



Clean Water Act Section 401 Water Quality Certification Application

Please refer to the “Clean Water Act Section 401 Water Quality Certification Application Guidance” document for assistance with completing this application.

A. Pre-Filing Meeting	
Please provide the date that a pre-filing meeting was requested from Nevada Division of Environmental Protection (NDEP) Bureau of Water Quality Planning (BWQP).	June 30 th , 2025
<i>Note: If a pre-filing meeting has not been requested, please schedule a pre-filing meeting with NDEP BWQP.</i>	

B. Contact Information	
Project Proponent Information	
Company Name: Carson Valley Conservation District	Address: 1702 County Rd., Suite A
Applicant Name: Richard Wilkinson	City: Minden
Phone: 775-782-3661	Fax: N/A
Email: Richard.Wilkinson@nv.nacdnet.net	State: Nevada
	Zip Code: 89423
Agent Information	
Company Name: Carson Valley Conservation District	Address: 1702 County Rd., Suite A
Agent Name: Richard Wilkinson	City: Minden
Phone: 775-782-3661	Fax: N/A
Email: Richard.Wilkinson@nv.nacdnet.net	State: Nevada
	Zip Code: 89423

C. Project General Information					
Project Location					
Project/Site Name: Two Ranch Rd #2 – Genoa Phase 4 2025 River Restoration Project		Name of receiving waterbody: Carson River			
Address: No physical address. APN: 1319-11-002-017		Type of waterbody present at project location (<i>select all that apply</i>): ☒ Perennial River or Stream ☐ Intermittent River or Stream ☐ Ephemeral River or Stream ☐ Lake/Pond/Reservoir ☐ Wetland ☐ Other: _____			
City: Genoa					
County: Douglas					
State: Nevada					
Zip Code: 89411					
Latitude (UTM or Dec/Deg): 39.0025717		Longitude (UTM or Dec/Deg): -119.8232531			
Township: 13N	Range: 19E	Section: 11	¼ Section:		

Project Details

Project purpose:	The purpose of this project is to restore and stabilize a highly eroded section of the Carson Riverbank at site Two Ranch Rd #2, one of six sites proposed as part of the Genoa Phase 4 River Restoration Project in Douglas County, NV. Excess instream materials deposited in the channel during flooding events in 2017 and 2023 will be used to reshape the banks and prevent erosion and degradation during future high-flow events. Some material will also be cut from the top of the bank to use for reshaping the bank. Approximately 462 linear feet along the project riverbank will be reshaped to a 3 to 1 slope with the intent to create a gradual connection of the river to the floodplain. Two swales will be installed along the bank to allow for stepped overflow below and above the ordinary high-water mark (OHWM). Instream materials will be used as fill to reshape the bank and will be protected and reinforced by rock riprap with interspersed willow plantings on the bank toe and lower slope and bioengineering applications on the upper slope. Bioengineering and seeding applications will be used on the rock slope, terraces and upland areas with the aim of restoring vegetation at the site.
Describe current site conditions: Attachments can include, but are not limited to, relevant site data, photographs that represent current site conditions, or other relevant documentation.	This site was identified by CVCD in 2024 for priority restoration action as part of the Genoa Phase 4 project. Flood damage in 2017 and 2023, exacerbated by seasonal high flows in other years, has significantly eroded the riverbank at the bend and adjacent straights on the south and west banks. The project length is approximately 462 linear feet, and the average current bank height is 8 feet. Site characteristics include: vertical to concave banks, noxious and nuisance weed populations, noticeable sedimentation and turbidity of the river, cottonwoods trees which are leaning and falling into the river, and the landowner's boundary fence is undercut and has fallen into the river on the northwest end of the project. See attached initial photo monitoring reports.
Describe the proposed activity including methodology of each project element:	Upon project initiation, BMPs will be installed, and the site will be dewatered in order to work in the channel without creating a discharge. Live flows will be diverted towards the opposite bank or center of the work area by excavating a channel through or around the existing in-stream bar and then diverting flows into that excavated channel through the installation of k-rails or other BMP applications. Temporary impacts resulting from dewatering will include a 486 linear-foot channel (0.17 acres surface area and 567 CY of instream material temporarily dredged) and 76 linear feet of k-rails or other approved BMP applications will be placed as temporary fill. The damaged riverbank will be re-graded and restored by cutting from the proposed crest lines and through utilization of instream material as fill which will be dredged from specified borrow areas on attached Engineered Drawings. The project length is 462 linear feet. It is estimated that 11 cubic yards of material will be cut from the banks below the OHWM and that

	an additional 757 cubic yards of dredged instream material will be used as permanent bank fill. A total of 582 cubic yards of large riprap rock (Classes 300, 550, 700 and 900) will be placed at the project site as permanent fill. Rock will be placed at a height of 3 feet along the toe and lower slope to reinforce the shaped bank, prevent future erosion, and allow for sediment deposition in between the rock spaces. There will be no import or export of instream soil materials for this project. The project construction contractor will utilize the following equipment for the specified actions: a dozer to push in-stream materials to the bank, an excavator to load and place materials, a loader to haul and drop materials, haul trucks to transport materials to and from the site, a street sweeper to remove dirt tracked out onto roadways, water trucks for dust control, and a backhoe for similar functions of the loader and excavator. CVCD will apply bioengineering methods to stabilize and protect the banks within and above the riprap rock on the toe and upper slopes (willow poles and fascines). A stinger will be utilized to plant willow poles to a depth of ~3 feet. Coir fabric will be utilized on the upper slopes to protect from soil erosion. Bioengineering materials are estimated to be approximately 24 CY. The District plans to start this work as soon as possible and during the driest time of the year, likely between October and December, depending upon authorization of all permits. This work is proposed to be completed under a CWA 404 Letter of Permission Procedure (LOP) with the US Army Corps of Engineers (USACE). This pathway for authorization has been recommended by USACE due to the following project characteristics: • Risk of discharge of dredged or fill material into waters of the US (WOTUS) • Project will have minimal or less than significant impacts on the human environment under NEPA • Project will include dredging of more than 25 cubic yards of instream material • Project does not meet the terms of NWP 45 or NWP 13 • Project does not exceed one acre of permanent loss of WOTUS or 1,000 linear feet of streambed
Estimate the nature, specific location, and number of discharge(s) expected to be authorized by the proposed activity:	The District does not anticipate any significant discharges as construction is planned during the driest time of the year. This section of the river often dries out during the winter so that water levels are extremely low, however this is dependent on annual precipitation and runoff levels. A minor discharge is possible if water levels unexpectedly come up during construction or when first creating the dewatering channel. Responsible dewatering practices and the application of BMPs which will be determined in the construction contract will help minimize any potential discharges.

Provide the date(s) on which the proposed activity is planned to begin and end and the approximate date(s) when any discharge(s) may commence:	The project start date will be highly dependent upon the timing of authorization of permits by all regulatory agencies. Preferred timeframe: October – December 2026. Anticipated completion of heavy earthwork on this timeline is Nov. 30th. A possible minor discharge may occur in October or November when the project begins and a dewatering channel is constructed. This risk of discharge would be dependent upon water levels. Based on the previous winter's snowpack (2025-2026), CVCD anticipates that Carson River water levels will be low in September and October of 2026, which would allow for construction with low risk of a discharge. If permitting is delayed, construction may be delayed until December 2026 – February 2027, if winter conditions are mild and water levels remain low. If permitting is not authorized in time for construction in the fall and winter of 2026-2027, or if water levels do not allow for construction during this time period, the District will plan to push construction until the fall of 2027.	
Provide a list of the federal permit(s) or license(s) required to conduct the activity which may result in a discharge into regulated waters (see mandatory attachments):	USACE CWA 404 Letter of Permission Procedure (LOP)	
Provide a list of all other federal, state, interstate, tribal, territorial, or local agency authorizations required for the proposed activity and the current status of each authorization:	NV Division of State Lands Authorization to Use State-Owned Submerged Lands (submitted) NDEP Temporary Working in Waterways (not yet submitted) Landowner Right of Entry Permit (complete) CVCD holds a General Permit for Routine Maintenance Activities	
Total area of impact to regulated waterbodies (acres):	1.14 acres	
Total distance of impact to regulated waterbodies (linear feet):	462 linear feet (bank construction) 486 linear feet (temporary dewatering channel)	
Amount excavation and/or fill discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary:	Permanent:
	K-rails = 9 CY/0.004 acres/76 linear feet	Bank cut = 11 CY Bio. Materials = 24 CY Riprap rock = 582 CY
Amount of dredge material discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary:	Permanent:
	Dewatering channel = 567 CY/0.17 acres/486 ln ft	In-stream material = 757 CY/up to 0.28 acres/462 ln ft
Describe the reason(s) why avoidance of temporary fill in regulated waters is not practicable (if applicable):	The avoidance of temporary fill in regulated waters is not practicable due to the necessity of dewatering the construction site in order to avoid a discharge. K-rails or other BMP applications will be necessary to dewater the site and will be temporarily used during construction and removed afterwards. The movement of instream material across the channel is considered temporary fill and cannot be avoided in order to complete the project. Installation of BMPs will also contribute to temporary fill and cannot be avoided due to the necessary protection of water quality standards.	

Describe the Best Management Practices (BMPs) to be implemented to avoid and/or minimize impacts to regulated waters:

Examples include sediment and erosion control measures, habitat preservation, flow diversions, dewatering, hazardous materials management, water quality monitoring, equipment or plans to treat, control, or manage discharges, etc.

