4.10 HYDROLOGY, WATER QUALITY, AND DRAINAGE

INTRODUCTION

This section of the EIR describes existing drainage and water resources for the project site, and evaluates potential impacts of the project with respect to stormwater runoff, surface water quality and resources, and groundwater quality and resources. The Hydrology, Water Quality, and Drainage section is based primarily on the *City of Davis General Plan*[1], the *Mace Ranch Park Master Drainage Study* prepared by Cunningham Engineering (May 1991) as well as information provided by the project engineer.

ENVIRONMENTAL SETTING

The section below describes the existing hydrological features of the project site and the surrounding region, and the water quality of the existing resources in and around the project site.

Regional Conditions

Regional Flooding

Flooding tends to increase in the Davis area when either or both of the following occur: 1) flood waters from western Yolo County exceed the capacity of creeks and sloughs flowing easterly near Davis (e.g., flows in Dry Creek west of Davis have frequently caused flooding in the Davis area); and 2) flood waters from the Sacramento River back up into the Yolo and Willow Slough Bypasses, impeding gravity flow from these systems. Floodwaters from local drainages subsequently back up and pond behind the levees of the bypasses until flood flows in the bypasses recede. In addition, a dam inundation study prepared for the Bureau of Reclamation shows that flooding would occur in Davis if Monticello Dam (Lake Berryessa) on Putah Creek, 23 miles west of Davis, were to catastrophically fail (City of Davis 1987a).

Catastrophic flood protection for the City from the Sacramento River is provided by storage and flood control projects upstream on the Sacramento River and its tributaries. Various storm drain collection systems and detention ponds capture internal drainage within the City limits. The ponds provide storage and reduce peak flood flows to the channels that flow to Willow Slough Bypass or the Yolo Bypass.

The soils in the eastern portion of Yolo County contain appreciable amounts of clay that limit infiltration rates and consequently cause high runoff rates. Flooding has frequently occurred in Willow Slough, Dry Slough, and Davis area watersheds north of Putah Creek. Yolo County has been mapped by the Federal Emergency Management Agency (FEMA)

as being part of the National Flood Insurance Program (NFIP). This program identifies areas of potential flooding and their associated risks.

Regional Drainage

The City of Davis lies within the Sacramento Valley between the Coast Ranges and the Sacramento River. The climate of this area is characterized by hot, dry summers and cool, wet winters. The temperature range is approximately 30 to 105 degrees Fahrenheit. Annual average rainfall in this region is around 16 inches and occurs primarily between November and March.

The City is situated on the valley floor where slopes are as flat as 5 to 10 feet per mile. Yolo County is drained by the Sacramento River and the Yolo Bypass, which is part of the Sacramento River Flood Control Project. The major streams that drain the unincorporated County areas around Davis are Putah Creek to the south and Willow Slough Bypass to the North, both of which empty into the Yolo Bypass. Willow Slough Bypass is a levied channel that drains approximately 204 square miles and receives flows from Willow, Cottonwood, Chickahominy, and Dry Sloughs south of Cache Creek.

