STATEMENT OF BASIS

PERMITTEE:	The United States Department of Interior, National Park Service
FACILITY:	Mesa Verde National Park Water Treatment Plant
PERMIT NO:	CO-0034622
RESPONSIBLE PERSON:	Cliff Spencer, Superintendent 970-529-5056 E-mail: cliff_spencer@nps.gov
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CONTACT PERSON:	Bryon Long, Water Treatment Plant Operator Office: 970-529-5056 or 970-529-5057 E-mail: <u>bryon_long@nps.gov</u>
PERMIT TYPE:	Federal Facility, Minor Industrial, Permit Renewal

Specific Changes to the Permit

- 1. The GAC system and waste streams descriptions have been added to this permit.
- 2. The monitoring frequency for TSS and oil and grease has been changed to once per month.
- 3. The inspection requirements are changed for the outside basins instead of settling ponds.

Background Information

This statement of basis is for the renewal of the permit for the discharge from the water treatment plant (WTP) at Mesa Verde National Park (Park) in Montezuma County, Colorado. The WTP is owned and operated by the National Park Service and is located approximately 1/10 of a mile south of U.S. Highway 160 near the main entrance to the Park, and approximately 7 miles east of the City of Cortez, Colorado. The WTP serves the Park visitors services, campground, and several residences with potable water. Peak water demands occur during the summer and the lowest water demands occur during the winter. There is about 3.5 million gallons of storage capacity for drinking water in the Park. Water is diverted from the West (Fork) Mancos River and is conveyed about 18 miles to the Park via an underground pipeline. An alternative water source is Jackson Gulch Reservoir, which diverts water from the West Mancos River. The pipeline conveys the water to an underground storage tank, which is located under a parking area located adjacent to the Main Entrance Road and about ½ mile south of the Park entrance. From the underground storage tank, the intake water goes by gravity flow to the WTP via another pipeline.

At times, especially during the winter, there may be a bypass of intake water at the intake water storage basin. In order to keep the long pipeline from freezing during cold weather, a minimum flow (e.g., 10 - 15 gpm) is kept through the pipeline. When the raw water storage tank is full, it is necessary to bypass the extra flow. This bypassed flow goes to an unnamed tributary

to Mud Creek, a tributary to the Mancos River. This bypass has been occurring for over 20 years. Since the bypassed water is being returned to the same river basin (i.e. Mancos River basin) and is of the same quality that was diverted from the river, it is not necessary to have an NPDES permit for this bypass. The permit does not address the bypass.

The WTP uses a membrane filtration process to treat the drinking water. The membrane filtration unit is a model AP4 Microza Filter from the Pall Corporation. The sediment content of the raw water is very low and there is no pretreatment of the water prior to the membrane filtration unit. The water treatment process consists of membrane filtration, granular activated carbon (GAC), and chlorination. The membrane filtration unit has a maximum capacity of about 350 gallons per minute (gpm), but is normally operated at about 130 to 180 gallons gpm. Currently about 24 million gallons of filtered water are produced annually. During the summer about 180,000 to 225,000 gallons are produced daily. Because of the storage capacity for drinking water, at times during the winter, when the demand for water is low, the WTP may not be operated for several consecutive days.

A dual pressure vessel GAC system consists of a 350 gpm with an empty bed contact time (EBCT) of 10 minutes was put in operation November, 2009. The GAC system was installed downstream of the existing microfiltration membranes, but prior to chlorine addition. The addition of GAC system did not increase the plant's treatment capacity. This system only improves water quality and operates seasonally from May through October.

There are four sources of process wastewater flow in the facility: (1) routine backwashing of the membrane filters (process stream flux maintenance (FM)), (2) the enhanced flux maintenance (EFM) cycle, (3) a clean in place (CIP) cycle, and (4) GAC wastewater. There is no discharge of sanitary wastewater from the WTP.

