RECLAMATION
Managing Water in the West

Conveyance of Non-Project Treated Effluent Water from Churchill County's Moody Lane Regional Water Reclamation Facility to Stillwater National Wildlife Refuge through Newlands Project Facilities

FINAL Environmental Assessment

Churchill County, Nevada
Mid-Pacific Region
Lahontan Basin Area Office

U.S. Department of the Interior
Bureau of Reclamation
Lahontan Basin Area Office
Carson City, Nevada

December 2010

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Chapter 1 - Background and Purpose and Need for Action

1.1 Introduction

Bureau of Reclamation (Reclamation) consent is required for conveyance of non-project water in Reclamation facilities. Churchill County, which constructed the Moody Lane water treatment facility in 2008, is seeking Reclamation's consent to discharge treated effluent into Newlands Project facilities for conveyance to Stillwater National Wildlife Refuge (NWR). Consent is contingent upon a determination by Reclamation that proposed conveyance would not interfere with Reclamation's use of its facilities and easements. This document is an Environmental Assessment (EA) analyzing the proposed conveyance of approximately 560 acre-feet per year (af/yr) of non-project treated effluent water through Reclamation's Newlands Project (Project) facilities from Churchill County's Moody Lane Regional Water Reclamation Facility to Stillwater NWR.

1.2 Project Location

The project area is located in Churchill County near Fallon, Nevada. The effluent would be discharged by Churchill County into Wade Drain and conveyed through existing Project facilities to Stillwater NWR (Figure 1). The proposed route is located primarily in a rural area surrounded by agricultural land and native desert shrub communities.

1.3 Background

The Reclamation Act of 1902 authorized the construction of the Project, a trans-basin diversion of water for agricultural development. The Project provides water from the Truckee and Carson Rivers for irrigation and wetlands purposes for approximately 57,000 acres in the Lahontan Valley near Fallon and Fernley in western Nevada. Water is diverted from the Truckee River into the Truckee Canal for the Truckee Division and conveyance to Lahontan Reservoir for storage for irrigation in the Carson Division. Water supply for the Carson Division comes primarily, however, from the Carson River which also flows into Lahontan Reservoir.

The Truckee Carson Irrigation District (District) is responsible for operation and maintenance of Project facilities, including Wade Drain and the other project features depicted in Figure 1, under a contract with Reclamation. The District is a political subdivision of the State of Nevada, organized and chartered in 1918 for the purpose of representing the water right holders within the boundaries of the Project related to Project operations.

The proposed environmental permit from the Nevada Department of Environmental Protection (NDEP) would allow Churchill County to discharge approximately .499 million gallons per day (mgd) from their wastewater treatment plant into Project facilities (Appendix A). A constant flow of .499 mgd translates to an amount of about 560 acre-feet per year (af/yr).

