

Table 2. Preliminary Working Draft Biological Goals, Objectives and Conservation Actions for the Santa Clara Valley Habitat Plan: Ponds and Wetlands and Associated Covered Species.

Note: These goals and objectives were developed during a workshop in January with Local Partner staff and biologists, Wildlife Agency staff and species experts, outside species experts, and consultants and were further refined during a follow up phone call.

Biological Goals and Objectives	Conservation Actions	Monitoring Action
Ecosystem/Landscape		
TBD		
Natural Communities		
Goal 5. Maintain, enhance, and create or restore pond, perennial and seasonal freshwater wetland habitats that benefit covered species and promote native biodiversity.		
<p>Objective 5.1. Protect grassland and oak and conifer woodland with a high concentration of ponds as part of the Reserve System.</p>	<p>LAND-24. Acquire in fee title or obtain easements on grassland, oak and conifer woodland habitat <u>east</u> of Coyote Valley with at least __ponds occupied by covered or native species and/or other ponds capable of being restored. <i>[Note: GIS analysis of prioritization criteria and identification of additional sites ongoing. Guidance will be incorporated into the text.]</i></p> <p>LAND-25. Acquire in fee title or obtain easements on native grassland, oak and conifer woodland habitat <u>west</u> of Coyote Valley in the Santa Cruz Mountains with at least __ ponds occupied by covered or native species and/or other ponds capable of being restored</p>	

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 5.2. Protect __ acres of freshwater wetlands and __ acres of seasonal wetlands as part of the Reserve System.</p>	<p>LAND-26. Acquire in fee title or obtain easements on __ acres of freshwater wetlands suitable for covered or native species or other freshwater wetlands capable of being enhanced or restored to support covered species in. <i>[Note: GIS analysis of prioritization criteria and identification of additional sites ongoing. Guidance will be incorporated into the text.]</i></p> <p>LAND-27. Acquire in fee title or obtain easements on __ acres of seasonal wetlands suitable for covered or native species and/or other seasonal wetlands capable of being enhanced or restored to support covered species in <i>[add locations when available]</i>.</p>	
<p>Objective 5.3. Protect contiguous tracts of natural land cover between ponds and wetlands that provide upland habitat and allow native species to move between these water sources.</p>	<p>LAND-28. Acquire in fee title or obtain easements on land between existing ponds and wetlands to provide a linked matrix of pond, wetland, and upland habitat as part of the Reserve System</p>	
<p>Objective 5.4. When appropriate for particular covered and native species, enhance freshwater and seasonal wetlands and ponds by increasing native vegetative cover, biomass, and structural diversity in and around the margins within five years of pond or wetland acquisition within the Reserve System.</p>	<p>POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.</p> <p>POND-2. Install woody debris around perimeter and in submerged bank of ponds and wetlands to create basking habitat and cover for native juvenile amphibians and turtles.</p> <p>POND-3. Plant native grasses around the perimeter of ponds and wetlands.</p> <p>POND-4. Maintain or enhance pond habitat for covered species and native biodiversity through periodic vegetation clearing or sediment removal, as necessary, in way that minimizes negative effects on species.</p> <p>Also see STREAM-3 – add stream 3 text here</p>	

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<p>Objective 5.5. Enhance ponds by reducing the cover and biomass of non-native plants in the adjacent uplands between the functional perimeter of the pond and within 0.5 miles.</p>	<p>GRASS-1. Continue or introduce livestock grazing in a variety of grazing regimes.</p> <p>GRASS-2. Conduct prescribed burns to enhance the community and to control or, where possible, eradicate invasive plants.</p> <p>GRASS-3. Conduct mowing in selected areas to mimic grazing where use of livestock is impractical.</p> <p>GRASS-4. Selectively apply herbicides or other treatments (e.g., hand or mechanical removal) to eradicate or control invasive plants.</p> <p>GRASS-5. Conduct selective seeding of native forbs and grasses.</p>	
<p>Objective 5.6. Enhance ponds and wetlands by eradicating or reducing exotic species that are detrimental to native pond and wetland biodiversity.</p>	<p>POND-5. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.</p> <p>POND-6. Eradicate if feasible, or reduce nonnative pigs through fencing (also see POND 1), trapping, or other control methods.</p>	
<p>Objective 5.7. Restore at least __ acres of freshwater and seasonal wetlands to increase available habitat and enhance connectivity among existing ponds and wetlands within the Reserve System.</p>	<p>POND-7. Restore __ acres of freshwater marsh within the Reserve System in <i>[add general locations when conservation strategy developed]</i>.</p> <p>POND-8. Restore __ acres of seasonal wetlands within the Reserve System in <i>[add general locations when conservation strategy developed]</i>.</p> <p>See POND 3.</p> <p>POND-9. Identify and select potential restoration sites on the basis of their physical processes and hydrologic, geomorphic, and soil conditions to ensure that successful restoration can occur and be self-sustaining <i>[could be moved to the text]</i>.</p>	