The largest volume of wastewater comes from the routine FM cycle (i.e., backwashing of the membrane filters). Raw water is used to flush solids from the filter. The permittee estimates the average FM flow is about 448 gallons/hour of operation. For a full 24 hours of operation there would be about 10,752 gallons of FM flow. During the winter months the volume of FM flow would be much less (less than one hour per day).

The second source will occur once every one million gallons of production is achieved. This is the enhanced flux maintenance (EFM) and will produce approximately 1440 gallons of wastewater per event.

The third source will come from annually or bi-annually, CIP cycle that will produce about 2500 gallons per event.

The fourth source will come from the two waste streams generated from the GAC process.

Since there is no chemical addition prior to the water going to the membrane filters, the FM wastewater contains only the raw water colloidal matter rejected by the membrane units and the minerals dissolved in the raw water supply. The "flush" water makes up the majority of the total discharges.

This wastewater is directed to either of two rectangular sludge decant/settling basins (inside settling basins) located below the floor of the WTP. The dimension of each basin is 26' by 20' and they are 10' deep. There is an overflow pipe located 1 foot below the top of each basin. Any overflow from the inside settling basins would go to Outfall 001. Water can also be pumped from the inside settling basin to Outfall 001 or pumped to one of the two outside basins located approximately 50' to the west of the WTP building.

These outside basins are concrete vaults, each measuring approximately 20' by 40' by 10' deep side by side. They are constructed of thick concrete walls and there are butterfly valves on the outflow lines with which to control the discharge flow. This water is not recycled back to the WTP. At the west end of the outside basins there is piping that can be used to release water to Outfall 002. The intake end of the west end piping is located about two feet above the bottom of the basin. Assuming that the bottom two feet of each basin is for the accumulation of sediment and that there is one foot of freeboard, the maximum operating capacity of each outside basin is approximately 42,000 gallons. The removal of sediment from the outside basins is done periodically as needed. A basin is allowed to dry out and the sediment removed manually.

The EFM cycle is performed after approximately 1 million gallons of water has been processed. (Note: the term "enhanced flux maintenance" is used by the Pall Corporation, the manufacturer of the membrane filter unit, to describe a patent pending process to keep the membranes free of fouling materials. The chemicals used are selected based on the foulants that may be present at the specific facility.) The EFM cycle uses heated filtered water with a low concentration of sodium hypochlorite to remove biological films from the surface of the membranes. After the chemical solution is applied, there is a rinse step and flushing of the system. Approximately 350 gallons of wastewater are generated from the EFM cycle at the Mesa Verde WTP. The residual concentration of chlorine in the EFM wastewater is very low (e.g., less than 1 mg/L). This wastewater can be either routed to one of the inside settling basins in the WTP or pumped to one of the outside basins.

A CIP cycle is performed 1-2 times per year as needed to remove accumulated foulants that are not removed by backwashing and the EFM cycle. The CIP cycle takes about 24 hours to complete and involves three steps; an acid wash, a caustic wash, and a rinse. The acid wash involves 350 gallons of warm 2% citric acid solution. The caustic wash step uses about 350 gallons of warm 0.5% NaOH and 300 mg/L NaOCl solution. The rinse step uses unheated filtered water. The wastewater is pumped to one of the outside basins. After the wastewaters from the three steps are mixed together, the resulting pH is about neutral (i.e., 6.9) and the chlorine concentration is very low.

All backwash waste from the GAC contactors is treated in same manner as the existing WTP waste. The wastewater is first routed to the inside settling basins located below the floor of the WTP. Then the wastewater is pumped from inside decant/settling basins to the two concrete outside basins located outside of the WTP building. After sufficient settling time, the settled water is discharged to Outfall 002. No chemicals are added within the GAC process.

There are two waste streams generated from the GAC process:

- 1. GAC backwash water, and
- 2. GAC filter to waste water.

