(UNDATED)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

80289-EUP Threatened and Endangered Species Determination

Isagro has applied for an Experimental Use Permit (EUP) for an orthosufamuron crop-destruct on rice. Isagro has identified one location in Colusa County (Township: 16 North, Section: 21, Range: 01 West) and three locations in Glenn County (Township: 19 North, Section. 35, Range: 02 West; Township: 21 North, Section: 8, Range 01 West; and Township: 21 North, Section: 1, Range: 02 West) to treat rice fields with IR5878 WG and IR5878 0.5 GR. Isagro has eliminated aerial application in all states from the EUP testing program. A total of 5 acres will be treated in Colusa County (2.5 acres foliar trial and 2.5 acres granular trial) and a total of 7 acres (3.5 acres foliar trial and 3.5 acres granular trial) will be treated in Glenn County of California.

Environmental Fate and Effects Division (EFED) has produced a report titled "Evaluation of Proposed Experimental Use Permit (EUP) for an Orthosulfamuron Crop-Destruct Use on Rice". In this report EFED identified several reasons why the EUP did not receive approval. EFED identified a single threatened and endangered species (T&E) in Colusa County potentially associated with rice areas, and three T&E species in Glenn County. These are palmate-bracted bird's-beak (*Cordylanthus palmatus)* in Colusa County and Greene's tuctoria (*Tuctoria greenei)*, hairy orcutt grass (*Orcuttia pilosa)*, and Hoover's spurge (*Chamaesyce hooveri)* in Glenn County. EFED requested further information on the likely habitats of the plants and additional information on the proposed location of EUP sites in California.

Information on the four species distribution and habitat requirements were obtained from the Sacramento Fish and Wildlife Office of the United States Fish and Wildlife Service (USFWS) and from the Endangered Species Recovery Program of California State University Stanislaus (CSUS). Isagro has provided copies of detailed county maps of Colusa and Glenn Counties depicting proposed field locations.

Greene's tuctoria which is also known as Greene's Orcutt grass, is a small, tufted annual in the grass family (*Poaceae*). The plant has several to many stems 2-6 inches tall, each ending in a spike-like inflorescence that may be partly enfolded in the upper leaf. The lemmas (bracts) are strongly curved and more or less truncate at the apex. Greene's tuctoria is restricted to small or shallow vernal pools or the early drying sections of large, deep vernal pools in the Central Valley. Its historical range included parts of Shasta, Tehama and Butte counties in the northern Sacramento Valley, and extended from San Joaquin County to Tulare County in the San Joaquin Valley. The remaining populations are in Shasta, southern Tehama, Butte, Glenn, and eastern Merced counties.

Hoover'spurge also known as Hoover's sanmat, is a prostrate, tap-rooted, annual herb in the spurge family (*Euphorbiaceae*). It forms mats from a few inches to a few feet across. The flowering structure is a small, highly simplified cup-like "cyathium," as in all other spurges (*Chamaesyce and Euphorbia)*. The flowering structure in Hoover's spurge has petal-like glands that are red to olive in color. Blooms appear in July. This species is readily distinguished from other species of *Chamaesyce* by characteristics of growth habit, plant color and leaf shape. It is distinguished from plants in the genus *Euphorbia* on the basis of growth habit, vascular anatomy, and photosynthetic pathway. Hoover's spurge grows in relatively large, deep vernal pools among the rolling hills, remnant alluvial fans and depositional stream terraces at the base of the Sierra Nevada foothills. It tends to occur where competition from other species has been reduced by prolonged seasonal inundation or other factors. The main remaining area of concentration for Hoover's spurge is in the northeastern Sacramento Valley. Three other occurrences are on the Sacramento National Wildlife Refuge in Glenn County.

