4.2 Hydrology and Water Quality

This section identifies and evaluates impacts of the project related to hydrology and water quality. The section discusses the environmental and regulatory setting; the criteria used to determine the significance of environmental impacts related to hydrology/water quality; and potential impacts related to hydrology and water quality that would result from implementation of the project.

4.2.1 Setting

The City of Ukiah is located in central Mendocino County, approximately 26 miles east of the Pacific Ocean, within the Ukiah Valley. The nearest major city is Santa Rosa, located approximately 60 miles to the south, while San Francisco and Sacramento are located approximately 100 miles to the south and southeast, respectively. The city is bounded by rolling hills and uplands to the west, the Russian River and associated floodplain to the east, and the Redwood Valley to the north (City of Ukiah 2020). Ground elevations generally slope toward the Russian River, which functions as the primary regional drainage feature. The City of Ukiah is located inland in the Russian River Valley, approximately 26 miles east of the Pacific Ocean, and is separated from the coastline by the Coast Ranges.

The proposed project area includes unincorporated lands located within the City of Ukiah's Sphere of Influence and adjacent to the city limits. These areas are part of the broader Ukiah Valley and share similar topographic, hydrologic, and climatic characteristics as the city, including valley floor areas, gently sloping terraces, and foothill landscapes. Drainage patterns in unincorporated areas generally flow toward the Russian River or its tributaries through a combination of natural channels, agricultural drainage features, and roadside ditches. Land uses in these areas include rural residential development, agricultural uses, public facilities, and developed urban uses, which can influence local drainage characteristics and stormwater runoff patterns.

The city and surrounding unincorporated areas lie within the Russian River watershed, which serves as the primary regional drainage system. The Russian River flows along the eastern boundary of the city and conveys surface water southward toward the Pacific Ocean. Within the City, surface drainage is accommodated through a combination of natural drainage courses, modified channels, and a network of storm drains and culverts that convey runoff from developed areas and surrounding hillsides toward the Russian River. Several smaller tributaries and drainage swales, many of which are channelized or partially enclosed, are present within and adjacent to the city limits and contribute to localized stormwater conveyance.

Development adjacent to creeks, floodplains, and drainageways has the potential to influence local drainage patterns and flood behavior. During large storm events, runoff from surrounding hillside areas, combined with elevated river flows, can result in localized flooding, particularly in low-lying areas near creeks and within portions of the Russian River floodplain. Maintaining existing drainage capacity and accommodating storm flows are ongoing considerations in land use planning and infrastructure management within the city.

Mendocino County, including Ukiah, is characterized by a temperate Mediterranean climate, with hot, dry summers and mild, wet winters. Average temperatures are highest between June and August and lowest between November and February. July is typically the hottest month, with an average high temperature of approximately 91 degrees Fahrenheit, while December is the coldest month, with an average low temperature of approximately 37 degrees Fahrenheit. Precipitation occurs primarily between October and April, with rainfall most heavily concentrated during the winter months of December through February (US Climate Data 2026). Seasonal rainfall patterns strongly influence surface runoff volumes, streamflow levels, and groundwater recharge throughout the Ukiah Valley.

a. Surface Water

The California Department of Water Resources (DWR) divides surface watersheds in California into 10 Hydrologic Regions. The proposed project area lies within the North Coast Hydrologic Region, which encompasses approximately 19,400 square miles and extends from the Oregon Border south to Marin County, and from the Pacific Ocean eastward to the crest of the Coast Ranges (DWR 2014).

The DWR further subdivides Hydrologic Regions into subregions, and further into basins, subbasins, watersheds, and subwatersheds. Within the North Coast Hydrologic Region, the proposed project area is within the Russian River Watershed. The Russian River watershed is one of the largest drainage systems in the North Coast Hydrologic Region. The Russian River flows generally southward through Mendocino and Sonoma counties before turning west and discharging to the Pacific Ocean near Jenner. Surface water features within and surrounding the city ultimately drain to the Russian River, which serves as the primary regional drainage feature for the Ukiah Valley (DWR 2014).

Water Quality

Water quality in the proposed project area is governed by the North Coast Regional Water Quality Control Board (NCRWQCB), which sets water quality standards in the Water Quality Control Plan for the North Coast Region (Basin Plan) for the Lower Klamath Lake and Lost River Basins, including the Russian River watershed (NCRWQCB 2025a). The Basin Plan identifies existing and potential beneficial uses of waters of the State and establishes water quality objectives to protect those uses. Beneficial uses are designated for individual waterbodies or groups of waterbodies within the North Coast Region and may include municipal and domestic supply, agricultural supply, recreation, fisheries habitat, freshwater habitat, and wildlife habitat (NCRWQCB 2025a). The Russian River and several reaches of its tributary drainage network within Mendocino County have designated beneficial uses that commonly include Municipal and Domestic Supply, Agricultural Supply, Water Contact and Non-Contact Recreation, Cold Freshwater Habitat, Warm Freshwater Habitat, Fish Spawning, and Wildlife Habitat, consistent with Basin Plan designations for inland surface waters in the North Coast Region (NCRWQCB 2025a).

