550 Kearny Street
Suite 800
San Francisco, CA 94108
415.896.5900 phone
415.896.0332 fax

esassoc.com

memorandum

date	May 25, 2020
to	John Forsythe, AICP
cc	Cory Barringhaus (ESA), Eric Zigas (ESA)
from	Sharon Dulava (ESA)
subject	MPWSP – Ryan Ranch – Bishop Interconnection Project Weekly Report (05/18/2020 – 05/22/2020)

Construction Activities

Construction activities occurred on Lower Ragsdale Drive, Ragsdale Drive, and Blue Larkspur Lane during the week of 5/18/2020 – 5/22/2020. Construction activities were conducted by Monterey Peninsula Engineering (MPE) and consisted of installation of Pressure Regulating Valve (PRV) components on Blue Larkspur Lane and installation of valve collars around Air Release Valves (ARV) along Ragsdale Drive and Lower Ragsdale Drive. Additional information about construction activities is included in the weekly CalAm report included in **Appendix A** and CPUC inspection logs included in **Appendix B.**

Compliance Activities

Denise Duffy & Associates (CalAm monitors) were on site for compliance monitoring. Work was conducted within the existing roadways and immediately adjacent to existing roadways for ARVs along Ragsdale Drive and Lower Ragsdale Drive, which were surveyed for sensitive resources by CalAm monitors prior to any construction activities. MPE conducted regular street sweeping.

Special status species plants (i.e., *Horkelia cuneata ssp.*) have been flagged along the entire construction area. In accordance with Mitigation Measures 4.6-1i, 4.6-1j, and 4.6-1k, CalAm monitors surveyed sections of the alignment ahead of construction daily for nesting birds, Monterey dusky-footed woodrat, and American badger. No sign of American badger, or additional woodrat nests were reported for the period between 5/15/2020 and 5/22/2020. CalAm monitors continued to monitor one crow nest on Lower Ragsdale Drive (near Station 37+00), one swallow nest on along Wilson Road (near Station 16+00), one bushtit nest along Lower Ragsdale Drive (near Station 30+00), and a black phoebe nest located under a flatbed truck parked within the staging area for any behavioral changes resulting from project activities. No deviation from behavioral baselines was reported for any of these nests.

Compliance Issues and Resolutions

No compliance issues were observed during the week of 5/15/2020 – 5/22/2020.

Photographs:

Photo 1. MPE excavation for installation of PRV components on Blue Larkspur Lane.

Photo 2. Installed ARV components.

Photo 3. Black phoebe nest under flatbed truck.

Photo 4. Pacific gopher snake observed along Lower Ragsdale Drive.

APPENDIX A

CalAm Weekly Report

DENISE DUFFY & ASSOCIATES, INC.
PLANNING AND ENVIRONMENTAL CONSULTING

DATE: May 22, 2020

TO: Cory Barringhaus, Environmental Science Associates (ESA)

FROM: Matthew Johnson, Denise Duffy & Associates, Inc. (DD&A)

CC: Even Holmboe, ESA
Sharon Dulava, ESA
Tyler Potter, DD&A

RE: **MPWSP Construction Weekly Biological Monitoring Report**

Denise Duffy & Associates, Inc. (DD&A) is contracted with AECOM to provide biological monitoring support for the California American Water Company (CalAm) Monterey Peninsula Water Supply Project (MPWSP). Biological monitoring includes providing environmental guidance to construction personnel and ensuring the project remains in compliance with the Mitigation, Monitoring, Compliance, and Reporting Program (MMCRP).

This report summarizes the results of monitoring for the week of **May 15 - May 21, 2020.**

Project/Component: **Ryan Ranch – Bishop Interconnection Project**	Work Location: **Ragsdale Drive. Lower Ragsdale Drive, Wilson Road, York Road, Blue Larkspur Lane and Staging Area**
Monitoring Period: **5/15/2020 – 5/21/2020**	Project Completion Status: **5,887 Linear Feet of Pipeline Installation (Pipeline Alignment Complete), Pressure Reduction Valve (PRV) Installation, Air Release Valve (ARV) Collar Pouring**
Construction Contractors/Personnel: **Monterey Peninsula Engineering**	Biological Lead: **M. Johnson**
Biological Monitors: **P. Krabacher, M. Hofmarcher**	Days on Site: **5/15, 5/18, 5/19, 5/20, 5/21**

Biological Surveys: **Nesting Bird, American Badger, Monterey Dusky-Footed Woodrat (MDFW) Nests**	WEAT Training: **No**
New Sensitive Resources: **No**	SWPPP Corrective Actions/Maintenance: **No**
Encountered Special-Status Species: **No**	Hazardous Spills: **No**
Relocated Plants or Wildlife: **No**	Compliance Issues: **No**

Summary of Construction Activities

This section is intended to provide a brief summary of daily construction progress. For a more detailed description of construction activities please refer to the daily logs prepared by CalAm's Inspector.

- 5/15/2020
  - MPE installing valve collars around ARVs along alignment on Ragsdale Drive and Lower Ragsdale Drive.
  - Installation of PRV components on Blue Larkspur Lane.
- 5/18/2020
  - MPE installing valve collars around ARVs along alignment on Lower Ragsdale Drive.
  - Installation of PRV components on Blue Larkspur Lane.
- 5/19/2020
  - Installation of PRV components on Blue Larkspur Lane.
- 5/20/2020
  - Installation of PRV components on Blue Larkspur Lane.
- 5/21/2020
  - Installation of PRV components on Blue Larkspur Lane.

Summary of Monitoring Activities

- 5/15/2020
  - Conducted wildlife clearance survey on all vehicles and equipment at staging area and on alignment.
  - Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.
  - Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area throughout day.
  - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities within 300 feet at the active bushtit (*Psaltriparus minimus*) nest located at Lower Ragsdale Drive, the active swallow (*Hirundo* ssp.) nest located at Wilson Road, and the active American crow (*Corvus brachyrhynchos*) nest adjacent to Wilson Pond. The nests were determined to still be active and no deviation from the baseline behavioral pattern was observed.
  - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns at the active black phoebe (*Sayornis nigricans*) nest located within the staging area. The nest was determined to still be active and no deviation from the baseline behavioral pattern was observed.
  - Confirmed integrity of BMP measures on stormwater drains immediately adjacent and ahead of construction.
  - Confirmed continued usage of hazardous spill protective measures under vehicles and equipment.
  - Photographed and recorded monitoring activities.
- 5/18/2020
  - Conducted wildlife clearance survey on all vehicles and equipment at staging area and on alignment.

    - Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.
    - Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area throughout day.
    - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities within 300 feet at the active bushtit nest located at Lower Ragsdale Drive, the active swallow nest located at Wilson Road, and the active American crow nest adjacent to Wilson Pond. The nests were determined to still be active and no deviation from the baseline behavioral pattern was observed.
    - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns at the active black phoebe nest located within the staging area. The nest was determined to still be active and no deviation from the baseline behavioral pattern was observed.
    - Confirmed integrity of BMP measures on stormwater drains immediately adjacent and ahead of construction.
    - Confirmed continued usage of hazardous spill protective measures under vehicles and equipment.
    - Photographed and recorded monitoring activities.
- 5/19/2020
    - Conducted wildlife clearance survey on all vehicles and equipment at staging area and on alignment.
    - Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.
    - Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area throughout day.
    - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities within 300 feet at the active bushtit nest located at Lower Ragsdale Drive, the active swallow nest located at Wilson Road, and the active American crow nest adjacent to Wilson Pond. The nests were determined to still be active and no deviation from the baseline behavioral pattern was observed.
    - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns at the active black phoebe nest located within the staging area. The nest was determined to still be active and no deviation from the baseline behavioral pattern was observed.
    - Confirmed continued usage of hazardous spill protective measures under vehicles and equipment at end of day.
    - Confirmed integrity of BMP measures on stormwater drains immediately adjacent and ahead of construction.
    - Confirmed that trash and recycling receptacles were emptied within the staging area.
    - Photographed and recorded monitoring activities.
- 5/20/2020

- Conducted wildlife clearance survey on all vehicles and equipment at staging area and on alignment.
- Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.
- Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area throughout day.
- Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities within 300 feet at the active bushtit nest located at Lower Ragsdale Drive, the active swallow nest located at Wilson Road, and the active American crow nest adjacent to Wilson Pond. The nests were determined to still be active and no deviation from the baseline behavioral pattern was observed.
- Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns at the active black phoebe nest located within the staging area. The nest was determined to still be active and no deviation from the baseline behavioral pattern was observed. It was observed that the eggs have hatched.
- Confirmed continued usage of hazardous spill protective measures under vehicles and equipment at end of day.
- Confirmed integrity of BMP measures on stormwater drains immediately adjacent and ahead of construction.
- Photographed and recorded monitoring activities.

- 5/21/2020
  - Conducted wildlife clearance survey on all vehicles and equipment at staging area and on alignment.
  - Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.
  - Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area throughout day.
  - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities within 300 feet at the active bushtit nest located at Lower Ragsdale Drive, the active swallow nest located at Wilson Road, and the active American crow nest adjacent to Wilson Pond. The nests were determined to still be active and no deviation from the baseline behavioral pattern was observed.
  - Conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns at the active black phoebe nest located within the staging area. The nest was determined to still be active and no deviation from the baseline behavioral pattern was observed.
  - Confirmed continued usage of hazardous spill protective measures under vehicles and equipment at end of day.
  - Confirmed integrity of BMP measures on stormwater drains immediately adjacent and ahead of construction.
  - Photographed and recorded monitoring activities.

Environmental Compliance Issues
DD&A did not observe any compliance issues during this monitoring period.

Recommendations
No adaptive management or mitigation is required.

Attachments
- Daily Monitoring Logs

Daily Monitoring Logs

Ryan Ranch-Bishop Interconnection Improvements Checklist

Ryan Ranch Bio Compliance Checklist - Phase 1 v3

Project	Ryan Ranch-Bishop Interconnection Improvements
ID	94297
Survey Date	05/15/2020
User	Max Hofmarcher

General Information

Project Name	Cal Am Monterey Peninsula Water Supply Project
Project Number:	60489016
Is this a Non-Work day?	[X] No [ ] Yes
Project Location Monitored	[X] Lower Ragsdale Drive [ ] Ragsdale Drive [X] Staging Area [X] Wilson Road
Company Name	[ ] AECOM [X] DDA
Monitor Name	Max Hofmarcher
Time In	06:30 AM
Time Out	03:45 PM

Weather

Start Temperature (F)	59
Start Cloud Cover (%)	10
Start Wind Speed (mph)	2
End Temperature (F)	68
End Cloud Cover (%)	15
End Wind Speed (mph)	9

Detailed Monitoring Activity

Construction Activities Monitored	MPE installing valve collars around ARVs along alignment on Ragsdale Drive and Lower Ragsdale Drive.

	MPE installing PRV vault components on Blue Larkspur Lane.
Log of Monitoring Activities	Conducted wildlife clearance survey on all vehicles and equipment at staging area and along alignment. Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area from the hours of 0630 to 0830. Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c. Confirmed integrity of BMP measures on stormwater drains immediately adjacent to construction activities. Photographed and recorded monitoring activities. MM6.4-1i, DD&A conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities at the active Black phoebe (Sayornis nigricans) nest in the staging area. Observed and photographed black phoebe chicks at the staging area nest site.

General Project Site Photo(s)

MPE paving over ARV valve collars along alignment on Lower Ragsdale Drive.

MPE installing PRV vault components on Blue Larkspur Lane

Infact silt fencing surrounding staging area.

Infact silt fencing surrounding staging area.

Infact silt fencing surrounding staging area.

intact ESA fencing surrounding protected oak tree adjacent to staging area.

MM 4.6-1b - WEAT

4.6-1B. CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION

4.6-1b. 1. All workers attend WEAT training and have sticker on hardhat?	☐ N/A ☐ No ☒ Yes

WEAT Notes

MM 4.6-1c - GENERAL

4.6-1C. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

4.6-1c. 1. Construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area?	☐ N/A ☐ No ☒ Yes
4.6-1c. 2. Construction vehicles within the delineated construction work area boundary or local road network?	☐ N/A ☐ No ☒ Yes
4.6-1c. 3.Vehicles and equipment in project area maintaining 15 miles per hour or less speed limit?	☐ N/A ☐ No ☒ Yes
4.6-1c. 4. Excavated soils stockpiled in disturbed areas lacking native vegetation and marked to define the limits?	☐ N/A ☐ No ☒ Yes
4.6-1c. 5. Standard best management practices employed to prevent loss of habitat due to erosion caused by project related impacts?	☐ N/A ☐ No ☒ Yes
4.6-1c. 6. Fueling of construction equipment within existing paved areas and at least 50 feet from drainages and native habitats?	☐ N/A ☐ No ☒ Yes
4.6-1c. 7. Introduction of exotic plant species avoided through physical or chemical removal and prevention?	☐ N/A ☐ No ☒ Yes
4.6-1c. 8. Use of herbicides as vegetation control measures used only when mechanical means have been deemed ineffective?	☒ N/A ☐ No ☐ Yes
4.6-1c. 9. Prior to construction at any site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary was fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction?	☐ N/A ☐ No ☒ Yes

4.6-1c. 10. If special-status wildlife species were found on the site immediately prior to construction or during project construction, construction activities ceased in the vicinity of the animal until the animal moved on its own outside of the project area?	[X]	N/A
	[ ]	No
	[ ]	Yes
4.6-1c. 11. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, qualified biologist(s) surveyed within the exclusion area to ensure that no special-status species were present?	[X]	N/A
	[ ]	No
	[ ]	Yes
4.6-1c. 12. All excavated, steep-walled holes or trenches more than 2 feet deep were inspected for trapped animals and covered with plywood or similar materials at the close of each work day, or escape ramps constructed of earth fill or wooden planks positioned within the excavations to allow special-status wildlife to escape on their own?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more were inspected for special-status wildlife before the pipe was subsequently buried, capped, or otherwise used or moved in any way?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, were temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special status birds?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 15. Water used for dust abatement was minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 16. Parked vehicles or equipment in the project area were inspected underneath for wildlife prior to moving?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 17. All vehicles and equipment were in proper working condition to ensure that there was no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 18. Trash and food items were contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 19. Workers did not feed wildlife and bring pets and firearms to the construction work areas?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 20. Workers did not intentionally kill or collect wildlife species, including special-status species in the project area and surrounding areas?	[ ]	N/A
	[ ]	No
	[X]	Yes
General Notes		

MM 4.6-1i - NESTING BIRDS

4.6-1I. AVOIDANCE AND MINIMIZATION MEASURES FOR NESTING BIRDS

4.6-1i. 2. Surveys covered all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds?	[ ] N/A [ ] No [X] Yes
4.6-1i. 3. If a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey was conducted before re-initiating construction?	[ ] N/A [ ] No [X] Yes
4.6-1i. 4. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1i. 5. If special-status bird species were observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes

Nesting Bird Notes

MM 4.6-1j - BADGER

4.6-1J. AVOIDANCE AND MINIMIZATION MEASURES FOR AMERICAN BADGER.

