To:
Mr. Zachary Carter
Nevada Division of Environmental Protection
Bureau of Water Quality Planning
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249
Ndep401@ndep.nv.gov

Date: May 11, 2026

Dear Mr. Carter,

Enclosed is a 401 Water Quality Certification (WQC) application for the Hollywood Boulevard Extension Project, located near Las Vegas, Clark County, Nevada, near Latitude 36.092456° North, Longitude -115.002901° West. The project proponent is WSP on behalf of Clark County Public Works (CCPW).

The project is located within Las Vegas Wash and Duck Creek, which are relatively permanent waters (RPWs) that maintain a continuous surface connection to a traditional navigable water (TNW) and are therefore subject to Clean Water Act (CWA) Section 404 permitting through the U.S. Army Corps of Engineers (USACE). The proposed project would result in temporary and permanent impacts to Las Vegas Wash, Duck Creek, UT-1 Duck Creek, and Wetland A.

The applicant is seeking authorization under Nationwide Permits (NWP) 14 (Linear Transportation Projects), 27 (Aquatic Habitat Restoration, Enhancement, and Establishment Activities), and 33 (Temporary Construction, Access, and Dewatering). The USACE project ID is SPK-2021-00564 and the project manager overseeing the Nationwide Permits authorization process is Mr. Ethan Schindler. The proposed project includes construction of a new bridge crossing, implementation of two roller compacted concrete (RCC) grade-control weirs, targeted channel grading, and installation of native riparian and emergent wetland vegetation. These activities are designed to stabilize active headcutting within Duck Creek, maintain flood conveyance, and enhance aquatic resource function and extent within the project area.

This application has been prepared in compliance with the 2023 Certification Rule, and all application requirements are contained herein. A revised Pre-Construction Notification (PCN) was submitted to USACE on March 3, 2026, incorporating additional clarification regarding avoidance, minimization, and aquatic resource enhancement measures, and these application materials are available upon request. This application is being submitted to NDEP to support the federal permitting process and to establish the reasonable period for issuance of the 401 WQC decision.

Additional supporting documentation, including the revised PCN submitted to USACE on March 3, 2026, Delineation Report, Draft Environmental Assessment (EA), Biological Assessment (BA), and Endangered Species Act (ESA) coordination with initiation of formal consultation between USACE and U.S. Fish and Wildlife Service (USFWS) are provided in a separate folder within this submittal. Cultural resources coordination with USACE and the Nevada State Historic Preservation Office (SHPO) under Section 106 of the National Historic Preservation Act is ongoing.

Should you require any additional information, please contact me at aldo.s@energyprojectsolutions.com or 702-832-6926.

Respectfully,

Aldo San Pedro
Environmental Permitting Specialist

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). *Note: If a pre-filing meeting has not been requested, please schedule a pre-filing meeting with NDEP BWQP.*	Tuesday, May 16, 2023

B. Contact Information			
Project Proponent Information			
Company Name: Clark County Public Works		Address: 500 S. Grand Central Pkwy	
Applicant Name: Spring Dineen		City: Las Vegas	
Phone: 702-455-6074	Fax:	State: NV	
Email: spring.dineen@clarkcountynv.gov		Zip Code: 89155	
Agent Information			
Company Name: EPS		Address: 4675 W. Teco Avenue, Suite 230	
Agent Name: Aldo San Pedro		City: Las Vegas	
Phone: 702-832-6926	Fax:	State: NV	
Email: aldo.s@energyprojectsolutions.com		Zip Code: 89118	

C. Project General Information			
Project Location			
Project/Site Name: Hollywood Boulevard Extension Project		Name of receiving waterbody: Las Vegas Wash and Duck Creek	
Address:		Type of waterbody present at project location (*select all that apply*): ☒ Perennial River or Stream ☒ Intermittent River or Stream ☒ Ephemeral River or Stream ☐ Lake/Pond/Reservoir ☒ Wetland ☐ Other: _____	
City: Henderson			
County: Clark County			
State: NV			
Zip Code: 89011			
Latitude (UTM or Dec/Deg): 36.092456		Longitude (UTM or Dec/Deg): -115.002901	
Township: 21 S	Range: 62 E	Section: 25	¼ Section: SW & SE

Project Details	
Project purpose:	The purpose of the project is to construct a new crossing for a roadway, and to construct two new weirs for erosion control.
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.	The project area has two distinct segments: a linear northern segment and a wider southern segment (Appendix A). A photolog of the project area is included in Appendix B. The northern segment of the Project Area is comprised of upland features that do not meet the definitions of WOTUS and therefore, would not require further evaluation for this permit. The WOTUS for the project are limited to the southern segment of the Project Area (Permit Area). The Permit Area is located in the Creosote Bush-Dominated Basins terrain of the Mojave Basin and Range ecoregion. Within the Permit Area, there are four WOTUS: the Las Vegas Wash, a perennial resource with wetland fringe that falls below the OHWM; Wetland A, which is a Cowardin classification of palustrine scrub-shrub seasonally flooded (PEM1C); and Duck Creek and UT-1 Duck Creek, which are both RPWs that maintain a continuous surface connection to a TNW and are directly adjacent to Wetland A.
Describe the proposed activity including methodology of each project element:	The proposed project encompasses multiple key aspects, including: 1. **Roadway and Trail Infrastructure** o New roadway construction. o Proposed trail development. o Maintenance roads. 2. **Drainage and Water Control Structures** o Construction of the **Hollywood Weir RCC Drop Structure** and **Wiesner Weir RCC Drop Structure**. o Implementation of **Riprap Protection**, including Riprap apron and Riprap Bank Protection. o Construction of **Grade Control Structures**: Hollywood Weir Roller Compacted Concrete (RCC) Grade Control Structure, Wiesner Weir Roller Compacted Concrete Grade Control Structure. 3. **Bridge Elements (Duck Creek and Las Vegas Wash Crossings)** o Development of **Substructure Elements**: Drilled shaft foundations, abutments, piers, and columns. o Construction of **Bridge Superstructure Elements**: Placement of prestressed girders, bridge deck and approach slabs, and installation of barrier rail. o **Staging areas and site access are illustrated in Appendix C. Appendix D provides details on the types and quantities of fill materials associated with the project. Project plans are included in Appendix E.**

Work sequencing would occur as follows:

Step 1) Project Access, Staging, and Mobilization
Construction equipment and personnel would access the site from Hollywood Boulevard to the south and the Hollywood Boulevard Extension corridor to the north of the project area. Construction equipment and materials would be staged at a designated, pre-disturbed upland area approximately 10 acres south of Duck Creek or within the disturbance footprint of the future Hollywood Boulevard Extension to the north, away from any wetlands or waterbodies, when not in use. This step also includes establishing general site access roads to the bridges, drainage structures, berms and temporary work platforms. Staging areas and site access are illustrated in Appendix C.

Step 2) Placement of construction best management practices (BMPs)
Prior to the initiation of construction, all necessary BMPs would be installed. This includes placing gravel bags at the downstream project extent and implementing appropriate perimeter controls. The site would be dewatered using a combination of diversion berms, sheet pile and/or piping, wells, and sump-and-pump methods. Specifically, pumping would be utilized for dewatering operations on Duck Creek along with a temporary work platform and/or sheet pile or berms would facilitate flood flow diversion/dewatering efforts. Temporary work platforms would facilitate flood flow diversion/dewatering efforts on the Las Vegas Wash. Additional BMPs, such as straw wattles, straw bales, silt fence, gravel check dams, and construction fencing, would be deployed as necessary along the project boundaries and at critical locations to control runoff and sediment. Refer to the dedicated BMP section for a comprehensive list.

Step 3) Site Clearing, Grubbing, and Sediment Removal
Vegetation removal would be limited to the areas indicated in the attached plans. To comply with dust control requirements, the Contractor is expected to clear only the necessary work areas, making this an ongoing operation throughout the project. Construction staging is anticipated to begin on the south side of the project and proceed northward. Once access to the drainages is established, sediment removal would be completed to facilitate the construction of temporary access pads.

- Equipment: Standard excavation equipment would be utilized, including bulldozers (e.g., Cat D6N, Komatsu D61PXi), crawler excavators (e.g., Cat 320, Volvo EC220E), motor graders (e.g., Cat 140M), compact track loaders (e.g., Bobcat T770), dump trucks (e.g., tandem axle, semi-trailer end dumps), and various small equipment and hand tools. Any specialized equipment needs have been identified and would be addressed during contractor selection.
- Material Handling: Excavation equipment would be operated within the described access pathways and the

channel. Removed material, including sediment and vegetation, would be loaded directly into dump trucks or temporarily stockpiled onsite at a clearly delineated, geotextile-lined upland area near the project's southern boundary. This stockpile would be protected by silt fencing and covered during non-working hours to prevent runoff. Subsequently, it would be transported to approved off-site uplands, away from WOTUS, for proper disposal. Sediment and vegetation removal is estimated to take approximately 60 days.

Specific Clearing, Grubbing, and Sediment Removal Details:

- Vegetation removal would occur in approximately 3,000 linear feet consisting of the new Duck Creek Channel and weirs.
- Sediment removal would occur within 3,000 feet comprised of the new Duck Creek channel and weirs. Approximately 11,400 cubic yards of sediment and vegetative debris would be removed below the OHWM of Duck Creek. Approximately 19,000 cubic yards of fill materials would be permanently discharged below the OHWM and associated wetland areas of Duck Creek. Appendix D provides details on the types and quantities of fill materials associated with the project.
- A total of 300 cubic yards of temporary fill would be placed over 1,500 square feet during flow diversion/dewatering activities for construction of the Duck Creek channel and 19,300 cubic yards of fill material, including temporary fill, would be placed over 31,500 square feet during construction activities.
- The average depth of sediment dredging in the Duck Creek Channel would be approximately 8 feet.
- Approximately 1,821 cubic yards of fill materials would be permanently discharged below the OHWM of the Las Vegas Wash.
- Establishment of temporary work pads in Las Vegas Wash. A total of 26,750 cubic yards of clean washed rock for temporary fill would be placed over 52,280 square feet during dewatering/sediment control activities. 27,260 cubic yards of total fill material, including temporary fill, would be placed over 52,280 square feet during construction activities. The rock may be topped with smaller rock and/or soil to provide a smooth platform for workers and equipment. This rock would be used as an access pad to construct the drilled shaft foundations. Sheet pile may be used as a cofferdam prior to placement of the rock. Upon completion, the rock and sheet pile would be removed to the surface level and restored to match the surrounding area.
- Appendix D provides details on the types and quantities of fill materials associated with the project.

Step 4) Bridge Construction

Bridge construction is considered the critical path and would take place through the duration of the project. The following is a list of bridge construction steps with anticipated construction equipment:

- Place drilled shafts: Utilizing oscillators (e.g., Bauer BG 28), large crawler cranes (e.g., Manitowoc 999), concrete placement equipment (e.g., concrete pumps, tremie pipes), and specialized drilling tools.
- Place columns: Using crawler cranes, man lifts, concrete pumps, concrete vibrators, and other concrete placing equipment.
- Place pier caps: Employing crawler cranes, man lifts, concrete pumps, and other concrete placing equipment.
- Place precast girders and diaphragms: Utilizing large crawler cranes and specialized lifts.
- Place deck, barriers, median, and curbs: Using concrete pump trucks, Bid-Well concrete pavers, concrete finishing tools, and other concrete placement and finishing equipment.