The Clean Water Act 303(d) list is a register of impaired and threatened waters which the Clean Water Act requires all states to submit for United States Environmental Protection Agency (USEPA) approval. The list identifies all waters where the required pollution control measures have so far been unsuccessful in reaching or maintaining the required water quality standards. Waters that are listed are known as “impaired.” According to the State Water Resources Control Board (SWRCB), multiple reaches of the Russian River within Mendocino County, including areas upstream and downstream of the City of Ukiah, are listed as impaired under Section 303(d). Identified impairments in the Russian River watershed include pathogens (indicator bacteria), sediment, temperature, mercury, nutrients, and low dissolved oxygen, among others. These impairments have resulted in the development of Total Maximum Daily Loads (TMDLs) and implementation programs adopted or under development by the North Coast RWQCB to improve water quality conditions in the watershed (NCRWQCB 2025b).

b. Groundwater

DWR’s Bulletin 118 is the State’s official groundwater basin inventory and defines basin boundaries and describes hydrologic characteristics for groundwater basins throughout California. Bulletin 118 is periodically updated to reflect revised basin boundaries and improved hydrogeologic information. The proposed project area is located within the Ukiah Valley Groundwater Basin (DWR Basin No. 1-052). The basin is approximately 22 miles long and up to five miles wide at its widest point and is the largest of several groundwater basins located along the Russian River. The Ukiah Valley Groundwater Basin is designated as a medium-priority basin under the Sustainable Groundwater Management Act (SGMA) and is managed by the Ukiah Valley Basin Groundwater Sustainability Agency (UVBGSA) in accordance with the adopted Ukiah Valley Basin Groundwater Sustainability Plan (GSP).

Most of the land within the basin is privately owned, with smaller areas owned by the State, federally owned lands in the vicinity of Lake Mendocino, and limited California Tribal Reservation and Rancheria

lands. The Russian River flows along the length of the basin and is hydrologically connected to groundwater resources within the valley. Lake Mendocino, located along the eastern portion of the basin, provides managed releases to the East Fork of the Russian River through operation of Coyote Dam, influencing both surface water and groundwater conditions in the Ukiah Valley. The Ukiah Valley Groundwater Basin is bounded by the Mendocino Range of the Coast Ranges and is bordered to the south by the Sanel Valley Groundwater Basin (DWR Basin Number 1-053). Groundwater conditions within the basin provide an important regional water supply resource for municipal, agricultural, and domestic uses within and adjacent to the City of Ukiah.

Groundwater Quality

Ongoing groundwater management and protection measures are implemented through Basin Plan requirements and the Ukiah Valley Basin GSP. Beneficial uses and water quality objectives are established by the NCRWQCB through the Basin Plan to protect municipal, domestic, agricultural, and environmental uses of groundwater resources. Groundwater quality within the basin is influenced by a combination of natural geologic conditions, land use patterns, and surface-groundwater interactions associated with the Russian River watershed.

c. Flood Hazards

Flood hazards can occur when the amount of rainfall exceeds the infiltration capacity of the surrounding landscape or the conveyance capacity of the stormwater drainage system. The Federal Emergency Management Agency (FEMA) delineates regional flooding hazards as part of the National Flood Insurance Program (NFIP). FEMA identifies flood hazard risks through its Flood Insurance Rate Map (FIRM) program. Higher flood risk zones are called Special Flood Hazard Areas; these areas have a 1 percent chance or greater of flooding in any given year (also called the 100-year flood). Although a 100-year flood will, on average, occur once every 100 years, the probability of a 100-year flood is 1 percent for any particular year. Two 100-year floods could occur in the same year or even in the same month, but the likelihood that two 100-year flood events would occur consecutively is very small.

According to FEMA FIRMs for the City of Ukiah, Special Flood Hazard Areas designated as Zone A and Zone AE are present in multiple locations throughout the city. These areas are generally associated with creek corridors, agricultural lands, and low-lying developed areas, including portions of western, central, northern, and southwestern Ukiah, as well as adjacent unincorporated lands. FEMA-designated Special Flood Hazard Areas are also present in portions of the surrounding area, particularly along the Russian River corridor and associated tributaries, where flood risks are influenced by regional watershed conditions and topography (FEMA 2025).

According to tsunami hazard maps prepared by DOC, tsunami hazard zones are mapped along portions of the California coastline and low-lying coastal areas. The proposed project area is located inland within Mendocino County and is not located within a tsunami hazard area (DOC 2026). Seiches are standing waves that typically occur in large, enclosed bodies of water, such as lakes or reservoirs, as a result of seismic activity or other disturbances. Surface water features in the vicinity of the proposed project area include rivers, creeks, and stormwater conveyance facilities.

4.2.2 Regulatory Setting

a. Federal Regulations

Clean Water Act

The Federal Water Pollution Prevention and Control Act of 1948 was the first major law to address water pollution in the United States. In 1972, the Federal Water Pollution Control Act was amended and became known as the Clean Water Act. The Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the USEPA the

authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the USEPA and United States Army Corps of Engineers (USACE).

The federal Clean Water Act places the primary responsibility for the control of water pollution and for the planning of development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs. At the state and regional levels in California, the Clean Water Act is enforced by the SWRCB and the nine RWQCBs.

Section 303(d): Impaired Waters and Total Maximum Daily Loads (TMDL)

Section 303(d) of the Clean Water Act requires states to identify water bodies that do not meet water quality objectives and are not supporting beneficial uses. Each state must submit an updated biennial list, called the 303(d) list, to USEPA. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing the impairment. Once a water body has been deemed impaired, a TMDL must be developed for each pollutant causing an impairment. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body may receive without exceeding applicable water quality standards (often with a "factor of safety" included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body.

