
REFERENCES

REFERENCES

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APPENDIX A

**Notice of Preparation and
Responses to Notice of Preparation**

**NOTICE OF PREPARATION OF A
DRAFT ENVIRONMENTAL IMPACT REPORT
FOR THE
MIDTOWN COMMUNITY PLAN**

TO: State Clearinghouse, Interested Persons, and Agencies
DATE: June 30, 2010
SUBJECT: Notice of Preparation of a Draft Environmental Impact Report
LEAD AGENCY: City of Fremont
PROJECT NAME: Midtown Community Plan & Design Guidelines
PROJECT AREA: City of Fremont

The City of Fremont will be the Lead Agency for preparation of an Environmental Impact Report (EIR) for the Midtown Community Plan, which is intended to guide future development within an approximately 110-acre area bounded by Fremont Boulevard, Mowry Avenue, Paseo Padre Parkway and Walnut Avenue through 2030. The City of Fremont estimates that buildout of the Midtown area will occur over multiple years in a combination of redevelopment of existing developed sites and new development on vacant properties. We request comments from your agency regarding the scope and content of the environmental information to be addressed in the EIR. Comments should be limited to issues germane to your agency's statutory responsibilities in connection with the proposed project. The EIR may be used by your agency when considering subsequent permits or approvals necessary for this project. A brief description of the proposed project, its site boundaries, and a summary of the potential environmental effects are attached. Additional project information is available on the City's website, at: www.fremont.gov/ceqa.

The proposed project, its location, and its potential environmental effects are described in the attached materials. An initial study was not prepared for this project.

According to State law, the deadline for your response is 30 days after receipt of this notice; however, we would appreciate an earlier response, if possible. **Written comments will be accepted until August 2, 2010 at 4:00pm.** A scoping meeting is scheduled for 1:30 p.m. on July 15, 2010. The meeting will be held at the City of Fremont Development Services Center in the Niles Room at 39550 Liberty Street, Fremont, California, 94538.

Please send your written responses, including the name of the contact person with your agency, to Kelly Diekmann, Senior Planner, at the address below:

City of Fremont
Community Development Department
Planning Division
39550 Liberty Street P.O. Box 5006
Fremont, CA 94537-5006
Phone: 510-494-4540
Fax: 510-494-4402
Email: kdiekmann@fremont.gov

MDTOWN COMMUNITY PLAN PROJECT DESCRIPTION

1. Project Title

Midtown Community Plan & Design Guidelines

2. Lead Agency Name and Contact

City of Fremont
Community Development Department
Planning Division
39550 Liberty Street, P.O. Box 5006
Fremont, CA 94537-5006

Kelly Diekmann, Senior Planner
Phone: 510-494-4540
Fax: 510-494-4402
Email: kdiekmann@fremont.gov

3. Project Location

The approximately 110-acre Midtown area is located in central Fremont, California (see **Attachment A**), and is bound by Fremont Boulevard, Mowry Avenue, Paseo Padre Parkway and Walnut Avenue (see **Attachment B**). Although there are vacant areas within the Midtown area, most of the Midtown area has already been developed, with current uses ranging from large shopping centers (e.g., Fremont Plaza and Town Fair) and Fremont City Hall to single-family residences.

4. Surrounding Land Uses

The Midtown area generally abuts developed areas. The Gateway Plaza Shopping Center is located north of the Midtown area across Paseo Padre Parkway. East of the Midtown area across Walnut Avenue are the Alameda County Veterans Memorial Park and Courthouse, offices, Fremont Hospital, assisted living facilities and retail operations. The Fremont Hub Shopping Center and Williams Historical Park are located south of the Midtown area across Fremont Boulevard. The area west of the Midtown area across Mowry Avenue is generally characterized by multi-family residential development, and a large vacant parcel at the southwest corner of Paseo Padre Parkway and Mowry Avenue.

5. General Plan and Zoning

Under the current General Plan the entire Midtown area is designated Central Business District (CBD), with the exception of a small area designated as Institutional Open Space (I-OS) for a civic park in the vicinity of Walnut Avenue and State Street. More specifically, the Midtown area is known as the "Focus Area" of the Central Business District Concept Plan.

The major portion of the Midtown area is zoned CBD (Central Business District), which is intended to provide for a concentration of retail, service, and office uses reflecting the needs of the entire city and the subregion. There are three areas designated Planned Development (P). One, P-2009-9, allows development of a civic park and 301 multi-family units known as Urban Housing and is located on 3.85 acres surrounded by Walnut Avenue, California Street and Beacon Avenue. . A second area, P-2005-76, extends along both sides of Mt. Vernon Street allowing for mixed-use development

(commercial space and residential use above at 50 – 70 units/acre). A third area, P-2008-177, is located at the northeast corner of Capitol Avenue and Hastings Street allowing a 4-story mixed-use (12 residential units over two levels of retail and office space). Planned development areas are intended to encourage and provide a means for effectuating desirable development, redevelopment, rehabilitation and conservation in the city, which features variations in siting, mixed land uses, and/or varied dwelling types.

6. Description of the Project

The vision of the Midtown Community Plan is a vibrant mixed-use urban destination with street level commercial activities and mid-rise office and residential buildings. Under the Midtown Community Plan, a range of uses would be allowed, and the Plan will establish form-based design guidelines for future development. The Plan will provide development flexibility for individual sites so that they may support either residential or non-residential uses when consistent with the overall design intent of the Plan. In order to promote relatively high development densities in this section of Fremont, the Midtown Community Plan will require a minimum site development floor area ratio (FAR) of 0.80 to assure achievement of urban design and Transit Oriented Development (TOD) goals. The Plan incorporates LEED Neighborhood Development (ND) principles, and will ultimately be a certified LEED ND plan.

For the purposes of the environmental review, the following development assumptions of Midtown buildout describe the redevelopment and intensification of the existing 1,000,000 square feet of existing commercial, office, and civic uses through 2030. Development assumptions consider an average buildout of 1.5 FAR throughout Midtown. Design Guidelines and particular zoning standards will not impose height restrictions but establish design requirements for build-to lines at street property lines, pedestrian-oriented ground floors, parking standards, green building, public art, and materials and finishes.

<u>Land Use Category</u>	<u>Total Development at Buildout</u>
Office	1,988,800 square feet
Civic	278,000 square feet
Retail/Commercial	443,100 square feet
Residential	2,500 units
Open Space/Plaza	2.3 acres

Office uses under the Midtown Community Plan will include general office, professional services and medical offices. Development anticipated under the Civic land use category includes consolidation of City office space and a new performing arts venue, with these uses coordinated around public open space and plazas. Retail/Commercial development will include establishments that provide personal services, restaurants, retail shops and other uses consistent with downtown development patterns. Residential development will consist of high-density urban housing types. Minimum density guidelines for residential development will be 50 units per acre if projects are stand-alone residential development not integrated within mixed-use buildings.

The Midtown Community Plan emphasizes TOD and improved connectivity with the extension of Capitol Avenue to Fremont Boulevard. The Plan includes new sidewalk and street right-of-way sections that include bicycle lanes, street parking, street trees, and wide sidewalks. No vehicular capacity improvements are anticipated in conjunction with the development of the Midtown.

7. Project Approvals

The Project EIR will be used to provide decision-makers and the general public with relevant environmental information to use in considering the following actions:

- Amend the General Plan
- Adopt Midtown Community Plan
- Amend Zoning Districts
- Adopt Standard Specifications for Public Improvements
- Adopt Design Guidelines

MIDTOWN COMMUNITY PLAN ENVIRONMENTAL REVIEW

1. Introduction

The purpose of an Environmental Impact Report (EIR) is to inform decision-makers and the general public of the environmental effects of a proposed project. The EIR process is intended to provide environmental information sufficient to evaluate a proposed project and its potential for significant impacts on the environment; examine methods of reducing adverse environmental impacts; and consider alternatives to the project.

The Project-level Midtown Community Plan Environmental Impact Report (EIR) will be prepared and processed in accordance with the California Environmental Quality Act (CEQA) of 1970, as amended, and the *CEQA Guidelines*. In accordance with CEQA requirements, the EIR will include the following:

- Summary of the proposed project and its potential environmental effects;
- Description of the proposed project;
- Description of the existing environmental setting, potential environmental impacts, and mitigation measures;
- Cumulative impacts;
- Alternatives to the proposed project; and
- Other Environmental consequences of the project, including: 1) the growth-inducing impacts of the proposed project; 2) any significant environmental effects which cannot be avoided if the project is implemented; 3) any significant irreversible and irretrievable commitments of resources; and 4) effects found not to be significant.

The EIR identifies the general effects of development envisioned under the Midtown Community Plan. The degree of specificity in the EIR reflects the level of detail provided in the Midtown Community Plan. Following City of Fremont adoption of the Midtown Community Plan, subsequent development activities and other actions would be necessary to implement the policies included in the Midtown Community Plan. The EIR will address the potential environmental impacts of those subsequent actions to the extent possible, given the conceptual nature of the Midtown Community Plan. When subsequent individual development projects are proposed within the Midtown area, additional site-specific environmental review may be required to evaluate and disclose project-level impacts in accordance with CEQA, as well as to demonstrate conformance with Midtown Community Plan goals, objectives and policies.

It should be noted that the level of residential and non-residential development assumed for the purposes of the EIR evaluation is much greater than the level of development that has actually taken place in the Midtown area in recent times, and represents an “upper limit” set of assumptions for development during the planning period to provide the basis for the assessment of potential environmental impacts. The level of development assumed under the Midtown Community Plan would accommodate a significant portion of the City of Fremont’s “fair share” of the regional housing need, but development decisions are often driven by economic factors which would not be influenced in any substantive way by the Midtown Community Plan. Although the Midtown Community Plan would permit more intensive development than has been experienced in recent years, it is probable that actual development during the planning period may not match the levels assumed for the purposes of the EIR evaluation. As a result, actual environmental impacts associated

with Midtown area development during the planning period may ultimately turn out to be less than those described in the EIR.

2. Environmental Factors Potentially Affected

The Environmental Impact Report will identify the significant environmental impacts resulting from the construction and operation of the proposed project. The EIR will address the following specific environmental topics:

- a. Land Use.** Although most of the approximately 110-acre Midtown area has already been developed, the Midtown Community Plan would enable development and redevelopment at significantly higher intensities than exist in the area today. The proposed project's compatibility with surrounding land uses will be discussed in the EIR. The EIR will also include an evaluation of the project's potential to divide an established community. Appropriate mitigation measures will be identified for any significant land use impacts resulting from implementation of the Midtown Community Plan.
- b. Aesthetics.** Development anticipated under the Midtown Community Plan would change the existing visual character of the site from one of primarily flat vacant land and low rise buildings in most areas in Midtown to one of multi-story residential and non-residential structures oriented toward increased transit use. This change in land use could result in significant impacts to the visual character of the site and its surroundings. The EIR will describe the existing visual conditions of the Midtown area and address the potential effects on scenic resources or any degradation to the existing visual character. Additionally, although the Midtown area is already largely developed, development under the Midtown Community Plan could introduce new sources of light to the area. The EIR will discuss the potential adverse effects of lighting types within the Midtown area. Mitigation measures will be identified to address significant impacts, as appropriate.
- c. Population, Employment and Housing.** Implementation of the Midtown Community Plan would contribute to increased housing and job growth in Fremont. The EIR will describe the existing demographics of the Midtown area and vicinity and assess the impacts of the increased growth that will be created by the anticipated development in the Midtown area, to the extent that they might directly or indirectly result in physical changes to the environment. Appropriate mitigation measures will be identified for any significant population, employment, or housing impacts resulting from implementation of the Midtown Community Plan.
- d. Transportation, Circulation and Parking.** Development enabled by the Midtown Community Plan would affect the traffic and circulation patterns in the project vicinity. A Traffic Impact Analysis will be prepared for the Plan that studies 28 most likely impacted intersections in and around the subject area and effects on CMP roadways leading to the subject area in 2015 and 2035. The transportation impact analysis will evaluate baseline (existing and approved) conditions against traffic and transit impacts and the transportation improvements under the proposed project condition and cumulative project conditions. Plan-related traffic, including planned roadway improvements in the area, will be evaluated for conformance with the City's current Level of Service (LOS) policies that identify an acceptable LOS of E and waiver of LOS standards in support of desirable neighborhood design goals in the Central Business District. The study will analyze localized operations and circulation. The study will also analyze the Plan's compliance with adopted policies, plans, and programs supporting alternative modes of transportation. Mitigation measures for significant impacts and determination of feasibility will be identified. The results of this study will be incorporated into the EIR.

e. **Air Quality.** Development activity associated with implementation of the Midtown Community Plan could potentially increase emission concentrations in Fremont through increased vehicle trips and demolition and construction. The EIR will address potential air quality impacts resulting from these Plan-related activities and their potential effects on existing and future sensitive receptors. The EIR will also discuss Plan compatibility with regional air quality plans. Construction-related air quality impacts, such as vehicle exhaust and dust will be qualitatively discussed. Odors that may result from potential restaurant uses in the Midtown area will also be discussed. Mitigation measures will be identified for potentially significant air quality impacts, as appropriate.

f. **Noise.** The existing noise environment within the Midtown area is influenced by its proximity to busy local roadways. Construction and operation anticipated under the Midtown Community Plan will increase noise levels in the Midtown area. Existing and proposed land uses within the Midtown area include sensitive uses, such as existing and future residential uses. The EIR will assess potential noise impacts associated with Plan implementation, including impacts to existing and future development. Noise levels will be evaluated for consistency with City of Fremont standards and guidelines. Mitigation measures to reduce noise impacts will be identified, as appropriate.

g. **Hydrology and Water Quality.** The EIR will address any hydrology and storm drainage impacts that may occur as a result of implementation of the Midtown Community Plan. The Plan would facilitate beneficial impacts related to stormwater runoff as sites redevelop and include new treatment measures. The analysis will discuss whether water quality and discharge requirements would be met, whether existing drainage patterns would be affected or altered, and if water resources would be degraded or depleted. Mitigation measures will be recommended, as appropriate.

h. **Geology, Soils and Seismicity.** The Midtown area is located in a seismically active region of the State. The EIR will assess soil and geologic conditions of the Midtown area to address seismic hazards, including the potential for liquefaction, ground-shaking, soil erosion, and subsidence. Mitigation measures will be recommended, where appropriate.

i. **Hazards and Hazardous Materials.** Historical releases of hazardous materials on or near the Midtown area could expose construction workers to hazardous materials during development and, if present, hazardous materials, soils and groundwater could potentially affect future workers and users in the Midtown area. Development of the Midtown area would require the use of hazardous materials present in fuels, lubricants, and building materials. Operations following anticipated development may include the occasional use of hazardous materials. The EIR will include a description of the potential hazards on the site and the health and safety effects associated with development anticipated under the Midtown Community Plan. Mitigation measures will be recommended, where appropriate.

j. **Cultural and Paleontological Resources.** Although no cultural or paleontological resources have been formally identified within the Midtown area, there is a possibility that unidentified prehistoric archaeological sites may exist within the Midtown area. This section of the EIR will address potential impacts to historic, archaeological, and paleontological resources. Mitigation measures will be recommended, where appropriate.

k. **Public Services.** The Midtown area is currently within the service boundaries of police, fire, park, and school services. The change in use and intensity envisioned by the Midtown Community Plan would exert additional demands on service providers. The EIR will identify existing service providers serving the Midtown area, and will quantify the increase in service demands resulting from implementation of the Midtown Community Plan. The availability and adequacy of existing services will be analyzed. Mitigation measures will be recommended, where appropriate.

l. Infrastructure and Utilities. The Midtown area is currently served by water, wastewater, solid waste disposal, and other utilities based on previous development. The change in use and intensity envisioned by the Midtown Community Plan may exert additional demands on utility providers and infrastructure. The net effect of this demand increase could result in the need for new water supply and sewer infrastructure. Per the requirements of *CEQA Guidelines* Section 15083.5, a Water Supply Assessment has been requested for the Midtown Community Plan. Mitigation measures will be recommended for any utilities and infrastructure impacts associated with implementation of the Midtown Community Plan.

m. Global Climate Change. The EIR will quantify the annual greenhouse gas emissions associated with development under the Midtown Community Plan, and will evaluate Plan consistency with BAAQMD Guidelines. Greenhouse gas emissions associated with development under the Midtown Community Plan will originate from two main sources: automobiles and energy use for operations. The EIR discussion of greenhouse gases may highlight potential Plan features which may lead to greater energy efficiency, reduce water demand, or other reductions in pollutants associated with global climate change.

n. Planning Policy Analysis. This section of the EIR will summarize project consistency with City plans and policies relevant to the Midtown area, such as the City of Fremont General Plan. The *physical* impacts associated with any plan or policy conflicts would be addressed. Likewise, conflicts relating to federal, state, and regional policies would be addressed in the EIR.

o. Cumulative and Growth Inducing Impacts. The analysis of cumulative effects will address the potential impacts associated with implementation of the Midtown Community Plan in conjunction with other off-site, permitted, under-construction or probable future projects associated with the projected build-out of the General Plan. This analysis will cover all environmental topics discussed in the EIR (e.g., traffic, air quality, etc.) and will specify which areas are anticipated to result in significant cumulative impacts. Potential growth-inducing impacts will also be evaluated to adequately describe the nature of the Midtown Community Plan in relation to existing and proposed development. Mitigation measures will be recommended, where appropriate.

p. Alternatives. The EIR will examine a reasonable range of alternatives to the project, including the CEQA-mandated No Project Alternative. A second potential alternative is described below. Other potential alternatives that may be capable of reducing or avoiding potential environmental effects may be examined based on comments received on this Notice of Preparation or based on preliminary impacts analysis.

