

RECOLOGY HAY ROAD LANDFILL LAND USE PERMIT AMENDMENT NO. 2 PROJECT MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA, Public Resources Code Section 21000 et seq.), Solano County prepared a Subsequent Environmental Impact Report (SEIR) for the proposed Recology Hay Road (RHR) Landfill Land Use Permit Amendment No. 2 Project that identified potentially significant impacts related to: aesthetics, air quality, cultural resources, biological resources, and paleontological resources. The SEIR also identifies mitigation measures that would reduce the impacts to less-than-significant levels or that would eliminate these impacts all together.

CEQA and the State CEQA Guidelines (PRC Section 21081.6 and CEQA Guidelines Sections 15091[d] and 15097, respectively) require public agencies “to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval to mitigate or avoid significant effects on the environment.” A Mitigation Monitoring and Reporting Program (MMRP) is required because the SEIR identifies potential significant adverse impacts related to the project implementation, and mitigation measures have been identified to reduce those impacts. Adoption of the MMRP would occur along with approval of the project.

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP has been prepared to ensure that all required mitigation measures are implemented and completed in a satisfactory manner prior to implementation of the proposed ordinance. The attached table has been prepared to assist the responsible parties in implementing the mitigation measures. The table identifies the impact, mitigation measures (as amended through the Final SEIR), monitoring responsibility, mitigation timing, and provides space to confirm implementation of the mitigation measures. The numbering of mitigation measures follows the numbering sequence found in the SEIR. Mitigation measures that are referenced more than once in the Draft SEIR are not duplicated in the MMRP table.

ROLES AND RESPONSIBILITIES

Unless otherwise specified herein, Solano County Planning Services Division of the Department of Resource Management (Solano County) is responsible for taking all actions necessary to implement the mitigation measures under its jurisdiction according to the specifications provided for each measure, and for demonstrating that the action has been successfully completed. Solano County, at its discretion, may delegate implementation actions or portions thereof to a licensed contractor or other designated agent, but it remains ultimately responsible for implementation.

As required by Section 21081.6 of the Public Resources Code, Solano County or its designee is the custodian of documents and other material which constitutes the record of proceedings upon which the action on the project was based.

Inquiries should be directed to:

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Solano County is responsible for overall administration of the MMRP and for verifying that staff members, Recology, and/or the construction contractor have completed the necessary actions for each measure.

Solano County is responsible for overall administration of the MRRP and for verifying that County staff members and/or the construction contractor has completed the necessary actions for each measure. The County may designate a project manager to oversee implementation of the MMRP. Duties of the project manager include the following:

- ▶ ensure routine inspections of the construction site are conducted by appropriate County staff; check plans, reports, and other documents required by the MMRP; and conduct report activities;
- ▶ serve as a liaison between the County and the contractor or project applicant regarding mitigation monitoring issues;
- ▶ complete forms and maintain reports and other records and documents generated for the MMRP; and
- ▶ coordinate and ensure that corrective actions or enforcement measures are taken, if necessary.

The responsible party for implementation of each item will identify the staff members responsible for coordinating with the County on the MMRP.

REPORTING

Solano County shall document and describe compliance with the required mitigation measures either within the attached table or separate monitoring documentation.

MITIGATION MONITORING AND REPORTING PROGRAM TABLE

The categories identified in the attached MMRP table are described below.

- ▶ **Mitigation Measure** – Provides the verbatim text of the adopted mitigation measure.
- ▶ **Timing** – Identifies the time frame in which the mitigation will be implemented.
- ▶ **Implementing Party/Agency** – Identifies the party responsible for implementation.
- ▶ **Enforcement/Monitoring Party/Agency** – Identifies the party responsible for enforcing compliance with the requirements of the mitigation measure.
- ▶ **Monitoring Frequency** – Identifies the frequency of monitoring of mitigation measure implementation to be undertaken by the enforcement/monitoring party/agency.
- ▶ **Dated Signature for Verification of Compliance** – Provides space for the person (either project manager or his/her designee) responsible for verifying compliance with the requirements of the mitigation measure to sign off on such compliance.

RHR Landfill Land Use Permit Amendment No. 2 Project - Mitigation Monitoring and Reporting Program

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
4.1 Aesthetics					
<p>Mitigation Measure 4.1-1: Litter Control</p> <p>The facility operator shall implement the following litter control mitigation measures to address the lateral landfill expansion area and/or the increase in landfill truck trips following implementation of the proposed project:</p> <p>Windblown Litter from the RHR Site:</p> <ul style="list-style-type: none"> Portable litter control fences shall be installed directly downwind of the working face during site operations. Additional litter collection crews shall be deployed following high wind events to remove litter from the parcels adjacent to the landfill. The RHR facility operator shall work to establish site access agreements with the adjacent property owners prior to project implementation. The maximum size of the working face shall be limited to 200' x 75' or smaller. Use of portable fencing in the immediate vicinity of the landfills working face and downwind of the working face shall be used to contain litter. Fencing along the site boundary of the landfill expansion area shall be high enough to contain litter from migrating offsite. Prior to the start of landfill operations within the expansion area, RHR shall construct a permanent 25 ft. tall litter-control fence that extends along the entire length of the southerly site boundary of the landfill expansion area. Adequate staffing shall be onsite to remove litter immediately from the property boundary in the event of a sudden change in wind speed or direction. Similarly, additional litter collection crews shall be deployed following such high wind events to remove litter from parcels adjacent to the landfill. The permittee (RHR) shall comply with the executed establish site access agreements with the adjacent property owners within 90 days of issuance of the use permit. <p>Windblown Litter from RHR-Related Truck Trips:</p> <ul style="list-style-type: none"> If waste is hauled by RHR or its contractors over the following roads, RHR shall check for and pick up litter, on a weekly basis, or more frequently, on the following roads: Vanden Road from Peabody Road to Canon Road, Canon Road from Vanden Road to North Gate Road, North Gate Road from Canon Road to McCrory Road, McCrory Road from North Gate Road to Meridian Road, Meridian Road from McCrory Road to Hay Road, Hay Road from Meridian Road to Lewis 	RHR to continue to comply with executed site access agreements with adjacent property owners; litter management plan; and litter reimbursement agreements	Solano County Planning Services Division of the Department of Resource Management (Solano County) and RHR Compliance Officer	Solano County and Solano County Local Enforcement Agency (LEA)	<p>Litter checks and pick-up on a weekly basis or more frequently, if needed</p> <p>Notifications from Solano County regarding litter requires response and removal from RHR within twenty-four (24) hours</p>	