Section 401: Water Quality Certification

Section 401 of the Clean Water Act regulates discharges of fill and dredged material to waters of the United States. Under Section 401, the SWRCB and RWQCBs have regulatory authority over actions in waters of the United States through the issuance of water quality certifications, which are issued in conjunction with any federal permit (e.g., permits issued by the USACE under Section 404 of the Clean Water Act, described below). Section 401 provides the SWRCB and the RWQCBs with the regulatory authority to waive, certify, or deny any proposed activity that could result in a discharge to surface waters of the State. To waive or certify an activity, these agencies must find the proposed discharge would comply with State water quality standards, including those protecting beneficial uses and water quality. If these agencies deny the proposed activity, the federal permit cannot be issued.

Section 402: National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act establishes the National Pollutant Discharge Elimination System (NPDES) regulations for stormwater and other pollutant discharges. Section 402 prohibits discharge of pollutants to waters of the United States unless they are regulated by an NPDES permit. Stormwater discharges are regulated under a variety of NPDES permits, including municipal, agricultural, industrial, construction, and low-threat discharge permits.

In 1987, Congress amended the Clean Water Act to require the implementation of a two-phased program to address stormwater discharges. Phase I of the NPDES program, promulgated by the USEPA in November 1990, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s)[1] serving populations of 100,000 or greater, construction sites disturbing greater than five acres of land, and 10 categories of industrial activities.

The USEPA recognized that smaller construction projects (disturbing less than five acres) and small MS4s (serving populations smaller than 100,000) were also contributing substantially to pollutant discharges nationwide. Therefore, in order to further improve stormwater quality, the USEPA promulgated

[1] An MS4 is a conveyance or system of conveyances designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches) that are owned by a state, city, town, or other public entity.

the NPDES Phase II program in January 2000, which requires NPDES permits for stormwater discharges from regulated small MS4s and for construction sites disturbing between one and five acres of land.

In California, the NPDES program is administered by SWRCB through the nine RWQCBs.

Section 404: Discharge of Dredge or Fill

Section 404 of the Clean Water Act requires a permit be issued by USACE before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulations (e.g. farming activities, maintenance activities, construction of temporary sedimentation basins, construction and maintenance of forest roads or temporary mining roads). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands). When an application for a Section 404 permit is made, the Applicant must show it has:

- Taken steps to avoid impacts to wetlands or waters of the U.S. where practicable;
- Minimized unavoidable impacts on waters of the U.S. and wetlands; and
- Provided mitigation for unavoidable impacts.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 were enacted by Congress to reduce the costs of disaster relief. The intent of these acts was to reduce the need for large, publicly funded flood control structures and disaster relief efforts by restricting development in floodplains. FEMA administers the NFIP to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in a floodplain. FEMA issues FIRMs of communities participating in the NFIP. These maps delineate flood hazard zones in the community. Local agencies are responsible for administering their community's floodplain management regulations. The City of Ukiah manages local storm drain facilities and is responsible for regional flood control planning within the city. Within the surrounding area, floodplain management and stormwater regulation are currently administered by Mendocino County in accordance with FEMA and NFIP requirements.

b. State Regulations

California Lake and Streambed Alteration Agreement

Sections 1600–1616 of the California Fish and Game Code require that any entity that proposes an activity that would divert or obstruct the natural flow of any river, stream or lake; change or use any material from the bed, channel, or bank of, any river, stream, or lake; or, deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, must notify the California Department of Fish and Wildlife. The California Department of Fish and Wildlife requires a Lake or Streambed Alteration Agreement if it determines that the alteration may adversely affect fish and wildlife resources. The Agreement includes conditions necessary to protect those resources. The Agreement applies to any stream, including ephemeral streams and desert washes.

Porter-Cologne Water Quality Control Act

California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of the Clean Water Act in California. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, regulate discharges to surface water and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous

substance, sewage, oil, or petroleum product. Each RWQCB must adopt and implement a Basin Plan for its region in conformance with the policies set forth in the Porter-Cologne Act. The proposed project area is within the jurisdictional boundaries of the NCRWQCB (Region 1).

Construction Stormwater General Permit

The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction Stormwater General Permit), adopted by SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction Stormwater General Permit authorizes the discharge of stormwater to surface waters from construction activities and requires all developers of land where construction activities will occur over more than one acre to do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the Construction Stormwater General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies construction best management practices (BMPs) that will reduce pollution in stormwater discharges to the Best Available Technology/Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction Stormwater General Permit, a project applicant must electronically file all permit registration documents with SWRCB prior to the start of construction. Permit registration documents must include a Notice of Intent, Risk Assessment, site map, SWPPP, annual fee, and signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control discharges from groundwater dewatering, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

The Construction Stormwater General Permit also contains post-construction requirements for projects not covered under a Phase I or Phase II MS4 Permit. The Construction Stormwater General Permit requires implementation of operational BMPs and low impact development features to reduce runoff and pollutants in stormwater discharge.

The Construction Stormwater General Permit also includes groundwater dewatering requirements for projects not covered under a De Minimis or Low Threat Discharge Permit. The dewatering requirements mandate dischargers to implement BMPs to control the volume and velocity of dewatering discharges. The Construction Stormwater General Permit also requires testing and treatment, if necessary, of groundwater discharge to verify the discharge meets or exceeds the effluent limitations specified in the permit.

