

4.3 WATER RESOURCES

4.3.1 ALTERNATIVE A – PROPOSED PROJECT

SURFACE WATER

Executive Order 11988 requires that Federal agencies determine whether a proposed action will occur in a floodplain. If an agency proposes to allow an action to be located in a floodplain, “the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains.” If the only practicable alternative action requires siting in a floodplain, the agency shall “minimize potential harm to or within the floodplain.”

The Madera site is located almost completely within a Federal Emergency Management Agency (FEMA) defined 100-year floodplain (**Figure 3.3-2**). Based on the current FEMA Flood Insurance Rate Map (FIRM) (Panel No. 0601700605B and Panel No. 0601700600B) the site is located in Zone AO, with an average flood depth of one foot. Zone AO is designated as “the flood insurance rate zone that corresponds to the areas of 100-year shallow flooding (usually sheet flow on sloping terrain) where average depths are between 1 and 3 feet.” Due to the size of the development proposed under Alternative A, elevating structures is not practicable. It would be extremely costly and would gain little benefit to the floodplain due to the relatively shallow depth of the 100-year flood in the area.

Projects encroaching within a 100-year floodplain are required by FEMA to be constructed a minimum of 1.0 foot above the estimated floodplain elevation (**Section 2.2.5**). The Grading and Drainage Plan (**Appendix K**, Figure 4) incorporates fill to elevate the finished floor of the proposed gaming facility and hotel at least 1.0 foot above the FEMA 100-year floodplain (approximately five feet above the floodplain is proposed). Earth from the detention basin excavation would be incorporated as fill material. Thus, effects to building structure and patron safety during a flood event would be less than significant.

Alternative A creates a potentially negative impact to the floodplain and the severity of flooding in the area in two different ways:

1. The loss of floodplain storage created by the encroachment of the facility, parking lots, treatment plant, wastewater storage basin, and stormwater detention basins into the floodplain, and
2. The increase in stormwater runoff created by the new impervious surfaces.

Impacts to floodplain storage occur when development displaces area that could be used for storage of flood waters during a flooding event. The runoff characteristics of a watershed are altered when impervious surfaces replace natural vegetation preventing infiltration into the soil. Runoff changes may increase stream volumes, increase stream velocities, increase peak discharges, shorten the rate of peak flows, and decrease groundwater contributions to stream base

flows during non-precipitation periods. Utilizing the FIRM-estimated depth of flooding in the vicinity of the Madera site of 1.0 feet results in a displaced flood storage volume of 53.5 acre-feet.

Under Alternative A, 45.26 acres of site improvements would be constructed, including the casino, other buildings, parking lots, and internal roads. Runoff from new impervious surfaces would result in a stormwater runoff volume of 102.4 acre-feet. This surface water increase has the potential to cause downstream flooding, and without mitigation would be a significant impact.

Alternative A includes the construction of a storm drainage system to manage stormwater flow. As described in **Section 2.2.6**, the drainage system would primarily consist of inlets and underground drainage pipes. However, an overland drainage would be created for the project to allow the site to drain under overflow conditions. The overland drainage release would be around the perimeter of the site and is shown in Figure 5 of **Appendix K**.

Grassy swales would convey the stormwater to a series of three stormwater detention basins that would be constructed to eliminate downstream stormwater impacts (**Appendix K**, Figure 4). The three detention basins would encompass a surface area of approximately 39 acres with a combined storage capacity of 105 acre-feet (af). The 100-year storm runoff would fill the detention basins to a depth of approximately 3 feet.

Although the proposed development of Alternative A reduces flood storage and increases runoff and peak flow rates, the proposed detention basins mitigate for the loss of flood storage and temporarily store the stormwater runoff to limit the peak flow. The peak flow from the detention basins would be metered through the designed metering structures to pre-project levels. A preliminary plan showing the location of the detention basins is included in **Appendix K** (Figure 4). Since a loss of flood-storage would not occur and post-project runoff and flow rates would equal pre-project levels with the detention basins, impacts to flooding would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce impacts from flooding.

Groundwater occurs at a depth of approximately 140 feet below the ground surface in the vicinity of the Madera site. Thus, there is no known hydrologic connection between groundwater and surface water in this area and significant impacts to surface water resources would not occur as a result of project groundwater pumping.

GROUNDWATER

Water for domestic use, emergency supply, and fire protection would be provided by on-site groundwater wells or by the City of Madera, as described in **Section 2.2.8**. Given nearby high capacity wells, historic high capacity on-site agricultural wells, and the known characteristics of

the San Joaquin Valley Groundwater Basin (see **Appendix L**), an on-site groundwater well would be able to supply the water demanded by Alternative A (see **Section 2.2.8**). As described in **Section 2.2.8**, the primary water supply for Alternative A would be provided by an on-site well whether or not a looped system with the City of Madera is created. Under the on-site system option an on-site water supply well, an on-site redundancy/maintenance well, and an on-site storage tank would be developed. Under the City of Madera loop option an on-site water supply well, an off-site redundancy/maintenance/fire flow well (existing City Well No. 26), required off-site piping, and, if necessary, an on-site storage tank would be developed. Impacts to groundwater would be the same for either the on-site system option or the City of Madera looped system option because the primary water supply well would be located on the Madera site for both options.