- *No Project Alternative.* The No Project alternative would be based on assumptions regarding the level of development which could currently be permitted and expected to take place under existing land use regulations within the Midtown area. Under the current General Plan designation and zoning for the Midtown area, this development would be expected to be largely non-residential, to provide a concentration of retail, service and office uses reflecting the needs of the entire city and the subregion.
- *Reduced Development Alternative.* The Reduced Development alternative would be based on the premise that the level of development which could take be expected to place within the Midtown area during the planning period could be limited to an average minimum FAR of 0.8 as a means of reducing possible Plan-related potential environmental impacts that may be identified through the EIR analysis (e.g., air quality impacts, greenhouse gas emission impacts, traffic impacts, etc.).

Attachment A

Premont
 Community Development Department, Planning Division
 30000 Live Oak Blvd., # 200, San Jose, CA 95132
 www.premont.gov/cdd/development/planning

**General Plan
 Land Use Diagram**

Amended through April, 2008

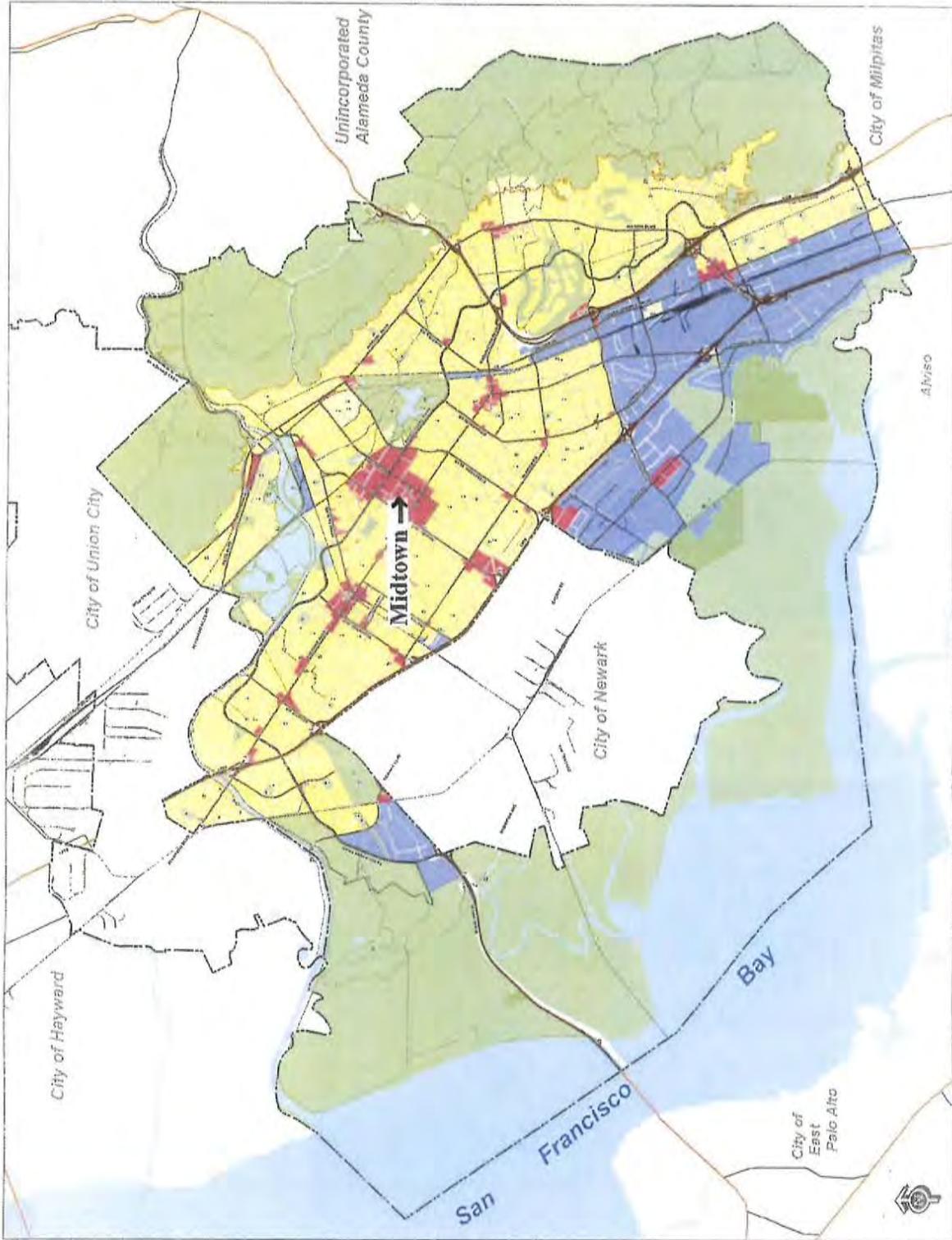
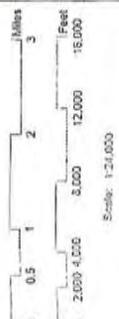
Land Use Classification

- Commercial
- Industrial
- Residential
- Commercial and/or Residential
- Open Space, Agriculture
- Open Space
- Public Facility
- City Boundary
- Freeway
- Palway
- Arterial
- Collector
- Top-of-the-Hill Line
- Trail
- Cemetery
- Fire Station
- Gateway
- Park
- School
- Trailhead
- BART Station- Existing or Proposed
- TRAIN Station- Existing or Proposed

This Land Use Diagram is one of several General Plan Diagrams which, when combined with the General Plan Text and other information, constitute the City's overall development policy for the City of Fremont.

Allowable land uses for specific parcels of land cannot be determined solely from this diagram. Contact the Community Development Department, Planning Division for the most up-to-date and relevant information.

USERS SHOULD VERIFY DESIGNATIONS, REGULATIONS, AND RESTRICTIONS BEFORE MAKING PROJECT COMMITMENTS.



MIDTOWN PROJECT AREA

 City of Fremont
Information Technology Services
2920 Liberty Avenue, Suite 200
Fremont, CA 94538 | 415.779.3000





ARNOLD SCHWARZENEGGER
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

July 1, 2010

To: Reviewing Agencies
Re: Midtown Community Plan
SCH# 2010072001

Attached for your review and comment is the Notice of Preparation (NOP) for the Midtown Community Plan draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Kelly Diekmann
City of Fremont
P.O. Box 5006
Fremont, CA 94537

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,


Scott Morgan
Acting Director

Attachments
cc: Lead Agency

**Document Details Report
State Clearinghouse Data Base**

SCH# 2010072001
Project Title Midtown Community Plan
Lead Agency Fremont, City of

Type NOP Notice of Preparation
Description The vision of the Midtown Community Plan is a vibrant mixed-use urban designation with street level commercial activities and mid-rise office and residential buildings. The plan allows for a flexible range of commercial, office, and civic uses. Build out of the plan will include redevelopment and intensification of the existing 1,000,000 sf of existing commercial, office, and civic uses through 2030. Development assumptions consider an average buildout of 1.5 FAR throughout Midtown. The plan will be a LEED Certified Neighborhood Development.

Lead Agency Contact

Name Kelly Diekmann
Agency City of Fremont
Phone 501-494-4440 **Fax**
email
Address P.O. Box 5006
City Fremont **State** CA **Zip** 94537

Project Location

County Alameda
City Fremont
Region
Cross Streets Mowry Ave/Fremont Blvd
Lat / Long 37° 33' 00" N / 121° 58' 58" W
Parcel No.
Township 4S **Range** 1W **Section** 28 **Base** MDB&M

Proximity to:

Highways 84, 238, I-880
Airports
Railways BART, UP
Waterways Lake Elizabeth
Schools Fremont Unified
Land Use PLU: Partially built out city center and commercial
Z & GP: Central Business District

Project Issues Aesthetic/Visual; Air Quality; Cumulative Effects; Noise; Landuse; Public Services; Traffic/Circulation; Water Supply

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Water Resources; Department of Fish and Game, Region 3; Native American Heritage Commission; Public Utilities Commission; California Highway Patrol; Caltrans, District 4; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 2

Date Received 07/01/2010 **Start of Review** 07/01/2010 **End of Review** 07/30/2010

- Resources Agency
- Resources Agency - Nadell Gayou
- Dept. of Boating & Waterways - Mike Solelo
- California Coastal Commission - Elizabeth A. Fuchs
- Colorado River Board - Gerald R. Zimmerman
- Dept. of Conservation - Rebecca Salazar
- California Energy Commission - Eric Knight
- Cal Fire - Allen Robertson
- Central Valley Flood Protection Board - James Herota
- Office of Historic Preservation - Wayne Donaldson
- Dept. of Parks & Recreation Environmental Stewardship Section
- California Department of Resources, Recycling & Recovery - Sue O'Leary
- S.F. Bay Conservation & Dev't Comm. - Steve McAdam
- Dept. of Water Resources - Nadell Gayou
- Conservancy
- Fish and Game
- Dept. of Fish & Game - Scott Flint
- Environmental Services Division - Fish & Game Region 1 - Donald Koch
- Fish & Game Region 1E - Laurie Hamsberger
- Fish & Game Region 2 - Jeff Dronngesen
- Fish & Game Region 3 - Charles Armor
- Fish & Game Region 4 - Julie Vance
- Fish & Game Region 5 - Don Chadwick
- Habitat Conservation Program - Fish & Game Region 6 - Gabriela Gatchel
- Habitat Conservation Program - Fish & Game Region 6 IM - Brad Henderson
- Inyo/Mono, Habitat Conservation Program - Dept. of Fish & Game M - George Isaac
- Marine Region
- Other Departments
- Food & Agriculture - Steve Shaffer
- Dept. of Food and Agriculture - Dept. of General Services - Public School Construction
- Dept. of General Services - Anna Garbeif
- Environmental Services Section - Dept. of Public Health - Bridgette Binning
- Dept. of Health/Drinking Water
- Independent Commissions/Boards
- Delta Protection Commission - Linda Flack
- Cal EMA (Emergency Management Agency) - Dennis Castrillo
- Governor's Office of Planning & Research - State Clearinghouse

- Native American Heritage Comm. - Debbie Treadway
- Public Utilities Commission - Leo Wong
- Santa Monica Bay Restoration - Guangyu Wang
- State Lands Commission - Marina Brand
- Tahoe Regional Planning Agency (TRPA) - Cheryl Jacques
- Business, Trans. & Housing
- Caltrans - Division of Aeronautics - Sandy Hesnard
- Caltrans - Planning - Terri Perovic
- California Highway Patrol - Scott Loetscher
- Office of Special Projects - Housing & Community Development - CEOA Coordinator - Housing Policy Division
- Dept. of Transportation
- Caltrans, District 1 - Rex Jackman
- Caltrans, District 2 - Marcelino Gonzalez
- Caltrans, District 3 - Bruce de Terra
- Caltrans, District 4 - Lisa Carboni
- Caltrans, District 5 - David Murray
- Caltrans, District 6 - Michael Navarro
- Caltrans, District 7 - Elmer Alvarez

- Caltrans, District 8 - Dan Kopulsky
- Caltrans, District 9 - Gayle Rosander
- Caltrans, District 10 - Tom Dumas
- Caltrans, District 11 - Jacob Armstrong
- Caltrans, District 12 - Chris Heire
- CalEPA
- Air Resources Board - Airport Projects - Jim Lerner
- Transportation Projects - Douglas Ito
- Industrial Projects - Mike Tollstrup
- State Water Resources Control Board - Regional Programs Unit - Division of Financial Assistance
- State Water Resources Control Board - Student Intern, 401 Water Quality Certification Unit - Division of Water Quality
- State Water Resources Control Board - Steven Herrera - Division of Water Rights
- Dept. of Toxic Substances Control - CEQA Tracking Center
- Department of Pesticide Regulation - CEQA Coordinator

- Regional Water Quality Control Board (RWQCB)
- RWQCB 1 - Cathleen Hudson - North Coast Region (1)
- RWQCB 2 - Environmental Document Coordinator - San Francisco Bay Region (2)
- RWQCB 3 - Central Coast Region (3)
- RWQCB 4 - Teresa Rodgers - Los Angeles Region (4)
- RWQCB 5S - Central Valley Region (5)
- RWQCB 5F - Central Valley Region (5) - Fresno Branch Office
- RWQCB 5R - Central Valley Region (5) - Redding Branch Office
- RWQCB 6 - Lahontan Region (6)
- RWQCB 6V - Lahontan Region (6) - Victorville Branch Office
- RWQCB 7 - Colorado River Basin Region (7)
- RWQCB 8 - Santa Ana Region (8)
- RWQCB 9 - San Diego Region (9)
- Other

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



July 29, 2010

Kelly Diekmann
City of Fremont
P.O. Box 5006
Fremont, CA 94537

Re: Notice of Preparation, Draft Environmental Impact Report (DEIR)
Midtown Community Plan
SCH# 2010072001

Dear Mr. Diekmann:

As the state agency responsible for rail safety within California, the California Public Utilities Commission (CPUC or Commission) recommends that development projects proposed near rail corridors be planned with the safety of these corridors in mind. New developments and improvements to existing facilities may increase vehicular traffic volumes, not only on streets and at intersections, but also at at-grade highway-rail crossings. In addition, projects may increase pedestrian traffic at crossings, and elsewhere along rail corridor rights-of-way. Working with CPUC staff early in project planning will help project proponents, agency staff, and other reviewers to identify potential project impacts and appropriate mitigation measures, and thereby improve the safety of motorists, pedestrians, railroad personnel, and railroad passengers.

The proposed traffic impact study includes 28 most likely impacted intersections in and around the subject area according to the project notice of preparation (NOP). The study needs to specifically include traffic safety issues to the at-grade railroad crossings in addition to the proposed 28 intersections. In general, the major types of impacts to consider are collisions between trains and vehicles, and between trains and pedestrians.

Measures to reduce adverse impacts to rail safety need to be considered in the DEIR. General categories of such measures include:

- Installation of grade separations at crossings, i.e., physically separating roads and railroad track by constructing overpasses or underpasses
- Improvements to warning devices at existing highway-rail crossings
- Installation of additional warning signage
- Improvements to traffic signaling at intersections adjacent to crossings, e.g., traffic preemption
- Installation of median separation to prevent vehicles from driving around railroad crossing gates
- Prohibition of parking within 100 feet of crossings to improve the visibility of warning devices and approaching trains

Kelly Diekmann
City of Fremont
SCH # 2010072001
July 29, 2010
Page 2 of 2

- Installation of pedestrian-specific warning devices, channelization and sidewalks
- Construction of pull out lanes for buses and vehicles transporting hazardous materials
- Installation of vandal-resistant fencing or walls to limit the access of pedestrians onto the railroad right-of-way
- Elimination of driveways near crossings
- Increased enforcement of traffic laws at crossings
- Rail safety awareness programs to educate the public about the hazards of highway-rail grade crossings

Commission approval is required to modify an existing highway-rail crossing or to construct a new crossing.

Thank you for your consideration of these comments. We look forward to working with the City on this project. If you have any questions in this matter, please contact me at (415) 713-0092 or email at ms2@cpuc.ca.gov.

Sincerely,

Moses Stites
Rail Corridor Safety Specialist
Consumer Protection and Safety Division
Rail Transit and Crossings Branch
180 Promenade Circle, Suite 115
Sacramento, CA 95834-2936

DEPARTMENT OF TRANSPORTATION

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July 14, 2010

ALA084444
ALA-84-9.03
SCH#2010072001

Mr. Kelly Diekmann
City of Fremont
P.O. Box 5006
Fremont, CA 94537

Dear Mr. Diekmann:

Midtown Community Plan – Notice of Preparation

Thank you for including the California Department of Transportation (Department) in the environmental review process for the Midtown Community Plan. The following comments are based on the Notice of Preparation. As lead agency, the City of Fremont is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, and implementation responsibilities as well as lead agency monitoring should be fully discussed for all proposed mitigation measures and the project's traffic mitigation fees should be specifically identified in the environmental document. Any required roadway improvements should be completed prior to issuance of project occupancy permits. An encroachment permit is required when the project involves work in the State's right of way (ROW). The Department will not issue an encroachment permit until our concerns are adequately addressed. Therefore, we strongly recommend that the lead agency ensure resolution of the Department's California Environmental Quality Act (CEQA) concerns prior to submittal of the encroachment permit application; see the end of this letter for more information regarding the encroachment permit process.