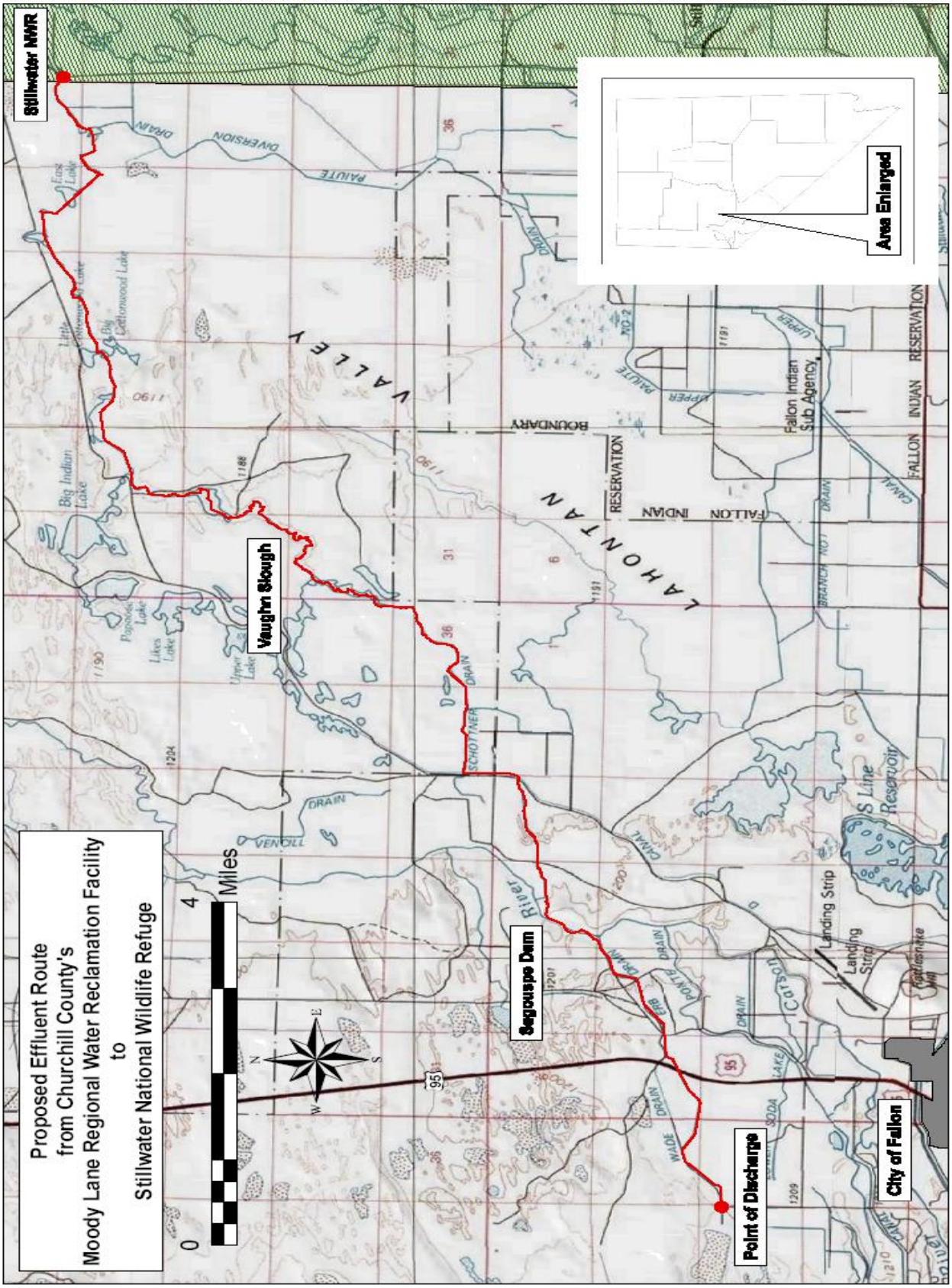

Figure 1. Location map

Treated effluent was identified as a potential source of wetlands water in the U.S. Fish and Wildlife Service (Service) Final Environmental Impact Statement and Record of Decision for Water Rights Acquisition For Lahontan Valley Wetlands (FEIS and ROD) (USFWS, 1996). The Great Basin wetlands ecosystem encompasses important historical wetlands that once covered vast areas of the Lahontan Valley and provided an important natural habitat for waterfowl, shorebirds, and other wetland-dependent wildlife. The Truckee-Carson-Pyramid Lake Water Rights Settlement Act (Title II, Public Law 101-618) addressed the need to restore and protect 25,000 acres of the historic wetlands habitat.

Private land development in Churchill County required the need for the Churchill County's Moody Lane Regional Water Reclamation Facility. The County proposes to use Newlands Project Facilities as the least cost option for effluent discharge. The Moody Lane water treatment plant was constructed in Churchill County in 2008 with an expected discharge of about 499,000 gallons per day at full capacity. The plant serves existing residential development but was also designed for future growth that has not yet occurred. Anticipated population growth in Churchill County by 2020 necessitates the availability of other options for disposal of treated effluent. At present, the plant serves about 262 residences and generates about 30,000 gallons of treated effluent per day. At full capacity, the plant is expected to serve up to 3,000 residences and generate 499,000 gallons of effluent per day (pers. comm. Milorad Stojicevic).

1.4 Purpose and Need for Action

The purpose of the proposed action is to authorize the conveyance of treated effluent from Churchill County's Moody Lane Regional Water Reclamation Facility (Moody Lane) to wetlands at Stillwater NWR through Project facilities.

1.5 Scope of Environmental Assessment and Decision to be Made

Federal agencies must comply with provisions of the National Environmental Policy Act of 1969 (NEPA). An environmental analysis is required under NEPA to assess the significance of possible environmental, social, and economic impacts to the human environment from the alternatives. The 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 to authorize the conveyance of treated effluent through Project facilities from Moody Lane to Stillwater NWR. The scope of analysis in this EA is limited to consideration of whether or not to authorize conveyance of non-project treated effluent through Project facilities. The potential impacts to Lahontan Valley wetlands from receiving treated effluent were fully analyzed in the Service's 1996 FEIS and ROD and are not considered in this EA beyond providing pertinent background and analysis information.

1.6 Authorization

The Truckee-Carson-Pyramid Lake Water Rights Settlement Act (Title II, Public Law 101-618) Section 206 (a) (3) (A) discusses that the Secretary of the Interior is authorized to "use, modify, or extend on a non-reimbursable basis, Federal water diversion, storage, and conveyance systems to deliver water to [Lahontan Valley] wetlands…."

This authority has been reviewed and confirmed in a memorandum from the Office of the Solicitor, Pacific Southwest Region, U.S. Department of the Interior, dated October 21, 2005 (Appendix B).