Step 5) Construction of Major Drainage Structures (Concurrent Work Items)

- Construct Hollywood Weir RCC Drop Structure and Wiesner Weir RCC Drop Structure using excavators, dozers, compactors, concrete trucks, and concrete pumps.
- A temporary pug mill would be set up on approximately 3 acres on the south side of Duck Creek for the processing of RCC.

Other Concurrent Work Items:

- Construction of riprap aprons and riprap embankment protection using excavators, dozers, and specialized riprap placement techniques.
- Construction of roadway, roadway improvements, maintenance roads, and trails using graders, compactors, asphalt paving equipment, and aggregate placement equipment.

Step 6) Stabilization and Cleanup

- Removal of excess materials.
- Specific stabilization and cleanup measures would commence immediately upon completion of earthwork and infrastructure installation in each respective area. This phase is anticipated to last for approximately 45 days following the main construction activities.
    - Activities: This includes final grading and shaping of disturbed areas to approximate original contours, implementation of permanent erosion control measures such as hydroseeding with native plant mixes, installation of erosion control blankets, and placement of permanent riprap where

applicable. All temporary BMPs, including silt fencing, gravel bags, and temporary diversion structures, would be carefully removed, ensuring no sediment is mobilized during removal. Final site walks would be conducted to identify and address any remaining construction debris or disturbed areas.

- Equipment: Equipment used would include light dozers for final grading, hydroseeding trucks, hand tools for fine grading and debris removal, and various utility vehicles for transport.
- Locations: Stabilization efforts would focus on all areas disturbed by construction, including temporary access roads, staging areas, and the immediate vicinity of drainage structures and bridge abutments.
- Prevention of Water Re-entry: Water would be prevented from re-entering WOTUS through the establishment of permanent, stabilized perimeter controls, including vegetated buffers and permanent rock-lined swales designed to convey stormwater away from sensitive areas. The newly constructed drainage features (weirs, channels) would provide positive drainage to manage stormwater flow effectively. Additionally, the permanent riprap protection and vegetation establishment would ensure long-term stability and prevent erosion that could lead to sediment discharge into the waterbodies.

Estimate the nature, specific location, and number of discharge(s) expected to be authorized by the proposed activity:	Described above as part of the construction sequencing and see impacts table summarized by Nationwide Permit Activity in Appendix D. Project plans are included in Appendix E.	
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:	To the extent possible, major work elements are proposed to occur during periods without storm-driven flow increases. This portion of project activities is expected to take 12 months to complete. Remaining project activities would be completed over the 2-year construction season. All work is anticipated to be completed by August 14, 2029.	
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 Nationwide Permits 14, 27, and 33 (Appendix H). A copy of the PCN submitted to USACE on March 3, 2026, is included with this application.	
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:	BLM Southern Nevada Public Lands Act Revegetation – in progress BOR Right-of-Way Permit- in progress NDEP Working in Waterways – in progress NDEP Construction Stormwater General Permit- contractor permit NDEP/NPDES Discharge Permit - obtained Clark County Dust Control Operation Permit – contractor permit	
Total area of impact to regulated waterbodies (acres):	23.4 acres (wetland and stream)	
Total distance of impact to regulated waterbodies (linear feet):	6,888 linear feet	
Amount excavation and/or fill discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: 26,750 cubic yards	Permanent: 254,340 cubic yards
Amount of dredge material discharged within regulated waters (acres, linear feet, and cubic yards):	Temporary: None N/A	Permanent: None N/A
Describe the reason(s) why avoidance of temporary fill in regulated waters is not practicable (if applicable):	Temporary fill is related to the water diversion to construct the project. The installation of the BMPs constitutes a temporary fill and is necessary to ensure the project does not cause an exceedance of state 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.	**Project specific BMPs to be implemented for the project:** • Work proposed to occur during low flow conditions (e.g., periods without storm-driven flow increases) • Weather monitoring to ensure no work occurs during precipitation events. • Work proposed to be conducted as quickly as possible to reduce the time in the live stream flows.	

- Stockpile areas would have perimeter controls installed at the toe of the stockpile and around the laydown area perimeter to prevent return flows from the sediment to the WOTUS.
- Work is sequenced to reduce sediment transport downstream during work activities.
- See attached plans for the placement of temporary BMPs to prevent downstream water quality impacts (Appendix E). Temporary berms would include impervious barrier covers.
- The construction contractor is responsible for obtaining the approved SWPPP for the proposed project. A construction contractor has not yet been selected for this project. An approved SWPPP will be obtained prior to the start of work.
- Sequencing to reduce sediment transport downstream during work activities.
- Equipment would be cleaned prior to being used on site to avoid the potential spread of invasive weed seeds.

General BMPs to be implemented for the project:

- Limit access to and from the site.
- Stabilize construction entrances/exits to minimize the track out of dirt and mud onto adjacent streets. Conduct frequent street sweeping.
- Avoid storing or stockpiling materials near storm drain inlets, gullies, or streams.
- Perform major maintenance and repairs of vehicles and equipment off-site.
- Concrete washouts located in upland areas off-site.
- Keep construction sites clean by removing trash, debris, waste, etc. on a regular basis.
- Clean up spills immediately using dry clean up methods (e.g., absorbent materials such as cat litter, sand or rags for liquid spills, sweeping for dry spills such as cement, mortar or fertilizer) and by removing the contaminated soil from spills on dirt areas.
- Prevent erosion by implementing any or a combination of soil stabilization practices such as mulching, surface roughening, and temporary silt fencing.
- Maintain all vehicles and equipment. Inspect frequently for leaks and repair promptly.
- Practice proper waste disposal. Many construction materials and wastes, including solvents, water-based paint, vehicle fluids, broken asphalt and concrete, wood, and cleared vegetation can be recycled. Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste.
- Cover open dumpsters with secure tarps or plastic sheeting. Never clean out a dumpster by washing it down on the construction site.
- Arrange for an adequate debris disposal schedule to ensure that dumpsters do not overflow.

	Wetland Planting Plan • A Wetland Planting Plan has been prepared to focus on establishing two wetland community types within the Duck Creek wash, utilizing grading to control the depth to groundwater and depth of flooding. At higher elevations with only shallow, seasonal flooding, a riparian shrub community consisting of Fremont cottonwood (*Populus fremontii*), Goodding willow (*Salix gooddingii*), sandbar willow (*Salix exigua*), screwbean mesquite (*Prosopis pubescens*), honey mesquite (*Prosopis glandulosa* var. *torreyana*), arrowweed (*Pluchea sericea*), seepwillow (*Baccharis salicifolia*), salt grass (*Distichlis spicata*), yerba mansa (*Anemopsis californica*), salt heliotrope (*Heliotropium curassavicum*), alkali sacaton (*Sporobolus airoides*), velvet ash (*Fraxinus velutina*), wolfberry (*Lycium* spp.), and quail bush (*Atriplex lentiformis*) would be established. Below the shrub community, an emergent wetland would be established up to the Duck Creek channel. The native plants included in the planting plan would include spikerush (*Eleocharis macrostachya*), Torrey spikerush (*E. rostellata*), alkali bulrush (*Schoenoplectus maritimus*), Olney's three square (*S. americanus*), California bulrush (*S. californicus*), hardstem bulrush (*S. acutus*), common three square (*S. pungens*), Baltic rush (*Juncus balticus*), and Cooper rush (*J. cooperi*). Within this planting zone, several smaller patches varying from 0.5 to 1 foot lower than the surrounding wetland would be established to introduce greater variability in the plant community. The site would also be rough graded to maintain variability in surface elevations, and long slopes of 10:1 or greater would be used between grade lines. • Plant materials would consist of a combination of containerized woody plants, herbaceous plugs, dormant live stakes, and native seed mixes. • The Wetland Planting Plan is included in Appendix F. **Monitoring and Adaptive Management Plan** • An Adaptive Management and Monitoring Plan has been prepared to define actions that would be implemented during and after construction to ensure the planting program is successful, including monitoring for hydrology, invasive species, and vegetation growth and survival. • The Monitoring and Adaptive Management Plan is included in Appendix G.
Describe how the activity has been designed to avoid and/or minimize adverse effects, both temporary and permanent, to regulated waters:	Temporary impacts have been minimized through the proposed BMPs and construction sequencing. Permanent impacts have been minimized through project design by reducing the number of pier supports located in WOTUS for the bridge over the Las Vegas Wash. Further, the weir structure has been designed to

	control the existing headcut which is actively eroding and destabilizing the surrounding floodplain and wetland area.
Describe any compensatory mitigation planned for this project (if applicable):	Compensatory mitigation is not being proposed for this project.

D. Signature

Name and Title (Print):	Phone Number:	Date:
Denis Cederburg	702-455-6020	May 6,2026

X
Signature of Responsible Official

Mandatory Attachments:

- **Federal Permit or License Identification:**
  - Project proponents seeking a federal general permit or license must include a copy of the draft federal license or permit and any readily available water quality-related materials that informed the development of the draft federal license or permit, or;
  - Project proponents seeking a federal individual permit or license must include 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/).

Hollywood Boulevard Extension Phase II
Wetlands Park to Vegas Valley Drive

Monitoring and Adaptive Management Plan

April 2026

Prepared by:

WSP USA, Inc.

On behalf of:

Clark County, Nevada

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1. Introduction

This Monitoring and Adaptive Management Plan was prepared for the Hollywood Boulevard Extension Phase II, Wetlands Park to Vegas Valley Drive (the Project) to describe the monitoring activities, criteria for success, and adaptive management procedures to be implemented, if needed, following the construction and restoration of emergent wetlands and riparian vegetation along Duck Creek. This plan describes the following elements:

- Project background.
- The existing and target conditions of the restoration site.
- Specific parameters to measure success or failure in reaching the target conditions.
- Actions to be taken if site conditions do not meet the success criteria.
- Conditions under which the restoration site will be considered successful after a certain number of growing seasons; and,
- Monitoring report requirements.

The post-construction monitoring activities will be used to evaluate whether measurable results have been achieved and whether the intent of the Project has been met. The level of detail in this plan is based on currently available data and information developed during baseline studies and permit application submissions. Updates to the plan, as needed due to design changes during the construction process, will be applied following completion of work.

2. Project Background

2.1 Purpose

The purpose of the proposed project is to stabilize the actively eroding Duck Creek drainage system while maintaining flood conveyance and increasing the extent and function of riparian and emergent wetland areas. The Project proposes two RCC grade-control weirs (the Wiesner Weir and Hollywood Weir), targeted channel grading, a low-flow channel, planting benches, and localized riprap bank protection designed to stabilize UT-1 Duck Creek and enhance aquatic resource functions and services. These components would relocate portions of non-tidal streams (e.g., Duck Creek and UT-1 Duck Creek) and common reed dominated wetlands as part of a strategy to address existing head cutting and erosion; improve energy dissipation; stabilize water levels and extend water residence; facilitate native riparian and emergent vegetation establishment; enhance nutrient cycling through expanded native emergent and riparian vegetation; and increase particulate retention.

2.2 Existing Conditions

The project area is in the Creosote Bush-Dominated Basins terrain of the Mojave Basin and Range ecoregion (USEPA, 2013). Uplands within the project area are dominated by xerophytic plant species including big saltbush (*Atriplex lentiformis*), creosote bush (*Larrea tridentata*), and fourwing saltbush (*Atriplex canescens*). The project area wetlands include a portion of Wetland A as described within the Aquatic Resources Delineation Report (UES 2024). The entirety of Wetland A is approximately 48.64

acres in size wetland with a Cowardin classification of palustrine emergent seasonally flooded (PEM1C). It is dominated by dense, tall communities of Eurasian common reed (*Phragmites australis*). Duck Creek and an unnamed tributary (UT-1) to Duck Creek flow through Wetland A.