Traffic Impact Study

The environmental document should include an analysis of the impacts of the proposed project on State highway facilities in the vicinity of the project site. Please ensure that a Traffic Impact Study (TIS) is prepared providing the information detailed below:

1. Information on the plan's traffic impacts in terms of trip generation, distribution, and assignment. The assumptions and methodologies used in compiling this information should be addressed. The study should clearly show the percentage of project trips assigned to State facilities.
2. Current Average Daily Traffic (ADT) and AM and PM peak hour volumes on all significantly affected streets, highway segments and intersections.

Mr. Kelly Diekmann/City of Fremont

July 14, 2010

Page 2

3. Schematic illustration and level of service (LOS) analysis for the following scenarios: 1) existing, 2) existing plus project, 3) cumulative and 4) cumulative plus project for the roadways and intersections in the project area.
4. Calculation of cumulative traffic volumes should consider all traffic-generating developments, both existing and future, that would affect the State highway facilities being evaluated.
5. The procedures contained in the 2000 update of the Highway Capacity Manual should be used as a guide for the analysis. We also recommend using the Department's "*Guide for the Preparation of Traffic Impact Studies*"; it is available on the following web site:
<http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>.
6. Mitigation measures should be identified where plan implementation is expected to have a significant impact. Mitigation measures proposed should be fully discussed, including financing, scheduling, implementation responsibilities, and lead agency monitoring.

We look forward to reviewing the TIS, including Technical Appendices, and environmental document for this project. Please send two copies to the address at the top of this letterhead, marked ATTN: Yatman Kwan, Mail Stop #10D.

Encroachment Permit

Any work or traffic control within the State ROW requires an encroachment permit that is issued by the Department. Traffic-related mitigation measures will be incorporated into the construction plans during the encroachment permit process. See the following website link for more information: <http://www.dot.ca.gov/hq/traffops/developserv/permits/>

To apply for an encroachment permit, submit a completed encroachment permit application, environmental documentation, and five (5) sets of plans which clearly indicate State ROW to the address at the top of this letterhead, marked ATTN: Michael Condie, Mail Stop #5E.

Should you have any questions regarding this letter, please call Yatman Kwan of my staff at (510) 622-1670.

Sincerely,



LISA CARBONI
District Branch Chief
Local Development - Intergovernmental Review

c: State Clearinghouse



**FREMONT
UNIFIED SCHOOL
DISTRICT**

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July 22, 2010

Kelly Diekmann, Senior Planner
City of Fremont
Community Development Dept., Planning Division
39550 Liberty Street P.O. Box 5006
Fremont, CA 94537-5006

Dear Ms. Diekmann,

Re: Midtown Community Plan Draft EIR Comments

The City of Fremont has notified the Fremont Unified School District of its intent to produce a Draft EIR for the Midtown Community Plan in which 2,500 residential units are proposed for construction in the center of the city. Comments are solicited regarding the project by no later than August 2, 2010. As such, the following are submitted.

The Midtown Community Plan is a guide to the development of approximately 110 acres bounded by Fremont Boulevard, Mowry Avenue, Paseo Padre Parkway and Walnut Avenue. The plan, which is an extension of the City of Fremont General Plan, is extensive and ambitious. An assessment of 4.16.1 indicates that no new schools or land for a school construction are incorporated in the concept. It appears that the District would only receive developer fees generated from this project and some Redevelopment Agency funds. The combination of those two funds would not cover the land acquisition and construction cost of a new elementary school to service the students that would be generated from the new residential units that are projected to be constructed.

Fremont Unified School District schools in the area of planned development are as follows:

Elementary Schools

Brier Elementary School	39201 Sundale Drive
Brookvale Elementary School	3400 Nicolet Avenue
Durham Elementary School	40292 Leslie Street
Maloney Elementary School	38700 Logan Drive
Parkmont Elementary School	2601 Parkside Drive

Secondary Schools

Centerville Junior High School	37720 Fremont Boulevard
Washington High School	38442 Fremont Boulevard

Kelly Diekmann, Senior Planner
July 22, 2010
Re: Midtown Community Plan Draft EIR
Page 2

The student load at elementary schools in the vicinity is presently at or near capacity and is expected to remain so in the foreseeable future. The student loads at these schools may, in the long term, reach a typical maturation period of decline. Therefore, based on the timing of when the residential component of the development is completed, the District may or may not be able to absorb new students generated from the project. Several elementary schools in the area that are currently impacted require that the additional students be transported to other sites. The Plan reflects no dedicated land in which to construct a new elementary school, nor is there space for expansion at the present school sites closest to the proposed area of development. Even with a dedicated parcel of land for construction, The District is without a source of identified funds to construct new schools. In greater likelihood, students generated from this development will be required to enroll at schools that have room, based on a case by case and grade level assessment of each student. Accordingly, the District can not guarantee that students generated from the development will be assigned to schools in proximity to the center of the City, but located at any school site(s) with available space. Those schools may be located anywhere in the city. At the current time, all home-to-school transportation is supported by fees charged to parents to offset the cost of services. With the current budgetary issues confronting education in this economic downturn, certainty of fee supported home-to-school transportation can not be provided.

The options just described above are of sincere concern to school officials since it is the desires of the District to make every attempt to both build neighborhood schools and have students attend neighborhood schools that are in proximity to their homes. This situation is considered best for families, neighborhoods and school communities.

Please contact Bill Stephens, Assistant Superintendent, Business, at 510-659-2572, for any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "James Morris". The signature is written in a cursive, flowing style.

James Morris, Ed.D.
Superintendent

JM/gm



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43885 SOUTH GRIMMER BOULEVARD • P.O. BOX 5110, FREMONT, CALIFORNIA 94537-5110
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Finance Manager/Treasurer
STEVE PETERSON
Operations Manager
ROBERT SHAVER
Engineering Manager

July 28, 2010

Mr. Kelly Diekmann
Senior Planner
City of Fremont
Community Development Department
Planning Division
39550 Liberty Street
Fremont, CA 94536

Dear Mr. Diekmann:

Subject: Notice of Preparation of Draft Environmental Impact Report for Midtown Community Plan

The Alameda County Water District (ACWD) wishes to thank you for the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Midtown Community Plan (Project).

ACWD has reviewed the Notice of Preparation of an EIR and would appreciate your consideration of the following comments:

1. Water Supply:

- a. Water Supply Assessment: Senate Bill 610 (California Water Code Sections 10910 - 10915) requires this Project to have a water supply assessment prepared by ACWD as part of its EIR. Pursuant to the Water Code, ACWD will prepare this assessment within 90 days of the formal request by the City of Fremont (City) received June 22, 2010. The water supply assessment will include an estimation of the Project's water demands and an evaluation of the sufficiency of ACWD's water supplies to meet these demands.
- b. Water Use Efficiency: In order to minimize additional demands on potable water supplies, the EIR should plan for development of the Project with the latest technology in water efficient plumbing fixtures and irrigation systems at both residential and non-residential developments, including but not limited to those listed in the attached tables for water efficiency measures for new development. Check with ACWD water conservation staff at time of Project development or the most up-to-date measures.

2. Groundwater: Local and imported water is percolated into the Niles Cone Groundwater Basin through percolation both in Alameda Creek and the adjacent recharge ponds in the Quarry Lakes Regional Recreational Area. The water is subsequently recovered through

ACWD's groundwater production wells and provided as a potable supply to a population of over 330,000 in the cities of Fremont, Newark, and Union City. Therefore, it is imperative that ACWD protects the water quality and ensures the continued use of the groundwater basin for water supply for ACWD's customers. ACWD requests that the following potentially significant impacts to the protection of groundwater be addressed by the EIR:

- a. Well Protection/Destruction: In order to protect the groundwater basin, all wells must be identified within the Project area and each well must be either protected or properly destroyed prior to construction activities. If the well(s) are to remain, a letter so indicating must be sent to ACWD. If the well(s) are: 1) no longer required by any regulatory agency; 2) no longer monitored on a regular basis; or 3) damaged, lost, or the surface seal is jeopardized in any way during the construction process, the wells must be destroyed in compliance with the City of Fremont Well Ordinance. In addition, any abandoned wells located within the Project area must be properly destroyed prior to construction activities.
- b. Drilling Permit Requirement: As the enforcing agency for the City of Fremont Well Ordinance, ACWD requests that the EIR include the requirement of obtaining a drilling permit from ACWD prior to the start of any subsurface drilling activities. Application for a permit may be obtained from ACWD's Engineering Department, at 43885 South Grimmer Boulevard, Fremont or via ACWD's website at http://www.acwd.org/engineering/drilling_permit.php5. Before a permit is issued, the applicant is required to deposit with ACWD, cash or check in a sufficient sum to cover the fee for issuance of the permit or charges for field investigation and inspection. All permitted work requires scheduling for inspection; therefore, all drilling activities must be coordinated with ACWD prior to the start of any field work.
- c. Dewatering: Since groundwater is an important component of ACWD's water resources, the EIR should address temporary and permanent dewatering activities and the potential impact of the Project on the local drinking water supply. It is critical that the amount of water that may be extracted by dewatering be estimated and documented in the EIR. Alternative designs should be evaluated that would minimize the amount of dewatering required during and subsequent to construction. Groundwater losses due to dewatering should be measured and may be subject to a replenishment assessment fee. Mitigation measures should be proposed to replace all significant losses of ACWD's water supplies.

ACWD regulates the installation and destruction of dewatering wells by working with licensed drilling contractors and agencies that require dewatering wells for the installation of their facilities. ACWD permits are required for dewatering well installations and destructions within the City; however, dewatering wells are currently exempt from permit fees.

3. Access to ACWD Facilities: ACWD installed monitoring wells on the corner of Hastings Street and Capitol Avenue and on Beacon Avenue, as part of ACWD's groundwater management efforts. Groundwater sampling and monitoring of these wells is imperative to the continued effort to investigate elevated chlorides in the Centerville and Fremont Aquifers

Mr. Kelly Diekmann

Page 3

July 28, 2010

near ACWD's Mowry Wellfield. Therefore, ACWD requests that the EIR address maintaining access to ACWD's monitoring wells.

4. Water Distribution Infrastructure: Reference is made to page 8, Section L, Infrastructure and Utilities. While the NOP addresses new water-related infrastructure, the EIR should also evaluate any impacts associated with relocating, abandoning, and making other such changes to the water distribution system, should other such changes be required to accommodate the Project development in accordance with applicable water system standards.
5. ACWD Contacts: The following ACWD contacts are provided so that the City can coordinate with ACWD as needed during the CEQA process:
 - Eric Cartwright, Water Resources Planning Manager, at (510) 668-4206, or by e-mail at eric.cartwright@acwd.com, for coordination regarding water supply issues.
 - Steven Inn, Groundwater Resources Manager at (510) 668-4441, or by e-mail at steven.inn@acwd.com, for coordination regarding ACWD's groundwater resources.
 - Michelle Myers, Well Ordinance Supervisor, at (510) 668-4454, or by e-mail at michelle.myers@acwd.com for coordination regarding groundwater wells and drilling permits.
 - Ed Stevenson, Development Services Manager, at (510) 668-4472, or by e-mail at ed.stevenson@acwd.com, for coordination regarding public water system infrastructure and water services.

Thank you for the opportunity to comment on the Project at this time.

Sincerely,



Walter L. Wadlow
General Manager

la/tf

Attachment

By E-mail

cc: Robert Shaver, ACWD
Eric Cartwright, ACWD
Thomas Niesar, ACWD
Steven Inn, ACWD
Michelle Myers, ACWD
Ed Stevenson, ACWD

**WATER EFFICIENCY MEASURES
FOR NEW RESIDENTIAL DEVELOPMENT - V.022610**

GPF = gallons per flush, GPM = gallons per minute, WF = water factor

Indoors	Flow Rate	Recommendation Details	Future Federal or State Requirements
Toilets	1.28 GPF	High efficiency toilets (HET) have a flush volume of 1.28 GPF, dual flush models are also considered HETs, with an average flush less than 1.28 GPF. Choose HETs that are third party tested and certified as passing a 350 g or higher flush volume test as established by the Uniform North American Requirements.	Required after 2013
Showerheads	2.0 GPM	EPA's Water Sense Program recommends showerheads with a flow rate of 2.0 GPM or less.	
Lavatory Faucets	1.5 GPM	Lavatory faucets with aerators that restrict flow to 1.5 GPM or less.	
Kitchen Faucets	2.0 GPM	Kitchen faucets with aerators that restrict flow to 2.0 GPM or less.	
Clothes Washers	6 WF	High efficiency clothes washers (HEW) with a water factor of 6 have a maximum average water use of 6 gallons per cubic foot of laundry. HEWs are typically front loading horizontal axis washers.	Potential requirement in 3-5 years
Outdoors		Recommendation Details	Future Federal or State Requirements
Turf Landscaping		Limit turf to areas where it is functional. Avoid planting turf in narrow, odd-shaped areas which are hard to irrigate efficiently.	Many of these measures are now required as part of the CA Model Water Efficient Landscape Ordinance effective 1/1/2010
Non-turf Landscaping		Select native or low water using plant species. High water using plants should be grouped together and irrigated separately.	
Irrigation System		Irrigation systems should be designed to maximize efficiency and reduce water waste by minimizing overspray and runoff. Use low volume (e.g., drip) irrigation in non-turf areas.	
Irrigation Controller		An automatic, self-adjusting irrigation controller is recommended. Automatic, self-adjusting controllers utilize prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the needs of plants.	
Overhead Sprinklers and Spray Heads		Should not be used in narrow areas, eight (8) feet wide or less, or where adjacent to impervious surfaces where overspray and excess run-off can occur.	
Valves and Circuits		Should be separated into hydrozones based on plant type and plant water needs.	
Decorative		All decorative fountains should recycle water.	
Swimming Pools and Spas		Covers should be used on all pools or spas.	
Bay-Friendly Landscaping Best Practices		Adopt the Bay-Friendly Program's (Stopwaste.org) 7 best practices for landscaping and gardening. 1. Landscape Locally; 2. Landscape for Less to the Landfill; 3. Nurture the Soil; 4. Conserve Water; 5. Conserve Energy; 6. Protect Water & Air Quality; 7. Create Wildlife Habitat	

**WATER EFFICIENCY MEASURES
FOR NEW COMMERCIAL DEVELOPMENT- V.022610**

GPF = gallons per flush, GPM = gallons per minute, WF = water factor

Indoors	Flow Rate	Recommendation Details	Future Federal or State Requirements
Toilets	1.28 GPF	High efficiency toilets (HET) have a flush volume of 1.28 GPF, dual flush models are also considered HETs, with an average flush less than 1.28 GPF. Choose HETs that are third party tested and certified as passing a 350 g or higher flush volume test as established by the Uniform North American Requirements.	Required after 2013
Urinals	0.5 GPF	High efficiency urinals (HEU) have a flush volume of 0.5 GPF or less.	
Showerheads	2.0 GPM	EPA's Water Sense Program recommends showerheads with a flow rate of 2.0 GPM or less.	
Lavatory Faucets	1.5 GPM	Lavatory faucets with aerators that restrict flow to 1.5 GPM or less.	
Kitchen Faucets	2.0 GPM	Kitchen faucets with aerators that restrict flow to 2.0 GPM or less.	
Clothes Washers	6 WF	High efficiency clothes washers (HEW) with a water factor of 6 have a maximum average water use of 6 gallons per cubic foot of laundry. HEWs are typically front loading horizontal axis washers.	Potential requirement in 3-5 years
Cooling Towers		Should be equipped with a recirculating system with a minimum of five (5) cycles of concentration. Newly constructed cooling towers should be operated with conductivity controllers, as well as make up and blowdown meters	
Food Steamers		Should be boiler less or self-contained where applicable.	
Ice Machine		Should be air-cooled, or use no more than 25 gallons of water per 100 pounds of ice and should be equipped with a recirculating cooling unit.	
Commercial Refrigeration		Should be air-cooled or if it is water cooled it should have a closed loop system.	
Pre-rinse Dishwashing Spray Valve	1.2 GPM	Should have a maximum flow rate of 1.2 or less GPM.	
Vehicle Wash		Shall reuse a minimum of 50% of the water.	
Outdoors		Recommendation Details	Future Federal or State Requirements
Turf Landscaping		Limit turf to areas where it is functional. Avoid planting turf in narrow, odd-shaped areas which are hard to irrigate efficiently.	Many of these measures are now required as part of the CA Model Water Efficient Landscape Ordinance effective 1/1/2010
Non-turf Landscaping		Select native or low water using plant species. High water using plants should be grouped together and irrigated separately.	
Irrigation System		Irrigation systems should be designed to maximize efficiency and reduce water waste by minimizing overspray and runoff. Use low volume (e.g., drip) irrigation in non-turf areas.	
Irrigation Controller		An automatic, self-adjusting irrigation controller is recommended. Automatic, self-adjusting controllers utilize prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the needs of plants.	
Overhead Sprinklers and Spray Heads		Should not be used in narrow areas, eight (8) feet wide or less, or where adjacent to impervious surfaces where overspray and excess run-off can occur.	
Valves and Circuits		Should be separated into hydrozones based on plant type and plant water needs.	
Decorative fountains		All decorative fountains should recycle water.	
Swimming Pools and Spas		Covers should be used on all pools or spas.	
Bay-Friendly Landscaping Best Practices		Adopt the Bay-Friendly Program's (Stopwaste.org) 7 best practices for landscaping and gardening. 1. Landscape Locally; 2. Landscape for Less to the Landfill; 3. Nurture the Soil; 4. Conserve Water; 5. Conserve Energy; 6. Protect Water & Air Quality; 7. Create Wildlife Habitat	



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Chair

Executive Director
Dennis R. Fay

August 10, 2010

Mr. Kelly Diekmann
Senior Planner
39550 Liberty Street
Fremont, CA 94537

kdeikmann@ci.fremont.ca.us

SUBJECT: Comments on the Notice of Preparation of a Draft Environmental Impact Report for Midtown Community Plan & Design Guidelines

Dear Mr. Deikmann:

Thank you for the opportunity to comment on the Comments on the Notice of Preparation of a Draft Environmental Impact Report for Midtown Community Plan & Design Guidelines. The Plan is intended to guide future development with an approximately 110-acre area bounded by Fremont Boulevard, Mowry Avenue, Paseo Padre Parkway and Walnut Avenue through 2030. The buildout is expected to be phased over several years.

