



Photograph 5: Sampling Point 1 – Within the Wetland Looking North Towards Leon Road



Photograph 6: Sampling Point 2 – Within the Wetland



Photograph 7: Sampling Point 3 – Non-wetland (upland) - facing southwest towards Clinton Keith Road



Photograph 8: Sampling Point 4 – Within the Wetland - facing south



Photograph 9: Culvert Under Los Alamos Road – facing northwest looking at Los Alamos Road



Photograph

10: Looking upstream at culvert under Los Alamos Road



Photograph 11: Double culvert under dirt driveway that conveys flow to French Valley Creek downstream – facing south



Photograph 12: Dirt driveway that contains the double culvert which conveys flows to French Valley Creek downstream – facing west



Photograph 13: Connectivity to French Valley Creek – Water Flows from Wetland Area, via two Culverts, into French Valley Creek

Appendix E – MSHCP Consistency Letter and USFWS Biological Opinion



U.S. Fish and Wildlife Service
 Carlsbad Fish and Wildlife Office
 6010 Hidden Valley Road
 Carlsbad, California 92011
 (760) 431-9440
 FAX (760) 431-5902 + 9618



California Department of Fish & Game
 Eastern Sierra Inland Deserts Region
 3602 Inland Empire Blvd., Ste C-220
 Ontario, California 91764
 (909) 484-0459
 FAX (909) 481-2945

In Reply Refer To:
 FWS/CDFG-WRIV-4357.2

FEB 02 2007

Laurie Dobson Correa
 County of Riverside Transportation Department
 P.O. Box 1090
 Riverside, California 92502

Subj: Western Riverside County Multiple Species Habitat Conservation Plan Consistency Review for the Clinton Keith Road Extension from Antelope Road to State Route 79 (SR79), Riverside County, California

Dear Ms. Correa:

The U. S. Fish and Wildlife Service (Service) and the California Department of Fish and Game (Department), collectively the "Wildlife Agencies," previously provided comments on the subject project and consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) in our response to the draft supplemental environmental impact report (February 4, 2005; FWS/CDFG 4357.1) and Joint Project Review (November 4, 2005; FWS/CDFG 4405.57). The following comments are based on information provided in the document titled "Clinton Keith Road Extension Antelope Road to State Route 79: Western Riverside County Multiple Species Habitat Conservation Plan Consistency" revised on August 2006 and on subsequent conversations. We appreciate your extensive coordination with the Wildlife Agencies on this project and your good-faith efforts to modify the project to maintain wildlife connectivity within the MSHCP Conservation Area.

The proposed project includes the widening and extension of the existing Clinton Keith Road between Interstate 215 to SR79. The section between Antelope Road and SR79 will be a new road. On completion, Clinton Keith will be a six-lane road with a median, shoulders, and sidewalks. Other project components include 2 bridges, a wildlife overcrossing, detention basins, and new and improved local access roads and driveways.

Consistency with Cell Criteria

The proposed project is a Covered Activity in the Criteria Area. Impacts from Covered Activities are anticipated within Criteria Cells, but it is important to examine the Cell Criteria to ensure that the amount and location of actual project impacts are consistent with what conservation was estimated and that connectivity between the different cell groups is maintained.

The Clinton Keith Road extension will run east/west through the middle of Proposed Core (PC) 2 and turn south along the eastern boundary of PC 2. The new road will cross Proposed Constrained Linkage (PCL) 18 near the eastern boundary of PC 2 before connecting with SR79. PC 2 provides core habitat to a wide variety of species and is particularly important for the Quino checkerspot butterfly. Because of the large number of Covered Activities in PC 2, it is important to maintain connectivity within the Core and to minimize the effects of Covered Activities on the surrounding environment. PCL 18 is designed to

Laurie Dobson Correa (FWS/CDFG-WRIV-4357.2)

2

provide live in and movement habitat for species such as the bobcat and Los Angeles pocket mouse, connecting PC 2 with Proposed Extension of Existing Core 7. Based on our review, we agree that the proposed project is consistent with the Cell Criteria. The location and size of the proposed project are similar to what was anticipated in the MSHCP, and, as described below, adequate provisions appear to be in place to ensure connectivity within PC 2 and between PC 2 and PCL 18.