Project Area Conditions

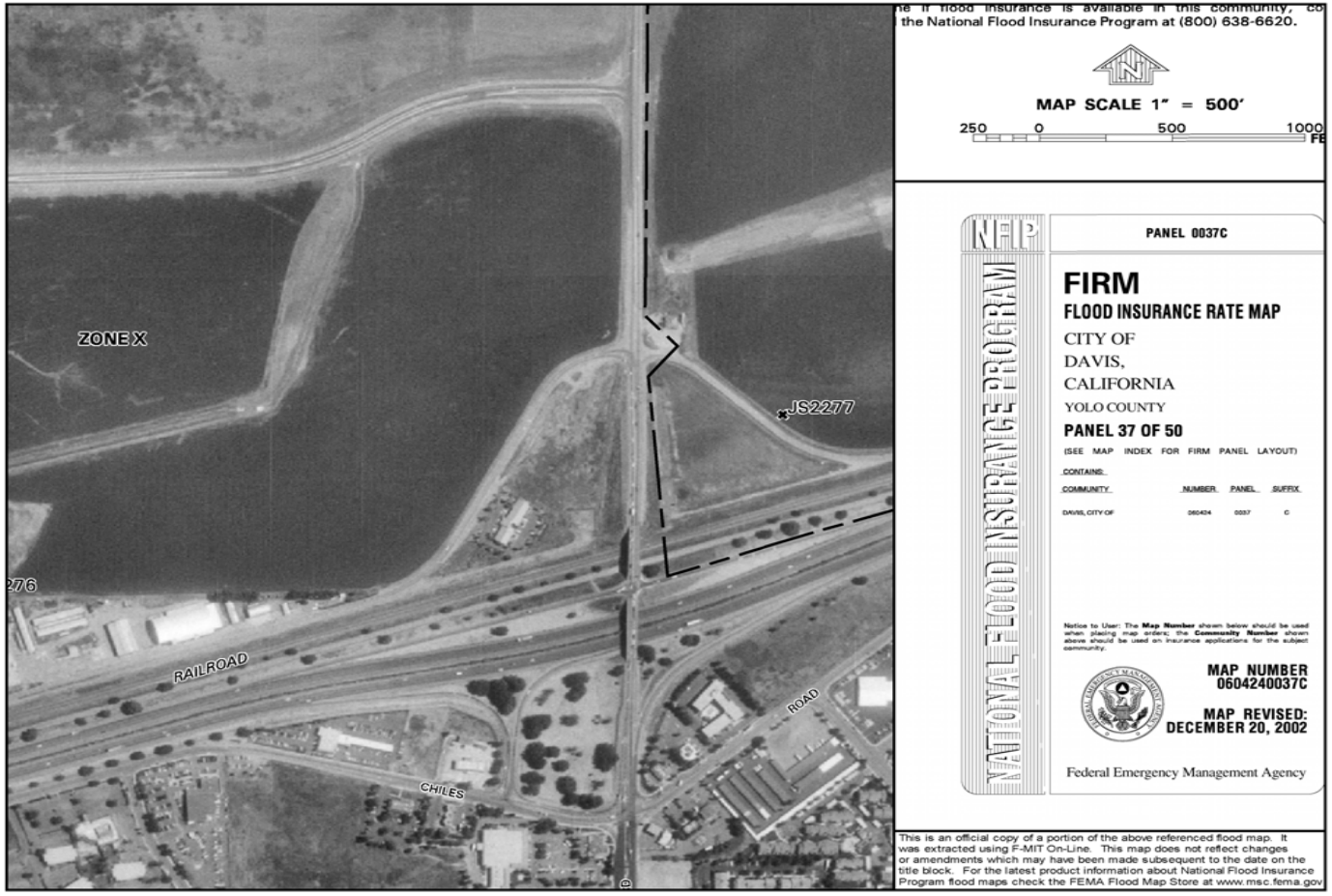
Local Flooding

The 2002 Flood Insurance Rate Map (FIRM Map Number 0604240037C, December 20, 2002) indicates that the project site is identified by FEMA as a Zone X area. Areas designated as Zone X are outside 100-year floodplains, areas of 100-year sheet flow flooding where average depths are less than one foot, areas of 100-year stream flooding where the contributing drainage area is less than 1 square mile, and/or areas protected from the 100-year flood by levees (see Figure 4.10-1). In addition, Figure 5I-1 of the Davis General Plan Update EIR indicates that the proposed project site does not lie within the 100-year floodplain.

Local Drainage

The project site located on approximately 19 acres of vacant, undeveloped land. The topography of the site is flat. Several trees are located at the southern portion of the project site. Faraday Avenue bisects the project site from east to west. At the eastern boundary of the site, Faraday Avenue connects to Second Street and at the western end of the site Faraday Avenue currently terminates in a cul-de-sac. Additional site improvements include six groundwater wells, two groundwater peizometers, and one groundwater extraction well that were installed and are maintained by the United States Environmental Protection Agency as a part of their on-going work in connection with the adjacent Frontier Fertilizer Superfund investigation and remediation program.

Figure 4.10-1
FIRM Map of Project Area



The site currently includes one 42-inch drainage pipe, which originates at the structure across Second Street to the southeast of the project site. The drainage pipe travels from the structure and flows to the northwest through the project area and empties into Mace Channel on the north boundary of the site.

Mace Channel/Line A

The Mace Channel located northwest of the project site is designated as Line A in the Mace Ranch Park Drainage Report.[2] According to the Drainage Report, the first reach of Line A begins as the storm drain along East Fifth Street at the west property line of Mace Ranch Park. The storm drain was designed to convey the 10-year storm without surcharge from Contech, Davis Villas, portions of Mace Ranch Park subdivision, Sunnyside, and adjacent contributing basins. The trunk line is a 60-inch storm drain that conveys flows west along Fifth Street, then south into a 120-foot wide flood channel located at the northwest corner of subbasin A80 (SB-A80).