Groundwater recharge may not be sufficient to compensate for drawdown effects caused by on-site pumping. Adjacent groundwater wells may also be impacted by a lowered table.

To provide an adequate water supply for the development of Alternative A, any wells constructed on-site would be at least 600 feet deep and would have an average water supply capacity of either approximately 400,000 gpd / 278 gpm (no water recycling) or approximately 270,000 gpd / 190 gpm (with water recycling) (see **Section 2.2.8** and **Appendix I**).

Drawdown of the water table from the project in combination with an ongoing groundwater basin decline caused mainly by agricultural pumping could shorten the lifespan of neighboring wells. Baseline groundwater basin water table declines are more rapid during dry or critically dry years (although they may be less rapid during especially wet years). At the property boundary, the predicted drawdown caused by Alternative A pumping would be 6.4 feet (if water is recycled) or 9.3 feet (if water is not recycled) (Komex, 2006 – **Appendix L**). However, no off-site wells are located at the property boundary, thus drawdown to neighboring wells would be less than 9.3 feet. Analysis of the drawdown curves shows that all of the known off-site wells located within a two-mile radius (estimated at 259 wells – see **Appendix L**) of the Madera site would experience some drawdown effects from proposed pumping on the site. For Alternative A, the drawdown effects would range from 1.5 feet to 7.2 feet without recycling and 1.0 feet to 4.9 feet with recycling. Reductions in the life of wells would not exceed 3 years among smaller wells within two miles of the site (effects would be negligible to larger wells and wells more than two miles from the site).

The Tribe has agreed in a Memorandum of Understanding (MOU) with the Madera Irrigation District (MID) to recharge at least as much water that would be pumped under Alternative A in nearby MID recharge areas. This recharge would alleviate regional impacts of the pumping (see **Section 4.11** for further analysis of these cumulative impacts) but would not occur on-site and would therefore not completely eliminate the cone of depression and resulting drawdown that would occur in neighboring wells. Thus, a minimal, less than significant effect to neighboring wells from on-site groundwater pumping would remain. Nonetheless, mitigation measures to

reduce impacts to neighboring wells from groundwater drawdown are provided in **Section 5.2.2** of this document.

WATER QUALITY

Construction Impacts

Project construction would result in ground disturbance, which could lead to erosion. Erosion can increase sediment discharge to surface waters during storm events. Project construction also has the potential to discharge other construction-related materials (concrete washings, oil, and grease) onto the ground and then into nearby surface waters during storm events. Construction would involve the use of diesel-powered equipment and would likely involve the temporary storage of fuel and oil on-site. Discharges of pollutants to surface waters from construction activities associated with development of Alternative A could result in significant impacts to water quality.

Discharges of stormwater from construction activities on the Madera site would be regulated by the U.S. Environmental Protection Agency (USEPA) National Pollutant Discharge Elimination System (NPDES) storm water program and would require coverage under the Phase II General Permit for Storm Water Discharges from Construction Activities (Construction General Permit). Under the Construction General Permit, a Notice of Intent (NOI) must be submitted to the USEPA at least seven days prior to commencement of construction. In accordance with the requirements of the General Permit, the Tribe must prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) to control discharge of the pollutants in stormwater. This plan would be kept on-site and would be available for review by the USEPA upon request. It would also include an inspection and monitoring section consistent with the requirements of the NPDES program. The plan would incorporate appropriate best management practices (BMPs) to prevent erosion and subsequent surface water degradation during construction activities. These measures typically include the use of silt fences, fiber rolls, vegetated swales, and construction entrances and exits stabilized with crushed aggregate.

Compliance with USEPA requirements would ensure impacts to water quality during construction would be less than significant. Nonetheless, see **Section 5.2.2** for a list of recommended mitigation measures, including recommended BMPs for incorporation into a SWPPP.

Operational Impacts

Stormwater Runoff

Stormwater runoff during long term casino operation could affect surface water quality. Runoff from project facilities, especially surface parking lots, could flush trash, debris, oil, sediments, and grease into downstream surface waters, impacting water quality. Fertilizers and other chemicals used in landscaping areas could also result in impacts to water quality if allowed to enter nearby surface waters. Unimpeded, this runoff would result in a significant impact.

Site planning includes minimization of impermeable surfaces. In addition, the project would be designed to incorporate two main structural BMPs: the stormwater detention basins described previously, and the use of sediment/grease traps. The purpose of the structural BMPs is to control and reduce total suspended solids (TSS), oils and greases, nutrients, metals, and other potentially environmentally polluting minerals or materials from being released to downstream surfaces.