California Drainage Law, Government Code 65302

Government Code Section 65302(a) requires cities and counties located within the state to review the Land Use, Conservation, and Safety elements of the general plan "for the consideration of flood hazards, flooding, and floodplains" to address flood risks. The code also requires cities and counties in the state to annually review the land use element within "those areas covered by the plan that are subject to flooding identified by floodplain mapping prepared by FEMA or the DWR."

c. Local Regulations

Mendocino County Low Impact Development Manual

The Mendocino County Low Impact Development (LID) Manual was adopted to implement stormwater management requirements under the County's MS4 permit and the federal NPDES program. The LID Manual establishes stormwater performance standards, design principles, and BMPs intended to manage runoff at its source by minimizing impervious surfaces, promoting infiltration, reducing runoff volumes and peak flows, and improving stormwater quality. These measures are intended to replicate pre-development hydrologic conditions to the extent feasible and to reduce erosion, pollutant loading, flooding, and hydromodification of receiving waters within the Russian River watershed and other County watersheds. The LID Manual applies to applicable development and redevelopment projects within unincorporated areas subject to the County's MS4 permit and is implemented through project-level permitting and review in coordination with County stormwater ordinances and Basin Plan requirements.

Mendocino County General Plan

The Mendocino County General Plan includes the following goals and policies related to hydrology and water quality within the Resources Management Element The following policies are applicable to the proposed project:

Goal RM-1. Land uses, development patterns, and practices that facilitate functional and healthy watershed ecosystems.

Goal RM-3. Land use development and management practices that protect or enhance water quality.

Policy RM-6. Promote sustainable management and conservation of the county's water resources.

Policy RM-7. Promote the incorporation of efficient indoor plumbing fixtures in new development and redevelopment. Where appropriate, promote drought-tolerant landscaping and the implementation of other water conservation best management practices.

Policy RM-19. Promote the incorporation of project design features that will improve water quality by minimizing impervious surface areas, maximizing on-site retention of stormwater runoff, and preserving existing vegetation to the extent possible. Examples include:

- Using Low Impact Development (LID) techniques.
- Updating the County's Building Codes to address "green" building and LID techniques that can reduce pollution of runoff water and promoting these techniques.

Policy RM-20. Require integration of stormwater best management practices, potentially including those that mimic natural hydrology, into all aspects of development and community design, including streets and parking lots, homes and buildings, parks, and public landscaping.

Ukiah 2040 General Plan

The Ukiah 2040 General Plan includes the following goals and policies related to hydrology and water quality within the Public Facilities, Services, and Infrastructure Element, and Environment and Sustainability Element. Relevant goals and policies include the following:

Goal PFS-2. To maintain quality wastewater treatment and disposal services to meet the needs of existing and future development.

PFS-2.7. The City shall preserve and protect groundwater quality through the implementation of best practices and innovative methods for modern wastewater disposal.

Goal PFS-5. To maintain an adequate stormwater management system to accommodate runoff and improve environmental quality.

Policy PFS-5.1. The City shall require new developments to install green infrastructure consistent with the Stormwater Low Impact Development Technical Design Manual and sustainable objectives of the State and the North Coast Regional Water Quality Control Board, including but not limited to pervious pavement, infiltration basins, raingardens, green roofs, rainwater harvesting systems, and other types of low impact development (LID).

Policy PFS-5.2. The City shall provide non-point source pollution control programs to reduce and control the discharge of pollutants into the storm drain system and Russian River.

Goal ENV-5. To conserve and protect the city's natural woodlands and water resources for future generations.

Policy ENV-4.6. The City shall require, for new development that could result in a significant reduction in groundwater recharge area or water quantity, an analysis, prepared by a licensed hydrologist, of the project impacts on groundwater recharge and quality.

Policy ENV-4.8. The City shall protect water quality from adverse impacts of urban and agricultural runoff.

Ukiah Valley Area Plan

The Ukiah Valley Area Plan (UVAP) is an element of the Mendocino County General Plan and provides detailed land use and resource protection policies for unincorporated areas within the Ukiah Valley, including areas proposed for annexation under the project. The UVAP contains the following goals and policies related to hydrology and water quality:

Goal WM3. Promote reclamation and conservation of water.

Policy WM3.1. Integrate urban water conservation Best Management Practices into community planning.

Goal WM4. Protect water quality by improving storm and wastewater management practices.

Policy WM4.1. Integrate storm water management practices that utilize and mimic natural hydrology into all aspects of development and community design, including streets and parking, homes and buildings, parks and public landscaping.

Ukiah Municipal Code

Chapter 7, Division 9 of the City of Ukiah Municipal Code establishes stormwater protection requirements intended to prevent the discharge of pollutants to the City's stormwater system and receiving waters. City Code provisions prohibit non-stormwater discharges to the stormwater system, except for specific categories of allowable discharges such as those authorized under a NPDES permit, certain uncontaminated water sources, and other discharges approved in writing by the RWQCB. The Municipal Code further prohibits any discharge that would result in or contribute to a violation of the City's stormwater NPDES permit and makes it unlawful to create, maintain, or use unauthorized drainage connections or pollutant-contributing connections to the stormwater system. Additional provisions require persons and entities whose activities may generate pollutants, including construction activities, parking areas, commercial and industrial uses, and properties adjacent to watercourses, to implement BMPs, prevent the discharge of wastes or debris, and maintain watercourses in a manner that minimizes pollution, erosion, and obstructions to flow. These requirements are implemented through City permitting, inspections, and enforcement mechanisms in coordination with applicable state and federal water quality regulations.