The character and expected volume of these streams are discussed below:

1. GAC backwash water:

The GAC contactors will be backwashed for two primary reasons: to alleviate the buildup of the head pressure that may occur after extended operation and to flush out fine GAC material that remains in the contactors after adding virgin GAC to the vessels.

The post filter GAC contactors typically do not require frequent backwashing. This is because most of the removable particles which contribute to head loss development are removed from the water (by the MF membrane) prior to entering the GAC contactors. They backwashed the GAC system only one time since put in operation in November 2009 (frequency is about once every four years so far). The total volume of waste water generated is only about 1,000 gallons per vessel.

Upon startup and whenever spent GAC is replaced with virgin product, the GAC contactors will be backwashed until all of the fine material is removed (the fine GAC particles can create excessive headloss buildup if not removed prior to placing the adsorber into service). The GAC manufacturer (Norit) estimates that a maximum of 4% of the total GAC mass may potentially be released during the initial backwash. The adsorption system is designed to include a total of 14,000 lbs for GAC media (7,000 lbs per vessel). Thus, a maximum of 560 lbs (14,000 lbs x 4%=560 lbs) of fine GAC material maybe expected whenever virgin GAC media is placed in the vessels. The backwash rate is anticipated to be approximately 250 gpm and the backwash duration is expected to be approximately 1 hour. The total volume of waste water is estimated to be 30,000 gallons (250 gpm x 60 min x 2 contactors = 30,000 gal). The exact GAC media since put in operation. There is potential for TSS to be increased due to backwashing events, however, the solids are expected to settle out within the existing settling basins prior to discharge to the receiving water. The facility uses the plant finished water pumped directly from the clearwell to backwash the GAC system.

2. GAC filter to waste water:

After backwash events, the GAC contactors will be placed into filter to waste mode prior to placing the contactors into service. The filter to waste sequence allows residual particles (if any) to be flushed from the filter prior to filters into service. The filter to waste water will be membrane filtered, un-chlorinated water that has passed through the GAC contactors.

The filter to waste frequency is based on the backwash frequency. As discussed above, the backwash frequency will be operationally determined once the GAC contactors are placed into service. The filter to waste flow rate is approximately 200 gpm and the duration is approximately 15 minutes for each vessel. The total volume of waste water generated during a backwash event is about 6,000 gallons (200 gpm x 15 min x 2 contactors = 6,000 gal).

The raw water supply has a very low concentration of suspended material. As a result, there usually is not much accumulated sediment in the outside settling basins. Sediment is removed

from the outside settling basins 1-2 times per year. The procedure for cleaning an outside settling basin is to use a portable pump to pump the bottom 2 feet of water. Squeegees are used to push the sediment over to the intake of the portable pump and the remaining water and sediment is pumped to one of the outside basins.

The method of operation of the inside settling basins is to route the wastewater from the FM and EFM cycles to one inside settling basin until it is near the overflow level, then route these wastewaters to the other inside settling basin. The water in the full inside settling basin can then either (1) be pumped to one of the outside basins or (2) pumped down to the 2 foot level, with the water going to Outfall 001. When the water is pumped to Outfall 001, there would be about 7 feet of drawdown, which is equal to about 27,200 gallons per batch discharge.

The permittee estimates about 1.7 million gallons of annual discharges based on a 90% recovery efficiency from the membrane filtration unit.

Outfall 001 is used for overflow discharges from the two rectangular inside settling basins located below the floor of the WTP. It consists of about 80 feet of a six inch pipe lying on the ground with no outlet structure. There is not a flow measuring devices installed on the discharge pipe. It is located near the east corner (right back corner) of the WTP property. The coordinates of Outfall 001 are approximately latitude 37.340517 N and longitude 108.413083 W.

Outfall 002 is located near the north corner of the outside basins for routine discharges. A valve is used to control the flow from the west end of outside basin. The flow would go to a 6" pipe, with no outlet structure and no flow measuring devise. The coordinates of Outfall 002 are latitude 37.341033 N and longitude 108.413350 W.