Connectivity within Conserved Lands and Guidelines for Roads in Criteria Area

The wildlife crossings incorporated into the proposed project appear to be appropriately designed and spaced and consistent with the guidelines provided by the MSHCP. The overpass, 36-inch diameter culverts, and bridge over Warm Springs Creek should maintain connectivity between the northern and southern portions of PC 2. Los Alamos Road is an existing dirt road that runs roughly parallel and south of the future Clinton Keith extension, but contains no bridges or overcrossings. During project development, the Service expressed concern that a high traffic load on Los Alamos could negate the benefits of the bridge and overcrossings on Clinton Keith Road. However, we have been informed that there are no plans to improve Los Alamos and that traffic load on Los Alamos is expected to be light following project completion, so wildlife will be able to cross Los Alamos at grade.

The planned bridge over French Valley Creek should provide connectivity between PC 2 and PCL 18 and accommodate movement of bobcat and Los Angeles pocket mouse, the Planning Species identified for PCL 18. Briggs Road runs just west and parallel to the north/south stretch of Clinton Keith Road. According to the information provided, future improvements to Briggs Road include the construction of six concrete box culverts (six feet high by fourteen feet wide) at French Valley Creek immediately west of the bridge over French Valley Creek. Although we are not currently providing MSHCP consistency review for improvements to Briggs Road, it is worth noting that the MSHCP requires that future improvements to Briggs Road include a "span facility over Warm Springs Creek" (MSHCP p. 7-29) as opposed to concrete box culverts.

Monitoring of Wildlife Undercrossings and Overcrossing

Under the Terms and Conditions of the MSHCP permit, the Monitoring Program Administrator of the Western Riverside County Resource Conservation Agency (RCA) is responsible for monitoring and analyzing the effectiveness of wildlife movement features for target species in coordination with the Resource Agencies. Effective monitoring of the wildlife movement features at this location is essential, as this stretch of road will include first wildlife overcrossing constructed in southern California, and there is much to be learned about the use of the different facilities by wildlife, including the Quino checkerspot butterfly.

Additional Survey Needs and Procedures

The proposed project is within the survey area for burrowing owl and Los Angeles pocket mouse. Focused surveys in 2004 were negative for burrowing owls, burrows, or sign. Focused surveys for Los Angeles pocket mouse pocket in 2003 were also negative, but since the timing of the survey coincided with the general time that hibernation is beginning, the results from this survey are not definitive. In general, the habitat appears to be low quality for Los Angeles pocket mouse because the soils are somewhat compacted, and vegetation was more dense than habitats typically used by this species. Nevertheless, because the previous survey was not definitive, the County has agreed to conduct focused trapping for the Los Angeles pocket mouse in 2007. If the Los Angeles pocket mouse is found in the future surveys, the

Laurie Dobson Correa (FWS/CDFG-WRIV-4357.2)

3

County will work with the Wildlife Agencies to ensure that impacts to potential habitat are avoided or to develop a biologically equivalent or superior preservation alternative for this species if impacts are unavoidable.

Protection of Narrow Endemic Plant Species and Plant Species in the Criteria Area Survey

The proposed project is within the Narrow Endemic Plant Species Survey Area 4 and the Criteria Area Species Survey Area 4, but focused surveys in Spring of 2003 for identified plant species were negative.

Riparian/Riverine and Vernal Pool Policy

Of the riparian/riverine species that require additional surveys, the project area contains potential habitat for only least Bell's vireo and southwestern willow flycatcher. Focused surveys for these species were conducted in 2003 and were negative.

The proposed project will temporarily impact 0.25 acre and permanently impact 0.86 acre (including potential shading effects to 0.30 acre) of riparian/riverine resources, including unvegetated wash, mulefat scrub, willow woodland, and upland vegetation (Riversidean sage scrub and grasslands) along the sides of the smaller tributaries.

Determination of Biologically Equivalent or Superior Preservation (DBESP)

To offset the anticipated impacts to riparian/riverine resources, the County has proposed to fund removal of 3.0 acres of arundo and other non-native invasive aquatic plant species through the Mission Conservation District in-lieu fee program, which operates in the Santa Margarita Watershed and to restore temporarily impacted riparian/riverine habitat in the project footprint. However, at the Wildlife Agencies' request, the County has agreed to work with the RCA and the Wildlife Agencies to identify potential restoration opportunities on recently-acquired MSHCP Reserve lands in the Warm Springs area. Restoration of identified locations in Warm Springs would replace some or all of the restoration committed to through the Mission Conservation District in-lieu fee program. A restoration plan for areas identified in the Warm Springs area will be developed in coordination with the Wildlife Agencies.

The restoration of temporarily impacted habitat in the project footprint will be conducted consistent with a habitat restoration plan submitted to the Wildlife Agencies for review and approval.