Water Quality Control Plan

The NCRWQCB has adopted a Basin Plan for the North Coast Region that establishes a comprehensive framework for protecting surface water and groundwater resources within its jurisdiction. The Basin Plan delineates hydrologic planning areas and designates beneficial uses for surface waters and groundwaters, including municipal supply, agricultural supply, recreation, aquatic habitat, and wildlife habitat. To protect these beneficial uses, the Basin Plan establishes narrative and numeric water quality objectives that must be attained or maintained and identifies implementation programs, including prohibitions, action plans, and policies designed to achieve water quality objectives. The Basin Plan also describes regional monitoring activities, procedures for public participation, and the framework for regulating waste discharges through permitting and enforcement. Consistent with State Water Resources Control Board policies, including the State Antidegradation Policy (Resolution No. 68-16), the Basin Plan serves as the foundation for Regional Water Board regulatory programs and is used by state and local agencies in permitting and resource management decisions that may affect water quality within the region.

Groundwater Sustainability Plan

SGMA requires GSAs to prepare GSPs for groundwater basins designated as high- or medium-priority by the DWR. The Ukiah Valley Groundwater Basin is designated as a medium-priority basin and is managed by the UVBGSA under the adopted Ukiah Valley Groundwater Basin GSP. The purpose of the GSP is to achieve and maintain sustainable groundwater management by 2042 and thereafter by avoiding "undesirable results," which are defined by SGMA to include chronic lowering of groundwater levels, significant and unreasonable reductions in groundwater storage, degraded groundwater quality, land subsidence, and depletions of interconnected surface water that adversely affect beneficial uses. The GSP establishes basin-specific sustainability goals, monitoring objectives, and management criteria, informed by technical studies and stakeholder engagement, to guide long-term groundwater management and ensure groundwater resources can be managed and used sustainably over the planning and implementation horizon.

4.2.3 Impact Analysis

a. Significance Thresholds and Methodology

Significance Thresholds

In accordance with Appendix G of the CEQA Guidelines, an impact related to hydrology and water quality would be significant if the project would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    a. Result in substantial erosion or siltation on- or off-site
    b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
    c. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
    d. Impede or redirect flood flows

4. Risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

Methodology

Project impacts to hydrology and water quality are evaluated based on the project's adherence to local, state, and federal standards; the nature of proposed soil disturbance, construction activities, and groundwater dewatering during construction; the change in land use and proposed operational activities; changes in pre- and post-project stormwater flows; and proposed operational BMPs for control of surface runoff and reduction of pollutants in stormwater runoff.

b. Prior Environmental Analysis

Hydrology and water quality conditions within the proposed project area have been evaluated in several previously certified environmental documents, including the City of Ukiah 2040 General Plan EIR, the Mendocino County General Plan Update EIR, and the UVAP EIR. These documents provide programmatic analyses of water quality, groundwater supply and recharge, drainage patterns, erosion and sedimentation, surface runoff, and flood hazards within the Ukiah Valley and surrounding areas.

Ukiah 2040 General Plan EIR

Hydrology and water quality are addressed in Chapter 4.16, *Effects Found Not to Be Significant*, of the Ukiah 2040 General Plan EIR. The General Plan EIR determined that implementation of the Ukiah 2040 General Plan would result in less-than-significant impacts related to water quality, groundwater supplies and recharge, drainage patterns, erosion or siltation, surface runoff, and flood hazards. These conclusions are based on the nature of proposed land use changes, compliance with applicable regulations, and the application of adopted General Plan policies. No mitigation measures specific to hydrology or water quality were required.

Mendocino County General Plan EIR

Hydrology and water quality are analyzed in Chapter 4.8 (Hydrology and Water Quality) of the County General Plan EIR. The County EIR evaluated potential impacts related to surface water and groundwater quality, groundwater recharge, drainage patterns, erosion, stormwater runoff, and flood hazards at a countywide scale. The EIR concluded that these impacts would be less than significant with implementation of existing regulatory requirements and adopted General Plan policies addressing water resource protection and flood management. No project-specific mitigation measures were identified.

Ukiah Valley Area Plan EIR

Hydrology and water quality are discussed in Chapter 2.2 (Hydrology and Water Quality) of the UVAP EIR. The UVAP EIR determined that impacts related to water quality, groundwater conditions, and dam inundation hazards would be less than significant with implementation of existing policies and measures. However, the EIR identified potentially significant impacts associated with increased flooding and stormwater runoff resulting from development anticipated under the UVAP. The UVAP EIR identified mitigation measures related to flood management planning, stormwater management, streambank protection, and avoidance of development in flood-prone areas to reduce these impacts to less than significant levels.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
Threshold 5:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-1 The proposed project would not include development and would not violate water quality standards, waste discharge requirements, or conflict with regulatory compliance. No impact would occur.