Receiving Waters

The discharges from Outfalls 001 and 002 would flow about 50 feet to the roadside ditch along south side of Highway 160 and ultimately go into an unnamed ephemeral drainage way that is tributary to McElmo Creek, which is located in the San Juan River Basin. The unnamed tributary belongs in Segment 8a of the sub-basin titled La Plata River, Mancos River, McElmo Creek, and San Juan River in Montezuma County and Dolores County. Segment 8a is described as all tributaries of McElmo Creek, including all wetlands, from the source to the Colorado/Utah border, except for specific listings in Segments 7a, 8b, 8c and 11.

Use Classifications and Water Quality Standards

The unnamed tributary belongs in Segment 8a of the sub-basin titled La Plata River, Mancos River, McElmo Creek, and San Juan River in Montezuma County and Dolores County. Segment 8a is described as All tributaries of McElmo Creek, including all wetlands, from the source to the Colorado/Utah border, except for specific listings in Segments 7a, 8b, 8c and 11. It has been classified by the State of Colorado for Aquatic Life Warm 2, Recreation E, Water Supply, and Agriculture and has been designated as use protected (UP). The water quality standards of potential concern for the discharge would be chlorine (0.019 mg/L acute toxicity and 0.011 mg/L chronic toxicity) and potentially pH (6.5-9.0). No other pollutants are considered to be of potential concern based on the information provided in the permit application. In addition, the final effluent data shown no metal concerns.

Effluent Limitations

The effluent limitations in the permit are a combination of numeric effluent limitations and operational requirements for the wastewater treatment system. The numeric effluent limitations are given in the table below and are based on a combination of the State of Colorado's Regulation for Effluent Limitations (Regulation No. 62) and effluent limitations considered necessary to comply with applicable water quality standards in the receiving waters. The effluent limitations based on Regulation No. 62 are total suspended solids (TSS) and oil and grease. The effluent limitation on oil and grease is being included because of the potential, although not great, for the spilling of oil and/or grease within the facility and/or leakage from pumps, etc. There will not be an effluent limitation on BOD₅ because the concentration of BOD₅ in this type of discharge normally is very low, usually less than 10 mg/L. The discharges from Outfalls 001 and 002 must each meet the numeric effluent limitations.

	Effluent Limitation		
Effluent Characteristic	30-Day Average <u>a</u> /	7-Day Average <u>a</u> /	Daily Maximum <u>a</u> /
Total Suspended Solids, mg/L	30	45	N/A
Oil and Grease, mg/L	N/A	N/A	10
Total Residual Chlorine, mg/L, b/	0.011 <u>b</u> /	N/A	0.019 <u>b</u> /

a/ See Definitions, Part 1.1 for definition of terms.

 \underline{b} / For the purposes of the permit, the minimum limit of analytical reliability in the analysis for total residual chlorine is considered to be 0.10 mg/L. For purposes of calculating averages and reporting on the Discharge Monitoring Report form, analytical values less than 0.10 mg/L shall be considered zero.

The water quality standard for pH, 6.5 - 9.0, must be met at the point of discharge in accordance with the State of Colorado's Basic Water Quality Standards (Regulation No. 31). This is more stringent than the 6.0 - 9.0 limitation required by Regulation No. 62.

Because most of the time there would be no dilution in the receiving waters, the permit will require that the discharge comply with the water quality standards on total residual chlorine (TRC) at the point of discharge. The effluent limitations on TRC are 0.011 mg/L as a 30-day average and not to exceed 0.019 mg/L in any sample. These limitations are based on the chronic

and acute toxicity standards for aquatic life. Because of analytical limitations on monitoring for TRC, the permit will specify that any monitoring value less than 0.10 mg/L will be considered as zero for purposes of permit compliance and reporting purposes. The 0.10 mg/L value is based on using the DPD Spectrophotometric method of analysis and 0.10 mg/L is considered the minimum detection limit for this analytical method. The permit requires that the permittee use an analytical procedure with a minimum detection level no greater than 0.10 mg/L. Although there is the possibility that TRC may be present in the discharge at concentrations of less than 0.10 mg/L but greater than 0.019 mg/L, the TRC most likely would be dissipated by the time the water reached the first classified receiving water, a distance of approximately 1/3 of a mile.