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<p>Road, Lewis Road from Midway Road to Fry Road, and Midway Road from I-80 to SR 113.</p> <ul style="list-style-type: none"> If Solano County personnel identify litter on roads used by RHR and its contractors, Solano County shall immediately notify RHR and request that it be removed. RHR shall respond and remove such litter within twenty-four (24) hours of receiving notification from Solano County. <p>Litter Control:</p> <ul style="list-style-type: none"> The facility operator shall negotiate an agreement with Solano County regarding reimbursement for the cost of removing trash and materials dumped along the above mentioned County roads, should County employees be required to assist in the removal of trash associated with the expanded use of the landfill. Litter control shall be the responsibility of the RHR compliance officer and shall be monitored by the Solano County Local Enforcement Agency (LEA) to ensure compliance with state minimum standards. A plan for litter control, by means of fencing, crews, adjustment of the size of working the face and use of soil cover, shall be detailed in the litter management plan. On a weekly basis, or more frequently if needed, RHR shall check for and pick up litter along adjacent properties, and along Burke Lane south of Hay Road, Dally Road north and south of Hay Road, Box R Ranch Road, Binghampton Road between SR 113 and Pedrick Road, Main Prairie Road between SR 113 and Pedrick Road, Brown Road between SR 113 and Pedrick Road, Pedrick Road between Brown Road and Binghampton Road, and along the following major haul routes: Fry Road between Leisure Town Road and SR 113, Lewis Road between Fry Road and Hay Road, Hay Road between SR 113 and Meridian Road, and Meridian Road between McCrory Road and Fry Road. The site, offsite properties, and roads listed above shall be kept as litter free as possible depending upon weather conditions. The County shall not be charged for disposal of litter or trash picked up during these activities. RHR shall comply with the executed litter agreement. Within 90 days of the issuance of the land use permit, RHR shall execute an agreement with Solano County regarding reimbursement to the County for the cost of removing trash and materials dumped along the above mentioned County roads, should County employees be required to assist in the removal of trash associated with use of the RHR landfill in the event that RHR does not remove the litter within 24 hours of receiving notification from Solano County. 					

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4.2 Air Quality					
<p>Mitigation Measure 4.2-2: Ensure Truck-Generated Emissions of NO_x in the San Francisco Bay Area Air Basin Will Not Exceed BAAQMD-recommended Mass Emission Criteria</p> <p>The applicant shall demonstrate compliance with one or a combination of the following mitigation options to ensure that the level of NO_x emissions in the SFBAAB associated with project-related truck trips does not exceed BAAQMD's recommended significance criteria of 54 lb/day and 10 tons/year. Within 60 days of use permit approval, the applicant shall submit to the Planning Services Division of the Department of Resource Management, a detailed action plan that demonstrates implementation of this measure.</p> <ul style="list-style-type: none"> Option A. Achieve Early Compliance with the Truck and Bus Regulation., the applicant shall retrofit and/or upgrade its fleet of trucks to fully comply with CARB's Truck and Bus Regulation prior to increasing average daily throughput at RHR landfill and before January 1, 2023, which is the date by which all trucks are required to comply with the emissions standards imposed by the Truck and Bus Regulation. The action plan submitted for this mitigation measure shall include an inventory of the vehicles to be retrofitted or upgraded and may include a phased approach. After January 1, 2023, Recology shall contract with haulers that are compliant and certified with CARB's Truck and Bus Regulations. Option B. Pay an Offset Fee to a Third-Party to Fund NO_x Emissions Offsets. The applicant shall purchase and retire NO_x offset credits sufficient to offset NO_x emissions in the SFBAAB at a rate of 57 lb/day and 10.3 tons/year from to a third-party non-profit (e.g., Bay Area Clean Air Foundation) or governmental entity prior to the receiving an increase in truck trips greater than the limits identified in Option B. The NO_x emission offset credits must be used to fund a NO_x reduction project in the SFBAAB. The cost of the credits, as well as any related administrative costs, shall be paid by the applicant. The applicant shall provide to the county the agreement that specifies the payment fee, timing of payment, and offset mechanism. This agreement must be signed by the applicant and the third-party entity. The specific emissions reduction project must result in emission reductions within the SFBAAB that are real, surplus, quantifiable, and enforceable and would not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. The cost of implementing the selected measures shall be fully funded by the applicant. The NO_x project or program that would be implemented to offset NO_x must be approved by BAAQMD. The applicant shall provide proof to the county that the offsets are approved by BAAQMD and have been fully funded by the applicant. 	Within 60 days of use permit approval	Solano County and RHR Compliance Officer	Bay Area Air Quality Management District (BAAQMD)	To be determined by BAAQMD	