The District will require contractors to bring clean and leak free equipment to and from the project site. In addition, extensive BMPs for mitigation of discharges will be in place and stated within all contract documents. The proposed work will take place at the driest time of the year and if necessary, will dewater the site to ensure that the project does not create a discharge and increase turbidity of the river. Project boundaries and all desirable vegetation will be marked, and critical areas will be avoided to protect resources. The District will require contractors to water for dust control and sweep for any materials tracked out onto access roads. Reseeding with native or desirable vegetation will take place on all areas impacted by equipment and the staging of materials. Contractors will not work in water above a certain CFS (usually 600 CFS, written into contract) to not create significant discharge; the contractor has the flexibility to not work if not comfortable with water level and flows. Contractors will follow BMP guidelines determined within the contract and ensure that the storage of stockpiles and staging of equipment is at least 100ft from the OHWM. Stockpiles will likely only be used for rock riprap. Instream material will be pushed from the center of the riverbed over to the bank using the contractor's choice of equipment (loader, excavator, backhoe, and/or dozer). CVCD prefers the use of a loader, but this does not work with fine/silty material. Material that is moved that day will likely be utilized that day. CVCD requires that stored materials be wrapped, and that silt fencing and filtration waddles are utilized during storage.

The construction contractor is responsible for obtaining the approved SWPP for the proposed project. A construction contractor has not yet been selected for this project. An approved SWPP will be obtained prior to the start of work, and this will define specific work erosion control measures. Typical erosion control measure that will be required include:

- Limited site access.
- Stockpiles will have perimeter controls such as silt fencing and/or filtration wattles.
- Erosion prevention by implementing any or a combination of soil stabilization practices such as mulching, surface roughening, and temporary silt fencing.
- Work will be done during appropriate weather conditions and will shut down work during storms when wind, rain, or snow would cause increased site erosion due to active work.

Project boundaries will be marked to ensure that the minimum area necessary for project completion will be affected by construction activities. The site will likely be dewatered only once for construction. The low elevation of the streambed will be determined during the engineering survey and instream material will be dredged to no lower than the lowest current elevation. Attached Engineered Drawings depict the general

	conceptual plan for dewatering. The construction contractor will determine the final method for dewatering and will submit a plan to CVCD, with a seven-day review period. The most common method is to use K-rails to block upstream with BMP materials installed downstream. The contractor may choose to terminate the backend of the project into a sand and gravel pile. A dewater trench will be utilized downstream and will not reduce the elevation of the streambed. K-rails or other approved BMP applications will be used to direct materials into the trench, and a buffer will be left to keep flows in-channel. A small discharge may occur when first creating the dewatering channel. However, the District will utilize silt fencing and filtration waddles to capture any downstream sediment flow. CVCD estimates that the site will be dewatered for a maximum of 6 weeks; this timeframe is dependent upon weather and the number of personnel available to work under the construction contractor and will likely be less than the maximum allotted. The method of removing temporary fill used during dewatering will be to use a barrier lift attached to a chain attached to an excavator or loader bucket. The dewatering channel will be backfilled. There will be no piles of material remaining, and the area will be clear of debris. The removal of the diversion will allow for the return of the live stream flows to the original low flow channel. The work will be ordered so that equipment will not be driving through live stream flows.
Describe how the activity has been designed to avoid and/or minimize adverse effects, both temporary and permanent, to regulated waters:	CVCD has been implementing riverbank stabilization projects for over two decades and has continually worked to ensure that the bidding, contracting, and construction process includes detailed requirements to avoid adverse effects to regulated waters. Contract documents will specify the requirements mentioned above and CVCD staff will ensure that any known violations will result in the stoppage of all work until the violation is corrected. Safety of personnel and the preservation of regulated waters within and adjacent to the work site are of utmost importance. All the above-mentioned BMPs and work requirements will be in place to ensure the minimization of adverse effects.
Describe any compensatory mitigation planned for this project (if applicable):	CVCD has determined that compensatory mitigation is not necessary for this project as actions will not result in potentially significant impacts on the human environment. CVCD is responsible for ensuring that the project is designed to avoid and minimize effects to the aquatic environment to the maximum extent practicable. The project will not result in the loss of WOTUS, wetlands, stream bed, or aquatic resource functions.

D. Signature

Name and Title (Print): Richard Wilkinson, District Manager	Phone Number: (775) 782-3661	Date: 6/16/2026
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X



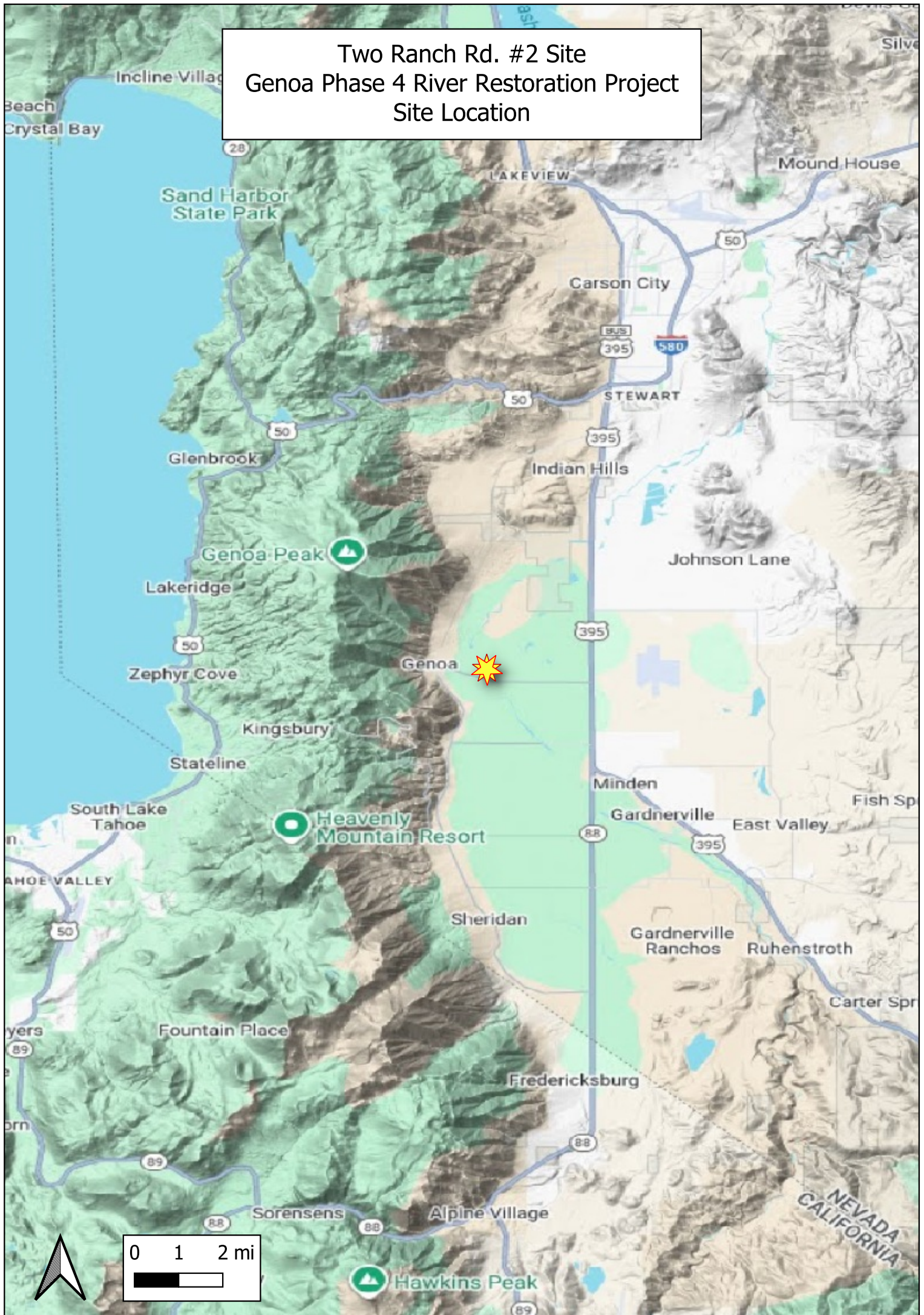
Signature of Responsible Official

Mandatory Attachments:

- **Federal Permit or License Application** - A copy of the federal permit or license application and any readily available water quality-related materials that informed the development of the federal license or permit application.
- **Site Map** - A map or diagram of the proposed project site including project boundaries in relation to regulated waters, local streets, roads, and highways.
- **Engineered Drawings** - Engineered drawings are preferred to be submitted at the 70% design level. If only conceptual designs are available at the time of application, plans for construction should be submitted prior to the start of the project. Specific locations of the proposed activities and details of specific work elements planned for the project should be identified (e.g., staging areas, concrete washouts, perimeter controls, water diversions, or other BMPs).

Submit the completed application materials to NDEP (ndep401@ndep.nv.gov) with the appropriate U.S. Army Corps of Engineers Regulatory Office copied on the communication (<http://www.spk.usace.army.mil/Missions/Regulatory/Contacts/Contact-Your-Local-Office/>).