- The City of Fremont adopted Resolution No. 8336 on July 7, 1992 establishing guidelines for reviewing the impacts of local land use decisions consistent with the Alameda County Congestion Management Program (CMP). If the proposed project generates at least 100 p.m. peak hour trips over existing conditions, the CMP Land Use Analysis Program requires the City to conduct a traffic analysis of the project using the Countywide Transportation Demand Model for projection years 2015 and 2030 conditions. Please note the following paragraph as it discusses the responsibility for modeling.
 - The CMA Board amended the CMP on March 26, 1998 so that local jurisdictions are responsible for conducting the model runs themselves or through a consultant. The County has a model that is available to the local jurisdictions for this purpose. The City of Fremont signed a Countywide Model Agreement with the ACCMA for the updated Countywide model on April 1, 2008. Before the model can be used for this project, a letter must be submitted to the ACCMA requesting use of the updated model and describing the project. A copy of a sample letter agreement is available upon request.
- Potential impacts of the project on the Metropolitan Transportation System (MTS) need to be addressed. (See 2009 CMP Figures E-2 and E-3 and Figure 2). The EIR should address all potential impacts of the project on the MTS roadway and transit systems. These include I-880, I-680, Fremont Boulevard, Osgood Road, Mowry Avenue, Peralta Boulevard, Paseo Padre Parkway, Mission Boulevard, as well as BART and AC Transit. Potential impacts of the project must be addressed for 2015 and 2030 conditions.

- Please note that the ACCMA does not have a policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts. (Please see chapter 6 of 2009 CMP for more information).
- The adequacy of any project mitigation measures should be discussed. The CMA Board adopted three criteria for evaluating the adequacy of EIR project mitigation measures:
 - Project mitigation measures must be adequate to sustain CMP service standards for roadways and transit;
 - Project mitigation measures must be fully funded to be considered adequate;
 - Project mitigation measures that rely on state or federal funds directed by or influenced by the CMA must be consistent with the project funding priorities established in the Capital Improvement Program (CIP) section of the CMP or the Regional Transportation Plan (RTP).

The EIR should discuss the adequacy of proposed mitigation measures relative to these criteria. In particular, the EIR should detail when the proposed roadway or transit route improvements are expected to be completed, how they will be funded, and what would be the effect on LOS if only the funded portions of these projects were assumed to be built prior to project completion.

- Potential impacts of the project on CMP transit levels of service must be analyzed. (See 2009 CMP, Chapter 4). The EIR should address the issue of transit funding as a mitigation measure in the context of the CMA's policies as discussed below.
- The EIR should also consider demand-related strategies that are designed to reduce the need for new roadway facilities over the long term and to make the most efficient use of existing facilities (see 2009 CMP, Chapter 5). The DEIR could consider the use of Travel Demand Management (TDM) measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered. The Site Design Guidelines Checklist may be useful during the review of the development proposal. A copy of the checklist is enclosed.
- The EIR should consider opportunities to promote countywide bicycle routes identified in the Alameda Countywide Bicycle Plan, which was approved by the ACCMA Board on October 26, 2006. The approved Countywide Bike Plan is available at <http://www.accma.ca.gov/pages/HomeBicyclePlan.aspx>
- The EIR should consider opportunities to promote pedestrian improvements identified in the Alameda County Pedestrian Plan, through the project development review process. The County Pedestrian Plan was adopted by both the ACTIA and ACCMA Boards in September 2006 and October 2006, respectively and is available at <http://www.acta2002.com>.

- For projects adjacent to state roadway facilities, the analysis should address noise impacts of the project. If the analysis finds an impact, then mitigation measures (i.e., soundwalls) should be incorporated as part of the conditions of approval of the proposed project. It should not be assumed that federal or state funding is available.
- Local jurisdictions are encouraged to consider a comprehensive Transit Oriented Development (TOD) Program, including environmentally clearing all access improvements necessary to support TOD development as part of the environmental documentation

Thank you for the opportunity to comment on this Notice of Preparation. Please do not hesitate to contact me at 510/836-2560 if you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Diane Stark". The signature is fluid and cursive, with the first name "Diane" and the last name "Stark" clearly distinguishable.

Diane Stark
Senior Transportation Planner

cc: Beth Walukas, Manager of Planning
file: CMP - Environmental Review Opinions - Responses - 2010

APPENDIX B

**Water Supply Assessment for
Midtown Community Plan Project**

WATER SUPPLY ASSESSMENT
FOR
MIDTOWN COMMUNITY
PLAN PROJECT

SEPTEMBER 2010

PREPARED FOR
CITY OF FREMONT,
CALIFORNIA

Prepared by:
ALAMEDA COUNTY WATER DISTRICT
43885 S. Grimmer Blvd.
Fremont, CA 94538

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SECTION 1 INTRODUCTION

BACKGROUND

The City of Fremont (City) has requested a Water Supply Assessment (WSA) for the Midtown Community Plan Project (Project). The Project is a mixed use proposal of high density residential housing, commercial retail and office building area, with civic elements including a performing arts venue, plazas and open space. The Project site covers approximately 110-acres and is located in Central Fremont, bounded by Paseo Padre Pkwy, Fremont Blvd, Walnut Ave, and Mowry Ave (Figure 1). The Project is a combination of redevelopment and new development and the site currently has a modest level of development and existing water demand. The site is located in the middle of the Central Fremont Priority Development Area (PDA) as outlined by the Association of Bay Area Governments (ABAG) in Projections 2009. Development of the Central Fremont PDA was included in ACWD's 2009 Water Demand Forecast (Forecast). As the Project relies on individual and independent developers, there is no specific timeline or phasing for completion of the Project.

The Project will require water supplies for the new homes, businesses and institutional uses. The existing water provider in the area is the Alameda County Water District (ACWD). ACWD is a retail water purveyor with a service area that includes the cities of Fremont, Newark and Union City. ACWD provides water primarily to urban customers: approximately 70% of supplies are used by residential customers, with the balance (approximately 30%) utilized by commercial, industrial, and institutional customers. Net distribution system water use was approximately 47,600 acre-feet (AF), or an average of 42.5 million gallons per day (mgd) in fiscal year 2009-10. The District's primary sources of supply come from the California State Water Project (SWP), the San Francisco Regional Water System, and local supplies from the Alameda Creek Watershed and Niles Cone Groundwater Basin (underlying the ACWD service area).

California Water Code (Water Code) Section §10910 requires that a water supply assessment be provided to cities and counties for a project that is subject to the California Environmental Quality Act (CEQA), and which surpasses a threshold for the number of housing units and/or square feet of commercial/industrial buildings. The cities and counties are mandated to identify the public water system that might provide water supply to the project and then to request a water supply assessment. The water supply assessment documents sources of water supply, quantifies water demands, evaluates drought impacts, and provides a comparison of water supply and demand that is the basis for an assessment of water supply sufficiency.

PURPOSE

The purpose of this Water Supply Assessment is to document ACWD's existing and future water supplies for its service area and compare them to the area's future water demands, including the future water demands of the Project. This comparison, conducted for both normal hydrologic conditions and drought conditions, is the basis for an assessment of water supply sufficiency in accordance with the requirements of California Water Code Section §10910.

METHODOLOGY

ACWD's long-term water supply strategy was developed as part of the District's Integrated Resources Planning Study (IRP), and adopted by the ACWD Board in 1995. ACWD's 2006-2010 Urban Water Management Plan (UWMP, or 2005 UWMP) incorporates this water supply strategy. The UWMP documented ACWD's existing water supplies as well as the projected future demand for water and changing availability of our supplies. The projections were made the year prior to completion of the UWMP, or 2004, and relied on the most current published supply reliability and land use planning data at that time.

ACWD is currently in the process of compiling data and information for preparing the 2011-2015 UWMP (2010 Draft UWMP Data). The 2010 Draft UWMP Data reflects substantial changes in both supply and demand from those reported in the 2005 UWMP. This WSA will rely on the 2010 Draft UWMP Data for purposes of analyzing and reporting water supply reliability and the 2005 UWMP (attached) for purposes of documenting ACWD's sources of supply as required under the Water Code.

SECTION 2 WATER DEMAND

This section provides an overview of historical and current water use in the District, and a summary of future projected water demands for the Project and ACWD's service area.

WATER USE CATEGORIES

Water use in the ACWD service area is divided into two categories: 1) distribution system use, and 2) groundwater system use. The distribution system use includes all water uses supplied by ACWD's treatment and production facilities, and conveyed to ACWD customers via the District's distribution system. This use is further subdivided into the categories of single family residential (SFR), multi-family residential (MFR), commercial, industrial, institutional, landscape and other use.

Groundwater system use includes private (non-ACWD) groundwater pumping (primarily for industrial and municipal landscape irrigation uses), ACWD's Aquifer Reclamation Program pumping, and saline groundwater outflow to San Francisco Bay. The Aquifer Reclamation Program (ARP) pumping is an ongoing ACWD program to pump saline groundwater out of the aquifer system and replace it with fresh water recharged at the District's groundwater recharge facilities. Saline groundwater outflow to San Francisco Bay represents the groundwater outflow required to maintain groundwater flow in a bayward direction necessary to prevent seawater intrusion into the local aquifer system and to flush saline groundwater back to San Francisco Bay.

The District's groundwater system use is not anticipated to change significantly in the future. Therefore, the following discussions of water use are focused on the District's distribution system water use.

HISTORICAL AND CURRENT WATER USE

Table 1 provides a summary of the last ten years of water use within the District. As shown in the table, residential water use comprises approximately 70% of District water use, with the remaining 30% used by commercial, industrial and institutional customers.

Water consumption patterns in the ACWD service area are a function of many independent factors including growth, weather conditions, economic conditions and water conservation behaviors. The District saw dramatic declines in consumption during the 1987-1992 drought due to voluntary conservation and District-sponsored demand management efforts. However, during the drought recovery period since 1992, several significant factors have influenced consumption. From 1993-2001 accelerated growth of both residential and business customers (including the high technology industry) occurred due to a strong economy. During this period, vacancy rates decreased and water consumption rose. From 2001 to 2007 the overall consumption in the District was relatively flat, attributed primarily to less robust local economic conditions, mild weather and on-going water conservation programs. In 2008 and 2009, ACWD has seen declines in overall water consumption, which ACWD attributes to a combination of successive dry year

conditions, conservation campaigns and a continued economic downturn. The resulting substantive reduction in demand for water has changed ACWD's near and mid-term anticipated level of new demands.

WATER DEMANDS - ACWD SERVICE AREA

ACWD's approach to water demand forecasting for the UWMP is to: 1) evaluate existing demands of lands already developed in the service area; 2) estimate future demands of currently undeveloped lands that are designated for development; and 3) combine the existing and future demands to estimate the overall District-wide future demands. This demand forecasting is done for six primary land use categories: single family residential, multi-family residential, commercial, industrial, institutional, and "other". In order to estimate future demands of currently undeveloped lands in each of these categories, ACWD obtains the most recent zoning information for these lands. The land use information is provided by the cities' planning staff, and includes general plan land use designations and, when available, more detailed information from specific plans or other planning documents. A District-wide water demand forecast for each land use category is then developed by multiplying the planned land use under each land use category by a District-wide average unit water use specific to that land use category. Additional potential future land use is also accounted for in the demand projections, and is based on city-approved plans for redevelopment and/or intensification of specific areas. The demand forecast also considers future demands associated with Association of Bay Area Governments (ABAG) Smart Growth projections.

Actual unit water use for any specific land use project may vary significantly from the District-wide average. However, determining the actual unit water use for each specific development project in the service area is beyond the scope of ACWD's UWMP demand forecast. Rather than providing demand forecasts for specific land use projects, the UWMP provides an aggregated, District-wide demand forecast for each land use category, as well as the total District-wide demand. This approach is proven sufficiently accurate for long-term, District-wide demand forecasting and is consistent with the California Water Code requirements for urban water management planning. However, if the District has detailed information about the water demands of a specific project during the time it is preparing the UWMP, the District will account for the specific project's water demands in the UWMP in lieu of the District-wide average.

ACWD's 2009 Forecast is substantially revised from the 2004 Forecast in several key areas with a combined effect of reduced long-term demand. Key changes since 2004 are a slower rate of growth in the service area, continued restructuring of the local economy with a net loss of high water use industry (manufacturing), prolonged economic recovery from the recession, increased natural conservation with plumbing code updates, and accelerated conservation effect resulting from recent drought message and public awareness.

The projected future demands in the ACWD service area are summarized in Table 2 (for the years 2010, 2015, 2020, 2025 and 2030). The water demand forecast also includes projected savings from water conservation, both District-sponsored water conservation and "natural conservation" resulting from new plumbing code standards. Also called "code-based savings" or "passive conservation", these demand reductions come about due to the replacement of old

inefficient plumbing fixtures with low flow fixtures. ACWD is a signatory to the California Urban Water Conservation Council's (CUWCC) MOU on Urban Water Conservation and is committed to the implementation of all locally cost-effective water conservation best management practices. A complete description of ACWD's water conservation program, as well as water saving assumptions, is provided in Chapter 7 of the attached UWMP.

As described in the following section, the Project's demands are considered to be consistent with the District's demand forecast, and therefore, are not listed separately in Table 2. Demands listed in this table include the demands from all WSAs completed to date except for the Ballpark Village Specific Plan and Masonic Homes Flatlands Projects which have both been rescinded.

WATER DEMANDS – MIDTOWN COMMUNITY PLAN PROJECT

Estimation of Project Water Demands

The Midtown Community Plan Project is a mixed use proposal of high density residential housing, commercial retail and office building area, with civic elements including a performing arts venue, plazas and open space. The Project is a combination of redevelopment and new development and the site currently has a modest level of development and existing water demand. The Project site covers approximately 110-acres and is located in Central Fremont, bounded by Paseo Padre Pkwy, Fremont Blvd, Walnut Ave, and Mowry Ave (Figure 1). The site is located within the Central Fremont PDA as outlined in ABAG's *Projections 2009* and is consistent with the Smart Growth objectives of the PDA. ACWD's Forecast and resource planning include all regional planning projections and, therefore, the Project has already been included in both the 2005 UWMP and 2010 Draft UWMP Data.

Information on the Project's proposed land use was provided by the City of Fremont. These details represent the upper end of development potential. ACWD estimates the Project will result in 705AF/yr of new demand on top of an existing 165AF/yr, for a total of 870 AF/yr.

Water Efficiency Measures to be Incorporated in the Project

In order to ensure that the Project incorporates the most up to date water efficiency measures, the Project should be developed with the latest technology in water efficient plumbing fixtures and irrigation systems at both residential and non-residential developments, including but not limited to those listed in ATTACHMENT D: Water Efficiency Measures for New Developments.

