

APPENDIX C

CRLF Survey Forms

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AQUATIC SURVEY DATA FORM

DATE: <u>4/13/07</u>	PROJECT: <u>AXP RO WATER ETL PESMO CREEK CRLF SURVEY</u>		
SURVEY BIOLOGIST(S): <u>K. HILLELAND B. DOUGLAS</u>			
Time Start: <u>1500</u>	Time End: <u>1545</u>	Survey Duration: <u>45 MIN</u>	Unit-Effort: _____

LOCATION

City/County SLO/SLO; _____ %; _____ -1/4 Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle _____; Elevation _____

****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8

Brand name/model of light used to conduct survey: _____ Brand/model/power of binoculars used: SWIFT 10x42 LILCA 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 72.4°F (3"); Water Temperature 61.8°F; Wind Speed: 5.2 mph; Wind Direction E; Cloud Cover 0 %

Precipitation _____ in.; Humidity 20 %; Moon Phase NA

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name PESMO CREEK River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): 50%; Emergent Vegetation: X; Floating Vegetation ^; Open Water X
Dominant Species: COTTONWOOD, AR WILLOW, WE SYCAMORE, CED

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<u>PROSCAMPES REGILLA</u>					<u>X</u>	<input type="checkbox"/> Visual <input checked="" type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<u>CRAYFISH</u>				<u>X</u>		<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<u>SPECKLED DACE</u>				<u>X</u>		<input type="checkbox"/> Visual <input type="checkbox"/> Call <input checked="" type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<u>ALTIJEMIS MARMORATA</u>					<u>X</u>	<input type="checkbox"/> Visual <input type="checkbox"/> Call <input checked="" type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>4/18/07</u>	PROJECT: <u>PXP Produced Water Reclamation Facility (Existing pond & Proposed Temporing Pond)</u>		
SURVEY BIOLOGIST(S): <u>KLG / JKP</u>			
Time Start: <u>10:00 pm</u>	Time End: <u>10:45 pm</u>	Survey Duration: <u>45 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ %; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle Pismo Beach 4; Elevation _____
 ATTACH MAP (include habitat types, important features, and species locations) Arroyo Grande NE

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used: Nite Lite Brand/model/power of binoculars used: Audobon / Swift 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 51 °F (3"); Water Temperature 61.7 °F; Wind Speed: 2.0 mph; Wind Direction S; Cloud Cover 0 %
 Precipitation 0 in.; Humidity _____%; Moon Phase _____

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name _____ River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: unnamed pond Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): 10%; Emergent Vegetation: ; Floating Vegetation ; Open Water 90%

Dominant Species: Scirpus californicus, Lemna minor, Salix spp.

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

(Piperian)

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>Rana catesbeiana</i>					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>4/25/07</u>	PROJECT: <u>PXP Produced Water Reclamation Facility (Existing Pond & Proposed Temporary Pond)</u>		
SURVEY BIOLOGIST(S): <u>FLG / JKP</u>			
Time Start: <u>8:20 pm</u>	Time End: <u>9:50 pm</u>	Survey Duration: <u>30 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ ¼; _____ -¼ Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle Pismo Beach 4; Elevation _____
Arroyo Grande NE
 ATTACH MAP (include habitat types, important features, and species locations)

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used to conduct survey: Nite Lite Brand/model/power of binoculars used: Audobon / Swift 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 54 °F (3"); Water Temperature 10.5 °F; Wind Speed: 3.9 mph; Wind Direction S; Cloud Cover 15 %
 Precipitation 0 in.; Humidity _____%; Moon Phase 1/2 Waxing

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name _____ River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: unnamed pond Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: ; Floating Vegetation ; Open Water _____

Dominant Species: *Refer to survey 2 data (4/18/07)*

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>NONE</i>						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM



DATE: <u>5/2/07</u>	PROJECT: <u>PXP Produced Water Project (Temporary pond / existing pond)</u>		
SURVEY BIOLOGIST(S): <u>KLG / JKP</u>			
Time Start: <u>2035</u>	Time End: <u>2115</u>	Survey Duration: <u>40 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ 1/4; _____ - 1/4 Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle Pismo Beach / Arroyo Grande NE; Elevation _____

****ATTACH MAP** (include habitat types, important features, and species locations)**

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: . 1 2 3 4 5 6 7 8

Brand name/model of light used: Nite Lite Brand/model/power of binoculars used: Swift / Audubon 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 55-59°F (3"); Water Temperature low °F; Wind Speed: 1-7 mph; Wind Direction S; Cloud Cover 10 %