4.6-1j. 1. Qualified biologist conducted preconstruction surveys for American badger dens in suitable habitat prior to the start of construction at potentially affected sites within 100 feet of the project area boundary?	[ ] N/A [ ] No [X] Yes
4.6-1j. 2. Along pipeline alignments, surveys were phased to occur within 14 days prior to disturbance along that portion of the alignment?	[ ] N/A [ ] No [X] Yes
4.6-1j. 3. Clearance surveys were performed prior to work activities, badgers absent and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1j. 4. If a badger was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1j. 5. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes

Badger Notes

MM 4.6-1k - WOODRAT

4.6-1K. AVOIDANCE AND MINIMIZATION MEASURES FOR MONTEREY DUSKY-FOOTED WOODRAT

4.6-1k. 1. Qualified biologist conducted preconstruction surveys for Monterey dusky-footed woodrat within 14 days prior to the start of construction in suitable habitat	[ ] N/A

and identify any woodrat nests located within 50 feet of anticipated construction disturbance areas?	[ ] No [X] Yes
4.6-1k. 2. If woodrat nests were found during the preconstruction surveys, the biologist conducted additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests?	[ ] N/A [ ] No [X] Yes
4.6-1k. 3. If nests were observed outside of the construction area, the qualified biologist demarcated a minimum 50-foot buffer area with orange construction fencing and required all construction activities and disturbance remain outside of the fencing?	[ ] N/A [ ] No [X] Yes
4.6-1k. 4. Active woodrat nests located within the anticipated construction disturbance areas were relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats?	[X] N/A [ ] No [ ] Yes
4.6-1k. 5. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1k. 6. If woodrat was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1k. 7. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Woodrat Notes	

MM 4.6-1p - INVASIVE PLANTS

4.6-1P.CONTROL MEASURES FOR SPREAD OF INVASIVE PLANTS	
4.6-1p. 1. Driving or operating equipment was avoided in weed-infested areas outside of fenced work areas and travel was restricted to established roads?	[ ] N/A [ ] No [X] Yes
4.6-1p. 2. Leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas) was avoided?	[ ] N/A [ ] No [X] Yes
4.6-1p. 3. Tools, equipment, and vehicles were clean before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points)?	[ ] N/A [ ] No [X] Yes
4.6-1p. 4. Vehicles and equipment were inspected for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas?	[ ] N/A [ ] No [X] Yes

4.6-1p. 5. Vehicles and equipment inspected prior to project initiation at applicable work areas for weed seeds and plant fragments that could colonize within the site or be transported to other sites?	☐ N/A ☐ No ☒ Yes
4.6-1p. 6. At project initiation, all construction vehicles were cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that were not clean were rejected until clear of weed seed and plant fragments?	☐ N/A ☐ No ☒ Yes
4.6-1p. 7. All equipment and tools involved in soil disturbance at applicable work areas were disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site?	☐ N/A ☐ No ☒ Yes
4.6-1p. 8. Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) were used for the project?	☐ N/A ☐ No ☒ Yes
Invasive Plant Notes	

Sensitive Species Observation

Sensitive species observed?	☒ No ☐ Yes

Additional Notes

Ryan Ranch-Bishop Interconnection Improvements Checklist

Ryan Ranch Bio Compliance Checklist - Phase 1 v3

Project	Ryan Ranch-Bishop Interconnection Improvements
ID	94325
Survey Date	05/18/2020
User	Max Hofmarcher

General Information

Project Name	Cal Am Monterey Peninsula Water Supply Project
Project Number:	60489016
Is this a Non-Work day?	[X] No [ ] Yes
Project Location Monitored	[X] Lower Ragsdale Drive [ ] Ragsdale Drive [X] Staging Area [X] Wilson Road
Company Name	[ ] AECOM [X] DDA
Monitor Name	Max Hofmarcher
Time In	07:00 AM
Time Out	03:00 PM

Weather

Start Temperature (F)	60
Start Cloud Cover (%)	0
Start Wind Speed (mph)	8
End Temperature (F)	68
End Cloud Cover (%)	0
End Wind Speed (mph)	11

Detailed Monitoring Activity

Construction Activities Monitored	MPE installing valve collars around ARVs along alignment on Ragsdale Drive and Lower Ragsdale Drive.

	MPE installing PRV vault components on Blue Larkspur Lane.
Log of Monitoring Activities	Conducted wildlife clearance survey on all vehicles and equipment at staging area and along alignment. Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area from the hours of 0630 to 0830. Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c. Confirmed integrity of BMP measures on stormwater drains immediately adjacent to construction activities. Photographed and recorded monitoring activities. MM6.4-1i, DD&A conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities at the active Black phoebe (Sayornis nigricans) nest in the staging area. Confirmed black phoebe adult incubating nest in staging area.

General Project Site Photo(s)

Intact silt fencing surrounding staging area.

Intact silt fencing surrounding staging area.

Intact silt fencing surrounding staging area.

Intact ESA fencing surrounding protected oak tree adjacent to staging area.

Intact protective flagging surrounding protected black phoebe nest within staging area.

MM 4.6-1b - WEAT

4.6-1B. CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION

4.6-1b. 1. All workers attend WEAT training and have sticker on hardhat?	[ ]	N/A
	[ ]	No
	[X]	Yes

WEAT Notes

MM 4.6-1c - GENERAL

4.6-1C. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

4.6-1c. 1. Construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 2. Construction vehicles within the delineated construction work area boundary or local road network?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 3.Vehicles and equipment in project area maintaining 15 miles per hour or less speed limit?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 4. Excavated soils stockpiled in disturbed areas lacking native vegetation and marked to define the limits?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 5. Standard best management practices employed to prevent loss of habitat due to erosion caused by project related impacts?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 6. Fueling of construction equipment within existing paved areas and at least 50 feet from drainages and native habitats?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 7. Introduction of exotic plant species avoided through physical or chemical removal and prevention?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 8. Use of herbicides as vegetation control measures used only when mechanical means have been deemed ineffective?	[X]	N/A
	[ ]	No
	[ ]	Yes
4.6-1c. 9. Prior to construction at any site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary was fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 10. If special-status wildlife species were found on the site immediately prior to construction or during project construction, construction activities ceased in the	[X]	N/A

vicinity of the animal until the animal moved on its own outside of the project area?	☐	No
	☐	Yes
4.6-1c. 11. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, qualified biologist(s) surveyed within the exclusion area to ensure that no special-status species were present?	☒	N/A
	☐	No
	☐	Yes
4.6-1c. 12. All excavated, steep-walled holes or trenches more than 2 feet deep were inspected for trapped animals and covered with plywood or similar materials at the close of each work day, or escape ramps constructed of earth fill or wooden planks positioned within the excavations to allow special-status wildlife to escape on their own?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more were inspected for special-status wildlife before the pipe was subsequently buried, capped, or otherwise used or moved in any way?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, were temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special status birds?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 15. Water used for dust abatement was minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 16. Parked vehicles or equipment in the project area were inspected underneath for wildlife prior to moving?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 17. All vehicles and equipment were in proper working condition to ensure that there was no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 18. Trash and food items were contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 19. Workers did not feed wildlife and bring pets and firearms to the construction work areas?	☐	N/A
	☐	No
	☒	Yes
4.6-1c. 20. Workers did not intentionally kill or collect wildlife species, including special-status species in the project area and surrounding areas?	☐	N/A
	☐	No
	☒	Yes
General Notes		