The proposed project is limited to jurisdictional and regulatory actions and would not authorize new development, increase development intensity, expand infrastructure capacity, modify allowable land uses, or reduce minimum parcel sizes within the proposed annexation areas. As a result, no new sources of stormwater runoff, wastewater discharge, or groundwater extraction would be introduced, and existing drainage patterns and groundwater recharge conditions would remain unchanged.

In addition, the proposed project would involve a change in service responsibility and regulatory oversight for water and wastewater services within annexed areas but would not result in physical modifications to water supply infrastructure, wastewater facilities, or stormwater systems. Existing water quality standards, discharge requirements, and groundwater protection provisions would continue to apply following annexation, and service provision by the City of Ukiah would be subject to the same or more stringent state and regional regulatory frameworks, including compliance with applicable NPDES and MS4 permit requirements and Basin Plan standards administered by the NCRWQCB. Accordingly, the transfer of service responsibility would not result in changes to water quality conditions, hydrologic processes, or groundwater management practices.

Although the project itself would not authorize development, future development proposals within annexed areas would be subject to project-specific discretionary review and compliance with applicable NPDES and MS4 permit requirements, Chapter 7 of the Ukiah Municipal Code establishing stormwater discharge prohibitions and pollution prevention requirements, and Basin Plan requirements administered by the NCRWQCB.

Implementation of the proposed project would not conflict with or impede implementation of adopted water quality control and groundwater management programs, including the Basin Plan for the North Coast Region and the Ukiah Valley GSP adopted pursuant to SGMA. The proposed project would also be consistent with applicable water quality and groundwater protection policies of the Mendocino County General Plan, including Policies RM-6 and RM-19, the City of Ukiah 2040 General Plan, including Policies PFS-2.7, PFS-5.1 and PFS-5.2, and ENV-4.6, and the UVAP Policy WM3.1 which establish requirements and performance standards for protecting surface and groundwater quality, managing stormwater and wastewater discharges, and ensuring development would not degrade water resources or conflict with adopted water quality control and groundwater management plans. Because the project would not authorize development or involve physical changes, it would not conflict with or obstruct implementation of these policies. Future development within the annexation areas would be subject to project-specific discretionary review and would be required to comply with all applicable City, County, and state water quality and groundwater protection policies.

Previous environmental review documents, including the Ukiah 2040 General Plan EIR, Mendocino County General Plan Update EIR, and UVAP EIR, evaluated water quality impacts associated with development potential under existing land use and zoning designations, including impacts related to stormwater runoff, wastewater discharges, and groundwater quality. Those documents concluded that, with implementation of applicable regulations and policies, impacts related to water quality would be less than significant. The proposed project would not increase development potential, authorize new development, or modify development assumptions evaluated in the prior EIRs. As a result, the project would not result in new or more severe water quality impacts than those previously analyzed. Therefore, there would be no

direct impacts of the proposed project related to compliance with water quality standards, waste discharge requirements, and adopted water quality control or groundwater management plans. Impacts associated with development potential evaluated in the applicable program-level EIRs would remain less than significant. Pursuant to CEQA Guidelines Sections 15162(a)(3) and 15163(a), no additional mitigation measures would be required.

Mitigation Measures

No mitigation measures would be required.

Threshold 2:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HYD-2 The proposed project would not authorize new development, would not increase groundwater demand or alter groundwater extraction, recharge or management. Therefore, it would not substantially decrease groundwater supplies or interfere with groundwater recharge or sustainable groundwater management of the basin. No impact would occur.

The proposed project would not involve construction, grading, land disturbance, or physical modification of surface or subsurface conditions. As such, groundwater recharge areas, infiltration capacity, and hydrologic connections between surface water and groundwater resources in the Ukiah Valley would remain unchanged.

The proposed project would not authorize new development, increase development intensity, expand water service capacity, or modify allowable land uses or site development standards within the proposed annexation areas. Accordingly, the proposed project would not increase groundwater extraction or introduce new demands on groundwater supplies. Existing groundwater use associated with current land uses would remain unchanged and would continue to be regulated under applicable local, regional, and State groundwater management and water quality requirements. Although the proposed project would involve a change in water service responsibility following annexation, it would not authorize increased groundwater pumping, change groundwater sources, or affect existing private well use or groundwater availability for neighboring properties. The proposed project area is located within the Ukiah Valley Groundwater Basin (DWR Basin Number 1-052), a medium-priority basin managed by the UVGSA pursuant to the adopted Ukiah Valley GSP prepared in accordance with SGMA. Groundwater management would continue under the GSP, with groundwater quality regulated by the NCRWQCB Basin Plan and Waste Discharge Requirements, and local implementation through Chapter 7 of the Ukiah Municipal Code and stormwater LID requirements following annexation.

The proposed project would also be consistent with applicable groundwater protection and water conservation policies of the Mendocino County General Plan, including Policy RM-6, and the City of Ukiah 2040 General Plan, including Policies PFS-2.7 and ENV-4.6, as well as UVAP Policy WM3.1. These policies require sustainable management and conservation of groundwater resources, protection of groundwater recharge areas, implementation of water conservation best management practices, and evaluation of groundwater impacts for projects that could affect water quantity or recharge, consistent with sustainable groundwater management objectives. Because the proposed project would not authorize development or physical changes affecting groundwater recharge or demand, it would not conflict with or obstruct implementation of these policies. Future development within the annexation areas would be subject to project-specific discretionary review and would be required to comply with all applicable City, County, and state water quality and groundwater protection policies.