Two Ranch Rd. #2 Site
Genoa Phase 4 River Restoration Project
Site Location



Two Ranch Rd #2 Genoa Phase 4 River Restoration Project Site Work Elements

Carson River

Legend

- Project work area
- Staging area
- Haul route/ingress/egress

0 250 500 ft

Genoa Lane

Photo Monitoring Report

TWO RANCH RD #2, CARSON RIVER
CARSON VALLEY CONSERVATION DISTRICT
GENOA PHASE 4 RIVER RESTORATION PROJECT
5/29/2026 PPRECONSTRUCTION PHOTOS

Two Ranch Rd #2 Photo Monitoring
Genoa Phase 4 2025 River Restoration Project
Carson Valley Conservation District

3

2

1

Legend

● Photo monitoring waypoints

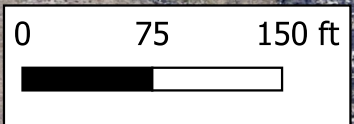


Photo monitoring waypoint 1: Garmin point: 39.002154, -119.822991. Looking upstream.

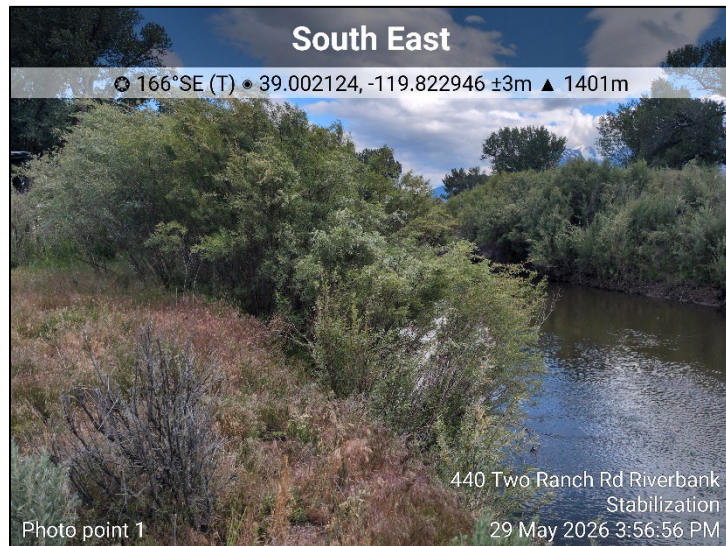


Photo monitoring waypoint 1: Garmin point: 39.002154, -119.822991. Looking downstream.



Photo monitoring waypoint 2: Garmin point: 39.002461, -119.823198. Looking upstream.



Photo monitoring waypoint 2: Garmin point: 39.002461, -119.823198. Looking downstream.

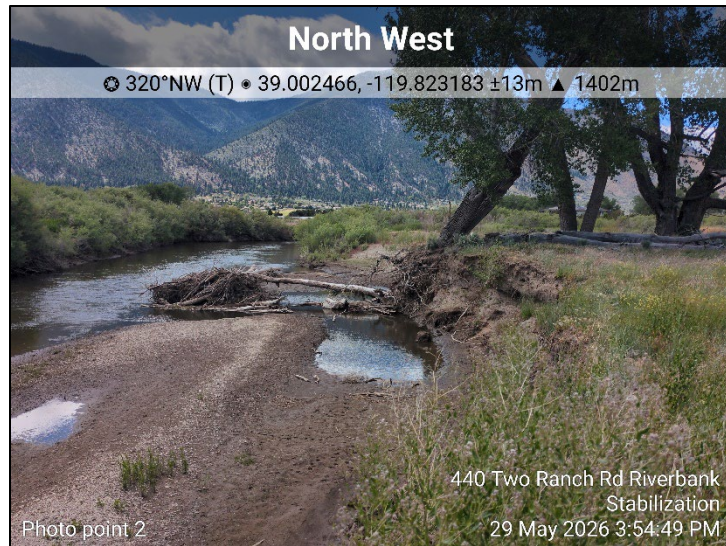


Photo monitoring waypoint 3: Garmin point: 39.002905, -119.823625. Looking upstream.



Photo monitoring waypoint 3: Garmin point: 39.002905, -119.823625. Looking downstream.



Panoramic 1: Photo taken from upstream end of project, looking downstream.



Genoa Phase 4 2025 River Restoration Project - Impacts Table
Carson Valley Conservation District

Area	USACE	Impact Duration	Impact Description	Linear Feet	Area (acres)	Cubic Yards Fill	Cubic Yards Dredge/Cut
Two Ranch Rd. #2	LOP	Temporary	Dewatering trench	Channel = 486 K-rails = 76	Channel = 0.17 K rails = 0.004	Channel = 567 K-rails = 9	Channel = 567
			Pushing instream material	462	0.33	-	-
		Permanent	Bank stabilization	462	0.36	Riprap = 582 Bio. materials = 24 Bank fill = 768	Bank cut = 11
			Borrow areas	-	0.28*	-	Instream material = 757
Total Site 3 Area:					1.14		

* Note: Borrow area acreages cover all potential areas where instream material may be dredged. Only enough of this acreage will be dredged to supply the specified instream material.

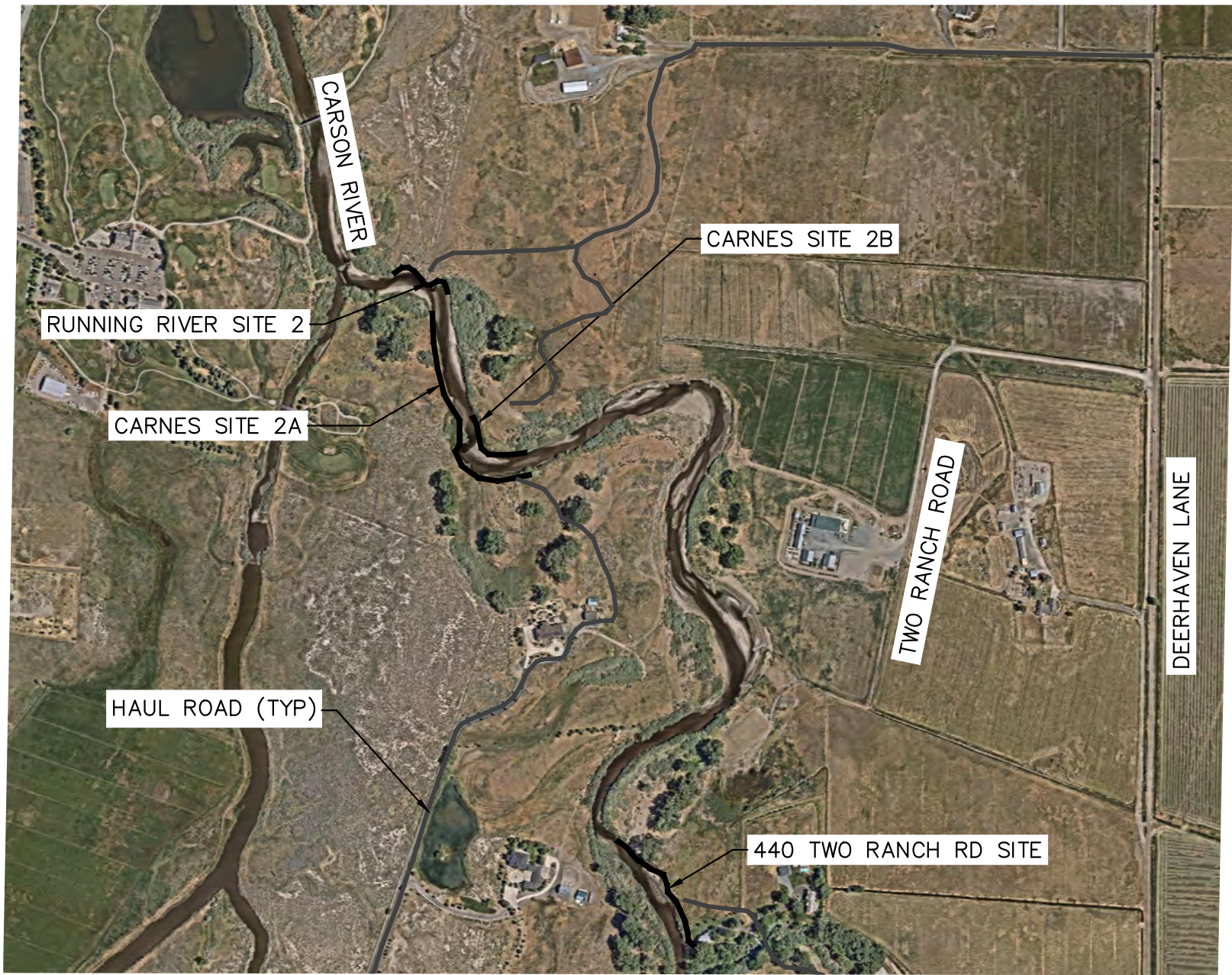
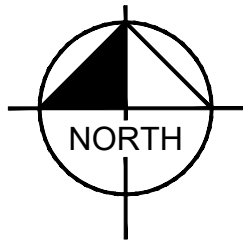
GENOA PHASE IV 2025 CARSON RIVER RESTORATION PROJECTS

CARSON VALLEY CONSERVATION DISTRICT

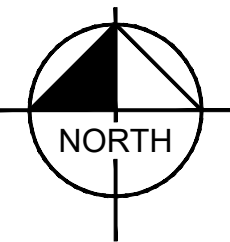
AFFECTED PROPERTIES

APNS 1319-03-810-001, 1319-11-001-013, 1319-11-001-015, 1319-11-002-017, 1319-11-002-032, 1319-11-002-014

SITE MAP — N.T.S.



VICINITY MAP — N.T.S.



SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
C1.0	COVER SHEET
C2.0	NOTES, LEGENDS & ABBREVIATIONS
C3.0	RUNNING RIVER 2 SITE AND GRADING PLAN
C3.1	CARNES 2 SITE AND GRADING PLAN
C3.2	440 TWO RANCH RD 2 SITE AND GRADING PLAN
C4.0	DETAILS
C5.0	440 TWO RANCH 2 DEWATERING & TEMPORARY EROSION CONTROL PLAN
C5.1	CARNES 2 DEWATERING & TEMPORARY EROSION CONTROL PLAN
C5.2	RUNNING RIVER 2 DEWATERING & TEMPORARY EROSION CONTROL PLAN

PROJECT CONTACTS

Kimley»Horn

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
7900 RANCHARRAH PARKWAY
RENO, NV 89511 SUITE 100
CONTACT: SHAKER GORLA, P.E., CFM
PHONE: (775) 453-6972

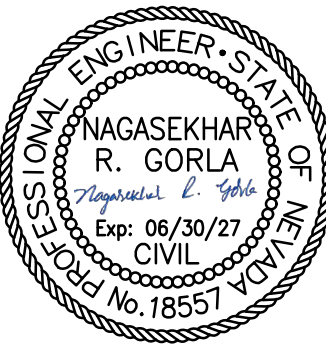
CARSON VALLEY CONSERVATION DISTRICT
1702 COUNTY ROAD, SUITE A
MINDEN, NV 89423
CONTACT: RICHARD WILKINSON
PHONE: (775) 782-3661

ENGINEER'S STATEMENT

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE BOARD OF COUNTY COMMISSIONERS CONDITIONS OF APPROVAL ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, COUNTY ORDINANCES, AND CODES. IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND THE COUNTY CODES, THE COUNTY CODES SHALL PREVAIL. IN THE EVENT OF A CONFLICT FOR THE DRY UTILITY PLANS, CONFORMANCE WITH THE COUNTY CODES AND APPLICABLE STATE AND NATIONAL UTILITY CODES SHALL PREVAIL.



Kimley»Horn
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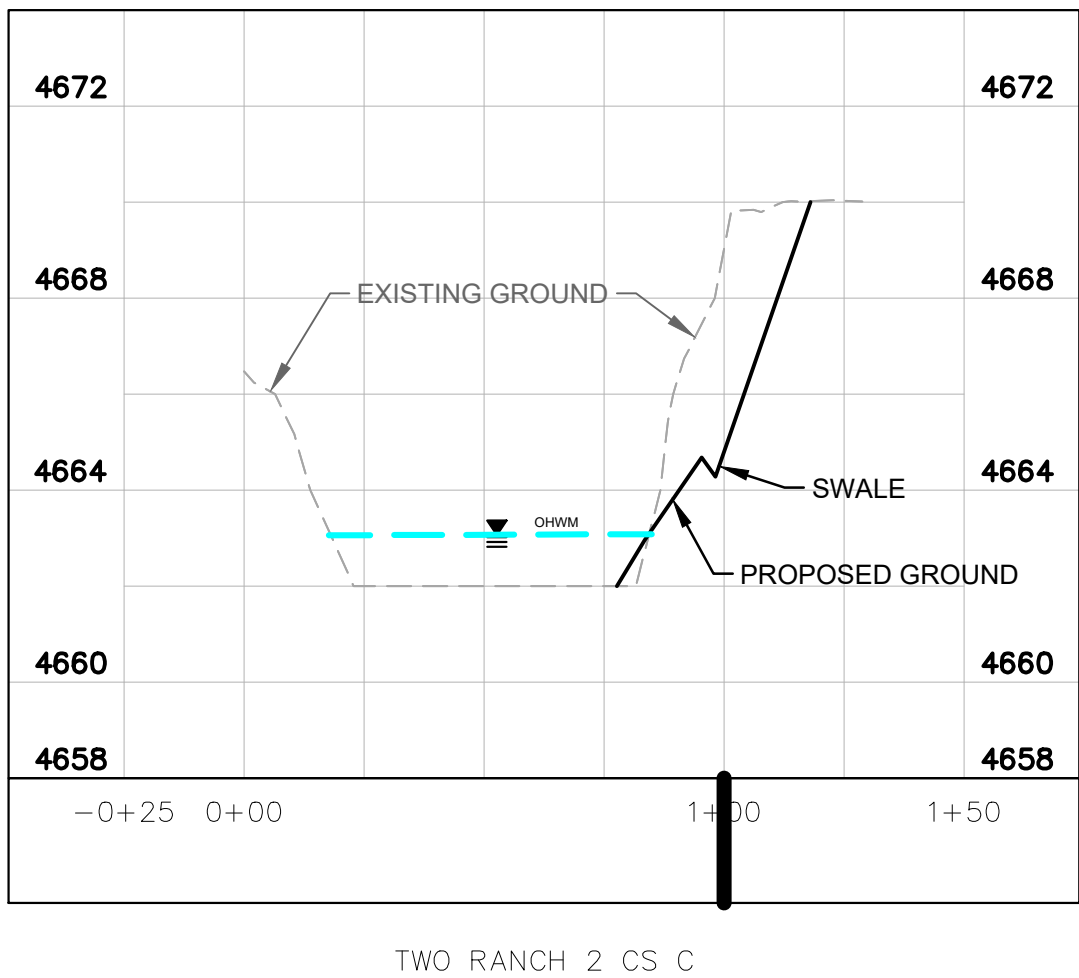
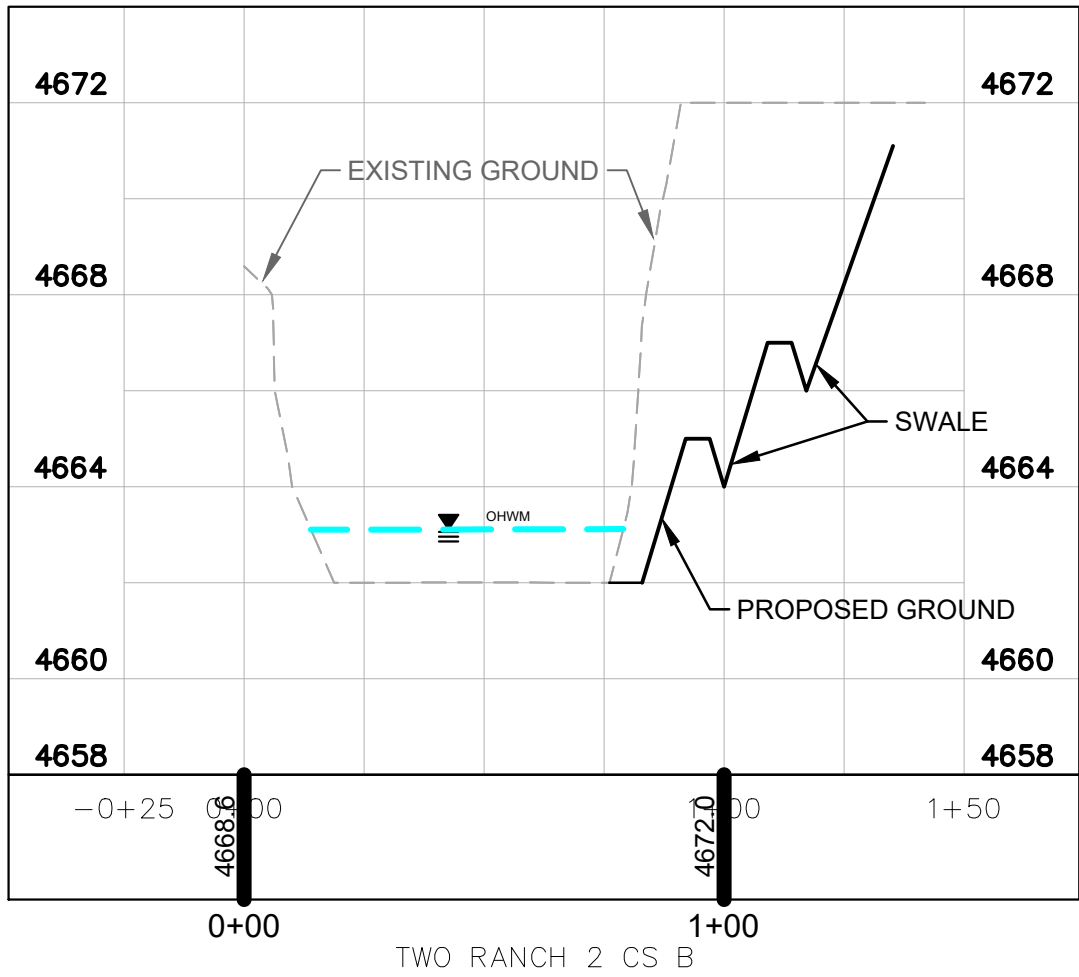
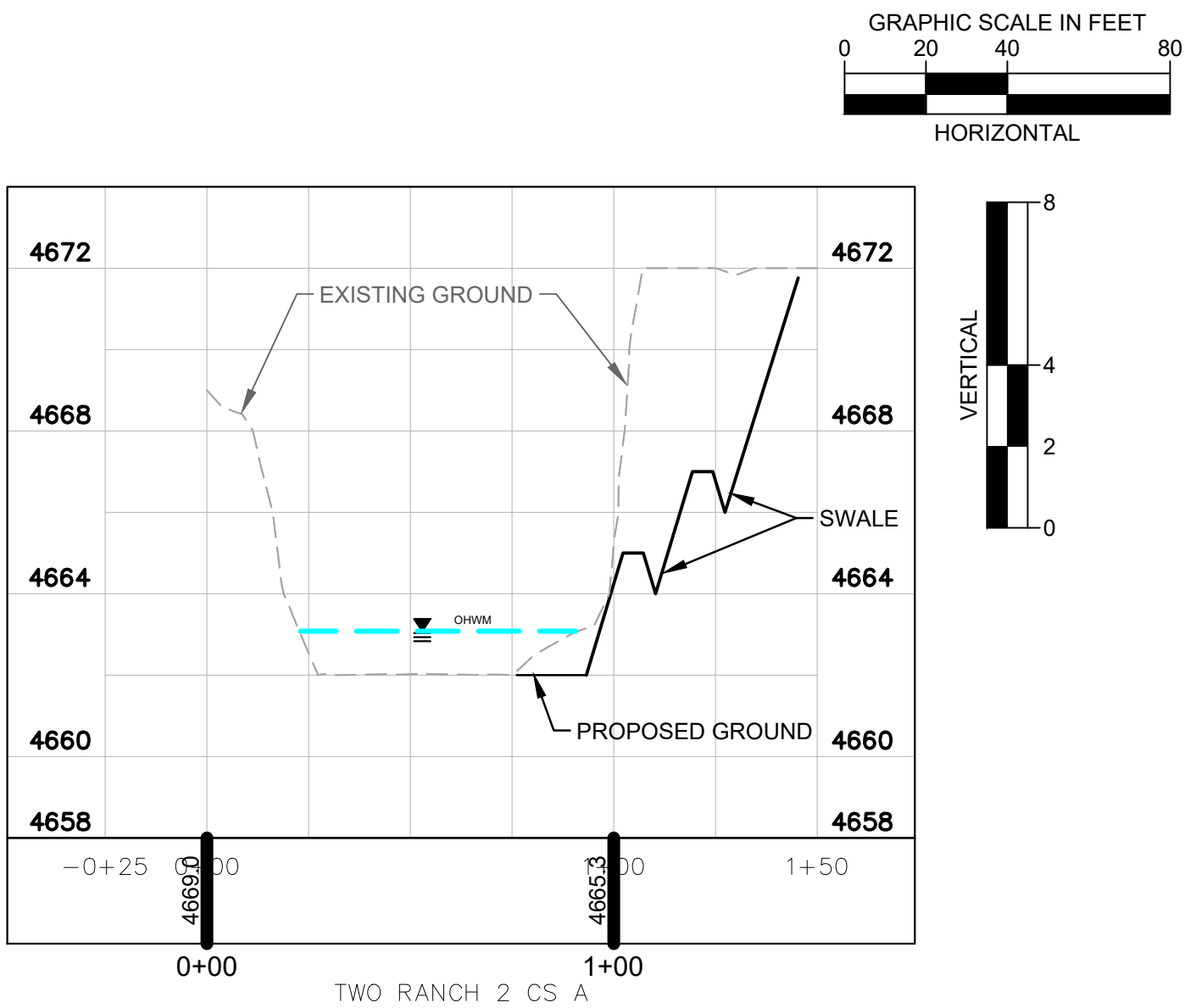
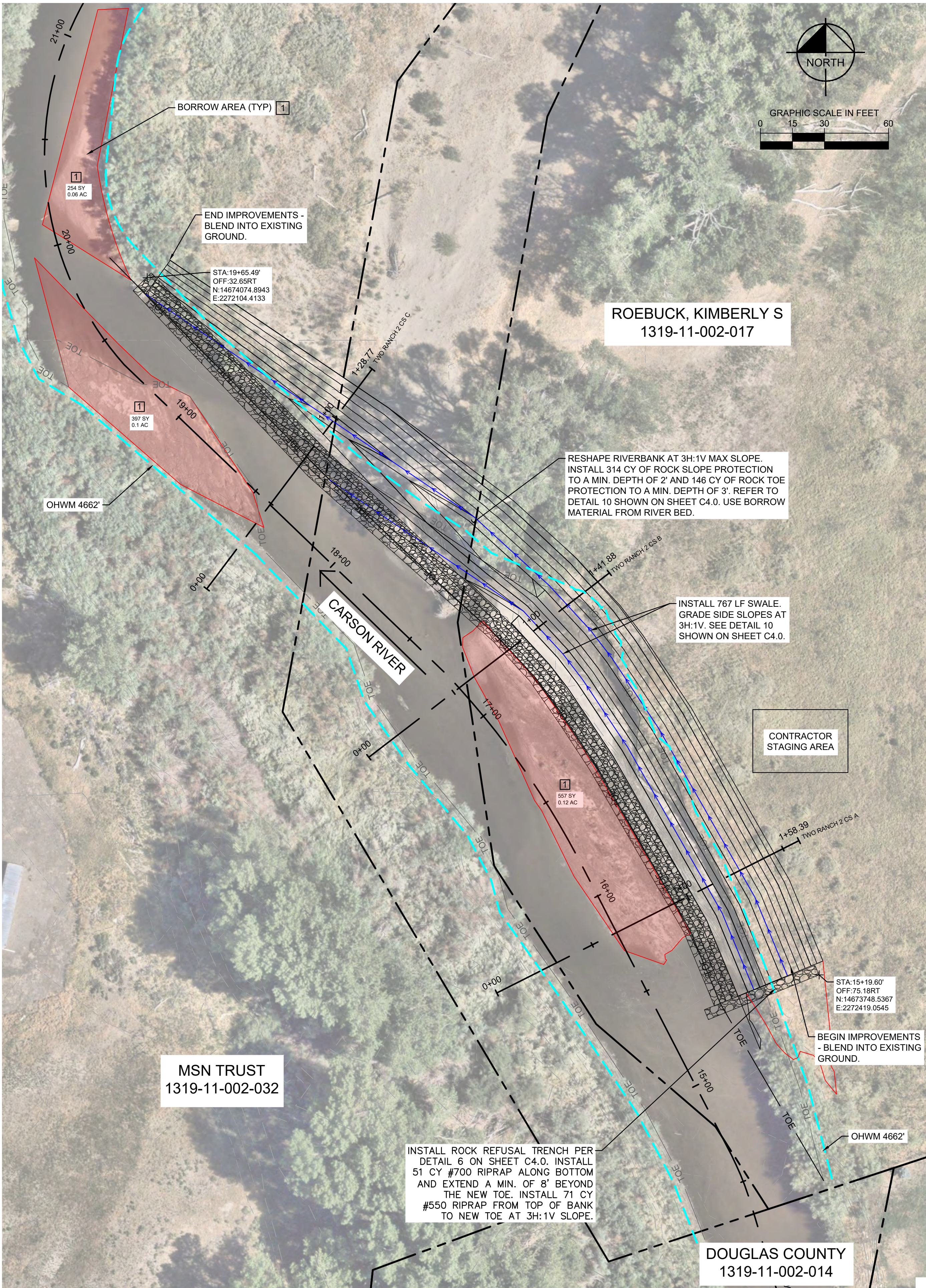
KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
192407100	8/15/2025	AS SHOWN	SG	HR	SG