MM 4.6-1i - NESTING BIRDS

4.6-1I. AVOIDANCE AND MINIMIZATION MEASURES FOR NESTING BIRDS

4.6-1i. 2. Surveys covered all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds?	[ ] N/A [ ] No [X] Yes
4.6-1i. 3. If a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey was conducted before re-initiating construction?	[ ] N/A [ ] No [X] Yes
4.6-1i. 4. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1i. 5. If special-status bird species were observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
Nesting Bird Notes	

MM 4.6-1j - BADGER

4.6-1J. AVOIDANCE AND MINIMIZATION MEASURES FOR AMERICAN BADGER.	
4.6-1j. 1. Qualified biologist conducted preconstruction surveys for American badger dens in suitable habitat prior to the start of construction at potentially affected sites within 100 feet of the project area boundary?	[ ] N/A [ ] No [X] Yes
4.6-1j. 2. Along pipeline alignments, surveys were phased to occur within 14 days prior to disturbance along that portion of the alignment?	[ ] N/A [ ] No [X] Yes
4.6-1j. 3. Clearance surveys were performed prior to work activities, badgers absent and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1j. 4. If a badger was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1j. 5. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Badger Notes	

MM 4.6-1k - WOODRAT

4.6-1K. AVOIDANCE AND MINIMIZATION MEASURES FOR MONTEREY DUSKY-FOOTED WOODRAT	
4.6-1k. 1. Qualified biologist conducted preconstruction surveys for Monterey dusky-footed woodrat within 14 days prior to the start of construction in suitable habitat and identify any woodrat nests located within 50 feet of anticipated construction	[ ] N/A [ ] No

disturbance areas?	[X] Yes
4.6-1k. 2. If woodrat nests were found during the preconstruction surveys, the biologist conducted additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests?	[ ] N/A [ ] No [X] Yes
4.6-1k. 3. If nests were observed outside of the construction area, the qualified biologist demarcated a minimum 50-foot buffer area with orange construction fencing and required all construction activities and disturbance remain outside of the fencing?	[ ] N/A [ ] No [X] Yes
4.6-1k. 4. Active woodrat nests located within the anticipated construction disturbance areas were relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats?	[X] N/A [ ] No [ ] Yes
4.6-1k. 5. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1k. 6. If woodrat was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1k. 7. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Woodrat Notes	

MM 4.6-1p - INVASIVE PLANTS

4.6-1P.CONTROL MEASURES FOR SPREAD OF INVASIVE PLANTS	
4.6-1p. 1. Driving or operating equipment was avoided in weed-infested areas outside of fenced work areas and travel was restricted to established roads?	[ ] N/A [ ] No [X] Yes
4.6-1p. 2. Leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas) was avoided?	[ ] N/A [ ] No [X] Yes
4.6-1p. 3. Tools, equipment, and vehicles were clean before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points)?	[ ] N/A [ ] No [X] Yes
4.6-1p. 4. Vehicles and equipment were inspected for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas?	[ ] N/A [ ] No [X] Yes
4.6-1p. 5. Vehicles and equipment inspected prior to project initiation at applicable work areas for weed seeds and plant fragments that could colonize within the site or	[ ] N/A

be transported to other sites?	[ ] No [X] Yes
4.6-1p. 6. At project initiation, all construction vehicles were cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that were not clean were rejected until clear of weed seed and plant fragments?	[ ] N/A [ ] No [X] Yes
4.6-1p. 7. All equipment and tools involved in soil disturbance at applicable work areas were disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site?	[ ] N/A [ ] No [X] Yes
4.6-1p. 8. Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) were used for the project?	[ ] N/A [ ] No [X] Yes
Invasive Plant Notes	

Sensitive Species Observation

Sensitive species observed?	[X] No [ ] Yes

Additional Notes

Ryan Ranch-Bishop Interconnection Improvements Checklist

Ryan Ranch Bio Compliance Checklist - Phase 1 v3

Project	Ryan Ranch-Bishop Interconnection Improvements
ID	94329
Survey Date	05/19/2020
User	Max Hofmarcher

General Information

Project Name	Cal Am Monterey Peninsula Water Supply Project
Project Number:	60489016
Is this a Non-Work day?	[X] No [ ] Yes
Project Location Monitored	[X] Lower Ragsdale Drive [X] Ragsdale Drive [X] Staging Area [X] Wilson Road
Company Name	[ ] AECOM [X] DDA
Monitor Name	Max Hofmarcher
Time In	07:45 AM
Time Out	10:00 AM

Weather

Start Temperature (F)	61
Start Cloud Cover (%)	0
Start Wind Speed (mph)	0
End Temperature (F)	63
End Cloud Cover (%)	10
End Wind Speed (mph)	7

Detailed Monitoring Activity

Construction Activities Monitored	MPE installing backflow components on Blue Larkspur Lane.

Conducted wildlife clearance survey on all vehicles and equipment at staging area and along alignment.

Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area from the hours of 0630 to 0830.

Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c.

Confirmed integrity of BMP measures on stormwater drains immediately adjacent to construction activities.

Photographed and recorded monitoring activities.

MM6.4-1i, DD&A conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities at the active Black phoebe (Sayornis nigricans) nest in the staging area.

Confirmed black phoebe adult incubating nest in staging area.

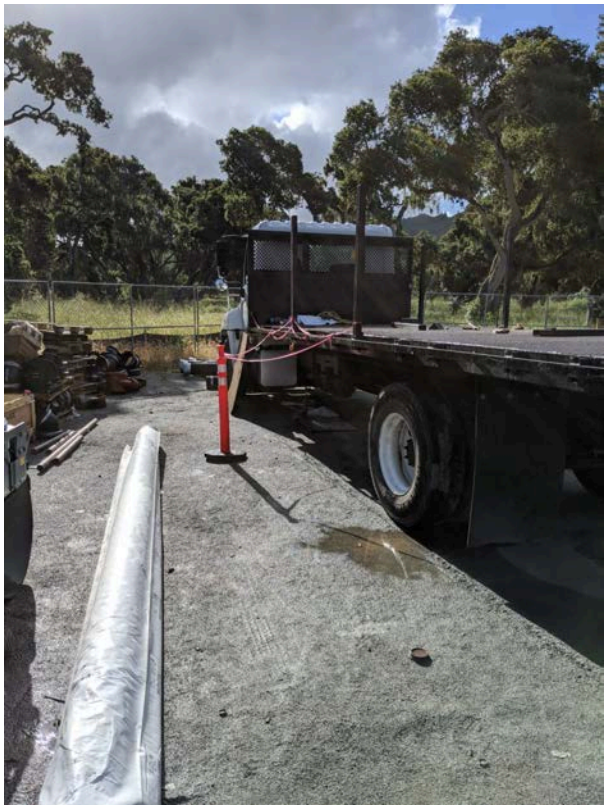
General Project Site Photo(s)

Intact ESA fencing surrounding protected oak tree adjacent to staging area.

Intact silt fencing surrounding staging area.

Intact silt fencing surrounding staging area.

Emptied trash and recycling receptacles within staging area.



intact protective fencing surrounding black phoebe nest within staging area.

MPE installing backflow components on Blue Larkspur Lane.

