

GCID – Sites Reservoir Project RDEIR/SDEIS

Preliminary Environmental Effects Related to
GCID Facilities

July 9, 2021



Agenda

- Provide Second Briefing on Preliminary Findings Related to GCID Facilities – Non-Biological Resources
 - General Overview of the RDEIR/SDEIS Contents
 - Discuss Project Description Components Related to GCID Facilities
 - Preliminary Environmental Effects Related to GCID Facilities Other than Biological Resources
 - Other Related Topics
 - Renewable, Carbon-free Power
 - Net Zero Greenhouse Gas Emissions
 - Funks and Stone Corral Creek Releases

RDEIR/SDEIS Contents

- 34 Chapters and 50 Appendices
 - Introductory Chapters
 - Ch. 1 - Introduction
 - Ch. 2 - Project Description and Alternatives
 - Ch. 3 - Approach to Environmental Analysis
 - Ch. 4 - Regulatory and other Approvals
 - Resources Area Chapters
 - Ch. 5 to Ch. 32
 - Closing Chapters
 - Ch. 33 - Consultation and Coordination; List of Preparers
 - Ch. 34 - EIR/EIS Document Distribution

RDEIR/SDEIS Resource Analysis Chapters

- Ch. 5 - Surface Water Resources
- Ch. 6 - Surface Water Quality
- Ch. 7 - Fluvial Geomorphology
- Ch. 8 - Groundwater Resources
- Ch. 9 - Vegetation and Wetlands
- Ch. 10 - Wildlife Resources
- Ch. 11- Aquatic Resources
- Ch. 12 - Geology and Soils
- Ch. 13 - Minerals
- Ch. 14 - Land Use
- Ch. 15 - Agricultural Resources
- Ch. 16 - Recreation
- Ch. 17 - Energy
- Ch. 18 - Navigation, Transportation and Traffic

RDEIR/SDEIS Resource Analysis Chapters (cont)

Ch. 19 - Noise

Ch. 20 - Air Quality

Ch. 21 - Greenhouse Gases

Ch. 22 - Cultural Resources

Ch. 23 - Tribal Cultural Resources

Ch. 24 - Visual Resources

Ch. 25 - Population and Housing

Ch. 26 - Public Services and Utilities

Ch. 27 - Public Health and Environmental Hazards

Ch. 28 - Climate Change

Ch. 29 - Indian Trust Assets

Ch. 30 - Socioeconomics and Environmental Justice

Ch. 31 - Cumulative Impacts

Ch. 32 - Other Required Analyses (includes Growth Inducement)

Project Description Components Related to GCID Facilities

- Includes the following improvements (page 2-9; Figures 2-7+)
 - New Main Canal headgate structure
 - Replace Walker Creek siphon
 - Replace Willow Creek siphon
 - Union Pacific Railroad siphon improvements (adding an additional barrel)
 - Main Canal improvements between MP 26 to MP 41.3 to increase freeboard
 - Main Canal road improvements from Willow Creek siphon to Funks Creek siphon for all weather road surface
- Recognizes that specific details to follow
- Conservatively assumes upgrades needed

Environmental Effects Related to GCID Facilities

- Biological Effects Previously Discussed
 - Vegetation and Wetlands
 - Wildlife Resources
- Non-Biological Effects Associated with GCID Facilities
 - Surface Water Quality
 - Groundwater Resources
 - Geology and Soils
 - Energy
 - Noise
 - Navigation, Traffic and Transportation
 - Cultural Resources
 - Tribal Cultural Resources
 - Visual Resources
 - Wildfire

Surface Water Quality

- Surface Water Quality – Less than Significant
 - GCID Main Canal improvements would likely occur during the winter (i.e., wet season). The terrain in the areas where this construction would occur is relatively flat, which would reduce the potential for erosion and runoff.
 - In-channel construction would be required for upgrades to the GCID system and canal head gate structure and TRR East and West pipelines; BMPs will minimize water quality impacts.
- Will be targeting release temperatures suitable for rice
- Worked with UC Davis Extension on mercury and arsenic and don't see any concerns for rice
- Variable I/O Tower intake levels will allow flexibility to adjust temperature and avoid water quality issues (HABs, high level of metals, etc)

