

# RECLAMATION

*Managing Water in the West*

## **Authorization of Naval Air Station Fallon Stormwater Discharge**

**Environmental Assessment LO-2012-1027**



**U.S. Department of the Interior  
Bureau of Reclamation  
Lahontan Basin Area Office  
705 North Plaza Street, Room 320  
Carson City, Nevada 89701**

## **Mission Statements**

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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## Acronyms and Abbreviations

af	acre-feet
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
cfs	cubic feet per second
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ft	feet
LD1	Lower Diagonal 1 (Drain)
LDD	Lower Deep Diagonal (Drain)
mi	mile(s)
MOA	Memorandum of Agreement
NAS	Naval Air Station (Fallon)
Navy	United States Department of the Navy
NDEP	Nevada Division of Environmental Protection
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
OCAP	Operating Criteria and Procedures
Reclamation	United States Bureau of Reclamation
Service	United States Fish and Wildlife Service
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load
USC	United States Code

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# **Chapter 1 – Background and Purpose and Need for Action**

## **1.1 Introduction**

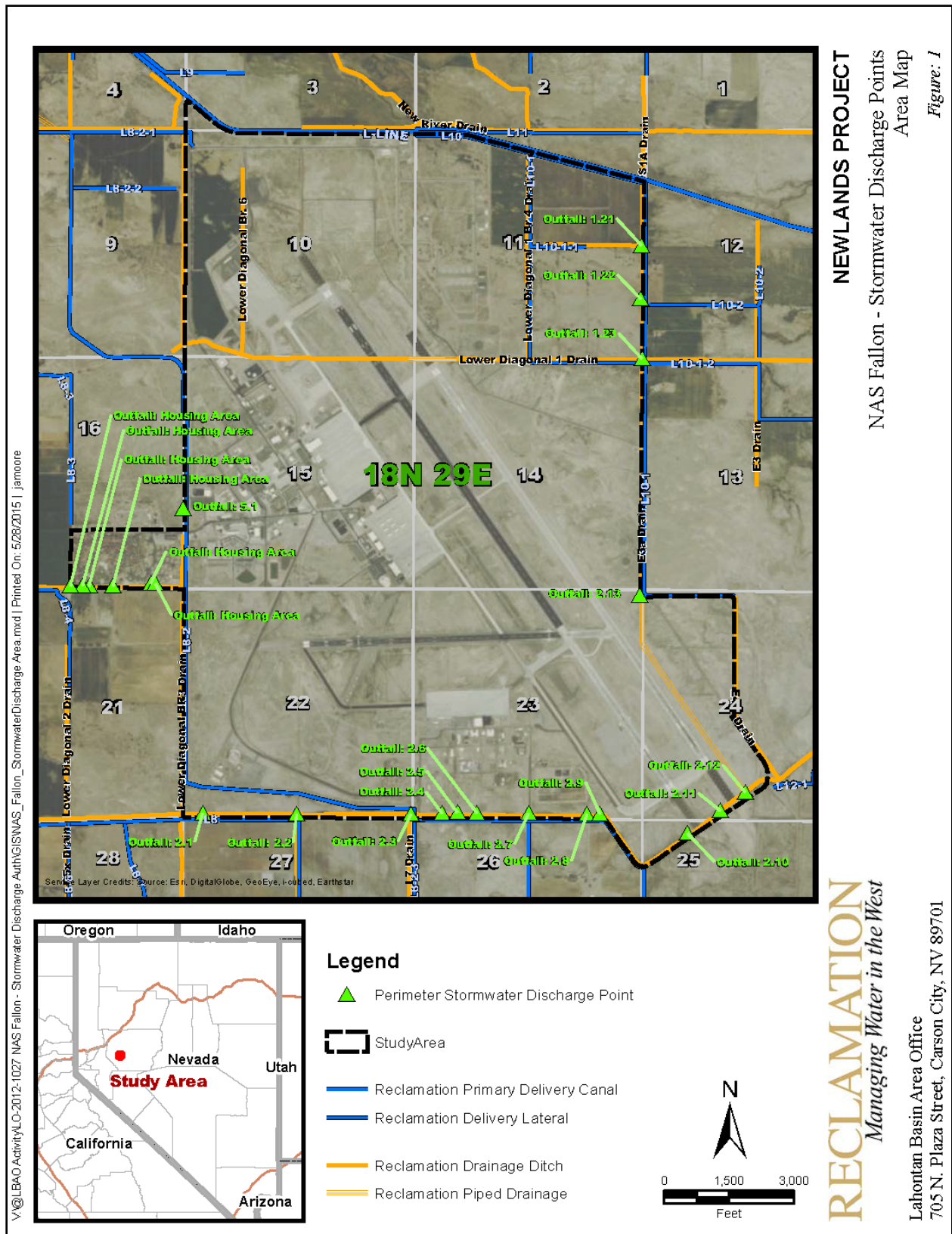
U.S. Bureau of Reclamation (Reclamation) consent is required for conveyance of non-agricultural water discharges entering into Reclamation facilities. Consent is contingent upon a determination by Reclamation that proposed conveyances would not interfere with Reclamation's use of its facilities and easements. This Environmental Assessment (EA) analyzes the potential environmental effects of conveyance of stormwater discharge from Naval Air Station (NAS) Fallon through Reclamation irrigation drainage systems which are part of the Newlands Project.

This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] §§ 4321–4370h), as implemented by Council on Environmental Quality (CEQ) regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508); and the Department of the Interior's NEPA Regulations (43 CFR Part 46).

## **1.2 Project Location**

NAS Fallon is located approximately 6 miles (mi) southeast of Fallon in Township 18N, Range 29E, Churchill County, Nevada (Figure 1). The facility is within the Lahontan Valley sub-basin of the Carson Desert. The Carson Desert is a hydrologically-closed basin covering an area 70 mi long and between 8 and 30 mi wide (NAS Fallon 2008). The climate is semiarid due to the rain shadow effect from the Sierra Nevada range to the west; average annual precipitation is 5 inches.

The stormwater discharge analyzed in this EA originates as sheet flow from NAS Fallon, specifically from the main station's base and housing areas. Storm drain systems in these areas capture this sheet flow and route it into Reclamation's Newlands Project drainage facilities. There are 23 stormwater point discharges (outfalls) around NAS Fallon's perimeter (Figure 1). The Lower Diagonal 1 (LD1) and Lower Diagonal Deep (LDD) Drains are the two primary Newlands Project drainage features that receive this stormwater. The LD1 Drain crosses through the northern portion of the base, flowing eastward in a series of pipes, open channels, and culverts (Figures 1 and 2); it terminates where it discharges into the LDD Drain approximately 2.7 mi due east of NAS Fallon's eastern perimeter. The LDD Drain runs along the southern perimeter of the base in an open channel with box culverts (Figures 1 and 3); it discharges into the Stillwater Slough channel and the Stillwater Slough Diversion Canal at a site approximately 2.5 mi southwest of Stillwater National Wildlife Refuge (NWR). Other Newlands Project features receiving NAS Fallon stormwater and draining into either the LD1 or LDD Drains include the D3, E2a, E3a, E4b, E4X, and Lower Diagonal BR3 Drains, as well as several unnamed ditches (Figures 1–3) (NAS Fallon 2008).



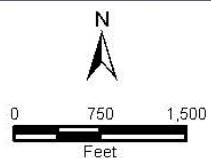
**Figure 1 – Area Map**





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- ▲ Perimeter Stormwater Discharge Point
- Study Area
- Reclamation Delivery Lateral
- Reclamation Drainage Ditch
- Reclamation Piped Drainage

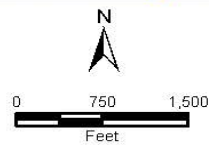
**NEWLANDS PROJECT**  
NAS Fallon - Stormwater Discharge Points  
Detail Area North

Figure 2 – Detail Map Area North



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- Perimeter Stormwater Discharge Point
- Study Area
- Reclamation Delivery Lateral
- Reclamation Drainage Ditch
- Reclamation Piped Drainage

**NEWLANDS PROJECT**  
NAS Fallon - Stormwater Discharge Points  
Detail Area South

**Figure 3 – Detail Map Area South**

## 1.3 Background

### NAS Fallon

NAS Fallon's main station covers 8,670 acres and includes airfield and maintenance facilities, public works and supply facilities, and housing (NAS Fallon 2008, Nevada Division of Environmental Protection (NDEP) 2014a). The main station also includes 3,926 acres of irrigated agricultural outlease lands. NAS Fallon's mission is "To provide the most realistic integrated air warfare training support available to carrier air wings, tenant commands, and individual units participating in training events including joint and multinational exercises." It is home to the Naval Strike and Air Warfare Center, Strike Fighter Wing Pacific Detachment, Navy Munitions Command-Fallon Detachment, Fleet Readiness Center West-Detachment Fallon, Fighter Composite Squadron 13, and Construction Battalion Maintenance Unit 303. NAS Fallon is the U.S. Department of the Navy's (Navy) premier air-to-air and air-to-ground training facility, and it also supports Navy SEAL Combat Search and Rescue Training. NAS Fallon's population includes about 3,000 active duty personnel, civilian employees, and Department of Defense contractors.