COVER SHEET

GENOA PHASE IV 2025
CARSON RIVER
RESTORATION PROJECTS
GENOA, NEVADA

SHEET NUMBER
C1.0

Plotted By:Gorla, Shaker Date:May 13, 2026 03:44:25pm File Path:K:\REN_Civil\192407200 - C\VD 2025 Carson Riverbank Restoration\07 CAD\Plansheets\22x34\Plans\CS-SITE-Two Ranch.dwg
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND

- ROCK SLOPE PROTECTION AND REFUSAL TRENCH
- ROCK TOE PROTECTION
- BORROW/CUT AREA
- PROPERTY LINES
- TOE EXISTING TOE OF SLOPE
- TOE PROPOSED TOE OF SLOPE
- HISTORICAL ORDINARY HIGH WATER MARK (OHWM)
- SWALE FLOW LINE
- PROPOSED - MAJOR CONTOUR - FIVE FOOT INTERVAL
- PROPOSED - MINOR CONTOUR - ONE FOOT INTERVAL

CONSTRUCTION NOTES

- REGRADE FAILED RIVER BANKS BY CUTTING/FILLING AS NEEDED FROM PROPOSED CREST LINE AT THE SLOPE NOTED ON PLANS. USE MATERIAL GENERATED FROM THE CUT AS FILL IN CONJUNCTION WITH ADDITIONAL FILL MATERIAL FROM THE BORROW AREAS AS NECESSARY. SEE RIVER BANK REGRADE DETAIL 3 ON C4.0.
- INSTALL RIPRAP TOE PROTECTION TO A MIN. DEPTH OF 3' USING CLASS 700 ROCK AND INSTALL RIPRAP ON NEWLY GRADED BANKS TO A MIN. HEIGHT OF 2' USING CLASS 300 RIPRAP.
- DEPTH OF EXCAVATION IN BORROW AREA SHALL NOT EXCEED ELEVATION OF ADJACENT PROPOSED TOE IN PROJECT AREA. TRANSITION FROM BORROW AREA TO EX. UNDISTURBED GROUND SHALL BE MADE AT 5:1 (MAX.) IN A SMOOTH & WORKMAN-LIKE MANNER.
- PROTECT EXISTING TREES AND RIPARIAN VEGETATION TO THE EXTENT POSSIBLE THROUGHOUT CONSTRUCTION. REMOVAL OF TREES IN EXCESS OF 6" IN DIAMETER IS PROHIBITED WITHOUT OWNER APPROVAL UNLESS OTHERWISE NOTED.