Precipitation 0 in.; Humidity _____ %; Moon Phase _____

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name _____ River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: unnamed pond Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____

Dominant Species: *REFER TO SURVEY 2 DATA (4/18/07)*

ADJACENT COVER TYPE(S)

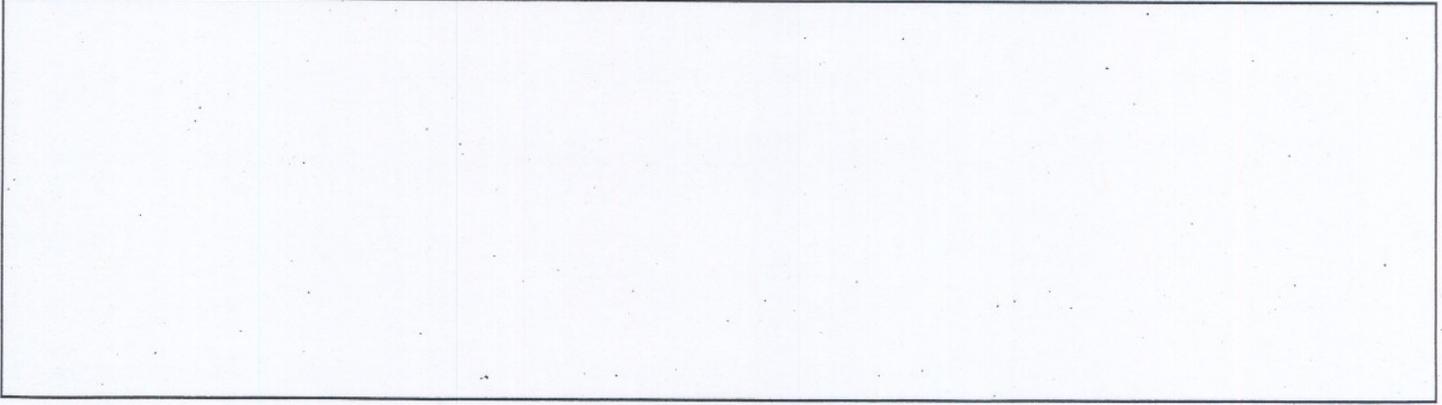
Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>NONE</i>						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM



NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>5/9/07</u>	PROJECT: <u>PXP AG FIELD</u>		
INVESTIGATOR(S): <u>K. GILLELAND C. SANTALA</u>			
Time Start: <u>1800 2100</u>	Time End: <u>2145</u>	Survey Duration: <u>45</u>	Unit-Effort: _____

LOCATION

City/County TEMPERENH POND ; _____ %; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____ ; Quadrangle _____ ; Elevation _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 60.7°F (3"); Water Temperature 67.3°F; Wind Speed: 0 mph; Wind Direction NA; Cloud Cover 100 % Precipitation _____ in.
FRESH FOG

AQUATIC HABITAT TYPE FULL MOON

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name TEMPERENH PONDS River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
 Dominant Species: _____

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

AQUATIC SURVEY DATA FORM

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>RANA CATESBEIANA</i>					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>5/17/07</u>	PROJECT: <u>PXP Produced Water Reclamation Facility (temporing pond)</u>		
SURVEY BIOLOGIST(S): <u>KLA / JKP</u>			
Time Start: <u>2039</u>	Time End: <u>2150</u>	Survey Duration: <u>29 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo Co.; _____ 1/4; _____ -1/4 Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle Pismo Beach #; Elevation _____
RR 406 Range NE

****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8

Brand name/model of light used: Nite Lite Brand/model/power of binoculars used: Audon/Swift 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 72.9 °F (3"); Water Temperature 66.2 °F; Wind Speed: 1.6 mph; Wind Direction W; Cloud Cover 0 %

Precipitation 0 in.; Humidity 0 %; Moon Phase new moon

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name _____ River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: unnamed pond Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation: _____; Open Water: _____

Dominant Species: *refer to survey 2 data (4/18/07)*

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>Rana catesbeiana</i>					2	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>7/3/07</u>	PROJECT: <u>PXP</u>		
SURVEY BIOLOGIST(S):			
Time Start: <u>1352</u>	Time End: <u>1435</u>	Survey Duration: _____	Unit-Effort: _____