The second reach of Line A is a large flood channel from the northwest corner of SB-A80 to the northeast corner of SB-A130. The proposed flood channel will ultimately include an 18-inch storm drain under the flood channel to help eliminate habitual wet areas and associated mud, vegetative growth, and mosquitoes. However, the construction of the proposed underdrain will be delayed until adjacent development occurs and the greenbelt/bikepath improvements along the flood channel require the inclusion of a nuisance flow pipeline. The pipeline within the flood channel will have inlets spaced at approximately 400 feet intervals to keep the greenbelt area free from bog areas and provide access to the pipeline.

The final reach of Line A goes north from the flood channel through a future neighborhood park area and outfalls to a storm drain, then a junction structure with Line B. The recreation/detention area (neighborhood park) will have an underdrain, a medium-sized flow channel and will provide detention storage during extreme rainfall events.

Stormwater from Line A ultimately flows northeast under Mace Boulevard. Just east of Mace Boulevard the stormwater enters a 10-acre detention basin. Water from the detention basin is routed further east through a small open channel. The small channel is designed to convey the 10 and the 100-year flow. According to the Mace Ranch Drainage Report, the goal in designing the system was to limit peak flows from the post-development condition to less than that which would be expected under the pre-developed condition. The Report determined that 10 acre-feet of storage would be required at the detention facility to reduce flows to undeveloped conditions. The small channel which flows east out of the detention basin ultimately discharges into the Yolo Bypass.

Water Quality Considerations

Surface Water

The General Plan Update EIR (p. 5G-3) states that pollutant concentrations in Davis surface water are highly variable, depending on urban densities, land uses, and the time since the last rains that produced surface runoff.

Urban runoff is typically higher in concentrations of copper, lead, cadmium, chromium, and zinc than acute U.S. Environmental Protection Agency (EPA) water quality criteria for the protection of aquatic life. The sources of these metals are typically linked to automobile use. In addition, new land development and improvements can have impacts on storm water quality. Human activity can contribute many pollutants to receiving waterways, including oils and hydrocarbons from automobile use, pesticides, fertilizers, and sediment.

According to the U.S. EPA National Pollutant Discharge Elimination System (NPDES),[3] the Stormwater Phase II Final Rule (December 8, 1999) requires operators of regulated small municipal separate storm sewer systems (MS4s) to obtain a National Pollutant Discharge Elimination System (NPDES) permit and develop a stormwater management program designed to prevent harmful pollutants from being washed by stormwater runoff into the MS4 (or from being dumped directly into the MS4) and then discharged from the MS4 into local waterbodies. The City of Davis is considered an operator of a regulated small municipal separate storm sewer system.

The U.S. EPA NPDES stormwater program requires operators of municipal storm drainage systems to implement a stormwater management program designed to reduce pollutants being discharged from their systems. According to the U.S. EPA NPDES, a stormwater management plan must include the following six minimum control measures:

1. Public Outreach and Education;
2. Public Participation and Involvement;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Runoff Control;
5. Post-Construction Runoff Control; and
6. Pollution Prevention/Good Housekeeping.

Site Surface Water Quality

Of the above list, only post-construction runoff control has a direct impact on the proposed facilities that would be a part of the Second Street Crossing (Target Store) project drainage system. Construction site runoff control is addressed in impact statement 4.10-2. In order to achieve the goal of post-construction runoff control, the storm drainage system operator is required to develop and implement strategies that include a combination of structural and/or non-structural Best Management Practices (BMPs).

Non-structural controls include planning procedures that manage growth in sensitive areas and minimize the imperviousness of developments. These types of BMPs, if implemented, would be incorporated into the on-site design of the project.

Structural BMPs include detention basins that allow suspended particles to settle out prior to discharge, infiltration practices, which promote percolation of runoff through the soil, and vegetative BMPs, which are landscaping features such as grassy swales and artificial wetlands, which promote pollutant removal.

Groundwater

Groundwater quality in the Davis Planning Area is generally high in total dissolved solids and hardness, causing scaling in plumbing systems and affecting taste and odor. Over one-half of the residential homes in Davis use water softeners to lower hardness levels. Overall, groundwater quality in the Davis Planning Area is of fair quality when compared to current drinking water regulations. According to the General Plan Update EIR (p. 5G-4), it is believed that acceptable standards for certain contaminants may be exceeded in the future. Therefore, long-term development of wells over 1,500 feet deep is planned to improve total dissolved solids concentrations and to continue to meet drinking water standards.