Based on the chemicals being used at the WTP and the quality of the raw water supply, no other water quality based effluent limitations are considered necessary. The discharges from Outfalls 001 and 002 will most likely seep into the ground before reaching the first classified receiving water. The data submitted with the renewal permit application were compared to the water quality standards. They indicated there were no significant concentrations of metals in the effluent which did not exceed water quality standards. Therefore, there will not be any reasonable potential for other pollutants to exceed the water quality standards.

The wastewater treatment system at the WTP and the manner in which wastewater can be discharged makes it necessary to include operational requirements in the permit in order to have a reasonable likelihood that the numeric effluent limitations are being consistently met. The operational requirements listed below are being included in the permit as safeguards. If there was a settling pond that provided several days detention time for the wastewater and there was no short circuiting of wastewater through the pond, the operational requirements most likely would not be necessary as effluent limitations.

Operational Requirements for Outfall 001:

- 1. The wastewater from the clean in place (CIP) process shall be pumped to one of the outside basins before being discharged The primary reason for this requirement is to minimize the potential for the accidental discharge of wastewater containing high concentrations of total residual chlorine. By routing the CIP wastewater to one of the outside basins there will be greater opportunity for any high concentrations of chlorine to be reduced to an acceptable concentration by means of dilution, chlorine demand, and/or the effects of sunlight.
- 2 The occurrence of a discharge from Outfall 001 resulting from the overflow of a settling basin(s) shall be minimized to the extent practical. If a discharge from Outfall 001 is to occur as the result of an overflow of a settling basin(s), the discharge shall be terminated as soon as reasonable and practicable. The discharge shall be monitored as required by Part 1.3.2.2. If the discharge exceeds any of the numerical effluent limitations given in Part 1.3.1.1, it shall be reported as required by Part 2.8.2 of the permit; The reason for this requirement is that if wastewater were discharged by allowing the settling basins to overflow there is a reasonable potential that adequate treatment is not being given to the wastewater. That is, there would be short circuiting

of the wastewater to the point of discharge without allowing adequate time for settling of solids and dilution of wastewater containing chlorine in the settling basin.

- 3. Wastewater is to be discharged on a controlled basis from only one settling basin at a time unless no wastewater is going into either settling basin while the discharge is occurring. Also, there shall be no inflow of wastewater into a settling basin or outside basin while a controlled discharge is occurring from that basin. The reason for this requirement is to insure that when wastewater is flowing into a settling basin or outside basin that there will be time for settling and dilution of any TRC to occur before the wastewater is discharged.
- 4. The removal of wastewater from a settling basin or outside basin for the purpose of being discharged through Outfall 001 shall be done in such a manner that the wastewater is not removed from the lower two feet of the settling basin or outside basin (i.e. the intake to a pump or an outlet pipe can be no lower than two feet above the bottom of the settling basin or outside basin). The purpose of this requirement is to minimize the potential of getting sediment into the wastewater being discharged.
- 5. There shall be no controlled discharge of wastewater from a settling basin or outside basin until the wastewater has been analyzed for pH and total residual chlorine and the analytical results show that the effluent limitations for pH and total residual chlorine will be met. The purpose of this requirement is to eliminate having a discharge that would not be in compliance with the effluent limitations on TRC and pH, especially TRC. The analyses are easy to do and can be done quickly.