In addition, the County will implement the minimization measures and Best Management Practices described in the MSHCP to minimize potential impacts to nesting birds and to riparian/riverine resources.

We agree that with the proposed measures described above, the project is consistent with the MSHCP's riparian/riverine policy. Connectivity along riparian corridors will be maintained, temporary impacts will be restored, and permanent impacts will be offset through habitat restoration at a ratio of over three acres restored for each acre impacted. Although the Department is commenting in terms of the project as it relates to MSHCP, a Streambed Alteration Agreement is still required and appropriate mitigation for stream impacts should be coordinated with the appropriate representative at the Department.

Laurie Dobson Correa (FWS/CDFG-WRIV-4357.2)

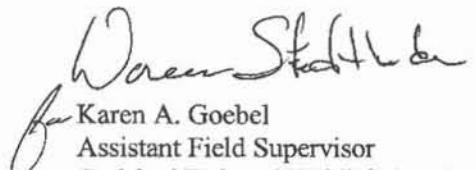
5


Conclusion

With the commitment to repeat surveys for Los Angeles pocket mouse in 2007 and work with the Wildlife Agencies to ensure that impacts to potential habitat are avoided or to develop a DBESP for this species if impacts are unavoidable, we agree that the proposed project is consistent with the MSHCP. However, please be advised that additional requirements may be necessary under other State and Federal Permits and this finding pertains solely to consistency under the MSHCP.

We appreciate your coordination on this project. If you have any questions regarding this review, please contact Jonathan Snyder of the Service at (760) 431-9440 x307 or Leslie MacNair of the Department at (949) 458-1754.

Sincerely,


Karen A. Goebel
Assistant Field Supervisor
Carlsbad Fish and Wildlife Service


Leslie MacNair
Staff Environmental Scientist
California Department of Fish and Game

cc:

Joe Richards, Western Riverside County Regional Conservation Authority, Riverside, CA
Stephanie Hall, U.S. Army Corps of Engineers, Los Angeles, California
Adam Fischer, Regional Water Quality Control Board, Santa Ana, California
Jeff Brandt, California Department of Fish and Game, Ontario, California
Yvonne Moore, Monitoring Program Administrator, Riverside, California



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011

In Reply Refer To:
FWS-WRIV-4357.3

MAR 6 2007

Colonel Alex Dornstauder
District Engineer
U. S. Army Corps of Engineers
Los Angeles District
Post Office Box 532711
Los Angeles, California 90053-2325

Attn: Laurie Monarres, Regulator Branch (File No. 200602205-LAM)

Subj: Formal Section 7 Consultation for the Clinton Keith Road Extension Project, Riverside County, California (1-6-07-F-4357.3)

Dear Colonel Dornstauder:

This document transmits our biological opinion based on our review of the Clinton Keith Road extension project and its potential effects on the federally threatened coastal California gnatcatcher (*Polioptila californica californica*, "gnatcatcher") and federally endangered Quino checkerspot butterfly (*Euphydryas editha quino*, "Quino") and Stephens' kangaroo rat (*Dipodomys stephensi*, "SKR"), in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et seq.). The project applicant, the County of Riverside (County), proposes to seek authorization for the project-related incidental take of the above-mentioned species through the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and the Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County, California (SKR HCP). We initiated formal consultation on March 2, 2007, the date we received your request.

On June 22, 2004, we issued a section 10(a)(1)(B) permit for the MSHCP. The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with the activities covered under the permit. The proposed project is located within the plan area boundary for the MSHCP. The project also occurs within the plan area boundary of the SKR HCP, dated March 1996. Within this plan area boundary, take of SKR is addressed under the SKR HCP rather than the MSHCP. In order for the applicant to receive incidental take authorization, the proposed action must be consistent with the MSHCP and SKR HCP and the associated implementation agreements and permits.

TAKE PRIDE
IN AMERICA 

This Biological Opinion is based on the following documents: 1) *Intra-Service Formal Section 7 Consultation/Conference for Issuance of Endangered Species Act Section 10(a)(1)(B) Permit TE-088609-0 for the Western Riverside County Multiple Species Habitat Conservation Plan dated June 22, 2004* (FWS-WRIV-870.19); 2) *Intra-Service Section 7 Consultation on Fish and Wildlife Service Issuance of an Incidental Take Permit for the Long-Term Stephens' Kangaroo Rat Habitat Conservation Plan (1-6-96-FW-27)*; 3) *Supplemental Environmental Impact Report 398: Clinton Keith Road Extension Project, Riverside County, California. Prepared for County of Riverside Transportation Department, dated January 2006*; 4) *Clinton Keith Road Extension Western Riverside County Multiple Species Habitat Conservation Plan Consistency. County of Riverside Transportation Department, dated August 2006*; 5) an enclosed letter (FWS/CDFG-WRIV-4357.2, dated February 2, 2007) from the U.S. Fish and Wildlife Service (Service) and California Department of Fish and Game (Department) documenting the consistency of the proposed project with the MSHCP; and 6) other information available in our files. The complete project file addressing this consultation is maintained at the Carlsbad Fish and Wildlife Office.