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<p>This option can only be implemented if NO_x offset credits are available at the time they are needed.</p> <ul style="list-style-type: none"> Option C: Use Renewable Diesel Fuel in All Diesel Trucks Operated by the Applicant. The applicant shall use only renewable diesel (RD) fuels in all diesel-powered trucks used to haul materials to the landfill and the Construction and Demolition Sorting Operation. This measure applies to diesel trucks operated or contracted by the applicant. RD fuel must meet the following criteria: <ul style="list-style-type: none"> meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; contain no fatty acids or functionalized fatty acid esters; and have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. <p>The use of RD in trucks is estimated to reduce NO_x emissions by approximately 14 percent compared to conventional diesel fuel (SMAQMD 2015:3).</p>					
4.3 Archaeological, Historic, and Tribal Cultural Resources					
<p>Mitigation Measure 4.3-1: Halt Ground-Disturbing Activity Upon Discovery of Subsurface Archaeological Features</p> <p>In the event that any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during construction, all ground-disturbing activity within 100 feet of the resources shall be halted and a professional archaeologist, qualified under the Secretary of the Interior's Professional Qualification Standards, shall be retained to assess the significance of the find. Specifically, the archaeologist shall determine whether the find qualifies as an historical resource, a unique archaeological resource, or a tribal cultural resource. If the find does fall within one of these three categories, the qualified archaeologist shall then make recommendations to Solano County regarding appropriate procedures that could be used to protect the integrity of the resource and to ensure that no additional resources are affected. Procedures could include but would not necessarily be limited to, preservation in place, archival research, subsurface testing, or contiguous block unit excavation and data recovery, with preservation in place being the preferred option if feasible. If the find is a tribal cultural resource, Solano County shall provide a</p>	During construction	Construction contractor and RHR Compliance Officer	Solano County	During construction if resources are discovered. If no resources are discovered, no further mitigation is required.	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
reasonable opportunity for input from representatives of any tribe or tribes the professional archaeologist believes may be associated with the resource. Solano County shall implement such recommended measures if it determines that they are feasible in light of project design, logistics, and cost considerations.					
Mitigation Measure 4.3-2: Pre-Construction Cultural Sensitivity Training Prior to ground disturbance activities for the borrow pit and lateral expansion (Triangle), the project applicant shall provide evidence to Solano County to demonstrate compliance with Mitigation Measure 4.3-2. The project applicant shall arrange for a qualified archaeologist to conduct a cultural resources sensitivity training for all construction personnel who will be active on the project site during project-related construction activities. The training will be provided before the initiation of construction activities and will be developed and conducted in coordination with a representative from Yocha Dehe Wintun Nation. The training will include relevant information regarding sensitive cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The cultural sensitivity training will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the project site and will outline what to do and whom to contact if any potential tribal cultural resources are discovered.	Prior to ground disturbance activities for the borrow pit and lateral expansion area (Triangle).	RHR Compliance Officer and construction contractor	Solano County	One time	
4.4 Biological Resources					
Mitigation Measure 4.4-1a: Special-Status Plant Surveys Prior to issuance of a grading permit for the lateral expansion (Triangle) and commencement of ground disturbance within habitats in the Triangle where special-status plants may occur (i.e., grassland habitat, vernal pool habitat), and during the blooming period for the special-status plants with potential to occur on the sites (Table 4.4-4), a qualified botanist will conduct protocol-level surveys for the potentially occurring special-status plants that could be removed or disturbed by project activities. Protocol-level surveys will be conducted in accordance with Protocols for Surveying and Evaluating Impacts to <u>Special Status</u> Native Plant Populations and Natural Communities (CDFW 200918). <u>Surveys will be conducted not more than one or two seasons prior to project implementation.</u> If special-status plants are not found, the botanist will document the findings in a letter report to CDFW and further mitigation will not be required. <u>Perennial shrub species (e.g., Carquinez goldenbrus) may be identified to genus (i.e., <i>Isocoma</i>) outside of the plants bloom period. If no specimens in the <i>Isocoma</i> genus are detected during the special-status plat survey, further surveys during the species' bloom period will not be necessary to determine presence.</u> [See p 4.4-19 of the Draft SEIR for Table 4.4-4, Normal Blooming Period for Special-Status Plants with Potential to Occur Within the Triangle]	One to two seasons prior to ground disturbance in lateral expansion area (Triangle).	Solano County and RHR Compliance Officer	California Department of Fish and Wildlife (CDFW)	To be determined by CDFW	