REGULATORY CONTEXT

The following is a description of federal, State, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

Federal

Federal Clean Water Act

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the U.S. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements.

However, three types of nonpoint source discharges are controlled by the NPDES program: nonpoint source discharge caused by general construction activities, the general quality of stormwater in municipal stormwater systems, and discharges associated with industrial operations. The 1987 amendments to the CWA directed the federal EPA to

implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by EPA that are not included in Phase I.

Construction Site Runoff Management

In accordance with NPDES regulations, in order to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting one (1) acre or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement Best Management Practices (BMPs) to reduce construction effects on receiving water quality by implementing erosion control measures. Because construction of the Second Street Crossing Project, through buildout, would collectively disturb more than one acre, the project would be subject to permit requirements. Implementation of such measures would be included in contract specifications.

Examples of typical BMPs completed in SWPPPs include: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

State

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdiction of the Central Valley Region of the RWQCB (Region 5). The Central Valley RWQCB (CVRWQCB) has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction.

Water quality objectives for the Sacramento River and its tributaries (e.g. Cache Creek, Willow Slough, and Yolo Bypass) are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the Porter-Cologne Act. The Basin Plan establishes water quality objectives, and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Sacramento-San Joaquin River Basin. Because the City of Davis is located within the CVRWQCB's jurisdiction, all discharges to surface water or groundwater are subject to the Basin Plan requirements.

Local

City of Davis General Plan

The following City of Davis General Plan goals and policies are applicable to hydrology, water quality, and drainage:

Municipal Water Supply

Goal WATER 2	Ensure sufficient supply of high quality of water for the Davis Planning Area.
Policy WATER 2.1	Provide for the current and long-range water needs of the Davis Planning Area, and for protection of the quality and quantity of groundwater resources.
Policy WATER 2.2	Manage groundwater resources so as to preserve both quantity and quality.
Policy WATER 2.3	Maintain surface water quality.

Stormwater Drainage

Goal WATER 3	Design stormwater drainage and detention facilities to maximize recreational, habitat, and aesthetic benefits.
Policy WATER 3.1	Coordinate and integrate development of storm ponds and channels Citywide, to maximize recreational, habitat, and aesthetic benefits.
Policy WATER 3.2	Coordinate and integrate design, construction, and operation of proposed stormwater retention and detention facilities City-wide, to minimize flood damage potential, and improve water quality.

Regional Coordination

Goal WATER 4	Monitor issues in the region that affect quality and quantity of water in the Davis Planning Area.
Policy WATER 4.1	Research, monitor, and participate in issues in Yolo County and the area of origin of the City's groundwater that affect the quality and quantity of water.
Policy WATER 4.2	Maintain contact with other appropriate State, Federal, and local agencies.

City of Davis Phase II Stormwater Management Plan

The City has prepared a Stormwater Management Plan (SWMP) consistent with the requirements of the National Pollutant Discharge Elimination System. The SWMP has been submitted to the Regional Water Quality Control Board (RWQCB) for review. The SWMP has not yet been approved by the RWQCB.

IMPACTS AND MITIGATION MEASURES

Standards of Significance

For the purposes of this EIR, impacts are considered significant if implementation of the proposed project would:

- Substantially affect aquifer characteristics or interfere substantially with groundwater recharge through water use, long-term dewatering, or reduction in recharge are such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level that could adversely affect future planned or permitted supplies;
- Result in a change in absorption rates or drainage patterns that would substantially increase the rate and amount of onsite or offsite surface runoff, or expose downstream locations to increased risk of flooding;
- Substantially degrade groundwater or surface water quality as a result of construction or operation of the project by exceeding adopted RWQCB Basin Plan water quality objectives, applicable NPDES permit requirements, or local standards; or
- Result in a net increase in downstream volumes.

Method of Analysis

The information contained in the Hydrology, Water Quality, and Drainage section of this EIR was derived primarily from the *Mace Ranch Park Master Drainage Study* prepared by Cunningham Engineering (May 1991) as well as information provided by the project engineer.

Project Impacts and Mitigation Measures

4.10-1 Increased stormwater runoff from the project site contributing to downstream flooding.