The proposed project would widen the existing Clinton Keith Road between Antelope Road and Los Alamos Road and extend Clinton Keith Road from Los Alamos Road to SR 79 at Benton Road. The project is about 3.4 miles in total length and runs between the northern boundary of the City of Murrieta and unincorporated Riverside County.

Impacts to Federally Listed Species

Implementation of the proposed project will impact a total of about 130 acres including about 42 acres of Riversidean sage scrub. About 10 pairs of gnatcatchers were observed in the Riversidean sage scrub within and adjacent to the proposed project footprint. In addition, much of the Riversidean sage scrub contains *Plantago erecta* and *Castilleja exserta*, which are host plants for Quino, and a male Quino was observed in the project footprint in 2000. SKR were trapped along the project footprint in annual grassland near the western end of the proposed widening and in Riversidean sage scrub just west of Warm Springs Creek.

MSHCP Criteria Cells and Guidelines for Roads in Criteria Area

As described in the enclosed letter (FWS/CDFG-WRIV-4357.2, dated February 2, 2007), the proposed project is in a location consistent with that identified in the MSHCP and will provide wildlife undercrossings and a wildlife overpass anticipated to maintain connectivity within MSHCP Conserved Lands.

MSHCP Additional Survey Needs and Procedures

Pursuant to the MSHCP, surveys were conducted for burrowing owl (*Athene cunicularia*), rare plants in the Criteria Area Species Survey Area, and plant species identified in the MSHCP as Narrow Endemic Plant Species. Surveys for these species were negative.

Under the MSHCP, focused surveys are also required for Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). These surveys were conducted in 2003 and were negative, but since the timing of the survey coincided with the general time that this species begins to hibernate, the results from this survey are not definitive. Therefore, the County has agreed to conduct focused trapping for the Los Angeles pocket mouse in 2007. If the Los Angeles pocket mouse is found in the future surveys, the County will work with the Service and Department to ensure that impacts to potential habitat are avoided or to develop a biologically equivalent or superior preservation alternative for this species if impacts are unavoidable.

MSHCP Riparian/Riverine Policy

Impacts to riparian/riverine resources as defined in the MSHCP include about 0.86 acre of permanent impact (including shading from the bridge over Warm Springs Creek) and 0.25 acre of temporary impacts to a combination of mulefat scrub, willow woodland, unvegetated wash, and transitional riparian/upland vegetation. Impacts to waters of the United States include about 0.56 acre of permanent impact and 0.25 acre of temporary impact. The impacted watercourses include Warm Springs Creek and some of its tributaries and French Valley Creek. Of the riparian/riverine species that require additional surveys under the MSHCP, the project area contains potential habitat for only least Bell's vireo and southwestern willow flycatcher. Focused surveys for these species conducted in 2003 were negative.

In accordance with the Riparian/Riverine Policy, a Determination of Biologically Equivalent or Superior Preservation (Determination) was prepared to address the impacts to riparian/riverine habitat. The Determination proposes to offset riparian/riverine impacts by funding removal of 3.0 acres of arundo and other non-native invasive aquatic plant species through the Mission Conservation District in-lieu fee program, which operates in the Santa Margarita Watershed and to restore temporarily impacted riparian/riverine habitat in the project footprint. We agree that this approach is consistent with the MSHCP Riparian/Riverine Policy. However, at the request of the Service and the Department, the County agreed to work with these agencies to identify potential restoration opportunities on recently-acquired MSHCP Reserve lands in the Warm Springs area. Restoration of identified locations in Warm Springs could replace some or all of the restoration committed to through the Mission Conservation District in-lieu fee program. In addition, it is our understanding that the Corps is working with the County to identify opportunities for wetland creation to help offset project-associated impacts.