### Newlands Project

The Newlands Project is located in western Nevada and eastern California. It was authorized under the Reclamation Act of 1902 (32 Statute 388), and construction was initiated by Reclamation in 1903. It has features in both the Carson and Truckee River basins. These basins cover nearly 3,400 square mi, with a combined average annual runoff of about 850,000 acre-feet (af) of water (Reclamation 2014). Water for the Newlands Project comes from the Carson River and inter-basin transfer of supplemental water from the Truckee River. Major Newlands Project features include the Lake Tahoe Dam, Derby Diversion Dam, Truckee Canal, Lahontan Dam, Old Lahontan Power Plant, and Carson River Diversion Dam. In addition, the Newlands Project has 68.5 mi of main delivery canals, more than 300 mi of distribution laterals, and almost 350 mi of drains (Reclamation 2011).

The Newlands Project has two water service (delivery) areas – the Carson Division and the Truckee Division. Truckee River water is diverted into the Truckee Canal at the Derby Diversion Dam to serve the Truckee Division and also for conveyance to Lahontan Reservoir in the Carson River basin. The water in Lahontan Reservoir is released into the lower Carson River and enters the Carson Division at the Carson River Diversion Dam where it is diverted into the V-Line and T-Line Canals (Reclamation 2011). Together, the Carson and Truckee Divisions can provide irrigation water for up to 66,700 acres of croplands, wetlands, and pasture in the Lahontan Valley near Fallon and 6,200 acres of fertile benchlands near Fernley (Reclamation 2014). The principal irrigated crops are alfalfa hay (35,500 acres), grass hay, irrigated pasture (4,000 acres), and cereal grains (barley, wheat, corn, oats, and sorghum; 9,950 acres combined).

The official role of the Newlands Project was expanded beyond irrigation in 1990 under Section 209 of Public Law (P.L.) 101–618, the Truckee-Carson-Pyramid Lake Water Rights Settlement Act (Settlement Act; 104 Statute 3289; November 16, 1990). Thus, the Newlands Project is currently operated and maintained to provide benefits to fish and wildlife, including endangered and threatened species; municipal, industrial, and irrigation users in Churchill and Lyon Counties, Nevada, including the Fallon Indian Reservation (Fallon Paiute-Shoshone Tribe); recreation; water quality; significant wetlands (*e.g.*, Carson Lake, Fernley Wildlife Management



Area, Stillwater Marsh/Stillwater NWR); and any other purposes recognized as beneficial under the law of the State of Nevada.

### **Truckee-Carson Irrigation District**

The Truckee-Carson Irrigation District (District) is a quasi-municipal political subdivision of the State of Nevada. The District has been operating and maintaining certain Newlands Project facilities and infrastructure used in the storage, transport, and delivery of irrigation water within the Carson and Truckee Divisions under contract with Reclamation since December 31, 1926 (Contract Number I1r-93). Reclamation and the District entered into a new contract for the District to continue to provide care, operation, and maintenance of the Newlands Project on November 25, 1996 (Contract Number 7-07-20-X0348; Reclamation 1996).

### **Wastewater Effluent**

NAS Fallon constructed a wastewater treatment plant in 1995 in the southwestern portion of the main station near the runway. This plant releases 0.75 million gallons per day (30-day average) of treated effluent (NDEP 2012). This non-Project water is conveyed through an unnamed ditch into the LDD Drain and then on to Stillwater NWR through the Stillwater Slough channel and the Stillwater Slough Diversion Canal. In 2007, NAS Fallon received an updated National Pollutant Discharge Elimination System (NPDES) permit that limited the amount of nitrogen that could be discharged from the treatment plant (CH2MHILL 2014). In 2009, NDEP issued an Administrative Order on Consent with a schedule for bringing NAS Fallon into compliance with the new nitrogen effluent limit and other areas of violation (CH2MHILL 2014). In 2009, Reclamation issued a Finding of No Significant Impact and EA for the continued conveyance of up to 840 af per year of treated effluent from NAS Fallon's wastewater treatment plant through the LDD Drain (Reclamation 2009). A new NAS Fallon wastewater treatment plant is scheduled for completion by October 2016 (NDEP 2012).

### **Stormwater Discharge**

As defined by the Environmental Protection Agency (EPA; 2015), stormwater runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment or other pollutants that could adversely affect water quality if the runoff is discharged untreated. The primary method to control stormwater discharges is the use of Best Management Practices (BMPs). In addition, most stormwater discharges are considered point sources and require coverage under a NPDES permit.

NAS Fallon has released stormwater into Reclamation's Newlands Project facilities since the 1950s. Stormwater from the main base and housing area does not pass through the wastewater treatment facility, but is instead discharged via 23 separate outfalls directly into multiple Newlands Project irrigation drainage facilities (See **1.2 Project Location**; Figures 1-3). Reclamation has no responsibility for NAS Fallon's stormwater, however, NAS Fallon is required to seek authorization from Reclamation to discharge stormwater into Newlands Project facilities.

NAS Fallon currently operates under NDEP's *Stormwater General Permit NVR050000 for Stormwater Associated with Industrial Activity*, which allows for the discharge of industrial

stormwater runoff to surface waters including lakes, streams, dry washes, and storm drains (NDEP 2008). Construction stormwater is authorized separately under NDEP General Construction Permit NVR100000. The base housing area is considered a Municipal Separate Storm Sewer System and is not subject to a NPDES permit under the Clean Water Act of 1972 (33 USC § 1251 *et seq.*) due to the very low population density of the base (EPA 2012a).

NAS Fallon has developed a Stormwater Pollution Prevention Plan (SWPPP) for the industrial areas of the main station (NAS Fallon 2008). Industrial areas typically include sites used for aircraft fueling and maintenance, as well as vehicle maintenance. Potential stormwater pollutants from these types of industrial areas include antifreeze, fuels (gasoline, jet fuel, diesel), oils, soaps, solvents, adhesives, grease, aqueous film forming foam, and residential refuse (NAS Fallon 2008). Other SWPPPs are developed by NAS Fallon for individual projects with construction activities involving over 1 acre.

NAS Fallon does not fall within a facility category required to conduct annual stormwater sampling under the Stormwater General Permit, Part III.A.4.c.(i) (NDEP 2008). However, NAS Fallon has an agreement with the State of Nevada to test several areas of their system annually under the Installation Restoration Program (NAS Fallon 2008). Also, under the SWPPP and Stormwater General Permit, NAS Fallon implements an Installation Stormwater Site Inspection Program, which includes annual inspections for potential non-stormwater discharges, quarterly inspections of the stormwater outfalls and other discharge areas, and an annual comprehensive system survey (NAS Fallon 2008, NDEP 2008). NAS Fallon also implements structural (*e.g.*, oil/water separators, catch basins) and non-structural BMPs for all stormwater discharges (NAS Fallon 2008). Non-structural BMPs are institutional, operational, and good housekeeping practices to prevent and control spills, leaks, or discharge of pollutants.

### **Lahontan Valley Wetlands**

The Great Basin wetlands ecosystem encompasses important historical wetlands that once covered vast areas of the Lahontan Valley and provided important natural habitat for migratory waterfowl, shorebirds, and other wetland-dependent wildlife. In 1990, P.L. 101–618 addressed the need to restore and protect a portion of this wetland habitat. The Settlement Act authorized the purchase and transfer of enough water rights to maintain a total of 25,000 acres of primary wetlands in the Lahontan Valley (to include: Stillwater NWR-14,000 acres, Carson Lake and Pasture-10,200 acres, and the Fallon Reservation and Indian Lakes-800 acres). This may require up to 125,000 af of water annually. In 1996, the U.S. Fish and Wildlife Service (Service) prepared a Record of Decision for the Final Environmental Impact Statement (EIS) for Water Rights Acquisition for Lahontan Valley Wetlands, selecting a water rights acquisition strategy to sustain a long-term average of 25,000 acres of primary wetland habitat in the Lahontan Valley, as directed by the Settlement Act (Service 1996a). The Final EIS provides an in-depth analysis of alternatives for acquiring sufficient water to achieve the 25,000-acre objective (Service 1996b).