LOCATION

City/County SLO; _____ ¼; _____ -¼ Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle _____; Elevation _____

****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8

Brand name/model of light used: _____ Brand/model/power of binoculars used: _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 81.9°F (3"); Water Temperature 75.6°F; Wind Speed: 4.6 mph; Wind Direction E; Cloud Cover 0 %

Precipitation N/A in.; Humidity _____%; Moon Phase N/A

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name TEMPERLEY PONDS (EXISTING STOCK POND / PAUPSCO TEMPERLEY POND) River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
Dominant Species:

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>7/3/07</u>	PROJECT: <u>PXP Produced Water Project (stock pond / tempering pond)</u>		
SURVEY BIOLOGIST(S): <u>C. Santala, J. Peak</u>			
Time Start: <u>2100</u>	Time End: <u>2120</u>	Survey Duration: <u>20 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ %; _____ -1/4 Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle Arroyo Grande Elevation _____

****ATTACH MAP (include habitat types, important features, and species locations)**** NE of Pismo Beach

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8

Brand name/model of light used: _____ Brand/model/power of binoculars used: _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 60.3°F (3"); Water Temperature 13.9°F; Wind Speed: 0 mph; Wind Direction N/A; Cloud Cover 0 %

Precipitation 0 in.; Humidity _____ %; Moon Phase 1/4 Waxing

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name _____ River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: unnamed pond Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): 10%; Emergent Vegetation: _____; Floating Vegetation _____; Open Water 90%
 Dominant Species: See SURVEY 3 data

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<u>None</u>						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>4/13/07</u>	PROJECT: <u>PXP RD WATER EIR TEMPORARY POND</u>		
SURVEY BIOLOGIST(S): <u>B. DUGAS / K. BELLELAND</u>			
Time Start: <u>1345</u>	Time End: <u>1425</u>	Survey Duration: _____	Unit-Effort: _____

LOCATION

City/County SLO/SLO PXP AG FIELD; _____ %; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle _____; Elevation _____
****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used to conduct survey: _____ Brand/model/power of binoculars used: SWIFT 10X42 LEICA 10X42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 74.7 °F (3"); Water Temperature 65.3 °F; Wind Speed: 6.1 mph; Wind Direction NW; Cloud Cover 0 %
 Precipitation _____ in.; Humidity 20 %; Moon Phase NA

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name TEMPORARY POND River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): 10%; Emergent Vegetation: X; Floating Vegetation X; Open Water X
 Dominant Species:

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
LARGE MOUTH BASS				X		<input type="checkbox"/> Visual <input type="checkbox"/> Call <input checked="" type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>4/18/07</u>	PROJECT: <u>PXP Produced Water Reclamation Facility (Pismo Creek)</u>		
SURVEY BIOLOGIST(S): <u>KLG / JKP</u>			
Time Start: <u>8:45 pm</u>	Time End: <u>10:00 pm</u>	Survey Duration: <u>1 hr 15 min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ 1/4; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle Pismo Beach 4; Elevation _____
 ATTACH MAP (include habitat types, important features, and species locations) Arroyo Grande NE

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used: Nite Lite Brand/model/power of binoculars used: Audubon / Swift 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 91 °F (3"); Water Temperature 56-7 °F; Wind Speed: 2.7 mph; Wind Direction S; Cloud Cover 0 %
 Precipitation 0 in.; Humidity _____%; Moon Phase _____

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name Pismo Creek River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other Beaver Dams
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover (mid-day): 100%; Emergent Vegetation: ; Floating Vegetation ; Open Water 40%
 Dominant Species: Platanus racemosa, Salix spp., Toxicodendron diversilobum, Rubus ursinus, R. discolor
Populus fremontii, Vinca major, Quercus agrifolia, Senecio mikanioides

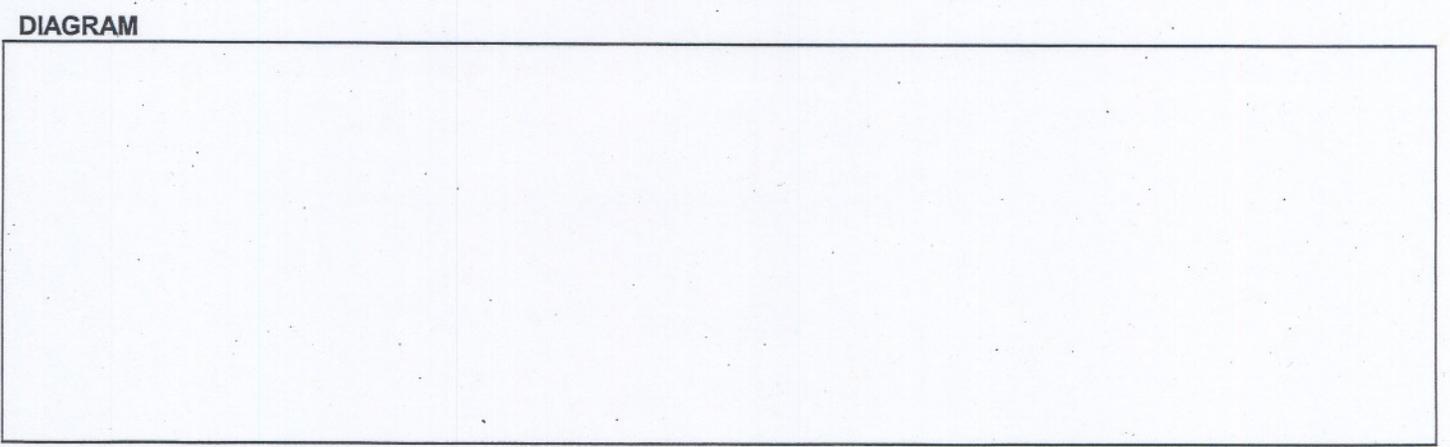
ADJACENT COVER TYPE(S)

Woodland (Riparian) Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>Rana catesbeiana</i>					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
<i>Pseudacris regilla</i>					110	<input type="checkbox"/> Visual <input checked="" type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Other:						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<i>Castor canadensis</i> (Beaver)					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:



NOTES

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____

Dominant Species: *refer to survey 2 data (4/18/07)*

ADJACENT COVER TYPE(S)

- Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>Pseudacris regilla</i>					+20	<input type="checkbox"/> Visual <input checked="" type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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<i>Other:</i>						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<i>crayfish</i>					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
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Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>5/2/07</u>	PROJECT: <u>PXP Produced Water Project (Pismo Creek)</u>		
SURVEY BIOLOGIST(S): <u>KLG / JKP</u>			
Time Start: <u>2130</u>	Time End: <u>2230</u>	Survey Duration: <u>1 hour</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo Co.; _____ %; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle Pismo Beach & Arroyo Grande NE; Elevation _____
****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used: _____ Brand/model/power of binoculars used: _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 54.5°F (3"); Water Temperature 60.1°F; Wind Speed: 3 mph; Wind Direction SW; Cloud Cover 0 %
 Precipitation 0 in.; Humidity _____ %; Moon Phase _____

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name Pismo Creek River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
Dominant Species: *refer to survey 2 data (4/18/07)*

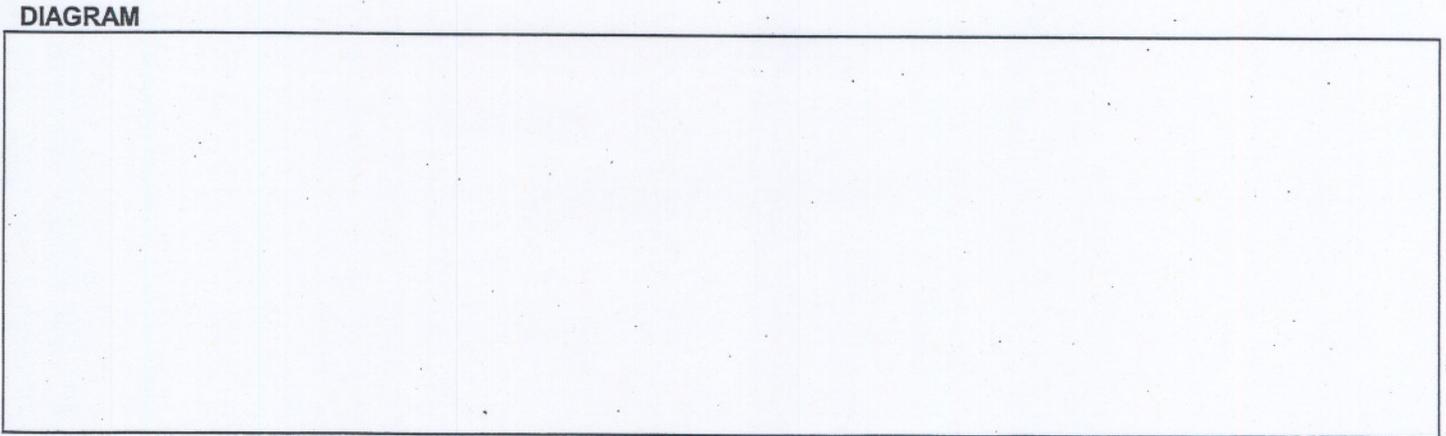
ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>PSEUDALLES REGILLA</i>					<input checked="" type="checkbox"/>	<input type="checkbox"/> Visual <input checked="" type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<i>RANA CATESBEIANA</i>						<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<i>RAINBOW TROUT</i>						<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
<i>SCULPIN</i>						<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:



NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>5/9/07</u>	PROJECT: <u>PXP AG FIELD</u>		
INVESTIGATOR(S): <u>K. GELLELAND & C. SANTALA</u>			
Time Start: <u>2200</u>	Time End: <u>2250</u>	Survey Duration: <u>50</u>	Unit-Effort: _____

LOCATION

City/County PISMO CREEK ; _____ 1/4 ; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____ ; Quadrangle _____ ; Elevation _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 52.3 °F (3"); Water Temperature 60.7 °F; Wind Speed: 5 mph; Wind Direction NE; Cloud Cover 100 % Precipitation _____ in.
HIGH FOG

AQUATIC HABITAT TYPE

FULL MOON

River
 Stream
 Swale
 Ditch
 Lake
 Natural Pond
 Stock Pond
 Impoundment
 Vernal Pool
 Marsh/Wetland
 Hydrogeomorphology Class:
 Depression
 Slope
 Riverine

HYDROPERIOD

Permanent
 Intermittent
 Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name PISMO CREEK River Mile _____ Stream Order _____
 Hydroperiod: Permanent
 Intermittent
 Ephemeral
 Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear
 Turbid
 Water Color: Clear
 Stained (Color _____)
 Instream Structure: Riffles
 Pools (max. depth _____)
 Glides
 Undercut Banks
 LOD (jams/snags)
 Other _____
 Channel Condition: Terracing
 Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent
 Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear
 Turbid
 Water Color: Clear
 Stained (Color _____)
 Instream Structure: Shoals
 Undercut Banks
 LOD (jams/snags)
 Other _____

SUBSTRATE (Percent)

Silt
 Sand
 Gravel
 Cobble
 Boulder
 Bedrock
 Other: _____

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
 Dominant Species: _____

ADJACENT COVER TYPE(S)

Woodland
 Shrub
 Savanna
 Grassland
 Wetland
 Agriculture
 Developed
 Other

AQUATIC SURVEY DATA FORM

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
PSEUDALIAS BEHELLA					/	<input type="checkbox"/> Visual <input checked="" type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
UNKNOWN RANID					2	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>9/17/07</u>	PROJECT: <u>RXP Produced Water Reclamation Facility (Pismo Creek)</u>		
SURVEY BIOLOGIST(S): <u>KLG / JKP</u>			
Time Start: <u>2115</u>	Time End: <u>2230</u>	Survey Duration: <u>1hr 15min</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo Co. ; _____ 1/4; _____ -1/4 Section _____ Township _____ Range _____
 Latitude _____ Longitude _____ ; Quadrangle _____ ; Elevation _____
****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8
 Brand name/model of light used: Nite Lite Brand/model/power of binoculars used: Audobon/swift 10x42

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 56.6 °F (3"); Water Temperature 50.6 °F; Wind Speed: 0 mph; Wind Direction _____; Cloud Cover 0 %
 Precipitation 0 in.; Humidity 0 %; Moon Phase new moon waxing

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name Pismo Creek River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
 Dominant Species: *refer to survey 2 data (4/18/07)*

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>None</i>						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE:	PROJECT:		
SURVEY BIOLOGIST(S):			
Time Start: <u>1404</u>	Time End: <u>1504</u>	Survey Duration: _____	Unit-Effort: _____

LOCATION

City/County _____; _____ ¼; _____ -¼ Section _____ Township _____ Range _____
 Latitude _____ Longitude _____; Quadrangle _____; Elevation _____
****ATTACH MAP (include habitat types, important features, and species locations)****