The County will implement minimization measures and Best Management Practices described in the MSHCP to minimize potential impacts to nesting birds and to riparian/riverine resources

Conclusion Based on Consistency with the MSHCP

Based on our review of the information provided to us, we have determined that the proposed project is consistent with relevant MSHCP policies and procedures. The status of the gnatcatcher and Quino and the effects of implementing the MSHCP were previously addressed in our

biological opinion dated June 22, 2004, in which we concluded that the level of anticipated take in the MSHCP Plan Area was not likely to result in jeopardy to these species. We do not anticipate any adverse effects to the gnatcatcher or Quino that were not previously evaluated in the biological opinion for the MSHCP. Therefore, it is our conclusion that implementation of the proposed project will not result in jeopardy to the gnatcatcher or Quino.


Consistency with the SKR HCP

We have also determined that the proposed project is consistent with the SKR HCP and its associated implementing agreement and permit. The status of SKR and effects of implementing the SKR HCP were previously addressed in our biological opinion dated May 2, 1996. In the biological opinion for the SKR HCP, we concluded that the level of anticipated take in the plan area for this HCP was not likely to result in jeopardy to the SKR. Given that the proposed action is consistent with the SKR HCP, we do not anticipate any adverse effects to SKR that were not previously evaluated in the biological opinion for the SKR HCP. Therefore, it is our conclusion that implementation of the proposed project will not result in jeopardy to SKR.

This concludes formal consultation on the proposed action. As provided in 50 CFR 5402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: 1) the amount or extent of incidental take is exceeded; 2) new information reveals effects of the proposed action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; 3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat that was not considered in this opinion; or 4) a new species is listed or critical habitat is designated that may be affected by the proposed action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this biological opinion, please contact Jonathan Snyder of this office at (760) 431-9440, extension 307.

Sincerely,


for Karen A. Goebel
Assistant Field Supervisor

Enclosure

cc:

Laurie Dobson Correa, County of Riverside, Riverside, CA



U.S. Fish and Wildlife Service
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road
Carlsbad, California 92011
(760) 431-9440
FAX (760) 431-5902 + 9618



California Department of Fish & Game
Eastern Sierra Inland Deserts Region
3602 Inland Empire Blvd., Ste C-220
Ontario, California 91764
(909) 484-0459
FAX (909) 481-2945

In Reply Refer To:
FWS/CDFG-WRIV-4357.2

FEB 02 2007

Laurie Dobson Correa
County of Riverside Transportation Department
P.O. Box 1090
Riverside, California 92502

Subj: Western Riverside County Multiple Species Habitat Conservation Plan Consistency Review for the Clinton Keith Road Extension from Antelope Road to State Route 79 (SR79), Riverside County, California

Dear Ms. Correa:

The U. S. Fish and Wildlife Service (Service) and the California Department of Fish and Game (Department), collectively the "Wildlife Agencies," previously provided comments on the subject project and consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) in our response to the draft supplemental environmental impact report (February 4, 2005; FWS/CDFG 4357.1) and Joint Project Review (November 4, 2005; FWS/CDFG 4405.57). The following comments are based on information provided in the document titled "Clinton Keith Road Extension Antelope Road to State Route 79: Western Riverside County Multiple Species Habitat Conservation Plan Consistency" revised on August 2006 and on subsequent conversations. We appreciate your extensive coordination with the Wildlife Agencies on this project and your good-faith efforts to modify the project to maintain wildlife connectivity within the MSHCP Conservation Area.

The proposed project includes the widening and extension of the existing Clinton Keith Road between Interstate 215 to SR79. The section between Antelope Road and SR79 will be a new road. On completion, Clinton Keith will be a six-lane road with a median, shoulders, and sidewalks. Other project components include 2 bridges, a wildlife overcrossing, detention basins, and new and improved local access roads and driveways.

Consistency with Cell Criteria

The proposed project is a Covered Activity in the Criteria Area. Impacts from Covered Activities are anticipated within Criteria Cells, but it is important to examine the Cell Criteria to ensure that the amount and location of actual project impacts are consistent with what conservation was estimated and that connectivity between the different cell groups is maintained.

The Clinton Keith Road extension will run east/west through the middle of Proposed Core (PC) 2 and turn south along the eastern boundary of PC 2. The new road will cross Proposed Constrained Linkage (PCL) 18 near the eastern boundary of PC 2 before connecting with SR79. PC 2 provides core habitat to a wide variety of species and is particularly important for the Quino checkerspot butterfly. Because of the large number of Covered Activities in PC 2, it is important to maintain connectivity within the Core and to minimize the effects of Covered Activities on the surrounding environment. PCL 18 is designed to

TAKE PRIDE®
IN AMERICA 

provide live in and movement habitat for species such as the bobcat and Los Angeles pocket mouse, connecting PC 2 with Proposed Extension of Existing Core 7. Based on our review, we agree that the proposed project is consistent with the Cell Criteria. The location and size of the proposed project are similar to what was anticipated in the MSHCP, and, as described below, adequate provisions appear to be in place to ensure connectivity within PC 2 and between PC 2 and PCL 18.