Chapter 2 - Alternatives

Reclamation has determined that there are no alternative ways to meet the Purpose and Need for Action other than the Proposed Action. Therefore, only the Proposed Action and No Action alternatives are considered in the EA.

Alternative 1. Proposed Action - Authorize Conveyance

Under this alternative, Reclamation would authorize the conveyance of treated effluent from Moody Lane through Project facilities to Stillwater NWR. The proposed undertaking will involve installing an 8-inch diameter, 20-foot long pipeline, in an approximately 3-foot-deep trench, across Reclamation right-of-way (ROW) at Wade Drain. This pipeline will connect to the Moody Lane water treatment facility, adjacent to Wade Drain, and provide the initial point of discharge for effluent into Reclamation facilities (Figure 2).

Minor modifications to existing Project facilities will be made for the conveyance of treated effluent – in particular a new water control structure to measure and release treated effluent from the D-Line to the F2 Drain. The Fish and Wildlife Service (Service) will design and install the water control structure to Reclamation specifications on the D-Line canal along Indian Lakes Road. The intent would be to install a check structure across the existing, concrete-lined canal and a perpendicular 2-bay gate that could be used to spill captured effluent into the F2 Drain (Figure 3). The F2 Drain crosses under the D-Line at a 90 degree angle, about six feet below the canal level. The construction on the canal for the check and spill would require cutting through the concrete lining and excavation through the adjacent levees for the spill opening and structure foundations, entirely within areas that have already been disturbed or modified by previous construction. The only excavation or construction that would be necessary in the drain would be a small area of rock rip-rap placed on the surface just below the spill. All activities will be confined to areas within existing Reclamation rights-of-way.

Churchill County would be responsible for obtaining, complying with, and renewing as necessary the State of Nevada National Pollutant Discharge Elimination System (NPDES) permit for the discharge and conveyance of the treated effluent. Expected flows at build out would be approximately 560 af/yr.

Reclamation would enter into a Memorandum of Agreement (MOA) with Churchill County and the Service to define the roles and responsibilities of the three entities for the use of federal water diversion, storage and conveyance facilities to deliver water to Lahontan Valley wetlands. After the MOA is signed, it is expected that Churchill County would apply to the Nevada State Engineer for a primary permit to appropriate its treated effluent. The Service would then apply to the Nevada State Engineer for a secondary permit to appropriate the treated effluent at the Wade Drain discharge site and convey the effluent through Project facilities to wetlands at Stillwater NWR. Project facilities included in this non-project water conveyance include Wade Drain, Erb Drain, the Carson River, Sagouspe Dam, D-Line Canal, F-2 Drain and Shaffner Drain. With the Secondary permit the effluent would become a federally owned interest, subject to the MOA with Churchill County, and the Service would be able to direct the flows to the appropriate wetlands area consistent with existing wetlands

management plans.

The conveyance as outlined in the proposed MOA between Reclamation, Churchill County and the Service would include terms and conditions that would adequately protect the interests of Reclamation, the United States and the Project for which said lands or interests in lands are being administered. The proposed action to authorize continued conveyance of the treated effluent is consistent with Reclamation law and applicable regulations and policies.

Alternative 2. No Action

Under this alternative, Reclamation would not authorize the conveyance of treated effluent water from Moody Lane through Project facilities to Stillwater NWR.

Sewer Facility at Wade Drain Map Scale correct at: (11" x 8.5")

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Lahontan Basin Area Office
705 N. Plaza Street, Carson City, NV 89701

N

0 155 310 620
Feet

Churchill County Moody Lane Sewer Treatment Facility

T19N R28E, Section 14: Churchill County, NV

Figure: 2

Sewer Facility at Wade Drain Map Scale correct at (11" x 8.5")

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Lahontan Basin Area Office
705 N. Plaza Street, Carson City, NV 89701

N

0 200 400 800
Feet

Proposed FWS measurement and release structure location in D-Line canal to deliver water into F2 Drain

T20N R29E, Section 34 & 35: Churchill County, NV

Figure: 3

Chapter 3 – Affected Environment and Environmental Consequences

3.1.1 Newlands Project Operating Criteria and Procedures (OCAP) Affected Environment

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

3.1.2 Newlands Project Operating Criteria and Procedures (OCAP) Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action

The conveyance of up to 560 af/yr of treated effluent water through Project facilities would have no effect on existing Project water rights, timing or amount of water diverted from the Truckee River to serve Project water rights. The conveyance of the treated effluent would not change current use of water from either the Truckee or Carson rivers. The proposed primary and secondary water rights permits for the treated effluent would not increase Project demand under OCAP.