The proposed project site was included as part of the overall *Mace Ranch Park Master Drainage Study* (prepared in September 1991). The project site is delineated as Sub-basin Areas A-130 and A-140 in the master drainage study, and the site's contributing drainage was part of the Line 'A' drainage system.

Drainage Line 'A' is located on the northern border of the project site. Line A is also referred as the Mace Channel. In the master drainage study, drainage improvements, including Line A, were designed based upon many factors, some of which include Sub-basin Areas A-130 and A-140 having the following hydrologic parameters:

- 90 percent imperviousness (post-development condition).
- Discharge outfall to the landscaped flood channel (north).

The flood channel along Line 'A' was designed to detain and convey the 100-year storm from the adjacent contributing areas; this includes Sub-basin Areas A-130 and A-140 where the project site is located.

Based on the latest Target site plan, the percent imperviousness of the proposed project would be approximately 73 percent. Therefore, the proposed project would result in the creation of less impervious surface area than was previously anticipated for the project site in the master drainage study. As a result, Line A/Mace Channel has adequate capacity to accommodate the stormwater runoff from the proposed project, resulting in a ***less-than-significant*** impact to downstream flooding.

Mitigation Measure(s)
None Required.

4.10-2 Construction-related impacts to surface water quality.

The development of the proposed project would involve the construction of a retail building and other retail building pads, roadways, parking lots, and infrastructure, which would require grading, excavation, and other construction-related activities that could cause soil erosion at an accelerated rate during storm events. All of these activities have the potential to affect water quality by contributing to localized violations of water quality standards, if stormwater runoff from construction sites enters receiving waters.

Construction activities such as grading, excavation, and trenching for site improvements would result in disturbance of soils at the project site or at certain offsite locations (including the proposed drainage and wastewater system, and roadway areas). Construction site runoff can contain soil particles and sediments from these activities. Dust from construction sites can also be transported to other nearby locations, where it can enter runoff or water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites can also enter runoff. Typical pollutants could include petroleum products and heavy metals from equipment and products such as paints, solvents, and cleaning agents that could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff

containing the sediment entered receiving waters in sufficient quantities to exceed water quality objectives. Impacts from construction-related activities would generally be short-term and of limited duration.

Although impacts from construction-related activities would generally be short-term and of limited duration, should appropriate stormwater best management practices (BMPs) not be implemented, a ***significant*** impact would result.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.10-2 *Prior to commencement of site grading, the applicant shall obtain the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit), which pertains to pollution from grading and project construction. Compliance with the Permit requires the project applicant to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. The SWPPP would incorporate Best Management Practices (BMPs) in order to prevent, or reduce to the greatest extent feasible, adverse impacts to water quality from erosion and sedimentation: the SWPPP shall be provided for the review and approval of the City Engineer.*

4.10-3 Long-term water quality degradation associated with urban runoff from the project site.

Implementation of the proposed project would be expected to result in long-term impacts to surface water quality due to urban runoff from the site. The increased impervious area created by the development of the proposed project would alter the types and levels of pollutants that could be present in project site runoff. Runoff from streets, driveways, parking lots, and landscaped areas typically contains nonpoint source pollutants such as oil, grease, heavy metals, pesticides, herbicides, fertilizers, and sediment. Concentrations of pollutants carried in urban runoff are extremely variable, depending on factors such as the following:

- Volume of runoff reaching the storm drains;
- Time since the last rainfall;
- Relative mix of land uses and densities; and
- Degree to which street cleaning occurs.

In addition, runoff from approximately 90 percent of the proposed parking area, half of the Target store roof area, and two of the smaller buildings to the north would be collected through a series of proposed storm drain pipes, inlets, and

manholes, conveyed, and eventually discharged to the Mace Channel to the north. The remaining Target store roof area to the west and loading dock area will drain to a proposed vegetative swale west of the Target store and outfall into the existing channel to the north via proposed underground piping. Runoff from the small building at the northeast corner of the site and its parking area would drain into a proposed vegetative swale and also outfall to the existing channel.

With approximately 90 percent of the proposed parking area, half of the Target store roof area, and two of the smaller buildings to the north being discharged directly into the Mace Channel without treatment, a ***significant*** impact would result.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.10-3 *Prior to approval of improvement plans, the applicant shall submit a water quality plan to the City Engineer aimed at reducing long-term urban runoff impacts associated with the project.*

The plan shall include Best Management Practices (BMPs) consistent with the recommendations in the City's Stormwater Management Plan. The BMPs shown on the improvement plans shall be reviewed and approved by the City Engineer.