MM 4.6-1b - WEAT

4.6-1B. CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION

4.6-1b. 1. All workers attend WEAT training and have sticker on hardhat?	☐ N/A ☐ No ☒ Yes
WEAT Notes	

MM 4.6-1c - GENERAL

4.6-1C. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

4.6-1c. 1. Construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area?	☐ N/A ☐ No ☒ Yes
4.6-1c. 2. Construction vehicles within the delineated construction work area boundary or local road network?	☐ N/A ☐ No ☒ Yes
4.6-1c. 3.Vehicles and equipment in project area maintaining 15 miles per hour or less speed limit?	☐ N/A ☐ No ☒ Yes
4.6-1c. 4. Excavated soils stockpiled in disturbed areas lacking native vegetation and	☐ N/A

marked to define the limits?	[ ] No [X] Yes
4.6-1c. 5. Standard best management practices employed to prevent loss of habitat due to erosion caused by project related impacts?	[ ] N/A [ ] No [X] Yes
4.6-1c. 6. Fueling of construction equipment within existing paved areas and at least 50 feet from drainages and native habitats?	[ ] N/A [ ] No [X] Yes
4.6-1c. 7. Introduction of exotic plant species avoided through physical or chemical removal and prevention?	[ ] N/A [ ] No [X] Yes
4.6-1c. 8. Use of herbicides as vegetation control measures used only when mechanical means have been deemed ineffective?	[X] N/A [ ] No [ ] Yes
4.6-1c. 9. Prior to construction at any site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary was fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction?	[ ] N/A [ ] No [X] Yes
4.6-1c. 10. If special-status wildlife species were found on the site immediately prior to construction or during project construction, construction activities ceased in the vicinity of the animal until the animal moved on its own outside of the project area?	[X] N/A [ ] No [ ] Yes
4.6-1c. 11. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, qualified biologist(s) surveyed within the exclusion area to ensure that no special-status species were present?	[X] N/A [ ] No [ ] Yes
4.6-1c. 12. All excavated, steep-walled holes or trenches more than 2 feet deep were inspected for trapped animals and covered with plywood or similar materials at the close of each work day, or escape ramps constructed of earth fill or wooden planks positioned within the excavations to allow special-status wildlife to escape on their own?	[ ] N/A [ ] No [X] Yes
4.6-1c. 13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more were inspected for special-status wildlife before the pipe was subsequently buried, capped, or otherwise used or moved in any way?	[ ] N/A [ ] No [X] Yes
4.6-1c. 14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, were temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special status birds?	[ ] N/A [ ] No [X] Yes
4.6-1c. 15. Water used for dust abatement was minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas?	[ ] N/A [ ] No [X] Yes

4.6-1c. 16. Parked vehicles or equipment in the project area were inspected underneath for wildlife prior to moving?	[ ] N/A [ ] No [X] Yes
4.6-1c. 17. All vehicles and equipment were in proper working condition to ensure that there was no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials?	[ ] N/A [ ] No [X] Yes
4.6-1c. 18. Trash and food items were contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs?	[ ] N/A [ ] No [X] Yes
4.6-1c. 19. Workers did not feed wildlife and bring pets and firearms to the construction work areas?	[ ] N/A [ ] No [X] Yes
4.6-1c. 20. Workers did not intentionally kill or collect wildlife species, including special-status species in the project area and surrounding areas?	[ ] N/A [ ] No [X] Yes
General Notes	

MM 4.6-1i - NESTING BIRDS

4.6-1I. AVOIDANCE AND MINIMIZATION MEASURES FOR NESTING BIRDS	
4.6-1i. 2. Surveys covered all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds?	[ ] N/A [ ] No [X] Yes
4.6-1i. 3. If a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey was conducted before re-initiating construction?	[ ] N/A [ ] No [X] Yes
4.6-1i. 4. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1i. 5. If special-status bird species were observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
Nesting Bird Notes	

MM 4.6-1j - BADGER

4.6-1J. AVOIDANCE AND MINIMIZATION MEASURES FOR AMERICAN BADGER.	
4.6-1j. 1. Qualified biologist conducted preconstruction surveys for American badger dens in suitable habitat prior to the start of construction at potentially affected sites within 100 feet of the project area boundary?	[ ] N/A [ ] No

	[X] Yes
4.6-1j. 2. Along pipeline alignments, surveys were phased to occur within 14 days prior to disturbance along that portion of the alignment?	[ ] N/A [ ] No [X] Yes
4.6-1j. 3. Clearance surveys were performed prior to work activities, badgers absent and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1j. 4. If a badger was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1j. 5. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Badger Notes	

MM 4.6-1k - WOODRAT

4.6-1K. AVOIDANCE AND MINIMIZATION MEASURES FOR MONTEREY DUSKY-FOOTED WOODRAT	
4.6-1k. 1. Qualified biologist conducted preconstruction surveys for Monterey dusky-footed woodrat within 14 days prior to the start of construction in suitable habitat and identify any woodrat nests located within 50 feet of anticipated construction disturbance areas?	[ ] N/A [ ] No [X] Yes
4.6-1k. 2. If woodrat nests were found during the preconstruction surveys, the biologist conducted additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests?	[ ] N/A [ ] No [X] Yes
4.6-1k. 3. If nests were observed outside of the construction area, the qualified biologist demarcated a minimum 50-foot buffer area with orange construction fencing and required all construction activities and disturbance remain outside of the fencing?	[ ] N/A [ ] No [X] Yes
4.6-1k. 4. Active woodrat nests located within the anticipated construction disturbance areas were relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats?	[X] N/A [ ] No [ ] Yes
4.6-1k. 5. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1k. 6. If woodrat was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1k. 7. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A

	☐ No ☐ Yes
Woodrat Notes	

MM 4.6-1p - INVASIVE PLANTS

4.6-1P.CONTROL MEASURES FOR SPREAD OF INVASIVE PLANTS	
4.6-1p. 1. Driving or operating equipment was avoided in weed-infested areas outside of fenced work areas and travel was restricted to established roads?	☐ N/A ☐ No ☒ Yes
4.6-1p. 2. Leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas) was avoided?	☐ N/A ☐ No ☒ Yes
4.6-1p. 3. Tools, equipment, and vehicles were clean before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points)?	☐ N/A ☐ No ☒ Yes
4.6-1p. 4. Vehicles and equipment were inspected for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas?	☐ N/A ☐ No ☒ Yes
4.6-1p. 5. Vehicles and equipment inspected prior to project initiation at applicable work areas for weed seeds and plant fragments that could colonize within the site or be transported to other sites?	☐ N/A ☐ No ☒ Yes
4.6-1p. 6. At project initiation, all construction vehicles were cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that were not clean were rejected until clear of weed seed and plant fragments?	☐ N/A ☐ No ☒ Yes
4.6-1p. 7. All equipment and tools involved in soil disturbance at applicable work areas were disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site?	☐ N/A ☐ No ☒ Yes
4.6-1p. 8. Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) were used for the project?	☐ N/A ☐ No ☒ Yes
Invasive Plant Notes	

Sensitive Species Observation

Sensitive species observed?	☒ No ☐ Yes

Additional Notes

Ryan Ranch-Bishop Interconnection Improvements Checklist

Ryan Ranch Bio Compliance Checklist - Phase 1 v3

Project	Ryan Ranch-Bishop Interconnection Improvements
ID	93291
Survey Date	05/20/2020
User	Patric Krabacher

General Information

Project Name	Cal Am Monterey Peninsula Water Supply Project
Project Number:	60489016
Is this a Non-Work day?	[X] No [ ] Yes
Project Location Monitored	[X] Lower Ragsdale Drive [ ] Ragsdale Drive [X] Staging Area [X] Wilson Road
Company Name	[ ] AECOM [X] DDA
Monitor Name	Patric Krabacher
Time In	06:59 AM
Time Out	03:26 PM

