Protection Agency (EPA) requested informal consultation with the Service on the addition of a 30 megawatt natural gas fired combination combustion turbine, that is now referred to as the GGS, to the existing Contra Costa Power Plant. On June 29, 2001, the Service concurred that aside from the potential adverse effects of the existing cooling water intake system on the threatened delta smelt (*Hypomesus transpacificus*) and the formerly threatened Sacramento splittail (*Pogonichthys macrolepidotus*), both of which were addressed in a section 7 consultation with the U.S. Army Corps of Engineers, the installation of the new turbine was not likely to adversely affect listed species.

However, although the consultation process for the GGS was concluded in 2001, this facility apparently did not become operational until 2009. It is our understanding that, because of the lapse in time between the EPA's issuance of a Prevention of Significant Deterioration permit to Pacific Gas and Electric (PG&E) for GGS and the construction and operation of the GGS facility, your agency and PG&E recently entered into a settlement agreement to impose emission limits on GGS consistent with current standards. Although this agreement will impose emission limits on nitrogen oxides (NOx), carbon monoxide (CO), sulfur dioxide (SO_2) and particulate matter that are thought to represent what the result of a new permitting process with the EPA would be, the Service was not consulted regarding the effects of these emissions on listed species.

New scientific information relating to the adverse effects of nitrogen deposition on listed species and natural ecosystems has become available since 2001 when the original permits were issued, and consultation with the Service was concluded. Based on current scientific literature, a baseline nitrogen deposition value of 5 kilograms per hectare (kg/ha/yr) recently has been recognized as the level above which effects of nitrogen deposition should be analyzed (Weiss 2006, California Energy Commission 2010). According to the best available estimates for the ADNWR area, that are based on 2002 data, the baseline nitrogen deposition is thought to be approximately 6.39 kg/ha/yr (Tonneson *et al.* 2007). This already exceeds the 5 kg/ha/yr threshold above which nitrogen deposition can result in adverse impacts to native plant communities. Although the amount of nitrogen deposition at ADNWR resulting from operation of GGS has not been modeled, it is reasonable to assume that based on the location, type of generating station, and amount of power to be generated by GGS, the amount of nitrogen deposition at ADNWR is similar to the amount estimated for MLGS and OGS and described below. Based on the current scientific literature available, it is the Service's opinion that the

deposition of this amount of nitrogen deposition at ADNWR is likely to result in adverse effects to the Contra Costa wallflower, the Antioch Dunes evening primrose, and in take of the Lange's metalmark butterfly.

Marsh Landing Generating Station

The California Energy Commission (CEC) is the primary state and local permitting authority for new power plants in California. Based on the CEC's final staff assessment for MLGS, the facility is predicted to result in an estimated 0.04 kg/ha/yr of additional nitrogen deposition to current baseline levels at ADNWR. On August 17, 2010, the Service submitted a letter to the CEC, conveying our concerns that the deposition of this amount of nitrogen at ADNWR would result in adverse effects to federally listed species and recommending that the applicant seek authorization for incidental take of the Lange's metalmark butterfly pursuant to either section 7 or 10(a) of the Act. We stated that should a Federal agency be involved with the permitting, funding, or carrying out of the project, that agency should initiate formal consultation with the Service pursuant to section 7 of the Act. If a Federal agency was not involved, we recommended an incidental take permit pursuant to section 10(a)(1)(B) of the Act be obtained. On August 25, 2010, the CEC issued Mirant Energy a Certificate to Construct and Operate the proposed MLGS. Although the CEC's conditions for certification for MLGS included a nominal annual payment to ADNWR for weed removal in order to mitigate for the effects of nitrogen deposition at ADNWR, the CEC did not recommend consultation with the Service and noted that section 7 of the Act would not apply because section 7 does not apply "to activities simply approved by state agencies, as we approve MLGS here". However, it is the Service's understanding that the EPA has delegated regional implementation of the Federal Clean Air Act to the Bay Area Air Quality Management District (BAAQMD) and that based on the CEC's environmental analysis, the BAAQMD issued an Authority to Construct permit for MLGS on August 31, 2010. Irrespective of the need for authorization of incidental take, we are concerned the payment of minimal funding will not, by itself, adequately compensate for the adverse effects of the project to listed species.

Oakley Generating Station

Based on the CEC's final staff assessment for OGS, the facility is predicted to result in an estimated 0.083 kg/ha/yr of additional nitrogen deposition to current baseline levels at ADNWR. The Service submitted comment letters to the CEC on October 13, 2010, February 14, 2011, and April 28, 2011, conveying our concerns that the deposition of nitrogen at ADNWR would result in adverse effects to federally listed species, recommending the applicant assist with the captive propagation and release of Lange's metalmark butterfly, and recommending the applicant seek authorization for incidental take pursuant to either section 7 or 10(a) of the Act. Again the CEC required the annual payment of nominal fees to ADNWR for weed eradication but did not recommend consultation with the Service.

Recommendations

The Service is concerned that the current operation of GGS, and the proposed operation of MLGS and OGS, will not be in compliance with the Endangered Species Act of 1973, as

amended, because take of the Lange's metalmark butterfly, and adverse effects to the Antioch Dunes evening primrose, the Contra Costa wallflower, and critical habitat for these two plants are likely to occur as result of these projects. Therefore, we recommend that:

1. Based on the availability of new scientific information that reveals adverse effects to listed species not previously considered and based on changes to the GGS project resulting from entering into the recent settlement agreement with PG&E, the EPA should reinitiate section 7 consultation with the Service for the GGS pursuant to 50 CFR § 402.14 of the Act.

2. The EPA should contact the Service in order to clarify their role in the permitting and review of OGS and MLGS. If the EPA's permitting authority has been delegated to a state or local agency, the EPA should either retain their permitting authority over these projects and initiate section 7 consultation with the Service or delegate their authority for consultation with the Service to the responsible State or local permitting agency.

We are interested in assisting the EPA in determining how to proceed with the consultation process for these power generating stations. Please contact Stephanie Jentsch, Ryan Olah, or Chris Nagano at the letterhead address, electronic mail (Stephanie_Jentsch@fws.gov; Ryan_Olah@fws.gov; Chris_Nagano@fws.gov), or at telephone (916) 414-6600 if you have any questions regarding this letter.

Sincerely,

Cay C. Goude

Cay C. Goude
Assistant Field Supervisor

cc:
Gerardo Rios, U.S. Environmental Protection Agency, San Francisco, California
Jack Broadbent, Brian Lusher, and Kathleen Truesdell, Bay Area Air Quality Management District, San Francisco, California
Randi Adair, California Department of Fish and Game, Yountville, California
Rick York, California Energy Commission, Sacramento, California
Louie Terrazas, Mendel Stewart, Don Brubaker, San Francisco Bay National Wildlife Refuge, Newark, California

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