The sediment/grease traps would be designed to comply with Federal stormwater treatment guidelines to reduce TSS in post-construction stormwater runoff as described in the USEPA National Management Measures Guidance to Control Nonpoint Source Pollution from Urban Areas (USEPA 842-B-02-003). This guidance document indicates that a reduction of TSS also controls heavy metals, phosphorous, and other pollutants. A summary of the pollutant reduction efficiencies is listed in **Table 4.3-1**. As shown, inlets affixed with a sediment/grease trap would remove 28 – 80 percent of pollutants from stormwater. In addition, stormwater would be routed to detention basins, which would further diminish pollutant concentrations in the stormwater (**Table 4.3-1**).

Since the combination of site planning, structural treatment BMPs and non-structural source control BMPs would be part of the proposed project, the impact of runoff on water quality would be less than significant. Mitigation measures are discussed in **Section 5.2.2** and would further reduce less than significant operational impacts to water quality.

TABLE 4.3-1
ESTIMATED STORMWATER QUALITY – ALTERNATIVE A

Pollutant	Anticipated Level in Stormwater (mg/L) ^a	Stormceptor Reduction Efficiency ^b	Detention Basin Reduction Efficiency ^c	Estimated Minimum Reduction Efficiency	Anticipated Discharge Pollutant Level (mg/L) ¹
Total Suspended Solids	80	80%	30-65%	80%	16
Total Petroleum Hydrocarbon	3.5	80%	N/A	80%	0.70
Total Nitrogen	2	43%	15-45%	43%	<2
Zinc	0.14	39%	15-45%	39%	<0.1
Copper	0.01	28%	15-45%	28%	<0.01
Lead	0.018	51%	15-45%	51%	<0.01

NOTES: ¹ Filtered stormwater would be transferred to a detention basin (which would be managed to further reduce the water's pollutant concentration) before being discharged to surface waters.

SOURCE: ^a National Management Measures to Control Nonpoint Source Pollution from Urban Areas, USEPA 842-B-02-003, July 2002.

^b Stormceptor-supplied performance studies, 2003.

^c Preliminary Data Summary of Urban Storm Water Best Management Practices, USEPA 821-R-99-02, August 1999.

Wastewater

Several wastewater treatment options exist for wastewater treatment and disposal, as described in **Section 2.2.7** and **Appendix I**. Wastewater treatment may occur at the City of Madera wastewater treatment plant (WWTP). Construction is planned in the near future to expand the plant's capacity from 7 million gallons per day (MGD) to 10.1 MGD. During the expansion, the trickling filter system will be replaced with an activated sludge system. The treated wastewater is conveyed to percolation beds for disposal. Wastewater at the City of Madera WWTP is treated to State and Federal standards before disposal; therefore, no significant impacts to surface water quality would occur from implementation of off-site wastewater treatment.

Alternatively, wastewater may be treated at an on-site WWTP, located to the west of the casino and hotel (**Figure 2-5**). The exact location of the WWTP would depend on the disposal option chosen. Disposal options are described in **Section 2.2.7**. The WWTP would use an immersed membrane bioreactor (MBR) system to provide tertiary-treated water for reuse or disposal. The MBR is a state-of-the-art system that operates as an activated sludge process run at a high suspended solids concentration. Running at a high suspended solids concentration gives the system the ability to react to wide variations in flows as would be expected at gaming facilities on the weekend or holidays. Experience at the other operating plants demonstrates the ability of the MBR system to consistently produce a high quality effluent. Typical effluent from a MBR process is summarized in **Table 4.3-2**. These concentrations are based on water qualities observed at other similar facilities. A detailed description of the wastewater treatment facility is presented in **Appendix I**.

TABLE 4.3-2
TYPICAL CASINO EFFLUENT WASTEWATER QUALITY

Parameter	Units of Influent
Biochemical Oxygen Demand (BOD)	< 1 mg/L
NH ₄ (Ammonium)	< 0.2 mg/L
NO ₃ (Nitrate)	< 8 mg/L
Total Coliform	> 2.2 MPN/100 mL
Nephelometric Turbidity Units (NTU)	> 0.1

NOTES: mg/L = milligrams per liter
MPN = most probable number
mL = milliliters

SOURCE: HydroScience Engineers, Inc., 2006.

The proposed treatment and disposal facility provides for the use of reclaimed water for casino toilet flushing and landscape irrigation. All water used for reclamation would be of a quality consistent with California Department of Health Services (DHS) regulations under Title 22, Division 4, Chapter 3, of the California Administrative Code, provided in **Table 4.3-3**. Title 22 specifies redundancy and reliability features that would be incorporated into the reclamation

plant. Under Title 22 Water Recycling Criteria, the highest level of treatment is referred to as “Disinfected Tertiary Recycled Water.” The proposed plant would produce an effluent meeting the criteria for this highest level of recycled water. Disinfected tertiary-treated recycled water can be used for irrigation of parks, playgrounds, schoolyards, residential landscaping, golf courses and food crops. Additional permitted uses include non-restricted recreational impoundments, cooling towers, fire fighting, toilet flushing and decorative fountains. The water produced by this treatment system is highly treated and poses no health risks for the intended uses.