Weather

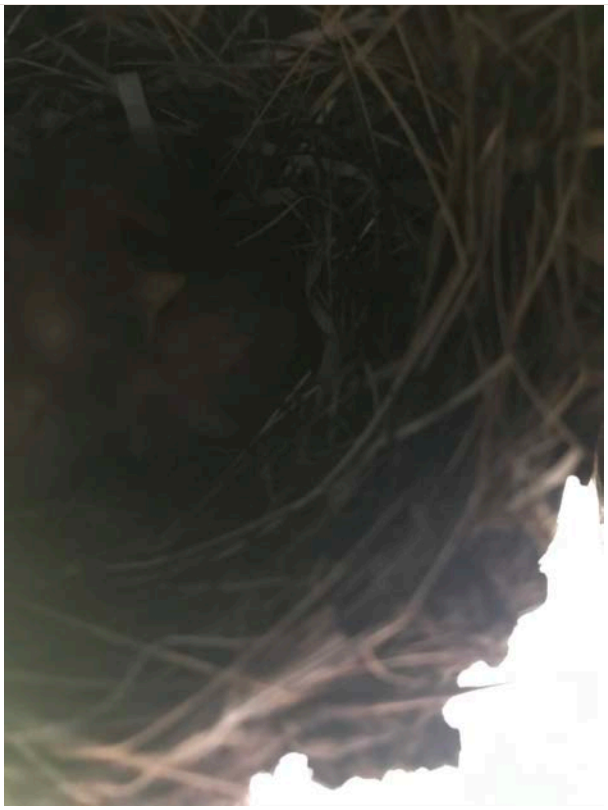
Start Temperature (F)	58
Start Cloud Cover (%)	95
Start Wind Speed (mph)	2
End Temperature (F)	65
End Cloud Cover (%)	0
End Wind Speed (mph)	15

Detailed Monitoring Activity

Construction Activities Monitored	Monitored MPE installing a pressure reducer and pressure testing at the corner of Blue Larkspur Lane and Citation

	Court.
Log of Monitoring Activities	Conducted wildlife clearance survey on all vehicles and equipment at staging area and along alignment. Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area from the hours of 0630 to 0830. Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c. Confirmed integrity of BMP measures on stormwater drains immediately adjacent to construction activities. Photographed and recorded monitoring activities. MM6.4-1i, DD&A conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities at the active Black phoebe (Sayornis nigricans) nest in the staging area. Observed and photographed black phoebe chicks at the staging area nest site.

General Project Site Photo(s)



Black phoebe chicks at nesting site within the MPE staging area at the corner of Highway 68 and York Rd

Recently installed pad for the Air Release Valve along Lower Ragsdale Rd

MPE Prepping and Pressure testing PRV along Blue Larkspur Ln

MPE Prepping and Pressure testing PRV along Blue Larkspur Ln

MM 4.6-1b - WEAT

4.6-1B. CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION

4.6-1b. 1. All workers attend WEAT training and have sticker on hardhat?

- [ ] N/A
- [ ] No
- [X] Yes

WEAT Notes

MM 4.6-1c - GENERAL

4.6-1C. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

4.6-1c. 1. Construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 2. Construction vehicles within the delineated construction work area boundary or local road network?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 3.Vehicles and equipment in project area maintaining 15 miles per hour or less speed limit?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 4. Excavated soils stockpiled in disturbed areas lacking native vegetation and marked to define the limits?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 5. Standard best management practices employed to prevent loss of habitat due to erosion caused by project related impacts?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 6. Fueling of construction equipment within existing paved areas and at least 50 feet from drainages and native habitats?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 7. Introduction of exotic plant species avoided through physical or chemical removal and prevention?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 8. Use of herbicides as vegetation control measures used only when mechanical means have been deemed ineffective?	[X]	N/A
	[ ]	No
	[ ]	Yes
4.6-1c. 9. Prior to construction at any site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary was fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction?	[ ]	N/A
	[ ]	No
	[X]	Yes
4.6-1c. 10. If special-status wildlife species were found on the site immediately prior to construction or during project construction, construction activities ceased in the vicinity of the animal until the animal moved on its own outside of the project area?	[X]	N/A
	[ ]	No
	[ ]	Yes
4.6-1c. 11. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, qualified biologist(s) surveyed within the exclusion area to ensure that no special-status species were present?	[X]	N/A
	[ ]	No
	[ ]	Yes

4.6-1c. 12. All excavated, steep-walled holes or trenches more than 2 feet deep were inspected for trapped animals and covered with plywood or similar materials at the close of each work day, or escape ramps constructed of earth fill or wooden planks positioned within the excavations to allow special-status wildlife to escape on their own?	[ ] N/A [ ] No [X] Yes
4.6-1c. 13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more were inspected for special-status wildlife before the pipe was subsequently buried, capped, or otherwise used or moved in any way?	[ ] N/A [ ] No [X] Yes
4.6-1c. 14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, were temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special status birds?	[ ] N/A [ ] No [X] Yes
4.6-1c. 15. Water used for dust abatement was minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas?	[ ] N/A [ ] No [X] Yes
4.6-1c. 16. Parked vehicles or equipment in the project area were inspected underneath for wildlife prior to moving?	[ ] N/A [ ] No [X] Yes
4.6-1c. 17. All vehicles and equipment were in proper working condition to ensure that there was no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials?	[ ] N/A [ ] No [X] Yes
4.6-1c. 18. Trash and food items were contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs?	[ ] N/A [ ] No [X] Yes
4.6-1c. 19. Workers did not feed wildlife and bring pets and firearms to the construction work areas?	[ ] N/A [ ] No [X] Yes
4.6-1c. 20. Workers did not intentionally kill or collect wildlife species, including special-status species in the project area and surrounding areas?	[ ] N/A [ ] No [X] Yes
General Notes	

MM 4.6-1i - NESTING BIRDS

4.6-1I. AVOIDANCE AND MINIMIZATION MEASURES FOR NESTING BIRDS

4.6-1i. 2. Surveys covered all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds?	[ ] N/A [ ] No [X] Yes
4.6-1i. 3. If a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey was conducted before re-initiating construction?	[ ] N/A [ ] No

	[X] Yes
4.6-1i. 4. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1i. 5. If special-status bird species were observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
Nesting Bird Notes	

MM 4.6-1j - BADGER

4.6-1J. AVOIDANCE AND MINIMIZATION MEASURES FOR AMERICAN BADGER.	
4.6-1j. 1. Qualified biologist conducted preconstruction surveys for American badger dens in suitable habitat prior to the start of construction at potentially affected sites within 100 feet of the project area boundary?	[ ] N/A [ ] No [X] Yes
4.6-1j. 2. Along pipeline alignments, surveys were phased to occur within 14 days prior to disturbance along that portion of the alignment?	[ ] N/A [ ] No [X] Yes
4.6-1j. 3. Clearance surveys were performed prior to work activities, badgers absent and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1j. 4. If a badger was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1j. 5. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Badger Notes	

MM 4.6-1k - WOODRAT

4.6-1K. AVOIDANCE AND MINIMIZATION MEASURES FOR MONTEREY DUSKY-FOOTED WOODRAT	
4.6-1k. 1. Qualified biologist conducted preconstruction surveys for Monterey dusky-footed woodrat within 14 days prior to the start of construction in suitable habitat and identify any woodrat nests located within 50 feet of anticipated construction disturbance areas?	[ ] N/A [ ] No [X] Yes
4.6-1k. 2. If woodrat nests were found during the preconstruction surveys, the biologist conducted additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests?	[ ] N/A [ ] No [X] Yes