Connectivity within Conserved Lands and Guidelines for Roads in Criteria Area

The wildlife crossings incorporated into the proposed project appear to be appropriately designed and spaced and consistent with the guidelines provided by the MSHCP. The overpass, 36-inch diameter culverts, and bridge over Warm Springs Creek should maintain connectivity between the northern and southern portions of PC 2. Los Alamos Road is an existing dirt road that runs roughly parallel and south of the future Clinton Keith extension, but contains no bridges or overcrossings. During project development, the Service expressed concern that a high traffic load on Los Alamos could negate the benefits of the bridge and overcrossings on Clinton Keith Road. However, we have been informed that there are no plans to improve Los Alamos and that traffic load on Los Alamos is expected to be light following project completion, so wildlife will be able to cross Los Alamos at grade.

The planned bridge over French Valley Creek should provide connectivity between PC 2 and PCL 18 and accommodate movement of bobcat and Los Angeles pocket mouse, the Planning Species identified for PCL 18. Briggs Road runs just west and parallel to the north/south stretch of Clinton Keith Road. According to the information provided, future improvements to Briggs Road include the construction of six concrete box culverts (six feet high by fourteen feet wide) at French Valley Creek immediately west of the bridge over French Valley Creek. Although we are not currently providing MSHCP consistency review for improvements to Briggs Road, it is worth noting that the MSHCP requires that future improvements to Briggs Road include a "span facility over Warm Springs Creek" (MSHCP p. 7-29) as opposed to concrete box culverts.

Monitoring of Wildlife Undercrossings and Overcrossing

Under the Terms and Conditions of the MSHCP permit, the Monitoring Program Administrator of the Western Riverside County Resource Conservation Agency (RCA) is responsible for monitoring and analyzing the effectiveness of wildlife movement features for target species in coordination with the Resource Agencies. Effective monitoring of the wildlife movement features at this location is essential, as this stretch of road will include first wildlife overcrossing constructed in southern California; and there is much to be learned about the use of the different facilities by wildlife, including the Quino checkerspot butterfly.

Additional Survey Needs and Procedures

The proposed project is within the survey area for burrowing owl and Los Angeles pocket mouse. Focused surveys in 2004 were negative for burrowing owls, burrows, or sign. Focused surveys for Los Angeles pocket mouse pocket in 2003 were also negative, but since the timing of the survey coincided with the general time that hibernation is beginning, the results from this survey are not definitive. In general, the habitat appears to be low quality for Los Angeles pocket mouse because the soils are somewhat compacted, and vegetation was more dense than habitats typically used by this species. Nevertheless, because the previous survey was not definitive, the County has agreed to conduct focused trapping for the Los Angeles pocket mouse in 2007. If the Los Angeles pocket mouse is found in the future surveys, the

County will work with the Wildlife Agencies to ensure that impacts to potential habitat are avoided or to develop a biologically equivalent or superior preservation alternative for this species if impacts are unavoidable.

Protection of Narrow Endemic Plant Species and Plant Species in the Criteria Area Survey

The proposed project is within the Narrow Endemic Plant Species Survey Area 4 and the Criteria Area Species Survey Area 4, but focused surveys in Spring of 2003 for identified plant species were negative.

Riparian/Riverine and Vernal Pool Policy

Of the riparian/riverine species that require additional surveys, the project area contains potential habitat for only least Bell's vireo and southwestern willow flycatcher. Focused surveys for these species were conducted in 2003 and were negative.

The proposed project will temporarily impact 0.25 acre and permanently impact 0.86 acre (including potential shading effects to 0.30 acre) of riparian/riverine resources, including unvegetated wash, mulefat scrub, willow woodland, and upland vegetation (Riversidean sage scrub and grasslands) along the sides of the smaller tributaries.