The proposed project would not involve physical changes affecting infiltration, would not increase groundwater demand, and would not modify development assumptions used in basin-wide groundwater planning. Therefore, it would not contribute to adverse groundwater conditions or SGMA-defined

undesirable results, including groundwater overdraft, reduced groundwater storage, degraded groundwater quality, land subsidence, or depletion of interconnected surface waters.

Groundwater supply, recharge, and sustainable groundwater management associated with development allowed under existing land use and zoning designations were previously evaluated in the Ukiah 2040 General Plan EIR, Mendocino County General Plan Update EIR, and UVAP EIR. Those analyses accounted for groundwater demand projections and groundwater management through adopted regulations and the Ukiah Valley GSP and concluded that impacts would be less than significant. The proposed project would not authorize new development, increase groundwater demand, or alter development assumptions used in basin-wide groundwater planning. As such, groundwater supply and recharge conditions would remain consistent with those evaluated in prior environmental reviews. Therefore, the proposed project would not result in groundwater impacts that are more severe than those previously analyzed, and there would be no impacts related to groundwater supply, recharge, and sustainable groundwater management. Pursuant to CEQA Guidelines Sections 15162(a)(3) and 15163(a), no additional mitigation measures are required.

Mitigation Measures

No mitigation measures would be required.

Threshold 3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

a. Result in substantial erosion or siltation on- or off-site?
b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
c. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
d. Impede or redirect flood flows?

Impact HYD-3 The proposed project would not authorize development or physical changes to drainage features and would not result in modification to drainage infrastructure or operations. Therefore, it would not substantially alter drainage patterns or result in erosion, flooding, exceedance of stormwater system capacity, or redirection of flood flows. No impact would occur.

The proposed project would not involve construction, grading, vegetation removal, land disturbance, or physical modification of surface drainage features. As such, the proposed project would not alter topography, modify creeks or drainage channels, change floodplain conditions, or introduce new impervious surfaces within the annexation areas.

The proposed project would not authorize development, increase development intensity, or modify allowable land uses or site development standards. As a result, the project would not increase surface runoff, alter drainage patterns, introduce new erosion or sediment sources, or create new sources of polluted runoff. Existing drainage systems, stormwater infrastructure, and flood control facilities would continue to function as they do under current conditions, and although the proposed project would involve a change in stormwater service responsibility following annexation, it would not alter the physical capacity, operation, or maintenance of these facilities.

Annexation of territory into the City of Ukiah would not change the physical capacity or operation of existing stormwater infrastructure. Future development within annexed areas would be subject to project-specific discretionary review and required to comply with Chapter 7 of the Ukiah Municipal Code, LID requirements, NPDES and MS4 permit conditions, and the Basin Plan. These regulations would ensure that future projects avoid or minimize erosion, flooding, pollutant discharges, and impacts to flood flows.

The proposed project would be consistent with applicable drainage and stormwater management policies of the Mendocino County General Plan, including Policies RM-19 and RM-20, the City of Ukiah 2040 General Plan, including Policies PFS-5.1 and PFS-5.2 and Policy ENV-4.8, and the UVAP, including Policies WM4.1 which govern how development is designed to manage runoff, minimize impervious surfaces, control erosion and sedimentation, maintain stormwater system capacity, and avoid adverse changes to drainage patterns and flood flows. Because the project would not authorize development or physical changes affecting drainage or runoff, it would not conflict with or obstruct implementation of these policies. Although annexation would involve a change in stormwater service responsibility following annexation, it would not alter the physical capacity, operation, or regulatory requirements applicable to drainage and stormwater systems. Future development within the annexation areas would be subject to project-specific discretionary review and would be required to comply with all applicable City, County, and state water quality and groundwater protection policies.

Hydrology, drainage, runoff, and flooding impacts resulting from buildout under existing land use and zoning designations were previously evaluated in the Ukiah 2040 General Plan EIR, Mendocino County General Plan Update EIR, and UVAP EIR. Those documents concluded that drainage and flooding impacts associated with anticipated development would be less than significant through compliance with stormwater regulations and flood management requirements. The proposed project would not authorize development, alter drainage patterns, increase impervious surfaces, or modify floodplain conditions, and would not increase the development potential analyzed in the prior EIRs. Accordingly, the proposed project would not result in drainage, runoff, or flooding impacts that are more severe than those previously disclosed. Therefore, there would be no direct impact of the proposed project related to erosion, flooding, stormwater system capacity, or redirection of flood flows. Impacts associated with development potential evaluated in prior environmental reviews would remain less than significant. Pursuant to CEQA Guidelines Sections 15162(a)(3) and 15163(a), no additional mitigation measures are required.

Mitigation Measures

No mitigation measures would be required.

Threshold 4:	In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Impact HYD-4 The proposed project would not authorize development or introduce new pollutant sources within flood hazard areas and would not result in physical changes to facilities or operations that could increase the risk of pollutant release due to flooding, tsunami, or seiche inundation. No impact would occur.

Special Flood Hazard Areas designated as Zone A and Zone AE are present in multiple locations throughout the city. These areas are generally associated with creek corridors, agricultural lands, and low-lying developed areas, including portions of western, central, northern, and southwestern Ukiah, as well as adjacent unincorporated lands. FEMA-designated Special Flood Hazard Areas are also present in portions of the surrounding unincorporated areas within the City's Sphere of Influence, particularly along the Russian River corridor and associated tributaries (FEMA 2025). However, the proposed project would not involve construction, land disturbance, or placement of new structures, facilities, or hazardous materials within flood hazard areas. The project would not introduce new sources of pollutants that could be mobilized during flooding events.