The portion of Wetland A within the project area is approximately 10 acres and is dominated by common reed. Along riparian zones, the dominant plant species includes Tamarix (*Tamarix aphylla*), willow baccharis (*Baccharis salicina*), and annual beard-grass (*Polypogon monspeliensis*). A complete plant list and photographs are available in the delineation report. Soil mapping provided by the NRCS shows the predominant soil type is "Land very fine sandy loam, wet" (278). Soil unit 278 is somewhat poorly drained and non-hydric, with a shallow depth to water table.

Duck Creek is a perennial feature with a Cowardin classification of riverine unknown perennial unconsolidated bottom permanently flooded (R5UBH). Duck Creek primarily receives hydrology from stormwater runoff (following precipitation events) and urban runoff. Near and within the survey area, it receives additional flow from the adjacent Clark County Wetlands Park mitigation wetlands and shallow groundwater. Duck Creek flows into the survey area from the west, flows east through/near the southern edge of Wetland A, confluences with UT-1 Duck Creek, then flows into the Las Vegas Wash. The Las Vegas Wash flows into Lake Las Vegas, the nearest downstream TNW, approximately 4.07 river miles from the survey area. Active head cutting has caused the Duck Creek channel to become narrow and deeply incised, concentrating flow, accelerating erosion, and discharging high-velocity water—up to 16 feet per second—into the Duck Creek-Las Vegas Wash confluence. The head cut will also cause a reduction in groundwater elevations, leading to a loss of functional wetlands and riparian habitat.

2.3 Target Conditions

The proposed action would result in the impact of approximately 10.02 acres of freshwater aquatic resources in the project area largely characterized by monotypic stands of invasive Eurasian common reed. The implementation of the wetland restoration is expected to result in a gross increase in aquatic resources by approximately 14.19 acres, yielding a net gain of approximately 4.17 acres of aquatic resources. This would result in a measurable gain in aquatic resource extent and associated ecological function. In addition to this increase in surface area, replacement of invasive common reed with native emergent and riparian vegetation would improve habitat structure and species diversity. This net increase is consistent with the Project's Biological Assessment (BA) for the Yuma Ridgway's rail, which identifies a net gain of approximately 3.6 acres of suitable riparian/wetland nesting habitat within the action area after implementation. Collectively, these changes demonstrate a net gain in aquatic resource function and wildlife habitat.

To ensure this outcome, the Project would implement the Wetland and Riparian Planting Plan (See Figure 1) paired with the adaptive management and monitoring plan activities outlined in this document to install and track native emergent and riparian plantings, Duck Creek channel conditions, and overall functional objectives.

The aquatic habitat restoration is divided into two systems above and below the proposed Wiesner Weir. Upstream of the weir, hydrology is characterized by variable seasonal flooding, fluctuating inundation depth, and periodic drawdown. Downstream of the weir, flooding is expected to be longer in duration and

more continuous due to backwater effects from Las Vegas Wash flows and the existing Duck Creek Confluence Weir.

The Wetland and Riparian Scrub Shrub Planting Plan focuses on establishing two plant communities within the drainage corridor, utilizing grading to control the seasonal depth to groundwater and depth of flooding. The design considered wetland information obtained from two reference wetlands within the Las Vegas Wash downstream of the project site. The first reference wetland is located downstream of the DU Confluence Weir and upstream of the Upper Narrow Weir. These wetlands have been established since 2013 and are reported to have high diversity of species, including both emergent herbaceous plants and riparian shrub and tree species and can serve as a reference site for aquatic resource restoration/enhancement downstream of the proposed Wiesner Weir (LVWCC, 2019). In addition, the project team used the wetlands located above the Bostick Weir to serve as a reference site for the aquatic resource restoration/enhancement in Duck Creek upstream of the proposed Wiesner Weir. The wetlands above the Bostick Weir are present on a wider floodplain and have a variety of wetland types, hydrologic regimes and native species including bulrushes, cattails and riparian shrubs and trees (LVWCC, 2004). Both reference sites also include patches of common reed which occur frequently within the Wash.

In addition, wetland habitat above the Duck Creek confluence weir located just below the project site is known habitat for the Yuma Ridgeway rail (*Rallus obsoletus yumanensis*). The emergent wetlands at this location include patches of common reed as well as native emergent plants such as cattail (Typha) and bulrushes. The presence of common reed within the restored wetlands is not a detriment to wildlife value of the emergent wetlands.

As noted above, the planting plan was developed to establish a diverse and floristically rich emergent wetland and riparian zones that provide suitable cover and structure for wildlife. The riparian shrub community will be established along higher elevation slopes that will experience shallow, seasonal flooding. The native tree and shrub planting will consist of Fremont cottonwood (*Populus fremontii*), Goodding willow (*Salix gooddingii*), sandbar willow (*Salix exigua*), screwbean mesquite (*Prosopis pubescens*), honey mesquite (*Prosopis glandulosa* var. *torreyana*), arrowweed (*Pluchea sericea*), seepwillow (*Baccharis salicifolia*), salt grass (*distichlis spicata*), yerba mansa (*Anemopsis californica*), salt heliotrope (*Heliotropium curassavicum*), alkali sacaton *(Sporobolus airoides*), velvet ash (*Fraxinus velutina*), wolfberry (*Lycium* spp.), and quail bush (*Atriplex lentiformis*) is included.

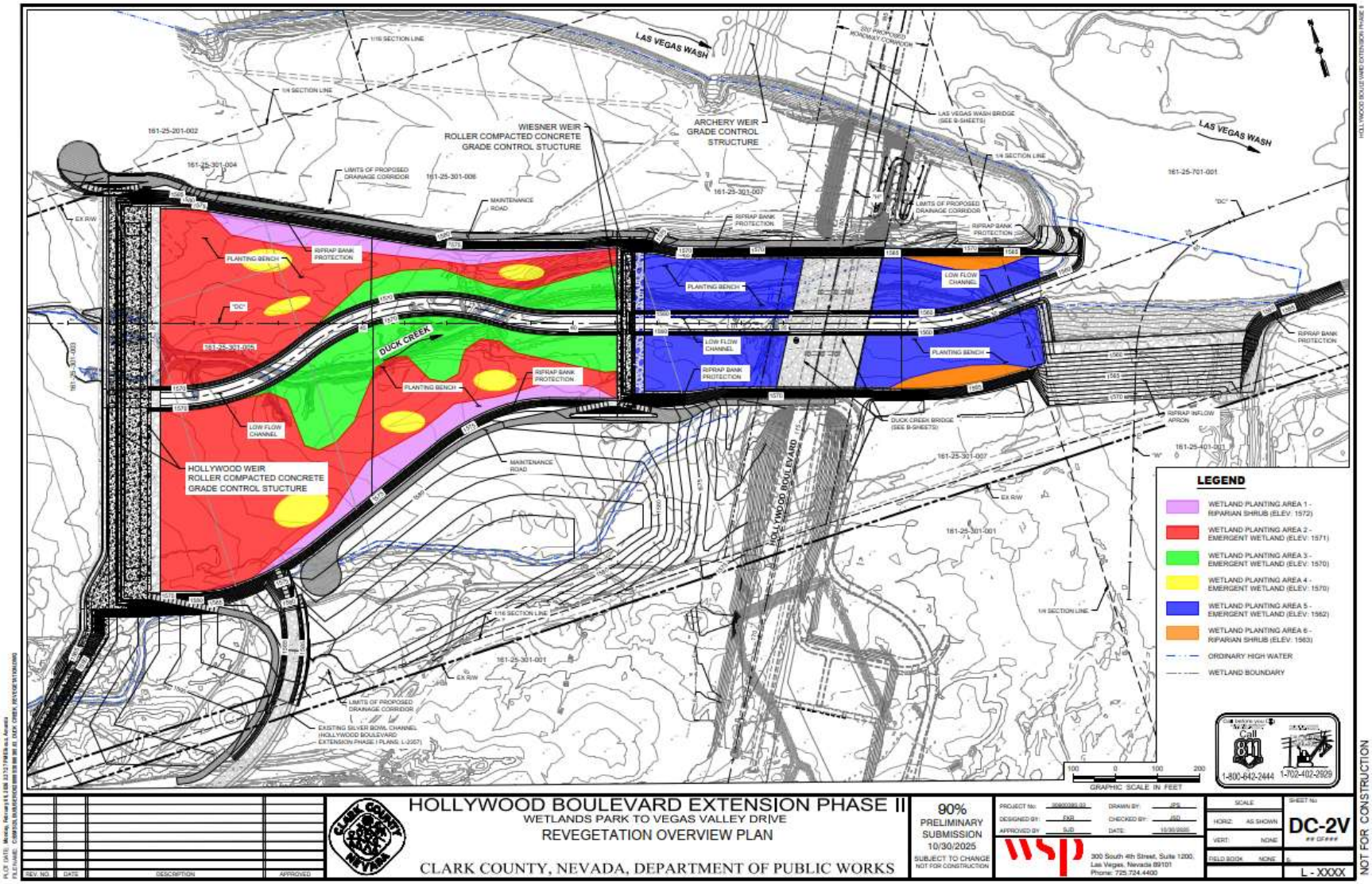
A broad emergent wetland will be established below the riparian shrub habitat and extend to the realigned Duck Creek channel. The emergent wetland consists of two planting types above the Weisner Weir to account for design variability in elevations and wetland hydrology. Within the emergent planting zone, several small depressions varying from 0.5 to 1 foot below the surrounding grade the wetland would be established to introduce greater variability in the plant community. The site would also be rough graded to maintain variability in surface elevations, and long slopes of 10:1 or greater would be used between grade lines. Emergent wetland Planting Type 2 will be at a slightly higher elevation that will be seasonally saturated and will experience periodic flooding, while Type 1 will experience more frequent and deeper flooding. Below the Weisner Weir, the emergent wetland will follow Planting Type 1.

Both emergent wetland planting types include alkali bulrush (*Schoenoplectus maritimus*), hardstem bulrush (*Schoenoplectus acutus* var*. acutus*), Olney's three square (*Schoenoplectus americanus*), California bulrush (*Schoenoplectus californicus*), and common three square (*Schoenoplectus pungens*).

Emergent Planting Type 1 will also include pale spikerush (*Eleocharis macrostachya*) and beaked spikerush (*Eleocharis rostelatta*), whereas Emergent Planting Type 2 will include mountain rush (*Juncus articus*) and Cooper's rush (*Juncus cooperi*).

The restored freshwater emergent wetland and riparian shrub habitats will be seeded with a native wetland seed mix containing sacatons (*Sporobulus* spp.), bulrushes (*Schoenoplectuss* spp.), rushes (*Juncus* spp.), desert marigold (*Baileya multiradiata*), Indian ricegrass (*Achnatherum hymenoides*), Nuttall's alkaligrass (*Puccinellia nuttalliana*), salt grass (*Distichlis spicata*), and saltmarsh fleabane (*Pluchea odorata var. succulenta*) to provide additional cover and soil stabilization. The mix of native herbaceous plants will provide multiple strata of cover within the wetland and riparian scrub shrub habitats.

Figure 1 – Proposed Habitat



3. Restoration Goals, Objectives, And Success Criteria

3.1 Goals and Objectives

The restoration goals and objectives are guided by the project purpose and inform monitoring and adaptive management protocols. As noted in Section 2.0, the purpose of the project is to stabilize the actively eroding Duck Creek drainage system while maintaining flood conveyance and increasing the extent and function of riparian and emergent wetland areas. The project goal and objectives below reflect the positive outcomes of the projects strategy to address existing head cutting and erosion; improve energy dissipation; stabilize groundwater and surface water levels and extend water residence; facilitate native riparian and emergent vegetation establishment; establish valuable wildlife habitat; enhance nutrient cycling through expanded native emergent and riparian vegetation; and increase particulate retention.