Hairy Orcutt grass is a small, tufted annual in the grass family (*Poaceae*). The plant has several stems 2-8 inches tall, each stem ending in a long, spike-like inflorescence. Foliage is grayish, with soft, straight hairs. This species and slender Orcutt grass (*Orcuttia tenuis*) grow together over a portion of their respective ranges but are readily distinguished. Slender Orcutt grass has fairly slender stems that often branch from their upper nodes. Spikelets are evenly spaced, not densely crowded. Hairy Orcutt grass stems branch only from lower nodes. Upper spikelets are densely crowded. Hairy Orcutt grass inhabits vernal pools in rolling topography on remnant alluvial fans and stream terraces in the Central Valley. The historical range includes the eastern margins of Sacramento and San Joaquin Valleys from Tehama County south to Stanislaus County and through Merced and Madera counties. Only 24 of 34 historically known populations exist. Populations of hairy Orcutt grass are found at the Sacramento National Wildlife Refuge.

Palmate-bracted bird's-beak is an annual herb in the snapdragon family (*Scrophulariaceae*). The plants are 4-12 inches tall and highly branched. The stems and leaves are grayish green and sometimes covered with salt crystals excreted by glandular hairs. Small pale whitish flowers, ½-inch to 1 inch long, are arranged in dense clusters (spikes) and densely surrounded by herbaceous leaf-like bracts. Like other *Cordylanthus* species, the petals are divided into two lips. The upper one is shaped like a bird's-beak, leading to the common name of the genus. Seedlings grow in late March or April. Flowers bloom from late spring through summer. Like other members of *Cordylanthus* and related genera, palmate-bracted bird's-beak is partially parasitic on the roots of other plants. Its host plant may be salt grass (*Distichlis spicata*). Palmate bracted bird's-beak grows on seasonally-flooded, saline-alkali soils in lowland plains and basins at elevations of less than 500 feet. Within these areas, it grows primarily along the edges of channels and drainages, with a few individuals scattered in seasonally-wet depressions, alkali scalds (barren areas with a surface crust of salts) and grassy areas. Palmate-bracted bird's-beak grows in valley sink scrub and alkali meadow natural communities in association with other species tolerant of high salt concentrations, such as iodine bush (*Allenrolfea occidentalis*), alkali heath (*Frankenia salina*), glasswort (*Salicornia subterminalis*),

seepweed (*Suaeda moquinii*) and salt grass (*Distichlis spicata*). Historically, the species is known from scattered locations in Fresno and Madera counties in the San Joaquin Valley, San Joaquin, Yolo, and Colusa counties in the Sacramento Valley and the Livermore Valley area of Alameda County. It is currently known to occur in seven locations in the Sacramento, Livermore and San Joaquin Valleys. From north to south, these are Sacramento National Wildlife Refuge (NWR) in Glenn County, Delevan NWR in Colusa County, Colusa NWR in Colusa County, the Woodland area, Springtown Alkali Sink near Livermore, western Madera County, and the combined Alkali Sink Ecological Reserve and Mendota Wildlife Management Area. The total occupied surface area over the seven locations is estimated at less than 741 acres.

Species location coverage maps (obtained from the USFWS and CSUS) were compared with test location maps provide by Isagro. All test sites were greater than 2 miles from known locations of T&Es. Further, aerial photographic data and topographic data obtained from United States Geological Survey and wetland and vernal pool coverage maps obtained from the USFWS, and soil coverage maps obtained from the United States Natural Resource Conservation Service were compared with the test location maps. All 4 proposed test sites are located in areas with high agricultural use (specifically rice cultivation) and don't contain the topography, hydrology, soil conditions, or other habitat requirements needed by the four T&Es. From comparing these maps and using the species information and habitat requirements provided by the USFWS, the proposed EUP will have no effect on palmate-bracted bird's-beak (*Cordylanthus palmatus)* in Colusa County and Greene's tuctoria (*Tuctoria greenei)*, hairy orcutt grass (*Orcuttia pilosa*), and Hoover's spurge (*Chamaesyce hooveri)* in Glenn County. The Endangered Species Act Section 7 Consultation Handbook (USFWS) was followed in making this determination.