4.6-1k. 3. If nests were observed outside of the construction area, the qualified biologist demarcated a minimum 50-foot buffer area with orange construction fencing and required all construction activities and disturbance remain outside of the fencing?	☐ N/A ☐ No ☒ Yes
4.6-1k. 4. Active woodrat nests located within the anticipated construction disturbance areas were relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats?	☒ N/A ☐ No ☐ Yes
4.6-1k. 5. Clearance surveys were performed prior to work activities and impacts avoided?	☐ N/A ☐ No ☒ Yes
4.6-1k. 6. If woodrat was observed, was date, time, species, location, and behavior noted?	☒ N/A ☐ No ☐ Yes
4.6-1k. 7. If relocation was necessary, were the guidelines in the relocation plan followed?	☒ N/A ☐ No ☐ Yes
Woodrat Notes	

MM 4.6-1p - INVASIVE PLANTS

4.6-1P.CONTROL MEASURES FOR SPREAD OF INVASIVE PLANTS	
4.6-1p. 1. Driving or operating equipment was avoided in weed-infested areas outside of fenced work areas and travel was restricted to established roads?	☐ N/A ☐ No ☒ Yes
4.6-1p. 2. Leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas) was avoided?	☐ N/A ☐ No ☒ Yes
4.6-1p. 3. Tools, equipment, and vehicles were clean before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points)?	☐ N/A ☐ No ☒ Yes
4.6-1p. 4. Vehicles and equipment were inspected for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas?	☐ N/A ☐ No ☒ Yes
4.6-1p. 5. Vehicles and equipment inspected prior to project initiation at applicable work areas for weed seeds and plant fragments that could colonize within the site or be transported to other sites?	☐ N/A ☐ No ☒ Yes
4.6-1p. 6. At project initiation, all construction vehicles were cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that were not clean were rejected until clear of weed seed and plant fragments?	☐ N/A ☐ No

	[X] Yes
4.6-1p. 7. All equipment and tools involved in soil disturbance at applicable work areas were disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site?	[ ] N/A [ ] No [X] Yes
4.6-1p. 8. Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) were used for the project?	[ ] N/A [ ] No [X] Yes
Invasive Plant Notes	

Sensitive Species Observation

Sensitive species observed?	[X] No [ ] Yes

Additional Notes

Ryan Ranch-Bishop Interconnection Improvements Checklist

Ryan Ranch Bio Compliance Checklist - Phase 1 v3

Project	Ryan Ranch-Bishop Interconnection Improvements
ID	93861
Survey Date	05/21/2020
User	Patric Krabacher

General Information

Project Name	Cal Am Monterey Peninsula Water Supply Project
Project Number:	60489016
Is this a Non-Work day?	[X] No [ ] Yes
Project Location Monitored	[X] Lower Ragsdale Drive [ ] Ragsdale Drive [X] Staging Area [X] Wilson Road
Company Name	[ ] AECOM [X] DDA
Monitor Name	Patric Krabacher
Time In	06:59 AM
Time Out	03:26 PM

Weather

Start Temperature (F)	58
Start Cloud Cover (%)	95
Start Wind Speed (mph)	2
End Temperature (F)	65
End Cloud Cover (%)	0
End Wind Speed (mph)	15

Detailed Monitoring Activity

Construction Activities Monitored	Monitored MPE installing a lateral pressure reducer to the north side of Blue Larkspur Lane near the corner of Blue

	Larkspur Lane and Citation Court
Log of Monitoring Activities	Conducted wildlife clearance survey on all vehicles and equipment at staging area and along alignment. Conducted surveys for nesting birds, MDFW nests, and American badger dens along pipeline alignment from Ragsdale Drive Station 10+00 to Station 22+66 (end of alignment at Blue Larkspur Lane and Citation Court) and in/around staging area from the hours of 0630 to 0830. Walked alignment and staging area during construction activities and conducted daily monitoring requirements per MM 4.6-1c. Confirmed integrity of BMP measures on stormwater drains immediately adjacent to construction activities. Photographed and recorded monitoring activities. MM6.4-1i, DD&A conducted continuous monitoring to detect any behavioral changes from the baseline behavioral patterns established prior to construction activities at the active Black phoebe (Sayornis nigricans) nest in the staging area. Observed and photographed black phoebe chicks at the staging area nest site.

General Project Site Photo(s)

Construction site prior to the days activities.

MPE staging area prior to the days activities

Empty trashcans in MPE's staging area

Black phoebe nesting site within MPE's staging area

MM 4.6-1b - WEAT

4.6-1B. CONSTRUCTION WORKER ENVIRONMENTAL AWARENESS TRAINING AND EDUCATION

4.6-1b. 1. All workers attend WEAT training and have sticker on hardhat?

- [ ] N/A
- [ ] No
- [X] Yes

WEAT Notes

MM 4.6-1c - GENERAL

4.6-1C. GENERAL AVOIDANCE AND MINIMIZATION MEASURES

4.6-1c. 1. Construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area?

- [ ] N/A
- [ ] No
- [X] Yes

4.6-1c. 2. Construction vehicles within the delineated construction work area boundary or local road network?	[ ] N/A [ ] No [X] Yes
4.6-1c. 3.Vehicles and equipment in project area maintaining 15 miles per hour or less speed limit?	[ ] N/A [ ] No [X] Yes
4.6-1c. 4. Excavated soils stockpiled in disturbed areas lacking native vegetation and marked to define the limits?	[ ] N/A [ ] No [X] Yes
4.6-1c. 5. Standard best management practices employed to prevent loss of habitat due to erosion caused by project related impacts?	[ ] N/A [ ] No [X] Yes
4.6-1c. 6. Fueling of construction equipment within existing paved areas and at least 50 feet from drainages and native habitats?	[ ] N/A [ ] No [X] Yes
4.6-1c. 7. Introduction of exotic plant species avoided through physical or chemical removal and prevention?	[ ] N/A [ ] No [X] Yes
4.6-1c. 8. Use of herbicides as vegetation control measures used only when mechanical means have been deemed ineffective?	[X] N/A [ ] No [ ] Yes
4.6-1c. 9. Prior to construction at any site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary was fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction?	[ ] N/A [ ] No [X] Yes
4.6-1c. 10. If special-status wildlife species were found on the site immediately prior to construction or during project construction, construction activities ceased in the vicinity of the animal until the animal moved on its own outside of the project area?	[X] N/A [ ] No [ ] Yes
4.6-1c. 11. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, qualified biologist(s) surveyed within the exclusion area to ensure that no special-status species were present?	[X] N/A [ ] No [ ] Yes
4.6-1c. 12. All excavated, steep-walled holes or trenches more than 2 feet deep were inspected for trapped animals and covered with plywood or similar materials at the close of each work day, or escape ramps constructed of earth fill or wooden planks positioned within the excavations to allow special-status wildlife to escape on their own?	[ ] N/A [ ] No [X] Yes
4.6-1c. 13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more were inspected for special-status wildlife before the pipe was subsequently buried, capped, or otherwise used or moved in any way?	[ ] N/A [ ] No [X] Yes