Goal 1: Improve wetland and riparian habitat quality and erosion control along Duck Creek and the Las Vegas Wash

Objective 1.1: Restore hydrology to support self-sustaining wetland and riparian habitats.

Objective 1.2: Restore native vegetation to support self-sustaining wetland and riparian habitats, and related functions and services.

Objective 1.3: The Hollywood and Weisner weirs stabilize Duck Creek drainage system and associated wetlands and reduce headcuts and soil erosion into the Wash.

Objective 1.4: Create habitat beneficial for the Yuma Ridgeway Rail.

Objective 1.5: The collection and removal of trash from the Hollywood Weir trash rack on Duck Creek is completed at least annually.

3.2 Success Criteria

Project success criteria provide objective based measurement standards that can be used to assess a project's progression toward meeting the project objectives within a set timeframe. Table 1 lists the project success criteria that are anticipated for the project. The success criteria in the table will be revised to reflect permit requirements.

Table 1: Monitoring Success Criteria

Feature	Monitoring Success Criteria
Wetland and Riparian Vegetation	• Survival rate of planted woody vegetation is greater than or equal to 80% by Year 3. • Post-construction wetland plant cover should be at least 70 percent of pre-construction natural plant cover by Year 3. • Less than 15 percent bare ground by Year 3. • Cover of invasive/exotic species should be less than 20% by Year 3.
Wetland Soil Conditions	• Hydric soil is present by Year 3, assuming normal precipitation during the previous monitoring years.

	• Final site stabilization is achieved by Year 5.
Wetland Hydrology Conditions	• Hydrology indicators are present by Year 3, assuming normal precipitation patterns in previous monitoring years.
Duck Creek Channel	• Constructed channel banks and bed below Hollywood and Weisner Weirs is stable. • No new or active incised and unstable channel formation by Year 3.
Hollywood and Weisner Weir Condition	• Visual inspection of weirs to document structures are stable, with no observable erosion.

4. Invasive Plant Species Management

Invasive and noxious plant species are present within the Las Vegas Wash and are recognized as a long-term management concern for habitat restoration activities within the Wash. Priority species identified in the Integrated Weed Management Plan (LVWCC, 2003) included tall whitetop (*Lepidium latifolium*), giant reed (*Arundo donax*), and saltcedar (*Tamarix ramosissima*), as well as an additional nine watch species. The Las Vegas Wash Long Term Revegetation Management Plan (LVWCC, 2019) also identified tall whitetop, giant reed, and tamarix as the primary invasive species along the Wash since the inception of the revegetation program and noted that treatment programs were successful in controlling the populations of these species. The report also noted that the state-listed noxious weed, johnsongrass (*Sorghum halepense*), is present in riparian areas. In addition, bassia (*Bassia hyssopifolia*) and Eurasian common reed (*Phragmites australis*), while not on the state list, are reportedly widespread within the wash. The wetland delineation report noted that Eurasian common reed occurs throughout freshwater wetlands within the project. Ongoing eradication and control efforts by the Southern Nevada Water Authority (SWNA) within revegetation areas have been reported to be effective (LVCC, 2024) in controlling invasive species. The report acknowledges Eurasian common reed and the native quailbush (*Atriplex lentiformis*) two species that need to be closely monitored due to their potential to outcompete other native species, and constant monitoring and treatment of new patches of tall whitetop, silverleaf nightshade (*Solanum elaegnifolium*) and giant reed is necessary to control these species.

Table 2 identifies invasive or noxious plant species within Nevada (Nevada Department of Agriculture, 2025) that may potentially be observed within the Project area.

Table 2: List of Invasive and Noxious Plant Species of Nevada

Common Name	Scientific Name
Russian knapweed*	*Acroptilon repens**
jointed goatgrass	*Aegilops cylindrica*
barbed goatgrass	*Aegilops triuncialis*
camelthorn*	*Alhagi maurorum**
mayweed chamomile	*Anthemis cotula*
giant reed**	*Arundo donax***
fivehook bassia*	*Bassia hyssopifolia**
Sahara mustard	*Brassica tournefortii*

flowering rush	*Butomus umbellatus*
hoary cress	*Cardaria draba*
musk thistle	*Carduus nutans*
spotted knapweed	*Centaurea biebersteinii*
purple starthistle	*Centaurea calcitrapa*
diffuse knapweed	*Centaurea diffusa*
Iberian starthisle	*Centaurea iberica*
Malta starthistle	*Centaurea melitensis*
yellow starthistle	*Centaurea solsitialis*
squarrose knapweed	*Centaurea virgata var. squarrosa*
rush skeletonweed	*Chondrilla juncea*
waterhemlock	*Cicuta spp.*
Canada thistle	*Cirsium arvense*
poison hemlock	*Conium maculatum*
common crupina	*Crupina vulgaris*
houndstongue	*Cynoglossum officinale*
leafy spurge	*Euphorbia esula*
goatsrue	*Galega officinalis*
hydrilla	*Hydrilla verticillata*
St. John's Wort	*Hypericum perforatum*
black henbane	*Hyoscyamus niger*
Dyer's woad	*Isatis tinctoria*
kchia*	*Kochia scoparia**
tall whitetop**	*Lepidium latifolium***
dalmatian toadflax	*Linaria dalmatica*
yellow toadflax	*Linaria vulgaris*
purple loosestrife	*Lythrum salicaria*
Eurasian watermilfoil	*Myriophyllum spicatum*
tree tobacco*	*Nicotiana glauca*
Scotch thistle	*Onopordum acanthium*
African rue	*Peganum harmala*
buffelgrass	*Pennisetum ciliare*
green fountaingrass*	*Pennisetum setaceum**
common reed	*Phragmites australis**
curly leaf pondweed	*Potamogeton crispus*
sulfur cinquefoil	*Potentilla recta*
Austrian fieldcress	*Rorippa austriaca*
Mediterranean sage	*Salvia aethiopis*
giant salvinia	*Salvinia molesta*
horsenettle	*Solanum carolinense*

silverleaf nightshade*	*Solanum elaegnifolium**
johnsongrass*	*Sorghum halepense**
Austrian peaweed	*Sphaerophysa salsula*
medusahead	*Taeniatherum caput-medusae*
salt cedar**	*Tamarix ramosissima***
puncturevine	*Tribulus terrestris*
ventenata	*Ventenata dubia*
desert knapweed	*Volutaria tubuliflora*
fan palm*	*Washingtonia filifera**
Syrian beancaper	*Zygophyllum fabago*

* Identified as species to watch within the Integrated Weed Management Plan for the Lower Las Vegas Wash (LVWCC, 2003).
**Identified as priority species within the Integrated Weed Management Plan for the Lower Las Vegas Wash (LVWCC, 2003).

5. Monitoring Activities

The project goals and objectives will be met through restoration activities, including invasive species treatment and removal, excavation and grading, and native planting in accordance with the Wetland Restoration Plan, the Monitoring and Adaptive Management Plan, and compliance with permit conditions.

Monitoring protocols for restored freshwater wetlands and riparian scrub-shrub zones are established in this section. Monitoring activities may need to be adjusted over time to address changes in site conditions that may affect site access, require changes in frequency of site inspections, or require changes in monitoring methodologies.

5.1 Baseline and As-Built Condition Monitoring

Baseline surveys of vegetation, hydrology, and soils were completed as part of the wetland delineation in May and June of 2024 (UES, 2024). Vegetation, soils and site hydrology were documented as part of the site investigation. Photos documenting the site conditions at the time of the wetland delineation are included in the report along with a figure depicting the location of each photograph.

Following grading, planting and seeding, as-built conditions should be documented to record the extent and acreage of each planting zone, the total number of native plants installed, and pounds of native seed placed. These calculations will establish the baseline conditions for the restored habitats. An As-Built site inspection will be performed to confirm as-builts information, establish permanent photograph monitoring points, permanent vegetation plots, and conduct a visual inspection of each planting zone. The Monitoring and Adaptive Management Plan should be updated upon completion of As-Built monitoring to account for any design changes made during the construction phase.

5.2 Post-Construction Quarterly Monitoring

The post-construction quarterly monitoring program will begin following completion of construction and run through a 3-year monitoring period. Approximately four to five weeks after final seeding and planting are complete, the first quarterly post-construction monitoring inspection will commence. The purpose of periodic inspections is to detect potential issues that may be occurring that will require immediate or planned, scheduled intervention to prevent the restoration site from being further degraded and placed

on a trajectory of failure to meet project goals and success criteria. Table 3 provides a summary of the suggested minimum frequency for monitoring inspections, suggested activities, the frequency

Quarterly site inspections will include a site walk to conduct a visual inspection of each freshwater emergent wetland and riparian scrub shrub planting zone. During each inspection, field observations will be recorded and supplemented with site photographs as needed. Completion of a standardized field inspection form and a field map is recommended to document observations for each planting zone. The use of aerial imagery collected by unmanned aerial vehicles (UAV) may be used to supplement the field inspections.

Additional periodic growing season inspections after construction completion will evaluate visible site hydrology, invasive species presence, native plant material establishment and any immediate plant mortality, indications of soil erosion, to determine the need for any herbicide treatments and/or re-planting efforts.

Annual wetland restoration monitoring, discussed below, will include the collection of site data to document the presence and extent of wetland hydrologic regimes, hydric soil characteristics, native plant species richness and percent cover, invasive plant species richness and percent cover, and overall performance of the restoration project.

At the end of the 3-year monitoring period, wetland plant coverage of the emergent wetlands should be 70 percent or greater.

Table 3: Monitoring Schedule

Monitoring Phase	Monitoring Activities	Documentation
Baseline and As-built Condition	Baseline measurements of monitoring parameters for vegetation, soils, and hydrology Conduct site inspection to confirm as-builts information for each planting area and conduct a visual inspection of site	• As-Built plans and summary documentation • Plan of permanent photograph and vegetation monitoring plots • Site condition assessment
Post-Construction Quarterly Inspections Years 1 - 3	Inspect and document conditions in restored wetlands, riparian shrub habitat and Duck Creek channel Additional inspections after each major rainfall and flood event	• Native vegetation health, growth, coverage. • Inspect for wetland hydrology indicators, channel and bank stability, channel incision, signs of erosion • Presence/extent of invasive species and treatment effects • Inspect for trash accumulation and flood damage to vegetation • Human activity within site
Annual Monitoring Years 1 - 3	Annual measurements of monitoring parameters (defined in this section) for vegetation, soils and hydrology, and reporting to USACE.	• Native plant survival, coverage statistics • Hydric soil development • Wetland hydrology documentation

		• Channel and bank stability, and limited erosion or channel incision • Effects of annual treatment and removal of invasive plants • Remedial actions to address deficiencies

5.3 Annual Wetland and Riparian Buffer Restoration Monitoring

Annual monitoring of restored wetland areas will occur once a year between May and June. The purpose of this monitoring is to assess the progress towards, and the success or failure of, the restoration of freshwater wetland habitats and the achievement of acceptable standards of wetland structure and function.

Qualitative Visual Analysis

The goal of visual monitoring is to identify any issues on a site that may not be detected by other routine monitoring activities such as poor vegetation growth, herbivory, drainage problems, soil instability or erosion and trash accumulation. The following parameters will be monitored via the visual assessment:

- General site freshwater hydrology
- Indication of soil erosion or instability
- Structural integrity of slopes
- Signs of disease or predation
- Planting failures
- General observations will be noted, and photographs will be taken of each habitat type or areas of concern. Infestations of invasive plant species will be sketched on a field map and included in the annual monitoring report.