Groundwater Resources

- Groundwater – Less than Significant
 - Water used for pipeline compression and dust control during construction of conveyance facilities would be supplied from the GCID Main Canal and would not affect groundwater.
 - Some of the GCID Main Canal would be dewatered during siphon improvements. This construction would occur during the regularly scheduled annual maintenance period for the canal and would not adversely affect groundwater flow directions or quality.
 - Construction of TRR East and West, TRR East and West pipelines, and pipelines to convey water during TRR East and West construction may require dewatering but would not result in a violation of water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality.
 - Reduced infiltration from the TRR East or TRR West would not be considered a significant change when compared the surrounding landscape

Geology and Soils

- Geology and Soils – Less than Significant
 - GCID system upgrades, TRR East PGP and pipelines would not be affected by surface fault rupture because no known active faults are present in the vicinity.
 - Construction of the new GCID head gate and replacement of three GCID Main Canal siphons are located in areas of low to moderate ground shaking; none of these structures would be considered habitable and would not cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.
 - The TRR West under Alternative 2 would involve a slightly greater risk of landsliding compared to TRR East under Alternatives 1 and 3 because it would require excavation into a hillslope to form a steep cut slope on the north side of the reservoir. Impacts would be minimized through implementation of applicable design criteria.

Geology and Soils (Paleontology)

- Paleontology – Less than significant
 - For the GCID Main Canal improvements, the new head gate would involve excavation and pile driving but would not damage paleontological resources because they would involve shallow disturbance, small areas of disturbance, or geologic units that are generally too young to contain fossils.
- Paleontology – Significant and Unavoidable
 - Construction of the TRR East would require extensive soil amendment using cement deep soil mixing (CDSM) that would damage paleontological resources in those locations where paleontologically sensitive units are present.

Energy

- Energy – Less than Significant
 - The pumps used for the TRR PGP would have a rated pump efficiency of 89%; electrical equipment, including pumping and generation equipment, and electrical equipment in buildings and other facilities would be designed and operated to conform to energy efficiency standards. Construction and operation impacts would be less than significant.

Noise

- Noise – Less than Significant
 - Sensitive receptors are located within 100 feet of the railroad siphon, and a residential area is adjacent to approximately 1 mile of GCID Main Canal system upgrades. BMPs related to noise would be implemented to reduce short term construction noise.
 - Construction noise associated with TRR Reservoir, TRR PGP, and TRR pipelines is unlikely to be noticeable above ambient sound levels by sensitive receptors because they are located more than 1 mile away from the noise-generating activity; for the same reason, operational noise associated with pumping is also unlikely to be noticeable.

Navigation, Traffic and Transportation

- Navigation, Traffic and Transportation – Less Than Significant
 - Anticipated vehicle trips related to construction at the GCID Improvements would be limited to 28 employee and 25 haul truck trips per day.
 - No navigational impacts would occur because construction and operations activities at GCID facilities would not occur within a navigable waterway.

Cultural Resources

- Cultural Resources – Significant and Unavoidable
 - The GCID Main Canal historic property boundary is the structure’s footprint, and its period of significance is circa 1887 to 1920, the dates of its original design and construction. The character defining features of the GCID Main Canal property conveying its historical significance under NRHP/CRHR Criteria A/1 are its alignment, its location in a generally rural and agricultural setting, and its continued use as, and ability to function as, a gravitational water conveyance structure serving the GCID market.
 - Portions of the GCID Main Canal historic property are located at the TRR East, along the canal alignment, and at the siphons near Willows. Alternatives 1 and 3 would construct the TRR East adjacent to the GCID Main Canal structure. Alternatives 1 and 3 would also construct a conveyance connection between the TRR East and the GCID Main Canal. This construction would not physically change the canal’s location, setting, or ability to convey water but would change the materials, design, and workmanship of the property.
 - Known cultural resources occur in the vicinity of the proposed TRR facilities and could be encountered during constructive associated with all Project facilities.