4.10-4 Groundwater quality and recharge impacts.

According to the City of Davis General Plan, the City relies on groundwater as its sole source of supply for public drinking water. Protection of groundwater quality is essential to ensure future prosperity and health. As noted in the City of Davis General Plan, the taste, odor, and hardness characteristics of the tap water in Davis are often debated. In general, groundwater in the vicinity of Davis is "hard" and high in dissolved solids. Samples from 19 of the 21 City wells tested through 1995 were classified as "very hard," causing over half of the single family homes in the City to use water softeners. Overall groundwater quality in Davis is of fair quality when measured against current drinking water regulations, but may exceed acceptable standards for certain contaminants in the future. Long-term development of wells over 1,500 feet deep is planned to improve the aesthetic characteristics of Davis' water and to meet drinking water regulations.

The project site currently consists of pervious vacant and undeveloped land. The development of the proposed project would replace approximately 73 percent of the site with impervious surfaces. The Davis 2000 Urban Water Management Plan Update, dated July 2001, uses the General Plan land use projections to predict and assess the groundwater supply capabilities based upon the planned buildout. Thus, the Urban Water Management Plan assumed, as did the Mace

Ranch Park Master Drainage Study, that the project site would be developed with urban uses; namely, General Commercial, Business Park, and Public/Semi-Public uses. The UWMP determined that the City has enough water resources to serve General Plan buildout. Therefore, the conversion of the project site to urban uses resulting in impervious surfaces was planned for and was deemed to have minimal impact on overall groundwater recharge/supply. As a result, the proposed project would have a ***less-than-significant*** impact.

Mitigation Measure(s)
None Required.

Cumulative Impacts and Mitigation Measures

As defined in Section 15355 of the State CEQA Guidelines, "cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects (CEQA Guidelines 15355).

An assessment of cumulative impacts should consider both impacts identified as significant as well as those impacts identified as less than significant for individual projects that may become significant in a collective sense when considering the co-occurrence of multiple projects.

4.10-5 Long-term increases in peak stormwater runoff flows from the proposed project in combination with existing and future developments in the Davis area.

Implementation of the proposed project would result in the construction of a Target Store and four accessory building pads for future retail uses, thereby creating impervious surfaces where none currently exist. The addition of impervious surfaces to the project site would increase peak stormwater runoff volumes downstream of the site. The effect of the proposed project plus other development in the City would result in increases in stormwater flows to a degree which could exceed existing drainage system capacity and cause flooding downstream. However, as with the proposed project, other future projects in the Davis area would be required to demonstrate that the downstream drainage systems would have adequate capacity to accommodate the project's runoff. If the system does not have adequate capacity to accommodate a particular project's runoff, the developer would be required to construct the necessary improvements, as determined by the City. As a result, cumulative impacts associated with increases in stormwater runoff flows would be ***less-than-significant.***

Mitigation Measure(s)
None Required.

4.10-6 Cumulative impacts related to degradation of water quality.

Construction of the proposed project would contribute to the cumulative increase of urban pollutant loading, which would adversely affect water quality. Cumulative development in the Davis area, including the proposed project, would also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution include runoff from roadways and parking lots; runoff from landscaping areas; commercial activities; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides.

The mitigation measures for the project-specific impacts identified in Impact Statements 4.10-2 and 4.10-3 would reduce the pollutants in the stormwater from this project to a level lower than in the runoff from most developed areas within the Davis area, because most of these areas were constructed before stormwater quality best management practices (BMPs) were required. Additionally, future development projects would be required to implement BMPs comparable to the BMPs identified in this project. However, without implementation of proper BMPs, this project and other future projects would result in the continued decrease of the water quality of the local Davis natural drainage system. As a result, the cumulative impact from the proposed project on water quality is ***significant***.

Mitigation Measure(s)
Implementation of the following mitigation measure would reduce the above impact to a *less-than-significant* level.

4.10-6 Implement Mitigation Measures 4.10-2 and 4.10-3.

Endnotes

[1] City of Davis, *City of Davis General Plan*, May 2001.
[2] Cunningham Engineering, *Mace Ranch Park Drainage Report*, May 1991.
[3] cfpub.epa.gov/npdes/, February 2006.