Vegetation Monitoring

Permanent monitoring plots will be established during the as-built verification inspection in Year 1 to monitor the development of vegetative cover and dominance patterns within the wetland and riparian restoration site. Permanent plots (the size and number to be determined post-construction) will be established within freshwater emergent wetlands and riparian shrub habitats. The corners of each plot will be recorded using a Global Positioning System (GPS) and marked with one (1) inch PVC pipes at each corner. These markers will also be used as permanent photo stations for annual photographic monitoring, taken from one end marker to the other and vice versa. Permanent plot locations will be randomly selected. Number of sample plots will vary based on transect length and the habitat types located within each transect. A minimum of 30 plots within wetland and riparian scrub shrub areas will be sampled.

The following parameters will be monitored:

- Total percent live vegetative cover in each quadrat;
- Absolute percent cover by species occurring in each quadrat, including invasive species;
- Species richness of native and invasive species;
- Height and density of live individual woody plant species
- Signs of disease, predation, or other disturbance in each quadrat.

In addition to assessing invasive species' presence within monitoring plots, a visual survey of the habitat area will be conducted to determine the presence of infestations. If present, a GPS points outlining the approximate extent of invasive plants observed will be collected and used to create figures to support treatment planning and reporting to USACE. Additionally, annual monitoring reports will summarize the type and extent of control measures implemented throughout the monitoring period.

Hydric Soil Monitoring Procedures

Investigations to track the progression of hydric soil formation will occur once annually during the growing season monitoring events, starting in Year 2. Soil samples will be taken at random points within the permanent plots. A soil sample, up to 18 inches in depth, will be examined to determine the soil characteristics including texture, color, structure, and hydric indicators such as redoximorphic features. Once transect soil samples meet hydric soil indicators, soil sampling will cease at that location.

Wetland Hydrology Monitoring Procedures

Field observations of wetland hydrology will be recorded at sampling plots in all freshwater wetland habitats and included with sampling data. Field observation of wetland hydrology indicators will follow the USACE 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).

Monitoring Reports

An annual monitoring report will be provided at the end of each monitoring season and submitted to the USACE District in accordance with permit requirements. The annual monitoring report will summarize all data obtained during the quarterly and annual monitoring events. The report will include all vegetation and soil sampling data, hydrology documentation, photographs, general qualitative observations, wildlife observations, and an invasive species evaluation. Each monitoring report will include a discussion of which restoration elements are successful and those elements that are not achieving the desired result. As-built plans and mapping will be included. A summary of corrective measures implemented and recommendations for future maintenance and corrective measures will be included in each monitoring report. Each report deliverable will consist of a draft and final submission.

6. Adaptive Management Procedures

The adaptive management actions can be triggered at any time after construction is complete. If any habitat fails to retain its designed structure or achieve its designed function, the following adaptive management procedures will be implemented. Table 4 summarizes potential failure conditions that may be observed, and adaptive management actions that may be employed to address each issue. As the post-construction monitoring work is initiated, the finding may require the development of specific supplemental plans, such as the development of an invasive species treatment plan, that can be amended to this plan. The list of items in Table 4 may need to be expanded based on field observations.

Table 4: Adaptive Management Actions

Failure condition	Adaptive management procedure
Less than 70% cover by wetland vegetation (planted and natural recruitment)	Supplemental container planting and/or seeding will occur in specified areas. If issues of vegetation establishment persist beyond two years

	post construction, an ecologist will investigate the cause of failure and recommend modifications to the plant species as appropriate.
	If extensive and prolonged surface flooding is present and preventing target vegetation establishment, alternative native plant species establishment could be considered. Evaluating the permanence of the surface flooding would need to be completed before adopting a new planting scheme.
	Should observation of severe herbivory to plant material be observed, then efforts to control herbivory will be devised and for possible implementation. If deemed necessary, a 4-foot-high waterfowl exclusion fence would be installed around perimeter and in a grid pattern throughout affected freshwater planting areas.
More than 20% coverage of non-native species in the restored habitat	Spot treatment recommendations regarding corrective measures for small colonies of invasive plant species shall be provided as required during the first three (3) years post-construction. Control of common reed will require annual herbicide treatments using an EPA-approved herbicide for use in wetlands.
	Observed species can be immediately removed by hand where practical.
	An invasive species treatment plan and program for removal of large colonies shall be developed if deemed necessary based on field observation and by monitoring data. This program should be designed to best accomplish the removal of invasive plant species through the implementation of various control methods and may include manual and/or chemical techniques, including aerial application of herbicides by helicopter or drones for large infestations.
Failure to achieve wetland hydrology regimes and/or failure to achieve soils that trend towards wetland soil characteristics	In the event areas within the restoration project are achieving anticipated wetland hydrology during the post-construction monitoring period, a hydrologist and wetland scientist will conduct additional analysis of rainfall and groundwater data to determine if the cause is due to drought conditions, improper elevations, or other causes.
	A hydrologist will investigate the cause of failure and recommend minor topographic modifications back to As-Built condition.
	Alternative site changes will be investigated such as adjusting the Deer Creek thalweg back to As-Built condition, or regrading portions of the site back to As-Built condition. Implementation of any adjustments will be coordinated with USACE.
Bank or channel erosion due to excessive channel or overland flows	Slope and bank erosion may require placement of stone riprap to stabilize slopes and repair the Duck Creek channel back to As-Built condition.

7. References

Lichvar R, McColley SM. 2008. A field guide to the identification of the ordinary high water mark (OHWM) in the arid west region of the United States: A delineation manual. ERDC/CRREL TR-08-12. USACE Research and Development Center/Cold Regions Research and Engineering Laboratory, Hanover, NH.

Gabrielle C.L., et. al. 2022. National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams: Interim Version. ERDC/CRREL TR-22-26. US Army Engineer Research and Development Center/Cold Regions Research and Engineering Laboratory, Hanover, NH.

Curtis, K, Lichvar R. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. ERDC/CRREL TN-10-1. USACE Research and Development Center/Cold Regions Research and Engineering Laboratory, Hanover, NH.

Las Vegas Wash Coordination Committee (LVWCC), 2019.Las Vegas Wash Long-Term Revegetation Management Plan. November 2019. Prepared by Southern Nevada Water Authority, Las Vegas, Nevada. 33p.

LVWCC, 2003. Integrated Weed Management Plan for the Lower Las Vegas Wash. September 19, 2003. Prepared by Southern Nevada Water Authority, Las Vegas, Nevada. 90 p. Integrated Weed Management Program for the Lower Las Vegas Wash

LVWCC, 2004. Bostick Weir Planting Plan. July 2004. 43 pg. https://www.lvwash.org/assets/pdf/resources-planting-bostick.pdf

LVWCC, 2025. Las Vegas Wash Vegetation Monitoring Report, 2024. May 2025. Prepared by Southern Nevada Water Authority, Las Vegas, Nevada. 60p.

National Oceanic and Atmospheric Administration, National Weather Service (NOAA/NWS). Climate. https://www.weather.gov/wrh/Climate?wfo=rev. Accessed July 24, 2024.

Natural Resources Conservation Service (NRCS), Web Soil Survey. https://websoilsurvey.nrcs.usda.gov/app/. Accessed July 18, 2024.

Ralston, B.E., and Sarr, D.A., 2017, Case studies of riparian and watershed restoration in the southwestern United States—Principles, challenges, and successes: U.S. Geological Survey Open-File Report 2017-1091, 116 p., https://doi.org/10.3133/20171091.

U.S. Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Environmental Protection Agency (USEPA). 2013. Level IV Ecoregions of the Conterminous United States. U.S. EPA Office of Research Y Development (ORD) – National Health and Environmental Effects Research Laboratory (NHEERL). Corvallis, OR. July 15, 2024.

UES, Inc. 2024. Aquatic Resources Delineation Report, Hollywood Boulevard Extension. Prep. for: WSP, Inc. Las Vegas, NV. 289 pp. August.

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Reference: SPK-2021-00564

Date: March 3, 2026

Dear Reviewer,

Enclosed is a revised and resubmitted pre-construction notification (PCN) for the Hollywood Boulevard Extension Project, located near Las Vegas, Clark County, Nevada near Latitude 36.092456° North, Longitude -115.002901° West. The project proponent is WSP on behalf of Clark County Public Works (CCPW). This submittal responds to the administrative withdrawal issued by USACE on November 12, 2025 (SPK-2021-00564) and incorporates additional clarification regarding avoidance, minimization, and enhancement measures associated with the proposed NWP 27 activities. A joint field verification site visit with USACE, Energy Project Solutions (EPS), and the Clark County Regional Flood Control District (CCRFCD) was conducted on January 13, 2026, to review existing site conditions and proposed NWP activities.

The approximately 380-acre survey area was surveyed in multiple phases November 6-7, 2022; April 16-19, 2024; and May 22, 2024. Portions of the survey area were evaluated during each survey event Collectively, the survey efforts provided coverage of the full 380-acre survey area. There was one wetland totaling 48.911 acres, four relatively permanent waters (RPWs) totaling 11,755 linear feet/46.682 acres, 20 non-relatively permanent waters (NRPWs) totaling 16,503 linear feet/2.197 acres, 26 upland swales totaling 7,029 linear feet, and one other upland feature totaling 0.17-acre, located within the survey area. One RPW is isolated, one AR is isolated, and the “other upland feature” are all isolated. All other features maintain surface connection to a traditional navigable water (TNW) through Las Vegas Wash. The RPWs and one wetland appear to be federally jurisdictional waters and subject to Clean Water Act (CWA) Section 404 permitting through the U.S. Army Corps of Engineers (USACE). The proposed project would result in impacts to three RWPs (Las Vegas Wash, Duck Creek, and UT-1 Duck Creek) and one wetland (Wetland A). This project qualifies for processing under the Clark County Regional Flood Control District (CCRFCD) Water Resources Development Act (WRDA) Agreement with USACE.

The project qualifies for coverage under the USACE Nationwide Permit (NWP) 14 – Linear Transportation Projects, NWP 27 – Aquatic Habitat Restoration, Enhancement, and Establishment Activities, and NWP 33 – Temporary Construction, Access, and Dewatering. The NWP activities are described in detail in the following sections:

NWP 14: The purpose of the NWP 14 activity is to construct a bridge across Las Vegas Wash, Wetland A, and UT-1 Duck Creek to provide direct transportation between Henderson and Sunrise Manor. The span crosses all jurisdictional waters to maintain channel conveyance and low-flow connectivity while allowing maintenance access beneath the structure to service existing and proposed bank protection. The design avoids broad in-channel fills; permanent impacts are limited to the minimum necessary bridge

substructures (e.g., drilled shafts, abutments, piers/columns, and wingwalls). Additionally, a necessary firebreak under the bridge would be constructed from either concrete, roller compacted concrete (RCC), or riprap. The proposed NWP 14 activity would result in permanent impacts totaling approximately 0.22 acre / 11,400 cubic yards of fill within Las Vegas Wash, Wetland A, and UT-1 Duck Creek.