Tribal Cultural Resources

- Tribal Cultural Resources – Significant and Unavoidable
 - Tribal Cultural Resources are assumed to occur in the vicinity of proposed TRR facilities that could be affected during Project construction. Efforts will be made to avoid and/or minimize effects.

Visual Resources

- Visual Resources – Less than Significant
 - Construction activities associated with GCID system upgrades would be temporary and introduce heavy equipment and associated vehicles, including backhoes, compactors, tractors, and trucks, into the viewsheds of all viewer groups. This equipment is consistent with views of heavy equipment used in adjacent farming operations and during operations and maintenance of existing facilities.
 - Construction of most of the project features would blend with the existing landscape, would not affect sensitive viewers, or would include implementation of BMPs to minimize visual changes.

Wildfire

- Wildfire – Less than Significant
 - Construction and operation of new infrastructure, such as roads, transmission lines, and substations, would not exacerbate fire risk. Incorporation of BMPs in construction and management plans would alert both construction and operation workers to potential ignitable materials and prepare the construction site by implementing required fire suppression procedures and tools.

Other Related Topics – Renewable, Carbon Free Power

- Targets of purchasing Project's operations power needs from renewable, carbon-free sources :
 - At least 60% from the start of operations to 2045
 - Starting in 2045, of 100%
- Does not apply to
 - Any operational power needs attributable to Reclamation's participation, including the conveyance and pumping of Incremental Level 4 Refuge water supply
 - Any non-Project power needs (GCID regular power)

Other Related Topics – Funks and Stone Corral Creek Releases

- Fish and Game Code 5937

The owner of any dam shall allow sufficient water at all times to pass through a fishway, or in the absence of a fishway, allow sufficient water to pass over, around or through the dam, to keep in good condition any fish that may be planted or exist below the dam. During the minimum flow of water in any river or stream, permission may be granted by the department to the owner of any dam to allow sufficient water to pass through a culvert, waste gate, or over or around the dam, to keep in good condition any fish that may be planted or exist below the dam, when, in the judgment of the department, it is impracticable or detrimental to the owner to pass the water through the fishway.

Other Related Topics – Funks and Stone Corral Creek Releases (cont)

- Funks Creek from Golden Gate Dam to Funks Reservoir
- Not sufficient information on flows, fisheries, habitat to determine releases
- Addressing through:
 - Design currently includes release from 0 to 100 cfs
 - Will be refined in the future based on study below
 - Study effort on fish assemblage, channel capacity, existing habitat to determine future releases
 - Planned for Amendment 3 to refine design ASAP
 - Would prepare Funks and Stone Corral Creeks Ops Plan post study
- Releases made in consideration of Projects flood control benefits and TC Canal operations

GCID Approval for Release of the RDEIR?

- 2.5. GCID and TCCA Operations: The Authority Members anticipate that the Sites Reservoir Project will be within or adjacent to GCID and/or TCCA districts with at least a portion of the conveyance of water into the reservoir to be accomplished by wheeling water through GCID's Main Canal and/or the Tehama-Colusa Canal. The Authority shall not have the power, except with the express written consent of GCID and/or TCCA, depending on which facilities are at issue, to enter into any agreements or otherwise take any action that will, directly or indirectly, decrease, restrict, or in any manner alter, modify or limit water rights, water supplies or contractual entitlements to water of GCID and/or TCCA (and, in the case of TCCA, the water agencies it serves) or the operations of their facilities or any facilities they operate under contract.
- Approval needed? If so, what does this look like?

Questions