Determination of Biologically Equivalent or Superior Preservation (DBESP)

To offset the anticipated impacts to riparian/riverine resources, the County has proposed to fund removal of 3.0 acres of arundo and other non-native invasive aquatic plant species through the Mission Conservation District in-lieu fee program, which operates in the Santa Margarita Watershed and to restore temporarily impacted riparian/riverine habitat in the project footprint. However, at the Wildlife Agencies' request, the County has agreed to work with the RCA and the Wildlife Agencies to identify potential restoration opportunities on recently-acquired MSHCP Reserve lands in the Warm Springs area. Restoration of identified locations in Warm Springs would replace some or all of the restoration committed to through the Mission Conservation District in-lieu fee program. A restoration plan for areas identified in the Warm Springs area will be developed in coordination with the Wildlife Agencies.

The restoration of temporarily impacted habitat in the project footprint will be conducted consistent with a habitat restoration plan submitted to the Wildlife Agencies for review and approval.

In addition, the County will implement the minimization measures and Best Management Practices described in the MSHCP to minimize potential impacts to nesting birds and to riparian/riverine resources.


We agree that with the proposed measures described above, the project is consistent with the MSHCP's riparian/riverine policy. Connectivity along riparian corridors will be maintained, temporary impacts will be restored, and permanent impacts will be offset through habitat restoration at a ratio of over three acres restored for each acre impacted. Although the Department is commenting in terms of the project as it relates to MSHCP, a Streambed Alteration Agreement is still required and appropriate mitigation for stream impacts should be coordinated with the appropriate representative at the Department.

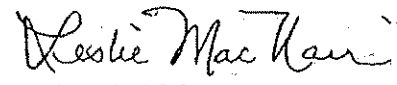
Conclusion

With the commitment to repeat surveys for Los Angeles pocket mouse in 2007 and work with the Wildlife Agencies to ensure that impacts to potential habitat are avoided or to develop a DBESP for this species if impacts are unavoidable, we agree that the proposed project is consistent with the MSHCP. However, please be advised that additional requirements may be necessary under other State and Federal Permits and this finding pertains solely to consistency under the MSHCP.

We appreciate your coordination on this project. If you have any questions regarding this review, please contact Jonathan Snyder of the Service at (760) 431-9440 x307 or Leslie MacNair of the Department at (949) 458-1754.

Sincerely,


for Karen A. Goebel
Assistant Field Supervisor
Carlsbad Fish and Wildlife Service


Leslie MacNair
Staff Environmental Scientist
California Department of Fish and Game

cc:

Joe Richards, Western Riverside County Regional Conservation Authority, Riverside, CA
Stephanie Hall, U.S. Army Corps of Engineers, Los Angeles, California
Adam Fischer, Regional Water Quality Control Board, Santa Ana, California
Jeff Brandt, California Department of Fish and Game, Ontario, California
Yvonne Moore, Monitoring Program Administrator, Riverside, California

Appendix F – Field Data Sheets

General Notes

Tuesday, April 5th

8:00 am

Clinton Keith Rd. Extension
Wetland delineation near
Leon Rd/Clinton Keith Intersect.

Clear, Sunny

~ 75°F

Vegetation

Riparian/Wetland
Mulleat (*Baccharis salicifolia*)
Cattails (*Typha latifolia*)
Awoye Willow (*Salix lasiolepis*)
Tamarisk (*Tamarix*)
Curly deck (*Rumex crispus*)
Grass buttons (*Cotula coronopifolia*)

Rabbits foot grass

Aquatic

Upland

Common mustard

Fiddleneck (*Amsinckia* sp)

annual grasses

red brome (*Bromus rubens*)

Common barley (*Hordeum vulgare*)

Vulpia sp.

Page 2

Clinton Keith Rd. Ept.

Surrounding Land Uses:
Residential / Commercial

Landscaping

Olive grove

Urban area w/ rural
components

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	5YR 3/1	100	n/a				silty	
5-16	5YR 4/2	98	5YR 5/6	2	C	M	clay loam	
5-16	5YR 4/2	98	5YR 5/1	2	D	M	clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils³:
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): <u>n/a</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Type: _____	
Depth (inches): _____	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: n/a

Remarks: water table @ 16"