IMPACTS OF DROUGHT ON DEMANDS

Dry periods may impact water demands in the ACWD service area in several ways. Because approximately 40% of the District's residential demand is for landscape irrigation, dry periods may result in an increase in demands due to less local rainfall available to meet the evapotranspiration requirements of lawns and other landscaping. However, demands may also be reduced due to customer efforts to be more water efficient during dry periods. As an example, during the 1987-1992 drought, ACWD customers reduced overall water use by approximately 20%. This response to the drought was due both to voluntary efforts and mandatory restrictions

imposed by ACWD. However, because many customers have retained a “water conservation ethic” since the 1987-92 drought, and because of increased efficiencies of plumbing fixtures and the implementation of on-going District-sponsored water conservation programs, the ability to reduce overall water use during future droughts by similar levels may be lessened. For example, during the current drought period between FY 03/04 and FY 09/10, ACWD customers reduced water consumption by 15%, however a portion of this reduction may also be attributed to the recent economic downturn.

For planning purposes, it is assumed that during drought periods water demands for ACWD’s distribution system customers (including those of the Project) do not change from those during normal years. However, the groundwater system demands are typically lower in dry years as lower groundwater levels, caused by reduced local recharge and increased reliance on groundwater storage, result in reduced saline groundwater outflows. ACWD will often minimize ARP pumping as well during dry periods. Summaries of projected demands under single dry year and multiple dry year conditions (based on a five year drought under 2026-2030 demand conditions) are provided in Table 3 and Table 4 respectively.

SECTION 3 WATER SUPPLY

ACWD's three primary sources of water supply are: 1) the State Water Project (SWP); 2) San Francisco's Regional Water System; and 3) local supplies. The SWP and San Francisco Regional Water Supplies are imported into the District service area through the South Bay Aqueduct and Hetch-Hetchy Aqueduct, respectively. Local supplies include fresh groundwater from the Niles Cone Groundwater Basin (underlying the District service area), desalinated brackish groundwater from portions of the groundwater basin previously impacted by seawater intrusion, and surface water from the Del Valle Reservoir. The primary source of recharge for the Niles Cone Groundwater Basin is percolation of runoff from the Alameda Creek watershed. To a lesser degree, a portion of ACWD's SWP supplies are also used for local groundwater percolation. Infiltration of rainfall and applied water within the ACWD service area also contribute to local groundwater recharge.

ACWD's planned future water supplies also include recycled water. As described below, ACWD anticipates implementing a recycled water program to provide up to 1,600 AF/Yr for non-potable uses (i.e. irrigation and industrial uses) by the year 2020.

Due to the configuration of ACWD's water production facilities and the interconnection with the District's distribution system, the proposed Project may receive water supplies from all three primary sources of supplies, and would not be dependent on any single source of supply. Therefore, a description of all of ACWD's water supplies is provided below. Table 6 provides a summary description of the contracts and permits for these supplies and Table 7 provides a summary of the historical use of these supplies by ACWD.

WHOLESALE WATER SUPPLIES

As described above, ACWD's wholesale water supplies are: 1) State Water Project supplies purchased from the California Department of Water Resources; and 2) San Francisco Regional Water System supplies purchased from San Francisco. ACWD's contracts for these wholesale supplies are provided in Attachment C and each supply is described in greater detail below.

State Water Project

In 1961, the District signed a contract with the State Department of Water Resources (DWR) for a maximum annual amount of 42,000 acre-feet from the SWP, referred to as ACWD's "maximum Table A allocation". The SWP, managed by the DWR, is the largest state-built, multi-purpose water project in the country. The SWP facilities include 28 dams and reservoirs, 26 pumping and generating plants, and approximately 660 miles of aqueducts. The water stored in the SWP storage facilities originates from rainfall and snowmelt runoff in Northern and Central California watersheds. The SWP's primary storage facility is Lake Oroville in the Feather River Watershed. Releases from Lake Oroville flow down the Feather River to the Sacramento River, which subsequently flows to the Sacramento-San Joaquin Delta. The SWP diverts water from the Delta through the Banks Pumping Plant which lifts water from the Clifton Court Forebay (in the Delta) to the California Aqueduct and Bethany Reservoir. From Bethany Reservoir, the South Bay Pumping Plant lifts water into the South Bay Aqueduct, which delivers

State Water Project supplies to ACWD and other Bay Area water agencies in Alameda and Santa Clara Counties.

Semitropic Banking of ACWD's SWP Supplies: Because of the variability in the SWP supply availability, ACWD's 1995 IRP identified the need to secure 140,000 AF of off-site storage capacity to improve the dry year reliability of this supply source. Based on this IRP recommendation, ACWD has contracted with Semitropic Water Storage District for participation in the Semitropic Groundwater Banking Program in Kern County. In wet years, ACWD delivers its unused (excess) SWP supplies to Semitropic for storage in their groundwater basin. In dry years, ACWD can recover these supplies through: (1) an "in-lieu" exchange whereby ACWD will receive a portion of Semitropic's SWP supplies (and Semitropic will utilize groundwater previously stored by ACWD in its basin); and (2) a "pumpback" program where Semitropic directly pumps stored groundwater into the California Aqueduct and ACWD recovers this supply through SWP exchanges.

The rate at which ACWD can recover stored water in dry years is constrained by contractual limitations and limitations on the capacity of the Semitropic pumpback facilities. Based on the terms of the agreements with Semitropic, the amount of return capacity is based on the amount of storage capacity purchased. Because of these limitations, ACWD secured a total of 150,000 AF of storage capacity at Semitropic (in excess of the IRP's recommendation of 140,000 AF), in order to provide sufficient dry year return capacity to meet ACWD's projected needs in all but the most severe drought conditions.

As with local groundwater storage in the Niles Cone Groundwater Basin, the Semitropic Groundwater Banking Program does not provide a new source of supply for the District. Rather, it provides a means to store the District's unused SWP supplies in wet years for use during dry years when the delivery of SWP supplies may be significantly curtailed.

San Francisco's Regional Water System

ACWD also receives water from the San Francisco Regional Water System, operated by the San Francisco Public Utilities Commission (SFPUC). This supply is predominantly from the Sierra Nevada, delivered through the Hetch-Hetchy aqueducts, but also includes treated water produced by the SFPUC from its local watersheds and facilities in Alameda and San Mateo Counties. The amount of imported water available to the SFPUC's retail and wholesale customers is constrained by hydrology, physical facilities, and the institutional parameters that allocate the water supply of the Tuolumne River.

In 2009, ACWD, along with the other wholesale customers, signed a new Master Sales Agreement with San Francisco, supplemented by an individual Water Sales Contract. The new agreements have a term of 25 years and provide a commitment from San Francisco to provide, collectively, up to 184 mgd to its wholesale customers. ACWD's individual supply assurance is 13.76 mgd.

LOCAL SOURCES

As described above, ACWD's local sources include fresh groundwater from the Niles Cone Groundwater Basin, brackish groundwater desalination, and surface water supplies from the Del Valle Reservoir. Each of these supplies is described in greater detail below.

Niles Cone Groundwater Basin

The principal source of local supply for the District is the local aquifer system known as the Niles Cone Groundwater Basin. The primary source of recharge for the Niles Cone Groundwater Basin is local runoff from the Alameda Creek Watershed, which is captured, diverted and recharged at the District's groundwater recharge facilities. To a lesser extent, infiltration of rainfall and applied water within the ACWD service area also provide a local source of recharge for the groundwater basin. ACWD also uses a portion of its imported State Water Project supplies for groundwater recharge.

The water quality in the groundwater system is characterized by fresh groundwater in the eastern portion of the groundwater basin transitioning into brackish groundwater in the western portion of the basin. The brackish groundwater is a result of historical seawater intrusion from the adjacent San Francisco Bay. Since the 1960's ACWD has managed the groundwater basin to prevent any additional seawater intrusion and has an on-going program to pump trapped brackish groundwater back to San Francisco Bay through the District's Aquifer Reclamation Program wells.

The Niles Cone Groundwater Basin has capacity to store water from year to year ("local groundwater storage"). However, the usable storage capacity of the groundwater basin is significantly limited by the potential for seawater intrusion if groundwater levels are maintained too low. Although local groundwater storage (i.e. groundwater supplies in excess of recharge) provides a short term source of supply during dry years, it is not a supply that is available every year because the groundwater system will require replenishment from freshwater sources, without which seawater intrusion would occur.

Chapter 4 of the UWMP (attached) provides a comprehensive description of the Niles Cone Groundwater Basin, including groundwater quality, groundwater levels, historical and projected groundwater pumping, and ACWD's groundwater management activities. A copy of ACWD's groundwater management policy is also provided in the UWMP. The Niles Cone Groundwater Basin is also described in DWR Bulletin 118 – Update 2003: *California's Groundwater*, and is not listed as in "overdraft" or "potentially overdraft condition" by the DWR.

Brackish Groundwater Desalination

In 2003 ACWD commissioned the Newark Desalination Facility. This 5-mgd facility utilizes the reverse osmosis process to remove salts and other impurities from the brackish groundwater pumped at ACWD's Aquifer Reclamation Program wells. Treated water from the Newark Desalination Facility is blended with untreated local groundwater and provided as a supply for the distribution system demands. ACWD is currently expanding this facility to 10-mgd.

Del Valle Reservoir

The District and Zone 7 Water Agency of the Alameda County Flood Control and Water Conservation District (hereafter referred to as "Zone 7"), have equal rights on Arroyo Del Valle to divert water to storage. When the California Department of Water Resources (DWR) constructed Del Valle Dam in the upper Alameda Creek Watershed, those rights were recognized in an agreement among DWR, the District, and Zone 7. Consequently, DWR typically makes a total of 15,000 AF of storage available annually in Del Valle Reservoir for use by ACWD and Zone 7. ACWD and Zone 7 equally share this storage capacity, thereby providing up to 7,500 AF of storage capacity annually to ACWD.

Recycled Water

Although ACWD does not currently have a recycled water supply, the District's long-term supply strategy includes a recycled water program to be implemented by 2020, which will provide up to 1,600 AF/yr of non-potable supply (e.g. landscape irrigation and industrial process water). A potential source of recycled water is from a joint project with Union Sanitary District (USD). Similar to ACWD, USD's service area includes the cities of Fremont, Union City and Newark. USD currently treats approximately 28 mgd (approximately 31,000 AF/Yr) of wastewater, the majority of which is discharged to San Francisco Bay via the East Bay Dischargers Authority pipeline facilities. Because ACWD's planning is based on providing 1,600 AF/Yr of recycled water, it is anticipated that there will be a sufficient source of wastewater supply available for a future recycled water project in the ACWD service area.

Recycled water distribution pipelines will be separate from the District's existing potable distribution system and, therefore, would not adversely affect existing potable supply operations. The volume of recycled water produced would be the same in drought years as in normal years, thus providing a firm source of supply. Demand for recycled water for irrigation purposes is highest in the summer months. Therefore, in addition to increasing water supply, use of recycled water would help meet peak monthly and daily production capacity needs.

ACWD and USD have evaluated two potential sources of recycled water: In 1993 and in 1999 ACWD and USD evaluated a potential program whereby the recycled water would originate at USD's Alvarado Wastewater Treatment Plant (Alvarado WWTP), located at the north end of the service area in Union City. As an alternative to constructing a recycled water treatment facility at the Alvarado WWTP, in 2003 ACWD and USD completed an evaluation of the feasibility of constructing a satellite recycled water treatment facility in southern Fremont at USD's Irvington Pump Station. These options are currently being reevaluated as well as the potential for other feasible options in an update to the Recycled Water Feasibility study. In addition, ACWD will continue to consider the potential use of other regional recycled water supplies, should such supplies become available. The ultimate decision on the source of a recycled water supply will likely be based on a variety of factors including costs, permitting issues, environmental constraints and location of recycled water customers.

WATER SUPPLY UNCERTAINTIES

The purpose of this section is to identify factors which may impact current planning assumptions, the significance and magnitude of which are currently unknown. As described below, the potential impacts of global warming are a key uncertainty which may impact all of ACWD supplies. In addition, each of ACWD's supplies face uncertainties which may be unique to the source of supply. A summary of water supply uncertainties facing ACWD's supplies is provided in Table 8 and discussed in greater detail below.

Climate Change

Climate change may result in less snowfall, more local rainfall and rising sea-levels. Under current conditions, much of ACWD's imported water supplies are held in "storage" in winter and spring snowpack in the Sierra Nevada Mountains. With a diminished snowpack, the yield of the State Water Project and San Francisco Regional System may be significantly impacted. The magnitude of the impact of climate change on water supplies is not known. However, the following provides an overview of recent studies that have evaluated potential impacts on surface water and groundwater supplies in California.

Surface Water: In 2006 DWR's Climate Action Team (CAT) released a report on climate change and its potential impact on California's water resources. Entitled *Progress on Incorporating Climate Change into Management of California's Water Resources (2006 Climate Change Report)*, the report summarizes recent research into change in precipitation, air temperatures, snow levels, and snowmelt runoff. The report also evaluates possible future impact on California water supply through model simulations reflecting multiple climate change scenarios, weather conditions and geopolitical conditions.

The main results of the *2006 Climate Change Report* related to climate change's estimated impacts on the State Water Project around the year 2050:

- Estimated changes in annual average SWP south-of-Delta Table A deliveries range from a slight increase of about 1 percent for a wetter scenario to about a 10 percent reduction for one of the drier climate change scenarios.
- Estimated increased winter runoff and lower Table A allocations resulting in slightly higher average annual Article 21 deliveries in the three drier climate change scenarios¹. However, the increases in Article 21 deliveries do not offset the losses to Table A. The wetter scenario with higher Table A allocations results in fewer Article 21 delivery opportunities and slightly lower annual Article 21 deliveries.

¹ Article 21 deliveries refer to Article 21 of the SWP contracts which allows for contractors to receive additional water deliveries only under specific conditions. These conditions include: 1) Article 21 water is available only when excess water is available in the Delta, and 2) Article 21 water is available only when conveyance capacity through the SWP facilities is available. Due to the uncertainties regarding the availability of Article 21 water, ACWD does not include this supply in its water supply planning and Urban Water Management Plan.

- Estimated SWP carryover storage is reduced in the drier climate change scenario and is somewhat increased in the wetter climate change scenario.

The 2009 Biennial Report of the CAT includes updates to the findings of the 2006 study. The update expands the number of future climate scenarios, methods for estimating sea-level rise, estimates for irrigation demands, reservoir inflows, and restrictions in Delta operations anticipated with sea-level rise and resultant salt-intrusion. The updated study qualitatively reports that SWP reliability will be further diminished from previous findings, however, as determined in 2006, those impacts do not become significant until the latter half of the 21st century. Therefore, while included in this analysis, the water supply impacts anticipated from climate change are minimal during the 20-year purview of the UWMP and WSA. The *State Water Project Delivery Reliability Report, 2009* (2009 SWP Reliability Report, 2009 SWP) includes these revised climate change assumptions, the impacts of which are reflected in the reliability data used in this WSA.

Groundwater: In 2003, and then again in an update prepared in August of 2005, the Pacific Institute for Studies in Development, Environment and Security prepared a literature search report for DWR, which summarized recommendations for coping with and adapting to climate change from key peer-reviewed publications and specifically considered the potential impacts of climate change on groundwater. The Pacific Institute's report is entitled, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, by Michael Diparsky and Peter H. Gleick, Pacific Institute (*Climate Change and Water Resources*).

Climate Change and Water Resources found that little work has been done on the impacts of climate change for specific groundwater basins, or for general groundwater recharge characteristics or water quality. As the following conclusions from the report illustrate, the potential impacts of climate change on groundwater resources are divided, with some potentially resulting in increased availability of groundwater and others potentially resulting in less.

- Changes in recharge will result from change in effective rainfall as well as a change in the timing of the recharge season. Increased winter rainfall could lead to increased groundwater recharge.
- Higher evaporation or shorter rainfall seasons could mean that soil deficits persist for longer periods of time, shortening recharge seasons.
- Because a significant portion of winter recharge comes from deep percolation of precipitation below the rooting zone, warmer winter temperatures between storms would be expected to increase and dry out the soil between storms. A greater amount of rain in subsequent storms would then be required to wet the root zone and provide water for deep percolation.
- Sea-level rise could affect coastal aquifers through saltwater intrusion.
- Warmer, wetter winters would increase the amount of runoff available for groundwater recharge. However this additional runoff would be occurring at a time when some basins are either being recharged at their maximum capacity or are already full.

- Reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.

Local Supplies

In addition to potential climate change impacts, the availability of ACWD's local supplies may be influenced by a variety of other factors including operational and facility modifications to accommodate on-going Alameda Creek fishery restoration efforts. Upstream land use, flood control and water supply projects in the Alameda Creek Watershed may also impact the supply and quality of water available at ACWD's groundwater recharge facilities. Similarly, efforts to develop groundwater supplies by agencies in the South East Bay Plain (north of ACWD) may also impact ACWD's groundwater supply availability. However, the extent of these impacts on ACWD's local supplies, if any, is not currently known.

San Francisco Regional Supplies

In order to enhance the ability of the SFPUC water supply system to meet identified service goals for water quality, seismic reliability, delivery reliability, and water supply, the SFPUC is undertaking a Water System Improvement Program (WSIP). Completion of the projects in the WSIP is critical to ensuring the reliability of the San Francisco Regional supplies. However, it is currently uncertain if the SFPUC will be successful in fully implementing this program, and if it will be accomplished in a timely manner.