The treated effluent (approximately 0.77 cfs) would be conveyed through existing drainage facilities within existing capacities (35 cfs) and therefore would not affect Project operations. Treated effluent from Moody Lane conveyed in Project facilities would not be considered releases to the Project under OCAP (43 CFR Part 418). Deliveries of effluent to Stillwater NWR would not be considered as Project deliveries for OCAP purposes. Deliveries of effluent to Stillwater NWR would not cause adverse effects to Project operations or efficiency. Based on the above findings, Reclamation has determined that the conveyance of the non-project treated effluent water would not impair the efficiency of the Project for irrigation or drainage purposes.

Alternative 2. No Action

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

3.2.1 Land Use and Economic Affected Environment

Project facilities are located on rights-of-way held by the United States. Most project facilities along the proposed effluent delivery route are unlined drains or channels maintained by the District to ensure drainage capacity and flows. Most drains have water in them year-round from groundwater as well as seasonal drainage from irrigation. Water levels in the drains are highest

primarily from April through mid-November during irrigation season.

The Stillwater NWR is located in the Lahontan Valley, about 16 miles East of Fallon, Nevada. It was established in 1949 as a wildlife sanctuary within Stillwater Marsh. In 1990, the refuge boundary was expanded to encompass about 77,500 acres for conservation and management of wetlands and other habitats for fish and wildlife.

3.2.2 Land Use and Economic Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action

Conveyance of the treated effluent water would not exceed the 0.77 cfs maximum daily flow allowed under NDEP permit. Drain capacity levels would not be impacted by the minor amount of additional flow from treated effluent.

Reclamation has determined that the conveyance of the non-project water is compatible with the use and purpose for which the Project facilities were constructed. No change in the use of Project water would occur under this proposal. Conveyance of the treated effluent water would not interfere with conveyance of Project water through Project facilities. The effluent would be delivered through existing rights-of-way and would not impact adjoining land uses.

At build-out there would be a gain of up to about 560 af/yr of water delivered to wetlands at Stillwater NWR. Obtaining permits from the Nevada State Engineer would create water rights that would protect these flows from other diversions or uses. With the Secondary permit the effluent would become a federally owned interest, subject to the MOA with Churchill County, and the Service would be able to direct the flows to the appropriate wetlands area consistent with existing wetlands management plans.

Alternative 2. No Action

The No Action alternative would result in no treated effluent from Moody Lane discharging into project facilities. The lack of the relatively small amount of treated effluent would have no impact on land use or economics to Reclamation facilities or operations.

The No Action alternative would impact Churchill County by preventing the disposal of their treated effluent water through Project facilities to Stillwater NWR. Churchill County would have to find an alternate disposal method and mechanism for the treated effluent. This would cause an economic impact related to costs associated with developing and implementing new disposal options.

The No Action alternative would impact Stillwater NWR by decreasing the amount of potential inflow to refuge wetlands.

3.3.1 Water Resources and Quality Affected Environment

Sources of surface water in the Project facilities that would commingle with the treated effluent

are primarily from agricultural drainage during the irrigation season and interception of groundwater during the winter months. Agricultural runoff and erosion increase the nutrient and suspended sediment levels of water in the drain. The quality of water in the drains is determined by seasonal flows, water diversion and agricultural activities in the area. Low flows and warm weather result in higher water temperatures.

In the general area, three groundwater aquifers have been delineated: shallow, intermediate and deep. The shallow aquifer is nearest the surface extending from the water table to a depth of about 50 feet below ground surface. Infiltration from Project canal and drain systems can cause water levels to rise in the shallow aquifer resulting in a water table beneath much of the valley floor that ranges from 5 to 10 feet below ground level (Churchill County, 2004).

3.3.2 Water Resources and Quality Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action

The addition of up to 560 af/yr of treated effluent to Project facilities would not result in significant effects to either surface or ground water in the activity area. The treated effluent would mix with high levels of agricultural drain water during irrigation season, and with groundwater in the drains outside of irrigation season.

Temperature, total dissolved solids (TDS) and other necessary standards for the proposed effluent are established by NDEP as part of the NPDES permit process. The permit is designed to meet the Clean Water Act and is subject to Environmental Protection Agency (EPA) approval. NDEP has set specific effluent standards and limits for a variety of parameters for the effluent to be conveyed through Project facilities (NDEP Permit NV0023582 Appendix A). These standards include weekly, monthly and annual monitoring and reporting requirements. Permit conditions also address groundwater monitoring wells, facility construction and operation conformance to plans, a certified treatment facility operator, and include a list of pollutants that must meet NDEP compliance standards. The effluent wastewater is disinfected with chlorine.

The NDEP permit is within the realm of standard practice for sewage treatment plants and is consistent with domestic discharge (not industrial). The permit does not allow the discharge of substances that would cause a violation of the water quality standards of the State of Nevada. The permit standards are appropriate for the level of activity and the type of receiving entity (agricultural drain and terminus reservoir/wetlands).