NWP 27: Active head cutting has caused the Duck Creek channel to become narrow and deeply incised, concentrating flow, accelerating erosion, and discharging high-velocity water—up to 16 feet per second—into the Duck Creek-Las Vegas Wash confluence. The purpose of the proposed NWP 27 work is to stabilize an actively eroding drainage system while maintaining flood conveyance and increasing the extent and function of riparian and emergent wetland areas. The Project proposes two RCC grade-control weirs (the Wiesner Weir and Hollywood Weir), targeted channel grading, a low-flow channel, planting benches, and localized riprap bank protection designed to stabilize UT-1 Duck Creek and enhance aquatic resource functions and services. These components would relocate portions of non-tidal streams (e.g., Duck Creek and UT-1 Duck Creek) and wetlands (e.g., Wetland A) as part of a strategy to address existing head cutting and erosion; improve energy dissipation; stabilize water levels and extend water residence; facilitate riparian and emergent vegetation growth; enhance nutrient cycling through expanded emergent and riparian vegetation; and increase particulate retention. The proposed NWP 27 activity would result in permanent impacts totaling approximately 20.74 acres / 57,756 cubic yards of fill within Las Vegas Wash, UT-1 Duck Creek, Duck Creek, and Wetland A.

The low-flow channel would maintain perennial flow of UT-1 Duck Creek and is designed to preserve key stream functions (e.g., conveyance, connectivity, and habitat continuity) throughout the relocated corridor. Moreover, concentrating base flows within a defined, contoured alignment would reduce stagnant pooling, enhance mixing, sustain dissolved oxygen delivery, and stabilize the thermal regime of the relocated reach by maintaining continuous flow. Vegetation in the relocated area is expected to remain better hydrated due to increased groundwater retention and sustained base flows, reducing the likelihood of seasonal drying and lowering the risk of fires, which have occurred downstream of the Clark County Wetlands Park. Collectively, these measures would enhance habitat stability and function at low–medium flows without diminishing high-flow conveyance; the relocated corridor and associated structures are designed to convey the 100-year peak discharge of approximately 18,000 cubic feet per second (cfs).

Consistent with the Sacramento District's Final 2021 NWP Regional Conditions for Nevada and Utah, the Project incorporates habitat development and restoration techniques to minimize adverse effects and address unavoidable changes associated with the on-site relocation of aquatic resources. The proposed action would result in the impact of approximately 10.02 acres of non-tidal aquatic resources in the action area (largely characterized by monotypic stands of invasive common reed (Phragmites australis)) due to the relocation of UT-1 Duck Creek, Duck Creek, and Wetland A into the proposed drainage corridor. Permanent proposed implementation is expected to result in a gross increase in aquatic resources by approximately 14.19 acres, yielding a net gain of approximately 4.17 acres of aquatic resources. This would result in a measurable gain in aquatic resource extent and associated ecological function. In addition to this increase in surface area, replacement of invasive common reed with native emergent and riparian vegetation would improve habitat structure and species diversity. This net increase is consistent with the Project's Biological Assessment (BA) for the Yuma Ridgway's rail, which

identifies a net gain of approximately 3.6 acres of suitable riparian/wetland nesting habitat within the action area after implementation. Collectively, these changes demonstrate a net gain in aquatic resource function and wildlife habitat. To ensure this outcome, the Project would implement a Planting Plan paired with a Monitoring and Adaptive Management Plan to install and native emergent and riparian plantings and monitor aquatic resource function. A final version of the Monitoring and Adaptive Management Plan would be submitted to USACE by the end of Q1 2026.

The proposed NWP 27 activity includes two limited access maintenance roads, portions of which are sited within areas currently occupied by aquatic resources that would be relocated. These roads are not standalone transportation features and are included solely to implement, monitor, and adaptively manage the Planting Plan and to provide maintenance and emergency access (e.g., weir inspection, vegetation installation, invasive species control, Planting Plan monitoring, and first-responder access). The roadways would be unpaved and include a gated driveway with a swing gate or collapsible, locked bollards to prevent unauthorized use. Accordingly, the minimal fills for these access routes are integral to implementing, monitoring, and adaptively managing the NWP 27 restoration work (e.g., not general transportation), and are therefore directly connected to achieving and verifying the net increase in aquatic resource functions, services, and extent.

NWP 27 and 14 each constitute a single-and-complete Project. The NWP 14 activity would provide a transportation connection and spans jurisdictional waters independent of the NWP 27 work. The NWP 27 measures (e.g., grade control, channel grading, riprap, and plantings) restore channel stability and habitat functions and are independent of the proposed NWP 14 activity. The limited access routes would enable inspection, planting, adaptive-management, maintenance, and do not serve general transportation. Design coordination (e.g., relocating the low-flow channel so banks align with proposed bridge abutments, and sizing abutments to match proposed stabilized banks) optimizes performance but does not create interdependence (e.g., the bridge functions even if the NWP 27 activities are not constructed, and vice versa). Impacts are therefore reported and evaluated separately by NWP, with each single-and-complete activity demonstrating independent utility.

NWP 33: The purpose of the proposed NWP 33 activity is to provide temporary construction access and dewatering necessary to implement the NWP 14 and NWP 27 activities.. Measures include diversion berms, sheet pile and/or piping, wells, and sump-and-pump methods; pumping would be used for dewatering along Duck Creek and UT-1 Duck Creek. Temporary work platforms (e.g., crushed rock) and/or sheet pile or berms would be used to divert flows and support dewatering, including temporary platforms within Las Vegas Wash. Best management practices (e.g., straw wattles, straw bales, silt fence, gravel check dams, and construction fencing) would be installed and maintained to control runoff and sediment. All temporary fills and structures would be removed, and disturbed areas would be restored following construction. The NWP 33 activity results in temporary impacts totaling approximately 2.4 acres / 26,750 cubic yards of fill within Las Vegas Wash, Duck Creek, UT-1 Duck Creek, and Wetland A.

The corresponding 401 Water Quality Certification (WQC) is being applied for concurrently with this project and those application materials are available upon request.

Additional supporting documentation, including the Draft Environmental Assessment (EA), Biological Assessment (BA), Cultural Resource Inventory and Visual Assessment, and Nevada State Historic Preservation Office (SHPO) coordination materials, are provided in a separate folder within this submittal.

Should you require any additional information please contact me at aldo.s@energyprojectsolutions.com or 702-832-6926.

Respectfully,

Aldo San Pedro
Environmental Scientist

Attachments:

1- ENG Form 6082
2- Attachment 1 – ENG Form 6082 Supplemental Information
    - Appendix A – Site Plans and Impact Mapping
    - Appendix B – NWP General Conditions Checklist
3- Attachment 2 – Mitigation Statement
    - Appendix A – Ecological Reference
    - Appendix B – Planting Plan

U.S. Army Corps of Engineers (USACE)

NATIONWIDE PERMIT PRE-CONSTRUCTION NOTIFICATION (PCN)

For use of this form, see 33 CFR 330; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0003 Expires: 2027-10-31

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Program of the Corps of Engineers (Corps); Final Rule 33 CFR 320-332.
Principal Purpose	Information provided on this form will be used in evaluating the nationwide permit pre-construction notification.
Routine Uses	This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of the agency coordination process.
Disclosure	Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued.

The public reporting burden for this collection of information, 0710-0003, is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PLEASE DO NOT RETURN YOUR RESPONSE TO THE ABOVE EMAIL.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (*see sample drawings and/or instructions*) and be submitted to the district engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (*agent is not required*)
First - Spring Middle - Last - Dineen	First - Aldo Middle - Last - San Pedro
Company - Clark County Public Works	Company - Energy Project Solutions (EPS)
Company Title - Principal Engineer	E-mail Address - aldo.s@energyprojectsolutions.com
E-mail Address - spring.dineen@clarkcountynv.gov	
6. APPLICANT'S ADDRESS	**9. AGENT'S ADDRESS**
Address- 500 S. Grand Central Pkwy	Address- 4675 W. Teco Ave, Suite 230
City - Las Vegas State - Nevada ZIP - 89155 Country - USA	City - Las Vegas State - Nevada ZIP - 89118 Country - USA
7. APPLICANT'S PHONE NOs. with AREA CODE	**10. AGENT'S PHONE NOs. with AREA CODE**
a. Residence b. Business (702) 455-6000 c. Fax d. Mobile	a. Residence b. Business (702) 832-6926 c. Fax d. Mobile

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Aldo San Pedro to act in my behalf as my agent in the processing of this nationwide permit pre-construction notification and to furnish, upon request, supplemental information in support of this nationwide permit pre-construction notification.

SIGNATURE OF APPLICANT 3/2/26 DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)
Hollywood Boulevard Extension

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

13. NAME OF WATERBODY, IF KNOWN (*if applicable*)
Las Vegas Wash, Duck Creek, UT-1 Duck Creek, Wetland A

14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)

15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)
Latitude °N: 36.092456
Longitude °W: -115.002901

City: State: ZIP:

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)
State Tax Parcel ID: See Supplemental Information (Attachment 1).
Municipality: Clark County
Section: 25
Township: 21 South
Range: 62 East

17. DIRECTIONS TO THE SITE
See Supplemental Information (Attachment 1).

18. IDENTIFY THE SPECIFIC NATIONWIDE PERMIT(S) YOU PROPOSE TO USE
NWP 14, 27, and 33.

19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY (*see instructions*)
See Supplemental Information (Attachment 1).

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)
See Mitigation Statement (Attachment 2).

21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)
See Supplemental Information (Attachment 1).

22. QUANTITY OF WETLANDS, STREAMS, OR OTHER TYPES OF WATERS DIRECTLY AFFECTED BY PROPOSED NATIONWIDE PERMIT ACTIVITY (*see instructions*)
Acres: See Supplemental Information
Linear Feet: (Attachment 1)
Cubic Yards Dredged or Discharged

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. (*see instructions*)
N/A

24. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and/or the loss of greater than 3/100-acre of stream bed and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) and/or paragraph (d) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.
See Mitigation Statement (Attachment 2).

25. Is any portion of the nationwide permit activity already complete? ☐ Yes ☒ No If Yes, describe the completed work:

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. (*see instructions*)

See Supplemental Information (Attachment 1).

27. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties. (*see instructions*)

See Supplemental Information (Attachment 1).

28. For a proposed NWP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

N/A

29. If the proposed NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the Corps district having jurisdiction over that project? ☐ Yes ☒ No

If "yes", please provide the date your request was submitted to the Corps district:

30. If the terms of the NWP(s) you want to use require additional information to be included in the PCN, please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

N/A

31. Pre-construction notification is hereby made for one or more nationwide permit(s) to authorize the work described in this notification. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
	3/2/26		3/3/26

The pre-construction notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in Block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a

Department of the Army

Nationwide Permit (NWP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the Corps of Engineers.

Block 5. Applicant's Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the preconstruction notification, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant's Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where he / she can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed Nationwide Permit Activity Name or Title. Please provide a name identifying the proposed NWP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the NWP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed NWP activity is located at a site having a street address (not a box number), please enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed NWP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed NWP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed NWP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed NWP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific Nationwide Permit(s) You Propose to Use. List the number(s) of the Nationwide Permit(s) you want to use to authorize the proposed activity (e.g., NWP 29).

Block 19. Description of the Proposed Nationwide Permit Activity. Describe the proposed NWP activity, including the direct and indirect adverse environmental effects the activity would cause. The description of the proposed activity should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide sketches when necessary to show that the proposed NWP activity complies with the terms of the applicable NWP(s). Sketches usually clarify the activity and result in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed NWP activity (e.g.,a conceptual plan), but do not need to be detailed engineering plans.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20. Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed NWP activity. The description of any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or additional mitigation measures.

Block 21. Purpose of Nationwide Permit Activity. Describe the purpose and need for the proposed NWP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed Nationwide Permit Activity. For discharges of dredged or fill material into waters of the United States, provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed NWP activity. For structures or work in navigable waters of the United States subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, or occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed NWP activity.