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Clinton Keith Extension City/County: Riverside County Sampling Date: 4/5/11
 Applicant/Owner: Riverside County Transportation Dept. State: CA Sampling Point: 1
 Investigator(s): James Garham/Melissa Williams Section, Township, Range: S31, T6S, R2W
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): Concave Slope (%): 1
 Subregion (LRR): LRRC Lat: 33.59791 Long: -117.127261 Datum: _____
 Soil Map Unit Name: MmB Monserate Sandy Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)																
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
4. _____	_____	_____	_____	Prevalence Index worksheet: <table style="width:100%; border: none;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
Total Cover: _____																				
<u>Sapling/Shrub Stratum</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
Total Cover: _____																				
<u>Herb Stratum</u>																				
1. <u>Rumex crispus</u>	<u>60</u>	<u>yes</u>	<u>FACW</u>																	
2. <u>unknown (arise)</u>	<u>20</u>	<u>yes</u>	<u>NL</u>																	
3. <u>unknown</u>	<u>10</u>	<u>no</u>	<u>NL</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
Total Cover: _____																				
<u>Woody Vine Stratum</u>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
Total Cover: <u>90%</u>																				
% Bare Ground in Herb Stratum <u>10%</u> % Cover of Biotic Crust <u>0</u>																				

Remarks: 1 m plot size

SOIL

10% Willow 60% Upha 30% Mulefat

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	5YR 4/2		5YR 4/6	2	C	M	Sandy clay Sandy clay	large cobbles
8-12			5YR 4/6	5	C	M	sandy clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Type: na Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: *disturbed soils, large imported cobbles*

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Salt Crust (B11) <input checked="" type="checkbox"/> Biotic Crust (B12) <input checked="" type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: *Based on primary indicators*

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Clinton Keith Rd. Extension City/County: Riverside Co. Sampling Date: 4/5/11
 Applicant/Owner: RCTD State: CA Sampling Point: 4
 Investigator(s): James Gorham/Melissa Williams Section, Township, Range: S31, T6S, R2W
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): LRRC Lat: 33.59791 Long: -117.127261 Datum: _____
 Soil Map Unit Name: monserate Sandy Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Total Cover: _____				
Herb Stratum				
1. <u>Rabbit's foot grass</u>	<u>60</u>	<u>yes</u>	<u>OBL</u>	
2. <u>grass buttons</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	
3. <u>ether</u>	<u>5</u>	<u>no</u>	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>15</u>		% Cover of Biotic Crust <u>5</u>		

Remarks: 2m plot size

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-6	5YR 3/3						Sandy loam
6-12	5YR 3/3		5YR 4/6	1	C	M	Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks: no

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Clinton Keith Extension City/County: Riverside County Sampling Date: 4/5/11
 Applicant/Owner: RCTD State: CA Sampling Point: 3 (upland)
 Investigator(s): James Gorham/Melissa Williams Section, Township, Range: S31, T6S, R2W
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Mediterranean Calif. (LRRC) Lat: 33.59791 Long: -117.127261 Datum: _____
 Soil Map Unit Name: MmB Monserate Sandy Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/> Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum				Hydrophytic Vegetation Indicators:
1. <u>Abrutium vulgare</u>	<u>60</u>	<u>yes</u>	<u>NL</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Bromus rubens</u>	<u>10</u>	<u>yes</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>amsinckia</u>	<u>15</u>	<u>no</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Nyctaginia</u>	<u>5</u>	<u>no</u>	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		

Remarks: 2m plot size

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-0.5	organic layer		2.5 10G4				MUCK
0-3	5YR 4/2	85%	5YR 4/2	5			clay sand (concentrations)
0-3	5YR 4/2		5YR 4/6	5	C	M	sand
0-3			5YR 4/4	10	C	M	clay
3-12	5YR 3/1	50%	5YR 4/2	25%	D	M	clay sandy loam
			5YR 4/4	25	C	M	clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present): Na

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Biotic Crust (B12)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): 1"

Water Table Present? Yes No Depth (inches): _____

Saturation Present? Yes No Depth (inches): _____

(includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Clinton Keith Extension City/County: Riverside Sampling Date: 4/5/11
 Applicant/Owner: RCTD State: CA Sampling Point: 2
 Investigator(s): James Cochran/Melissa Williams Section, Township, Range: S31, T6S, R2W
 Landform (hillslope, terrace, etc.): drainage basin Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): LRRC Lat: 33.59791 Long: -117.127261 Datum: _____
 Soil Map Unit Name: MmB Monserate Sandy Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
--	--

Remarks: _____

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100%</u>				
Herb Stratum				
1. <u>Rabbit's foot grass</u>	<u>60%</u>	<u>yes</u>	<u>OBL</u>	
2. <u>unknown</u>	<u>10%</u>	<u>yes</u>	<u>NL</u>	
3. <u>Pumila crispus</u>	<u>5%</u>	<u>no</u>	<u>FACW</u>	
4. <u>algae</u>	<u>25%</u>	<u>no</u>	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust _____				

Remarks: 2m plot size