Operational Requirements for Outfall 002:

- 1. There shall be a controlled discharge from only one outside basin at a time unless no wastewater is going into either outside basin while the discharge is occurring. Also, there shall be no inflow of wastewater into an outside basin while a controlled discharge is occurring from that outside basin. The reason for this requirement is to insure that when wastewater is flowing into an outside basin that there will be time for settling and dilution of any TRC to occur before the wastewater is discharged.
- 2. There shall be no controlled discharge of wastewater from an outside basin until the wastewater has been analyzed for pH and total residual chlorine and the analytical results show that that the effluent limitations for pH and total residual chlorine will be met. If a discharge will occur from both outside basins at the same time, both basins shall be monitored for total residual chlorine and pH. The purpose of this requirement is to eliminate having a discharge that would not be in compliance with the effluent limitations on TRC and pH, especially TRC. The analyses are easy to do and can be done quickly.

Antidegradation Review

Segment 8a is described as all tributaries of McElmo Creek, including all wetlands, from the source to the Colorado/Utah border, except for specific listings in Segments 7a, 8b, 8c and 11 has been classified by the State of Colorado for Aquatic Life Warm 2, Recreation E, Water Supply, and Agriculture. This segment has been designated as use protected (UP). Based on Colorado's antidegradation policy, an antidegradation review is not required for this permit because Segment 8a is use protected and there is no new or increased water quality impact from this facility.

Self-Monitoring Requirements

The self-monitoring requirements for Outfalls 001 and 002 are specified in Part 1.3.2 of the permit. Part 1.3.2.1 has the self-monitoring requirements for those discharges from Outfall 001 that occur without there being an overflow from a settling basin(s). Part 1.3.2.2 has the self-monitoring requirements for those discharges from Outfall 001 that occur when there is an overflow from a settling basin(s). Part 1.3.2.3 has the self-monitoring requirements for discharges from Outfall 002. For each reporting period the self-monitoring results from Parts 1.3.2.1, and 1.3.2.2 are to be combined, summarized, and reported on one discharge monitoring report form (DMR) (e.g., all the monitoring results for TSS for Outfall 001 are to be reported together). The self-monitoring results for Outfall 002 for that period are to be summarized and reported for Outfall 002 on the same DMR.

The composite sample shall consist of a minimum of three (3) grab samples taken near the start of the discharge, at approximately the midpoint of the discharge, and near the end of the discharge. The grab samples shall be composited in equal volumes. A composite sample is being required because of the reasonable potential for a variation in the concentration of TSS while the discharge is occurring.

The DMR data shown that for both TSS and Oil and Grease effluent limitations have been consistently met for the previous permit, except one TSS sample exceeded the limit of 45 mg/L (it was reported at 47 mg/L in June 30, 2009). This exceedance was likely caused by the installation of GAC system during this time. Therefore, the monitoring frequency for both TSS and oil and grease is changed to once per month.

Visual observations are to be done for a visible sheen or floating oil and grease every two weeks. If a visible sheen and/or floating oil or grease are observed, a grab sample is to be promptly taken and analyzed for oil and grease. The approximate total volume of water discharged during the reporting period is to be reported. The volume of water discharged each discharge may be estimated based on the change in the volume of wastewater in the settling basin before the discharge started and after the discharge stopped.

Monitoring for pH and TRC are to be done prior to the discharge beginning and is not required while the discharge is occurring. If it is necessary to do more than one analysis for pH and/or TRC before the discharge begins, only the final analytical results are to be reported on the discharge monitoring report form. The analysis for TRC is to be done with an approved method that has a minimum detection level no greater than 0.100 mg/L (100 μ g/L). For purposes of the

permit, analytical values less than 0.10 mg/L are to be considered as zero and are to be reported as zero.

Part 1.3.2.2 has the self-monitoring requirements for Outfall 001 when there is an overflow of a settling basin(s). Grab samples are to be taken daily for TSS, pH, TRC, and oil and grease while there is an overflow of a settling basin and there is a discharge from Outfall 001. All samples are to be taken at the end of the outfall pipe. Daily samples are required because of the increase in potential for the effluent limitations being exceeded. The monitoring results for total volume discharged, TSS, pH, TRC, and oil and grease are to be summarized along with the other monitoring data from Parts 1.3.2.1 and reported on the discharge monitoring report for that reporting period. The total number of discharges that occurred while there was an overflow of a settling basin(s) shall be reported.