For multiple NWPs, or for separate and distant crossings of waters of the United States authorized by NWPs 12 or 14, attach an extra sheet of paper marked Block 21 to provide the quantities of wetlands, streams, or other types of waters filled, flooded, excavated, or drained (or dredged or occupied by structures, if in waters subject to Section 10 of the Rivers and Harbors Act of 1899) for each NWP. For NWPs 12 and 14, include the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained for each separate and distant crossing of waters or wetlands. If more space is needed, attach an extra sheet of paper marked Block 22.

Block 23. Identify Any Other Nationwide Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by NWPs 12 or 14 that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses of Greater Than 1/10-Acre of Wetlands and/or of Greater Than 3/100-Acre of Stream Bed When Pre-Construction Notification is Required. Paragraphs (c) and (d) of NWP general condition 23 require compensatory mitigation at a minimum one-for-one replacement ratio for all wetland losses that exceed 1/10-acre and/or for all losses of stream bed that exceed 3/100-acre, unless the district engineer determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed NWP activity are no more than minimal without compensatory mitigation, and provides an activity-specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than 1/10 acre and/or for losses of stream bed that exceed 3/100-acre, or provide an explanation of why the district engineer should not require wetland and/or stream compensatory mitigation for the proposed NWP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the Nationwide Permit Activity Already Complete? Describe any work that has already been completed for the NWP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the Nationwide Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed NWP activity, or if the proposed NWP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the Nationwide Permit Activity. If you are not a Federal agency, and if any historic properties have the potential to be affected by the proposed NWP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed NWP activity. If you are a Federal agency, and the proposed NWP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the Nationwide Permit Activity Would Occur in such a River. If the proposed NWP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/.

Block 29. Nationwide Permit Activities that also Require Permission from the Corps Under 33 U.S.C. 408. If the proposed NWP activity also requires permission from the Corps under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a Corps federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the Corps district having jurisdiction over that project.

Block 30. Other Information Required For Nationwide Permit Pre-Construction Notifications. The terms of some of the Nationwide Permits include additional information requirements for preconstruction notifications:

* NWP 3, Maintenance –information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
* NWP 31, Maintenance of Existing Flood Control Facilities –a description of the maintenance baseline and the dredged material disposal site.
* NWP 33, Temporary Construction, Access, and Dewatering –a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
* NWP 44, Mining Activities –if reclamation is required by other statutes, then a copy of the final reclamation plan must be submitted with the pre-construction notification.
* NWP 45, Repair of Uplands Damaged by Discrete Events –documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
* NWP 48, Commercial Shellfish Aquaculture Activities –(1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).
* NWP 49, Coal Remining Activities –a document describing how the overall mining plan will result in a net increase in aquatic resource functions must be submitted to the district engineer and receive written authorization prior to commencing the activity.
* NWP 50, Underground Coal Mining Activities –if reclamation is required by other statutes, then a copy of the reclamation plan must be submitted with the pre-construction notification.

If more space is needed, attach an extra sheet of paper marked Block 30.

Block 31. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the NWP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the NWP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the NWP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 45 day PCN review period will not start until the delineation is submitted or has been completed by the Corps.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one original, or good quality copy, of all drawings on 8½x11 inch plain white paper (electronic media may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed NWP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived (see NWP general condition 25). Some States, Tribes, or EPA have issued water quality certification for one or more NWPs. Please check the appropriate Corps district web site to see if water quality certification has already been issued for the NWP(s) you wish to use. For proposed NWP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur (see NWP general condition 26). Some States have issued Coastal Zone Management Act consistency concurrences for one or more NWPs. Please check the appropriate Corps district web site to see if Coastal Zone Management Act consistency concurrence has already been issued for the NWP(s) you wish to use.

Attachment 1 – ENG Form 6082 Supplemental Information

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN

Assessor Parcel Numbers (APNs) within the survey area include: 161-14-199-001, 161-14-299-001, 161-15-702-001, 161-15-799-001, 161-14-399-001, 161-14-701-001, 161-14-401-001, 161-23-101-001, 161-24-000-002, 161-25-501-001, 161-25-601-001, 161-25-201-001, 161-25-201-002, 161-25-701-001, 161-25-801-001, 161-25-899-001, 161-25-301-007, 161-25-301-006, 161-25-301-005, 161-25-301-003, 161-25-301-002, 161-25-301-001, 161-26-701-001, 161-25-499-001, 161-25-401-001, 161-35-501-002. These parcels are owned or managed by Clark County, Clark County Water Reclamation District (CCWRD), Clark County Parks and Community Services, Clark County Public Works (CCPW), the Bureau of Land Management (BLM), and the U.S. Bureau of Reclamation (USBR).

17. DIRECTIONS TO THE SITE

From the Harry Reid International Airport to the northernmost reach of the survey boundary, travel northwest on Russell Road then turn right onto Spencer Street. Turn right onto Rawhide Street then turn left onto Eastern Avenue. Turn right onto Harmon Avenue and travel 3.1 miles then turn left onto Nellis Boulevard. Next, turn right onto Flamingo Road and then left onto Cabana Drive. Turn right onto Desert Inn Road then turn right onto Hollywood Boulevard. Travel 0.4 miles on Hollywood Boulevard to reach the northernmost boundary of the survey boundary.

From the Harry Reid International Airport to the southernmost reach of the survey boundary, travel southwest on Landing Strip Avenue then turn left onto Spencer Street. Take the first left onto Allen Drive, travel for 0.20 miles, turn left onto Surrey Street, and travel for 0.1 mile. Turn right onto East Russell Road towards Henderson and continue straight for 5.3 miles. Turn right onto NV-582 South and travel for 0.90 miles, then turn left onto South Broadbent Avenue and travel for 0.20 miles. Turn right onto Sunbonnet Avenue, then left onto Aspen Peak Loop and continue for 0.50 mile. Turn left onto Wiesner Way and travel for 0.32 miles then arrive at the southernmost boundary of the survey area.

The entire survey area can be reached via public right-of-way (ROW) and thus site specific access is not required. In the case that the USACE were to conduct a site visit, it is requested that the Project proponent be contacted 48 hours in advance to accompany the agency.

19. DESCRIPTION OF PROPOSED NATIONWIDE PERMIT ACTIVITY

The applicant is requesting the verification of three Nationwide Permits: (NWP) 14, 27, and 33. The site plans and associated impact mapping are included in Appendix A of this Supplemental Information. NWP 14 and 27 each constitute a single and complete Project. Compliance with the general conditions of NWP 14, 27, and 33 has been demonstrated in Appendix B of this Supplemental Information. **Table 1** summarizes all impacts associated with each NWP.

Table 1. Summary of NWP Impacts

NWP	Aquatic Resource	AR Type	Type of Fill	Impact Duration	Linear Feet of Impact	Area Impact	Cubic Yards of Fill
14	Las Vegas Wash	RPW	Bridge Concrete	Permanent	80	641 sq ft	1,800
14	Wetland A	Wetland	Bridge Concrete	Permanent	N/A	321 sq ft	900
			Riprap/Concrete/ Roller Compacted Concrete (RCC)	Permanent	80	4,800 sq ft	4,800
14	UT-1 Duck Creek	RPW	Riprap/Concrete/ RCC	Permanent	80	3,900 sq ft	3,900
Total NWP 14 (Roadway)				**Permanent**	**240**	**0.22 acre**	**11,400**
27	Las Vegas Wash	RPW	Grading/Riprap	Permanent	25	0.01 acre	21
27	UT-1 Duck Creek	RPW	Grading/Riprap	Permanent	3,080	2.82 acres	2,360
			RCC	Permanent	70	0.07 acre	1,165
			Sheet Piling	Permanent	45	90 sq ft	N/A
27	Duck Creek	RPW	Grading/Riprap	Permanent	2,370	0.27 acre	4,080
			RCC	Permanent	42	0.01 acre	20
			Sheet Piling	Permanent	6	12 sq ft	N/A
27	Wetland A	Wetland	Grading/Riprap	Permanent	N/A	15.72 acres	23,360
			RCC	Permanent	N/A	1.79 acres	26,750
			Sheet Piling	Permanent	930	1,860 sq ft	N/A
Total NWP 27 (Duck Creek Enhancements)				**Permanent**	**6,648**	**20.74 acres**	**57,756**
33	Las Vegas Wash	RPW	BMPs	Temporary	N/A	0.40 acre	N/A
			Crushed Rock (work pads)	Temporary	N/A	1.20 acres	26,750
33	UT-1 Duck Creek	RPW	BMPs	Temporary	N/A	0.30 acre	N/A
33	Duck Creek	RPW	BMPs	Temporary	N/A	0.20 acre	N/A
33	Wetland A	Wetland	BMPs	Temporary	N/A	0.30 acre	N/A
Total NWP 33 (All Temporary Impacts)				**Temporary**	**N/A**	**2.4 acres**	**26,750**

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES

See Attachment 2 – Mitigation Statement.

21. PURPOSE OF NATIONWIDE PERMIT ACTIVITY

The purpose of the Project is to:

a) construct a new roadway crossing across Las Vegas Wash, Wetland A, and Duck Creek, to provide a direct connection between Henderson and Sunrise Manor, and

b) implement two roller compacted concrete (RCC) grade-control weirs, targeted channel grading, a low-flow channel, native planting benches, and localized riprap bank protection to arrest active head cutting, stabilize channel morphology, and maintain flood conveyance of Duck Creek upstream of Las Vegas Wash. As part of this effort, these measures are designed to expand and improve aquatic resource extent and associated function, resulting in a net gain of approximately 4.17 acres.

The Project would result in permanent and temporary impacts to four aquatic resources as described in the attached delineation report: three linear relatively permanent waters (RPWs) (e.g., Las Vegas Wash, Duck Creek and UT-1 Duck Creek) and one palustrine scrub-shrub wetland (Wetland A). The single PCN submittal requests USACE verification under Nationwide Permits 14, 27, and 33.

NWP 14: The purpose of the NWP 14 activity is to construct a bridge across Las Vegas Wash, Wetland A, and UT-1 Duck Creek to provide direct transportation between Henderson and Sunrise Manor. The bridge crossing would span all aquatic resources to maintain channel conveyance and low-flow connectivity. The design avoids broader in-channel fills; permanent impacts are limited to the minimum necessary (e.g., pier/abutment/wingwall footprints). These impacts also incorporate a necessary fire-break in the form of either concrete, roller compacted concrete (RCC), or riprap directly under the bridge structure. The proposed NWP 14 activity would result in permanent impacts to Las Vegas Wash, UT-1 Duck Creek, and Wetland A.

NWP 27: Active head cutting has caused the Duck Creek channel to become narrow and deeply incised, concentrating flow, accelerating erosion, and discharging high-velocity water—up to 16 feet per second—into the Duck Creek-Las Vegas Wash confluence. The purpose of the proposed NWP 27 work is to stabilize an actively eroding drainage system while maintaining flood conveyance and increasing the extent and function of riparian and emergent wetland areas.

The Project proposes two RCC grade-control weirs (the Wiesner Weir and Hollywood Weir), targeted channel grading, a low-flow channel, planting benches, and localized riprap bank protection designed to stabilize UT-1 Duck Creek and enhance aquatic resource functions and services. These components would relocate portions of non-tidal streams (e.g., Duck Creek and UT-1 Duck Creek) and wetlands (e.g., Wetland A) as part of a strategy to address existing head cutting and erosion; improve energy dissipation; stabilize water levels and extend water residence; facilitate riparian and emergent vegetation growth; enhance nutrient cycling through expanded emergent and riparian vegetation; and increase particulate retention. The proposed NWP 27 activity would result in permanent impacts to Las Vegas Wash, Duck Creek, UT-1 Duck Creek, and Wetland A.