Any infiltration of water from the relatively small amount of additional effluent in the Project facilities compared to irrigation and drainage valley-wide would constitute a very minor addition to the shallow aquifer. Water quality effects in the aquifer from infiltration would be negligible.

This conveyance of the treated effluent that meets NDEP water quality standards would result in no significant effect on either groundwater or surface water quality, or to resources and uses dependent on such water. No significant effect would occur to water quality or to dependent resources and uses including wildlife in the Project facilities or fish and wildlife at Stillwater

NWR.

Alternative 2. No Action

Under the No Action alternative there would be no mixture of Project drain water with treated effluent. There would be a slightly lower level of flows occurring in Project facilities and less water flowing into Stillwater NWR. Water quality in both the drains and at the refuge would be unaffected.

3.4.1 Public Health and Safety Affected Environment

Affected Project facilities are primarily surrounded by privately-owned agricultural lands and open space desert shrub communities. Most facilities are isolated drains with little or no public contact or use. The effluent water would join other flows in the Carson River for a short distance above Sagouspe Dam, where occasional public use occurs. District employees perform routine operation and maintenance activities in and adjacent to the Project facilities.

3.4.2 Public Health and Safety Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action

The proposed action is conditioned upon treated effluent discharged into Project facilities meeting NDEP environmental permit standards and federal Clean Water Act standards delegated to the State of Nevada for enforcement. The treated effluent does not qualify as a hazardous material. Except for a small reach of the Carson River above Sagouspe Dam, the effluent conveyance route through Project facilities to Stillwater NWR is closed to swimming, bathing and fishing. The treated effluent would not mix with any current or planned sources of municipal water supplies.

Effluent discharge is limited to parameters specified in Table 1 of Appendix A. Monitoring the permit compliance by Churchill County will be adequate to prevent public health and safety concerns related to the water quality limitations of the permit. The limits meet the beneficial use standards for human contact per Nevada Administrative Code for the Carson River.

Alternative 2. No Action

No impacts would occur to the health or safety of the public if the treated effluent is not conveyed in Project facilities. Churchill County would have to find an alternative method and location to dispose of treated effluent. It is expected the relocation would not result in any public health or safety concerns as the county would be required to meet all applicable federal, state and local laws for the wastewater disposal.

3.5.1 Vegetation Affected Environment

Plant communities within the affected area are described in four major groupings: wetlands, riparian, agricultural, and desert shrub. Project facilities have limited riparian vegetation; vegetation above the high water mark is primarily desert shrub (sagebrush, rabbitbrush, greasewood, etc.) and introduced non-native species (Russian olive and salt cedar).

Noxious weed species occur throughout the Lahontan Valley, including along and adjacent to Project facilities and Stillwater NWR. Many entities are involved in multi-agency weed management activities in the valley including: the District, Stillwater NWR, Churchill County, Nevada State Parks, Bureau of Land Management, Nevada Department of Wildlife, NAS Fallon, Lahontan Conservation District, Churchill County Coordinated Weed Management Area, private landowners and others.

The District is responsible for weed management along Project facilities. Some facilities may also receive noxious weed treatment from private landowners along the drains.

3.5.2 Vegetation Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action.

The estimated flow of 560 af/yr from Moody Lane would slightly increase flows through Project facilities. The increased flow could help sustain small areas of vegetation along Project facilities and beneficial wetlands-dependent plant species at the refuge. Since noxious weed invasions can be limited by increasing water flows or levels, adding the effluent flow could slightly decrease the potential for invasion of noxious weeds along small bands of Project facilities and small areas of wetlands at Stillwater NWR.

Alternative 2. No Action.

Under this alternative, discharge from Moody Lane would not flow through Project facilities to wetlands at Stillwater NWR. There would be no change to existing conditions.

3.6.1 Fish and Wildlife Affected Environment

Lahontan Valley consists of varying habitat types including wetlands, desert shrub communities, agriculture and riparian that supports a diversity of fish and wildlife. Project facilities run through or are in the vicinity of all of these types of habitat.

Historically, runoff from the Sierra Nevada (via the Carson River) constituted the primary inflow to the Lahontan Valley wetlands. Upstream diversions required for agriculture have steadily dried the Stillwater marshes, Carson Lake, and Carson Sink in all but the wettest years (Kelly and Hattori, 1985; Morrison, 1964; Townely, 1977). Since the early 1900s, the Lahontan Valley wetlands have subsisted on seepage losses and drainage from Project irrigation, water from winter power generation, and from periodic spills in high water years.