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<p>Objective 5.8. In addition to the restoration of wetlands (Objective 5.7), restore freshwater and seasonal wetlands in-kind within the Reserve System at a ratio of 1 acre of conservation to 1 acre of impact (1:1) and 2 acres of conservation to 1 acre of impact (2:1), respectively.</p>	<p>POND-10. Restore freshwater marsh at a ratio of 1:1 (estimated at X__ acres) within the Reserve System in <i>[add general locations when conservation strategy developed]</i>.</p> <p>POND-11. Restore seasonal wetlands at a ratio of 2:1 (estimated at X acres) within the Reserve System in <i>[add general locations when conservation strategy developed]</i>.</p> <p>See POND 3.</p> <p>See POND-9.</p>	
<p>Objective 5.9. Create at least __ acres [and __ number] of ponds to increase available habitat and enhance connectivity among existing ponds and wetlands within the Reserve System.</p>	<p>POND-12. Create at least __ acres [and __ number] of ponds in <i>[add specific locations that will increase connectivity]</i>.</p> <p>POND-13. When feasible, design new ponds to rely on passive management (e.g., dry on their own periodically) and minimize need for artificial draining.</p> <p>See POND-9.</p>	
<p>Objective 5.10. In addition to the creation of ponds (see Objective 5.9), create ponds lost to covered activities, in-kind within the Reserve System, at a ratio of 1 acre of conservation to 1 acre of impact (1:1).</p>	<p>POND-14. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in <i>[add general location]</i>.</p> <p>See POND-13</p> <p>See POND-9.</p>	

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Species</p>		
<p>Goal 8: Maintain, and where appropriate, increase the number of individuals and expand the distribution of California red-legged frog, California tiger salamander, and western pond turtle within the Reserve System to maintain viable populations and contribute to the regional recovery of these species.</p>		
<p>Objective 8.1. Protect (___ acres) of ponds, (___ acres) of wetlands, (___ miles) of streams, and (___ acres) of grassland, oak woodland, riparian, or chaparral in core areas to support California red-legged frog, California tiger salamander, and western pond turtles.</p> <p>-need to clearly define “stream” unit (variable width)</p>	<p>LAND-29. Acquire in fee title or obtain easements on ___ acres of land in the East San Francisco Bay Recovery Unit (<i>USFWS 2002</i>) (Coyote Creek, Pacheco-Santa Ana, and Santa Cruz Mountain Watersheds).</p> <p>LAND-30. Acquire in fee title or obtain easements on habitat adjacent to Joseph D. Grant County Park, Palassou Ridge Open Space Preserve, southeast of Henry Coe State Park, Santa Cruz Mountain foothills, and Calero County Park in areas where dense forest is absent to reduce competition with CA newts [consider broadening this to avoid referencing one species]. Consider cluster of unprotected occurrences east of Uvas Reservoir.</p> <p>LAND-31. Acquire in fee title or obtain easements on stream segments or ponds that currently provide or could provide high quality basking, breeding, and nesting habitat (vegetated banks and at least 150 feet of adjacent upland habitat) for western pond turtle.</p>	
<p>Objective 8.2. Protect corridors between existing protected areas to ensure genetic exchange within species and movement between populations of covered amphibians and aquatic reptiles.</p>	<p>LAND-32. Acquire in fee title or obtain easements on habitat near Santa Teresa Hills and Tulare Hill to provide connectivity between populations in the Diablo Range and the Santa Cruz foothills.</p> <p>LAND-33. Acquire in fee title or obtain easements on ___ acres of land between existing ponds to provide a linked matrix of pond and upland habitat as part of the reserve system.</p>	

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<p>Objective 8.3. Enhance ponds and wetlands by eradicating or reducing exotic species that are detrimental to covered amphibians, aquatic reptiles, and native pond biodiversity.</p>	<p>POND-5. Eradicate if feasible, or reduce nonnative predators (bullfrogs, invasive fish) through habitat manipulation (e.g., periodic draining of ponds), trapping, hand capturing, electroshocking or other control methods.</p> <p>POND-6. Eradicate if feasible, or reduce nonnative pigs through fencing (also see POND 1), trapping, or other control methods.</p>	