The low-flow channel would maintain perennial flow of UT-1 Duck Creek and is designed to preserve key stream functions (e.g., conveyance, connectivity, and habitat continuity) throughout the relocated corridor. Moreover, concentrating base flows within a defined, contoured alignment would reduce stagnant pooling, enhance mixing, sustain dissolved oxygen delivery, and stabilize the thermal regime of the relocated reach by maintaining continuous flow. Vegetation in the relocated area is expected to remain better hydrated due to increased groundwater retention and sustained base flows, reducing the likelihood of seasonal drying and lowering the risk of fires, which have occurred downstream of the Clark County Wetlands Park. Collectively, these measures would enhance habitat stability and function at low–medium flows without diminishing high-flow conveyance; the relocated corridor and associated structures are designed to convey the 100-year peak discharge of approximately 18,000 cubic feet per second (cfs).

Consistent with the Sacramento District's Final 2021 NWP Regional Conditions for Nevada and Utah, the Project incorporates habitat development and restoration techniques to minimize adverse effects and address unavoidable changes associated with the on-site relocation of aquatic resources. The proposed action would result in the impact of approximately 10.02 acres of non-tidal aquatic resources in the action area (largely characterized by monotypic stands of invasive common reed (*Phragmites australis))* due to the relocation of UT-1 Duck Creek, Duck Creek, and Wetland A into the proposed drainage corridor. Permanent proposed implementation is expected to result in a gross increase in aquatic resources by approximately 14.19 acres, yielding a net gain of approximately 4.17 acres of aquatic resources. This would result in a measurable gain in aquatic resource extent and associated ecological function. In addition to this increase in surface area, replacement of invasive common reed with native emergent and riparian vegetation would improve habitat structure and species diversity. This net increase is consistent with the Project's Biological Assessment (BA) for the Yuma Ridgway's rail, which identifies a net gain of approximately 3.6 acres of suitable riparian/wetland nesting

habitat within the action area after implementation. Collectively, these changes demonstrate a net gain in aquatic resource function and wildlife habitat. To ensure this outcome, the Project would implement a Planting Plan paired with a Monitoring and Adaptive Management Plan to install and native emergent and riparian plantings and monitor aquatic resource function.

An ecological reference is included with this PCN in Appendix A of Attachment 2 (Mitigation Statement). This ecological reference was used as the basis for developing the Planting Plan included in Appendix B of Attachment 2 (Mitigation Statement). To develop the ecological reference, the project team reviewed existing aerial imagery, reports, and documentation to identify high-quality aquatic habitats within Las Vegas Wash that demonstrate strong ecological structure and function suitable as benchmarks for restoration and enhancement design. These reference sites serve as performance standards for evaluating the success of the proposed created, restored, and enhanced wetlands.

The proposed aquatic habitat restoration/enhancement is divided into two systems—above and below the proposed Wiesner Weir. Upstream of the weir, hydrology is characterized by variable seasonal flooding, fluctuating inundation depth, and periodic drawdown. Downstream of the weir, flooding is expected to be longer in duration and more continuous due to backwater effects from Las Vegas Wash flows and the existing Duck Creek Confluence Weir. Existing wetland areas within the project site are dominated by monotypic stands of invasive common reed and therefore are not suitable for use as ecological reference sites.

For reference wetlands, the project team selected two locations within the Las Vegas Wash downstream of the project site. The first reference wetland is located downstream of the DU Confluence Weir and upstream of the Upper Narrow Weir. These wetlands have been established since 2013 and are reported to have high diversity of species, including both emergent herbaceous plants and riparian shrub and tree species and can serve as a reference site for aquatic resource restoration/enhancement downstream of the proposed Wiesner Weir.[1] In addition, the project team is proposing to use the wetlands located above the Bostick Weir to serve as a reference site for the aquatic resource restoration/enhancement in Duck Creek upstream of the proposed Wiesner Weir. The wetlands above the Bostick Weir are present on a wider floodplain and have a variety of wetland types, hydrologic regimes and native species including bulrushes, cattails and riparian shrubs and trees.[2]

The proposed NWP 27 activity includes two limited access maintenance roads, portions of which are sited within areas currently occupied by aquatic resources that would be relocated.

[1] Las Vegas Wash Coordination Committee. (2019). *Las Vegas Wash Long-Term Revegetation Management Plan*. Retrieved from https://www.lvwash.org/assets/pdf/reports-revegetation-long-term-management-plan.pdf
[2] Las Vegas Wash Coordination Committee. (2004). *Bostick Weir Planting Plan*. Retrieved from https://www.lvwash.org/assets/pdf/resources-planting-bostick.pdf

These roads are not standalone transportation features and are included solely to implement, monitor, and adaptively manage the Planting Plan and to provide maintenance and emergency access (e.g., weir inspection, vegetation installation, invasive species control, Planting Plan monitoring, and first-responder access). The roadways would be unpaved and include a gated driveway with a swing gate or collapsible, locked bollards to prevent unauthorized use. Accordingly, the minimal fills for these access routes are integral to implementing, monitoring, and adaptively managing the NWP 27 restoration work (e.g., not general transportation), and are therefore directly connected to achieving and verifying the net increase in aquatic resource functions, services, and extent.

NWP 27 and 14 each constitute a single-and-complete Project. The NWP 14 activity would provide a transportation connection and spans jurisdictional waters independent of the NWP 27 work. The NWP 27 measures (e.g., grade control, channel grading, riprap, and plantings) restore channel stability and habitat functions and are independent of the proposed NWP 14 activity. The limited access routes would enable inspection, planting, adaptive-management, maintenance, and do not serve general transportation. Design coordination (e.g., relocating the low-flow channel so banks align with proposed bridge abutments, and sizing abutments to match proposed stabilized banks) optimizes performance but does not create interdependence (e.g., the bridge functions even if the NWP 27 activities are not constructed, and vice versa). Impacts are therefore reported and evaluated separately by NWP, with each single-and-complete activity demonstrating independent utility.

NWP 33: The purpose of the proposed NWP 33 activity is to provide temporary construction access and dewatering necessary to implement the NWP 14 and NWP 27 activities. Dewatering would use diversion berms, sheet pile and/or piping, wells, and sump-and-pump methods. Pumping will be used for dewatering operations on Duck Creek and UT-1 Duck Creek. Temporary work platforms (e.g., crushed rock) and/or sheet pile or berms will be used to divert flows and support dewatering, including temporary work platforms in Las Vegas Wash. Additional BMPs, including straw wattles, straw bales, silt fence, gravel check dams, and construction fencing, will be deployed to control runoff and sediment. All temporary fills and structures would be removed, and disturbed areas would be restored following construction. The proposed NWP 33 activity would result in temporary impacts to Las Vegas Wash, Duck Creek, UT-1 Duck Creek, and Wetland A.

22. QUANTITY OF WETLANDS, STREAMS, OR OTHER TYPES OF WATERS DIRECTLY AFFECTED BY PROPOSED NATIONWIDE PERMIT ACTIVITY

See **Table 1**.

24. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and requires pre-construction notification, explain how the compensatory mitigation requirement in paragraph (c) of general condition 23 will be satisfied, or explain why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required for the proposed activity.

A full discussion of why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required is included in the Mitigation Statement (Attachment 2). The Mitigation Statement also describes project avoidance and minimization measures, long-term monitoring and management, and demonstrates a net gain in aquatic resource extent and function through pre- and post-project surface area calculations.

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed NWP activity or utilize the designated critical habitat that might be affected by the proposed NWP activity.

The USFWS Information Planning and Consultation (IPaC) program and draft Environmental Assessment (EA) identify species occurring or potentially occurring within the action area. Effect determinations are as follows:

1. Desert Tortoise (*Gopherus agassizii*): May affect, likely to adversely affect. Incidental take of up to two tortoises has been requested.
2. Southwestern Willow Flycatcher (*Empidonax traillii extimus*): May affect, not likely to adversely affect.
3. Western Yellow-Billed Cuckoo (*Coccyzus americanus*): May affect, not likely to adversely affect.
4. Monarch Butterfly ***(****Danaus plexippus****)***: The Monarch Butterfly is a candidate species. Recreation within Clark County Wetlands Park has not been shown to adversely affect monarchs. Adjacent landscaping provides nectar-producing plants that support migrating butterflies. Planned restoration in the action area would include native pollinator plantings, including milkweed (e.g., *Asclepias*), which would benefit monarch butterflies during spring and fall migration and may support recruitment. No reasonably foreseeable adverse effects to the monarch butterfly are anticipated.

5. Yuma Ridgway's Rail (*Rallus obsoletus yumanensis*): May affect, likely to adversely affect due to a temporary impact to approximately 4.1 acres of nesting habitat; a take of 5 acres of temporary habitat has been requested. However, Project actions are expected to result in a long-term net increase of 3.6 acres of suitable habitat.

27. List any historic properties that have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic property or properties.

A Class III cultural resources inventory and visual assessment found no previously recorded cultural resources within the direct area of potential effect (APE) and identified no new resources during fieldwork. A records search using the Nevada Cultural Resource Information System (NVCRIS) identified 15 cultural resources within 1.0 mile of the APE (e.g., lithic scatters, quarries, artifact scatters, rock features, historic habitation, historic road, trash scatter) and noted regional resources such as Las Vegas Wash Archaeological District and the Three Kids Mine townsite outside the direct APE. No properties within or adjacent to the Project Area are listed in the National Register of Historic Places. All eligible or unevaluated resources in the visual APE were visited and assessed; based on the absence of historic properties in the direct APE and existing development to the west, a determination of "No Historic Properties Affected" was made for the Hollywood Boulevard Extension Project in the draft EA. A copy of the cultural resources report prepared in accordance with the Sacramento District's Section 106 submittal guidelines is included with this application.

Aquatic Resources Delineation Results

An Aquatic Resources Delineation Report and Approved Jurisdictional Determination request was prepared and is included in this permit application package. This report was prepared to accompany this permit application and serve as the analysis for calculating the impacts associated with the proposed NWP activities.

The Project survey area was assessed on November 6–7, 2022; January 5–6, 2023; April 16–19, 2024; and May 22, 2024. The delineation followed the 1987 Corps of Engineers Wetlands Delineation Manual with the Arid West Regional Supplement and the 2008 Arid West OHWM Field Guide. Across the approximately 380-acre survey area, there were 28,258 linear feet / 48.879 acres of linear aquatic resources documented: four relatively permanent waters (RPWs) totaling 11,755 linear feet / 46.682 acres and twenty non-relatively permanent waters (NRPWs) totaling 16,503 linear feet / 2.197 acres. Additionally, one palustrine scrub-shrub wetland totaling 48.911 acres was delineated, twenty-six upland swales totaling 7,029 linear feet were mapped, and one other upland feature (0.17 acre) was recorded. Of the linear aquatic resources, three RPWs (e.g., Las Vegas Wash, Duck Creek, and Unnamed Tributary (UT-1) Duck Creek) meet the relatively permanent standard and are jurisdictional under paragraph A(3). Nineteen NRPWs are tributaries that do not meet the relatively permanent standard and are non-jurisdictional, and one NRPW is isolated in addition to not meeting the relatively permanent standard. Wetland A maintains a continuous surface connection to Las Vegas Wash and is jurisdictional under paragraph A(4). The 26 upland swales exhibited no OHWM indicators during field surveys and are excluded under paragraph B(8).