ESTIMATED QUANTITIES*

EARTH WORK: 0.36 AC. (±462.28 L.F. AT TOP OF SLOPE)
CUT = 27 CY
FILL = 1990 CY
NET FILL = 1963 CY

EARTH WORK BELOW OHWM
CUT = 11 CY
FILL = 768 CY
NET FILL = 757 CY

CLASS 300 ROCK= 314 CY
CLASS 550 ROCK= 71 CY
CLASS 700 ROCK= 197 CY

NOTE:

- EARTHWORK CALCULATIONS ARE BASED ON SURFACE TO SURFACE, UNADJUSTED ANALYSIS.
- NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.
- THE BORROW AREAS AND ASSOCIATED CUT ARE NOT INCLUDED IN THIS EARTHWORK ESTIMATE.
- ROCK ESTIMATES ARE BASED ON APPROXIMATE ROCK SLOPE PROTECTION, ROCK TOE PROTECTION AND ROCK REFUSAL TRENCH VOLUMES.

* ESTIMATED CUT AND FILL QUANTITIES WILL CHANGE WHEN UPDATED TOPOGRAPHY IS PROVIDED BY THE SURVEYOR.

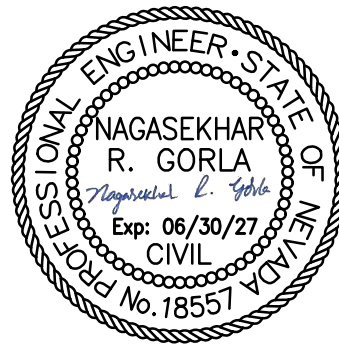
GENERAL NOTES

- BORROW AREAS ARE APPROXIMATED USING AERIAL IMAGERY FROM JULY 2025. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.
TOTAL ESTIMATED BORROW AREA:
0.25 ACRES
1210 CY



No.	REVISIONS	DATE	BY

Kimley»Horn
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7900 RANCHHARAH PARKWAY, SUITE 100, RENO, NV 89511
PHONE: 775-453-6872
WWW.KIMLEY-HORN.COM



KHA PROJECT 192407100	DATE 8/15/2025	SCALE: AS SHOWN	DESIGNED BY: SG	HR	SG
			DRAWN BY:		CHECKED BY:

440 TWO RANCH RD 2
SITE AND GRADING
PLAN

GENOA PHASE IV 2025
CARSON RIVER
RESTORATION PROJECTS
GENOA, NEVADA

SHEET NUMBER

C3.2

GENERAL DE-WATERING & TEMPORARY EROSION CONTROL PLAN NOTES

1. PLAN ASSUMES WORK IS GENERIC & WILL REQUIRE ADJUSTMENT IN FIELD BY CONTRACTOR.
2. PLAN ASSUMES WORK IS CONDUCTED AT EXTREMELY LOW FLOW CONDITIONS.
3. CONTRACTOR SHALL SATISFY HIMSELF THAT LOCATION WHERE TEMPORARY LOW-FLOW CHANNEL IS CUT WILL ALLOW ENOUGH BORROW AREA TO SATISFY FILL REQUIREMENTS OF PROJECT.
4. LOW-FLOW CHANNEL WILL BE FILLED & RESTORED TO EX. CONDITIONS.
5. IN CASE OF EMERGENCY CALL CARSON VALLEY CONSERVATION DISTRICT (RICH WILKINSON, ☎ 775-782-3661 X 3830 OR ENGINEER ☎ 775-787-7552).
6. CONTRACTOR MAY SUBMIT ALTERNATE DE-WATERING & EROSION CONTROL PLAN TO ENGINEER. SAME SHALL BE MADE IN ADVANCE OF CONSTRUCTION ACTIVITIES FOR REVIEW & APPROVAL.
7. CONSTRUCTION SHALL BE SCHEDULED TO COINCIDE WITH PERIODS OF LOW FLOW IN THE RIVER.
8. RESTORE AREAS DISTURBED BY DE-WATERING ACTIVITIES TO PRE-CONSTRUCTION CONDITIONS.
9. ANY PASTURE FENCES DAMAGED, FAILING OR RELOCATED FOR CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EXISTING CONDITIONS AT TOP OF BANK.
10. DUST SHALL BE CONTROLLED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND OWNER.
11. THE CONTRACTOR SHALL MAINTAIN A CLEAN PROJECT SITE, REMOVING CONSTRUCTION DEBRIS AT THE END OF EACH ACTIVITY DAY. TRASH WILL BE HAULED TO A LICENSED DISPOSAL FACILITY. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE.
12. THE CONTRACTOR SHALL MAINTAIN DEBRIS FREE CONSTRUCTION ROUTES, ADJACENT STREETS AND STORM DRAIN SYSTEMS.
13. A STANDBY CROWD FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROPRIATE LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES. CONTRACTOR SHALL PROVIDE OWNER WITH THE NAME & PHONE NUMBER OF EMERGENCY CONTACT AT THE PRE-CONSTRUCTION MEETING.
14. AFTER A RAINSTORM, ALL BMP'S AND GRADED SLOPE SURFACE PROTECTION MEASURES SHALL BE INSPECTED TO VERIFY CONTINUED SATISFACTORY OPERATION AND REPAIRED OR REPLACED IF NECESSARY.
15. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
16. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
17. BUILT UP SEDIMENT SHALL BE REMOVED AS NECESSARY TO MAINTAIN PROPER FUNCTIONING OF THE BMP'S.
18. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONE PER WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
19. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. THE REPORT WILL CONTAIN THE NAME OF THE INSPECTOR, MEASURES, AREAS INSPECTED, OBSERVED CONDITIONS, AND NOTE CHANGES NECESSARY.
20. REPORT RELEASES OF REPORTABLE QUANTITIES OF OIL OR HAZARDOUS MATERIALS (IF THEY OCCUR) TO NDEP AND THE OWNER WITHIN 24 HOURS.
21. FILTER FABRIC FENCES, IF THE FABRIC BECOMES CLOGGED, TORN, OR DEGRADES, IT SHOULD BE REPLACED. MAKE SURE THE STAKES ARE SECURELY DRIVEN IN THE GROUND AND ARE IN GOOD SHAPE (IE., NOT BENT, CRACKED, OR SPLINTERED, AND ARE REASONABLY PERPENDICULAR TO THE GROUND.) REPLACE DAMAGED STAKES.
22. SEDIMENT THAT ACCUMULATES IN THE BMP MUST BE PERIODICALLY REMOVED IN ORDER TO MAINTAIN BMP EFFECTIVENESS. SEDIMENT SHOULD BE REMOVED WHEN THE SEDIMENT ACCUMULATION REACHES ONE-THIRD OF THE BARRIER HEIGHT. SEDIMENT REMOVED DURING MAINTENANCE MAY BE INCORPORATED INTO EARTHWORK ON THE SITE OR DISPOSED AT AN APPROPRIATE LOCATION.
23. NO DE-WATERING UNTIL FLOWS EXCEED 400 CFS AS READ AT THE CARSON CITY GAUGE.

GENERAL NOTES:

1. SOME TYPES OF FILTER FABRIC FENCE HAVE STAKES INCLUDED AND DO NOT REQUIRE THE MATERIALS LISTED.
2. THE FABRIC SHOULD NOT EXCEED MORE THAN 3' ABOVE THE GROUND. CUT FILTER FABRIC FROM A CONTINUOUS ROLL TO AVOID HAVING JOINTS. WHERE JOINTS ARE NECESSARY, SPlice THE FABRIC ONLY AT A POST, WITH AT LEAST 6" OF OVERLAP, AND FASTEN BOTH ENDS SECURELY TO THE POST.
3. INSPECT PERIODICALLY AND AFTER EACH STORM. REPLACE DAMAGED FENCE.
4. CLEAN OUT THE SEDIMENT BEFORE IT REACHES 1/3 FENCE HEIGHT. DEPOSIT THE SEDIMENT WHERE IT WILL NOT ENTER A DRAINAGEWAY.

SILT FENCE INSTALLATION INSTRUCTIONS:

1. SPACE POSTS NO MORE THAN 10' APART AND DRIVE THEM AT LEAST 1" INTO THE GROUND. ALIGN THE SLOPE ALONG THE SLOPE CONTOUR, CURVING IT SLIGHTLY UPHILL TO AVOID END RUNS.
2. DIG A 4"x4" TRENCH ALONG THE UPHILL SIDE OF THE POSTS.
3. FASTEN WIRE MESH TO UPHILL SIDE OF POST WITH STAPES (ON WOOD POSTS) OR WIRE (ON STEEL POSTS). EXTEND MESH TO BOTTOM OF TRENCH. (DO NOT ATTACH MESH OR FABRIC TO TREES).
4. FASTEN FILTER FABRIC TO UPHILL SIDE OF POSTS WITH STAPES OR WIRE. EXTEND FABRIC 8" INTO TRENCH.
5. BACKFILL TRENCH AND COMPACT THE SOIL.