The reporting frequency is quarterly, with the reporting quarters based on the calendar quarter (e.g., January – March etc.). More frequent reporting is not considered necessary for this discharge.

Inspection Requirements

The permit has some routine inspection requirements. Each day that water is being treated at the water treatment plant, the water level in each settling basin shall be determined to ensure that the settling basin is not likely to overflow before the next inspection. The purpose of this requirement is to minimize the potential of there being an overflow of a settling basin resulting in a discharge from Outfall 001.

The permit is also required to do monthly inspections of the outside basins to check to see if there are any potential problems such as the basins overflowing due to excessive inflow, the accumulation of excess sediment, and leaks due to cracks in the concrete walls of the basins. The inspections shall be done at approximately 4 week intervals. Improper or inadequate operation and maintenance procedures should be noted. A notebook should be maintained to document all inspections as described above, and any actions recommended or taken at the facility to remedy any problems.

Endangered Species Act (ESA) Requirements

Section 7(a) of the Endangered Species Act requires federal agencies to insure that any actions authorized, funded, or carried out by an Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species. Federally listed threatened, endangered and candidate species found in Montezuma County, Colorado include:

Group	Name	Status
Birds	Yellow-billed Cuckoo	Proposed Threatened
	Mexican spotted owl	Threatened
	Southwestern willow flycatcher	Endangered
Fishes	Colorado pike minnow	Endangered

	Greenback Cutthroat trout	Threatened
	Razorback sucker	Endangered
Flowering Plants	Schmoll milk-vetch	Candidate
	Mancos milk-vetch	Endangered
	Mesa Verde cactus	Threatened
	Sleeping Ute	Candidate
Mammals	Black-footed ferret	Non-essential
	New Mexico meadow jumping mouse	Proposed Endangered
	North American wolverine	Proposed Threatened

The EPA finds that this permit is "Not Likely to Adversely Affect" any of the species listed by the US Fish and Wildlife Service under the Endangered Species Act. The discharges from Outfalls 001 and 002 would flow overland to the northwest and ultimately go into an unnamed ephemeral drainage way that is tributary to McElmo Creek. The permit limitations are protective of water quality and the effluent quality should not present a problem for any wildlife that came into contact with the effluent.

National Historic Preservation Act (NHPA) Requirements

In a letter of April 3, 2008, the Office of Archaeology and Historic Preservation, Colorado Historical Society, recommended that EPA Region 8 initiate review of the proposed permit issuance with their office under Section 106 of the National Historic Preservation Act (Section 106). Detailed information about the location and nature of the discharge was e-mailed to their office. In a letter of April 15, 2008, the Office of Archaeology and Historic Preservation concurred that the renewal of the permit, a Federal undertaking under Section 106 of the National Historic Preservation Act (Section 106), would result in a finding of "**no adverse effect**" [36 CFR 800.5(b)] under Section 106. The EPA does not anticipate any impacts on listed/eligible historic properties or cultural resources because this permit is a renewal and will not be associated with any new ground disturbance or significant changes to the volume or point of discharge.

Miscellaneous

The permit effective date and expiration date will be determined at the time of permit issuance. The permit expiration date will be at the end of the calendar quarter closest to five years after the effective date, but not exceeding five years.

Permit prepared by: Qian Zhang P.E., Wastewater Unit (8P-W-WW), May 16, 2014

Reviewed by: Robert Shankland, SEE, Wastewater Unit (8P-W-WW)

This permit was public noticed on July 15, 2014. The 30 day public comment period closed on August 15, 2014. There were no public comments received.

The EPA received the Section 401 Water Quality Certification for this permit on September 23, 2014 from the Colorado Department of Public Health & Environment.

Qian Zhang October 20, 2014