The proposed project area is located inland within the Russian River Valley and is not located within a mapped tsunami inundation area (DOC 2026). In addition, the proposed project area would not contain large natural or engineered reservoirs that could generate seiche hazards. Therefore, the project would not be exposed to tsunami or seiche-related inundation risks.

Annexation and pre-zoning would not alter existing land uses or introduce industrial, commercial, or hazardous material uses beyond those already allowed under existing Mendocino County regulations. Following annexation, properties would be subject to Chapter 7 of the Ukiah Municipal Code, regulating stormwater discharges, pollutant control, and hazardous materials management, as well as applicable federal and State requirements.

The proposed project would also be consistent with applicable water quality and runoff control policies of the Mendocino County General Plan, including Policies RM-19 and RM-20, and the City of Ukiah 2040 General Plan, including Policies PFS-5.2, and PFS-2.7 which regulate land uses, stormwater discharges, and pollutant controls in areas subject to flooding, and are intended to prevent the release of pollutants to surface water and groundwater during inundation events. Because the proposed project would not authorize development or introduce new pollutant sources in flood-prone areas, it would not conflict with or obstruct implementation of these policies. Future development within the annexation areas would be subject to project-specific discretionary review and would be required to comply with all applicable City, County, and state water quality and groundwater protection policies.

Prior environmental review for the Ukiah 2040 General Plan, Mendocino County General Plan, and UVAP evaluated risks associated with flooding and inundation of developed areas, including the potential mobilization of pollutants during flood events. Those analyses concluded that, with adherence to land use controls and stormwater and hazardous materials regulations, impacts would be less than significant. The proposed project would not authorize development, place new structures or pollutant sources within flood hazard areas, or increase development potential beyond that evaluated in previous EIRs. In addition, the proposed project area is not located within tsunami or seiche hazard zones. Therefore, the proposed project would not result in increased risk of pollutant release due to inundation. Thee project would not result in new or substantially more severe than those evaluated in prior environmental reviews. Accordingly, there would be no impacts related to flooding-related pollutant release, tsunami, or seiche hazards. Pursuant to CEQA Guidelines Sections 15162(a)(3) and 15163(a), no additional mitigation measures are required.

Mitigation Measures

No mitigation measures would be required.

4.2.4 Cumulative Impacts

A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (*CEQA Guidelines* Section 15065[a][3]). The geographic scope for cumulative hydrology and water quality impacts is the Ukiah Valley Watershed, including the Russian River and associated tributaries, and the Ukiah Valley Groundwater Basin. This geographic scope is appropriate because surface water quality effects would occur within the same watershed system, and groundwater-related effects would affect basin-wide groundwater conditions managed under the Ukiah Valley GSP.

Past, present, and reasonably foreseeable future development within the cumulative study area includes development consistent with existing land use and zoning designations under the City of Ukiah 2040 General Plan, the Mendocino County General Plan, and the UVAP. Cumulative development has the potential to increase impervious surface area, alter drainage patterns, increase stormwater runoff, reduce groundwater recharge, and introduce pollutants to surface and groundwater resources.

However, the proposed project would consist of annexation, detachment, and application of pre-zoning consistent with existing County land use designations. The proposed project would not authorize development, increase allowable development intensity, expand infrastructure capacity, or change development assumptions evaluated in previously certified environmental documents. As such, the proposed project would not directly contribute to cumulative hydrology or water quality impacts through construction activity, increased impervious surfaces, new drainage alterations, increased groundwater

demand, or changes in groundwater extraction or management associated with a transfer of water service responsibility.

Cumulative development within the Ukiah Valley Watershed and Groundwater Basin would continue to be regulated under a comprehensive framework of federal, State, regional, and local requirements designed to protect water quality and manage hydrologic conditions. These include, but are not limited to, the NCRWQCB Basin Plan, the NPDES Construction and MS4 permit programs, the Ukiah Valley GSP adopted pursuant to SGMA, and applicable City of Ukiah Municipal Code provisions and Ukiah 2040 General Plan policies related to stormwater management, groundwater protection, and flood hazard avoidance. Future discretionary development projects would be required to comply with stormwater low-impact development requirements, erosion and sediment control measures, pollutant discharge limitations, groundwater sustainability objectives, and floodplain management regulations.

Hydrology and water quality impacts associated with cumulative development consistent with adopted land use plans were previously evaluated in the Ukiah 2040 General Plan EIR, Mendocino County General Plan Update EIR, and UVAP EIR, including consideration of flood hazards, stormwater runoff, groundwater supply and recharge, and water quality protection. Those analyses concluded that, with implementation of applicable regulations, policies, and mitigation measures, cumulative hydrology and water quality impacts would be less than significant.

Because the proposed project would not increase development potential, modify the regulatory framework governing cumulative development, or result in changes to groundwater, stormwater, or flood management practices associated with a transfer of water or stormwater service responsibility, its incremental contribution to cumulative hydrology and water quality effects would not be cumulatively considerable. Therefore, there would be no cumulative impacts related to surface water quality, groundwater supply and recharge, drainage patterns, flooding, and pollutant discharges.