Fish

Because of extreme seasonal flow variations and other reasons, Project facilities generally do not support fish, although game- and non-game species are found in the deeper drains, regulating reservoirs and Lahontan Valley wetlands. Reduced inflows from drought and implementation of the Project OCAP have affected fish habitat. Non-native game fish found in Project facilities include occasional bass, bass hybrids and catfish. Non-game fish include: carp, Sacramento blackfish, tui chub, Lahontan redside shiners, speckled dace, Lahontan mountain suckers, Tahoe suckers, fathead minnows, and mosquito fish.

Waterfowl

Some duck species such as mallards, cinnamon teal and wood ducks commonly nest along Project drains and canals. Lahontan Valley wetlands are important for migrating waterfowl and are one of the most important duck breeding grounds in Nevada. About 67 percent of the waterfowl nesting activity occurs at Stillwater NWR and Carson Lake, with much of the remainder occurring on secondary wetlands.

Shorebirds

The Lahontan Valley wetlands provide important habitat for a variety of migrating shorebirds. In 1988 Stillwater NWR and the Carson Lake wetlands were elected as sites of hemispheric importance by the Western Hemispheric Shorebird Reserve Network. Shorebirds species exhibit incidental use of habitat along Project drains and canals.

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, black-crowned night heron, great egret and snowy egret. Colony nesting and other marsh birds exhibit incidental use of habitat along Project drains and canals.

Mammals

Beaver, muskrats, and raccoons are the most common mammals found in the marsh, riparian areas, drains and canals. Other common mammals that inhabit the marsh and riparian areas include the Western harvest mouse and long-tailed voles. The most common carnivore in the valley is the coyote.

3.6.2 Fish and Wildlife Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action.

The effluent would support minor amounts of habitat along the drains for waterfowl, shorebirds and other wetlands-dependent species. The proposed conveyance of treated effluent would benefit the wetlands by adding water for aquatic habitat, though the amount is not significant

compared to the 14,000 acres of wetlands, on average, maintained within Stillwater NWR. The water quality of the treated effluent meets NDEP standards and there would be no expected water quality impacts that would be adverse to fish, wildlife or other resource values.

Alternative 2. No Action.

The additional discharge would not be conveyed from Moody Lane through project facilities to wetlands at Stillwater NWR. There would be no change to existing conditions for fish and wildlife.

3.7.1 Threatened and Endangered Species Affected Environment

Section 7 of the Endangered Species Act of 1973, as amended (ESA), 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 consultation process can be found at 50 Code of Federal Regulations (CFR) part 402.

3.7.2 Threatened and Endangered Species Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action and Alternative 2. No Action

The Service has determined there are no federally-listed or candidate plant or wildlife species in the proposed action area, therefore neither alternative has the potential to affect any listed or candidate species or their habitat.

3.8.1 Cultural Resources Affected Environment

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, canals, roadways, and buildings. Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to consider the affects of their actions on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies address these effects. The regulations follow a series of steps that are designed to identify interested parties, determine the area of potential effects (APE), conduct cultural resource inventories, and evaluate the significance of identified properties within the APE to determine if any of them are eligible for inclusion in the National Register of Historic Places (National Register) (36 CFR Part 60.4). The process continues by assessing effects on historic properties within the APE. In the event that adverse effects to historic properties will occur from the proposed undertaking, the Section 106 process is generally completed with the

signing of an agreement document detailing the methods that will be used to resolve the adverse effects. The Section 106 process is conducted through consultations with the State Historic Preservation Officer, Native American tribes, and other interested parties.

Native American tribes are participants in the Section 106 process. The regulations require Federal agencies to consult with federally recognized tribes to determine if sites of religious or cultural significance are present within the APE for a specific action. Non-federally recognized tribes may also have concerns and Reclamation involves such groups as interested members of the public pursuant to 36 CFR Part 800.2(c)(5) and 800.2(d). Reclamation consulted the Fallon Paiute Shoshone Tribe regarding the proposed project. No religious or culturally significant sites were identified in the project APE.

In an effort to identify historic properties, Reclamation reviewed in-house documentation and past project data and performed an online search of the Nevada Cultural Resources Inventory System (NVCRIS). The results of the NVCRIS records search indicate that one previous cultural resources inventory is reported for the area immediately adjacent to Wade Drain and two previous surveys have been reported for locations within 0.25 miles of the D-Line Canal/F2 Drain intersection. There are no known prehistoric cultural resources reported within either APE. Reclamation's research also indicates that three linear cultural resources are located within the APE for this undertaking. These are Wade Drain, the D-Line Canal, and the F2 Drain, all of which are Newlands Project facilities constructed by Reclamation prior to 1926.