State Water Project Supplies

The reliability of ACWD's State Water Project supplies will continue to remain uncertain due to the on-going concerns regarding the sustainability of the Delta. These concerns include the Delta ecosystem and potential future environmental regulations, levee stability and the potential for catastrophic failure of these levees, urban encroachment within the Delta, and water quality within the Delta due to urban and agricultural discharges.

Most notably, successive actions to protect endangered species within the Delta have resulted in reductions in long term reliability from 69% to 60% of Maximum Table A allocation over the past four years. Beginning in December of 2007, Federal District Court Judge Oliver Wanger issued a final court order ("Wanger Decision") which put into place an operational plan requiring the State Water Project and Central Valley Project (CVP) to reduce Delta export pumping operations in order to protect the Delta smelt. This court action was replaced by a biological opinion in December of 2008, which largely upheld the operating restrictions imposed by the Wanger Decision. Most recently, in June of 2009 a revised biological opinion for salmonids was published which further restricted the State's ability to deliver supplies presently and for the foreseeable future.

Most recently, on July 20, 2010, the State Water Resources Control Board (State Water Board) released a report titled "Draft Report on the Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem". Development of these criteria was required under SBX7 1,

passed in November of 2009, which sought to protect the public trust resources of the Delta ecosystem. The purpose for developing the criteria is to inform planning decisions for the Delta Plan and the Bay Delta Conservation Plan (BDCP), a multiagency effort with the goal of providing long-term Federal and State Endangered Species Act compliance for Delta export operations. At this point, the extent to which these criteria will be implemented and what effect they may have on the State's ability to deliver water supplies is as of yet unknown.

The net effect of existing uncertainties is that projected reliability of the SWP has been reduced from 72% to 60% of Maximum Table A since 2002 (Table 9).

Semitropic Banking Program

Over the past several years ACWD faced uncertainties with regard to recovery of water from the Semitropic Banking Program. These uncertainties include: 1) water quality concerns with regard to groundwater from Semitropic that is pumped back into the California Aqueduct; and 2) the ability to make the upstream exchanges needed to deliver the recovered water to the ACWD service area. With regards to the water quality issues, Semitropic has initiated a pilot water treatment plant which has treated the groundwater to meet the required criteria for pumping this water into the California Aqueduct. Semitropic has indicated that this pilot treatment plant will form the basis for a future permanent treatment facility. With regards to the exchange capacity needed to recover dry year supplies from Semitropic, over the past year, ACWD has coordinated with Semitropic, DWR, and other Semitropic Banking partners to ensure coordination of the planned use of the Semitropic recovery capacity and the needed exchanges. However, the risk remains that under certain critical dry year conditions ACWD may not be able to recover 100% of the District's contractual recovery capacity from Semitropic.

As part of the update to the ACWD IRP and UWMP, ACWD is evaluating the potential constraints with the Semitropic recovery capacity and how these constraints may affect ACWD's dry year supply reliability. ACWD will also be evaluating potential mitigation measures to minimize the risk associated with the constraints in Semitropic dry year recovery. These measures may include: 1) re-operation of local and other storage available to ACWD (i.e. Niles Cone Groundwater Basin, Del Valle Reservoir, San Luis Reservoir) in coordination with recovery from Semitropic and/or: 2) alternative dry year supply programs.

SB 7 – Water Conservation Requirements under the 2009 Comprehensive Water Package

In November of 2009, the California State Assembly passed a suite of water bills designed, among other things, to address long range water supply reliability. One of these bills, SB 7, also known as 20x2020, requires the state to achieve a 20% reduction in urban per capita water use by December 31, 2020.

SB 7 acknowledges that not all water agencies should be held to one fixed target as many have been actively implementing conservation for some time. To address this, SB 7 provides agencies with a choice of four different methodologies to set and achieve their water use target. The bill requires ACWD to hold a public meeting to present the method and to publish it in the 2010

UWMP. Given that one of the four methodologies to choose from has yet to be published by DWR, the State has extended the UWMP deadline to July 1, 2011.

ACWD has begun to analyze several of the choices, but will have to complete further studies over the coming year to determine which target and implementation strategies are in the District's best interest. Having identified programmatic conservation as a critical component in meeting long-term water supply reliability in the 1995 IRP, and as a signatory to the CUWCC MOU, ACWD and its customers have already achieved significant levels of conservation. As a result of these efforts, ACWD estimates that the actual required reductions in per-capita use between the present and 2020 will be something less than a true 20%. Implementation of the efficiency standards expected of this development will help achieve these new goals (ATTACHMENT D : WATER EFFICIENCY MEASURES FOR NEW DEVELOPMENTS)

WATER SUPPLY IN NORMAL AND DRY YEAR CONDITIONS

The projected availability for each of ACWD's water supplies under normal, critical dry year and multiple dry year conditions are provided in Table 10 through Table 12. As documented in the District's 2005 UWMP, information on the projected availability of ACWD's local supplies is based on the long-term historical hydrologic conditions in the Alameda Creek Watershed. Information on the projected reliability of ACWD's wholesale supplies from the State Water Project and San Francisco Regional Water System supplies were provided by the DWR and San Francisco Public Utilities Commission, respectively. As discussed, the WSA differs from the last published UWMP, but reflects the 2010 Draft UWMP Data.

Water Supply under Normal Year Conditions

In order to be consistent with the recommendations by the DWR in the use of SWP reliability information, this water supply assessment characterizes long-term average conditions as normal year conditions. As shown in Table 10, under normal year conditions supplies from the SWP and San Francisco Regional Water System comprise approximately 55% of the water available to ACWD, with the balance coming from local supplies. All of the supplies listed in Table 10, with the exception of recycled water, are existing supplies available to ACWD, and have been historically utilized by the District. Recycled water, not currently available to ACWD, is anticipated to add approximately 1,600 AF/Yr to the District's normal year water supplies by the year 2020. Supplies from local groundwater storage and the Semitropic Groundwater Banking Program are not included as normal year supplies because these supplies are intended for dry year conditions (or other water shortages) and are not intended to meet normal year demands.

Water Supply under Critical Dry Year Conditions

As shown in Table 11, the availability of ACWD's overall water supplies under a critically dry year may be significantly reduced. Under critically dry conditions, the SWP deliveries would be reduced to between 4% and 6% of the maximum contractual amounts (referred to as the "Table A" amounts in the SWP contracts). In addition, ACWD's other supplies from the San Francisco

Regional Water System and local supplies from the Alameda Creek Watershed may also be substantially reduced during a critically dry year.

In order to mitigate these potentially severe water supply cut-backs, ACWD would rely on groundwater reserves stored in the local Niles Cone Groundwater Basin, and reserves stored at the Semitropic Groundwater Banking Program. As described above, the amount of storage in the local Niles Cone Groundwater Basin is limited due to threats of seawater intrusion when groundwater elevations fall below sea-level. ACWD has therefore invested in additional off-site storage at the Semitropic Groundwater Banking Program. Under two separate agreements with Semitropic, ACWD has contracted for a combined total of 150,000 AF of storage capacity. The District currently has approximately 113,000 AF of water in storage at the Semitropic banking program. However, the maximum rate at which stored water can be returned to ACWD from Semitropic is constrained by ACWD-Semitropic contractual limitations. As shown in Table 11, under the most severe drought conditions, the maximum rate at which water can currently be returned to ACWD is 13,800 AF/Yr².

Water Supply under Multiple Dry Year Conditions

Table 12 provides summaries of the projected supply availabilities under a long-term (five-year) drought for 2026-2030 demand conditions. This multiple year drought sequence is based on the 1929-1933 historical hydrologic conditions, which represents the most severe five-year drought on record (based on projected availability of ACWD's supplies over the 1922-94 hydrologic period). The results from this analysis indicate that ACWD's water supplies may be significantly reduced during a multiple year drought. However, the supply reduction would not be as severe as during a single, critically dry year condition. As with the single dry year condition, both local groundwater storage and off-site groundwater storage in Semitropic will play key roles in offsetting shortfalls in the District's other local and imported supplies.

² ACWD's maximum rate of recovery from the Semitropic Groundwater Banking Program during critically dry years will increase by 300 AF/Yr (from 13,500 AF/Yr to 13,800 AF/Yr) as a condition of ACWD providing water service to the Patterson Ranch Development Project in Fremont, per the 2010 Patterson Ranch Recirculated Draft EIR.

SECTION 4 WATER SUPPLY AND DEMAND ANALYSES

The following provides a comparison of ACWD water supplies and projected future demands, including the demands associated with the proposed Project. The supply/demand comparisons are provided for normal, single year dry, and multiple dry year conditions.

NORMAL YEAR WATER SUPPLY

Table 13 provides a comparison of normal year water supply and demands under future levels of development in five-year increments from 2010 through 2030. As shown in the tables, ACWD's projected supply under normal year conditions is sufficient to meet current and projected future demands, which include demands for this Project.

SINGLE DRY YEAR WATER SUPPLY

Table 14 documents the comparison of water supply and demand under a single critical dry year condition based on 1977 hydrologic conditions. As with the normal year conditions, the single dry year supply/demand comparison is provided in the same five-year increments between 2010 and 2030.

As shown in the table, ACWD anticipates facing a water supply shortage during single critical dry year supply conditions. This shortage is less than previously anticipated in the 2005 UWMP due primarily to the reduction in forecast demands, discussed under WATER DEMANDS - ACWD SERVICE AREA. District planning has held since the 1995 IRP that shortages anticipated during critical droughts of this magnitude and frequency (1 in 35 years) will be mitigated through a combination of demand management measures (including rationing) and purchases of dry year water through programs such as the Drought Water Bank (initiated during the 1987-92 drought by the DWR).

MULTIPLE DRY YEAR WATER SUPPLY

Table 15 documents projected water supply and demand under an extended dry period (multiple year drought). As documented in the UWMP, ACWD recognizes the hydrology of 1929 to 1933 to be most severe five-year period for the District's imported and local supplies. The multiple year dry period was reviewed for the level of demand anticipated between the years of 2026 and 2030 as that is the highest level of demands anticipated during the next 20 years.

Unlike the single dry year analysis, shortages are not anticipated during a multiple year drought (similar to the 1929-33 conditions) experienced during the next 20 years.

SECTION 5 SUMMARY AND CONCLUSIONS

1. The City of Fremont has proposed the Midtown Community Plan Project which includes 2,500 high density residential housing, commercial retail and office building area, with civic elements including a performing arts venue, plazas and open space.
2. The total projected demand for the Project is 870 AF/yr, of which 705 AF/Yr is new demand.
3. The Project demand is consistent with planning assumptions and is included in ACWD's forecast and water supply planning.
4. ACWD has diverse sources of supply that include imported water from the State Water Project and San Francisco Regional Water System, as well as local supplies from the Alameda Creek Watershed and underlying Niles Cone Groundwater Basin. Due to the configuration of ACWD's water production facilities, the proposed Project would not be dependent on any single source of supply.
5. ACWD's imported and local water supplies may be significantly cut back during droughts. In order to improve ACWD's dry year reliability, ACWD has secured 150,000 AF of off-site storage capacity at the Semitropic Groundwater Banking Program in Kern County. ACWD currently has approximately 110,000 AF in storage at the Semitropic Program.
6. Key uncertainties facing ACWD's supplies include the effects of climate change as well as supply restrictions due to endangered species and environmental protection. ACWD's projected long-term average supply reliability from the State has been reduced from 72% to 60% of Maximum Table A Allocation between 2002 and 2009, primarily as a result of Delta export pumping restrictions to protect endangered species.
7. Under normal year conditions, ACWD's water supplies are projected to be sufficient to meet the future demands in the service area, including the Project's demands.
8. ACWD's UWMP identifies that ACWD may face water supply shortages during critically dry years. As described in the UWMP, ACWD would look to secure additional supplies through a DWR drought water bank or similar water purchase/transfer program under these severe drought conditions. ACWD may also implement a drought contingency plan, which would include provisions for ACWD customers to cut back on water use, the magnitude of which would depend on the severity of the shortage. Because the Project's demands are consistent with the UWMP demand forecast, the development of the Project will not result in increased shortages from that which is already factored into ACWD's planning. However, because ACWD anticipates potential future shortages under severe drought conditions, water supplies to the Project may be cut back during these severe dry year conditions. The level of cut back to the Project would be consistent with the rest of ACWD's customers, and would depend on the magnitude of the dry-year shortage facing the entire District.

9. As part of the Project description, the Project shall be developed with the latest technology in water efficient plumbing fixtures and irrigation systems at both residential and non-residential developments, including but not limited to those listed in ATTACHMENT D: Water Efficiency Measures for New Developments.
10. The determination of water supply sufficiency is based on the implementation of the water efficiency measures set forth in paragraph 9 above and these water efficiency measures must be included in the environmental analysis for this Project and in the City's conditions of Project approval.
11. Under Government Code §66473.7 ACWD may be required to issue a written verification ensuring sufficient water supply if a residential subdivision is created as part of the Project. ACWD will re-evaluate the assumptions, and conclusions of this water supply assessment at that time. If these assumptions have changed significantly ACWD may require additional mitigation measures as a condition of providing a water supply verification and/or as a condition of providing water service to the Project. In the event that subsequent evaluation of District-wide demands and supplies in-light of the water supply uncertainties set forth in this water supply assessment indicates that there will be an imbalance between demands and supplies, ACWD may require additional mitigation for the specific elements in question. If District supplies are not sufficient to meet the demands, as a condition of water service, ACWD may require the Project proponent to: 1) acquire a new water supply to offset the water supply impacts of the Project, and/or: 2) invest in District-wide conservation programming (above and beyond that which is planned by the District) to offset the increase in District-wide demands that are a result of the Project.
12. This water supply assessment is based on the proposed land use of the Midtown Community Plan Project, as provided to ACWD by the City of Fremont (documented in ATTACHMENT A). If, prior to Project approval, the proposed land use within the Project area changes from what is currently incorporated in this water supply assessment, ACWD will evaluate the impacts that these changes may have on ACWD's water supplies. In the event that the land use changes impact the conclusions of this water supply assessment, ACWD may require additional mitigation measures as a condition of providing water service to the Project. If the proposed land use changes occur after Project approval and approval of the final subdivision maps, ACWD will evaluate the potential water supply impacts of these changes, and may require additional mitigation as a condition of providing water service to those areas with the changed land use condition.
13. The determination made in this water supply and demand analysis is based on the circumstances as of the date this water supply assessment was approved. ACWD reserves the right to impose conditions that go beyond the conditions that the City of Fremont may impose as part of the environmental analysis at the time ACWD provides a verification of sufficient supply for the Project and/or enters into a water service agreement with the developer to provide water service to the Project.

Table 1 ACWD Past and Current Water Use (Acre-Feet)

Water Use Category	Fiscal Year										
	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
Distribution System											
Single Family Residential	25,000	25,700	25,200	25,300	26,000	23,700	24,900	25,200	24,600	24,100	21,500
Multi-Family Residential	8,600	8,900	8,200	8,500	8,100	8,200	8000	8,100	8,100	8,100	7,600
Commercial	5,800	5,600	5,200	5,000	5,200	5,300	5,500	5,300	5,200	5,100	4,700
Industrial	4,700	4,600	4,300	4,100	4,100	3,400	3,500	3,400	3,100	2,800	2,500
Institutional	2,100	2,300	2,200	2,200	2,300	2,000	2,100	2,100	2,100	2,100	1,800
Landscape	5,200	5,300	5,600	5,600	6,300	5,700	5,200	5,700	5,900	5,600	4,800
Other	200	200	200	200	200	100	100	100	100	200	100
Total Consumption	51,700	52,600	50,800	50,700	52,300	48,400	49,300	49,900	49,100	48,000	43,000
Unaccounted for Water	4,200	3,600	4,300	3,700	4,100	3,200	3,800	5,000	5,700	3,000	4,600
Distribution System Total	55,900	56,200	55,100	54,400	56,400	51,600	53,100	54,900	54,800	51,000	47,600
Groundwater System											
Private Groundwater	3,100	3,800	3,100	3,400	3,600	3,800	3,000	3,000	2,100	2,100	2,000
Groundwater Reclamation											
-ARP Pumping	6,300	4,300	7,400	7,700	11,100	9,400	11,600	9,900	6,600	4,900	6,800
-Saline Outflow	7,400	6,600	6,300	5,800	7,200	6,600	7,500	6,800	7,400	7,400	7,400 (est)
Groundwater System Total	16,800	14,700	16,800	16,900	21,900	19,800	22,100	19,700	16,100	11,300	14,200
Grand Total	72,700	70,900	71,900	71,300	78,300	71,400	75,200	74,600	70,900	64,400	63,800 (est)

Notes:

1. Annual consumption is based on units billed during the Fiscal Year (July 1 to June 30). ACWD uses bi-monthly billing cycle.
2. All values rounded to the nearest 100.
3. Total Consumption values may not equal sum of individual components due to rounding.
4. Multi-Family Residential, Commercial, Industrial, and Institutional categories do not include dedicated landscape irrigation water use within these categories.
5. Landscape water use includes all dedicated landscape accounts for Multi-Family Residential, Commercial, Industrial and Institutional customers.
6. Distribution System Total represents total water production, as reported in ACWD's Annual Groundwater Survey Reports.
7. System Losses are calculated as the difference between Distribution System Total (total production) and Total Measured Consumption and include water for fire suppression, distribution system flushing, distribution system and service line leaks, etc.
8. Groundwater System demands are based on annual reported values in ACWD's Annual Survey Report on groundwater conditions. FY 09/10 Figures are currently an estimate
9. Groundwater Reclamation demands represents groundwater system demands to protect and reclaim the groundwater system from seawater intrusion.
10. Groundwater System demands do not include "Other Outflows" as reported in ACWD's Annual Survey Report on Groundwater Conditions.