Treated effluent may be discharged through surface water discharge, spray disposal, sub-surface disposal, or a combination of spray and sub-surface disposal. Projected wastewater discharge rates appear in **Appendix I**. Wastewater discharge options for the on-site WWTP are described below.

TABLE 4.3-3
SUMMARY OF TITLE 22 TREATMENT REQUIREMENTS FOR RECYCLED WATER

Potential Uses	Title 22 Criteria
Landscape Irrigation	
With High Public Contact	Bio-oxidation, coagulation, clarification, filtration, disinfection to limit coliform to 2.2 MPN/100 mL.
With Low Public Contact	Bio-oxidation, disinfection to limit coliform to 23 MPN/100 mL.
Recreational Impoundments	
Non-restricted	Bio-oxidation, coagulation, clarification, filtration, disinfection to limit coliform to 2.2 MPN/100 mL.
Restricted	Bio-oxidation, disinfection to limit coliform to 2.2 MPN/100 mL.
Landscape Impoundments	Bio-oxidation, disinfection to limit coliform to 23 MPN/100 mL.
Industrial uses	
Construction/Dust Control/Soil Compaction	Bio-oxidation, disinfection to limit coliform to 23 MPN/100 mL.
Groundwater Recharge/Seawater Intrusion Barrier	
	This use shall be considered by the DHS and the RWQCB on an individual case basis where the use of recycled water involves a potential risk to public health; guidelines for this use have been proposed.
Cleaning, Dual Water System (Toilet Flushing and Landscape Irrigation), Firefighting, Wetlands Creation/Restoration	
	No criteria are listed for any of these uses in existing Title 22. Currently, each of these uses is considered as criteria set by the RWQCB and DHS on an individual case basis. Uses anticipated to be addressed in future revisions to Title 22, which have been circulated for public comment.

NOTES: MPN = most probable number
DHS = Department of Health Services
RWQCB = Regional Water Quality Control Board
mL = milliliters

SOURCE: California Code of Regulations, Title 22, Division 4, 1978, amended 1998.

The USEPA’s Office of Ground Water and Drinking Water administers the Source Water Protection Program (authorized by the 1996 amendments to the Safe Drinking Water Act) to

prevent contamination to drinking water supplies. The Source Water Protection Program outlines a comprehensive plan to achieve maximum public health protection through inventorying known sources of contamination to drinking water, assessing the threat of such sources of contamination to drinking water, notifying the public about such threats, implementing management measures, and developing contingency plans.

The on-site WWTP would be constructed at least five feet above the floodplain elevation, minimizing the risk of floodwater contamination during a flood event. Storage basins would be bermed above the floodplain elevation and would not contain untreated water. Given that water would be treated to Title 22 standards sufficient for use as reclaimed water, even if it were to mix with flood flows, significant effects to water quality would not occur. Thus the on-site WWTP and proposed treated wastewater storage basins would be compatible with the protection of drinking water sources provided by the Source Water Protection Program. Effects from the various disposal options are discussed below.

Surface Water Discharge. Treated effluent may be discharged into a channelized creek that flows through the Madera site. This creek flows into Dry Creek, and eventually into the Fresno River. The Fresno River is not designated as part of the Regional Water Quality Control Board's (RWQCB) 303(d) listing of impaired water bodies; however, it does flow into the San Joaquin River, which is listed as an impaired water body.

A NPDES permit would be required to discharge wastewater produced on-site to the on-site creek. Since the treatment facilities and point of discharge would be fully contained within trust lands, the NPDES permit would be issued and regulated by the USEPA. Normally, the USEPA sets treatment and discharge requirements in the NPDES permit in accordance with State standards.

The acquisition of an NPDES permit, along with the construction and operation of the proposed MBR WWTP, would ensure that impacts to surface water from the surface water wastewater disposal option would be less than significant.

Spray Disposal. Spray disposal is an evapotranspiration technique in which water is applied to sprayfields at agronomic rates throughout the year. During rain events, sprayfields cannot be used. Therefore, a large seasonal storage basin would be necessary. The location for the WWTP and sprayfields is shown in **Figure 2-5**. Under this option, 29 acres of land in the northwest corner of the Madera site would be used for spray disposal or a recycled water line would transfer treated effluent approximately 1 mile south to the City of Madera golf course. A seasonal storage basin would be located near the WWTP and would hold 43 million gallons (MG) of treated effluent.

The water produced by the MBR treatment system is of high quality and poses negligible health risks for the intended uses. In addition, surface water quality would not be impacted since discharge to surface water bodies would not occur. Implementing Title 22 criteria for recycled water at the Tribe's WWTP would also ensure that groundwater quality is not impacted. Therefore, no significant impacts would occur from implementation of the spray disposal option.

Sub-Surface Disposal. Leachfields are used to dispose of treated wastewater effluent by distributing it underground to infiltrative soil surfaces. Sub-surface disposal requires good percolation and several feet of clearance above the highest groundwater levels. High groundwater does not occur at this site; however, percolation may be limited due to a hardpan layer within the soil. Because effluent would be treated to tertiary levels prior to placement in the leachfields, soil cover over the leachfields can be minimal. The location of the WWTP and leachfields is shown in **Figure 2-5**. A maximum of 78 acres of leachfields would be required for discharge of the entire 270,000 gpd. A seasonal storage basin would have the capacity to hold 4 MG of treated effluent.

The proposed MBR WWTP would produce an effluent meeting the Title 22 criteria for the highest quality of recycled water and poses negligible health risks for the intended uses. Surface water quality would not be impacted since discharge to surface water bodies would not occur and implementation of Title 22 criteria for recycled water at the Tribe's WWTP would ensure that groundwater quality is not impacted. Therefore, no significant impacts would occur from implementation of the sub-surface disposal option for wastewater effluent.

In addition, sub-surface disposal may be considered a Class V injection well under the USEPA's Underground Injection Control (UIC) Program. The USEPA requires that: 1) Class V wells obey the non-endangerment performance standard prohibiting injection that allows the movement of fluids containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation or adversely affect public health; and 2) owners of Class V wells provide inventory information to the USEPA regional UIC Program.

Combination of Surface and Sub-Surface Disposal. Under this option, sprayfields would be used in conjunction with leachfields. The combined area would be approximately 31 acres. A seasonal storage basin would be required to hold 31 MG. The location of the WWTP and combination spray and leachfields is shown in **Figure 2-5**.

Based on the above discussion, the on-site WWTP with discharge from a MBR facility would have a less than significant impact on the quality of surface water and groundwater resources.

4.3.2 ALTERNATIVE B – REDUCED INTENSITY

SURFACE WATER

Alternative B's impacts to flooding would be similar to Alternative A, given the similar footprint of the Alternative B development. As with Alternative A, the Alternative B gaming facility would be raised approximately five feet above the floodplain elevation (**Section 2.3.4**), resulting in a less than significant effect to project structures and patron safety during a flooding event.

The Grading and Drainage Plan would also be implemented for Alternative B (**Appendix K**, Figure 4). See **Sections 2.3.5** and **4.3.1** for further information regarding storm drainage improvements. With incorporation of the Grading and Drainage Plan, impacts to flooding would be less than significant with the implementation of Alternative B. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce impacts from flooding.

Groundwater occurs at a depth of approximately 140 feet below the ground surface in the vicinity of the Madera site. Thus, there is no known hydrologic connection between groundwater and surface water in this area and significant impacts to surface water resources would not occur as a result of project groundwater pumping.

GROUNDWATER

As with Alternative A, groundwater resources would be sufficient to serve the demands of Alternative B, which would require less water for operation. As with Alternative A, primary continuous water supply for Alternative B would be supplied by a privately operated on-site well. Under the on-site system option an on-site water supply well, an on-site redundancy/maintenance well, and an on-site storage tank would be developed. Under the City of Madera loop option an on-site water supply well, an off-site redundancy/maintenance/fire flow well (existing City Well No. 26), required off-site piping, and, if necessary, an on-site storage tank would be developed. Impacts to groundwater would be the same for either the on-site system option or the City of Madera looped system option because the primary water supply well would be located on the Madera site for both options.

At the property boundary, the predicted drawdown caused by Alternative B pumping would be 3.8 feet (water is recycled) or 5.8 feet (water is not recycled) (Komex, 2006 – **Appendix L**). Analysis of the drawdown curves shows that all of the known off-site wells located within a two-mile radius of the Madera site would experience some drawdown effects from proposed pumping on the site. For Alternative B, the drawdown effects would range from 0.9 feet to 4.5 feet without recycling and 0.6 feet to 3.0 feet with recycling. Reductions in the life of wells would not exceed 3 years among smaller wells within two miles of the site (effects would be negligible to larger wells and wells more than two miles from the site). Therefore, a significant effect to neighboring wells from on-site groundwater pumping would not occur. Nonetheless, mitigation measures to

reduce impacts to neighboring wells from groundwater drawdown are provided in **Section 5.2.2** of this document.

WATER QUALITY

Construction Impacts

Construction impacts of Alternative B would be similar to Alternative A. There are minor construction differences between the two alternatives, including a reduced site layout and reduced square footage. As with Alternative A, discharges of stormwater from construction activities on the Madera site would be regulated by the USEPA NPDES storm water program and would require coverage under the Phase II General Permit for Storm Water Discharges from Construction Activities. A SWPPP and an erosion control plan would be prepared and implemented as part of the NPDES permit. See **Section 4.3.1** for further discussion of construction impacts to surface water quality. Compliance with USEPA requirements would ensure impacts to water quality during construction would be less than significant. Nonetheless, see **Section 5.2.2** for a list of recommended mitigation measures, including recommended BMPs for incorporation into a SWPPP.

Operational Impacts

Stormwater Runoff

Operational impacts of Alternative B from stormwater runoff would be similar to those of Alternative A (**Section 4.3.1**) and a less than significant effect would result. Mitigation measures are included in **Section 5.2.2** that would further reduce operational impacts to water quality.

Wastewater

Wastewater treatment and disposal options for Alternative B are similar to those for Alternative A, except that average day disposal flows and disposal acreages would be reduced. Each of the wastewater options described in **Section 4.3.1** would satisfy Federal and State standards. No significant operational impacts to water quality from wastewater would occur. Mitigation measures associated with the on-site WWTP option are provided in **Section 5.2.2**.

4.3.3 ALTERNATIVE C – NON-GAMING USE

SURFACE WATER

Alternative C's impacts to flooding would be similar to Alternative A, given the similar footprint of the Alternative C development. As with Alternative A, Alternative C retail and restaurant buildings would be raised approximately five feet above the floodplain elevation (**Section 2.4.4**), resulting in a less than significant effect to project structures and patron safety during a flooding event.

The Grading and Drainage Plan would also be implemented for Alternative C (**Appendix K**, Figure 4). See **Sections 2.4.5** and **4.3.1** for further information regarding storm drainage improvements. With incorporation of the Grading and Drainage Plan, impacts to flooding would be less than significant with implementation of Alternative C. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce flooding impacts.

Groundwater occurs at a depth of approximately 140 feet below the ground surface in the vicinity of the Madera site. Thus, there is no known hydrologic connection between groundwater and surface water in this area and significant impacts to surface water resources would not occur as a result of project groundwater pumping.

GROUNDWATER

As with Alternative A, groundwater resources would be sufficient to serve the demands of Alternative C, which would require less water for operation. As with Alternative A, primary continuous water supply for Alternative C would be supplied by a privately operated on-site well. Under the on-site system option an on-site water supply well, an on-site redundancy/maintenance well, and an on-site storage tank would be developed. Under the City of Madera loop option an on-site water supply well, an off-site redundancy/maintenance/fire flow well (existing City Well No. 26), required off-site piping, and, if necessary, an on-site storage tank would be developed. Impacts to groundwater would be the same for either the on-site system option or the City of Madera looped system option because the primary water supply well would be located on the Madera site for both options.

At the property boundary, the predicted drawdown caused by Alternative C pumping would be 0.3 feet (water is recycled) or 0.5 feet (water is not recycled) (Komex, 2006 – **Appendix L**). Analysis of the drawdown curves showed that all of the known off-site wells located within a two-mile radius of the Madera site would experience drawdown effects from proposed pumping on the site. For Alternative C, the drawdown effects would be less than 0.4 feet. This would not be a significant impact because it would represent a negligible change in the depth pumped and would not measurably reduce the life of neighboring wells. Nonetheless, mitigation measures to reduce impacts to neighboring wells from groundwater drawdown are provided in **Section 5.2.2** of this document.

WATER QUALITY

Construction Impacts

Construction impacts of Alternative C would be similar to Alternative A. There are minor construction differences between the two alternatives, including a reduced site layout and reduced acres of impervious surfaces. As with Alternative A, discharges of stormwater from construction activities on the Madera site would be regulated by the USEPA NPDES storm water program and would require coverage under the Phase II General Permit for Storm Water Discharges from

Construction Activities. A SWPPP and an erosion control plan would be prepared and implemented as part of the NPDES permit. See **Section 4.3.1** for further discussion of construction impacts to surface water quality. Compliance with USEPA requirements would ensure impacts to water quality during construction would be less than significant. Nonetheless, see **Section 5.2.2** for a list of recommended mitigation measures, including recommended BMPs for incorporation into a SWPPP.

Operational Impacts

Stormwater Runoff

Operational impacts of Alternative C from stormwater runoff would be similar to those of Alternative A (**Section 4.3.1**) and a less than significant effect would result. Mitigation measures are included in **Section 5.2.2** that would further reduce operational impacts to water quality.

Wastewater

Wastewater treatment and disposal options for Alternative C are similar to those for Alternative A, except that average day disposal flows and disposal acreages would be reduced. Each of the wastewater options described in **Section 4.3.1** would satisfy Federal and State standards. No significant operational impacts to water quality from wastewater would occur. Mitigation measures associated with the on-site WWTP option are provided in **Section 5.2.2**.

4.3.4 ALTERNATIVE D – NORTH FORK LOCATION

SURFACE WATER

According to FEMA, the North Fork site is designated as being located within the Sierra National Forest Zone D, “an area in which flood hazards are undetermined.” Since the North Fork site is located in a mountainous, forested region with steep topography, flooding associated with a 100-year floodplain is very unlikely to occur. Therefore loss of flood storage and on-site impacts from flooding would not occur with Alternative D. A Drainage Plan has been prepared for Alternative D (**Appendix K**, Figure 13) that includes storm drainage improvements, including an overland drainage release to enable the property east of Mission Drive to continue to drain through the North Fork site (**Appendix K**, Figure 14). The overland drainage release allows the building site to be protected during peak storm runoff events.

Construction of Alternative D would create new impervious surfaces over approximately five acres of the North Fork site. This increase in impervious surfaces would prevent groundwater infiltration and increase surface runoff, potentially causing flooding, and without mitigation, would be a potentially significant impact.

Development of Alternative D would increase surface runoff to a volume of 0.55 acre-feet. To eliminate downstream flooding impacts, the stormwater drainage system for Alternative D is

designed to limit the peak flow from the developed site to pre-development peak flows (**Section 2.5.5**). To accomplish this, stormwater detention has been incorporated into the southern portion of the site. To accommodate the total storage required for implementation of Alternative D (0.55 acre-feet), the stormwater detention basin has been sized to allow for 1 acre-foot of storm water runoff. The 100-year storm runoff would fill the detention basin to a depth of approximately 3 feet.

Since a loss of flood-storage would not occur and post-project runoff and flow rates would equal pre-project levels with the detention basins, impacts to flooding would be less than significant. Nonetheless, mitigation measures are included in **Section 5.2.2** that would further reduce impacts from flooding.

It is unknown whether on-site surface waters are connected to groundwater. It is possible, although unlikely given the low levels of pumping that would occur under Alternative D, that a significant affect to surface water flows would occur from project pumping. Thus, a potentially significant impact would result. Mitigation measures are contained in **Section 5.2.2** that would reduce this potential impact to a less than significant level.

GROUNDWATER

Water for domestic use, emergency supply, and fire protection would be provided by on-site groundwater wells or from Madera County, as described in **Section 2.5.7**.

If on-site groundwater is utilized, two new pumping wells on the North Fork site would be constructed to at least 500 feet below ground surface (bgs). One well would be used for continuous supply and the other for redundancy in case of malfunction or maintenance of the primary well. Each well would have a firm water supply capacity of approximately 17 (no water recycling) or 9 (with water recycling) gpm. Hook up to the County water supply system would be an alternative to on-site groundwater production. The proposed pumping rate is comparable to or lower than the tested sustainable pumping rates of existing wells in the area of the North Fork site; therefore, the aquifer would produce water at the proposed rate. Potentially significant effects on nearby wells could range from no impact at all to a well going dry or its pumping capacity being significantly reduced. Mitigation measures for drawdown impacts to groundwater are provided in **Section 5.2.2** of this document. Implementation of mitigation measures would reduce impacts to less than significant level.

WATER QUALITY

Construction Impacts

Project construction would result in ground disturbance, which could lead to erosion. Erosion can increase sediment discharge to surface waters during storm events and has the potential to discharge other construction-related pollutants. Discharges of sediment and pollutants to surface

waters from construction activities and accidents are a potentially significant impact to surface water quality.

Discharges of stormwater from construction activities on the North Fork site would be regulated by the USEPA NPDES storm water program and would require coverage under the Phase II General Permit for Storm Water Discharges from Construction Activities. See **Section 4.3.1** for additional information regarding the NPDES program. Compliance with USEPA requirements would ensure impacts to water quality during construction would be less than significant. Nonetheless, see **Section 5.2.2** for a list of recommended mitigation measures, including recommended BMPs for incorporation into a SWPPP.

Operational Impacts

Stormwater Runoff

Operational impacts of Alternative D from stormwater runoff would be similar to those of Alternative A (**Section 4.3.1**), except at a different location (the North Fork site). Mitigation measures are discussed in **Section 5.2.2** that would further reduce less than significant operational impacts to water quality.

Wastewater

Two wastewater facility options exist for wastewater treatment, storage, and disposal: 1) an off-site wastewater treatment option and 2) an on-site wastewater treatment option (**Section 2.5.6**). Each of these options would satisfy State and Federal standards as described in **Section 4.3.1**.

Development of Alternative D would produce 20,000 gpd of wastewater. See **Appendix I** for further discussion on flow rates and treatment options.

Wastewater treatment may occur at the County-operated WWTP that serves the Community of North Fork. This WWTP is located 1 mile northwest of the North Fork site (**Figure 2-16**). Treatment plant facilities include a raw sewage pump station, extended aeration treatment facilities, chlorine disinfection, an effluent pump station, storage pond, and a distribution pump station. Sprayfields are currently utilized to dispose of disinfected effluent; however, an expansion of the WWTP is currently underway that will also include the use of leachfields. Wastewater at the County WWTP is treated to State and Federal standards before disposal; therefore, less than significant impacts to surface water quality would occur from use of the off-site WWTP for disposal.

Alternatively, wastewater may be treated at an on-site WWTP, located to the south of the casino and hotel (**Figure 2-17**). Like Alternative A, a MBR WWTP would be utilized. Unlike Alternative A, the North Fork site is not located within the 100-year floodplain. Thus, water quality issues during flood events are not a concern.

The proposed treatment and disposal facility provides for the use of reclaimed water for casino toilet flushing and landscape irrigation. As described in **Section 4.3.1**, all water used for reclamation would meet Title 22 standards of the California Code of Regulations. Wastewater discharge options for the on-site WWTP are described below.

Surface Water Discharge. Treated effluent may be discharged to an unnamed tributary of Willow Creek, which flows through the North Fork site. Willow Creek empties into the San Joaquin River, upstream of Millerton Lake. A NPDES permit would be required to discharge wastewater produced on-site to the on-site creek. Since the treatment facilities and point of discharge would be fully contained within trust lands, the NPDES permit will be issued and regulated by the USEPA. Normally, the USEPA sets treatment and discharge requirements in the NPDES permit in accordance with State standards. The acquisition of a NPDES permit, along with the construction and operation of the proposed MBR WWTP, would ensure that impacts to surface water from the surface water wastewater disposal option would be less than significant.

Spray Disposal. The location for the WWTP and sprayfields is shown in **Figure 2-17**. Under this option, 2 acres of land in the southern corner of the North Fork site would be used for spray disposal. A seasonal storage basin would be located near the WWTP and would hold 4 MG of treated effluent. As with Alternative A, the proposed MBR WWTP effluent would meet the Title 22 criteria for recycled water and would be applied to sprayfields at agronomic rates and not during rain events. The water produced by this treatment system is highly treated and poses negligible health risks for the intended uses. In addition, surface water quality would not be impacted since discharge to surface water bodies would not occur. Implementing Title 22 criteria for recycled water at the Tribe's WWTP would also ensure that groundwater quality is not impacted. Therefore, no significant impacts would occur from implementation of the spray disposal option.

Sub-Surface Disposal. Leachfields are used to dispose of treated wastewater effluent by distributing it underground to infiltrative soil surfaces. The location of the WWTP and leachfields is shown in **Figure 2-17**. A maximum of 5 acres of leachfields would be required for effluent disposal. A seasonal storage basin would contain 2 MG of treated effluent.

As with Alternative A, the proposed MBR WWTP would produce an effluent meeting Title 22 criteria for the highest quality of recycled water, and poses negligible health risks for the intended uses. Surface water quality would not be impacted since discharge to surface water bodies would not occur. Implementation of Title 22 criteria for recycled water at the Tribe's WWTP would ensure that groundwater quality is not impacted. Therefore, no significant impacts would occur from implementation of the sub-surface disposal option for wastewater effluent.

Combination of Surface and Sub-Surface Disposal. Under this option, sprayfields would be used in conjunction with leachfields. The combined area would be approximately 2 acres. A seasonal storage basin would be required to hold 3 MG. The location of the WWTP and combination spray and leachfields is shown in **Figure 2-17**. Based on the above discussion, the on-site WWTP with discharge from a MBR facility would have a less than significant impact on the quality of surface water and groundwater resources.

4.3.5 ALTERNATIVE E – NO ACTION

SURFACE WATER

No new development is proposed under Alternative E. Thus, the existing drainage from the Madera site and North Fork site would continue to flow off-site unimpeded. Under this alternative, no effect would occur to drainage. Flooding at the Madera site following the No Action Alternative would consist of inundation of present day, agricultural landforms. Therefore no new impacts would occur.

Construction Impacts

The No Action Alternative would not result in any site grading, construction, or any other impact.

Operational Impacts

Runoff

Runoff following the No Action Alternative would consist of natural flow from permeable earthen and vegetative surfaces. The ongoing level of impact on the water quality of runoff from agricultural uses at the Madera and North Fork sites would continue.

Wastewater

The No Action Alternative would not generate wastewater. Therefore no impacts would occur.

GROUNDWATER

The No Action Alternative would result in no additional impacts to groundwater supply.

WATER QUALITY

Surface water supplies near the Madera site would continue to be susceptible to contamination from agricultural uses under Alternative E. The above surface water quality control measures necessary for the construction and operation of Alternatives A through D would not be necessary for the No Action Alternative because no new development would occur. Because existing land uses would persist on the Madera and North Fork sites, there would be no effect on current surface water quality.