## **1.4 Need for the Proposed Action**

Authorization for the continued discharge and conveyance of NAS Fallon stormwater through Newlands Project drainage facilities is needed for Reclamation to ensure that non-agricultural stormwater is legally covered and compatible with authorized Newlands Project purposes. NAS

Fallon needs the Proposed Action to avoid having to reconstruct their stormwater system and locate an alternate stormwater discharge site. The Proposed Action is also needed to help ensure that NAS Fallon is in compliance with their Stormwater General Permit, as well as to potentially facilitate achieving State of Nevada water quality standards for designated beneficial uses in the LDD Drain (Nevada Administrative Code 445A.1854).

## **1.5 Scope of Environmental Assessment and Decision to be Made**

Federal agencies must comply with the provisions of NEPA. An environmental analysis is required under NEPA to assess the significance of possible environmental, social, and economic impacts to the human environment from a proposed action. An EA serves as the basis for determining whether implementation of the proposal would constitute a major federal action significantly affecting the quality of the human environment.

This EA has been prepared to assist Reclamation's decision-making regarding whether or not to authorize the continued discharge and conveyance of stormwater from NAS Fallon through Newlands Project drainage facilities. The scope of analysis in this EA is limited to consideration of the stormwater discharged from the 23 outfalls mentioned above.

## **1.6 Authorization**

The Reclamation Project Act of 1939 (53 Statute 1187), Section 10, provides Reclamation the ability to authorize the use of Reclamation lands, facilities, and waterbodies when such uses are determined to be "compatible" with authorized project purposes. Detailed guidance for issuing such authorizations can be found in 43 CFR Part 429, Reclamation Manual LND 08-01 (Land Use Authorizations; Reclamation 2002), and Office of Management and Budget Circular A-25.

# **Chapter 2 – Alternatives**

Reclamation has determined that there are no alternative ways to meet the need for NAS Fallon's continued stormwater discharge and conveyance through Reclamation drainage facilities, other than the Proposed Action. Therefore, only the Proposed Action and No Action Alternative are considered in this EA.

## **2.1 Proposed Action**

Under the Proposed Action, Reclamation would authorize the continued discharge and conveyance of stormwater from NAS Fallon through Newlands Project drainage facilities. Expected volumes and flow rates of stormwater discharging to Reclamation facilities would not change from the current estimated volumes and flow rates (NAS Fallon 2013), as long as the amount of impermeable surfaces remain the same. Stormwater volumes and flow rates are otherwise largely dependent upon the location, frequency, duration, and intensity of natural storm events. NAS Fallon would continue to be responsible for obtaining, complying with, and renewing their NPDES permit for the continued discharge of stormwater.

## **2.2 No Action Alternative**

Under the No Action Alternative, Reclamation would not authorize the continued discharge and conveyance of stormwater from NAS Fallon through Newlands Project drainage facilities. Current discharge and conveyance of stormwater from NAS Fallon through Newlands Project drainage facilities would cease, and all stormwater would be retained on site.

# **Chapter 3 – Affected Environment and Environmental Consequences**

## **3.1 Newlands Project Operating Criteria and Procedures**

The *Operating Criteria and Procedures for the Newlands Reclamation Project, Nevada* (OCAP; 43 CFR Part 418), is a federal rule that describes how the Newlands Project is operated. Its main purposes are to ensure legitimate Newlands Project water rights are served, to regulate the timing and amount of water that can be diverted out of the Truckee River to serve Newlands Project water rights, and to minimize the use of water from the Truckee River and maximize the use of water from the Carson River.

### **Proposed Action**

The continued discharge and conveyance of stormwater from NAS Fallon through Newlands Project drainage facilities would have no effect on existing Newlands Project water rights or the timing or amount of water diverted from the Truckee River to serve Newlands Project water right holders. The conveyance of the stormwater would not change current usage of water from either the Truckee or Carson Rivers. Authorization would not increase or decrease Newlands Project water demands under OCAP.

Stormwater discharge would continue to be conveyed through existing drainage facilities within their existing capacities, and therefore, would not affect Newlands Project operations or efficiency. Stormwater discharge from NAS Fallon would not be considered releases to the Newlands Project under OCAP. Also, deliveries of this stormwater to Stillwater NWR would not be considered as Newlands Project deliveries for OCAP purposes.

### **No Action Alternative**

There would be no effect to any OCAP parameters if the continued conveyance of stormwater is not authorized.

## **3.2 Land Use and Economics**

Reclamation's drainage facilities receiving NAS Fallon's stormwater are located on rights-of-way held by the United States on lands under non-Reclamation ownership. These lands primarily include private properties used for agricultural purposes (irrigated farmland), public lands managed by the Bureau of Land Management (BLM) for multiple uses, and public lands (Stillwater NWR) managed by the Service primarily for conservation and management of wetlands and other habitats for wildlife and wildlife-dependent recreation.

Most of Reclamation's facilities are unlined channels maintained by the District to ensure adequate drainage capacity. Many drains have some water in them year-round from intercepting groundwater, as well as the seasonal drainage from irrigation. Water levels in the drains are highest primarily from April through mid-November during the irrigation season.

### **Proposed Action**

Reclamation has determined that the conveyance of NAS Fallon's stormwater is compatible with the use and purpose for which the Newlands Project facilities were constructed. Conveyance of stormwater would not interfere with conveyance of Newlands Project water. No change in the use of Newlands Project water would occur under the Proposed Action, and there would be no change in water deliveries to Stillwater NWR. No modifications of existing Newlands Project drainage facilities would be required for the continued conveyance of stormwater. Also, drain capacities and efficiency levels would not be adversely impacted by continuing to receive stormwater.

Continued discharge and conveyance of stormwater in Reclamation's Newlands Project drainage facilities would allow NAS Fallon to continue to discharge stormwater from the main station. The Proposed Action to authorize continued discharge and conveyance of stormwater is consistent with Reclamation law and applicable regulations and policies. Discharge of NAS Fallon's stormwater would continue to be authorized under an NDEP Stormwater General Permit. Under the Proposed Action, there would be no changes to land use or economics.

### **No Action Alternative**

The No Action Alternative would result in the discontinuance of NAS Fallon's stormwater discharges into Newlands Project drainage facilities. The lack of stormwater inflows would have no impact on land use or economics related to Reclamation facilities or operations.

The No Action Alternative would impact NAS Fallon by not allowing the discharge of their stormwater through the Newlands Project drainage facilities. NAS Fallon would have to create an alternate delivery system and receiving body for discharged stormwater. This would cause an economic impact related to costs associated with designing, construction, and implementing the new stormwater system. It would also impact land use at NAS Fallon with effects dependent on where the new system is constructed.

## **3.3 Water Resources and Quality**

### **Surface Water**

The LDD Drain runs through NAS Fallon and receives stormwater from the LD1 Drain off of the main station before terminating in Stillwater Point Reservoir on Stillwater NWR. During a 5-year storm event<sup>1</sup> lasting 24 hours, the volume of stormwater discharged from NAS Fallon to the LD1 Drain is approximately 8 af, with a peak flow rate of approximately 29 cubic feet per

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<sup>1</sup> A "5-year storm event" is a rainfall event that statistically has a 20 percent chance of occurring in a year or an event that is expected to occur, on average, once every 5 years.



second (cfs) (NAS Fallon 2013). During a 24-hour, 100-year storm event<sup>2</sup>, the volume of stormwater discharged to the LD1 Drain is approximately 36 af, and the peak flow rate is approximately 205 cfs (NAS Fallon 2013). During a 5-year storm event lasting 24 hours, the volume of stormwater from NAS Fallon discharging to the LDD Drain is approximately 17 af, with a peak flow rate of approximately 47 cfs (NAS Fallon 2013). During a 24-hour, 100-year storm event, the volume of stormwater discharging to the LDD Drain is approximately 80 af, and the peak flow rate is approximately 329 cfs.

Stormwater entering Newlands Project drainage facilities generally combines with other sources of water, primarily from agricultural drainage during the irrigation season and groundwater intercepted by the drains during the winter. The quality of water in the drains is affected by seasonal flows, water diversions, and agricultural activities in the area. Agricultural runoff and soil erosion increase the nutrient concentrations and suspended sediment levels of water in the drains. Low flows and periods of warm weather both result in higher water temperatures in the drains.

In the Carson River basin most streams, rivers, lakes, reservoirs, and wetlands downstream of Lahontan Dam in the Lahontan Valley have been identified by the State of Nevada as impaired waterbodies under Section 303(d) of the Clean Water Act, including the LDD Drain and Stillwater Marsh (East and West of Westside Road) (NDEP 2014b). A waterbody is classified as impaired if any single associated water quality standard is not met and a beneficial use is thereby not supported. Water quality parameters that have one or more associated impaired beneficial uses for the LDD Drain and/or Stillwater Marsh include: Arsenic, boron, *Escherichia coli*, iron, mercury in fish tissue and sediment, total phosphorus, and total dissolved solids (NDEP 2014b). The Total Maximum Daily Load (TMDL) is the allowable loading from all pollutant sources established as a level necessary to achieve compliance with applicable water quality standards. States are required to develop TMDLs for waterbody segment/parameter combinations appearing in the 303(d) List (40 CFR Part 130.7). However, TMDLs have not yet been established for the LDD Drain or Stillwater Marsh (NDEP 2014b).

## **Groundwater**

In the Fallon area of Churchill County, four groundwater subsystems have been identified (Seiler and Allander 1993). A shallow, unconsolidated sedimentary aquifer extends from the land surface to a depth of about 50 feet (ft). An intermediate-depth, unconsolidated sedimentary aquifer is positioned from 50 ft to 500–1,000 ft below the land surface. Then a deep, generally-unconsolidated sedimentary aquifer begins 500–1,000 ft below the land surface. Transecting all three sedimentary aquifers is a basalt aquifer that is highly permeable; it is located beneath a volcanic feature named Rattlesnake Hill and is approximately 4 mi wide and 15 mi long (EPA 2012b). Domestic and industrial water supplies for the City of Fallon, NAS Fallon, and Fallon Paiute-Shoshone Tribe are obtained from the basalt aquifer. Rural populations in the Carson Desert area obtain domestic water from private wells within the shallow aquifer. Infiltration from Newlands Project canals and drains can cause water levels to rise in the shallow aquifer,

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<sup>2</sup> A “100-year storm event” is a rainfall event that statistically has a 1 percent chance of occurring in a year or an event that is expected to occur, on average, once every 100 years.

resulting in a water table beneath much of the Lahontan Valley that ranges from 5 to 10 ft below the land surface (Churchill County 2004).

### **Proposed Action**

Stormwater from NAS Fallon would continue to be treated, through infiltration and other BMPs and in full compliance with NAS Fallon's SWPPP, before being discharged into Reclamation drainage facilities (NAS Fallon 2008). A Notice of Intent certification statement under Stormwater General Permit NVR050000 was submitted by NAS Fallon to NDEP on December 8, 2008 (Appendix A). All regulated stormwater parameters for NAS Fallon have continued to meet the compliance limitations in the Stormwater General Permit. Treated stormwater would continue to mix with agricultural drain water during the irrigation season and with groundwater entering the drains during the winter. The proposed continued conveyance of stormwater that meets NDEP water quality standards would result in no changes to either surface water or groundwater quality from current conditions in Newland Project facilities and at Stillwater NWR. Average stormwater discharge volumes and peak flow rates would also experience no changes and continue to be largely dependent upon the location, frequency, duration, and intensity of natural storm events.

### **No Action Alternative**

Under the No Action Alternative there would be no mixture of stormwater from NAS Fallon with agricultural drain water or groundwater in Newlands Project facilities. Lower flows would occur periodically in Newlands Project drainage facilities in the absence of these stormwater discharges. Water quality in the drains would potentially decrease slightly intermittently during the irrigation season with less stormwater to dilute agricultural drainage water. There would also likely be a temporary reduction in the temperature component of water quality within the drains associated with the lack of cooler stormwater inflows during low flow and warm weather periods. Since NAS Fallon would have to implement a new stormwater system to contain and treat discharges within the main station under the No Action Alternative, no significant changes to local groundwater resources are anticipated.

## **3.4 Public Health and Safety**

Affected Newlands Project drainage facilities are primarily surrounded by privately-owned agricultural lands and federally-managed public lands. These facilities are typically unfenced, but relatively isolated with little or no direct human contact or use. District employees, under contract with Reclamation, perform routine operation and maintenance activities within and adjacent to these facilities.

### **Proposed Action**

The Proposed Action is conditioned upon NAS Fallon stormwater discharged into Newlands Project drainage facilities continuing to meet NDEP permit standards and remaining in compliance with the Clean Water Act. Stormwater discharge is limited to water quality parameters specified in the Stormwater General Permit (NAS Fallon 2008). NDEP monitoring of NAS Fallon permit compliance would detect any public health and safety concerns related to stormwater quality. The current permit limits meet the beneficial use standards for human contact per Nevada Administrative Code 445A.283–445A.285. This stormwater does not qualify as a hazardous material.

The NAS Fallon stormwater would not directly enter any current or planned sources of municipal water supplies, including the basalt aquifer used by the City of Fallon, NAS Fallon, and the Fallon Paiute-Shoshone Tribe. Newlands Project drains do contact the shallow aquifer below the land surface, but these drains are typically groundwater discharge reaches instead of aquifer recharge reaches (Seiler and Allander 1993). Therefore, no impacts to water quality in the shallow aquifer are expected from continued conveyance of stormwater discharge in the drains. Under the Proposed Action, current conditions would be maintained relative to any private wells using the shallow aquifer in the Carson Desert downgradient of NAS Fallon.

### **No Action Alternative**

If the treated stormwater is not conveyed in Newlands Project drainage facilities, NAS Fallon would have to design, construct, and implement an alternative system and location to convey, treat, and discharge stormwater. It is expected that any such new system would not result in future public health or safety concerns, as NAS Fallon would still be required to comply with all applicable federal, state, and local laws for the stormwater discharge.

## **3.5 Vegetation**

Plant communities within the action area of this EA include wetland, riparian, agricultural, and low desert shrub vegetation. Newlands Project facilities in the area generally have limited vegetation. The delivery canals in the Carson Division are dewatered every year during the winter (non-irrigation) season, while the water level in the drains varies by drain depth and location, and seasonally from irrigation rates, groundwater discharge, and storm events. Vegetation above the high water mark of these facilities is primarily desert shrub (sagebrush, *Artemisia* spp.; rabbitbrush, *Ericameria* spp.; greasewood, *Sarcobatus vermiculatus*) and non-native shrubs and trees (Russian olive, *Elaeagnus angustifolia*; salt cedar, *Tamarix* spp.). Emergent vegetation within the drains is primarily broad-leaf cattail (*Typha latifolia*), southern cattail (*Typha domingensis*), and hardstem bulrush (*Scirpus acutus*).

Historically, runoff from the Sierra Nevada (via the Carson River) constituted the primary water inflow to the Lahontan Valley wetlands. Upstream diversions for agriculture steadily dried Stillwater Marsh, Carson Lake, and the Carson Sink in all but the wettest years (Morrison 1964, Kelly and Hattori 1985, Townly 1998). Since the early 1900s, the Lahontan Valley wetlands have subsisted on seepage losses and drainage from the Newlands Project, water from winter power generation at Lahontan Dam, and water from periodic spills at Lahontan Dam in high water years. Wetland vegetation in Stillwater Marsh has been impacted through changes in salinity levels, water depths, timing and volume of water inflows, water inflow routes, and non-native vegetation (Service 2000). The diversity of emergent and submergent vegetation in Stillwater Marsh has substantially declined (Kerley *et al.* 1993, Service 2000). The emergent vegetation community at Stillwater Marsh includes hardstem bulrush, broad-leaf cattail, southern cattail, common horsetail (*Equisetum arvense*), sago pondweed (*Stuckenia pectinata*), and duckweed (*Lemna* spp.). Submergent vegetation community species include western chara (*Chara* spp.), pondweed (*Potamogeton* spp.), widgeon grass (*Ruppia maritima*), and horned pondweed (*Zannichellia palustris*).

Weeds occur throughout the Lahontan Valley, including at NAS Fallon, along and adjacent to Newlands Project facilities, and at Stillwater NWR. Noxious weeds and invasive species

associated with Newlands Project facilities include Canada thistle (*Cirsium arvense*), hoary cress (*Cardaria draba*), perennial pepperweed (*Lepidium latifolium*), poison-hemlock (*Conium maculatum*), puncturevine (*Tribulus terrestris*), salt cedar, Russian olive, Eurasian watermilfoil (*Myriophyllum spicatum*), and common reed (*Phragmites australis*) (District 2014).

Many entities are involved in weed management activities in the Lahontan Valley including the District, Service, Churchill County, Nevada Division of State Parks, BLM, Nevada Department of Wildlife (NDOW), NAS Fallon, Lahontan Conservation District, Churchill County Coordinated Weed Management Area, private landowners, and others. The District is responsible for weed management along the Newlands Project drainage facilities covered in this EA. Portions of the drains may also receive noxious weed treatments from other entities where Reclamation facilities transit various other land ownerships. The Service has implemented an integrated, multi-agency approach to noxious weed management at Stillwater NWR involving local, state, and federal agencies and utilizing mechanical, cultural and chemical control methods.

### **Proposed Action**

Under the Proposed Action, the estimated total stormwater discharges of approximately 25 and 116 af from NAS Fallon during 5-year and 100-year storm events, respectively, would remain similar to current discharge conditions from such events. Stormwater discharge would help sustain existing areas of emergent and riparian vegetation along Reclamation's drainage facilities, which represent a routine maintenance (vegetation control) workload for the District. However, many terrestrial noxious weeds and invasive species readily colonize newly-exposed, moist soils. Continuing the current discharge of stormwater would provide occasional water level fluctuations that may maintain soil moisture conditions suitable for establishment of noxious weeds and invasive vegetation along small elevational zones of the drain embankments. Stormwater discharge would continue to provide temporary beneficial effects for wetland vegetation at Stillwater NWR by slightly increasing water inflows and flooding additional surface acreage. This increased acreage would not be a significant amount compared to the approximately 14,000 acres of wetlands within Stillwater NWR.

### **No Action Alternative**

Due to the relatively low volumes, frequency, and duration of stormwater currently discharged from NAS Fallon, only minor reductions in elevational distribution and/or density of vegetation along Newlands Project drains would be expected under the No Action Alternative. If stormwater is not delivered to Stillwater NWR it would slightly reduce the water available to support wetland vegetation. This reduction in wetland vegetation would not be a significant amount compared to the approximately 14,000 acres of wetlands within Stillwater NWR.

## **3.6 Wildlife**

The Lahontan Valley contains various habitat types including wetlands, desert shrub communities, agriculture lands, and riparian zones that support a diversity of wildlife. Newlands Project facilities run through or are in the vicinity of all of these types of habitat.

## **Fish**

Newlands Project facilities generally do not support fish populations, except in areas where water is typically maintained year round (e.g., Truckee Canal, reservoirs). However, there are no fish screens to prevent native and non-native fish in the Carson and Truckee Rivers or other waterbodies from entering Newlands Project facilities. Fish are commonly found in Lahontan Valley wetlands that maintain surface water. Non-game fish present include native tui chub (*Gila bicolor*), Lahontan redbelly shiners (*Richardsonius egregius*), speckled dace (*Rhinichthys osculus*), Lahontan mountain suckers (*Catostomus platyrhynchus*), and Tahoe suckers (*Catostomus tahoensis*), as well as non-native common carp (*Cyprinus carpio*), Sacramento blackfish (*Orthodon microlepidotus*), fathead minnows (*Pimephales promelas*), and mosquitofish (*Gambusia affinis*) (Service 2000).

## **Birds**

### *Waterfowl*

Lahontan Valley wetlands are important for migrating waterfowl and are one of the most important duck breeding grounds in Nevada. Most waterfowl nesting activity in the Lahontan Valley occurs at Stillwater NWR and Carson Lake. The National Audubon Society (2013) reports that nearly 250,000 American coots (*Fulica americana*) have been recorded in the valley during the fall. Migration also brings thousands of other waterfowl, including snow geese (*Chen caerulescens*), Ross' geese (*Chen rossii*), greater white-fronted geese (*Anser albifrons*), gadwall (*Anas strepera*), northern pintail (*Anas acuta*), green-winged teal (*Anas carolinensis*), and cinnamon teal (*Anas cyanoptera*). The wetlands are particularly critical for canvasback (*Aythya valisineria*), with up to 28,000 recorded, and redhead (*Aythya americana*), with up to 29,000 recorded during migration. Mallards (*Anas platyrhynchos*), cinnamon teal, and wood ducks (*Aix sponsa*) commonly nest and forage along Newlands Project drains.

### *Shorebirds*

The Lahontan Valley wetlands provide important habitat for a variety of migrating shorebirds. Neel and Henry (1996) identified 21 shorebird species present in the valley between 1949 and 1994. In 1988, Stillwater NWR and the Carson Lake wetlands were elected as sites of hemispheric importance by the Western Hemispheric Shorebird Reserve Network (2015). The National Audubon Society (2013) indicates that, depending on water levels, the area is visited by up to 250,000 shorebirds annually including long-billed dowitcher (*Limnodromus scolopaceus*), western sandpipers (*Calidris mauri*), least sandpipers (*Calidris minutilla*), American avocet (*Recurvirostra americana*), Wilson's phalarope (*Phalaropus tricolor*), and long-billed curlew (*Numenius americanus*). Up to 5,000 American avocet breed locally, as do nearly 700 snowy plover (*Charadrius alexandrinus*) (Neel and Henry 1996). Shorebirds species exhibit incidental use of shallow water habitats in Newlands Project drains for foraging.

### *Colony-Nesting and Other Marsh Birds*

Substantial numbers of colony-nesting and other marsh birds migrate through and nest in the Lahontan Valley wetlands. Colony-nesting birds include the white-faced ibis (*Plegadis chihi*), black-crowned night heron (*Nycticorax nycticorax*), great egret (*Ardea alba*), and snowy egret (*Egretta thula*). With up to 8,000 breeding pairs, the Lahontan Valley wetlands support one of the largest colonies of white-faced ibis in the United States (Earnst *et al.* 1998). Colony-nesting and other marsh birds exhibit incidental use of shallow to moderately-deep water habitats in Newlands Project drains for foraging.

## **Mammals**

Beaver (*Castor canadensis*), muskrats (*Ondatra zibethicus*), and raccoons (*Procyon lotor*) are the most common mammals found in the wetlands, riparian areas, drains, and canals within the project area. Large mammals associated with wetland and riparian habitats include mule deer (*Odocoileus hemionus*) and, rarely, mountain lions (*Puma concolor*). Common small mammals that inhabit wetland and riparian areas include the western harvest mouse (*Reithrodontomys megalotis*) and long-tailed vole (*Microtus longicaudus*). The most common carnivore in the Lahontan Valley is the coyote (*Canis latrans*).

## **Proposed Action**

Implementing the Proposed Action would continue the conveyance of approximately 25 af of stormwater during a 5-year storm from NAS Fallon through the LDD Drain to wetlands at Stillwater NWR. The water would continue to support minor amounts of wildlife habitat along the drains and add approximately 5 acres of wetland habitat for wildlife at the refuge. This is not a significant amount of wetland habitat compared to the approximately 14,000 acres of wetlands within the refuge. The estimated total stormwater discharge of approximately 116 af during a 100-year storm event would provide additional wetland habitat for wildlife over a longer period of time than a 5-year storm event, but it would still be insignificant (approximately 5–23 acres) in comparison with existing wetland acreages. The water quality of the stormwater meets NDEP standards, and there are currently no known water quality-related adverse effects to wildlife or their habitat associated with this stormwater.

## **No Action Alternative**

Stormwater from NAS Fallon would not be discharged to Newlands Project drainage facilities or delivered to wetlands at Stillwater NWR under the No Action Alternative. Minor amounts of desert shrub habitat along the drains and areas of emergent vegetation within the drains that provide some wildlife habitat would be impacted slightly by intermittent reductions in the volume of water in the drains. The refuge would lose an insignificant amount of wetlands that provide habitat for waterfowl, shorebirds, and other wetland-dependent wildlife species. The loss of desert shrub habitat would not be significant compared to the extensive areas of available surrounding similar habitat, and the amount of wetland habitat loss (5–23 acres) would not be significant compared to the approximate 14,000 acres of existing wetlands within the refuge.

## **3.7 Threatened and Endangered Species**

Section 7 of the Endangered Species Act of 1973, as amended, prohibits Federal agencies from authorizing, funding, or carrying out activities that are likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat. By consulting with the Service before initiating projects, agencies review their actions to determine if these could adversely affect listed species or their habitat. Through consultation, the Service works with other Federal agencies to help design their programs and projects to conserve listed and proposed species. Regulations for the section 7 consultation process can be found at 50 CFR Part 402.

Two federally-listed species are reported by the Service as potentially being affected by activities in Churchill County (Service 2015a). The endangered cui-ui (*Chasmistes cujus*) and threatened Lahontan cutthroat trout (LCT; *Oncorhynchus clarkii henshawi*) occur in the Truckee River, which provides

supplemental water to the Newlands Project; LCT are also native to the Carson River basin. These two listed species do not have designated critical habitat. No listed species are reported to occur at NAS Fallon's main station, Stillwater NWR, or near the LD1 and LDD Drains (Service 2015b). Numerous species of conservation concern, especially migratory birds, are reported as occurring within the project area and/or Churchill County (NAS Fallon 2014; Nevada Natural Heritage Program 2015; Service 2015a, 2015b).

### **Proposed Action**

No federally-listed species or designated critical habitat occur within the project area, so there would be no direct effects to these species or their habitat from the Proposed Action. Also, there would be no indirect effects to cui-ui in the Truckee River basin or LCT in the Truckee River and Carson River basins because authorization of the continued conveyance of NAS Fallon's stormwater would not increase or decrease Newlands Project water demands under OCAP.

### **No Action Alternative**

Under the No Action Alternative, NAS Fallon would be required to retain stormwater on site. This would likely involve the construction of retention/detention basins and/or other facilities to convey, treat, and store stormwater. No federally-listed species or critical habitat occur on NAS Fallon's main station, therefore no effects to listed species would occur from construction and operation of a new stormwater system. No listed species have been reported at Stillwater NWR or near the LD1 and LDD Drains; and no critical habitat is present in these areas (Service 2015a, 2015b). Therefore, no effects to listed species or critical habitat would occur from the elimination of stormwater conveyance in the drains and elimination of stormwater delivery to Stillwater NWR.

## **3.8 Cultural Resources**

Cultural resources is a term used to describe both 'archaeological sites' depicting evidence of past human use of the landscape and the 'built environment' which is represented in structures such as dams, roadways, and buildings. The National Historic Preservation Act of 1966 (NHPA) is the primary legislation which outlines federal agencies' responsibilities to consider cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on historic properties, which are cultural resources listed or eligible for listing on the National Register of Historic Places (National Register).

Implementing regulations for Section 106 (36 CFR Part 800) describe the process that Federal agencies must take to identify historic properties and determine the level of effect that a proposed undertaking would have on such properties. In summary, it must first be determined whether the action is the type of activity that has the potential to affect historic properties. If the action is that type of activity, then the agency must identify the area of potential effects (APE), determine if historic properties are present within the APE, determine the effect that the undertaking would have on historic properties, and seek to resolve any adverse effects through consultation with the State Historic Preservation Officer and any other consulting parties.

Several Newlands Project features have been listed on the National Register as part of a Thematic Resource Nomination in 1981. However, neither the LD1 nor LDD Drains have been evaluated for National Register eligibility, either as an individual property, or as a contributing element of the Newlands Project Historic District.

### **Proposed Action**

The Proposed Action to authorize continued discharge and conveyance of stormwater in Newlands Project drainage facilities is not the type of activity that has the potential to affect historic properties pursuant to the regulations at 36 CFR Part 800.3(a)(1). The stormwater would continue to be discharged and conveyed in existing drain facilities. No ground-disturbing activities, including excavation or construction, are required to convey the water. The relatively minor amount of water that would be discharged and conveyed in the drains would not result in measurable increases of water levels in either the LD1 Drain or LDD Drain. The proposed action has no potential to affect historic properties (Appendix B).

### **No Action Alternative**

Under the No Action Alternative, NAS Fallon would be required to retain stormwater on site. This would likely result in ground-disturbing activities, such as the construction of retention/detention basins and/or other facilities to convey and store stormwater. Undertaking the No Action Alternative would be subject to Section 106 requirements and would be the responsibility of NAS Fallon.

## **3.9 Indian Trust Assets**

Indian Trust Assets (ITA) are legal interests in property or natural resources held in trust by the United States for Indian Tribes or individuals. The Secretary of the Interior is the trustee for the United States on behalf of Indian Tribes; all Interior bureaus share the Secretary's duty to act responsibly to protect and maintain ITAs reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and executive orders.

There are two federally-recognized Indian Tribes potentially impacted by the Proposed Action (Bureau of Indian Affairs 2015). The two tribes are the Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation, Nevada; and the Paiute-Shoshone Tribe of the Fallon Reservation and Colony. Trust resources of these tribes include land, water rights, and fish and wildlife; incomes are derived from these resources.

### **Fallon Paiute-Shoshone Tribe**

The Fallon Reservation and Colony includes members of the Northern Paiute and Western Shoshone Indians. The Fallon Reservation covers approximately 8,156 acres and is located in Churchill County, approximately 10 mi northeast of Fallon, Nevada. The Fallon Colony is geographically separate from the Reservation and located on 60 acres closer to downtown Fallon. Colony land is used for residential and commercial purposes. Water rights on and appurtenant to the Reservation are served by Newlands Project facilities pursuant to OCAP and are part of the Carson Division. Currently, 5,513 acres of the Reservation are water righted; and approximately 1,800–3,175 acres have been irrigated.

The Fallon Paiute-Shoshone Tribe entered into a settlement agreement that was ratified by Congress as Title I of P.L. 101–618, or the Fallon Paiute-Shoshone Indian Tribes Water Rights Settlement Act of 1990. Section 103 of P.L. 101–618 limits annual water use on the Reservation to 10,587.5 af (equivalent to 3,025 acres). However, it also permits the Tribe to acquire up to 2,415.3 acres of land and up to 8,453.55 af of water rights. These water rights may be used for irrigation, fish and wildlife, municipal and industrial, recreation, or water quality purposes, or for



any other beneficial use subject to applicable laws of the State of Nevada. The Tribe has dedicated Reservation acreage to be used as wetland habitat for wildlife. The Bureau of Indian Affairs entered into an agreement with the Service in 1995 to acquire water rights for Reservation wetlands; under that agreement, 1,613.4 af of water rights have been acquired.

### **Pyramid Lake Paiute Tribe**

The Pyramid Lake Reservation is located in Washoe County, north of Reno, Nevada. The Reservation covers 475,085 acres and includes Pyramid Lake. The Federal actions that set aside the Pyramid Lake Reservation explicitly reserved Pyramid Lake for the Tribe's benefit. P.L. 101-618 affirmed that "all existing property rights or interests, all of the trust land within the exterior boundaries of the Pyramid Lake Indian Reservation shall be permanently held by the United States for the sole use and benefit of the Pyramid Tribe (Section 210[b][1])." The Tribe is also allocated water from the Truckee River for irrigation, including up to 4.71 af per acre for 3,130 acres of bottomland farm (14,742 af) (Claim No. 1) and another 5.59 af per acre for 2,745 acres of benchlands (15,345 af) (Claim No. 2).

The Pyramid Lake fishery remains one of the cultural mainstays of the Tribe. The Tribe operates fish hatcheries on the Reservation at Sutcliffe and Numana. Tribal hatcheries raise both the threatened LCT and the endangered cui-ui. Along with conserving listed fish, the Tribe manages and controls fishing and hunting rights on the Reservation.

### **Proposed Action and No Action Alternative**

No water rights, land, or trust income resources of either tribe would be affected under either the Proposed Action or No Action Alternative. The two Reservations and the Colony are not within or immediately adjacent to the action area and, therefore, land resources of the tribes would not be directly affected. The continued conveyance of NAS Fallon's stormwater would have no impact on the timing or amount of use of Newlands Project water from either the Carson or Truckee Rivers and would not directly or indirectly impact any tribal water rights or land use potentially affecting trust incomes. Fish and wildlife resources and wetland habitats at Stillwater NWR that are potentially used by the tribes for hunting and fishing may benefit slightly from implementation of the Proposed Action.

## **3.10 Environmental Justice**

Executive Order 12898 (1994), "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," provides that each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. Environmental justice programs promote the protection of human health and the environment, empowerment via public participation, and the dissemination of relevant information to inform and educate affected communities.

EPA guidelines for evaluating potential adverse environmental effects of projects require specific identification of minority populations when a minority population either exceeds 50 percent of the population of the affected area or represents a meaningfully greater increment of the affected population than of the population of some other appropriate geographic unit. Race,

ethnicity, and poverty data for the action area and surrounding geographic units (Table 1) were acquired from the 2009–2013 American Community Survey 5-year Estimates (U.S. Census Bureau 2015). The 2015 poverty threshold was an annual income of \$24,250 for a family of four (U.S. Department of Health and Human Services 2015). Minorities represent 9.4–15.9 percent of the population in and near the action area, which is comparable to Churchill County total estimates and less than estimates for Nevada statewide (U.S. Census Bureau 2015). Numbers of people living below the poverty level in and near the action area are lower than in Churchill County and Nevada (U.S. Census Bureau 2015).

### **Proposed Action and No Action Alternative**

Based on the U.S. Census Bureau (2015) data, the Proposed Action and No Action Alternative would not disproportionately affect minority or low-income populations within or near the action area. Sections 3.2 Land Use and Economics, 3.3 Water Resources and Quality, and 3.4 Public Health and Safety in this EA also indicate that implementing the Proposed Action or No Action Alternative would not result in disproportionately high or adverse human health or environmental effects. Therefore, environmental justice is not affected.

Table 1. Demographic and economic statistics (2009–2013) for residents of geographic areas including NAS Fallon’s main station, the LD1 and LDD Drains, and Stillwater National Wildlife Refuge, Churchill County, Nevada (U.S. Census Bureau 2015).

<b>Location</b>	<b>Total Population</b>	<b>White Alone and Not Hispanic (%)</b>	<b>Total Racial and Ethnic Minorities (%)</b>	<b>People Below Poverty Level (%)</b>
Nevada	2,730,066	1,948,808 (71.4)	781,258 (28.6)	409,510 (15.0)
Churchill County	24,572	20,247 (82.4)	4,325 (17.6)	3,686 (15.0)
Churchill County (Census Tract 9501)	3,036	2,752 (90.6)	284 (9.4)	331 (10.9)
Churchill County (Census Tract 9504)	801	673 (84.0)	128 (15.9)	5 (0.6)

### **3.11 Irreversible and Irretrievable Commitments of Resources**

Irreversible and irretrievable resource commitments involve the use of nonrenewable resources and the effects of their use on future generations. An irreversible commitment of resources occurs when, once committed to an action, the resource would continue to be committed throughout the life of that action. Irreversible effects primarily result from the use, removal, or destruction of specific resources that cannot be replaced within a reasonable time frame, such as energy and minerals. An irretrievable commitment of resources refers to those resources that, once used, consumed, destroyed, or degraded during implementation of an action, would cause the resource to be permanently unavailable for use by future generations. Examples of irretrievable types of resources include nonrenewable resources, such as mineral and cultural resources, as well as renewable resources that would be unavailable for the use of future generations such as extinction of a threatened or endangered species. No irreversible and irretrievable commitments of resources would occur under the Proposed Action or No Action Alternative.

### 3.12 Cumulative Effects

CEQ regulations implementing NEPA require that the cumulative impacts of a proposed action be assessed (40 CFR Parts 1500–1508). CEQ also provides guidance on cumulative impact analysis in *Considering Cumulative Impacts under the National Environmental Policy Act* (CEQ 1997). A cumulative impact is defined as:

*“...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”* (40 CFR § 1508.7).

This section addresses the potential cumulative impacts that may result when the Proposed Action is combined with the incremental impacts of other past, present, and reasonable foreseeable future actions. If a project would not result in a direct or indirect impact on a resource, it would not contribute to a cumulative impact on that resource, and no further evaluation from a cumulative impact perspective is warranted.

With the exception of wastewater effluent discharges, summary information below on other actions with potential cumulative effects was primarily obtained from the Navy’s recent draft EIS for the Fallon Range Training Complex, which includes NAS Fallon’s main station, Reclamation’s LD1 and LDD Drains, and Stillwater NWR (Navy 2015).

#### **Wastewater Effluent Discharges**

Past, ongoing, and future actions most similar to the Proposed Action include Reclamation’s authorizations of multiple wastewater treatment plants to discharge effluent into Newlands Project drains. NAS Fallon discharges treated effluent from their wastewater treatment plant to the LDD Drain, which is then conveyed to Stillwater NWR. There is a 2009 Memorandum of Agreement (MOA; Number 09-LC-20-0063) between Reclamation, the Navy, and the Service for this discharge. Churchill County also has a 2010 MOA with Reclamation and the Service (Number 10-LC-20-0310) and an NDEP Permit (NV0023582) for their Moody Lane Regional Water Reclamation Facility. The Churchill County facility discharges treated effluent to the Wade Drain and from there it is conveyed to the lower Carson River channel and on to Stillwater NWR through a series of other Newlands Project facilities. In addition, the City of Fallon has a 2012 MOA with Reclamation and the Service (Number 12-LC-20-0099), as well as a permit from NDEP (NV0020061), for discharging treated effluent into the New River Drain. New River Drain flows can be routed to Harmon Reservoir and then on to Stillwater NWR, but are more often routed into the L-Line Canal and then on to Carson Lake or Stillwater NWR.

There would be continued overlap in use of some Newlands Project facilities (*i.e.*, LDD Drain) between ongoing treated effluent discharges and the Proposed Action. In addition, some portion of the effluent discharges from these facilities and the proposed NAS Fallon stormwater discharge are conveyed to wetland habitats within Stillwater NWR. Discharges from each wastewater treatment plant identified above are expected to continue, as authorized by Reclamation and in compliance with their State permits and water quality standards established by NDEP. Reclamation authorization for the continued discharge and conveyance of NAS

Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present, or reasonably foreseeable future wastewater effluent discharges.

### **NAS Fallon Airfield Operations and Facility Development**

The Navy intends to maintain baseline NAS Fallon airfield operations, conduct airfield operations with new types of aircraft, and increase airfield operations to support future potential training conditions (Navy 2015). Proposed facility development required to support future aircraft missions at NAS Fallon would include space for aircraft maintenance, crew and equipment, administration, training, and an unmanned aircraft system runway and staging area. The potential impacts associated with NAS Fallon airfield operations and facility developments related to the Proposed Action may include: Temporary wildlife disturbance during construction phases and during increased airfield operations; vegetation/wildlife habitat disturbance during construction activities; creation of additional impervious surfaces; and potential increases in runoff, erosion, and sedimentation associated with new impervious surfaces, which will be offset by the use of BMPs. Reclamation authorization for the continued discharge and conveyance of NAS Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present, or reasonably foreseeable future NAS Fallon airfield operations and facility development.

### **NAS Fallon Integrated Natural Resources Management Plan**

The Integrated Natural Resources Management Plan (INRMP) for NAS Fallon was updated in July 2014 (NAS Fallon 2014). The plan fulfills the requirements of the Sikes Act (16 USC 670a–670o, 74 Statute 1052), Department of Defense Instruction 4715.03, and Chief of Naval Operations Instruction 5090.1D (Environmental Readiness Program Manual). The INRMP was prepared in coordination with the Service and NDOW. It provides NAS Fallon with a framework for future (10–20 years) management of natural resources on lands it owns or manages. The INRMP “provides goals and objectives for the use and conservation of natural resources that integrate regional ecosystem, military, social (community), and economic matters. It establishes planning and management strategies; identifies natural resource constraints and opportunities; provides baseline descriptions of natural resources necessary for the development of conservation strategies and environmental assessment; serves as the principal information source for the preparation of future environmental documents for proposed NAS Fallon actions; and provides guidance for annual natural resources management reviews, internal compliance audits, and annual budget submittals” (NAS Fallon 2014). Reclamation authorization for the continued discharge and conveyance of NAS Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present, or reasonably foreseeable future implementation of NAS Fallon's INRMP.

### **Lahontan Valley Water Rights Acquisitions and Land Sales**

Since 1990, the Service has been acquiring water rights for wetlands in the Lahontan Valley, including wetlands within Stillwater NWR and at Carson Lake. The primary acquisition authority, P.L. 101–618, was analyzed in the 1996 Final EIS and Record of Decision for water rights acquisition for Lahontan Valley wetlands (Service 1996a, 1996b). The Service continues to acquire water rights from willing sellers, and in many cases, land and other real estate is

included in the transactions. The Service intends to sell lands acquired outside of the Stillwater NWR boundary; approximately 65 parcels (5,891 acres), so far (Navy 2015). The Service anticipates acquiring a similar number of parcels and acreage during the remainder of its Lahontan Valley water rights purchase program. The total acreage and exact locations of properties that will be offered for future sale are not known. Because the water rights acquisition program may last for another 15 years or more, the need to sell acquired land is expected to continue for a similar period.

Land sale revenues would be deposited into the Lahontan Valley and Pyramid Lake Fish and Wildlife Fund and used for additional water rights purchases for Lahontan Valley wetlands, payment of annual operations, and maintenance charges for water delivery and other authorized expenditures. These revenues would help offset the need for future Federal appropriations to acquire and maintain water rights for Lahontan Valley wetlands. The potential impacts associated with water rights acquisitions and land sales related to the Proposed Action may include: Changes in vegetation, including the spread of noxious weeds; increased erosion of exposed soils on former agricultural properties and affects to water quality; changes in land use; and benefits to wildlife, especially birds, and ITAs. Reclamation authorization for the continued discharge and conveyance of NAS Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present or reasonably foreseeable future implementation of the Service's Lahontan Valley water rights acquisition program.

### **BLM Carson City District Drought Management Program**

The BLM's Carson City District prepared an EA on management actions carried out during drought to alleviate impacts on sensitive resources (BLM 2013). Drought effects depend on drought severity, but often include: Increased number and severity of fires; lack of forage and water for livestock; decreased vigor and production of vegetation; increased wind and water erosion of soils; reduction and degradation of fish and wildlife habitat; and increased deaths of wildlife, wild horses and burros, and livestock. Implementation of the BLM's drought management program is expected to positively affect these drought-related issues by allowing rapid response actions during drought conditions. The potential impacts associated with drought management on BLM's public lands related to the Proposed Action may include: Temporary changes in permitted livestock grazing (*e.g.*, season of use, stocking levels, grazing duration) to reduce vegetation stress, as well as installation of above-ground water pipelines and fences to manage livestock distribution and reduce localized impacts to vegetation, water sources, and soils. Reclamation authorization for the continued discharge and conveyance of NAS Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present, or reasonably foreseeable future implementation of BLM's drought management program.

### **BLM Grazing Program**

As of 2010, the BLM's Carson City District contained 114 grazing allotments covering 5,208,826 acres in California and Nevada (Navy 2015). Public land grazing is managed to achieve the fundamentals of rangeland health as indicated by soil and site stability, hydrologic function, and biotic integrity. Potential impacts from public land grazing include the potential for livestock operations to exacerbate drought conditions, introduce noxious weeds and invasive

species, and compete for water and other habitat resources with native wildlife. Reclamation authorization for the continued discharge and conveyance of NAS Fallon's stormwater in Newlands Project drainage facilities would not result in significant direct or indirect incremental impacts to any resources analyzed in this EA when combined with past, present, or reasonably foreseeable future implementation of BLM's grazing program.

### 3.13 Environmental Commitments

NAS Fallon is responsible for obtaining, complying with, and renewing their State of Nevada Stormwater General Permit. The current 5-year permit (NVR050000) is dated September 22, 2008, with an expiration date of September 21, 2013; however, the permit has been administratively continued by NDEP while a permit renewal is being drafted. The permit includes multiple standards for stormwater quality monitoring. If future monitoring finds significant adverse water quality impacts from the stormwater, State-required mitigation would be the responsibility of NAS Fallon. BMPs outlined in NAS Fallon's 2008 SWPPP will continue to remain in force to ensure that stormwater discharges to Reclamation drainage facilities do not contribute to an exceedance of applicable State water quality standards.

## Chapter 4 – Consultation and Coordination

### 4.1 Public Involvement and Agency Coordination

Reclamation prepared this EA in coordination with NAS Fallon. The EA will be made available to the public for a 30-day review period. Reclamation is issuing a news release on the availability of the EA. The EA will be posted on Reclamation's Mid-Pacific Region website, and hard copies will be available to the public for viewing at the Churchill County Public Library and Reclamation's Lahontan Basin Area Office in Carson City, Nevada. Notifications will also be provided to Federal agencies, Indian Tribes, the Nevada State Clearinghouse, and interested parties.

### 4.2 Agencies and Individuals on Mailing List

Agency	Individual
Churchill County	Eleanor Lockwood, County Manager Michael Johnson, Planning Director
Fallon Paiute-Shoshone Tribe	Len George, Chairman
NAS Fallon	Environmental Program Director
Natural Resources Conservation Service	Lex Riggle, Fallon Service Center
Nevada State Clearinghouse	Skip Canfield
Pyramid Lake Paiute Tribe	Vinton Hawley, Chairman
Reno-Sparks Indian Colony	Arlan Melendez, Chairman
Truckee-Carson Irrigation District	Rusty Jardine, Project Manager/General Counsel
U.S. Army Corps of Engineers	Kristine Hansen, Senior Project Manager
U.S. Environmental Protection Agency	Environmental Review Office
U.S. Fish and Wildlife Service Reno Fish and Wildlife Office	Ted Koch, Field Supervisor
U.S. Fish and Wildlife Service Stillwater NWR Complex	Nancy Hoffman, Refuge Manager

### **4.3 Other Federal Laws, Regulations, and Executive Orders**

In undertaking the Proposed Action, Reclamation would comply with the following federal laws, executive orders, and legislative acts: Executive Order 11988 Floodplain Management; Executive Order 12372 Intergovernmental Review of Federal Programs; Executive Order 11593 Protection of Historical, Archaeological, and Scientific Properties; Executive Order 11990 Protection of Wetlands; Executive Order 13186 Responsibilities of Federal Agencies to Protect Migratory Birds; Executive Order 12996 Management and General Public Use of the National Wildlife Refuge System; Secretarial Order 3127 Hazardous Substances Determinations; and the National Wildlife Refuge System Administration Act of 1966, as amended (16 USC 668dd–668ee).

## **Chapter 5 – References and Personal Communications**

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# Appendix A

## Notice of Intent Certification Statement Under Stormwater General Permit NVR050000

Storm Water Pollution Prevention Plans (SWPPPs) must remain on the project site and be updated as necessary during the duration of the project.

12/8/2008

**Owner**

Naval Air Station Fallon  
Mr. M.H. Glaser, Commanding Officer  
Environmental Division OPWN39  
4755 Pasture Rd. Bldg. 307  
Fallon, NV 89496

**Operator**

Naval Air Station Fallon  
Mr. M.H. Glaser, Commanding Officer  
Environmental Division OPWN39  
4755 Pasture Rd. Bldg. 307  
Fallon, NV 89496

**Renewal: Yes (Old Site ID - 275)**

**Re: Stormwater General Permit NVR050000**

**Confirmation Number: ISW - 1273**

**Project Name: Naval Air Station Fallon**

Your submittal to be included under the Stormwater General Permit has been received.  
Please mail the filing fee of \$200.00 along with this notice to:

Stormwater Coordinator 3173  
Bureau of Water Pollution Control  
Nevada Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, NV 89701-5249

After receipt of the filing fee, an approval letter will be mailed to you.

the time of any on-site inspections, our inspectors will ask to review your copy of the SWPPP in an effort to ensure proper compliance with the program.

Should you have any questions, please call Bonnie Hartley at (775) 687-9430.

### Industrial NOI Certification Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. I also confirm that a storm water pollution prevention plan (SWPPP) has been completed, will be maintained at the project site from the start of construction activities, and that the SWPPP will be compliant with any applicable local sediment and erosion control plans. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines for knowing violations.

**Confirmation Number: ISW - 1273**

**Date: 12/8/2008**

**Owner or Operator Name (Please Print):**

**Signature:**

M.H. GLASER CAPT USN  
*[Signature]*

# Appendix B

## Cultural Resource Compliance Memorandum

### **CULTURAL RESOURCES COMPLIANCE Division of Environmental Affairs Cultural Resources Branch (MP-153)**

**MP-153 Tracking Number:** 15-LBAO-150

**Project Name:** Authorization to Naval Air Station (NAS) Fallon for Stormwater Drainage

**NEPA Document:** EA

**NEPA Contact:** Julia Long, Natural Resource Specialist

**MP 153 Cultural Resources Reviewer:** BranDee Bruce, Architectural Historian

**Date:** May 22, 2015

Reclamation proposes to issue an authorization to NAS Fallon to allow the continued conveyance of NAS Fallon stormwater discharge through two Newlands Project facilities, the Lower Deep 1 Drain and Lower Diagonal Deep Drain, to the Lahontan Valley wetlands at Stillwater National Wildlife Refuge. No changes in use or modification of either Newlands Project facilities are required for this undertaking. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such properties be present, pursuant to the NHPA Section 106 regulations codified at 36 CFR § 800.3(a)(1). Reclamation has no further obligations under NHPA Section 106, pursuant to 36 CFR § 800.3(a)(1).

Reclamation proposes to issue an authorization to NAS Fallon for continued use of the Newlands Project facilities. After reviewing documentation provided within EA titled "Authorization to Naval Air Station (NAS) Fallon for Stormwater Drainage", Reclamation has concluded this action would not have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places. This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, additional NHPA Section 106 review, including further consultation with the SHPO, may be required.

This document is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.