Portions of the Newlands Project are listed on the National Register as a thematic resource for conservation-reclamation of arid lands in the West. Hardesty and Buhr (2001) discuss the various property types comprising the Newlands Project and make recommendations for National Register eligibility, as Newlands Project contributing elements, for more than 150 project facilities and features. According to Hardesty and Buhr (2001:28), Newlands Project dams, water conveyance systems (including canals and drains), and power plants that have "retained integrity of feeling, setting, design, location, and association" may be eligible for inclusion in the National Register under Criterion A (36 CFR Part 60.4), for their association with the engineering and operations of the first federally funded irrigation project in the United States and their association with the agricultural development of the lower Carson River basin. Among the facilities recommended as eligible for National Register inclusion by Hardesty and Buhr are Wade Drain, the D-Line Canal, and the F2 Drain (2001: Appendix 1).

As a main canal, the D-Line Canal is viewed as one of the "primary arteries" of the Newlands Project (Hardesty and Buhr 2001:25). The D-Line Canal is associated with the original construction of the Newlands Project, is considered a "core" water engineering component, and is under federal management, all of which contribute to its significance and National Register eligibility as a Newlands Project contributing element (Hardesty and Buhr 2001:28). Wade Drain and the F2 Drain are associated with the early period of Newlands Project drain construction (1921 to 1926) and express an "engineering response to the drainage problems that developed early in the operation of the project" (Hardesty and Buhr 2001:28). These factors, together with the "exceptional size" (Hardesty and Buhr 2001:26) of the two drains, form the basis for the Hardesty and Buhr recommendation of National Register eligibility, as Newlands Project contributing elements, for Wade Drain and the F2 Drain.

3.8.2 Cultural Resources Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action.

Proposed modifications to Wade Drain and the D-Line Canal at the F2 Drain, required to convey effluent from the Moody Lane water treatment facility through Newlands Project facilities to wetlands in the Stillwater National Wildlife Refuge, constitutes an undertaking with the potential to effect historic properties, as defined in 36 CFR Part 800.3(a). Reclamation finds no adverse effect to historic properties as the proposed modifications will not change the historic characteristics that make the Wade Drain, D-Line Canal, and the F2 Drain eligible for inclusion in the National Register. Reclamation is consulting on this finding with the Nevada State Historic Preservation Officer under Section 106 of the NHPA.

Alternative 2. No Action

There would be no change to existing conditions for cultural resources.

3.9.1 Indian Trust Resources Affected Environment

Indian trust resources 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 Indian trust resources reserved by or granted to Indian Tribes or Indian individuals by treaties, statutes, and executive orders.

There are two federally-recognized tribes potentially impacted by the proposed action. The two tribes are the Pyramid Lake Paiute Tribe (Pyramid Lake Indian Reservation including Pyramid Lake), and the Fallon Paiute-Shoshone Tribes (Fallon Paiute-Shoshone Reservation and Fallon Colony). Trust resources of these tribes include land, water rights, trust income, and fish and wildlife; incomes are derived from these resources.

Fallon Paiute-Shoshone Tribes/ Fallon Indian Reservation and Colony

The Fallon Paiute-Shoshone Indian Reservation is approximately 8,156 acres in size and is located in Churchill County in west-central Nevada, approximately 10 mile northeast of Fallon and 65 miles east of Reno and Carson City. The Reservation includes members of the Paiute and Shoshone Tribes. The Fallon Indian Colony is located on 60 acres and Colony land is used for residential and commercial purposes.

Water rights on and appurtenant to the reservation are served by Project facilities pursuant to OCAP and are part of the Carson Division. Currently, 5,513 of the 8,156 acres of the reservation are water righted. Approximately 1,800-3,175 acres have been irrigated.

The Fallon Tribes 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 acre-feet (equivalent to 3,025 acres). It also, however, permits the Tribes to acquire up to 2,415.3 acres of land and up to 8,453.55 acre-feet 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 for 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 acre-feet of water rights have been acquired.

P.L. 101-618 established the $43-million Fallon Paiute-Shoshone Tribal Settlement Fund; interest on the Settlement Fund may be spent according to the Fallon Tribes' investment and management plan for this fund.

Pyramid Tribe/Pyramid Lake Indian Reservation

The reservation of the Pyramid Lake Paiutes, located in Washoe County north of Reno and including Pyramid Lake, presently covers 475,085 acres. 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 Federal actions that set aside Pyramid Lake Indian Reservation explicitly reserved Pyramid Lake for the Tribe's benefit. The Pyramid Tribe is allocated for irrigation an amount not to exceed 4.71 acre-feet per acre for 3,130 acres of bottomland farm (14,742 acre-feet) (Claim No. 1) and another 5.59 acre-feet per acre for 2,745 acres of benchlands (15,345 acre-feet) (Claim No. 2).

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

P.L. 101-618 established the $25-million Pyramid Lake Paiute Fisheries Fund and the $40-million Pyramid Lake Paiute Economic Development Fund. The Pyramid Tribe has complete discretion to invest and manage the Pyramid Lake Paiute Economic Development Fund; funds are available to the Tribe when the Truckee River Operating Agreement becomes effective.