MATERIALS:

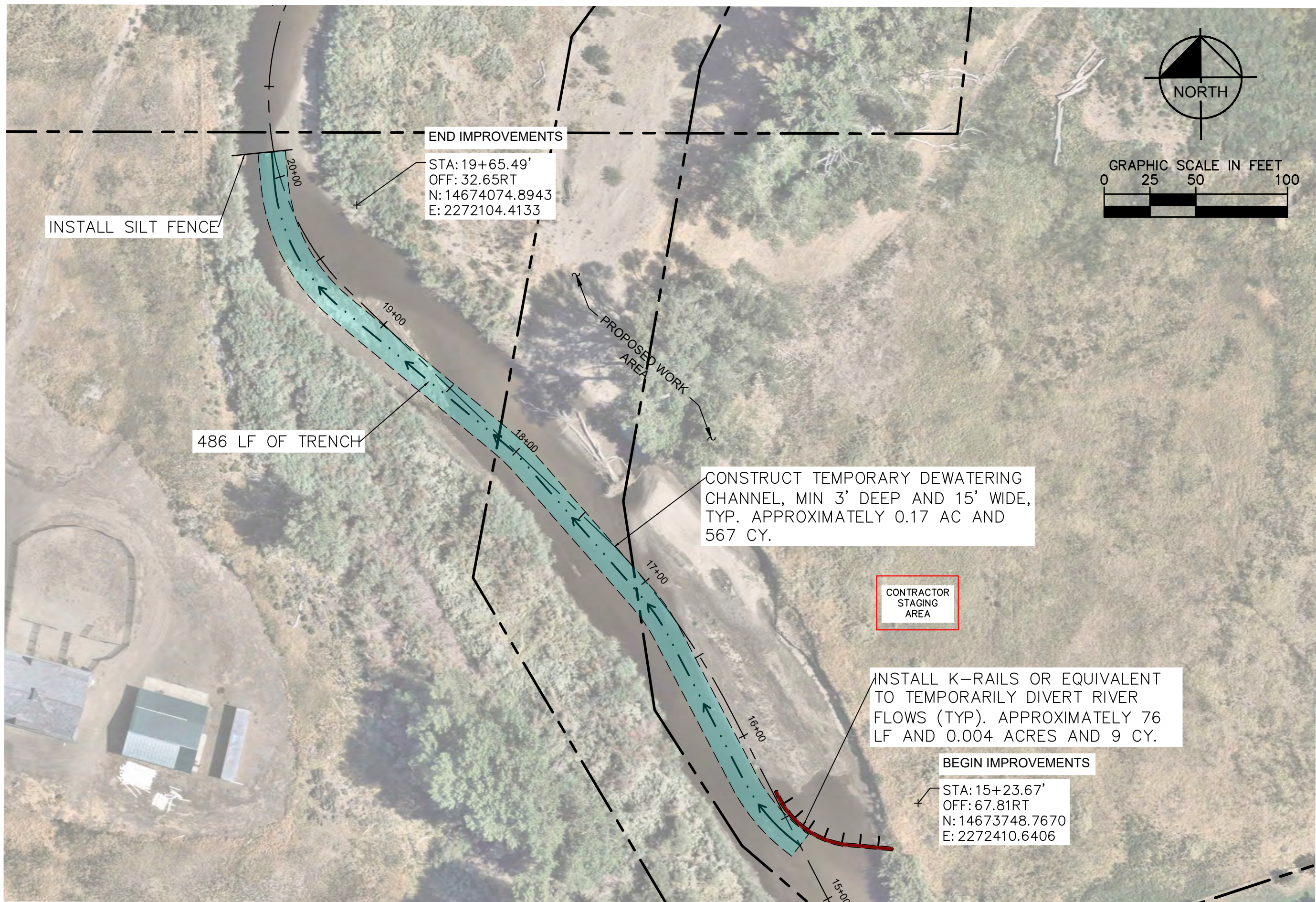
1. SILT FENCE:
- a. FILTER FABRIC SHALL BE 42" WIDE, TENSILE STRENGTH 120 LBS., EQUIVALENT OPENING SIZE 70.
 - b. POSTS SHALL BE 5' LONG (MIN.), 4"x4" WOOD OR 1.3 LBS./FT STEEL.
 - c. WIRE MESH SHALL BE 42" WIDE, 6" MESH, 16 GAUGE WIRE (MINIMUM).
 - d. STAPLES (FOR WOOD POSTS) SHALL BE HEAVY DUTY 1" LONG, 14 GAUGE (MINIMUM).
 - e. WIRE (FOR STEEL POSTS).

SPILL PREVENTION AND RESPONSE:

1. CONTRACTOR SHALL STEAM CLEAN ALL EQUIPMENT THAT WILL BE WORKING IN RIVER BED AT SHOP PRIOR TO COMMENCING CONSTRUCTION.
2. ALL EQUIPMENT SHALL BE CHECKED FOR LEAKS AND REPAIRED PRIOR TO COMMENCING CONSTRUCTION.
3. CONTRACTOR SHALL INSURE INTEGRITY OF SILT FENCE AND STRAW BALE BARRIERS DURING THE COURSE OF CONSTRUCTION.
4. CONTRACTOR SHALL USE DRIP PANS OR ABSORBENT MATS DURING FUELING AND MAINTENANCE TO PROTECT AGAINST SPILLS.
5. SPILLED PETROLEUM PRODUCTS, CONTAMINATED SOILS OR WATER, AND ACCUMULATED SEDIMENTS SHALL BE CLEANED UP AND PROPERLY DISPOSED OF AT A LICENSED LANDFILL. DISCHARGE OF SUCH MATERIALS TO THE RIVER CHANNEL OR DITCHES IS PROHIBITED.

REVEGETATION:

1. ALL DISTURBED AREAS, CUT AND FILL SLOPES SHALL BE RE-SEED. THE SEED MIX, APPLICATION RATE ETC. SHALL BE SPECIFIED BY THE CYCD.
2. REVEGETATED AREAS WILL BE INSPECTED AT COMPLETION OF INSTALLATION & ACCEPTANCE SUBJECT TO COMPLIANCE WITH SPECIFIED MATERIALS & INSTALLATION REQUIREMENTS. FOR ONE FULL GROWING SEASON AFTER PLANTING, CONTRACTOR SHALL GUARANTEE 30% COVERAGE BY SEEDS SPECIES & MULCH SUCH THAT THERE IS NO SIGNIFICANT EVIDENCE OF RILLS, GULLIES OR OTHER EVIDENCE OF EROSION. IF ADEQUATE COVERAGE IS NOT ACHIEVED, THE CONTRACTOR SHALL RE-SOIL, AMEND, RE-SEED OR RE-MULCH. THE ENGINEER, UPON CONTRACTOR'S REQUEST, WILL MAKE FINAL INSPECTION & ACCEPTANCE ONE FULL YEAR FOLLOWING COMPLETION OF SEEDING (THE MAINTENANCE PERIOD). PROVIDE NOTIFICATION AT LEAST 10 WORKING DAYS BEFORE REQUESTED INSPECTION DATE.



440 TWO RANCH RD 2 SITE

LEGEND



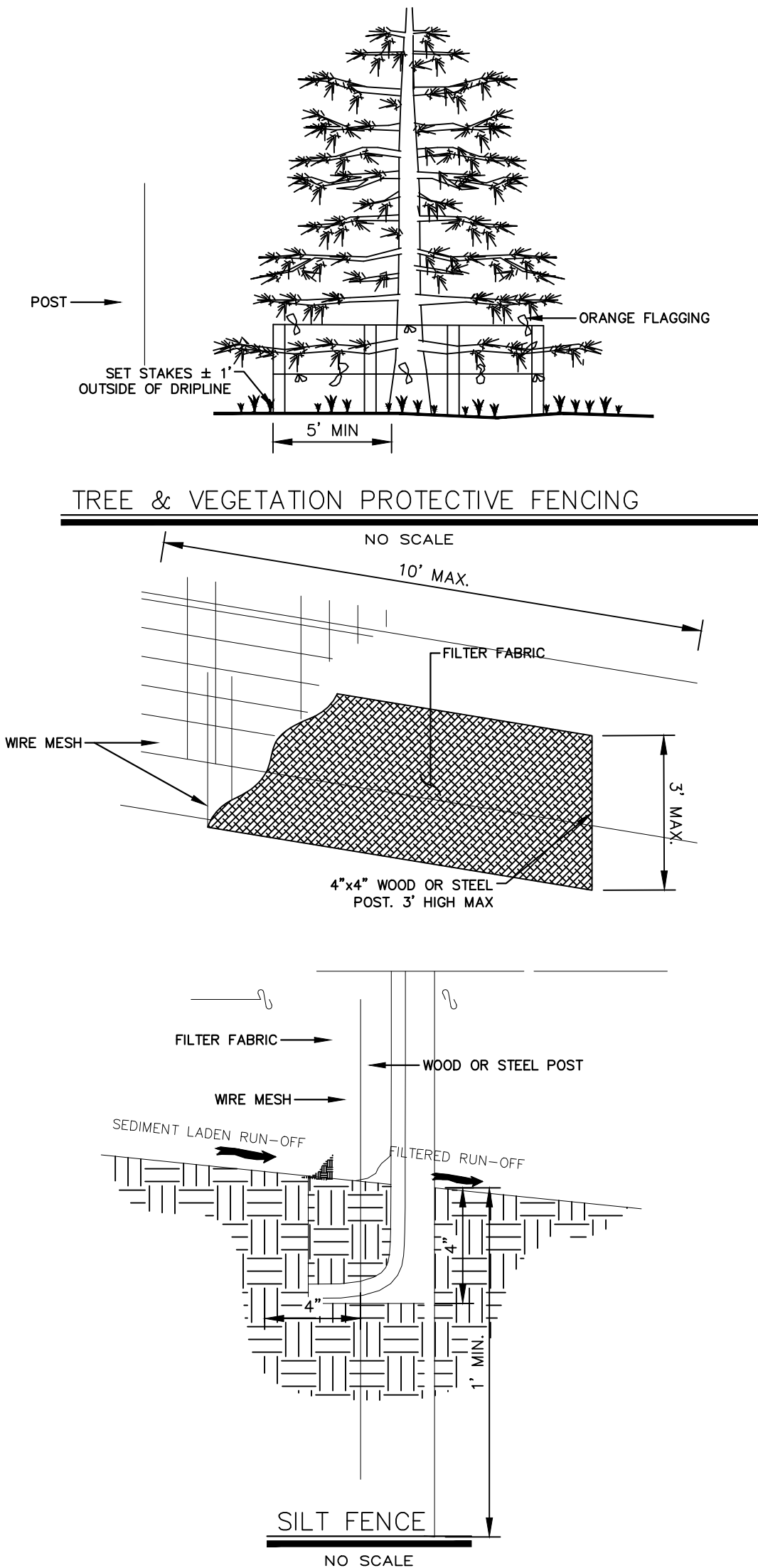
ESTIMATED QUANTITIES

DEWATERING FOOTPRINT: 0.37 AC
TEMPORARY DEWATERING CHANNEL: 486 LF
K-RAILS: 76 LF

NOTE

- NOTE:
1. CALCULATIONS ARE BASED ON SURFACE TO SURFACE, UNADJUSTED ANALYSIS.
 2. NO GUARANTEE IS MADE CONCERNING THE ACCURACY OF THE ESTIMATED QUANTITIES. THE CONTRACTOR SHALL DETERMINE ACTUAL QUANTITIES OF WORK ASSOCIATED WITH THE PROJECT.