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Mitigation Measure 4.4-1b: Special-Status Plant Avoidance If special-status plant species are found on the project site and are located outside of the permanent footprint of any proposed structures/site features and can be avoided, the project applicant will establish and maintain a protective buffer around special-status plants to be retained.	Prior to ground disturbance activities within the lateral expansion area (Triangle).	Solano County, construction contractor, and RHR Compliance Officer	California Department of Fish and Wildlife (CDFW)	Annually, as part of on-site biological monitoring conducted as part of existing landfill operations	
Mitigation Measure 4.4-1c: Special-Status Plant Impact Minimization Measures If special-status plants are found during rare plant surveys and cannot be avoided, the project applicant will consult with CDFW and USFWS, as appropriate depending on species status, to determine the appropriate compensation to achieve no net loss of occupied habitat or individuals. Mitigation measures may include, but are not limited to, preserving and enhancing existing populations, creating offsite populations on mitigation sites through seed collection or transplantation at a 1:1 ratio, and restoring or creating suitable habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. Potential mitigation sites could include suitable locations within or outside of the campus. The project applicant will develop and implement a site-specific mitigation strategy describing how unavoidable losses of special-status plants will be compensated. Success criteria for preserved and compensatory populations will include: <ul style="list-style-type: none"> ▪ The extent of occupied area and plant density (number of plants per unit area) in compensatory populations will be equal to or greater than the affected occupied habitat. Compensatory and preserved populations will be self-producing. Populations will be considered self-producing when: <ul style="list-style-type: none"> ▪ plants reestablish annually for a minimum of five years with no human intervention such as supplemental seeding; and ▪ reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity. 	When rare plant surveys are conducted onsite	Solano County and RHR Compliance Officer	CDFW and U.S. Fish and Wildlife Service (USFWS)	As needed/upon observance	
Mitigation Measure 4.4-2a: California Tiger Salamander Avoidance and Compensatory Mitigation for Habitat Loss Prior to deepening and widening of the borrow pit and commencement of ground-disturbing activities within suitable habitat for California tiger salamander (i.e., grassland, vernal pools), the project applicant will implement the following measures to avoid direct loss of California tiger salamanders if present within the project site. <ul style="list-style-type: none"> ▪ A worker environmental awareness training shall be conducted to inform onsite construction personnel regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat. 	At least two-weeks prior to deepening and widening of the borrow pit and commencement of ground-disturbing activities within grassland and vernal pools	Solano County, construction contractor, and RHR Compliance Officer	CDFW and USFWS	For work conducted between November 1 st and May 31 st , weekly monitoring by a qualified biologist; more frequent monitoring during qualifying rain events	

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<ul style="list-style-type: none"> A USFWS <u>and</u> CDFW-approved biologist will conduct a pre-construction survey of the project site no more than two weeks before commencement of project construction activities. When feasible, there will be a 50-foot no-disturbance buffer around burrows that provide suitable upland habitat for California tiger salamander. Burrows considered suitable for California tiger salamander will be determined by a qualified biologist, approved by USFWS <u>and</u> CDFW. All suitable burrows directly impacted by construction will be hand excavated under the supervision of a qualified wildlife biologist. <u>A small excavator or backhoe could be utilized to assist in burrow excavation, under the direction of a qualified wildlife biologist.</u> If California tiger salamanders are found, the biologist will relocate the organism to the nearest burrow that is outside of the construction impact area. For work conducted during the California tiger salamander migration season (November 1 to May 31), exclusionary fencing will be erected around the construction site during ground-disturbing activities after hand excavation of burrows has been completed. A qualified biologist will visit the site weekly to ensure that the fencing is in good working condition. Fencing material and design will be subject to the approval of the USFWS <u>and</u> CDFW. If exclusionary fencing is not used, a qualified biological monitor will be onsite during all ground disturbance activities. Exclusion fencing will also be placed around all spoils and stockpiles. For work conducted during the California tiger salamander migration season (November 1 to May 31), a qualified biologist will survey the active work areas (including access roads) <u>in mornings following measurable precipitation events each day that the 72-hour National Weather Service forecast predicts a 40 percent chance or greater of precipitation or after rain events of a tenth of an inch or greater.</u> Construction may commence once the biologist has confirmed that no California tiger salamander are in the work area. Prior to beginning work each day, underneath equipment and stored pipes greater than 1.2 inches (3 cm) in diameter will be inspected for California tiger salamander. If any are found, they will be allowed to move out of the construction area under their own accord. Trenches and holes will be covered and inspected daily for stranded animals. Trenches and holes deeper than 1 foot will contain escape ramps (maximum slope of 2:1) to allow trapped animals to escape uncovered holes or trenches. Holes and trenches will be inspected prior to filling. 				Any other monitoring requirements TBD by CDFW and/or USFWS	

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<ul style="list-style-type: none"> All food and food-related trash will be enclosed in sealed trash containers at the end of each workday and removed completely from the construction site once every three days to avoid attracting wildlife. A speed limit of 15 mph will be maintained on dirt roads. All equipment will be maintained such that there are no leaks of automotive fluids such as fuels, oils, and solvents. Any fuel or oil leaks will be cleaned up immediately and disposed of properly. Plastic monofilament netting (erosion control matting) or similar material will not be used at the Project site because California tiger salamander may become entangled or trapped. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 100 feet from aquatic habitat. If it is not feasible to store hazardous materials 100 feet from wetlands and the river channel, then spill containment measures will be implemented to prevent the possibility of accidental discharges to wetlands and waters. The applicant shall secure any necessary take authorization prior to project construction through formal consultation with USFWS pursuant to Section 7 of the ESA <u>and approval from CDFW and proper take authorization under CESA.</u> <p>Prior to commencement of ground-disturbing activities within suitable habitat for California tiger salamander in the Triangle (i.e., grassland and vernal pools within the landfill expansion area), the project applicant will implement the following measures to compensate for loss of California tiger salamander habitat.</p> <ul style="list-style-type: none"> The project applicant will provide suitable in-kind habitat that will be created, restored, and/ or set aside in perpetuity at a ratio of 3:1. Alternatively, credits will be purchased at a USFWS- and CDFW-approved conservation bank. Compensation plans will be subject to review and approval by USFWS and CDFW. All compensation will be acquired or secured prior to the beginning of ground disturbance. In-kind habitat compensation will occur prior to initiation of ground or vegetation disturbance activities. Aquatic habitat will be provided for damage or loss of aquatic habitat and upland habitat will be provided for damage or loss of upland habitat. Compensation will be accomplished through the following options: 1) acquire land, by itself, or possibly in conjunction with a conservation organization, State park, State Wildlife Area, National Wildlife Refuge, or local regional park that provides occupied habitat; 2) purchase the appropriate credit units at a USFWS- approved conservation bank; 3) restore habitat to support the Central California 					

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tiger salamander; or 4) other method as determined by USFWS and CDFW including participation within a HCP permit area.					
<p>Mitigation Measure 4.4-2b: Protection of Giant Garter Snake</p> <p>Prior to deepening and widening of the borrow pit and commencement of ground-disturbing activities within suitable aquatic (i.e., irrigation ditches) or upland habitat (i.e., grassland habitat) for giant garter snake in the Triangle, the project applicant will implement the following measures to avoid direct loss of giant garter snake if present within the project site.</p> <p>For projects or ground-disturbing activities with potential to disturb suitable aquatic or adjacent upland habitat for giant garter snake, the following measures will be implemented.</p> <ul style="list-style-type: none"> ▪ The applicant shall retain a qualified biologist to conduct a field investigation to delineate giant garter snake aquatic habitat within the project footprint and adjacent areas within 300 feet of the project footprint. Giant garter snake aquatic habitat includes agricultural ditches. A report summarizing the results of the delineation shall be submitted to the Solano County Department of Resource Management, <u>CDFW</u>, and <u>USFWS</u> within 10 days of the delineation. ▪ During construction, an approved biologist experienced with giant garter snake identification and behavior shall be onsite daily when construction activities within aquatic habitat or within 300 feet of aquatic habitat are taking place. The biologist shall inspect the project site daily for giant garter snake prior to construction activities. The biologist will also conduct environmental awareness training for all construction personnel working on the project site on required avoidance procedures and protocols if a giant garter snake enters an active construction zone. ▪ All construction activity within giant garter snake aquatic and upland habitat in and around the site shall be conducted between May 1 and September 15<u>October 1</u>, the active period for giant garter snakes. This would reduce direct impacts on the species because the snakes would be active and respond to construction activities by moving out of the way. ▪ If construction activities occur in giant garter snake aquatic habitat (i.e., irrigation ditches, the borrow pit, other habitat identified during the delineation of habitat), aquatic habitat shall be dewatered and then remain dry and absent of aquatic prey (e.g., fish and tadpoles) for 15 days prior to initiation of construction activities. If complete dewatering is not possible, the project applicant shall consult with CDFW and USFWS to determine what additional 	Prior to deepening and widening of the borrow pit and commencement of ground-disturbing activities within suitable aquatic (i.e., irrigation ditches) or upland habitat (i.e., grassland habitat) for giant garter snake in the Triangle.	Solano County, construction contractor, and RHR Compliance Officer	CDFW and USFWS	Daily when construction activities occur within 300 feet of aquatic habitat.	

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<p>measures may be necessary to minimize effects to giant garter snake. After aquatic habitat has been dewatered 15 days prior to construction activities, exclusion fencing shall be installed extending a minimum of 300 feet into adjacent uplands to isolate both the aquatic and adjacent upland habitat. Exclusionary fencing shall be erected 36 inches above ground and buried at least 6 inches below the ground to prevent snakes from attempting to move under the fence into the construction area. In addition, high-visibility fencing shall be erected to identify the construction limits and to protect adjacent habitat from encroachment of personnel and equipment. <u>Exclusionary fencing and high-visibility fencing will be made from material that will not cause entanglement (e.g., silt fencing and stakes with flagging and/or poly wire).</u> Giant garter snake habitat outside construction fencing shall be avoided by all construction personnel. The fencing and the work area shall be inspected by the approved biologist to ensure that the fencing is intact and that no snakes have entered the work area before the start of each work day. The fencing shall be maintained by the contractor until completion of the project.</p> <ul style="list-style-type: none"> ▪ If a giant garter snake is observed, the biologist shall notify CDFW and USFWS immediately. Construction activities will be suspended in a 100-foot radius of the garter snake until the snake leaves the site on its own volition. If necessary, the biologist shall consult with CDFW and USFWS regarding appropriate procedures for relocation. If the animal is handled, a report shall be submitted, including date(s), location(s), habitat description, and any corrective measures taken to protect giant garter snake within 1 business day to CDFW and USFWS. The biologist shall report any take of listed species to USFWS and CDFW immediately. Any worker who inadvertently injures or kills a giant garter snake or who finds one dead, injured, or entrapped must immediately report the incident to the approved biologist. ▪ All excavated steep-walled holes and trenches more than 6 inches deep shall be covered with plywood (or similar material) or provided with one or more escape ramps constructed of earth fill or wooden planks at the end of each work day or 30 minutes prior to sunset, whichever occurs first. All steep-walled holes and trenches shall be inspected by the approved biologist each morning to ensure that no wildlife has become entrapped. All construction pipes, culverts, similar structures, construction equipment, and construction debris left overnight within giant garter snake modeled habitat shall be inspected for giant garter snake by the approved biologist prior to being moved. 					

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
<ul style="list-style-type: none"> If erosion control is implemented on the project site, non-entangling erosion control material shall be used to reduce the potential for entrapment. Tightly woven fiber netting (mesh size less than 0.25 inch) or similar material will be used to ensure snakes are not trapped (no monofilament). Coconut coir matting and fiber rolls containing burlap are examples of acceptable erosion control materials. The applicant shall ensure that there is no-net-loss of giant garter snake habitat by compensating for loss of habitat at a ratio of 1:1, by purchasing credits from a USFWS and CDFW-approved conservation bank. <u>The selected conservation bank will be located within Solano County, if feasible (i.e., if applicable credits are available at conservation banks in Solano County).</u> Prior to construction, USFWS shall be consulted pursuant to Section 7 of the ESA. <u>Approval from CDFW and proper take authorization under CESA shall be obtained.</u> The activities may qualify to use the "Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California" (USFWS 1999). The Habitat Replacement & Restoration Guidelines (Appendix A), Items Necessary for Formal Consultation (Appendix B), Avoidance & Minimization Measures During Construction (Appendix C), and Monitoring Requirements (Appendix D) shall be followed. 					
<p>Mitigation Measure 4.4-2c: Vernal Pool Tadpole Shrimp and Vernal Pool Fairy Shrimp Habitat Compensation for Direct Effects</p> <p>The project applicant shall implement the following measures to minimize and compensate for loss of vernal pool fairy shrimp and vernal pool tadpole shrimp and suitable habitat prior to ground-disturbing activities.</p> <p>The following mitigation shall occur prior to ground-disturbing activities and approval of improvement plans for the lateral expansion and any project phase that would allow work within 250 feet of such habitat (or a reduced distance if established in the BO for the project), and before any ground-disturbing activity within 250 feet of the habitat (or a reduced distance if established in the BO for the project).</p> <ul style="list-style-type: none"> Habitat Preservation: The applicant, in consultation with USFWS, shall compensate for direct effects of the project on potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, and vernal pool tadpole shrimp at a ratio of 2:1, by purchasing vernal pool preservation credits from a USFWS-approved conservation bank. <u>The selected conservation bank will be located within Solano County if feasible (i.e., if applicable credits are available at conservation banks in</u> 	Prior to approval of improvement plans for the lateral expansion and any project phase that would allow work within 250 feet of vernal pools.	Solano County, construction contractor, and RHR Compliance Officer	USFWS	One time prior to construction; additional measures related to take authorizations and their frequency of monitoring shall be determined by USFWS	

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<p><u>Solano County</u>). Compensation credits shall be purchased prior to any ground-disturbing activities.</p> <ul style="list-style-type: none"> Habitat Creation: The applicant shall compensate for the direct effects of the project on potential habitat for vernal pool fairy shrimp, conservancy fairy shrimp, and vernal pool tadpole shrimp at a ratio of 1:1, by purchasing vernal pool creation credits from a USFWS-approved conservation bank. <u>The selected conservation bank will be located within Solano County if feasible (i.e., if applicable credits are available at conservation banks in Solano County).</u> For seasonal wetlands and drainages that shall be retained on the site (i.e., those not proposed to be filled), a minimum setback of at least 50 feet from these features will be avoided on the project site. The buffer area shall be fenced with high visibility construction fencing prior to commencement of ground-disturbing activities and shall be maintained for the duration of construction activities. A worker environmental awareness training shall be conducted to inform onsite construction personnel regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat. The applicant shall secure any necessary take authorization prior to project construction through consultation with USFWS pursuant to Section 7 of the ESA. Documentation of habitat preservation, habitat creation, and take authorization shall be provided to the County following approval by USFWS. 					
<p>Mitigation Measure 4.4-2d: Protection of Conservancy Fairy Shrimp Habitat From Indirect Effects</p> <p>The project applicant shall implement the following measures to minimize indirect effects to Conservancy fairy shrimp habitat prior to any ground-disturbing activities within or adjacent to the playa pool on the project site.</p> <ul style="list-style-type: none"> During the dry season, when the playa pool is completely devoid of water, the project applicant shall construct a permanent, impermeable barrier along the southern boundary of the new disposal area within the Triangle that overlaps the playa pool. The barrier will be designed to prevent stormwater runoff or sediment discharge between the project site and the playa pool and will remain in place after construction to prevent operation-related discharge into the playa pool. The barrier shall be constructed of material that prevents discharge into the playa pool, including but not limited to: an earthen levee, steel sheet piles, or concrete riprap. Final design plans shall be reviewed and approved by a qualified biologist and the County. 	During the dry season and prior to any ground-disturbing activities within or adjacent to the onsite playa pool (in Triangle area)	Solano County, construction contractor, and RHR Compliance Officer	Solano County and USFWS	One time	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
<ul style="list-style-type: none"> The project site will be graded in a manner that prevents surface water flow from the project site into the playa pool. A worker environmental awareness training shall be conducted to inform onsite construction personnel regarding the potential presence of listed species and the importance of avoiding impacts to these species and their habitat. 					
<p>Mitigation Measure 4.4-2e: Protection of Burrowing Owl</p> <p>Prior to ground disturbance, grading, or vegetation removal activities for the lateral expansion (Triangle), the project applicant will implement the following measures:</p> <ul style="list-style-type: none"> The applicant shall retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the project site. Surveys shall be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's <i>Staff Report on Burrowing Owl Mitigation</i> (CDFW 2012). If no occupied burrows are found, a letter report documenting the survey methods and results shall be submitted to CDFW and no further mitigation will be required. If an active burrow is found during the nonbreeding season (September 1 through January 31), the applicant shall consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan shall be developed, as described in Appendix E of CDFW's 2012 Staff Report. Burrowing owls shall not be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan shall include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat proximate to the burrows to be destroyed, that provide substitute burrows for displaced owls. If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer shall depend on the time of year and level disturbance as outlined in the CDFW Staff Report (CDFW 2012). The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented to ensure burrowing owls are not 	<p>Prior to ground disturbance, grading, or vegetation removal activities within the lateral expansion area (Triangle), conduct focused surveys for burrowing owls during one nonbreeding season (September 1 through January 31) and one breeding season (February 1 through August 31)</p>	<p>Solano County and RHR Compliance Officer</p>	<p>CDFW</p>	<p>If occupied burrows are found during focused surveys, during construction that occurs between September 1 and January 31 burrowing owls shall be evicted from the site. A burrowing owl exclusion plan shall be prepared and submitted to CDFW.</p> <p>If occupied burrows are found during focused surveys, during construction that occurs during the breeding season (February 1 through August 31), no disturbance of buffers shall occur and protective buffers shall be established. If no occupied burrows are present, no</p>	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
<p>detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved burrowing owl exclusion plan developed in accordance with Appendix E of CDFW's 2012 Staff Report.</p> <ul style="list-style-type: none"> ▪ If active burrowing owl nests are found on the site and are destroyed by project implementation, the project applicant shall mitigate the loss of occupied habitat in accordance with guidance provided in the CDFW 2012 Staff Report, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat shall be mitigated such that habitat acreage, number of burrows, and burrowing owls impacted are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. The applicant shall retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards: <ul style="list-style-type: none"> ▪ Mitigation lands shall be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide. ▪ If feasible, mitigation lands shall be provided adjacent or proximate to the site so that displaced owls can relocate with reduced risk of take. Feasibility of providing mitigation adjacent or proximate to the project site depends on availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity. ▪ If suitable habitat is not available for conservation adjacent or proximate to the project site, mitigation lands shall be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage shall be determined in consultation with CDFW. ▪ If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, 				further mitigation needed.	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success shall be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, shall include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.					
<p>Mitigation Measure 4.4-2f: Special-status and Other Nesting Bird Surveys and Avoidance</p> <p>Prior to any ground disturbances for the lateral expansion (Triangle), the applicant will implement the following measures to reduce impacts on special-status bird species:</p> <ul style="list-style-type: none"> To minimize the potential for disturbance or loss of tricolored blackbird, northern harrier, California black rail, or other bird nests, vegetation removal activities will only occur during the nonbreeding season (September 16-January 31). If all suitable nesting habitat (e.g., trees, grassland) is removed during the nonbreeding season, no further mitigation would be required. Prior to removal of any vegetation or any ground disturbance between February 1 and August 31 <u>September 15</u>, a qualified biologist will conduct preconstruction <u>protocol-level</u> surveys for <u>Swainson's hawk</u> nests within 0.5 mile of the project site for Swainson's hawks, and for black rail within suitable habitat. Protocol-level surveys for Swainson's hawks will follow the Swainson's Hawk Technical Advisory Committee's Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Protocol-level surveys for Swainson's hawk and black rail may require multiple site visits; some more than 30 days prior to project implementation. Additionally, preconstruction surveys will be conducted within 500 feet of the project site for other nesting raptors, and 100 feet for all other birds. The surveys will be conducted no more than 30 7 days before construction commences. If no active nests are found during focused surveys, no further action under this measure will be required. If active nests are located during the <u>protocol-level</u> and preconstruction surveys, the biologist will notify CDFW. Impacts to nesting Swainson's hawks, other raptors, or other nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during preconstruction raptor surveys. Project activity shall not commence within the buffer areas until 	Prior to removal of any vegetation or any ground disturbance between February 1 and September 15.	Solano County and RHR Compliance Officer	CDFW	<p>During construction that occurs between September 1 and January 31 remove trees when no active nests are present.</p> <p>7-14 days prior to ground disturbing or vegetation removal activities that occur between February 1 and August 31 conduct pre-construction surveys.</p> <p>During construction install appropriate buffers if occupied nests are present. If no occupied nests, no further mitigation needed.</p>	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
a qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. CDFW guidelines recommend implementation of 0.5-mile-wide buffer for Swainson's hawk, 500 feet for other raptors, and 100 feet for other nesting birds, but the size of the buffer may be adjusted if a qualified biologist and the project applicant, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist during and after construction activities shall be required if the activity has potential to adversely affect the nest.					
Mitigation Measure 4.4-2g: Swainson's Hawk Foraging Habitat Mitigation To mitigate for the loss of approximately 17 acres of suitable Swainson's hawk foraging habitat, the project applicant shall implement a Swainson's hawk mitigation plan consistent with the following but not limited to the requirements described below: <ul style="list-style-type: none"> ▪ Prior to site disturbance associated with the landfill expansion, such as clearing or grubbing within the Triangle, building, or other site improvements, or recordation of a final map, whichever occurs first, the project applicant shall acquire suitable Swainson's hawk foraging habitat as determined by CDFW. ▪ The project applicant shall preserve through conservation easement(s) or fee title one acre of similar habitat for each acre affected or shall purchase credits from a CDFW-approved mitigation bank in Solano County at the same ratio. ▪ The project applicant may transfer said easement(s) or title to CDFW and a third-party conservation organization as acceptable to CDFW. Such third-party conservation organizations shall be characterized by non-profit 5019(c)(3) status with the Internal Revenue Service. 	Prior to site disturbance associated with the landfill expansion, such as clearing or grubbing within the Triangle, building, or other site improvements, or recordation of a final map, whichever occurs first.	Solano County and RHR Compliance Officer		One time.	
Mitigation Measure 4.4-3: Wetland Delineation Verification, Permitting, and Compensatory Mitigation Prior to ground disturbance, grading, or vegetation removal activities within undeveloped areas of the project site (including ditches) the project applicant will implement the following measures: <ul style="list-style-type: none"> ▪ Wetlands and vernal pools are of special concern to resource agencies and are afforded specific consideration, based on Section 404 of the CWA and other applicable regulations. An updated delineation of waters of the United States or state, including wetlands that would be affected by the project, was completed by ICF in 2017 (ICF 2017). This delineation shall be submitted to and verified by USACE. If, based on the verified delineation, it is determined that fill of waters of 	Prior to ground disturbance, grading, or vegetation removal activities within undeveloped areas of the project site (including ditches).	Solano County and RHR Compliance Officer	U.S. Army Corp of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and CDFW	TBD by USACE, RWQCB, and CDFW	

Mitigation Measures	Timing of Initial Action	Implementing Party/Agency	Enforcement/Monitoring Party/Agency	Monitoring Frequency	Verification
<p>the United States or state would result from implementation of the project, authorization for such fill shall be secured from USACE through the 404 permitting process.</p> <ul style="list-style-type: none"> Any waters of the United States that would be affected by project development shall be replaced or restored on a "no-net-loss" basis in accordance with USACE mitigation guidelines (or the applicable USACE guidelines in place at the time of construction). In association with the Section 404 permit (if applicable) and prior to ground disturbance, grading, or vegetation removal activities within undeveloped areas of the project site (including ditches), Section 401 Water Quality Certification from the RWQCB shall be obtained. If it is determined that waters subject to jurisdiction by CDFW are present within the project site following the delineation of waters of the United States and state, and that site development would affect the bed, bank, or channel, a Streambed Alteration Notification will be submitted to CDFW, pursuant to Section 1600 et seq. of the California Fish and Game Code. If proposed activities are determined to be subject to CDFW jurisdiction, the project proponent will abide by the conditions of any executed agreement prior to ground disturbance, grading, or vegetation removal activities within undeveloped areas of the project site (including ditches). Several aquatic features onsite, including intermittent streams, would likely fall under the jurisdiction of CDFW. 					
4.6 Geology, Soils, Mineral, and Paleontological Resources					
<p>Mitigation Measure 4.6-1: Paleontological Resources</p> <p>Prior to initiation of earthmoving activities associated with the Triangle or deepening and widening of the borrow pit, Recology shall retain a qualified paleontologist to alert all construction personnel involved with earthmoving activities, including the site superintendent, about the possibility of encountering fossils. The appearance and types of fossils likely to be seen during construction will be described. Construction personnel will be trained about the proper notification procedures should fossils be encountered.</p> <p>If paleontological resources are discovered during earthmoving activities, the construction crew will be directed to immediately cease work in the vicinity of the find and notify the County. Recology will retain a qualified paleontologist that will be readily available for quick identification and salvage of fossils so that construction delays can be minimized. If large specimens are discovered, the paleontologist will have the authority to halt or divert grading and construction equipment while the finds are removed. The paleontologist will be responsible for implementing the following measures.</p>	Prior to initiation of earthmoving activities associated with the Triangle or deepening and widening of the borrow pit.	Solano County, construction contractor, and RHR Compliance Officer	Solano County	As needed/upon observance	

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<ul style="list-style-type: none"> ▪ In the event of discovery, salvage of unearthed fossil remains, typically involving simple excavation of the exposed specimen but possibly also plaster-jacketing of large and/or fragile specimens, or more elaborate quarry excavations of richly fossiliferous deposits ▪ Recovery of stratigraphic and geologic data to provide a context for the recovered fossil remains, typically including description of lithologies of fossil-bearing strata, measurement and description of the overall stratigraphic section, and photographic documentation of the geologic setting ▪ Laboratory preparation (cleaning and repair) of collected fossil remains to a point of curation, generally involving removal of enclosing rock material, stabilization of fragile specimens (using glues and other hardeners), and repair of broken specimens ▪ Cataloging and identification of prepared fossil remains, typically involving scientific identification of specimens, inventory of specimens, assignment of catalog numbers, and entry of data into an inventory database ▪ Transferal, for storage, of cataloged fossil remains to an appropriate repository ▪ Preparation of a final report summarizing the field and laboratory methods used, the stratigraphic units inspected, the types of fossils recovered, and the significance of the curated collection. 					