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 8
 Brand name/model of light used: _____ Brand/model/power of binoculars used: _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 84.4 °F (3"); Water Temperature 71.1 °F; Wind Speed: 3.4 mph; Wind Direction E; Cloud Cover 0 %
 Precipitation N/A in.; Humidity N/A %; Moon Phase N/A

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland
 Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name PESMO CREEK River Mile _____ Stream Order _____
 Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____
 Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____
 Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____
 Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal
 Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____
 Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____
 Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)
 Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other:

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): _____; Emergent Vegetation: _____; Floating Vegetation _____; Open Water _____
 Dominant Species: _____

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:

DIAGRAM

NOTES

AQUATIC SURVEY DATA FORM

DATE: <u>7/3/07</u>	PROJECT: <u>PXP Produced Water Project (Pismo Creek)</u>		
SURVEY BIOLOGIST(S): <u>C. Santala, J. Peak</u>			
Time Start: <u>2130</u>	Time End: <u>2230</u>	Survey Duration: <u>1 hour</u>	Unit-Effort: _____

LOCATION

City/County San Luis Obispo County; _____ %; _____ -1/4 Section _____ Township _____ Range _____

Latitude _____ Longitude _____; Quadrangle Arroyo Grande NE; Elevation _____
Pismo Beach

****ATTACH MAP** (include habitat types, important features, and species locations)**

TYPE OF SURVEY

Day Night; Breeding Non-Breeding; Survey Number: 1 2 3 4 5 6 7 8

Brand name/model of light used: _____ Brand/model/power of binoculars used: _____

WEATHER CONDITIONS AT START OF SURVEY

Air Temperature 61 °F (3"); Water Temperature 67 °F; Wind Speed: 0 mph; Wind Direction N/A; Cloud Cover 0 %

Precipitation 0 in.; Humidity _____%; Moon Phase 1/4 waning

AQUATIC HABITAT TYPE

River Stream Swale Ditch Lake Natural Pond Stock Pond Impoundment Vernal Pool Marsh/Wetland

Hydrogeomorphology Class: Depression Slope Riverine

HYDROPERIOD

Permanent Intermittent Ephemeral

STREAM MORPHOMETRY/FEATURES

River/Creek Name Pismo Creek River Mile _____ Stream Order _____

Hydroperiod: Permanent Intermittent Ephemeral Reach Length _____ Right Bank Height _____ Left Bank Height _____

Top Bank Width _____ Stream Width _____ Channel Width @ OHWM _____ Right Bank Slope _____ Left Bank Slope _____

Water Depth _____ Sinuosity Index _____ Stream Gradient _____ Flow Velocity _____ Wetted Perimeter _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Riffles Pools (max. depth _____) Glides Undercut Banks LOD (jams/snags) Other _____

Channel Condition: Terracing Bank or Bed Degradation

LAKE/POND MORPHOMETRY/FEATURES

Pond/Lake Name: _____ Hydroperiod: Permanent Seasonal

Area: _____ Maximum Width _____ Maximum Length _____ Maximum Depth _____

Shore Line _____ Shoreline Development _____ Width of Drawdown Zone _____

Water Clarity: Clear Turbid Water Color: Clear Stained (Color _____)

Instream Structure: Shoals Undercut Banks LOD (jams/snags) Other _____

SUBSTRATE (Percent)

Silt Sand Gravel Cobble Boulder Bedrock Other: _____

AQUATIC SURVEY DATA FORM

STREAM/POND VEGETATION

Canopy Cover(mid-day): 70%; Emergent Vegetation: ; Floating Vegetation ; Open Water 30%
 Dominant Species: see survey 3 data

ADJACENT COVER TYPE(S)

Woodland Shrub Savanna Grassland Wetland Agriculture Developed Other

SPECIES AND NUMBERS OBSERVED

Species	Egg Masses	Larvae	Metamorphs (w/legs)	Juvenile	Adult	Detection Method
<i>Rana callosirostris</i>					1	<input checked="" type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input checked="" type="checkbox"/> Spotlight
						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight
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						<input type="checkbox"/> Visual <input type="checkbox"/> Call <input type="checkbox"/> Capture <input type="checkbox"/> Spotlight

Describe potential threats to California red-legged frogs observed, including non-native and native fish predators such as fish, bullfrogs, and raccoons:
observed an opossum along stream channel

DIAGRAM

NOTES