*DEWATERING PLANS ARE SUBJECT TO CHANGE BASED ON CONTRACTOR SCHEDULING AND CONSTRUCTION SEQUENCING.



SHEET NUMBER	GENOA PHASE IV 2025 CARSON RIVER RESTORATION PROJECTS GENOA, NEVADA	440 TWO RANCH 2 DEWATERING & TEMPORARY EROSION CONTROL PLAN	KHA PROJECT 192407100	DATE 8/15/2025	SCALE: AS SHOWN	DESIGNED BY: SG	DRAWN BY: HR	CHECKED BY: SG		 © 2024 KIMLEY-HORN AND ASSOCIATES, INC. 7900 RANCHAPRAH PARKWAY, SUITE 100, RENO, NV 89511 PHONE: 775-453-6972 WWW.KIMLEY-HORN.COM	No.	REVISIONS	DATE	BY

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME
Two Ranch Rd #2 – Genoa Phase 4 2025 River Restoration Project

LOCATION
Douglas County, Nevada



DESCRIPTION
Some(The Carson Valley Conservation District (CVCD) proposes the Two Ranch Rd #2 – Genoa Phase 4 2025 River Restoration Project (Project) to address severe erosion and degradation of riparian habitat resulting from flood events in 2017 and 2023. The Two Ranch Rd #2 site is one of six priority sites identified by CVCD in the Genoa, NV area for the Genoa Phase 4 River Restoration Project. This Project is designed to restore the stability of the riverbanks while minimizing environmental impacts to have a net positive effect on natural resources in the area.
The purpose of the Project is to provide mitigation of flood damage and bank erosion on the Carson River near Genoa, NV through bank stabilization and bioengineering methods to meet local conservation and land management needs. The Project is necessary to address severe erosion and sediment transport which have resulted in bank destabilization, degradation of riparian habitat, property loss, and increased flood vulnerability. The Project is planned to be implemented in the fall and winter of 2026.
The primary objectives of this Project are:
• To stabilize approximately 462 linear feet of the Carson Riverbank where severe erosion has occurred.
• To mitigate downstream sediment transport.
• To restore riparian habitat and improve flood resilience through bank stabilization and bioengineering techniques.
• To prevent further channel migration, flood-related damage, and property loss while maintaining the natural functions of the Carson River.)

Local office

Reno Fish And Wildlife Office
 (775) 861-6300
 (775) 861-6301
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Log in to IPaC.
- 2. Go to your My Projects list.
- 3. Click PROJECT HOME for this project.
- 4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
- 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Insects

NAME	STATUS
Carson Wandering Skipper Pseudocopaesodes eunus obscurus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/674	Endangered
Monarch Butterfly Danaus plexippus Wherever found There is proposed critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act ² and the Migratory Bird Treaty Act (MBTA) ¹. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

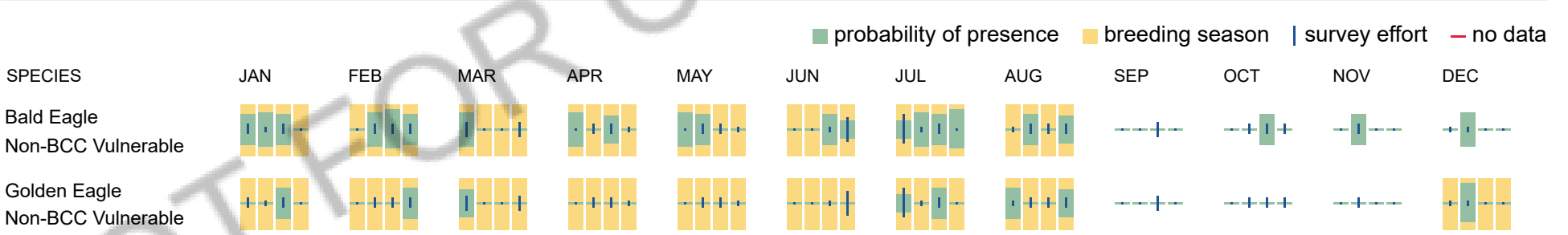
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) ¹ prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs

The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black-throated Gray Warbler <i>Setophaga nigrescens</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jul 20
California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Calliope Hummingbird <i>Selasphorus calliope</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9526	Breeds May 1 to Aug 15
Cassin's Finch <i>Haemorhous cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Olive-sided Flycatcher <i>Contopus cooperi</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay <i>Gymnorhinus cyanocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15
Western Grebe <i>Aechmophorus occidentalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 1 to Aug 31
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

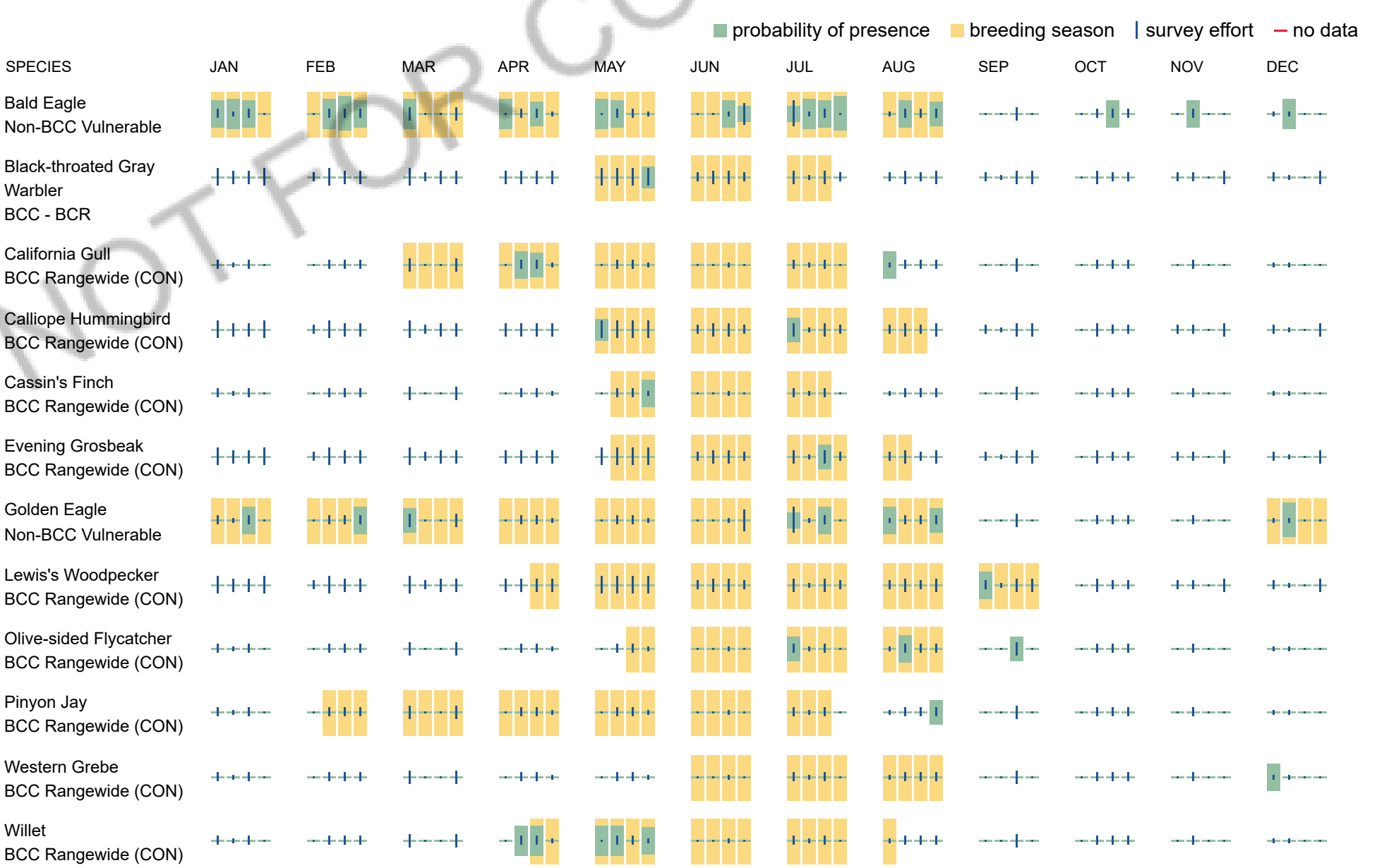
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional](#)

[measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and

minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION