4.12 UTILITIES AND SERVICE SYSTEMS

This section assesses potential impacts on public utilities and service systems that may result from implementation of the Project. The section addresses water supply, storage, and distribution; wastewater collection, transmission, and treatment; stormwater runoff and collection; and solid waste collection and disposal. Water supply and wastewater treatment are provided by the Mammoth Community Water MCWD (MCWD). The analysis regarding water supply in this section is based on data provided in the 2010 Urban Water Management Plan (UWMP) prepared by the MCWD. The analysis regarding wastewater is based on information from the UWMP and the Inyo-Mono Integrated Regional Water Management Plan (2014). The stormwater analysis is based on input from the Town of Mammoth Lakes Department of Public Works, Engineering Division, and the 2015 Stormwater Management Plan. The solid waste analysis is based primarily on the Countywide Siting Element of the Mono County Integrated Waste Management Plan (2015). A comment letter addressing utilities and service systems was provided by MCWD in response to the May 29, 2015 Notice of Preparation circulated for the Project. The comment letter indicates that the discontinuation of the PAOT could impact the MCWD's ability to determine per capita water use and estimate of future population numbers.

1. WATER SUPPLY

a. ENVIRONMENTAL SETTING

(1) Regulatory Framework

(a) State of California

(i) California Urban Water Management Planning Act

The California Urban Water Management Planning Act (Act) (California Water Code Section 10610-10656) requires urban water suppliers to develop urban water management plans. While generally aimed at encouraging water suppliers to implement water-conservation measures, it also creates long-term planning obligations. The Urban Water Management Planning Act requires urban water suppliers that either provide over 3,000 acre-feet of water annually or serve more than 3,000 or more connections to assess the reliability of its water sources over a 20-year planning horizon and to update the data in urban water management plans every five years. In preparing the 20-year management plans, water suppliers must directly address the subject of future population growth. The suppliers must also identify sources of supply to meet demand during normal, single-dry, and multiple-dry years.

AB 1420 amended the Urban Water Management Planning Act, to require, effective January 1, 2009, that eligibility for any water management grant or loan made to an urban water supplier and awarded or administered by the Department of Water Resources (DWR) or State Water Resources Control Board (SWRCB) be conditioned on the implementation of the water Demand Management Measures (DMMs) described in Water Code Section 10631(f). These DMMs correspond to the seven Best Management Practices (BMPs) listed and described in the Memorandum of Understanding Regarding Urban Water Conservation in California. Based on this, DWR has consulted with the California Urban Water Conservation Council and appropriate funding agencies, and determined that it will equate the DMMs with the BMPs described in the California Urban Water Conservation Council's MOU for loan and grant funding eligibility

purposes. Water management grants and loans include programs and projects for surface water or groundwater storage, recycling, desalination, water conservation, water supply reliability and water supply augmentation. This funding includes, but is not limited to, funds made available pursuant to Public Resources Code Section 75026 (Integrated Regional Water Management Program).

(ii) California Water Conservation Act

The California Water Conservation Act (Senate Bill 7 SBx7-7) enacted in November 2009 contains several mandates designed to promote water conservation and efficiency throughout California.[1] One of these mandates directs the DWR, in coordination with the California Urban Water Conservation Council to "convene a Task Force consisting of academic experts, urban retail water suppliers, environmental organizations, and commercial, industrial and institutional water users to develop alternative BMPs for the CII water sector." CWC (10608.43). SB X7-7 stemmed from the Governor's goal to achieve a 20 percent statewide reduction in per capita water use by 2020 (20x2020). SBx7-7 requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020 and an interim 10 percent goal by 2015. The MCWD achieves an approximately 30 percent reduction rate, meeting the requirements of SBx7-7.

(iii) California Groundwater Management Act

The California Groundwater Management Act (AB 3030), enacted in 1992, allows existing local water agencies to develop a groundwater management plan in groundwater basins defined in DWR Bulletin 118. Action is voluntary. AB 3030 introduces twelve technical components that may be included in the groundwater management plan and DWR highly encourages agencies to include as many of the following twelve components as necessary for the successful management of the basin groundwater resources:

1. The control of saline water intrusion.
2. Identification and management of wellhead protection areas and recharge areas.
3. Regulation of the migration of contaminated groundwater.
4. The administration of a well abandonment and well destruction program.
5. Mitigation of conditions of overdraft.
6. Replenishment of groundwater extracted by water producers.
7. Monitoring of groundwater levels and storage.
8. Facilitating conjunctive use operations.
9. Identification of well construction policies.

[1] *An act to amend and repeal Section 10631.5 of, to add Part 2.55 (commencing with Section 10608) to Division 6 of, and to repeal and add Part 2.8 (commencing with Section 10800) of Division 6 of, the Water Code, relating to water.*

10. The construction and operation by the local agency of groundwater contamination cleanup, recharge, storage, conservation, water recycling, and extraction projects.

11. The development of relationships with state and federal regulatory agencies.

12. The review of land use plans and coordination with land use planning agencies to assess activities which create a reasonable risk of groundwater contamination.

(iv) California Sustainable Groundwater Management Act

The California Sustainable Groundwater Management Act of 2014 (AB 1739, SB 1168, and SB 1319) commits the state to locally controlled, sustainable groundwater management and provide tools and authorities for local agencies to achieve the sustainability goal over a 20-year implementation period. The Sustainable Groundwater Management Act is considered one element of a comprehensive water action plan advanced by the governor that also includes investment in water conservation, water recycling, expanded water storage, safe drinking water, wetlands and watershed restoration. The legislation gives local agencies new tools to manage groundwater sustainably. For example, groundwater sustainability agencies may:

- Require registration of wells and measurement of extractions
- Require annual extraction reports
- Impose limits on extractions from individual groundwater wells
- Assess fees to implement local groundwater management plans
- Request a revision of basin boundaries, including establishing new sub basins

Under the Sustainable Groundwater Management Act, a community's sustainability plan must include measurable objectives and interim milestones to achieve the sustainability goal for the basin within the 20-year time frame. The plan must include a physical description of the basin, including information on groundwater levels, groundwater quality, subsidence and groundwater-surface water interaction; historical and projected data on water demands and supplies; monitoring and management provisions; and a description of how the plan will affect other plans, including jurisdiction's general plans.

(v) California Statewide Groundwater Elevation Monitoring

California Statewide Groundwater Elevation Monitoring (CASGEM), also enacted in November 2009, is authorized under SBx7-6, which is also administered by the DWR. SBx7-6 mandates a statewide groundwater elevation monitoring program to track seasonal and long-term trends in groundwater elevations in California's groundwater basins. To achieve that goal, the amendment requires collaboration between local monitoring entities and DWR to collect groundwater elevation data. Collection and evaluation of such data on a statewide scale is considered an important fundamental step toward improving management of California's groundwater resources.

In accordance with this amendment to the Water Code, DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. The intent of the CASGEM program is to establish a permanent, locally-managed program of regular and systematic monitoring in all of California's alluvial groundwater basins. The CASGEM program will rely and build on the many, established local long-term groundwater monitoring and management programs. DWR's role is to coordinate the CASGEM program, to

work cooperatively with local entities, and to maintain the collected elevation data in a readily and widely available public database. DWR will also continue its current network of groundwater monitoring as funding allows.

(vi) Memorandum of Understanding Regarding Urban Water Conservation in California

Memorandum of Understanding Regarding Urban Water Conservation in California administered by the California Urban Water Conservation Council, sets forth BMPs that result in efficient use or conservation of water. The California Urban Water Conservation Council was created to increase efficient water use statewide through partnerships among urban water agencies, public interest organizations, and private entities. The MOU was signed by 120 urban water agencies and environmental groups in December 1991. MCWD is not a signator to the MOU. Those signing the MOU pledge to develop and implement urban water conservation practices to reduce the demand of urban water supplies. The MOU contains several standards by which water conservation is achieved. Section 3.3 (Reclamation) of the MOU supports the reclamation and reuse of wastewater wherever technically and economically reasonable. Section 3.4 (Land Use Planning), Limits to the Applicability of the MOU, indicates that the MOU does not deal with the question of growth management. However, each signatory water supplier must inform relevant land planning agencies at least annually of the impacts that planning decisions involving projected growth would have on the reliability of its water supplies for the service area. Section 4.1 provides for implementation and includes BMP's schedule of implementation, procedures for estimating reliable savings, exemptions, and schedule of implementation. BMP listed in the MOU include water survey programs, residential plumbing retrofit, system water audits (leak detection and repair), large landscape conservation programs and incentives, high-efficiency clothes washing, education programs, retail conservation pricing, and water waste prohibition. Water savings are demonstrated through such methods as establishing gallons per capita per day (GPCD) compliance. Agencies choosing a GPCD compliance approach would count overall water savings of the quantifiable measures from the BMP list or other menus, plus additional savings achieved through implementation of the BMPs. Savings goals and methodology are updated in the MOU's compliance policies from time to time based upon data and studies.

California Code of Regulations

The California Code of Regulations (CCR) Title 24 contains the California Building Standards, including the California Plumbing Code (Part 5), which promotes water conservation. Title 20 addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, other State laws listed below require water-efficient plumbing fixtures in structures.

- Title 24, California Administrative Code, Sections 25352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.
- Title 20, California Administrative Code, Section 1604(g) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets and tub spout diverters.
- Title 20, California Administrative Code, Section 1606 prohibits the sale of fixtures that do not comply with established efficiency regulations.
- Health and Safety Code, Section 17921.3 requires low-flush toilets and urinals in virtually all buildings.

- Health and Safety Code, Section 116785 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied and includes the requirement that water conservation devices on fixtures using softened or conditioned water be installed.

(viii) Water Efficiency in Landscaping Act

The California Water Efficiency in Landscaping Act (AB 1881) was approved by the Office of Administrative Law on September 10, 2009. This law is primarily aimed at irrigation technology and addresses common problems related to the design of irrigation systems and avoiding water waste (i.e., broken spring joints, leaking risers, etc.). AB 1881 requires a budget for landscape irrigation water use and sets maximum water allowances for landscape areas Existing landscapes and irrigation systems are not required to retrofit under AB 1881 unless a renovation is proposed. In this manner, local utility companies are encouraged to use rebates to induce homeowners to upgrade. Under AB 1881, parkway irrigation must not use over-spray or overhead irrigation in areas less than 8 feet wide or within 24 inches of non-permeable hardscapes.

(viii) Executive Order B-29-15

On April 1, 2015, the California Governor issued an Executive Order to mandate conservation of potable urban water due to ongoing drought and ordered that the State Water Resources Control Board (SWRCB) impose restrictions to achieve a statewide 25 percent reduction in potable urban water use through February 28, 2016. Usage reductions would be compared to the amount used in 2013. These restrictions consider the relative per capita water use of each water suppliers' service area, and require that those areas with high per capita use achieve proportionally greater reductions than those with low use. Under Executive Order B-29-15, the California Public Utilities Commission is requested to take similar action with respect to investor-owned utilities providing water services.

The DWR leads the statewide initiative, in partnership with local agencies, to collectively replace 50 million square feet of lawns and ornamental turf with drought tolerant landscapes. The California Energy Commission, jointly with the DWR and Water Board are required to implement a time-limited statewide appliance rebate program to provide monetary incentives for the replacement of inefficient household devices.

Under Executive Order B-29-15, the Water Board imposes restrictions to require that commercial, industrial, and institutional properties, such as campuses, golf courses, and cemeteries, immediately implement water efficiency measures to reduce potable water usage in an amount consistent with the reduction targets. Irrigation with potable water of ornamental turf on public street medians is prohibited. Irrigation with potable water of newly constructed homes and buildings that is not delivered by drip or microspray systems is also prohibited. Executive Order B-29-15 mandates that the DWR update the State Model Water Efficient Landscape Ordinance through expedited regulation. This updated ordinance is to increase water efficiency standards for new and existing landscapes through more efficient irrigation systems, grey water usage, onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf.

Executive Order B-29-15 requires the Water Board to direct urban water suppliers to develop rate structures and other pricing mechanisms, including but not limited to surcharges, fees, and penalties, to maximize water conservation consistent with statewide water restrictions and urban water suppliers to provide monthly information on water usage, conservation, and enforcement on a permanent basis.

Executive Order B-29-15 requires monthly reporting on the amount of potable water produced, the population served, statistics on conservation compliance and enforcement, number of days that irrigation is allowed, and monthly commercial, industrial and institution sector use. Local water agencies in high and medium priority groundwater basins must immediately implement all requirements of the California Statewide Groundwater Elevation Monitoring Program pursuant to Water Code Section 10933. Also under Executive Order B-29-15, the California Energy Commission must adopt emergency regulations establishing standards that improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings.

Executive Order B-29-15 also requires investment in new innovative water management technologies , such as renewable energy-powered desalination, integrated onsite reuse systems, water-use monitoring software, irrigation system timing and precision technology, and on-farm precision technology. The Order further mandates that the Water Board prioritize new and amended safe drinking water permits that enhance water supply and reliability for community water systems facing water shortages or that expand service connections to include existing residences facing water shortages. MCWD implements required water management technologies and conservation measures. Regarding Executive Order B-29-15, MCWD has achieved and continues to meet the state mandated 20 percent reduction and was recognized as "stand out" water saving community by the state in July 2015.

(b) Regional

(i) Settlement Agreement between the Los Angeles Department of Water and Power and the Mammoth Community Water District

The Los Angeles Department of Water and Power (LADWP) exercises riparian rights and pre-1914 appropriative water rights for diversions of water from Mammoth Creek and the Owens River watershed. MCWD has two SWRCB water right licenses and a permit to divert Mammoth Creek water for beneficial uses. To settle litigation over water rights, the MCWD and the LADWP entered into a Settlement Agreement dated July 3, 2013. Under the Settlement Agreement (SA), the parties agreed that the MCWD may divert surface water, extract groundwater and use recycled water up to a total use of 4,387 acre feet per year (AFY), the use of which could result in an estimated total net consumptive use of 1,779 AFY, or 40.55 percent.[2] According to the Settlement Agreement, MCWD's diversions, extractions, and deliveries are less than 4,387 AFY and the estimated total consumptive use is currently less than 1,779 AFY. Provided that MCWD complies with minimum in-stream fishery bypass flows in Mammoth Creek described in MCWD's Amended Permit 17332 and Amended Licenses 5715 and 12593, the LADWP would not challenge MCWD performing its Mammoth Creek in-stream monitoring. The LADWP and the MCWD have common interests in supporting sustainable water resources management within the Mammoth Creek watershed to maximize water use efficiency and consumptive beneficial uses. The MCWD would not object to the LADWP's existing or future diversions or extractions, provided that these would not interfere with the MCWD's ability to exercise its total diversions, extractions, and deliveries.

[2] *Settlement Agreement between Los Angeles Department of Water and Power and the Mammoth Community Water District, July 7, 2013, page 2. Total estimated total net consumptive use is 1,779 AFY, or 40.55 percent (1,779÷4,387+0.4055).*

(c) Local

(i) Mammoth Lakes Community Water District 2010 Urban Water Management Plan

The 2010 Urban Water Management Plan (UWMP) is MCWD's long term planning document for the provision of water to the Town and several out-of-service area locations. The District's service area lies entirely within the 24-square-mile Town of Mammoth Lakes' incorporated boundary. Most of the 3,640 acre (5.7 square mile) service area is within the much smaller approximately 6 square miles of the Town's urban growth boundary. The majority of demand discussed in the UWMP derives from within the Town's urban growth boundary. The conclusions and recommendations from the 2010 UWMP currently determine key aspects of long term capital investment by the District for water supply and treatment, and influence land use planning and development levels, to the extent these are influenced by the practical and regulatory requirements linking water supply reliability and land use decisions.[3]

The 2010 UWMP's planning horizon is 20 years, or through 2030.[4] Based on the Water Conservation Act of 2009 (SB X7-7) the UWMP contains several mandates designed to promote water conservation and efficiency. As discussed in the UWMP, SBx7-7 requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020 and an interim 10 percent goal by 2015.

Guidelines for the preparation of the UWMP require the MCWD to describe stages of action in response to a water supply shortage including up to a 50 percent reduction in supply. The MCWD has the ability to monitor the effectiveness of four stages of water restrictions. Water production is monitored on a daily basis through source meters located at each of the three water treatment facilities and one well that pumps water directly into the system. This daily record of water production allows the MCWD to monitor water demands and establish baseline data for various seasons, peak tourist periods, and irrigation periods. The MCWD also has the ability to monitor water demand on an hourly basis by tracking total production and net change in the total volume in the storage reservoirs and by reviewing hourly customer meter data available through MCWD's advanced metering system.

The UWMP's projections, shown in **Table 4.12-1**, *Current and Projected Service Area Population*, includes resident population, represented by 2010 census data, the transient peak combined resident and visitor/transient populations, and an estimate of the percentage (30 percent) of the visitor/transient population that represents a relatively constant population presence through build-out. As shown in Table 4.12-1, under the UWMP's projections, the residential and PAOT populations would both increase by approximately 49 percent, and the effective annual population would increase by approximately 45 percent. The build-out population and timeline represent an average annual resident and effective annual population growth of 2 percent.

According to the 2010 UWMP, the 10-year average per capita use (2001 – 2010), is 176 gallons per day (gpd). The compliance per capita is 141 gpd and the per capita use in 2010 was 119 gpd. The ten-year trend has shown a steadily declining per capita water demand of approximately 39 percent, due to a combination of a 70 percent decrease in water distribution system losses and demand management (conservation)

[3] *Mammoth Community Water District, 2010 Urban Water Management Plan, November 2011, page ES-1*

[4] *The UWMP's planning horizon through 2030 varies slightly from the revised 2035 horizon for the Mammoth Lakes General Plan Buildout.*

Table 4.12.1

Urban Water Management Plan - Current and Projected Service Area Population

	2010	2015	2020	2025	2030
Resident Population	8,234	9,094	10,041	11,086	12,300
People at One Time	36,578	40,434	44,289	48,145	52,000
Effective Annual Population	16,739	18,496	20,315	22,204	24,210

Source: Mammoth Community Water District, 2010 Urban Water Management Plan, Table ES-1

measures. Based on the compliance methodology established by the State, the MCWD has met and is expected to continue to meet, both the interim and compliance daily per capita water use targets required under the 2009 Water Conservation Act.[5]

(ii) Mammoth Community Water District Water Code

The Mammoth Community Water District Code establishes regulations for the design, construction, alteration, use, and maintenance of public water mains, distribution system, reservoirs, booster pump stations, pressure reducing stations, connections and services, and all system appurtenances. It provides for the issuance of permits and the collection of fees for plan check, construction inspection and other services. The Water Code establishes standards for water fixtures, such as shower heads, water conservation aerators, toilets, self-closing and pressure-reducing valves, and other fixtures in compliance with the most recent effective California Plumbing Code (whichever results in the least consumption).

Section 3.33 of the Water Code applies to water shortage conditions, water conservation, standards, regulations, and enforcement.[6] This section establishes certain permanent and mandatory requirements necessary to conserve water, enable effective water supply planning, assure reasonable and beneficial use of water, prevent waste of water, prevent unreasonable use of water, recognizing that water is a scarce natural resource that requires careful management not just in times of drought. Section 12.01 establishes four levels of action to be implemented in times of water supply shortage, with increasing restrictions in response to decreasing supply. Level 1 requires a 10 percent reduction in demand. Water conservation measures apply to residential and commercial landscaping, repair of water leaks, restrictions on new lawns, and construction water use. Level 2 requires a 20 percent reduction in demand and applies further to irrigation of residential, public, and commercial landscapes, and no use of potable water for general construction and maintenance. Level 3 conditions enforce further restrictions on landscapes, ornamental ponds, , and immediate repair of all plumbing malfunctions. Level 4 restricts all landscape irrigation except golf courses, public parks, school playing fields, and commercial growing. The latter must provide water conservation plans to the MCWD for methods of reducing water demand up to 50 percent. Filling and refilling of residential pools and spas is prohibited.

[5] *Mammoth Community Water District, Urban Water Management Plan, November 2011, page ES-4.*

[6] *Repealed by Ord. No. 03-20-14-08 and readopted as part of Division XII of Chapter 12, effective March 2014.*

Permanent water conservation requirements include the prevention of runoff or ponding; no overfilling of swimming pools or spas; prevention or repair of leaks; no washing of hard, paved surfaces; automatic shut-offs on hoses for washing commercial and non-commercial vehicles and boats; timing devices on irrigation systems or sprinklers; permitted hours, days of week; irrigation budgets for landscape irrigation accounts; restrictions on restaurant water use; encouragement of reduced hotel or motel linen laundry. Under Section 3.33, the MCWD may implement one of four levels of water restrictions (primarily on landscape irrigation) after the MCWD's Board of Directors declares the existence or threat of a water shortage. The Water Code requires the installation of water-conserving devices in new buildings and remodels that require permits.

A number of other district programs are also intended to help customers and the district manage water use wisely:

- Water rates include an increasing block rate structure where the rate per 1,000 gallons increases as usage increases.
- A separate landscape water meter for landscapes over 5,000 square feet in area is required.
- MCWD has a toilet, clothes washer, and irrigation system pressure reducing valve rebate program.
- During the irrigation season, MCWD regularly issues news bulletins that focus on educating the public about water conservation.
- MCWD implements an on-going leak-detection program to reduce water losses in the water distribution system and on the customer side of the meter.
- MCWD employs a Public Relations Officer to promote knowledge of the area's water supply issues and the need for conservation.
- MCWD employs a conservation coordinator to assist customers in reducing consumption.

On May 19, 2016, the MCWD updated Division XII of Chapter 12 of the Water Code (Ordinance No. 05-19-16-10) to address the ongoing drought. As discussed in the revised Ordinance, because of continuing drought conditions, the Governor is continuing to mandate a drought state of emergency in California and the SWRCB is continuing to mandate that all urban water agencies implement and enforce water conservation on their customers. As discussed in the Ordinance, following a two percent or normal runoff in 2015, the April 1, 2016 water content at Mammoth Pass was 93 percent of normal, the highest in the past five years.

As indicated in Ordinance No. 05-19-16-10, because of the need to allow replenishment and recovery of the District's water resources, and because drought has not been fully alleviated, the District is continuing to impose water demand management measures to avoid water shortages during peak water demand and to ensure that the District has a carryover supply for future water years. The amendment of the Water Code is intended to improve water conservation practices. The Code contains permanent water conservation regulations in addition to specific conservation goals for four levels of water shortage conditions. Permanent water conservation measures include controls of runoff and ponding from any hose, pipe, faucet, sprinkler or other device; no overfilling of swimming pools and spas; covering of pools and spas; repair of any water leaks; automatic shut-offs on hoses for washing hard surfaces and commercial and non-commercial vehicles, boats, trailers, and other vehicles; timers on irrigation devices; and restrictions on permitted hours for landscape irrigation. Additional irrigation requirements include no misting devices, no operation of a broken sprinkler head, no over-spraying. Restrictions are also placed on restaurants, hotel laundries,

construction and maintenance water. The degree of water conservation necessary during a shortage would be directly correlated with the imbalance between estimated water supply and anticipated demand. Restrictions are imposed during each of the four levels of water shortage. These restrictions are shown in **Table 4.12-2**, *Water Shortage Contingency*.

Town of Mammoth Lakes

(i) General Plan

The Resource Management and Conservation Element of the General Plan sets forth the goal to conserve and enhance the quality and quantity of Mammoth Lakes' water resources. Goal R.4 is to "conserve and enhance the quality and quantity of Mammoth Lakes' water resources. Policy R.4.A is that the "Town shall work with MCWD to ensure that land use approvals are phased so that the development of necessary water supply sources is established prior to development approvals." The General Plan also supports and encourages water conservation and recycled water use within private and public developments; drought-tolerant landscaping and water-efficient irrigation practices for all development and Town-maintained landscaped areas; and the review and updating of the Suggested Plant List in the Town of Mammoth Lakes Design Guidelines. Policy R.4.B is to support and encourage water conservation and recycled water use within private and public developments; Policy R.4.C is to require drought-tolerant landscaping and water-efficient irrigation practices for all development and Town-maintained landscaped areas, parks and park improvement projects. Development design, including parks, may include limited turf as appropriate to the intended use. Policy R4.D is to require development to use native and compatible non-native plants, especially drought resistant species, to greatest extent possible when fulfilling landscaping requirements and Policy R.4.E is to limit the use of turf over root zones of native trees to avoid or minimize adverse impacts of excessive water to native trees.

(ii) Municipal Code

The Town of Mammoth Lakes Municipal Code contains detailed water-efficient landscape requirements. The purpose of Chapter 17.40, Water Efficient Landscape Regulations, is to (a) implement the Water Conservation in Landscaping Act; (b) reduce water waste in landscaping by promoting the use of region-appropriate plants that require minimal supplemental irrigation, and by establishing standards for irrigation efficiency; (c) establish a structure for designing, installing and maintaining water efficient landscapes; and (d) promote the effective and efficient irrigation of landscapes.

Under Chapter 17.40, among other regulations, plants must be selected according to their adaptability to the climatic, geologic and topographical conditions of Mammoth Lakes. Native species and natural areas are to be protected and preserved to the extent possible. Plants having similar water use should be grouped together by hydrozone and landscape area shall use efficient water conservation practices and shall generally separate areas of similar slope, sun exposure, soil, and other site conditions appropriate for the selected plants.

Table 4.12-2

Water Shortage Contingency

Prohibitions	Stage When Implemented
Irrigation of residential and commercial landscapes, except golf courses, public parks, and school playing fields, shall occur between 1:00 A.M. and 7:00 A.M. and between 5:00 P.M. and 11:00 p.M.	Level 1
No hard surfaces including sidewalks, driveways, parking areas or decks may be washed or hosed down with water supplies through the District's water system, unless required by health or safety requirements.	Level 1
After the District institutes a Level 1 Condition or higher water level condition in any year, there shall be no new lawn areas planted, which will require water from the District's potable water system unless the landscape is managed under a District approved Landscape Plan and the landscape meets the current Town of Mammoth Lakes Water Efficient Landscape Ordinance.	Level 1
Upon notice to the District and approval by the General Manager or his/her designee, no more than five percent of existing turf area may be replaced or reseeded.	Level 1
Any other measures the Board determines will provide the appropriate level of water use reductions under this water shortage level and that are specified in any motion or other action adopted by the Board.	Level 1
Irrigation of residential and commercial landscapes, except golf courses, public parks, and school playing fields, shall occur between 1:00 A.M. and 7:00 A.M. and between 7:00 P.M. and 11:00 p.M. Customers with a monthly MAWA may not have monthly water use exceeding 100 percent of the monthly allowance.	Level 2
No turf areas may be replaced or reseeded.	Level 2
Repair or prevention of all water leaks shall be carried out upon discovery by the customer or within 3 days after notification from the District.	Level 2
Any other measures the Board determines will provide the appropriate level of water use reductions under this water shortage level and that are specified in any motion or other action adopted by the Board.	Level 2
Irrigation of residential and commercial landscapes, except golf courses, public parks, and school playing fields, shall occur between 1:00 A.M. and 6:00 A.M. and between 8 P.M. and 11 p.M. Customers with odd addresses will be permitted to water only on Wednesday and Saturday. Customers who don't have a numbered address will be notified by the District of their two watering days. Customers with a monthly MAWA may not have monthly water use exceeding 80 percent of the monthly allowance.	Level 3
All water leaks, breaks, or other plumbing malfunctions shall be repaired upon discovery by the customer or within 48 hours after notification by the District, with the exception of rental properties, which shall have up to 72 hours to repair interior unit leaks, in order to comply with State laws regarding the provision of notice to tenants.	Level 3
Any other measures that the Board determines will promote the appropriate level of water use reductions under this water shortage level and that are specified in any motion or other action adopted by the Board.	Level 3
All landscape irrigation shall be prohibited. (iv) Golf courses, public parks, school playing fields, and landscape products of commercial growers and nurseries are exempt as set forth in Sec. D.6.d. (v) Hand-watering existing landscapes with a hose equipped with a shot-off nozzle is exempt as set forth in Sec. C.3(e) ii.	Level 4
All water leaks, breaks or other plumbing malfunctions shall be repaired upon discovery by the customer or within 24 hours after notification by the District, with the exception of rental properties, which shall have up to 72 hours to repair interior unit leaks, in order to comply with State laws regarding the provision of notice to tenants.	Level 4
Filling or refilling of residential pools and spas is prohibited. Vehicle washing may only be conducted at or by businesses licensed for such activity and has a process to recycle wash water.	Level 4
Any other measures that the Board determines will promote the appropriate level of water use reductions under this water shortage level and that are specified in any motion or other action adopted by the Board.	Level 4

Source: MCWD Water Code Update, Ordinance No. 05-19-16-10, May 19, 2016.

Irrigation specifics require that all irrigation systems are expected to meet or exceed 71.0 percent efficiency; be designed to avoid runoff, low head drainage, overspray, or other water loss; and automatic controllers and sensors are required to suspend or alter irrigation during unfavorable or wet weather conditions. In addition to other water saving features and requirements, low volume irrigation must be in mulched areas, overhead irrigation is prohibited within 24 inches of any non-permeable surface, recirculating water is required for decorative water features, and backflow prevention devices are required to protect the water supply from contamination by the irrigation system.

To further encourage landscape water efficiency and reduce water waste, the Code requires the Estimated Total Water Use (ETWA) does not exceed the landscape area Maximum Applied Water Allowance (MAWA). Detailed irrigation plans meeting Code-provided options, must be submitted to the Town with the permit application for all applicable projects (Code Section 17.40.030).. Approval of the Documents of Project Completion is required prior to the issuance of a Certificate of Occupancy for a project. Under Code Section 17.40,060D, for projects served by MCWD, approval of Documents of Project Completion by the Town shall be marked as preliminary until MCWD confirms in writing that the preliminary approved documents have been received regardless of meter requirements.

(2) Existing Conditions

The MCWD is the public water supplier for the Town of Mammoth Lakes. As required by the California Urban Water Management Planning Act, the MCWD prepared the 2010 UWMP, which was adopted in November 2011. MCWD is currently in the process of updating the UWMP, which is anticipated to be complete mid-2016. The following discussion of water supply (existing and planned sources) is based on the 2010 UWMP, which is incorporated herein by reference. The planning horizon for the 2010 UWMP is 20 years, or through 2030, which varies slightly from the Mammoth Lakes General Plan revised horizon year of 2035.

As discussed in the UWMP, the MCWD's service area permanent population (residential population) in 2010 was 8,234 and the anticipated build-out residential and transient population is estimated to 16,737. Maximum peak combined residential and transient population is anticipated to be approximately 52,000.

The MCWD has 3,660 water service connections, and relies on a mix of water supplies from Mammoth Creek (diverted and stored at Lake Mary), the Mammoth groundwater basin, and reclaimed water. The MCWD has three water treatment plants: one surface water treatment plant supplied from Lake Mary, and two groundwater treatment plants. Groundwater is produced from nine production wells. Treated water is stored in 10 distribution system storage reservoirs, with a combined capacity of 7,500,000 gallons. The water distribution system includes 81 miles of pipelines, seven booster pump stations, and five pressure zones. The recycled water system includes an advanced wastewater treatment plant producing Title 22 quality recycled water, two booster pump stations, and 21,000 feet of distribution mains. Under the Settlement Agreement between the MCWD and the LADWP, the MCWD may divert surface water and groundwater (including the use of recycled water) up to a total of 4,387 AFY, the use of which could result in an estimated total net consumptive use of 1,779 AFY.

(a) Water System Demands and Trends

The MCWD is currently in a Level 3 Water Shortage condition and, with the current implementation of strong conservation measures, recent trends indicate a declining per capita water demand. The MCWD is also obligated to meet the provisions of the 2009 Water Conservation Act to reduce daily per capita water use by 20 percent by the year 2020. Average per capita water demand between 2001 and 2010 was 176 gpd. The mandated reduction in per capita water demand by 2020 would be 141 gpd. Permanent water conservation efforts in the Town of Mammoth Lakes reduced actual per capita gpd, which are shown as less than 119 gpd in 2010.[7]

Table 4.12-3, *Customer Water Delivery in 2010*, lists the customer water deliveries for 2010 and the breakdown by general water use category. Table **4.12-4**, *Projected Customer Water Demand, 2015-2030*, shows the projected growth in customer water demands for the same water use categories through 2030. **Table 4.12-5,** *Total Water Demand Past, Current and Projected***,** shows the total water demand (net customer deliveries, distribution and treatment system losses) through 2030. As shown in Table 4.12-5, the percent change in total MCWD water demand is projected to increase approximately 38 percent between 2015 and 2030, to a total of 4,180 acre feet. The 2010 UWMP projections reflect a reduction in system losses and utilize the 2007 General Plan and 2009-10 Town traffic model for buildout land use projections.

Table 4.12-3

Customer Water Delivery in 2010

Water Use Category	Number of Units	Acre-feet/year (AFY)
Single-family residential	2,227	450
Multifamily	6,429	926
Motel/Hotel	1,852	131
Commercial (1,000 sq ft)	1,616 sf	230
Industrial and Agriculture	Not applicable	Not applicable
Institutional (1,000 sq ft)	48	84
Irrigation (includes golf courses)(acres)	42	348
Other (process water, fire, line cleaning, etc)	Not applicable	Not applicable
Total:		2,169

Source: Mammoth Community Water District, 2010 Urban Water Management Plan, Table ES-3

Table 4.12-4

Projected Customer Demand, 2015-2030

	2015		2020		2025		2030	
Water use category	Units	AFY	Units	AFY	Units	AFY	Units	AFY
Single-family	2,363	498	2,499	545	2,625	593	2,771	650
Multi-family	7,062	1,064	7,694	1,203	8,327	1,341	8,959	1,480

[7] *Mammoth Community Water District, Urban Water Management Plan, November 2011, page ES-4.*

Motel/Hotel	2,885	212	3,917	293	4,950	374	5,982	455
Commercial	1,825	261	2,034	292	2,242	324	2,451	355
Institutional	48	89	48	94	48	99	47	103
Irrigation (golf courses)	41	441	41	533	41	626	41	178
Industrial and Process Water	Not applicable in MCWD service area							
AFY Totals:	2,565		2,961		3,357		3,751	

Source: Mammoth Community Water District, 2010 Urban Water Management Plan, Table ES-4

Table 4.12-5

Total Water Demand Past, Current, and Projected

Water Use	2010	2015	2020	2025	2030
Total Water Deliveries	2,169	2,565	2,961	3,357	3,751 AFY
Additional Water Uses and Losses	420	424	426	428	429 AFY
Total:	2,589	2,989	3,387	3,785	4,180 AFY

Source: Mammoth Community Water District, 2010 Urban Water Management Plan, Table ES-5

(b) Water Supplies

The MCWD's existing sources of water include surface water, groundwater, recycled water, and savings from water conservation (demand management) measures. The MCWD stores and diverts Mammoth Creek surface water at Lake Mary. Groundwater supply comes from nine production wells within the Mammoth groundwater basin. Delivery of recycled water meeting Title 22 water standards for unrestricted irrigation use began in 2010. The 2010 UWMP compares projected water supplies and service area demands over the 20 year planning horizon. It assesses the reliability of future supplies, including limitations to supplies and the impacts of drought and/or emergency conditions that severely curtail supply. Drought conditions considered include both a severe one-year drought and a sustained multi-year drought, based on hydrologic records for the Mammoth Basin. The 2010 UWMP also describes responses to be implemented by MCWD to reduce service area demands during emergency short term and sustained drought shortage conditions. Data presented in **Table 4.12-6**, *Water Supply by Source for Planning Scenarios at Town Buildout*, utilizes historical water years' hydrology to develop the water shortage and supply scenarios. Based on the evaluation of normal and dry year water supply estimates, the 2010 UWMP determined that under 2010 conditions, the MCWD has adequate water supply to meet community needs under the full range of water year types, including both the severe one year and sustained multi-year droughts.[8] The various scenarios

[8] *Note that 2015 was a more severe drought scenario than the one described in the 2010 UWMP. In 2015, the water content of the snow was 1.5 inches compared to the single dry year (1977) used in the 2010 UWMP, when the water content measured as 9.3 inches. MCWD is currently evaluating water resources that would be available at buildout given the most recent single year and multiple consecutive year drought scenario.*

Table 4.12-6

Water Supply by Source for Planning Scenarios at Town Buildout

	Water Sources			
Water Year Type	**Surface Water AFY**	**Groundwater AFY**	**Recycled Water AFY**	**Total Supply AFY**
Average	2,221	1,463	640	4,324
Single Dry Year	337	3,360	640	4,337
Multiple Dry Years:				
Year 1	948	2,702	640	4,290
Year 2	337	3,360	640	4,337
Year 3	2,760	814	640	4,214

Note: Buildout in the UWMP is buildout under the 2007 General Plan.

Source: Mammoth Community Water District, 2010 Urban Water Management Plan, Table ES-8

shown in Table 4.12-6 would not exceed the water cap under the Agreement of 4,387 AFY between the MCWD and the LADWP.

The UWMP, however, concluded that the long-range projection could be affected by future changes to both demands and supply. According to the UWMP, the demand analysis is largely dependent on the Town land use policies and the actual type and density of development which occurs between the present and buildout. According to the UWMP, Town policies on development type, density, and enforcement of effective landscape practices will influence water demands significantly. As also discussed in the UWMP, the MCWD's surface water supply could be impacted by climate change impacts to snowpack water content and watershed runoff patterns, to which the MCWD cannot adapt without increased surface water storage. The UWMP states that local groundwater supplies could also be impacted by the major expansion of geothermal energy production or natural changes from seismic or volcanic activity causing changes to the local hydrogeologic characteristics.

b. Methodology and Thresholds

(1) Methodology

While the Town requested that MCWD prepare a Water Supply Assessment, (WSA), "…the District's understanding of the requirements for a water supply assessment are not met unless something is proposed by a proponent that specifically meets the criteria."[9] Since the Project would allow an increase in development compared to existing regulations, MCWD indicated that the "…EIR should address the impacts of the potential increase in intensity of development, including those related to water availability."[10] Absent a WSA, an evaluation has been prepared based on available documents and information and input from MCWD.

[9] *Letter from MCWD to Town of Mammoth Lakes dated September 25, 2015.*

[10] *Ibid.*

The evaluation of water impacts compares the incremental growth that could occur under the proposed Land Use Element/Zoning Code Amendments to the water supply and demand projections contained in MCWD's 2010 UWMP. Projections contained in the UWMP reflect state-mandated per capita reductions, which limit per capita use to 141 gallons per day, and other conservation measures contained in the Water Code and Municipal Code, discussed above. Because the Mobility Element Update is not anticipated to substantially increase water demand over existing conditions, including uses associated with typical highway maintenance, the impact of the Mobility Element on water resources is not evaluated. Other proposed General Plan Amendments, including the change in the People at One Time (PAOT) policies and deleting Community Benefits Incentive Zoning (CBIZ) and Transfer of Development Rights (TDR) are administrative in character and, compared to the proposed change in FAR and General Plan policies regarding intensity of development within specific zones, are not directly related to population change. As such, these policies from the General Plan are also not considered to have an effect on water demand and are not evaluated in this section.

(2) Thresholds

For purposes of this EIR, the Town has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as thresholds of significance to determine whether a project would have a significant environmental impact regarding utilities and service systems. Based on Appendix G, the following thresholds of significance are used for the water analysis. The project would result in a significant impact if the project would:

WATER-1 Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

WATER-2 Exceed available water supplies available from existing entitlements and resources, or result in the need for new or expanded entitlements.

(3) Applicable General Plan Goals/Policies and Adopted Mitigation Measures

(a) General Plan Policies

The following is a list of policies contained in the 2007 General Plan and that are applicable to water supply:

- R.4.A Policy: The Town shall work with MCWD to ensure that land use approvals are phased so that the development of necessary water supply sources is established prior to development approvals.
- R.4.B Policy: Support and encourage water conservation and recycled water use within private and public developments.
- R.4.C Policy: Require drought-tolerant landscaping and water-efficient irrigation practices for all development and Town-maintained landscaped areas, parks and park improvement projects. Development design, including parks, may include limited turf as appropriate to the intended use.
- R.4.D Policy: Require development to use native and compatible non-native plants, especially drought resistant species, to greatest extent possible when fulfilling landscaping requirements.
- R.4.E Policy: Limit use of turf over root zones of native trees to avoid or minimize adverse impacts of excessive water to native trees.

(b) Mitigation Monitoring and Reporting Program

The Mitigation Monitoring and Reporting Program (MMRP) for the 2007 General Plan, adopted on May 23, 2007 (Resolution No. PC-2007-14) is applicable to the proposed General Plan Amendments. Since these are adopted measures, for purposes of this EIR, these measures are applied where applicable to address the impacts of the Project design features. The following mitigation measure is from the Town's adopted General Plan Update MMRP:

GPMM 4.11-1: The Town shall not approve new development applications that would result in a water demand in excess of available supplies as determined by the MCWD. The Town shall work with MCWD to ensure that land use approvals are phased so that the development of necessary water supply sources is established prior to development approvals.

c. Environmental Impacts

Threshold WATER-1: The project would result in a significant impact if the project would require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Statement WATER-1*: With the incorporation of General Plan mitigation measures and policies, in concert with development fees, plan check of service line upgrades, and construction of any new or upgraded facilities in compliance with the Water Code, it is anticipated that the construction of site-specific water main and ancillary facilities under the FAR increase would not result in significant environmental impacts. Impacts with respect to construction of treatment and conveyance infrastructure would be less than significant.*

The proposed Land Use Element/Zoning Code Amendments relative to FAR would result in a more concentrated growth pattern in the Town's commercial districts, which are currently served by water delivery infrastructure. The incremental growth could potentially affect the capacity of water mains within and beyond the Town's commercial districts. The Water Code requires adequate delivery systems and the payment of development fees, which would support necessary new or upgraded water mains and other water infrastructure. As required under the Water Code, all development plans would be submitted to the MCWD for review of local delivery systems. Any construction of water mains and other water infrastructure would be required to comply with specific rules and regulations contained in the Water Code. It is expected that any necessary upgraded water mains would be site-specific or related to specific development projects in the Town's commercial districts. The site-specific scope of construction and the required review and approval of all water main construction projects by the MCWD would ensure that appropriate construction practices, including dust and erosion control and other requirements of the Town of Mammoth Lakes Building Code,[11] would be followed and that the construction of site-specific water mains and connections would not result in significant environmental impacts.

With respect to the treatment of potable water, the MCWD has or anticipates facilities to supply water up to the projected 2030 buildout. Under the 2010 UWMP, anticipated buildout is partly based on a PAOT of

[11] *Note that the Mammoth Lakes Building Code (MLMC Title 15) incorporates the California Building Code by reference, while also implementing local amendments.*

approximately 52,000, which is less than the potential maximum population of approximately 53,980 anticipated as a result of the proposed Land Use Element/Zoning Code Amendments relative to increased FARs in the Town's commercial districts.[12] As discussed under "Water System Demand and Trends," above, State-mandated and MCWD Water Code-required conservation regulations currently in effect have resulted in a declining average per capita water demand. In addition, landscaping is discussed in State legislation, such as the California Water Efficiency in Landscaping Act, as a high-water demand land use. Land uses that result in over-all reduction in landscaping are considered more water efficient. Therefore, with the continued incorporation of rigorous conservation measures required under the Water Code, concentration of development to reduce landscaping requirements, and the incorporation of GPMM 4.11-1, which provides that new development applications may not be approved unless available supplies as determined by the MCWD, it is not expected that any currently unplanned water treatment systems would be required as a result of the proposed Land Use Element/Zoning Code Amendments. The MCWD's projected water treatment capacity is consistent with buildout demand and, although existing treatment facilities and water mains may need to be upgraded through time, the Project would not require extensive construction of new lines or treatment plant in areas that are not currently served. As such, large scale or disruptive construction projects beyond regular maintenance are not anticipated, and environmental impacts associated with construction of new delivery and treatment systems would be less than significant.

Threshold WATER-2: The Project would result in a significant impact if it would exceed available water supplies from existing entitlements and resources, or result in the need for new or expanded entitlements.

Impact Statement WATER-2: *The proposed* Land Use Element/Zoning Code Amendments *relative to FAR would result in an incrementally higher growth projection than under the 2010 UWMP. However, the implementation of GPMM 4.11-1, General Plan Policy R.4.A, and the PIEC would not allow new development in excess of available supplies. Because available supplies would not be exceeded, and expanded entitlements would not be required, impacts with respect to water supply would be less than significant.*

The proposed Land Use Element/Zoning Code Amendments would result in a potential maximum population of 53,980 comprising permanent and transient residents and hotel occupants. This would exceed the projected effective population in the 2010 UWMP, in which future (2030) water demand incorporates a buildout of 52,000 PAOT. The MCWD is obligated to meet the provisions of the 2009 Water Conservation Act to reduce daily per capita water use by 20 percent by the year 2020, the result of which is a per capita water demand for 2020 of 141 gpd. Conservation efforts currently in effect in the Town of Mammoth Lakes have already reduced gallons per day per capita water demand beyond the 2020 goal of 141 gpd, with a demand of approximately 119 gpd in 2010 (the UWMP was adopted in October 2011). The continuation of conservation efforts would encourage the lower per capita water demand into the future.

Based on extrapolated unit factors used by the MCWD to derive the UWMP's 2030 projections, as shown in Table 4.12-6, above, **Table 4.12-7**, Projected Water Demand at 2030 Buildout - Land Use Element/Zoning Code Amendments, illustrates 2030 demand with the projected growth under the Land Use Element/Zoning

[12] *The potential maximum population of approximately 53,980 represents 100 percent occupancy of all units. The vacancy rate fluctuates in Town between a year-round vacancy rate of 72 percent to a seasonal vacancy rate of 10 percent (Tishler Bise DIF Report 2015). Assuming seasonal vacancy rates, the maximum buildout population would be 48,592 people.*

Code Amendments. As shown in Table 4.12-7, the total demand with the Land Use Element/Zoning Code Amendments would be 4,302 AFY, compared to 4,180 AFY under the UWMP's 2030 projections. This would

Table 4.12-7

Projected Water Demand at 2030 Buildout
Land Use Element/Zoning Code Amendments

Water Use Category	UWMP Estimated Buildout Plus New Units or Floor Area Added by Project	Factor/Unit or Floor Area	AFY
Single Family	2,771	No Change	640
Multifamily	8,959 + 252[a] = 9,211	0.165/unit	1,520
Motel/Hotel	5,982 + 467[b] + 84[c] = 6,533	0.076/unit	497
Commercial	1,365,002 sq. ft. + 152,533[d] = 1,517,535 sq. ft.	0.000260/sq. ft.	395
Institutional	48	No change	103
Irrigation (including golf courses)	41	No change	718
Additional Water Uses and Losses		No change	445
AFY Totals:			4,318

[a] *Additional Multi-family units as a potential result of Land Use Element/Zoning Code Amendments as shown in Section 4.9, Table 4.9-5, of this Draft EIR. While the Town proposes a change from People At One Time (PAOT) and permanent/transient units, given the methodology used for water in the UWMP projected units resulting from the proposed Land Use Element/Zoning Code Amendments are broken out as permanent and transient in this table. As shown in Table 4.9-5, using the PAOT approach, 336 multifamily units could result with 252 permanent units and 84 transient units.*

[b] *Additional hotel rooms as a potential result of the Land Use Element/Zoning Code Amendments as shown in Section 4.9, Table 4.9-5, of this Draft EIR.*

[c] *Additional transient units as a potential result of the Land Use Element/Zoning Code Amendments as shown in Section 4.9, Table 4.9-5, of this Draft EIR. Please see note b above for a more detailed explanation regarding the methodology. Transient units are categorized as a hotel/motel use under the UWMP.*

[d] *Additional commercial floor area that could result from the proposed Land Use Element/Zoning Code Amendments as discussed in Chapter 2, Project Description and shown in Table 2-3 of this EIR.*

Source: ESA PCR, 2016. Multipliers are based on factors extrapolated from MCWD's 2010 UWMP Tables ES-4 and ES-5.

exceed MCWD's demand projections; however, the Project's maximum water demand of 4,318 would not exceed 4,387 AFY, which is the MCWD's existing maximum entitlement.[13] As such, the Project would not exceed the MCWD's maximum supply or entitlement described in the 2010 UWMP.

The MCWD, however, recently experienced the most severe drought year in its history. Level 3 Water Shortage Restrictions were enforced and, because of the implementation of water conservation measures, per capita water demand was substantially reduced. Recent trends show a continuing reduction in water demand that is not reflected in the 2010 UWMP. However, with potentially continuing or recurring drought conditions, the MCWD is experiencing uncertainty about the amount and timing of future aquifer recharge. The effects of drought on snowpack water content and watershed runoff patterns may require a substantial increase in surface water storage that isn't presently available. In the current preparation of the 2015 UWMP, the MCWD is evaluating water resources that would be available at buildout given the most recent single year and multiple consecutive year drought scenario. In addition to climate change, local groundwater

[13] *The 2013 Settlement Agreement between the LADWP and MCWD provides a maximum supply or entitlement of 4,387 AFY.*

supplies could be impacted by the major expansion of geothermal energy production at the Casa Diablo power plant complex, or natural changes from seismic or volcanic activity that would alter local hydrogeologic characteristics. Finally, the potential expansion of recycled water use for Snowcreek golf course and its related future development remains a major variable, since recycled water would potentially make up about 15 percent of future supply. Each of these potential influences on future water supply and demand will be re-evaluated in MCWD's 2015 UWMP Update.

Although the implementation of conservation measures currently in effect in the Town of Mammoth Lakes could result in an even lower annual per capita water use and reduce future per capita demand, with potential drought conditions and other unknown events that could affect water supply, the incremental increase in population under the Land Use Element/Zoning Code Amendments has the potential to exceed available water supplies. However, the Town will continue to implement General Plan Policy R.4.A, which requires that the Town work with MCWD to ensure that land use approvals are phased so that the development of necessary water supply sources is established prior to development approvals. GPMM 4.11-1, contained in the General Plan's adopted MMRP, requires that the Town shall not approve new development applications that would result in a water demand in excess of available supplies as determined by the MCWD. Under GPMM 4.11-1, the Town must also work with MCWD to ensure that land use approvals are phased and that water supply sources are established prior to development approvals. In addition, as discussed in Chapter 2, Project Description, of this EIR, the Town shall review and adjust, as needed, the General Plan's buildout calculations every five years. This will further facilitate coordination between the Town and the MCWD to achieve a balance between population growth and water supplies.

The Project would revise Policy L.1.A, which would replace the People At One Time approach with the Project Impact Evaluation Criteria (PIEC). Consistent with General Plan Policy R.4.A, the approach of the PIEC is to evaluate projects to ensure that development would not exceed the carrying capacity of the Town. This would also require the evaluation of a project's demand relative to available water supply. With the implementation of the General Plan policy and the use of PIEC, the proposed Land Use Element/Zoning Code Amendments would not exceed available water supplies or result in the need for new or expanded entitlements. Therefore, impacts with respect to water supply would be less than significant.

Mitigation Measures

No mitigation measures are required as the implementation of existing mitigation measures and policies would ensure that supplies are available prior to approval of new development.

d. Cumulative Impacts

The Project represents the Town's maximum anticipated development. Therefore, the impact analysis above is, by its character, a cumulative analysis. It addresses the buildout of the General Plan and the proposed incremental increase in multi-family, hotel, and commercial uses anticipated under the Land Use Element/Zoning Code Amendments. Therefore, the cumulative effects would be the same as the Project effects discussed above. As discussed above, the incremental increase over the General Plan buildout evaluated in the 2010 UWMP would be adequately served by maximum allowable water withdrawal under the LADWP/MCWD Settlement Agreement. However, recent drought conditions and other factors, such as the expansion of geothermal energy production at the Casa Diablo power plant complex, have the potential to reduce future supplies or to require greater surface water storage capacity. Because of the uncertainty of

future water supplies, future cumulative growth has the potential to exceed water supplies. , The Town's ongoing implementation of General Plan Policy R.4.A, which requires that the Town work with MCWD to ensure that land use approvals are phased so that the development of necessary water supply sources is established prior to development approvals, would ensure continued coordination of land use and water resources between the Town and the MCWD. In addition, with implementation of GPMM 4.11, no new development would be permitted if the MCWD determines that adequate water supplies were not available. Continued implementation of the adopted General Plan policy and mitigation measure would ensure that the Project would not exceed water supplies. Because the Project would not exceed the threshold criterion, the Project would result in a less than significant impact on water resources.

e. Level of Significance After Mitigation

Impacts regarding water would be less than significant. Therefore, no mitigation measures are required.

2. WASTEWATER

a. ENVIRONMENTAL SETTING

(1) Regulatory Framework

(a) State of California

(i) California Code of Regulations Title 20

Title 20, Sections 1605.1(h) and 1605.1(i) of the California Code of Regulations (CCR) establishes efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including such fixtures as showerheads, lavatory faucets and water closets. Among the standards, the maximum flow rate for showerheads and lavatory faucets are 2.5 gallons per minute (gpm) at 80 pounds per square inch (psi) and 2.2 gpm at 60 psi, respectively. The standard for water closets is 1.8 gallons per flush. In addition, Section 1605.3(h) establishes State efficiency standards for non-federally regulated plumbing fittings, including commercial pre-rinse spray valves.

(ii) Lahontan Regional Water Quality Control Plan

The Water Quality Control Plan (Basin Plan) for the Lahontan Regional Water Quality Control Board sets forth requirements for the treatment, disposal, and reclamation of municipal wastewater in accordance with state and federal water quality laws. These include CCR, Title 23, Chapter 5 related to effluent or liquid waste. According to the Basin Plan, municipal and domestic bacteriological and toxic contamination to both ground and surface waters can occur with improper disposal practices. Discharge requirements for municipal dischargers are based on case-by-case evaluation, with greater restrictions on industrial uses. As regulated under the Basin Plan, land disposal of sewage effluent includes disposal to evaporation-percolation basins, irrigation of land, disposal to constructed or natural wetlands, drying ponds or beds for municipal effluent sludge, and disposal to lined evaporation ponds. The Basin Plan states that all effluent discharged to land must not adversely impact an underlying aquifer that is designated drinking water supply.[14] Under the Basin Plan, surface water disposal is prohibited in some watersheds and the discharge of waste from existing

[14] *State of California, Regional Water Quality Control Board, Water Quality Control Plan for the Lahontan Region, 1995, page 4.4-3*

leaching or percolation systems is prohibited in the Mammoth Creek watershed above elevation 7,650 feet, including the Town of Mammoth Lakes, which is located at 7,800 feet.[15]

(b) Regional

(i) Mono County Local Agency Formation Commission Municipal Service Review and Sphere of Influence Recommendation

In accordance with Government Code Section 56425, the Mono County Local Agency Formation Commission (LAFCO) prepared a written statement of its determination regarding infrastructure needs and deficiencies, growth and population projections, financing constraints and other opportunities associated with the County's service infrastructure. The evaluation contained in Mono County LAFCO's *Municipal Service Review and Sphere of Influence Recommendation- Mammoth Community Water District (*approved October 2010) found that the expansion and renovation of existing facilities in the Town of Mammoth Lakes, including the replacement of aging equipment and/or the purchase of additional equipment, will be needed to maintain or increase the quality of service provided by the Mammoth Community Water District (MCWD). According to the evaluation, increased development throughout the MCWD's service area would create an increased need for sewer services. The evaluation states that the buildout allowed by the General Plan (52,000) would create a greater demand for wastewater services in the future and finds that the MCWD has an existing and continuing need for public facilities and services to serve the increasing and planned development in the area. The evaluation states that the MCWD has planned for the expansion and renovation of its facilities in its long-term plans according to the estimated General Plan Buildout of 52,000 by 2025. The evaluation states that the Sphere of Influence for the MCWD should be coterminous with the boundaries of the Town of Mammoth Lakes (UGB) and, accordingly, states that these boundaries recognize the district's role as the primary sewer provider for the incorporated area and would enable the district to extend service throughout the incorporated area, to existing and planned developments.[16] As noted in the evaluation, there is no demonstrated current need for additional land for urbanization.

(c) Local

(i) Mammoth Community Water District Urban Water Management Plan

The MCWD's 2010 Urban Water Management Plan (UWMP) (November 2011) addresses the key aspects of long term capital investment by the MCWD for water supply and treatment, and the influence of future land use planning and development levels within the Town. The 20-year planning horizon (through 2030) of the 2010 UWMP is less than the approximate 2035 horizon for buildout of the Town. Although not identical, the comparison of the UWMP's 2030 horizon to the General Plan's 2035 horizon would result in a conservative analysis (indicate greater demand) through an earlier buildout. The conservative analysis in this EIR would be consistent with CEQA parameters. The UWMP identifies the MCWD as the primary collection and treatment facility for wastewater in the Mammoth Lakes area. This includes wastewater generated in the Town of Mammoth Lakes, USFS campgrounds and USFS permittees in the Mammoth Lakes Basin, with the exception of 10 private cabins on the south end of Lake George. The UWMP projects that it would treat and provide 480 acre feet (AF) of recycled water by 2015.

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[15] *State of California, Op. Cit, page 4.1-8.*

[16] *Mono County Local Agency* Formation Commission Municipal Service Review and Sphere of Influence Recommendation – Mammoth Community Water MCWD, October 2010, page 35.

The UWMP's estimated wastewater collection and treatment is shown in **Table 4.12-8**, *Wastewater Collection and Treatment*. Table 4.12-8 lists the past and projected future annual wastewater generation volumes. Treated wastewater is discharged to Laurel Pond, located approximately 5.5 miles southeast of Mammoth Lakes on USFS land. Laurel Pond is a terminal surface water feature which, prior to initiation of treated effluent discharge, dried up during sustained drought periods.

Table 4.12-8

Wastewater Collection and Treatment
(Acre Feet per Year)

	2005	2010	2015	2020	2025	2030
Wastewater collected and treated in service area[a]	1,924 AFY	1,432 AFY	1,666 AFY	1,888 AFY	2,110 AFY	2,330 AFY

[a] *Projections of wastewater represent the average ratio of collected wastewater to total water demand for 2005-2030.*

Source: MCWD, 2010 Urban Water Management Plan, November 2011, Table 4-5, page 4-10.

The UWMP based the service population on the 2007 General Plan and Town's 2009-10 Town traffic model for buildout land use projections. Under the UWMP, the residential population in 2030 is estimated to grow to 12,300 and the effective annual population, which reflects the transient population, is estimated to grow to 24,201. Under the UWMP, the 2010 residential population is 8,234, the PAOT population (based on the 2007 General Plan) is 36,578, and the effective annual population is 16,739. A primary focus of the 2010 UWMP is to ensure water resources are managed efficiently to provide a reliable supply to residents and businesses. The UWMP's water supply and conservation estimates for indoor use would also apply to wastewater demand.

(d) Mammoth Community Water District Code

The MCWD Code, Chapter 11 (the "Sanitary Sewer Code") (2013) applies to the discharge or disposal of all wastes including any material which may cause pollution of underground or surface waters in, upon, or affecting the MCWD service area. It also applies to the design, construction, alteration, use, and maintenance of public sewers, house laterals, industrial connections, liquid waste pretreatment plants, sewage pumping plants, sand and grease interceptors; the issuance of permits and the collection of fees. Fees apply to the cost of checking plans, inspecting construction, and making record plans of the provided facilities. According to Section 3.14, Chapter 11 applies to maintenance of sewage pumping plants, waste pre-treatment, interceptors and other appurtenances. All such facilities must be maintained in a safe and sanitary condition required for good working order. All occupancies in the Town of Mammoth Lakes that require sanitation facilities must be connected to the public sewer. Under Sections 5.03.G and H, a letter of sewer availability for new development is required to ensure that the developer or subsequent purchaser would acquire a sewer permit prior to construction of any improvements. The letter of availability would be provided solely on a first-come, first served basis and only to the extent that the physical facilities for conveyance and treatment would have available capacity.

Division VII of the Sanitary Sewer Code establishes design standards for sewer main lines, pumping plants, new laterals and other infrastructure. Plans for any new construction, which must comply with the design

standards set forth in Division VII, must be prepared by a Registered Civic Engineer of the State of California and submitted to the MCWD for approval.

(2) Existing Conditions

The MCWD owns, operates and maintains the sewage collection system that serves the Town. The sewage system includes 78 miles of 6- and 8-inch collection lines and 8- to 18-inch interceptors. The MCWD also operates 12 sewage lift stations, a wastewater treatment plant located just east of the MCWD Base Facility, and a discharge site at Laurel Pond. The collection system is currently rated at a capacity of 8.0 million gallons per day (mgd), while the wastewater treatment plant's existing capacity is estimated to be 4.9 mgd. The MCWD has improved the wastewater treatment plant to produce up to a maximum of 1.5 mgd of treated water that meets the State's Title 22 standards.

The MCWD's wastewater treatment plant provides advanced secondary treatment, which includes biological treatment, filtration, and disinfection with chlorine. The wastewater is suitable for certain types of reuse and meets the standards set by the Lahontan Regional Water Quality Control Board. Treated wastewater is discharged to Laurel Pond, a natural sink approximately 5.5 miles southeast of Mammoth Lakes on U.S. Forest Service (USFS) and Los Angeles Department of Water and Power (LADWP) land. The pond provides disposal by percolation and evaporation and is also used as a duck nesting area. Laurel Pond is a terminal surface water feature which, prior to initiation of treated effluent discharge, dried up during sustained periods of drought. The MCWD has an obligation to maintain a minimum of 18 acres of water surface area at the pond as a mitigation measure for the recycled water project. The Forest Service, in cooperation with the State Department of Fish and Game and the district, constructed nesting mounds in the Lauren Pond area, which the district maintains by providing sufficient effluent at the site to partially cover the mounds. The district's sludge, which is the byproduct of the treatment process, is dewatered and transported to Benton Crossing Landfill where it is mixed with soil and then used for daily cover of the solid waste. The district considers this method to be suitable for the future, although they are also considering the possibility of reuse of composted material as a soil amendment. According to the MCWD, there is currently sufficient room at Benton Crossing Landfill to continue this practice.[17]

According to the Mono County LAFCO Municipal Service Review, annual sewer flows under the jurisdiction of the MCWD are approximately 534 million gallons with average daily wastewater flows of 1.4 million gallons per day (mgd) and peak flows of 2.6 mgd on holiday weekends. During periods of high snowmelt from March through June, the MCWD estimates that at least 0.1 to 0.2 mgd of daily influent derives from infiltration into the collection lines. According to the LAFCO Municipal Service review, however, the capacity of the existing sewage treatment plant is considered sufficient to serve the projected buildout peak population.[18]

Construction of a recycled water distribution system, pump stations, and pipelines to serve the Sierra Star and Snowcreek golf courses was completed in 2010. Sierra Star completed the on-site work to comply with Title 22 regulations and began using recycled water for irrigation in late summer of 2010. The golf course irrigation for Snowcreek and Sierra Star (320 AFY each), along with minor amounts of construction-use

[17] *Mono County Local Agency Formation Commission, Municipal Service Review and Sphere of Influence Recommendation, October 2010, page 18.*

[18] *Ibid.*

water, are the MCWD's only established long term uses for recycled water. Snowcreek's use of the full 320 AFY is planned to begin by 2020, but is dependent on the timing and completion of the Snowcreek Phase VIII resort development.[19] However, because of a drop in wastewater treatment output related to the current California drought, the MCWD states that it had not met its projected output of 480 AF of recycled water by 2015.[20]

According to the Inyo-Mono County Integrated Regional Water Management Plan (IRWMP) (October 22, 2014), MCWD has aging sewer lines made of substandard materials and designed for lower flows than they are currently carrying. As stated in the IRWMP, completion of certain projects, such as the Meridian Sewer Replacement Line, would eliminate the potential overflow of sewage onto the streets. The project consists of replacing approximately 1,000 feet of aging sewer main pipeline and installing 6,500 feet of new sewer main pipeline along portions of Meridian Boulevard in the Town of Mammoth Lakes. The pipeline project would replace existing asbestos cement pipe threatened by structural failure due to hydrogen sulfide corrosion exasperated by low slopes and high flows. The proposed new pipeline alignment and installation would extend the existing sewer main along Meridian Boulevard and divert flows around old asbestos pipe currently in use.[21]

The MCWD currently offers a rebate program, consistent with state-mandated requirements to reduce water demand and, secondarily, wastewater demand. The rebate program supports the replacement of old appliances such as shower heads, toilets, and washing machines with more water efficient models.

b. Methodology and Thresholds

(1) Methodology

The evaluation of wastewater infrastructure and treatment facilities considers the capacity of existing and proposed infrastructure and treatment facilities to accommodate potential increased demand of potential additional growth under the Land Use Element/Zoning Code Amendments compared to the forecasts contained in the 2010 UWMP.

(2) Thresholds

For purposes of this EIR, the Town has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as thresholds of significance to determine whether a project would have a significant environmental impact regarding utilities and service systems. Based on Appendix G, the following thresholds of significance are used in this section. The project would result in a significant impact if the project would:

> **WW-1** Cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained; or

[19] *MCWD, 2010 UWMP, October 2011, page ES-9.*

[20] *John Pederson, District Engineer, MCWD, Meeting Notes, MCWD, PCR, and Town of Mammoth Lakes, August 28, 2015.*

[21] *Inyo-Mono Integrated Regional Water Management Plan, October 22, 2014, pages 302 and 303.*

WW-2 Substantially or incrementally exceed the future scheduled capacity of the treatment plant by generating flows greater than those anticipated.

(3) Applicable General Plan Goals/Policies and Adopted Mitigation Measures

There are no applicable General Plan policies or mitigation measures from adopted Mitigation Monitoring and Reporting Programs regarding wastewater impacts.

c. Environmental Impacts

Threshold WW-1	The Project would result in a significant impact if it would cause a measurable increase in wastewater flows at a point where, and a time when, a sewer's capacity is already constrained or that would cause a sewer's capacity to become constrained.

Impact Statement WW-1: *The proposed Land Use Element/Zoning Code Amendments would generate a measurable increase in wastewater flows that could potentially constrain existing sewer line capacity. With the implementation of Mitigation Measure WW-1 and the provisions of the MCWD's Sanitary Sewer Code, under which MCWD would not issue a sewer connection permit if conveyance systems do not have adequate capacity, impacts to sewer lines would be less than significant.*

(1) Wastewater Service Lines

The proposed Land Use Element/Zoning Code Amendments would result in a potential incremental population increase of approximately 1,978 over current General Plan buildout projections. This includes permanent and transient residents and hotel occupants. The incremental increase would be generally concentrated in the Town's commercially-designated properties in the vicinity of Main Street and Old Mammoth Road.

The 2010 UWMP estimates an effective annual service area population of 24,201 at buildout (2010 UWMP Table ES-1) and wastewater generation at buildout of 2,330 AFY (2010 UWMP Table 4-5). At this generation rate, per capita wastewater generation would be approximately 0.096 AFY, or approximately 85.9 gpd. With the concentration of the incremental population increase (1,978) in the Town's commercial districts, demand on sewer lines in Main Street and Old Mammoth Road would increase by approximately 241,293 gpd. This increase has the potential to exceed the capacity of the existing lines serving the Town's commercial districts or to adversely impact any downstream sewer line capacities or deficiencies. The MCWD has further indicated that the delay of improvements in the Meridian sewer main raises further questions about line capacity in downstream areas, as well as capacity in existing mains serving the Town's commercial neighborhoods.[22] Given that this is a Program-level EIR, the specific description of a project and its location that are necessary to determine the capacity of existing main lines is not available.

State-mandated water reduction measures, enforced by the State Water Quality Control Board, require a 20 percent reduction in water demand. Respective reductions in water demand can affect wastewater generation. For instance, measures such as replacement of older appliances with more water efficient models would reduce water flowing into the wastewater system. In addition, efficiency standards that

[22] *John Pederson, District Engineer, MCWD, Meeting Notes, MCWD, PCR, and Town of Mammoth Lakes, August 28, 2015.*

reduce maximum flow rate under CCR Title 20, Sections 1605.1(h) and 1605.1(i) apply to all new federally-regulated plumbing fittings and fixtures, including such fixtures as showerheads, lavatory faucets and water closets. However, such reductions are not quantifiable with the current data (the 2010) UWMP.

As required by the MCWD's Sanitary Sewer Code, all occupancies in the Town that provide sanitation facilities must be connected to the public sewer. Sewer Code Chapter 11 Sections 5.03.G and H require the applicant of any new development, including development that would occur under the proposed Land Use Element/Zoning Code Amendments, to obtain a letter of sewer availability to ensure that the developer or subsequent purchaser would acquire a sewer permit prior to construction of any improvements. The Sewer Code further stipulates the design, construction, alteration, use, and maintenance of public sewers, house laterals, and the collection of fees. Fees apply to the cost of checking plans, inspecting construction, and making record plans of the provided facilities. The letter of availability would be provided solely on a first-come, first served basis and only to the extent that the physical facilities for conveyance and treatment would have available capacity. With the enforcement of the Sanitary Sewer Code, no building permits would be issued for uses that would exceed the capacity of specific sewer lines. To ensure that development would go forward, mitigation measures are recommended to provide for local sewer line upgrades where deficiencies are identified. With enforcement of the Sanitary Sewer Code and the applicant's responsibility to upgrade lines specifically impacted by the respective project under Mitigation Measure WW-1, impacts to existing sewer lines under the proposed Land Use Element/Zoning Code Amendments would be less than significant.

Threshold WW-2: The project would result in a significant impact if the project would substantially or incrementally exceed the future scheduled capacity of the treatment plant by generating flows greater than those anticipated.

Impact Statement WW-2: *The wastewater treatment facility would have adequate capacity to treat the projected incremental growth of 1,978 people by resulting from the Land Use Element/Zoning Code Amendments. Because population growth would not exceed the scheduled capacity of the treatment facility, impacts related to wastewater treatment would be less than significant.*

(i) Wastewater Treatment

The MCWD wastewater treatment plant's existing capacity is estimated to be approximately 4.9 mgd or approximately 5,488 AFY.[23] During periods of high snowmelt from March through June, the MCWD estimates that at least 0.1 to 0.2 mgd of daily effluent is generated due to infiltration into the collection lines. The 2010 UWMP estimates an effective annual service area population of 24,201 by buildout (2010 UWMP, Table ES-1) and wastewater generation at buildout of 2,330 AFY (2010 UWMP Table 4-5). The incremental population increase of 1,978 people that could occur under the proposed Land Use Element/Zoning Code Amendments would generate approximately 170,108 gpd or approximately 187 AFY. With the incremental increase, total demand on the wastewater treatment system would be approximately 2,517AFY, which would not exceed the MCWD's estimated treatment capacity of approximately 5,488 AFY. Because the treatment capacity would exceed the estimated growth under the proposed Land Use Element/Zoning Code

[23] *Mono County Local Agency Formation Commission, Service Review and Sphere of Influence Recommendation, Mammoth Community Water District, October 2010, page 18.*

Amendments and the MCWD has the authority to disallow development under the Sanitary Sewer Ordinance if capacity is not available, the proposed Land Use Element/Zoning Code Amendments would not substantially or incrementally exceed the future scheduled capacity of the treatment plant. It is also noted that the Project's potential buildout may not occur and, thus, represents a conservative estimate. However, because the full buildout would not exceed treatment capacity, impacts with respect to wastewater treatment capacity would be less than significant.

Mitigation Measures

Mitigation Measure WW-1: During the review of an application by the MCWD for a wastewater permit, if deficiencies in local sewer lines resulting from the application would cause the denial of the sewer permit, the applicant shall install improvements that would comply with Division VII of the Sewer Code (as reviewed by the MCWD). Where general deficiencies are identified, the Sanitary Sewer Code already provides for the collection of fees for sewer main lines, new laterals and other infrastructure.

d. Cumulative Impacts

The analysis of the impact of the Land Use Element/Zoning Code Amendments on wastewater systems is cumulative in nature because it evaluates the effects of the project in combination with the General Plan buildout. Because demand for General Plan buildout would be adequately served, and the impact evaluation for the Project determined that Land Use Element/Zoning Code Amendments would not have a significant impact on wastewater conveyance and treatment, the Project would not have a cumulatively considerable contribution to wastewater treatment, and its cumulative impact would be less than significant.

e. Level of Significance After Mitigation

Implementation of the prescribed mitigation measures would ensure that impacts regarding wastewater conveyance lines would be less than significant.

3. STORMWATER

a. ENVIRONMENTAL SETTING

(1) Regulatory Framework

(a) State of California

(i) Lahontan Regional Water Quality Control Plan

The Water Quality Control Plan (Basin Plan) (1995) for the Lahontan Regional Water Quality Control Board (LRWQCB) addresses stormwater runoff, including stormwater problems and control measures. As discussed therein, adverse water quality conditions related to stormwater discharges are a frequent and widespread problem. Stormwater control measures set forth in the Basin Plan primarily include erosion control. Source control best management practices (BMPs) discussed in the Basin Plan include street and storm drain maintenance and enforcement of ordinances to prevent illegal dumping. BMPs for residential/commercial activities include roadway and drainage facility operations and maintenance programs, BMP planning for new development projects, and retrofitting existing and proposed flood control projects with BMPs.

In 1991, the Town of Mammoth Lakes and the LRWQCB adopted a Memorandum of Understanding (MOU) regarding storm water objectives and control measures. Per the MOU, the Town was granted the authority to issue construction permits for all developments less than one acre in size and provide site inspection. Although the MOU provides the following guidelines to prevent pollution, these guidelines also address siltation and erosion that affect the capacity of the Town's storm drain system.

1. Drainage collection, retention, and infiltration facilities shall be constructed and maintained to prevent transport of the runoff from a 20-year, 1-hour design storm from the project site.
2. Surplus or waste material shall not be placed in drainage ways or within the 100-year flood plain of surface waters.
3. All loose piles of soil, silt, clay, sand, debris, or earthen materials shall be protected in a reasonable manner to prevent any discharge to waters of the State.
4. Dewatering shall be done in a manner so as to prevent the discharge of earthen material from the site.
5. All disturbed areas shall be stabilized by appropriate soil stabilization measures by October 15th of each year.
6. All work performed between October 15th and May 1st of each year shall be conducted in such a manner that the project can be winterized within 48 hours.
7. Where possible, existing drainage patterns shall not be significantly modified.
8. After completion of a construction project, all surplus or waste earthen material shall be removed from the site and deposited at a legal point of disposal.
9. Drainage swales disturbed by construction activities shall be stabilized by the addition of crushed rock or riprap as necessary or other appropriate stabilization methods.
10. All construction areas shall be protected by fencing or other means to prevent unnecessary disturbance.
11. During construction, temporary erosion control facilities (e.g., impermeable dikes, filter fences, hay bales, etc.) shall be used as necessary to prevent discharge or earthen materials from the site during periods of precipitation or runoff.
12. Revegetated areas shall be continually maintained in order to assure adequate growth and root development. Physical erosion control facilities shall be placed on a routine maintenance and inspection program to provide continued erosion control integrity.
13. Where construction activities involve the crossing and or alteration of a stream channel, such activities shall be timed to occur during the period in which streamflow is expected to be lowest for the year.

(b) Regional

(i) Inyo-Mono Integrated Regional Water Management Plan

Inyo-Mono Integrated Regional Water Management Plan (IRWMP), which was adopted October 22, 2014, sets forth funding priorities for water-related projects throughout the region. Based on needs assessments, projects throughout the region were prioritized for Proposition 84 funding applications. Several projects in the Town of Mammoth Lakes, including the Mammoth Lakes Stormwater Management Plan Phase II, have

been prioritized. As discussed therein, much of the infrastructure in the Town of Mammoth Lakes was built by Mono County prior to the incorporation of the Town in 1984. During that time, minimal emphasis was placed on erosion control, water quality or facility design. According to the IRWMP, the Town is now dealing with serious erosion issues, inadequate drainage facilities, numerous flood prone areas and a lack of water quality improvements. Several large storm events in 2006 and 2007 highlighted the existing problems in the Town and caused excessive erosion of slopes and ditches, flooding of Town facilities and private property, and discharged sediment and other pollutants to Hot Creek and Mammoth Creek. The Mammoth Lakes Stormwater Management Plan Phase II is located within the Town of Mammoth Lakes municipal boundary.

As discussed in the IRWMP, the Town is signatory to the Inyo-Mono Regional Water Management Group, and the project would be developed and completed in cooperation with this planning group. The goal of the IRWMP is to "move the Town of Mammoth Lakes toward a more proactive approach to managing stormwater, improving water quality and minimizing the risk of flooding through the development and implementation of a Stormwater Management Plan."[24] Objectives of the IRWMP relative to the Stormwater Management Plan are as follows:

- Objective 1. Develop a Stormwater Management Plan that includes provisions for improved management and policy; Capital Improvement Program (CIP); maintenance and operations; and education and outreach.
- Objective 2. Build upon the work previously completed by the Town, including the integration of the findings and recommendations included in the Erosion, Drainage and Flooding Project Final Recommendations Report dated April 11, 2008.
- Objective 3. Identify, delineate and prepare to implement CIP projects identified within the Stormwater Management Plan.

(c) Local

(i) Town of Mammoth Lakes Storm Drain Master Plan

In response to potential erosion and flooding hazards as a result of increased urbanization, the Mono County Public Works Department prepared the Mammoth Lakes Storm Drain Master Plan (SDMP) dated July 1984, which included a Master Plan Report, Design Manual, and Implementing Ordinance. An update to the SDMP specific to the Town of Mammoth Lakes was completed on May 26, 2005. The 2005 SDMP was primarily formulated to control drainage and erosion problems by establishing a program to rehabilitate existing development areas, while also providing policies, standards, and procedures to guide future development.

The 2005 SDMP identifies several existing drainage problems in the Town including the following:

- Lack of a stable drainage system in much of the community located within the Urban Growth Boundary;
- Roadside and slope erosion due to uncontrolled runoff in poorly defined channels from steep areas;

[24] *Inyo-Mono Regional Water Management Group, the Inyo-Mono Integrated Regional Water Management Plan October 22, 2014, page 303.*

- Drainage that crosses private property, and development in or near the natural drainage channels;
- Undersized culverts and channels; and
- Discharge of runoff from developed areas directly to Mammoth Creek resulting in high sediment loads to the creek and water quality degradation.

In response to these problems, the 2005 SDMP identifies general drainage improvements throughout the Town that would remedy existing drainage problems.

Three priority levels were established in the 2005 SDMP for construction of the improvements as summarized below:

- Priority 1 improvements focus primarily on eliminating existing drainage and erosion control problems;
- Priority 2 improvements include solutions to less critical drainage problems and facilities required to provide adequate drainage trunk capacity for the ultimate development; and
- Priority 3 improvements include the remainder of SDMP facilities, which are principally improvements for local storm drainage.

The 2005 SDMP retains or improves natural streams, where possible, rather than replacing them with storm pipes (for aesthetic, economic, and functional purposes). Storm pipes would be placed in streets where feasible; however, some easements would be required on private property, primarily where existing development has occurred near stream zones. The SDMP recommends the Town replace corrugated metal pipelines that failed to transmit the required 20-year flows with pipes of the same size made of concrete, PVC, HDPE, or other materials that do not have a rough texture.

(ii) Town of Mammoth Lakes Stormwater Master Plan

The Town of Mammoth Lakes Stormwater Master Plan (SMP) (2015) was developed under a Planning Grant from the IRWMP for the purpose of providing a strategy for dealing with stormwater priorities. The components of the SMP include a capital improvement program, stormwater operations and maintenance plan, public education and outreach, and a retrofit program. The purpose of the SMP is to address the following issues that have been identified by the Town:

- Highly connected drainage pathways do not attenuate flows and quickly lead to high volume, high velocity runoff which causes erosion
- Areas with inadequate drainage facilities direct stormwater runoff onto steep, unprotected slopes and across bare or unpaved areas which are easily eroded
- Erosion of these areas generates significant sediment loads deposited at lower elevations which clog stormwater infrastructure and increase the potential for flooding
- Existing stormwater infrastructure, like open channels, have little capacity to attenuate stormwater runoff, increasing erosion and the potential for flooding

- Erosion and flooding compromises roadway and stormwater infrastructure which requires more frequent and costly maintenance and repair

The priorities established under the SMP include: (i) minimize drainage issues and erosion (ii) protect creeks and streams from stormwater runoff, and (iii) effectively manage the Town's stormwater infrastructure. To minimize drainage issues, goals include identifying eight priority projects to control erosion and flooding and integrating these into the Town's Capital Improvement Program (CIP). Goals to protect creeks and streams include updating the grading permit and construction site erosion control requirements. Goals related to the management and operation of the Town's stormwater infrastructure include developing an operations and maintenance plan (O&M) for maintaining infrastructure and updating a geographic information system (GIS) to inventory stormwater infrastructure. Under this objective, deferred maintenance of existing stormwater infrastructure would be minimized.

(iii) Town of Mammoth Lakes Stormwater Capital Improvements Program

The Town of Mammoth Lakes Stormwater Capital Improvements Program (CIP) comprises Component 2 of the SMP and is intended to specifically address stormwater infrastructure deficiencies beginning in fiscal year 2016/2017. It would improve upon the Town's ability to prevent erosion, sedimentation, and drainage problems through the construction of eight priority erosion control, drainage improvement and flood control projects. These priority areas, which had been identified in the 2007 Existing Conditions report, include the following:

1. Upper John Muir Slope Protection
2. Upper John Muir Storm Drain
3. Lower John Muir Slope Protection
4. Lower John Muir Storm Drain
5. Davison Road Storm Drain
6. Majestic Pines Storm Drain
7. Forest Trail Slope Protection
8. Forest Trail Storm Drain

Projects 1 through 6 address issues identified along a generally continuous flow path. The path begins with slope stability and erosion issues at the top of John Muir Road and running eastward across Lake Mary Road, through the Majestic Pines neighborhood. Accumulated sediment along this path in the Sierra Star Golf Course increases the potential for flooding in the Sierra Valley residential area. Although no projects are proposed in the Sierra Valley residential area, the Town anticipates improvements occurring upstream would alleviate some of the previous flooding issues. Projects 7 and 8 address drainage and erosion issues identified in the North Village and the Forest Trail residential area. Timing of proposed projects will depend on the ability of the Town to identify reliable funding sources.

(iv) Town of Mammoth Lakes Operations and Maintenance Plan

The Town of Mammoth Lakes Operations and Maintenance (OMP), which comprises Component 3 of the SMP, was developed to guide the inspection, maintenance, and tracking of the Town's stormwater infrastructure and to build upon the Town's current inspection and maintenance activities. The OMP, which will be used by the Public Works, Roads and Maintenance, and GIS system, would have the added benefit over the current O&M by tracking inspections and maintenance of stormwater infrastructure. The OMP would simplify the workflow cycle (feedback loop) and will be based on current GIS as well as inspection and maintenance resources. The OMP's detailed processes were developed on input from the Town's Public Works staff, who are managing the project, and the GIS staff who will update and manage the stormwater geodatabase, and the inspection and maintenance staff. The OMP will begin with examination of a facility by a qualified inspector who enters inspection data into a GIS database. This would generate subsequent hard copy work orders that describe the needed maintenance. Maintenance is performed and information is submitted to the GIS database, which closes the workflow cycle at a particular facility. This effort is being implemented beginning in 2016. The O&M service areas include the Westside Downtown and the Allen Tract and Sierra Valley along Main Street's commercial corridor.[25]

(v) Town of Mammoth Lakes Municipal Code

Municipal Code Chapter 13.20, Storm Drainage Utility, provides for a storm drain system for the Town of Mammoth Lakes. Section 13.20.11 describes the storm drainage system as all the natural and manmade drainage system that collects and transports stormwater from the first point of contact with the ground to discharge at the town boundaries or other designated point of discharge. Included are all impervious manmade areas, street paving, curbs and gutters, catch-basins, pipes, culverts, ditches, natural swales and streams, wetlands, lakes and storage area, and all other features appurtenant thereto. Under Chapter 13.20, the Town utility (i.e., Department of Public Works) is responsible for all activity related to the water quality of runoff entering and discharging from the town's storm drainage system and for compliance with any permits required by the state of California or the federal government under the National Pollution Discharge Elimination System (NPDES). Under Section 13.20.040, all new development is subject to a storm drainage connection or impact fee at the time of sale or occupancy of the permitted improvement.

Municipal Code Section 15.08 (Construction Site Regulations) requires that construction sites must protect drainage paths and control erosion within areas cleared of vegetation during construction. These requirements support the implementation of the SMP by providing authority to regulate erosion and sedimentation from construction sites. Municipal Code Section 15.16.081.C also establishes a development impact fee for storm drainage facilities drainage, revenues from which are to be deposited into the drainage fund.

These fees support maintenance of the Town's stormwater infrastructure. Municipal Code Section 17.36.050 requires a grading permit for any lot graded or cleared of vegetation, which provides a mechanism to prevent debris and eroded materials from entering the Town storm drain system. Section 17.36.020 requires the Town to consider drainage and erosion control as a factor in lot density and, thus, helpsm to identify whether a project would cause or contribute to erosion, drainage and flooding. Section 17.36.090

[25] *Nichols Consulting Engineers, Chtd., Town of Mammoth Lakes Stormwater Master Plan, Component 3 (Operations and Maintenance Plan), O&M Service Areas Map, 2015.*

requires buffers to be landscaped between retail and residential land uses, which provides an opportunity to treat runoff with landscaped features such as bioswales or rain gardens.

(d) Town of Mammoth Lakes Drainage Facilities Standards

(i) Town of Mammoth Lakes Drainage and Erosion Control Manual

The Town of Mammoth Lakes Drainage and Erosion Control Manual (1984) sets forth procedures for the planning and design of storm drainage and flood control systems and erosion control facilities. The Manual's standards for project review and procedures for issuance of applicable grading and building permits include calculation of runoff, evaluation of storm drainage systems, temporary runoff management, erosion control, temporary and permanent soil stabilization, and regulation procedures. The Manual provides the appropriate return period (exceedance intervals) for use in the design of storm drainage and erosion facilities. In all cases, the storm drain systems shall be sized to carry 100-year peak flows without damage to persons or property. Under the Manual, individual facilities in the system may have lower exceedance intervals, but should be designed to overflow to another portion of the storm drainage system when their capacity is exceeded. For example, if a storm drain overflows into the street, the capacity of the street, curb and gutter must be adequate to carry the 100-year peak flow without flooding adjacent property.

(ii) Town of Mammoth Lakes Standards

The Town of Mammoth Lakes Department of Public Works Standards (Standards) (Revised July 2013) sets forth specific design and materials standards for the Town's public works construction projects, including streets, sidewalks, bike paths, and storm drains. Section 100 establishes standards for streets, gutters, and sidewalks, and drainage facilities. Under the Standards, roadway drainage shall be designed with considerations of the amount of runoff, erosion protection, and maintenance facilities. All drainage facilities must be approved by the Director of Public Works. Section 300 establishes standards for a range of drainage systems, including storm drain trenches, drywells, cobble swales (including rip rap), drop inlets, drainage swales, culvert standards, and yard drains (to be used for private development only where source does not originate from vehicular traffic). The Standards also provide design criteria for commercial drywell/infiltrators.

(2) Existing Conditions

The Town of Mammoth Lakes Erosion, Drainage, and Flooding Project – Existing Conditions Report (2007) was prepared to assist Town staff in the identification of existing erosion, drainage, and flood-related problem areas and to develop a prioritized list of localized solutions. The work was conducted to supplement the 2005 Storm Drain Master Plan. The principal goals of the Existing Conditions Report are to (i) Clearly identify and document existing conditions by type and location, (ii) to prioritize problems or problem areas; (iii) to develop and document localized solutions through enhancements or projects; (iv) to integrate projects with the Town's Capital Improvement Program and Storm Drain Master Plan; and (v) to provide basic stormwater program assistance.

To provide a clear presentation of existing conditions, the project was divided into seven priority areas in which flooding or erosion have the potential to occur based on topography and other factors. Area 1, which comprises John Muir, Davison, and Lee Roads, is a steep residential neighborhood. Because of the steep terrain, this area has a history of erosion associated with cut and fill slopes, drainage ditches, unstable road shoulders, and unpaved parking surfaces. In addition, because of the steeper topography, this area generates

faster and more sediment-filled runoff to lower neighborhoods within the Town. The area has limited drainage infrastructure and flooding has been experiences in several locations throughout Area 1.

Figure 2-1, Project Areas, of the Existing Conditions Report identifies the Town's seven drainage priority areas. As shown in Figure 2-1, the north edge of Area 6 encompasses the south side of Main Street in the Town's commercially-zoned neighborhood. The Existing Conditions Report describes Area 6 as relatively flat and densely developed residential neighborhood with a mix of single-family and multi-family structures. The area is bounded by Main Street to the north, Manzanita Road to the east, Dorrance Drive to the south, and Lupin Street to the east, and Callahan Way and Obsidian Place to the west. The report states that roads are primarily residential streets with slopes of approximately 4 percent. Drainage flows from west to east in three primary drainage systems which converge at the end of Center Street.[26] The focus of the report is on Sierra Valley Sites, including Joaquin Road, Lupin Street, Mono Street, and Manzanita north of Dorrance Drive, the report mentions that Area 6 includes a portion of the South Frontage Road along Main Street.

The main drainage systems in Area 6 are comprised primarily of open channels linked by culverts under roads. In some locations, the lack of roadside drainage ditches has recreated rill and gully erosion of road shoulders. However, the report states that the main erosion issue is the abundance of unpaved parking areas and driveways.[27] The surface drainage channels in the area have capacity issues related to sedimentation and encroachment from adjacent development. Sheet flow is also gathering loose sediment and carrying it back into the culvert system. According to the report, flooding in Area 6 generally coincides with the two primary drainage systems in the residential subdivision.[28] Flooding and upstream concerns related to Main Street, the commercial zones, or the Frontage Road are not described in the report.

Existing stormwater facilities in the Main Street and Old Mammoth Road areas include storm drain pipes in Main Street between Minaret Road on the west and Old Mammoth Road on the east. Drop inlets and catch basins are located along Main Street and Sierra Park Road. Storm drain pipes are also located in Sierra Nevada Road, between Old Mammoth Road and Sierra Park Road, in the Old Mammoth Road district. Sierra Park Road also contains storm drain pipes and drop inlets between Tavern Road and Sierra Nevada Road.

The drain system for the Town begins in upper Lake Mary Road area (around Davison) with various connections from Sierra Valley. However, the system is not continuous. The ultimate outlets for the Town's stormwater system are Murphy Gulch and Mammoth Creek.

With the exception of a portion of the Town's Mixed-use/Lodging and Downtown Commercial Zones along Main Street, the Town's commercial zones are not located within any of the seven areas identified in the Town of Mammoth Lakes Erosion, Drainage, and Flooding Project – Existing Conditions Report (2007). The Old Mammoth Road commercially-zoned areas are not located within any of the Existing Conditions Report's Project Areas and, thus not identified as drainage problem areas. Although a section of Main Street and the Frontage Road between approximately Callahan Way on the west and Center Street on the east is located within Area 6. However, any unpaved parking areas or open drain areas in the commercial neighborhoods

[26] *Nichols Consulting Engineers, Chtd., Town of Mammoth Lakes Erosion, Drainage, and Flooding Project Existing Conditions Report, December 2007, page 5.*

[27] *Op. Cit., page 21.*

[28] *Op. Cit., page 22.*

have the potential for erosion. The 2015 SWP also identifies significant runoff from large impervious areas associated with multifamily developments and commercial parking lots and states that higher runoff from these areas overwhelm stormwater infrastructure, exacerbate erosion and increase potential for flooding.[29]

(a) Town of Mammoth Lakes Erosion, Drainage, and Flooding Project – Final Recommendations

The Town of Mammoth Lakes Erosion, Drainage, and Flooding Project - Final Recommendations Report (2008) (Final Recommendations Report) was prepared to assist Town staff with the identification of existing drainage and flood related problem areas and to develop a prioritized list of localized solutions that would allow the Town to become proactive in the way it manages its stormwater. The work performed as part of the report is intended to enhance and supplement work previously conducted for the 2005 SDMP. Relative to stormwater runoff, the report addresses issues not presented in the SDMP, including:

- Discussion of flood prone areas;
- Impacts of erosion and sedimentation on the storm drain system;
- Existing condition of surface conveyance and capture facilities (i.e. earthen ditches, curb and gutter, AC dike, AC swale, drop inlets, catch basins, etc.); and
- Impact of runoff from private impervious surfaces.

The Final Recommendations Report suggests that, in order to address the impact of stormwater runoff from large impervious surfaces in the Town's commercial districts, the Town engage owners or managers in discussions about opportunities to reduce stormwater runoff from private property. Some alternatives for addressing this issue include cooperative agreements, shared facilities and cost sharing opportunities. Other options include developing and implementing a Low Impact Development[30] (LID) education program or the passing of a local ordinance requiring erosion control and stormwater BMPs be implemented for all developed properties. Pertinent to the Town's commercial district, the Final Recommendations Report offers several items of consideration. These include:

- When feasible, separate urban runoff from upland runoff. This will minimize the volume of surface flow reaching the Town's storm drain infrastructure in some locations.
- A major emphasis should be placed on reducing stormwater runoff peak flows and volumes through infiltration or detention. This is particularly important in the higher elevation areas of the Town in order to reduce the stress placed on drainage infrastructure in the lower portions of the Town.
- Identify opportunities to disperse flows at various locations eliminating concentrated discharge points to the maximum extent practicable.

[29] *Nichols Consulting Engineers, Chtd., Town of Mammoth Lakes Stormwater Master Plan, 2015, page 16.*

[30] *LID is an approach to land development (or re-development) that manage stormwater as close to its natural source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. Many practices have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed.*

The Final Recommendations Report also provides specific flooding improvement measures. Recommended drainage and flooding improvement measures primarily include infiltration devices such as shallow impoundments to infiltrate stormwater, infiltration trenches, drywells (subsurface structures that capture and slowly release stormwater), and level spreaders that reduce storm water velocity and encourage infiltration. Detention basins, which are ponds or low areas with an outlet designed to hold water for a specified period of time (generally 48 to 72 hours), are also recommended.

b. Methodology and Thresholds

(1) Methodology

The evaluation of storm drains systems considers the ability of existing infrastructure to accommodate stormwater or snow melt runoff, the solutions that have been advanced by 2014 Inyo-Mono Integrated Regional Water Management Plan, the 2005 Stormwater Management Plan, and the 2008 Erosion, Drainage, and Flooding Project - Final Recommendations Report. The analysis discusses the potential reduction in permeability associated with future development under the Land Use Element/Zoning Code Amendments, the extent to which such development would require the construction of new drainage control systems, and measures that would attenuate the potential effects of additional surface water runoff. The effects of the Mobility Element Update, which could result in the construction of new street linkages and implementation of the Main Street Plan, are also considered with respect to existing or expanded future storm drain facilities or relocation of existing storm drains.

(2) Thresholds

For purposes of this EIR, the Town has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as thresholds of significance to determine whether a project would have a significant environmental impact regarding utilities and service systems. Based on Appendix G, the following threshold of significance is used. The project would result in a significant impact if the project would:

STRM-1 Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

(3) Applicable General Plan Goals/Policies and Adopted Mitigation Measures

(a) General Plan Policies

The following is a list of policies contained in the 2007 General Plan that are applicable to the storm drainage effects.

- R.5.A. Policy: Wisely manage natural and historic drainage patterns.
- R.5.B. Policy: Require parking lot storm drainage systems to include facilities to separate oils and silt from storm water where practical and when warranted by the size of the project.
- R.5.C. Policy: Prevent erosion, siltation, and flooding by requiring use of Best Management Practices (BMPs) during and after construction.

(b) Trail System Master Plan Mitigation and Monitoring Program

The following is a list of mitigation measures contained in the Trails System Master Plan Mitigation Monitoring and Reporting Program (MMRP) that are applicable to the trail components of the proposed Mobility Element Update:

TSMM 4.H-12: Runoff control measures shall be implemented in the design of trails as follows:

a. Maintain minimum trail gradients. Maintain positive surface drainage by means of out-sloped, in-sloped, or crowned sections having cross slopes of 3 percent to 5 percent for soft surfaced trails and 2 percent for hard surfaced trails. The trail surface should be graded to shed water before it can run very far down the trail. MUPs with significant cut-slopes shall be designed to eliminate drainage down or across fill slopes to prevent erosion.

b. Maintain the minimum trail width suitable for uses specified. Maintain only the width of trail necessary to support the designated uses.

c. Avoid long sustained grades that concentrate flows by providing drainage at frequencies appropriate for soils and gradients. Roll grades or undulate the trail profile frequently to disperse water from the trail. Features such as rolling dips and water bars to provide essential drainage relief shall be incorporated into soft surface trail design.

d. Prevent erosion at outlets of rolling dips and culverts through incorporation of measures that include but are not limited to: armoring of drainage outlets with rock to prevent erosion; spreading of brush or native organic debris in lead-off ditches to slow the velocity of the runoff and facilitate the deposition of sediments.

e. Install pipes and ditches, including road and trail under-drains (culverts) and associated ditches, when other measures would not be effective, and only when maintenance funds are available to maintain them.

f. Avoid discharging trail runoff onto fill slopes and unprotected slopes. Fill slopes should be armored where runoff is discharged onto them or the runoff should be conveyed in a down drain to a location where sediments can be deposited and flow infiltrated.

g. Avoid concentrated runoff from flowing on to trails and paths.

TSMM 4.H-13: Prior to construction of trails and trails related facilities, complete more detailed engineering study to determine the appropriate design and sizing of storm drain facilities, based on hydrologic data. All culvert sizes shall be prescribed by a qualified engineer based on the size of the contributing watershed and best hydrologic data available.

TSMM 4.H-14: A Maintenance Plan for proposed trails shall be developed in conjunction with design that specifies the type and frequency of maintenance activities to be employed for the soil types and terrain of the trail or MUP. Trails and MUPS shall be designed to minimize the need for grading. The following provisions shall also apply to trail maintenance activities per the Maintenance Plan:

- Season of work. Maintenance work that results in disturbed earth should be conducted outside the wet season (typically October 15 to May 1). If necessary,

blading shall be done when the trail surface materials are moist, but not dry, to the extent possible.

- Disposal/storage of excess earth materials. Areas for disposal of excess earth materials generated during maintenance activities shall be designated in the Maintenance Plan. Excess earth materials that must be stored shall be covered with plastic or a thick layer of wood chips.

TSMM 4.H-15: Areas of disturbed earth shall be seeded with native plant materials and mulched as soon as possible after disturbance. Also refer to Mitigation Measure 4.A-3, in Section 4.A, *Aesthetics and Visual Resources*, of this EIR. Wood chips shall not be used where improved drainage facilities are located, that could become clogged.

TSMM 4.H-16: In parking areas, avoid grades in excess of 5 percent where possible. Design of all parking areas shall adhere to the following:

a. Design parking areas to minimize concentration of runoff.

b. Maintain the smallest paved area feasible to meet parking requirements.

c. Install sand/oil separators to collect and contain pollutants from runoff from parking areas.

d. Install infiltrators and oil/water separators to collect initial runoff from parking lots.

e. Connect parking areas to existing storm drainage systems or install level spreaders. If necessary, drainage outlets shall be armored with rock to prevent erosion. Brush or native organic debris can be spread in lead-off ditches to slow the velocity of the runoff and facilitate the deposition of sediments.

f. Avoid discharging runoff onto fill slopes and unprotected slopes. Fill slopes receiving discharge shall be armored, or runoff shall be conveyed in a down drain to a location where sediments can be deposited and flow infiltrated.

g. Parking areas shall be designed in accordance with the Town's drainage design manual, and sited so as to avoid water courses and adverse effects wetlands or water quality.

c. Environmental Impacts

Threshold STRM-1: The Project would result in a significant impact if it would require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Impact Statement STRM-1: *With the enforcement or incorporation of existing Municipal Code requirements, General Plan policies, and adopted mitigation measures, surface runoff from potential new development and implementation of the Mobility Element Update would not substantially reduce the capacities of the Town's existing storm drain system. Therefore, impacts with respect to drainage would be less than significant.*

Potential buildout of the Town's commercial area under the proposed Land Use Element/Zoning Code Amendments would allow denser development of the Town's commercially-zoned downtown area. Although implementation of the proposed Land Use Element/Zoning Code Amendments would not change

development standards, such as on-site retention of runoff produced from a one-hour 20-year storm event, the location of buildings, driveways, and other paved surfaces within eight acres of existing vacant land would increase overall surface runoff in the commercial districts. Any increase in surface runoff could affect the Town's existing drainage systems, which have been identified in the 2015 SMP as potentially deficient. The Town's OMP, included in the 2015 SMP, further identifies the need for O&M services in the Land Use Element/Zoning Code Amendments study area, including Westside Downtown and the Allen Tract, which are part of the Old Mammoth Road commercial district, and Sierra Valley, which is located along the south side of Main Street in the Main Street commercial district.

In addition, the extension and reconfiguration of streets under the Mobility Element Update would increase impervious surfaces. Although new street construction would be consistent with the Town's Standard Plans (Section 300, Drainage) regarding surface runoff and drainage, implementation of the Mobility Element Update would require grading and potential alterations in the drainage patterns at respective construction sites and would require verification of available capacity in the local drainage system.

Impacts on drainage facilities associated with development can be partly addressed through several existing regulations in the Municipal Code. These include drainage impact fees that support maintenance of the Town's stormwater infrastructure; grading permits for grading and clearing of vegetation, which is a mechanism to prevent debris and eroded materials from entering the Town storm drain system; and landscaped buffers between retail and residential land uses, which provides an opportunity to treat runoff with landscaped features such as bioswales or rain gardens.

As discussed in the 2015 SMP, infiltration devices such as a drywell, infiltration gallery, shallow impoundment basin, or other subsurface structure would further reduce surface runoff from impermeable or primarily impermeable sites. The use of infiltration devices would retain and direct stormwater into the soil in a controlled manner to remove pollutants and to reduce peak flow and event volumes. Some infiltration devices may have an outlet riser, but most would drain into the soil or an underground pipe. To ensure implementation of the SMP and to further address the potential increase in surface runoff in the Town's commercial districts under the proposed Land Use Element/Zoning Code Amendments, mitigation measures, such as the use of infiltration devices at newly paved or covered sites, are recommended. Mitigation Measure STRM-1, below, requires the installation of infiltration devices such as a drywell, infiltration gallery, shallow impoundment basin, or other subsurface structure. With the implementation of this measure, in combination with consistency with the applicable General Plan Policies, as reflected in Municipal Code requirements, peak or event-related surface runoff from newly impermeable sites would be minimal. This approach would be consistent with the Town's OMP for outreach to reduce impervious areas. All infiltration systems must be consistent with the design criteria for commercial drywell/infiltrators set forth in the Department of Public Works' Standards for proposed private development projects. Depending on the configuration of the site, bioswales may be implemented to increase retention of stormwater or snowmelt. Therefore, the implementation of applicable Municipal Code requirements and Mitigation STRM-1 would reduce the impact of the proposed Land Use Element/Zoning Code Amendments to the Town's existing storm drain system to a less than significant level.

The paving of vacant sites and unpaved driveways and parking lots under the project would also be consistent with the OMP to reduce erosion and the amount of sediment that currently spreads to existing roads and culverts. As such, the completion of buildout under the proposed Land Use Element/Zoning Code

Amendments would reduce siltation and erosion that could cause clogging and erosion of the existing storm drain system.

Under the proposed Mobility Element Update, new street connections and trails would potentially increase runoff into the Town's storm drain system. Improvements would include the reconfiguration of Main Street, which would likely occur with new development on Main Street. Reconfiguration would include the removal of the existing frontage roads and conversion to a four-lane cross-section with a center median and turn pockets. As well as potentially increasing impermeability, this change would require the relocation of existing storm drain facilities. New road construction would require consistency with the Department of Public Works' Standards and all new public streets, sidewalks, and trails projects must provide drainage facilities. Under the Public Works' Standards, roadway and sidewalk drainage shall be designed with consideration of the amount of runoff generated by the facility, as well as erosion protection and maintenance facilities. All drainage facilities must be approved by the Director of Public Works. Section 300 of the Standards establishes design criteria for a range of drainage systems, including storm drain trenches, drywells, cobble swales (including rip rap), drop inlets, drainage swales, and culvert standards. In addition, as indicated above the MMRP for the Trails Master Plan, TSMM 4.H-12 through 4.H-16 (which are applicable to trails and trail head parking areas), in combination with applicable Municipal Code Regulations and the Town's Standards for public works projects in the Mobility Element Update would reduce potential adverse impacts on the Town's existing drainage system to a less than significant level.

Mitigation Measures

MM STRM-1 Potential peak surface runoff shall be determined for all private projects. Suitable infiltration or other containment systems, such as dry wells, galleries, or basins, shall be designed to reduce net runoff increase to existing conditions. All infiltration devices shall be consistent with the Town Standards and shall be reviewed and approved by the Department of Public Works. The property owner shall perform inspection twice a year (Spring and Fall) and after major storm events and shall provide any needed maintenance or cleanout.

d. Cumulative Impacts

The analysis of the impact of the Land Use Element/Zoning Code Amendments and Mobility Element Update on stormwater facilities is cumulative in nature because it evaluates the effects of the project in combination with the General Plan buildout. Because the impact evaluation determined that, with incorporation of Town Standards, DFs and Mitigation Measure STRM-1, the Mobility Element Update and Land Use Element/Zoning Code Amendments would not have a significant impact relative to stormwater, the Project would not have a cumulatively considerable contribution on surface drainage, and its cumulative impact would be less than significant.

e. Level of Significance After Mitigation

With implementation of Town Standards, Municipal Code requirements, adopted mitigation measures, and Mitigation Measure STRM-1 regarding stormwater facilities and erosion control, impacts to surface drainage facilities would be less than significant.

4. SOLID WASTE

a. ENVIRONMENTAL SETTING

(1) Regulatory Framework

(a) State of California

(i) Assembly Bill 939 - California Integrated Waste Management Act of 1989

The State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939) to improve solid waste disposal management with respect to (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. AB 939 mandates jurisdictions to meet a diversion goal of 50 percent by 2000 and thereafter.

AB 939 requires that all counties and cities develop a comprehensive solid waste management program that includes a Source Reduction and Recycling Element (SRRE) to address waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste (asbestos, sewage sludge, etc.), and household hazardous waste. It also requires counties to develop a Siting Element that addresses the need for landfill/transformation facilities for 15-year intervals; and it also mandates, all cities and counties to prepare and submit Annual Reports that summarize the jurisdictions' progress in reducing solid waste. Oversight of these activities was set up under the aegis of the California Integrated Waste Management Board (CIWMB). The duties and responsibilities of CIWMB were transferred to CalRecycle as of January 1, 2010.

(ii) Senate Bill 1374 – Construction and Demolition Waste Materials Diversion Requirements

Senate Bill 1374 was signed into law in 2002 to assist jurisdictions with diverting their construction and demolition (C&D) waste material. The bill called for preparation of a model C&D diversion ordinance by March 1, 2004, such model ordinance being adopted on March 16, 2004. The bill also required that jurisdictions include in their annual AB 939 report a summary of the progress made in diverting C&D wastes.

(iii) Assembly Bill 341 – Commercial Solid Waste Recycling

AB 341, which took effect on July 1, 2012, was designed to help meet California's recycling goal of 75 percent by the year 2020. AB 341 makes "…a legislative declaration that it is the policy goal of the state that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020…" AB 341 requires a business, defined to include a commercial or public entity that generates more than 4 cubic yards of commercial solid waste per week or a multifamily residential dwelling of 5 units or more to arrange for recycling services. Such business/residential development must: 1) source separate recyclable materials from the solid waste they are discarding, and either self-haul or arrange for separate collection of the recyclables; and 2) subscribe to a service that includes mixed waste processing that yields diversion results comparable to source separation.

(iv) Assembly Bill 1826 –Commercial and Multi-Family Organics Recycling

In October 2014 AB 1826 was signed into law, which requires that businesses, including multi-family dwellings of five or more units, recycle organic wastes.[31] Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. The minimum threshold or organic waste generation decreases over time, which means that an increasingly greater proportion of the commercial sector will be required to comply. The law offers an exemption process for rural counties. Jurisdictions must provide information about their organic waste recycling program implementation in the annual report submitted to CalRecycle. The implementation schedule is as follows:

- January 1, 2016: Local jurisdictions must have an organic waste recycling program in place; jurisdictions must conduct outreach and education to inform businesses how to recycle organic waste and monitoring to identify those not recycling and inform them of the law.
- April 1, 2016: Businesses that generate eight cubic yards of organic waste per week must arrange for organic waste recycling services.
- January 1, 2017: Businesses that generate four cubic yards of organic waste per week must arrange for organic waste recycling services.
- January 1, 2019: Businesses that generate four cubic yards or more of commercial solid waste per week must arrange for organic waste recycling services.
- Summer/Fall 2021: If CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50 percent of the level of disposal during 2014, the organic recycling requirements on businesses will expand to cover businesses that generate two cubic yards or more of commercial solid waste per week. Additionally certain exemptions, previously discussed, may no longer be available if this target is not met.

(v) Assembly Bill 1594 – Alternative Daily Cover

AB 1594 was signed into law on September 28, 2014. AB 1594 required that the use of green material as alternative daily cover will not constitute diversion through recycling and would be considered disposal beginning January 1, 2020. Therefore, jurisdictions will no longer receive CalRecycle diversion credits for green waste that is used as alternative daily cover.

(b) Mono County

Mono County Local Solid Waste Task Force (SWTF), which is a group of citizens that advise elected officials on matters relating to the solid waste program in the County, was originally established in 1990. The group was re-authorized and re-organized in 1999 following a period of inactivity. The SWTF developed the 2000 County Integrated Waste Management Plan (CIWMP), which guided the County's solid waste system until recently. By 2012 there were emerging diversion programs as discussed above and required by state law, proposed infrastructure and pending closure of the regional landfill which caused the need for the County to formally update the CIWMP. In September 2012 with changes in membership on the LTF a new set of bylaws were adopted by the Mono County Board of Supervisors and the Town of Mammoth Lakes Town

[31] *Multi-family dwelling are not required to have a food waste diversion program.*

Council. Members of the LTF include waste haulers and recyclers, representatives from the construction and lodging industries, Mammoth Mountain Ski Area, Mammoth Community Water (MCWD), and members at large.

Pursuant to AB 939, each County is required to prepare and administer a Countywide Integrated Waste Management Plan (IWMP), including preparation of an Annual Report. The IWMP comprises the jurisdictions' solid waste reduction planning document plus an Integrated Waste Management Summary Plan (Summary Plan) and a Countywide Siting Element (CSE). The Summary Plan describes the steps to be taken by local agencies, acting independently and in concert, to achieve the mandated state diversion rate by integrating strategies aimed toward reducing, reusing, recycling, diverting, and marketing solid waste generated within the County. The County's Department of Public Works (Public Works) is responsible for preparing and administering the CIWMP.

The purpose of the CSE is to demonstrate that a minimum of 15 years of permitted disposal capacity is available through existing or planned facilities on a countywide or regional basis. To meet this requirement, the CSE describes the geographic context of the planning area, defines the goals and objectives of this element, provides an estimate of existing countywide disposal capacity, demonstrates that existing capacity exceeds 15 years, and presents general criteria for future siting of new facilities.

The County prepared the CIWMP (including the Summary Plan, the Non-Disposal Facility Element, the Siting Element and the Household Hazardous Waste Element) as part of the County's overall Draft Regional Transportation Plan (RTP)/General Plan Update. The Final EIR was certified in December 2015 and the CIWMP was adopted. The CIWMP, which is dated January 2015, contains an updated set of goals, policies and alternatives to achieve additional waste management goals in the years ahead.

In May 2015, the Mono County Board of Supervisors approved Resolution R 15-30, A Resolution of the Mono County Board of Supervisors, exempting itself and business operating within its jurisdiction from the requirements of AB 1826. As indicated above, AB 1826 contains a provision that allows such an exemption for a rural county, which is defined as a county that has a total population of less than 70,000 persons. Mono County has a population of less than 15,000 persons as of the Department of Finance's most current population estimates.

(c) Town of Mammoth Lakes

The Town Council of Mammoth Lakes adopted Ordinance No. 15-04 on September 16, 2015, which amended the Town's Municipal Code and added Chapter 8.13, Construction and Demolition Waste Management. The requirements contained in the ordinance became effective on October 16, 2015. The purpose and intent of Chapter 8.13 is to require construction and demolition (C&D) waste management within the Town so as to enable the Town to work toward reducing the amount of waste disposed of in landfills. The code requires that applicants of covered projects divert a minimum of 50 percent of the construction and demolition debris resulting from the project. Covered projects shall be all projects meeting any of the criteria listed in the most current edition of the CALGreen Construction Waste Reduction Requirements. The code requires that a Waste Management Plan be submitted and approved by the Town Manager prior to issuance of the building permit. The Waste Management Plan must include the estimated volume or weight of construction and demolition material by type and an estimate of volume or weight of each material that could be diverted and the amount that would be disposed of at a landfill.

With regard to AB 1826, the Town Council of Mammoth Lakes adopted a resolution exempting the Town from AB 1826, as allowed by the legislation. As indicated in the resolution, the Town does not have the existing infrastructure, composting or anaerobic facilities, with the capacity to economically handle all the organic waste produced within the jurisdiction. With the amount of organic waste generated in the Town and the lack of infrastructure it is not economically feasible for the Town to build sustainable processing facilities necessary to handle all the organic waste produced within the county. However, the Town is committed to continue to pursue economically feasible alternatives for organics management and to encourage businesses to reduce and recycle organics materials. Town staff expects to continue its work with the Mono County SWTF and will continue its efforts to look for viable ways to increase recycling of all types.

In compliance with Public Resource Code Section 42911, Section 17.36.130 of the Town's Municipal Code requires the provision of solid waste and recyclables separation and storage areas for new multi-family residential development of three or more units and non-residential development. The dumpsters and recycling containers must be located on a paved area within all multi-family projects of three or more units, commercial, and industrial development. The area shall be readily accessible to refuse collection and recycling vehicles. The location and size of the storage areas are approved by the Community and Economic Development Director. All trash enclosures, receptacles, and food storage areas shall be animal resistant.

(i) General Plan

The Resource Management and Conservation Element establishes and emphasizes the Town's stewardship of the community's natural resources. The intent of the Resource Management and Conservation Element indicates the Town's emphasis on sustainability through green building design strategies and energy efficiency. Goal R.9 of the Element addresses solid waste and the goals and policies are provided below in Section (b)(3).

(2) Existing Conditions

The solid waste system in Mono County includes disposal facilities (landfills) and non-disposal facilities (transfer stations). Two facilities, Chalfant, and Bridgeport, were closed in 2007-2009. These three facilities are in the post-closure maintenance period with operating Transfer Stations at those locations. These facilities accept clean wood waste and organics, which is chipped onsite and beneficially re-used for post-closure maintenance, or distributed to the public.

Three active landfills accept disposal of solid waste in Mono County. Two of these landfills, Pumice Valley and Walker, currently accept only inert commercial and demolition (C&D) waste for burial with cover activities occurring every 90 days. These two sites have onsite Transfer Stations that accept municipal solid waste, recycling and HHW for transport for off-site disposal. The Benton Crossing Landfill has been the County's regional, and sole municipal solid waste landfill, for over 10 years. Benton Crossing Landfill, which is owned and operated by the County of Mono, is located approximately five miles east of the intersection of U.S. Highway 395 and Benton Crossing Road on a site leased from the Los Angeles Department of Water and Power (LADWP). The landfill is approximately l45 acres in size with a landfill footprint of approximately 72 acres.

This facility receives waste from the general public, from the outlying Transfer Stations, and from commercial collection routes throughout the county. The Benton Crossing Landfill accepts all putrescible and non-putrescible solid and semi-solid waste including garbage, trash, refuse, paper, rubbish, ashes, industrial

wastes, construction and demolition wastes, abandoned vehicles and parts, home and industrial appliances, manure, vegetable or animal solid and semi-solid wastes. In addition to typical non-hazardous municipal solid waste, the Benton Crossing Landfill accepts source-separated waste for management through its waste diversion program, including wood waste, scrap metal, white goods and appliances, waste tires, non-hazardous sewage sludge, CRTs, CEDs, HHW and used oil and filters. Benton Crossing Landfill also performs vital non-disposal functions as part of normal operations. This includes the processing and diversion of clean wood waste, as well as the processing and sorting of certain C&D waste. These efforts include the periodic crushing of C&D aggregate material as well as the sorting of mixed C&D to reduce the amount of metal and clean wood within the mixed loads. The landfill also provides sludge management and diversion services for biosolid waste originating primarily in the Town of Mammoth Lakes, through the Mammoth Community Water District.

In terms of capacity, the Benton Crossing Landfill receives an average of 102 tons per day (tpd) (204 cubic yards/day) of municipal solid waste and construction and demolition debris. The maximum daily permitted throughput is 500 tpd with a maximum annual permitted capacity of 156,000 tons as indicated on the Solid Waste Facility Permit. As indicated in the CIWMP, the Benton Crossing Landfill has a remaining capacity of 817,300 cubic yards. The projected closure date of the landfill is December 2023.

In terms of overall regional capacity, the CIWMP indicates that the County will not exhaust its remaining permitted disposal capacity for over 13 years. If the proposed disposal capacity is included, this period grows to over 17 years. In addition, an increase in diversion would extend the capacity further.

Mono County does not currently have plans to establish any new solid waste disposal sites within its jurisdictional boundaries. With the future closure of Benton Crossing, the County is exploring other concepts for solid waste disposal. First and foremost are efforts to reduce the waste stream through increased diversion and recycling. Another concept is the early closure of Benton Crossing Landfill, coupled with the development of a Regional Recycling Center and Transfer Station or the siting of a similar facility in close proximity to the Town of Mammoth Lakes, through a federal land exchange. The County anticipates that one or more of these proposals will come to fruition in the coming years.

Solid waste collection service for the Town is provided under a franchise agreement with Mammoth Disposal, a subsidiary of Waste Connections, Inc. Solid waste collection service is provided via community trash bins at a centralized collection station on Commerce Drive and by individual customer pickup by Mammoth Disposal.

The majority of the solid waste generated by the Town is transferred to the Benton Crossing Landfill for disposal. In 2014, the Town of Mammoth Lakes generated about 13,037 tons of solid waste that was disposed of in landfills. Of this, 13,036 tons were disposed of at Benton Crossing Landfill and one ton was disposed of at El Sobrante Landfill.

Based on the most recent data available on the CalRecycle website, in the time period from 2010 to 2014 the amount of solid waste disposed by the Town is fluctuating but going down.[32] In 2010 approximately 15,319 tons were disposed and by 2014 there were 13,037 tons disposed. Similarly, the per capita disposal has also gone down between 2010 and 2014. In 2010 the per capita for population was 10.20 pounds per day (PPD)

[32] *CalRecycle website http://www.calrecycle.ca.gov/lgcentral/report, accessed April 1, 2016. Various diversion reports run from the website to obtain the data provided in this discussion.*

and in 2014 with a slight increase in population the per capita was 8.80 PPD. The employment per capita went down as did the employment numbers between 2010 and 2014. In 2010 the employment per capita was 18.3 PPD (with employment shown at 4,592 employees) and this fell to 17.9 PPD by 2014 (with employment show at 3,986 employees). The target per capita for population is 17.6 PPD and for employees is 32.9 PPD. Thus, while the Town is achieving some reduction in disposal, the Town is not yet meeting the target per capita.

With regard to diversion, the Town has 39 diversion programs in place ranging from composting, recycling including drop-off and buy-back as well as residential curbside and school and government recycling.[33] In addition, the Town has special waste materials programs including sludge, white goods, tires, and scrap metal. The Town also provides educational materials. Other businesses such as Shred-Pro (mixed paper shredding service) and Mammoth Rock-n-Dirt (aggregate crushing) contribute to the available recycling services in the Town of Mammoth Lakes. In addition, as discussed above, in 2015 the Town adopted a C&D ordinance to remove C&D materials from development projects from the waste stream. While the Town has not yet met the 50 percent diversion rate mandated by Assembly Bill 939 the Town is committed to continuing its best efforts to increase its diversion rate whenever an opportunity becomes available and is coordinating with CalRecycle at all times.

Various efforts are underway to increase the diversion of solid waste from landfills. The Sierra Conservation Project, Inc. and the Town have partnered to expand commercial and condominium recycling, which provides curbside recycling to residences and businesses located in the Town for a monthly fee. The Mammoth Lakes Transfer Station and Recycling Center, which is owned and operated by Mammoth Disposal, currently accepts municipal solid waste for transfer to Benton Crossing Landfill, as well as BOP, metal, and other recyclable materials for transport to market. A CRV Buyback Center is located at the facility. The Town of Mammoth Lakes, in partnership with Mammoth Disposal, has planned for expansion of the Transfer Station that may include a long haul transfer station, a metals recovery facility (MRF), and a permanent HHW facility.

With regard to compliance with AB 341, the Town, Sierra Conservation Project, and Mammoth Disposal are taking active steps to assist businesses and multi-family residences to comply with the new regulations. The following recycling programs are currently available within the Town: commercial cardboard recycling; restaurant and bar programs; lodging and hospitality programs; business recycling; residential recycling including multi-family/apartment recycling; aluminum, plastic and glass; E-waste; and used oil and batteries.

b. Methodology and Thresholds

(1) Methodology

The analysis of impacts on solid waste disposal addresses the amount of waste debris that would result from the increase in intensity of population in the commercial districts. The analysis evaluates whether sufficient landfill capacity is available to accommodate the increase in waste generated that may occur. The amount of waste generated is determined by multiplying the amount of each of the uses by per unit waste generation factors associated with each use. The availability of landfill capacity is derived from various documents, including the County's CIWMP and the CalRecycle website. In addition, the EIR prepared for the County's General Plan Update was reviewed. The waste generation is compared to existing and planned capacities to

[33] *Ibid.*

determine the potential impact to solid waste facilities. In addition, the analysis also addresses the Project's consistency with policies and programs to increase diversion of waste materials from landfills and increase the recycling of materials in support of the Town's commitment to sustainability/green growth.

(2) Thresholds

For purposes of this EIR, the Town has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as thresholds of significance to determine whether a project would have a significant environmental impact regarding utilities and service systems. Based on Appendix G, the following thresholds of significance are used in this section. The project would result in a significant impact if the project would:

SW-1 Be served by a landfill with insufficient permitted capacity to accommodate projected solid waste disposal needs.

SW-2 Conflict with federal, state, and local statutes and regulations related to solid waste.

(3) Applicable General Plan Goals/Policies and Adopted Mitigation Measures

There are no mitigation measures regarding solid waste from the adopted Mitigation Monitoring and Reporting Program from the 2007 General Plan Update EIR. However, the Town's Resource Management and Conservation Element addresses solid waste as follows:

GOAL R.9: Reduce volume of solid waste.

- **Policy R.9.A.:** Support programs to recycle materials such as paper, cardboard, glass, metal, plastics, motor oil; and programs to compost or chip for mulch tree cuttings, brush, and other vegetation.

The action items are to develop programs to maximize recycling so as to prolong the useful life of the landfill; require effective and efficient recycling programs throughout the community; and to provide recycling containers throughout the community.

c. Environmental Impacts

Threshold SW-1: The project would result in a significant impact if the project would be served by a landfill with insufficient permitted capacity to accommodate the projected solid waste disposal needs.

Impact Statement SW-1: *The Land Use Element/Zoning Code Amendments would result in an increase in population and thus, an increase in solid waste disposal. While the Benton Crossing Landfill is scheduled for closure, the Town is committed to increasing waste diversion and the County anticipates that long haul or the use of a transfer station would occur in the future. Therefore, the Land Use Element/Zoning Code Amendments would result in a less than significant impact with regard to solid waste.*

Solid waste generated in the Town would continue to be disposed of at the Benton Crossing Landfill. The potential increase in population, both permanent and visitors to the Town, that could occur with the Land Use Element/Zoning Code Amendments would result in an increase in solid waste generated. **Table 4.12-9**,

Estimated Solid Waste Generated by Development Resulting from Proposed Amendments, shows the projected increase in solid waste generated that could occur form the potential increase in development within the commercially designated areas. As shown in Table 4.12-9, an additional 2,387 tons per year could be generated by future development within the commercially designated areas that could occur as a result of the Land Use Element/Zoning Code Amendments.

Table 4.12-9

Estimated Solid Waste Generated by Development Resulting from Proposed Amendments

Land Uses	Quantity (units/ employees/	Generation Factor[a]	Rate Units	Solid Waste Generated (tons/year)
Residential	336	0.87	tons/occupied unit/yr	292
Hotel/Lodging	514[b]	2.14	tons/employee/yr	1,100
Retail	413[c]	2.41[d]	tons/employee/yr	995
Total				**2,387**

[a] *Generation factors are used rather than diversion in order to present a conservative estimate and to account for limited diversion that occurs in Mammoth Lakes due to difficulty of diversion.*

[b] *The number of employees for hotel/lodging is calculated using 1.1 employee per room/unit. This assumes 467 rooms/units x 1.1 = 514*

[c] *The number of employees for commercial space is calculated using 0.00271 employees/sf. This assumes 152,533 sf x 0.00271 = 413*

[d] *The generation factor for retail is used as it is the highest, with the exception of food and beverage stores, of retail and service uses.*

Source: 2014 Generator-Based Characterization of Commercial Sector Disposal and Diversion in California, CalRecycle, September 10, 2015

Future development would participate in the Town's efforts to increase diversion. New multifamily residential development could participate in the curbside recycling program. Bins for recycling could be located in commercial developments and composting of food waste could occur. As indicated in the CIWMP, the Benton Crossing Landfill has a remaining capacity of 817,300 cubic yards and a projected closure date of December 2023. In terms of overall regional capacity, the CIWMP indicates that the County has sufficient capacity for the 15-year planning period, which is the planning period established in the California Code of Regulations (14 CCR 18755(a).[34] In addition, an increase in diversion would extend the disposal capacity as well as additional capacity proposed at Pumice Valley is included, the disposal capacity would be extended beyond the current capacity.

While the Land Use Element/Zoning Code Amendments could result in an increase in population in the Town, the timing is uncertain. As indicated in Section 4.13, Public Services and Utilities, of the EIR for Mono County's 2015 RTP and General Plan Update, the County's solid waste system is in transition. Due to the economic challenges of operating low volume rural landfills, the County is currently in a position where the operation of its landfills exceeds the cost of available long-haul transfer opportunities due to the County's relatively close proximity to available capacity in other jurisdictions where much larger scale, and more

[34] *CIWMP, page 18.*

efficient landfill operations are underway. The County intends on maintaining the current course at Benton Crossing Landfill until a point of closure, but following the closure of this site the County intends to pursue the most cost-effective options to meet future disposal needs. These options include the long-haul transfer of waste. While there is interest in maintaining landfill capacity and the flexibility it affords, by developing long-haul transfer infrastructure the County is assured of another competitive, and capacity-preserving option.

Mono County does not currently have plans to establish any new solid waste disposal sites within its jurisdictional boundaries. With the future closure of Benton Crossing, the County is exploring other concepts for solid waste disposal. The County is focused primarily on efforts to reduce the waste stream through increased diversion and recycling. A concept that the County is exploring is the early closure of Benton Crossing Landfill, coupled with the development of a Regional Recycling Center and Transfer Station or the siting of a similar facility in close proximity to the Town of Mammoth Lakes, through a federal land exchange.

As indicated in the County's EIR for the 2015 RTP and General Plan Update the County is considering various options and also determined that impacts would be less than significant. Thus, based on the above, the Land Use Element/Zoning Code Amendments and the associated population and increase in solid waste disposal would be considered a less than significant impact.

Mitigation Measures

The Project would result in a less than significant impact with regard to solid waste. Therefore, no mitigation measures are necessary.

Threshold SW-2	The Project would result in a significant impact if it would conflict with federal, state, and local statutes and regulations related to solid waste.

Impact Statement SW-2: *The Town will continue to comply with applicable State, and local regulatory requirements, which would further State laws and policies regarding diversion of landfill materials and efficient use of County landfill facilities. Therefore, the Project would not conflict with applicable statutes and regulations related to solid waste and impacts would be less than significant.*

The Town would continue to operate the waste collection and recycling program in accordance with the Integrated Waste Management Act. Goal R.9 of the Town's Resource Management and Conservation Element is to reduce the volume of solid waste generated by people in the Town. As discussed above, there are 39 programs in the Town aimed at reducing the volume of waste disposed of at landfills. The Town is actively engaged in increasing programs. Action items in the Town's Resource Management and Conservation Element include providing efficient recycling programs throughout the community and the provision of recycling containers throughout the community.

As indicated above, the goal of AB 341 is to increase the statewide recycling rates to 75 percent by 2020. The purpose of this new law is to reduce greenhouse gas emissions by diverting commercial solid waste to recycling efforts and expand opportunities for additional recycling services and recycling manufacturing facilities in California. Starting July 1 2012, businesses and public entities that generate four cubic yards or more of waste per week and Multi-Family units of five or more will be required to recycle. The Town of Mammoth Lakes (TOML), Sierra Conservation Project (SCP) and Mammoth Disposal (MD) are taking active

steps to assist businesses and multi-family residences to comply with the new regulations. The Town of Mammoth Lakes will be providing education and outreach to help the community comply with AB 341.

While the Land Use Element/Zoning Code Amendments would result in an increase in population in the Downtown area the Project would not conflict with applicable federal, state and local policies and regulations regarding solid waste. The geographic concentration of population could allow the efforts to increase diversion that are put into place to be more successful. For example, with the placement of containers for recycling, the concentration of population may use the containers more than if they were scattered throughout the Town. Therefore, the Project would not conflict with applicable statutes and regulations related to solid waste and impacts would be less than significant.

Mitigation Measures

The Project would not conflict with applicable federal, state and local statutes and regulations related to solid waste. Therefore, no mitigation measures are necessary.

d. Cumulative Impacts

The analysis of the impact of the Land Use Element/Zoning Code Amendments on solid waste facilities and applicable and regulatory requirements is cumulative in nature because it evaluates the effects of the Project in addition to the General Plan buildout. The demand associated with General Plan buildout would be adequately served and the Town would comply with applicable regulations, thus, the impact evaluation determined that the Land Use Element/Zoning Code Amendments would have a less than significant impact relative to solid waste. Therefore, the Project would not contribute to a cumulatively significant impact.

e. Level of Significance After Mitigation

The Project would result in a less than significant impact with regard to solid waste disposal and would not conflict with applicable federal, state and local statutes and regulations related to solid waste.