Table 2 Estimated Future Water Demands in the ACWD Service Area – Normal Year (AF/yr)

Water Use Category	Year				
	2010	2015	2020	2025	2030
Distribution System					
Single Family Residential	23,800	26,500	26,900	27,200	27,500
Multi-Family Residential	9,700	10,100	10,400	10,800	11,100
Commercial	6,200	6,600	7,000	7,200	7,500
Industrial	3,700	4,300	4,800	5,100	5,400
Institutional	3,100	3,800	4,200	4,500	5,100
Other	100	100	100	100	100
Sub-Total	46,600	51,400	53,400	54,900	56,700
Adjustment for plumbing code savings	(100)	(800)	(1,500)	(2,000)	(2,400)
Sub-Total Demand	46,500	50,600	51,900	52,900	54,300
<i>Total Distribution System Demand with unaccounted for waters</i>	<i>50,500</i>	<i>55,000</i>	<i>56,400</i>	<i>57,500</i>	<i>59,000</i>
Adjustments for water conservation savings	(100)	(800)	(1,400)	(1,400)	(1,400)
Groundwater System Demand	14,800	14,800	14,800	14,800	14,800
Total ACWD Forecast Demands	65,200	69,000	69,800	70,900	72,400

Notes:

1. All numbers are from ACWD's 2009 water demand forecast, developed in preparation for the 2010 UWMP. Forecast includes demand assumptions for the Project.
2. All values rounded to the nearest 100. Total values may not equal sum of individual components due to rounding errors.
3. Numbers do not reflect demand reductions resulting from SB-7.
4. Landscape Irrigation included within Multi-Family Residential, Commercial, Industrial, and Institutional categories.
5. Adjustment for conservation includes savings due to District-sponsored water conservation programs.
6. Total Distribution System Demand includes 8% unaccounted for water or UAW. UAW is calculated as the difference between total production and total measured consumption and is mostly comprised of meter inaccuracy but also includes physical water such as water used for fire suppression, distribution system flushing, distribution system and service line leaks.
7. Groundwater System demands include: (1) private pumping, (2) ARP pumping and (3) saline groundwater outflows.

Table 3 Estimated Future Water Demands in the ACWD Service Area – Critical Dry Year (AF/yr)

Water Use Category	Year				
	2010	2015	2020	2025	2030
Distribution System					
Single Family Residential	23,800	26,500	26,900	27,200	27,500
Multi-Family Residential	9,700	10,100	10,400	10,800	11,100
Commercial	6,200	6,600	7,000	7,200	7,500
Industrial	3,700	4,300	4,800	5,100	5,400
Institutional	3,100	3,800	4,200	4,500	5,100
Other	100	100	100	100	100
Sub-Total	46,600	51,400	53,400	54,900	56,700
Adjustment for plumbing code savings	(100)	(800)	(1,500)	(2,000)	(2,400)
<i>Sub-Total Distribution System Demand (without losses)</i>	<i>46,500</i>	<i>50,600</i>	<i>51,900</i>	<i>52,900</i>	<i>54,300</i>
<i>Sub-Total Distribution System Demand (with losses)</i>	<i>50,500</i>	<i>55,000</i>	<i>56,400</i>	<i>57,500</i>	<i>59,000</i>
Adjustments for water conservation savings	(100)	(800)	(1,400)	(1,400)	(1,400)
Groundwater System Demand	10,500	10,500	10,500	10,500	10,500
Total ACWD Forecast Demands	60,900	64,700	65,500	66,600	68,100

Notes:

1. All numbers are from ACWD's 2009 water demand forecast, developed in preparation for the 2010 UWMP. Forecast includes demand assumptions for the Project.
2. All values rounded to the nearest 100. Total values may not equal sum of individual components due to rounding errors.
3. Numbers do not reflect demand reductions resulting from SB-7.
4. Landscape Irrigation included within Multi-Family Residential, Commercial, Industrial, and Institutional categories.
5. Adjustment for conservation includes savings due to District-sponsored water conservation programs.
6. Total Distribution System Demand (with losses) includes estimated system losses of 8.4%. Distribution system losses are calculated as the difference between total production and total measured consumption and include water for fire suppression, distribution system flushing, distribution system and service line leaks, etc.
7. Groundwater System demands include: (1) private pumping, (2) ARP pumping and (3) saline groundwater outflows.

Table 4 Estimated Future Water Demands in the ACWD Service Area – Multiple Dry Years (AF/Yr)

Water Use Category	Year				
	2026	2027	2028	2029	2030
Distribution System					
Single Family Residential	27,300	27,300	27,400	27,400	27,500
Multi-Family Residential	10,800	10,900	10,900	11,000	11,100
Commercial	7,300	7,300	7,400	7,400	7,500
Industrial	5,200	5,200	5,300	5,400	5,400
Institutional	4,500	4,600	4,600	4,900	5,100
Other	100	100	100	100	100
Sub-Total	55,200	55,400	55,700	56,200	56,700
Adjustment for plumbing code savings	(2,100)	(2,200)	(2,200)	(2,300)	(2,400)
<i>Sub-Total Distribution System Demand (without losses)</i>	<i>53,100</i>	<i>53,200</i>	<i>53,400</i>	<i>53,900</i>	<i>54,300</i>
<i>Sub-Total Distribution System Demand (with losses)</i>	<i>57,700</i>	<i>57,800</i>	<i>58,000</i>	<i>58,600</i>	<i>59,000</i>
Adjustments for water conservation savings	(1,400)	(1,400)	(1,400)	(1,400)	(1,400)
Groundwater System Demand	10,800	9,900	5,600	5,500	6,400
Total ACWD Forecast Demands	67,100	66,300	62,200	62,700	64,000

Notes:

1. All numbers are from ACWD's 2009 water demand forecast, developed in preparation for the 2010 UWMP. Forecast includes demand assumptions for the Project.
2. All values rounded to the nearest 100. Total values may not equal sum of individual components due to rounding errors.
3. Numbers do not reflect demand reductions resulting from SB-7.
4. Landscape Irrigation included within Multi-Family Residential, Commercial, Industrial, and Institutional categories.
5. Adjustment for conservation includes savings due to District-sponsored water conservation programs.
6. Total Distribution System Demand (with losses) includes estimated system losses of 8.4%. Distribution system losses are calculated as the difference between total production and total measured consumption and include water for fire suppression, distribution system flushing, distribution system and service line leaks, etc.
7. Groundwater System demands include: (1) private pumping, (2) ARP pumping and (3) saline groundwater outflows.

Table 5 Water Demands for Midtown Community Plan Project

Element	Planning units		GPD/Unit ⁽¹⁾	Demand estimate (AF/yr)
Office	1,988,800	Building Area	0.1035	231
Retail / Commercial	443,100	Building Area	0.282	140
Residential	2,500	Dwelling units	150	420
Open space	2.3	Acres	4,630	12
Civic	278,000	Building Area	<i>Included in the "open space" figure</i>	
Estimated Total Project Demand <i>(including 8.4% unaccounted for water and rounded to nearest 100 AF)</i>				870
Less Existing Demands ⁽²⁾				-165
Total New Demand				705
Approximate peak day demand in mgd <i>(1.6x peaking factor)</i>				1.00

⁽¹⁾ Demand units from the 2009 Water Demand Forecast.

⁽²⁾ Existing on-site demand included in the base demand for the 2009 Forecast

⁽³⁾ Figures provided by City of Fremont

Table 6 Overview of Contracts and Permits for ACWD's Existing Water Supplies

SUPPLY COMPONENT	Category	Description	Maximum Quantity (AF/Yr)	Ever Used
Imported Supplies				
- State Water Project	Contract	In 1961, ACWD signed an agreement with the California State Department of Water Resources for a maximum annual amount of 42,000 AF/Yr from the State Water Project (SWP). SWP water is delivered to ACWD via the South Bay Aqueduct. This contract expires in the year 2035.	42,000	Yes
- San Francisco Regional Water System	Contract	In 2009, ACWD along with the other wholesale customers signed a new Master Sales Agreement with San Francisco. The new agreement has a term of 25 years and provides a commitment from San Francisco to provide, collectively, up to 184 mgd to its wholesale customers. ACWD's contractual purchase amount is 13.76 mgd.	15,344	Yes
Local Supplies				
- Alameda Creek Diversions for Groundwater Recharge	Water-rights permit	ACWD received a water rights permit from the SWRCB in 1949 (permit no. 8428) to appropriate up to 40,000 AF/Yr of unappropriated water from the Alameda Creek for groundwater storage and replenishment.	40,000	Yes
- Del Valle Reservoir	Water-rights permit	ACWD received a water rights permit in from the SWRCB in 1958 (permit no. 11320) to appropriate up to 60,000 AF/Yr of unappropriated water from Arroyo Del Valle in the Alameda Creek Watershed for storage and later beneficial use.	60,000	Yes
- Groundwater Storage in Niles Cone Groundwater Basin - Desalination of Brackish Groundwater	Other	ACWD manages and protects the Niles Cone Groundwater Basin for water supply under its Groundwater Management Policy (adopted 1989, amended 2001). This Policy is based on the statutory authority granted to ACWD under the County Water District Law; the Replenishment Assessment Act of ACWD; and local well ordinances.	N/A	Yes
Banking / Transfers				
- Semitropic Groundwater Banking Program	Contract	In 1996 and in 2001 entered into agreements with Semitropic Water Storage District for 150,000 AF of combined groundwater storage capacity for banking of ACWD's excess SWP supplies in wet years. The banked water is to be returned to ACWD in dry years via a series of exchanges. These banking agreements expire in the year 2035.	13,500 (maximum return quantity during critically dry years)	Yes

Table 7 Historical Water Supply Utilization by ACWD (AF/Yr)

Fiscal Year	SWP supplies used at ACWD facilities	Del Valle	San Francisco Regional Water	Newark Desal Facility	Net Local Groundwater Recharge ⁽²⁾	Recovered from Semitropic GW bank	Total In-District Water Supply	SWP Supply delivered to Semitropic GW bank
93-94	21,600	5,000	12,200	-	28,500	-	67,300	-
94-95	16,100	4,200	13,000	-	35,900	-	69,200	-
95-96	18,600	5,300	12,200	-	27,600	-	63,700	-
96-97	7,700	15,900	14,700	-	25,300	-	63,600	6,200
97-98	12,900	10,600	13,700	-	58,000	-	95,200	10,000
98-99	20,800	5,300	13,600	-	33,200	-	72,900	18,780
99-00	25,200	3,800	13,800	-	26,900	-	69,700	7,230
00-01	26,400	200	13,000	-	31,000	-	70,600	7,250
01-02	21,900	4,600	13,500	-	32,100	-	72,100	90
02-03	17,600	7,400	14,000	-	31,400	-	70,400	20,800
03-04	18,500	6,700	13,700	2,600	30,700	-	72,200	4,000
04-05	18,800	6,000	11,800	3,900	38,700	-	79,200	9,300
05-06	15,600	7,700	11,700	2,100	31,100	-	68,200	41,540
06-07	13,800	11,000	15,300	2,800	26,000	-	68,900	11,940
07-08	22,600	500	15,000	3,600	24,900	5,500	72,100	-
08-09	16,600	4,200	12,600	3,200	23,700	10,600	58,313	-

1. All values rounded to the nearest 100. Total values may not equal sum of individual components due to rounding errors.
2. Recharge figures less evaporation and other losses.

Table 8 Summary of Potential Future Factors that may Influence
ACWD Water Supply Reliability

SUPPLY	Factor		
	Legal/Environmental	Water Quality	Climatic
Imported Supplies			
- State Water Project	ESA* requirements may constrain Delta pumping	Potential seawater intrusion impacts if Delta Levees fail.	Supply is dependent on hydrologic conditions
- San Francisco Regional Supply	ESA requirements may require additional reservoir releases	None anticipated	Supply is dependent on hydrologic conditions
Local Supplies			
- Groundwater Recharge	ESA requirements may impact groundwater recharge operations	None anticipated	Supply is dependent on hydrologic conditions
- Groundwater Storage	None anticipated	None anticipated	Supply is dependent on availability of water to store in wet years
- Del Valle Release	ESA requirements may require downstream flow releases	None anticipated	Supply is dependent on hydrologic conditions
- Desalination	None anticipated	None anticipated	Supply is dependent on local groundwater conditions
- Recycled Water	None anticipated	None anticipated	None anticipated
Banking/Transfers			
- Semitropic Banking	Delta pumping constraints may impact ability to recover water through SWP exchanges	Banked groundwater may require treatment	Supply is dependent on availability of water to store in wet years

* Endangered Species Act

Table 9 Recent DWR publications and stated reliability of Deliveries from the State
Water Project

	2002 Report	2005 Report	2007 Report	2009 Report
Average % of Full Allocation in year of report	72%	69%	63%	60%
Primary cause for reduction	NA	Changes in modeling assumptions and demands	Wanger Decision + Climate Change	Biological Opinion on Salmonids + expanded climate change

Source: Department of Water Resources State Water Project Reliability Reports

Table 10 Projected Normal Year Supply

SUPPLY	2010	2015	2020	2025	2030
Imported Supplies					
- State Water Project	25,500	25,500	25,500	25,500	25,500
- San Francisco Regional	15,400	15,400	15,400	15,400	15,400
Total Imported Supplies	40,900	40,900	40,900	40,900	40,900
Local Supplies					
- Groundwater Recharge	21,400	21,400	21,400	21,400	21,400
- Groundwater Storage	0	0	0	0	0
- Del Valle Release	7,100	7,100	7,100	7,100	7,100
- Desalination	5,100	5,100	5,100	5,100	5,100
- Recycled Water	0	0	1,600	1,600	1,600
Total Local Supplies	33,600	33,600	35,200	35,200	35,200
Banking/Transfers					
- Semitropic Banking	<i>N/A – Not intended or needed to meet normal year demands</i>				
TOTAL SUPPLY	74,500	74,500	76,100	76,100	76,100

Table 11 Projected Critical Year Supply

SUPPLY	2010	2015	2020	2025	2030
Imported Supplies					
- State Water Project	4,000	4,000	4,000	4,000	4,000
- San Francisco Regional	11,700	13,700	14,100	12,700	13,100
Total Imported Supplies	15,700	17,700	18,100	16,700	17,100
Local Supplies					
- Groundwater Recharge	15,600	15,600	15,600	15,600	15,600
- Groundwater Storage	10,000	10,000	10,000	10,000	10,000
- Del Valle Release	100	100	100	100	100
- Desalination	5,600	5,600	5,600	5,600	5,600
- Recycled Water	0	0	1,600	1,600	1,600
Total Local Supplies	31,300	31,300	32,900	32,900	32,900
Banking/Transfers					
- Semitropic Banking	13,800	13,800	13,800	13,800	13,800
TOTAL SUPPLY	60,800	62,800	64,800	63,400	63,800

Notes:

1. Critical Dry Year conditions are based on projected water supply availability under 1977 drought conditions.
2. Semitropic Banking assumes ACWD's existing recovery capacity increased by 300 AF/Yr (from 13,500 AF/Yr to 13,800 AF/Yr), per 2010 Re-circulated Draft EIR for the Patterson Ranch Planned District.

Table 12 Projected Multiple Dry Year Supply

SUPPLY	2026	2027	2028	2029	2030
Imported Supplies					
-State Water Project	13,900	17,400	12,400	16,200	16,300
- San Francisco Regional	15,300	15,300	13,100	15,300	15,300
Total Imported Supplies	29,200	32,700	25,500	31,500	31,600
Local Supplies					
- Groundwater Recharge	12,700	12,100	9,900	19,800	14,000
- Groundwater Storage	9,100	0	10,000	0	3,300
- Del Valle Release	900	5,200	1,000	3,400	1,000
- Desalination	5,000	5,000	2,000	1,900	2,600
- Recycled Water	1,600	1,600	1,600	1,600	1,600
Total Local Supplies	29,300	23,900	24,500	26,700	22,500
Banking/Transfers					
- Available Semitropic Banking	17,900	19,900	17,100	19,200	19,200
TOTAL SUPPLY	76,400	76,500	67,100	77,400	73,300

Notes:

1. Multiple Dry Year conditions based on projected water supply availability under 1929-33 drought conditions.
2. Semitropic Banking assumes ACWD's existing pump back recovery capacity increased by 300 AF/Yr (from 13,500 AF/Yr to 13,800 AF/Yr), per 2010 Re-circulated Draft EIR for the Patterson Ranch Planned District.