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 8.4. Restore (___ acres) of wetlands, or maintain or enhance (___ acres) of ponds and (___ miles) of streams for the California red-legged frog, California tiger salamander, and western pond turtle to maintain or increase breeding populations of covered amphibians and reptiles.</p>	<p>POND-1. Install fencing that will reduce grazing pressure and exclude feral pigs on portions of ponds and wetlands and provide vegetated refuge sites for native amphibians.</p> <p>POND 2. Install woody debris around perimeter and in submerged bank of ponds and wetlands to create basking habitat and cover for native juvenile amphibians and turtles.</p> <p>POND 3. Plant native grasses around the perimeter of ponds and wetlands.</p> <p>POND-15. In the case of ponds, wetlands, and/ or amphibian populations becoming infected with chytrid fungus or other diseases, use the best scientific information available to manage and stop spread of epidemic.</p> <p>POND-16. Address hybridization issues (e.g., California tiger salamander hybridizing with Texas salamander) using the best scientific information available to manage covered amphibians and aquatic reptiles.</p> <p>POND-17. Periodically clear vegetation or remove sediment, as necessary, in a way that minimizes negative effects on species.</p> <p>POND-18. Excavate sections of ponds to provide deeper pools that will be utilized by California red-legged frog adults and sub-adults and western pond turtles, while maintaining shallow areas to provide rearing habitat for CRLF tadpoles, CTS larvae, and WPT hatchlings.</p> <p>POND-19. Identify and maintain upland overwintering and nesting sites for western pond turtle because of the high fidelity of their use from year to year (even if sites are not “natural”).</p> <p>LAND-34. Offer incentives to private landowners to enhance pond and wetland habitat to suit breeding California red-legged frog, California tiger salamander, and western pond turtle.</p> <p>See STREAM-3. (import text)</p> <p>GRASS-1.</p> <p>GRASS-2.</p> <p>GRASS-4.</p>	

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 8.5. Create ponds to provide new breeding sites for California red-legged frog, California tiger salamander, and western pond turtle.</p>	<p>POND-20. Create at least __ acres [and __ number] of ponds in <i>[add specific locations that will increase connectivity]</i>.</p> <p>POND-21. When feasible, design new ponds to rely on passive management (e.g., dry on their own periodically) and minimize need for artificial draining.</p> <p>POND-22. Identify and select potential restoration sites on the basis of their physical processes and hydrologic, geomorphic, and soil conditions to ensure that successful restoration can occur and be self-sustaining <i>[could be moved to the text]</i>.</p> <p>POND-23. Create ponds lost to covered activities at a ratio of 1:1 (estimated at __ acres) within the Reserve System in <i>[add general location]</i>.</p>	
<p>Goal 9: Increase the population size of tricolored blackbird to enhance the viability of the species in the study area.</p>		
<p>Objective 9.1. Protect at least 4 breeding sites that support or could support tricolored blackbird colonies each with at least 2-acres of breeding (marsh) habitat and that have foraging habitat within 2 miles.</p>	<p>LAND-35. Acquire in fee title or obtain easements on __ acres of suitable breeding habitat within dry land farming or ranching complexes in Coyote Valley and the Diablo Hills; put high priority on protection of occupied or sites occupied in last 5 years or on historic breeding sites that could be restored.</p> <p>LAND-36. Offer incentives to private landowners to enhance pond and marsh habitat to suit breeding tricolored blackbirds, and to ensure that dry-land farming and ranching activities support breeding tricolored blackbirds.</p>	
<p>Objective 9.2. Protect suitable foraging habitat to ensure that 200 acres occur within 2 miles of protected and occupied breeding sites.</p>	<p>LAND-37. Acquire in fee title or obtain easements on 200 acres foraging habitat in areas where there is sufficient breeding habitat available within 2 miles.</p> <p>LAND-38. Offer incentives to private landowners to ensure that dry-land farming and ranching activities support foraging tricolored blackbirds.</p>	

Biological Goals and Objectives	Conservation Actions	Monitoring Action
<p>Objective 9.3. Enhance or restore [__ acres] of suitable breeding habitat in historically/currently occupied areas within the Reserve System.</p>	<p>See POND-1. POND-25. Enhance ___ acres of marsh habitat that will support dense reed-like vegetation (cattails) or other native vegetation that will attract nesting tricolored blackbirds. POND-26. Restore potential tricolored blackbird breeding sites to support at least 2 acres of breeding habitat. POND-27. In areas with non-native vegetation (e.g., Himalayan blackberry) that supports existing tricolored blackbird colonies, initiate a gradual (3-4 year) transition from non-native vegetation to native vegetation that is structurally similar. See STREAM-3. import text</p>	
<p>Objective 9.4. Create __ acres of freshwater wetland suitable for breeding tricolored blackbird within 2 miles of suitable and foraging habitat to encourage colonization of new sites.</p>	<p>See POND-9. POND-23</p>	