4.6-1c. 14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, were temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special status birds?	[ ] N/A [ ] No [X] Yes
4.6-1c. 15. Water used for dust abatement was minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas?	[ ] N/A [ ] No [X] Yes
4.6-1c. 16. Parked vehicles or equipment in the project area were inspected underneath for wildlife prior to moving?	[ ] N/A [ ] No [X] Yes
4.6-1c. 17. All vehicles and equipment were in proper working condition to ensure that there was no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials?	[ ] N/A [ ] No [X] Yes
4.6-1c. 18. Trash and food items were contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs?	[ ] N/A [ ] No [X] Yes
4.6-1c. 19. Workers did not feed wildlife and bring pets and firearms to the construction work areas?	[ ] N/A [ ] No [X] Yes
4.6-1c. 20. Workers did not intentionally kill or collect wildlife species, including special-status species in the project area and surrounding areas?	[ ] N/A [ ] No [X] Yes
General Notes	

MM 4.6-1i - NESTING BIRDS

4.6-1I. AVOIDANCE AND MINIMIZATION MEASURES FOR NESTING BIRDS	
4.6-1i. 2. Surveys covered all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds?	[ ] N/A [ ] No [X] Yes
4.6-1i. 3. If a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey was conducted before re-initiating construction?	[ ] N/A [ ] No [X] Yes
4.6-1i. 4. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1i. 5. If special-status bird species were observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No

	☐ Yes
Nesting Bird Notes	

MM 4.6-1j - BADGER

4.6-1J. AVOIDANCE AND MINIMIZATION MEASURES FOR AMERICAN BADGER.	
4.6-1j. 1. Qualified biologist conducted preconstruction surveys for American badger dens in suitable habitat prior to the start of construction at potentially affected sites within 100 feet of the project area boundary?	☐ N/A ☐ No ☒ Yes
4.6-1j. 2. Along pipeline alignments, surveys were phased to occur within 14 days prior to disturbance along that portion of the alignment?	☐ N/A ☐ No ☒ Yes
4.6-1j. 3. Clearance surveys were performed prior to work activities, badgers absent and impacts avoided?	☐ N/A ☐ No ☒ Yes
4.6-1j. 4. If a badger was observed, was date, time, species, location, and behavior noted?	☒ N/A ☐ No ☐ Yes
4.6-1j. 5. If relocation was necessary, were the guidelines in the relocation plan followed?	☒ N/A ☐ No ☐ Yes
Badger Notes	

MM 4.6-1k - WOODRAT

4.6-1K. AVOIDANCE AND MINIMIZATION MEASURES FOR MONTEREY DUSKY-FOOTED WOODRAT	
4.6-1k. 1. Qualified biologist conducted preconstruction surveys for Monterey dusky-footed woodrat within 14 days prior to the start of construction in suitable habitat and identify any woodrat nests located within 50 feet of anticipated construction disturbance areas?	☐ N/A ☐ No ☒ Yes
4.6-1k. 2. If woodrat nests were found during the preconstruction surveys, the biologist conducted additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests?	☐ N/A ☐ No ☒ Yes
4.6-1k. 3. If nests were observed outside of the construction area, the qualified biologist demarcated a minimum 50-foot buffer area with orange construction fencing and required all construction activities and disturbance remain outside of the fencing?	☐ N/A ☐ No ☒ Yes
4.6-1k. 4. Active woodrat nests located within the anticipated construction disturbance areas were relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats?	☒ N/A ☐ No ☐ Yes

4.6-1k. 5. Clearance surveys were performed prior to work activities and impacts avoided?	[ ] N/A [ ] No [X] Yes
4.6-1k. 6. If woodrat was observed, was date, time, species, location, and behavior noted?	[X] N/A [ ] No [ ] Yes
4.6-1k. 7. If relocation was necessary, were the guidelines in the relocation plan followed?	[X] N/A [ ] No [ ] Yes
Woodrat Notes	

MM 4.6-1p - INVASIVE PLANTS

4.6-1P.CONTROL MEASURES FOR SPREAD OF INVASIVE PLANTS	
4.6-1p. 1. Driving or operating equipment was avoided in weed-infested areas outside of fenced work areas and travel was restricted to established roads?	[ ] N/A [ ] No [X] Yes
4.6-1p. 2. Leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas) was avoided?	[ ] N/A [ ] No [X] Yes
4.6-1p. 3. Tools, equipment, and vehicles were clean before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points)?	[ ] N/A [ ] No [X] Yes
4.6-1p. 4. Vehicles and equipment were inspected for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas?	[ ] N/A [ ] No [X] Yes
4.6-1p. 5. Vehicles and equipment inspected prior to project initiation at applicable work areas for weed seeds and plant fragments that could colonize within the site or be transported to other sites?	[ ] N/A [ ] No [X] Yes
4.6-1p. 6. At project initiation, all construction vehicles were cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that were not clean were rejected until clear of weed seed and plant fragments?	[ ] N/A [ ] No [X] Yes
4.6-1p. 7. All equipment and tools involved in soil disturbance at applicable work areas were disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site?	[ ] N/A [ ] No [X] Yes
4.6-1p. 8. Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) were used for the project?	[ ] N/A [ ] No

[X] Yes

Invasive Plant Notes

Sensitive Species Observation

Sensitive species observed?

[X] No

[ ] Yes

Additional Notes

APPENDIX B

CPUC Inspection Logs

ESA Biological Resources

550 Kearny Street
Suite 800
San Francisco, CA 94108
415.896.5900 main phone

www.esassoc.com

Monterey Peninsula Water Supply Project (MPWSP)

Daily Monitoring Log

Date: 05/20/2020 **Time:** 14:30 – 15:45

Report Code: MPWSP_20200520_sd

Project Site: Ryan Ranch – Bishop Interconnection Improvements

Compliance Level:

Acceptable ☒ Level 0: Unanticipated Event ☐ Level 1: Minor Incident ☐
Level 2: Moderate Incident ☐ Level 3: Major Incident ☐

Compliance Advisory or Non-Compliance form attached Yes ☐ No ☒

Photo Documentation Yes ☒ No ☐

Type of Monitoring:

Full-time ☐ Spot-check ☒ SWPPP inspection ☐
Biological ☒ Re-inspection ☐

Construction Activity(s) Being Monitored:

- Installation of PRV components on Blue Larkspur Lane
- Work being conducted by Monterey Peninsula Engineers (MPE).

General Summary of Mitigation Compliance and Site Conditions:

- Denise Duffy & Associates (CalAm monitors) on site for compliance monitoring. Compliance monitoring has been reduced to twice daily spot checks, including wildlife clearance surveys, active bird nest monitoring, compliance inspections in the morning, and active bird nest monitoring and compliance inspections in the afternoon.
- Special status species plants (i.e., *Horkelia cuneata ssp.*) have been flagged along the entire construction area.
- Any woodrat middens along Lower Ragsdale Drive have been flagged to demarcate the area and prevent any construction related impacts to middens.
- CalAm monitor on site monitoring behavior at known bird nest locations (1 active crow nest, 1 active bushtit nest, active swallow nests, and 1 active black phoebe nest). The staging area is still active but has had reduced activity since the phoebes established the nest on the flatbed truck.
- The work staging and equipment staging area is located at an existing graveled area adjacent to the east side of York Road at Highway 68. Tree protection and silt fencing around the perimeter of the staging area are in good condition.

- No compliance issues were noted during the 5/20/2020 site visit.

Sharon Dulava
ESA Monitor

05/20/2020
Date

	
Photo 1. MPE excavation on Blue Larkspur Lane.	Photo 2. Installed ARV components.
	
Photo 3. Black phoebe nest under flatbed truck.	Photo 4. Pacific gopher snake observed along Lower Ragsdale Drive.