Table 13 Water Supply and Demand Comparison: Normal Year

SUPPLY/DEMAND	Year				
	2010	2015	2020	2025	2030
Total Supply	74,500	74,500	76,100	76,100	76,100
Forecast Demands	65,200	69,000	69,800	70,900	72,400
Anticipated Shortage	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>

Notes:

1. All values rounded to the nearest 100 AF.
2. Forecast Demands include Project demands.

Table 14 Water Supply and Demand Comparison: Critical Dry Year

SUPPLY/DEMAND	Year				
	2010	2015	2020	2025	2030
Total Supply	60,800	62,800	64,800	63,400	63,800
Forecast Demands	60,900	64,700	65,500	66,600	68,100
Anticipated Shortage	-100	-1,900	-700	-3,200	-4,300

Notes:

1. All values rounded to the nearest 100 AF.
2. Forecast Demands include Project demands.
3. Critical Dry Year conditions are based on projected water supply availability under 1977 drought conditions.

Table 15 Water Supply and Demand Comparison: Multiple Dry Year

SUPPLY/DEMAND	Year				
	2026	2027	2028	2029	2030
Total Supply	76,400	76,500	67,100	77,400	73,300
Forecast Demands	67,100	66,300	62,200	62,700	64,000
Anticipated Shortage	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>	<i>none</i>

Notes:

1. All values rounded to the nearest 100 AF.
2. Forecast Demands include Project demands.
3. Multiple Dry Year conditions are based on projected water supply availability under 1929-1933 drought conditions; supply includes access to stored water in Semitropic

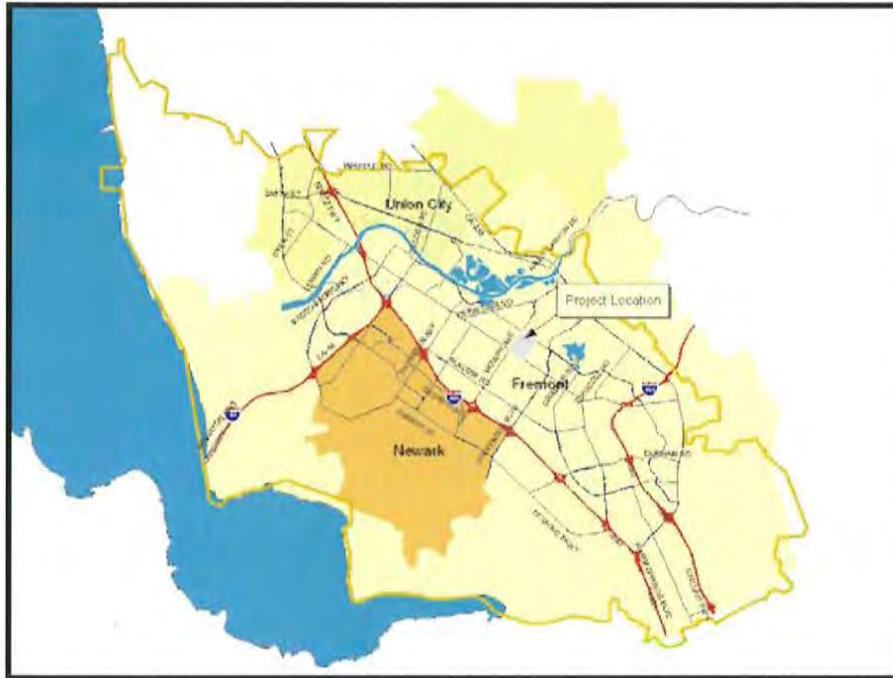


Figure 1 ACWD Service Area and Midtown Community Plan Project Location Map

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ATTACHMENT A

Letter of request form City of Fremont for Water Supply Assessment

ATTACHMENT B – ACWD URBAN WATER MANAGEMENT PLAN 2006-2010

**ATTACHMENT C
ACWD WATER SUPPLY CONTRACTS**

- **State Water Project Water Supply Contract (partial)**
 - **San Francisco Water Supply Contract**

**(note: Complete State Water Project Supply Contract is available on DWR website:
<http://www.swpao.water.ca.gov/wsc/index.cfm>)**

ATTACHMENT D – WATER EFFICIENCY MEASURES FOR NEW DEVELOPMENTS

WATER EFFICIENCY MEASURES FOR NEW RESIDENTIAL DEVELOPMENT - V.060810			
GPF = gallons per flush, GPM = gallons per minute, WF = water factor			
Indoors	Flow Rate	Recommendation Details	Future Federal or State Requirements
Toilets	1.28 GPF	High efficiency toilets (HET) have a flush volume of 1.28 GPF, dual flush models are also considered HETs, with an average flush less than 1.28 GPF. Choose HETs that are third party tested and certified as passing a 350 g or higher flush volume test as established by the Uniform North American Requirements.	Will be mandatory to comply with CALGreen under the prescriptive method - effective 1/1/2011 Required for all after 2013
Showerheads	2.0 GPM	EPA's Water Sense Program recommends showerheads with a flow rate of 2.0 GPM or less.	Will be mandatory to comply with CALGreen under the prescriptive method - effective 1/1/2011
Lavatory Faucets	1.5 GPM	Lavatory faucets with aerators that restrict flow to 1.5 GPM or less.	
Kitchen Faucets	1.5 GPM	Kitchen faucets with aerators that restrict flow to 1.5 GPM or less.	
Clothes Washers	6 WF	High efficiency clothes washers (HEW) with a water factor of 6 have a maximum average water use of 6 gallons per cubic foot of laundry. HEWs are typically front-loading horizontal axis washers.	Potential requirement in 3-5 years
Outdoors		Recommendation Details	Future Federal or State Requirements
Turf Landscaping		Limit turf to areas where it is functional. Avoid planting turf in narrow, odd-shaped areas which are hard to irrigate efficiently.	Many of these measures are now required as part of the CA Model Water Efficient Landscape Ordinance effective 1/1/2010
Non-turf Landscaping		Select native or low water using plant species. High water using plants should be grouped together and irrigated separately.	
Irrigation System		Irrigation systems should be designed to maximize efficiency and reduce water waste by minimizing overspray and runoff. Use low volume (e.g., drip) irrigation in non-turf areas.	
Irrigation Controller		An automatic, self-adjusting irrigation controller is recommended. Automatic, self-adjusting controllers utilize prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the needs of plants.	
Overhead Sprinklers and Spray Heads		Should not be used in narrow areas, eight (8) feet wide or less, or where adjacent to impervious surfaces where overspray and excess run-off can occur.	
Valves and Circuits		Should be separated into hydrozones based on plant type and plant water needs.	
Decorative		All decorative fountains should recycle water.	
Swimming Pools and Spas		Covers should be used on all pools or spas.	
Bay-Friendly Landscaping Best Practices		Adopt the Bay-Friendly Program's (Stopwaste.org) 7 best practices for landscaping and gardening: 1. Landscape Locally; 2. Landscape for Less to the Landfill; 3. Nurture the Soil; 4. Conserve Water; 5. Conserve Energy; 6. Protect Water & Air Quality; 7. Create Wildlife Habitat.	

WATER EFFICIENCY MEASURES FOR NEW COMMERCIAL DEVELOPMENT - V.060810			
GPF = gallons per flush; GPM = gallons per minute; WF = water factor			
Indoors	Flow Rate	Recommendation Details	Future Federal or State Requirements
Toilets	1.28 GPF	High efficiency toilets (HET) have a flush volume of 1.28 GPF, dual flush models are also considered HETs, with an average flush less than 1.28 GPF. Choose HETs that are third party tested and certified as passing a 350 g or higher flush volume test as established by the Uniform North American Requirements.	Will be mandatory to comply with CALGreen under the prescriptive method - effective 1/1/2011 Required for all after 2012
Urinals	0.5 GPF	High efficiency urinals (HEU) have a flush volume of 0.5 GPF or less.	
Showerheads	2.0 GPM	EPA's Water Sense Program recommends showerheads with a flow rate of 2.0 GPM or less.	Will be mandatory to comply with CALGreen under the prescriptive method - effective 1/1/2011
Lavatory Faucets	.5 GPM	Lavatory faucets with aerators that restrict flow to .5 GPM or less.	
Kitchen Faucets	1.5 GPM	Kitchen faucets with aerators that restrict flow to 1.5 GPM or less.	
Clothes Washers	6 WF	High efficiency clothes washers (HEW) with a water factor of 6 have a maximum average water use of 6 gallons per cubic foot of laundry. HEWs are typically front loading horizontal axis washers.	Potential requirement in 3-5 years
Cooling Towers		Should be equipped with a recirculating system with a minimum of five (5) cycles of concentration. Newly constructed cooling towers should be operated with conductivity controllers, as well as make up and blowdown meters.	
Food Steamers		Should be boiler less or self-contained where applicable.	
Ice Machine		Should be air-cooled, or use no more than 25 gallons of water per 100 pounds of ice and should be equipped with a recirculating cooling unit.	
Commercial Refrigeration		Should be air-cooled or if it is water-cooled it should have a closed loop system.	
Pre-rinse Dishwashing Spray Valve	1.2 GPM	Should have a maximum flow rate of 1.2 or less GPM.	
Vehicle Wash		Shall reuse a minimum of 50% of the water.	
Outdoors		Recommendation Details	Future Federal or State Requirements
Turf Landscaping		Limit turf to areas where it is functional. Avoid planting turf in narrow, odd-shaped areas which are hard to irrigate efficiently.	Many of these measures are now required as part of the CA Model Water Efficient Landscape Ordinance effective 1/1/2010
Non-turf Landscaping		Select native or low water using plant species. High water using plants should be grouped together and irrigated separately.	
Irrigation System		Irrigation systems should be designed to maximize efficiency and reduce water waste by minimizing overspray and runoff. Use low volume (e.g., drip) irrigation in non-turf areas.	
Irrigation Controller		An automatic, self-adjusting irrigation controller is recommended. Automatic, self-adjusting controllers utilize prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the needs of plants.	
Overhead Sprinklers and Spray Heads		Should not be used in narrow areas, eight (8) feet wide or less, or where adjacent to impervious surfaces where overspray and excess run-off can occur.	
Valves and Circuits		Should be separated into hydrozones based on plant type and plant water needs.	
Decorative fountains		All decorative fountains should recycle water.	
Swimming Pools and Spas		Covers should be used on all pools or spas.	
Bay-Friendly Landscaping Best Practices		Adopt the Bay-Friendly Program's (Stopwaste.org) 7 best practices for landscaping and gardening: 1. Landscape Locally; 2. Landscape for Less to the Landfill; 3. Nurture the Soil; 4. Conserve Water; 5. Conserve Energy; 6. Protect Water & Air Quality; 7. Create Wildlife Habitat.	

APPENDIX C

Greenhouse Gas Emissions Calculations

Project Name:
Project Years:

Midtown Community Plan
2020

GHG Emissions for Plan Scenarios

Source Category	Existing in 2011	Existing in 2020	Minimum Plan Buildout 2020	Maximum Plan Buildout 2020
Transportation:	27,636	21,798	33,419	54,703
Area Source:	6	6	623	1,297
Electricity:	3,889	3,889	3,200	5,600
Natural Gas:	1,220	1,220	4,550	9,168
Water & Wastewater:	75	75	112	211
Solid Waste:	2,884	2,883	5,343	9,482
Total:	35,710	29,870	47,248	80,461
Service Population	2,934	2,934	7,256	13,653
CO2e Rate per capita	12.2	10.2	6.5	5.9

Project Name:
Project Years:

Midtown Community Plan
2020

Change in GHG Emissions for Plan Scenario

Source Category	Change - Existing in 2020	Change - Minimum Plan Buildout 2020	Change - Maximum Plan Buildout 2020
Transportation:	(5,838)	5,782	27,067
Area Source:	-	617	1,291
Electricity:	-	(688)	1,711
Natural Gas:	-	3,330	7,948
Water & Wastewater:	(1)	37	136
Solid Waste:	(1)	2,459	6,598
Total:	(5,840)	11,538	44,751
Service Population Change	0	4,323	10,719
CO2e Rate per capita	--	2.7	4.2

Project Name: Midtown Community Plan (Maximum)
Project Years: 2020
Greenhouse Gas Operational Period Emissions in Metric Tons Per Year

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Converted for PG&E rates	Adjusted for VMT ¹
Transportation:	56,518	53,296	53,296	54,703
Area Source:	1,297	1,297	1,297	1,297
Electricity:	19,432	15,544	5,600	5,600
Natural Gas:	11,460	9,168	9,168	9,168
Water & Wastewater:	586	586	211	211
Solid Waste:	18,965	9,482	9,482	9,482
Total:				80,461
Population	based on 2.5 persons/du			6250
	based on 2 job/1,000 sf retail			886
	based on 3 job/1,000 sf Office			6516
				13,653
				CO2e Rate per capita
				5.9

¹ VMT Estimates from Fremont Midtown Community Plan Transportation Impact Analysis, Fehr & Peers February 2011. Maximum build-out URBEMIS2007 = 443,848 and F&P = 455,565

Project Name: Midtown Community Plan (Minimum)
Project Years: 2020
Greenhouse Gas Operational Period Emissions in Metric Tons Per Year

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Converted for PG&E rates	Adjusted for VMT ¹
Transportation:	35,461	32,316	32,316	33419
Area Source:	623	623	623	623
Electricity:	11,107	8,884	3,200	3,200
Natural Gas:	5,688	4,550	4,550	4,550
Water & Wastewater:	312	312	112	112
Solid Waste:	10,685	5,343	5,343	5,343
Total:				47,248
Population	based on 2.5 persons/du			3000
	based on 2 job/1,000 sf retail			886
	based on 3 job/1,000 sf Office			3370
				<u>7,256</u>
				6.5

¹ VMT Estimates from Fremont Midtown Community Plan Transportation Impact Analysis, Fehr & Peers February 2011. Maximum build-out URBEMIS2007 = 272,544 and F&P = 281,845

Project Name: Midtown Community Plan (Existing 2020)

Greenhouse Gas Operational Period Emissions in Metric Tons Per Year

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Mitigated Project Converted for PG&E rates	Adjusted for VMT ¹
Transportation:	18,972.11	18,972.11	18972	21798
Area Source:	6.17	6.17	6	6
Electricity:	5,829.68	5,829.68	3889	3889
Natural Gas:	1,219.52	1,219.52	1220	1220
Water & Wastewater:	111.96	111.96	75	75
Solid Waste:	5,765.26	2,882.63	2883	2883
Total:				29,870
Population	based on 2.5 persons/du			25
	based on 2 job/1,000 sf retail			996
	based on 3 job/1,000 sf Office			1913
				2,934
				CO2e Rate per capita 10.2

¹ VMT Estimates from Fremont Midtown Community Plan Transportation Impact Analysis, Fehr & Peers February 2011 Maximum build-out URBEMIS2007 = 221,307 and F&P = 167,565

Project Name: Midtown Community Plan (Existing 2011)

Greenhouse Gas Operational Period Emissions in Metric Tons Per Year

Source Category	Unmitigated Project CO2e (metric tons/year)	Mitigated Project CO2e (metric tons/year)	Mitigated Project Converted for PG&E rates	Adjusted for VMT¹
Transportation:	24,053	24,053	24,053	27636
Area Source:	6	6	6	6
Electricity:	5,830	5,830	3,889	3889
Natural Gas:	1,220	1,220	1,220	1220
Water & Wastewater:	113	113	75	75
Solid Waste:	5,767	2,884	2,884	2884
Total:				35,710
	based on 2.5 persons/du			25
	based on 2 job/1,000 sf retail			996
	based on 3 job/1,000 sf Office			1913
				<u>2,934</u>
				12.2

¹ VMT Estimates from Fremont Midtown Community Plan Transportation Impact Analysis, Fehr & Peers February 2011. Maximum build-out URBEMIS2007 = 221,307 and F&P = 167,565

Project Name: Midtown Community Plan (Existing 2011)

Scenario	Service Population	F&P Predicted VMT			URBEMIS VMT
		Existing	Increase over Existing	VMT from F&P	
Existing	2,934	167,565	--	145,840	145,840
Minimum MCP	7,256		114,280	281,845	272,544
Maximum MCP	13,653		288,000	455,565	443,848

Note: URBEMIS2007 assumed Passby trips, so VMT was adjusted lower by model