3.9.2 Indian Trust Resources Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action and Alternative 2. No Action

No fish, wildlife, water rights, land or trust income resources of either tribe would be affected

under either alternative. The two reservations are not in close proximity of the Project area and therefore land, fish and wildlife resources of the Tribe would not be directly affected. The conveyance of the treated effluent would have no impact on the timing or amount of use of Project water from either the Carson or Truckee River and would not impact the quantity or use of any tribal water rights.

3.10.1 Environmental Justice Affected Environment

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.

Environmental Protection Agency (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.

3.10.2 Environmental Justice Environmental Consequences

Alternative 1. Authorize Conveyance - Proposed Action and Alternative 2. No Action

As identified in Chapter 5, "Consultation and Coordination," public involvement, consultation and coordination with potentially affected publics have occurred for the proposed action. A review of the "Land Use and Economics", "Public Health and Safety", and "Indian Trust Resources" sections in this chapter has shown that the proposed action does not involve facility construction, population relocation, health hazards, hazardous waste, property takings, or substantial economic impacts. Consequently, it is concluded that implementing the proposed action would have no adverse human health or environmental effects on minority or low-income populations as defined by environmental justice policies and directives.

Neither alternative would disproportionately affect minority or low-income populations within the community.

3.11 Unavoidable Adverse Impacts

Unavoidable adverse impacts are assumed to be long-term impacts to resources which would be affected by implementation of an action alternative. Because the proposed action involves only authorizing a relatively small amount of effluent within an existing system, no unavoidable

adverse impacts are expected under either alternative.

3.12 Irreversible and Irretrievable Commitments of Resources

Irreversible and irretrievable commitments are considered to be the permanent reduction or loss of a resource. No irreversible and irretrievable commitments of resources would occur under either alternative.

3.13 Cumulative Effects

The Navy has a Memorandum of Agreement with Reclamation and the U.S. Fish and Wildlife Service for discharging treated effluent into Newlands Project facilities that was issued in 2009. The City of Fallon has a permit with NDEP for discharging treated effluent into Old River Drain that is expiring in 2011. There would be no known cumulative effects to the human environment from the proposed action when combined with past actions and any known current or reasonably foreseeable future actions.

3.14 Environmental Commitments

A NPDES permit is required for the proposed action. Churchill County is responsible for obtaining, complying with, and renewing as necessary the State of Nevada permit.

The permit includes multiple standards for water quality monitoring. If future monitoring finds significant adverse water quality impacts from the treated effluent, required mitigation would be the county's responsibility.

Churchill County and the Service must comply with all applicable Reclamation laws, regulations and policies as may be amended and supplemented, and the rules and regulations promulgated by the Secretary under Reclamation law. The County and Service must also comply with other pertinent federal, state and local laws.

Chapter 4 – Consultation and Coordination

4.1 Public Involvement

A press release on the proposed project requesting scoping comments was released on June 17, 2010, to Reclamation's Regional "Mid-Pacific All the News" list. The list consists of television, radio, newspapers, and regional entities interested in Reclamation's actions. This includes local newspapers. The EA will be made available to the public for a 30-day review period.

Reclamation will put out a news release on availability of the EA to the above-mentioned list. The EA will be posted on Reclamation's Mid-Pacific website.

4.2 Agency Coordination

Reclamation prepared the EA in coordination with the Service. Reclamation consulted with the District on the proposed action to ascertain if there were issues related to the continued conveyance of the treated effluent (pers. comm. Kathryn Rutan). Reclamation also consulted with the Nevada Department of Environmental Protection for clarification on water quality parameters in the proposed NPDES permit for the Moody Lane facility (pers. comm. Janine Hartley).

4.3 Tribal Consultation

Letters were sent on June 11, 2010, to the Pyramid Lake Paiute Tribe and the Fallon Paiute-Shoshone Tribe requesting consultation, pursuant to federal legislation and executive orders concerning Native American government to government consultation, including NEPA and Indian Trust Assets. No comments were received.

4.4 Other Federal Laws, Regulations, and Executive Orders

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

Chapter 5 – List of Preparers

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Chapter 6 – References and Personal Communications

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Personal Communications

Rutan, Kathryn. Truckee-Carson Irrigation District Project Manager. Phone call June 29, 2010.

Hartley, Janine. Nevada Department of Environmental Protection Bureau of Water Pollution Control Staff Engineer. Phone call June 24, 2010.

Stojicevic, Milorad. Churchill County Engineering and Capital Projects Department Manager. Personal interview January 12, 2009.

Chapter 7 – Appendices

Appendix A NDEP Permit 0023582

Appendix B Memorandum from the Office of the Solicitor, Pacific Southwest Region, U.S. Department of the Interior, October 21, 2005