WATER USE BUDGET GUIDELINES

Engineering Division
701 Laurel St., Menlo Park, CA 94025
tel 650-330-6740; fax 650-327-5497

CITY OF MENLO PARK

Water use efficiency requirements

A. All new building construction within the Office, Life Sciences, and Residential Mixed-Use shall comply with the California Green Building Standards Code (CALGreen), Cal. Code Regs.,Title 24, Part 11 and water use efficiency and recycled water requirements per the corresponding zoning ordinances: Office (O) Section 16.43.140 Green and sustainable building; Life Sciences (LS) Section 16.44.140 Green and sustainable building; and Residential Mixed-Use (R-MU), Section 16.45.140 Green and sustainable building.
   1. All new buildings more than one hundred thousand (100,000) square feet of gross floor area shall prepare and submit a proposed water budget and accompanying calculations following the methodology described in Section B for review and approval by the City's Public Works Director prior to certification of building occupancy.
   2. All new buildings two hundred and fifty (250,000) square feet or more in gross floor area shall use an alternate water source for all City approved non-potable applications and shall be required to submit an Alternate Water Source Assessment as described in Section C to be reviewed and approved by the City's Public Works Director and Community Development Director prior to certification of building occupancy.
      a. Alternative water sources shall include rainwater, graywater, stormwater, and blackwater as defined below and other as approved by the City's Public Works Director and Community Development Director.
         - Rainwater – precipitation collected from aboveground surfaces, such as building roofs.
         - Graywater – wastewater generated from indoor uses such as showers, bathtubs, bathroom sinks and laundry equipment.
         - Stormwater – precipitation collected from surface drainage and underground piping.
         - Blackwater – wastewater generated from toilets, dishwashers and kitchen / utility sinks.
      b. Non-potable applications shall include toilet and urinal flushing, cooling applications, process water, dust control and soil compaction, water features / decorative fountains, irrigation and other as approved by the City's Public Works Director and Community Development Director and as allowed by Division 4 of Title 22 of the California Code of Regulations and the California Plumbing Code.
      c. Applicants may propose conservation measures to meet the requirements of this section subject to approval of the City Council. The conservation measures shall achieve a reduction in potable water use equivalent to the projected demand of City approved non-potable applications, but in no case shall the reduction be less than 30 percent compared to the approved water budget. The conservation measures may include on-site measures, off-site measures or a combination thereof.

B. New and rehabilitated landscapes associated with projects requiring City review and approval shall comply with the requirements of the Menlo Park Municipal Code Chapter 12.44 Water-Efficient Landscaping Ordinance.

Water use budget

A. For projects determined to be subject to the California Environmental Quality Act ("CEQA") and Water Code §10910(a) and 10912(a)(3), thus requiring a Water Supply Assessment, the water use budget shall provide the basis for the water demand.
B. The water use budget shall be comprehensive and account for a project's estimated total water demand from outdoor and indoor uses at full building occupancy.
C. The water use budget shall include the following:
   1. Project background, applicant information, location, lot size, building size (gross square footage), land use designation, building use(s) and space type(s), and estimated date of project completion.
   2. Description of all intended water uses.
   3. Detailed projections of the total annual indoor and outdoor potable water demand on a monthly basis per the calculation methods presented in Section B.2. The water demand calculations shall be presented based on building space types(s) and uses, number of plumbing fixtures and fittings with respective duration times and frequency of use, occupancy counts, days of operation, heating / cooling system modeling data and results, process water requirements and modeling data and results, irrigation needs, and other pertinent data. The calculations shall be detailed, state all assumptions, note referenced material, and be provided in Microsoft Excel.
   4. Other pertinent information as required by the Public Works Director.

D. Methodology:
   1. Indoor water demand – shall consist of the demand from plumbing fixtures and fittings, heating and cooling systems, and other indoor uses and processes.
      a. Non-residential
         - Plumbing fixtures and fittings
            - Flow rates shall be based on the latest version of CALGreen.
            - Fixture / fitting frequency of use and duration time per occupant type and gender ratio shall be based on values provided in the latest version of Leadership in Energy and Environmental Design (LEED) Water Use Reduction Additional Guidance.
            - Occupancy counts shall be based on the latest version of LEED for Building Operations and Maintenance and include numbers for Full Time Equivalents (FTEs) and Transient FTEs per building space type and gross square footage.
         - Days of operation shall be based on the project's intended use of the building space types(s).
      b. Residential Mixed-Use
         - Plumbing fixtures and fittings
            - Flow rates shall be based on the latest version of CALGreen.
            - Fixture / fitting frequency of use and duration time per occupant type and gender ratio shall be based on values provided in the latest version of LEED Water Use Reduction Additional Guidance.
         - Household size shall be based on the average number of residents per dwelling unit as determined by the Public Works Director.
         - Days of operation shall be based on 365 days.
      c. Heating and cooling - Demand from heating and cooling shall be specific to the requirements and intended use of the proposed systems and shall be based on modeling results that account for the local climate conditions and days of operation. The water demand shall be presented on a monthly and annual basis.
      d. Process water - Demand from process water shall be specific to the requirements and intended use of the proposed system(s) and shall be based on modeling results, if applicable. The water demand shall be presented on a monthly and annual basis.
      e. Other indoor demand - Demand from other indoor uses shall be specific to the requirements and intended use of the proposed system(s).
   2. Outdoor water demand – shall consist of the demand from irrigation and other outdoor uses.
      a. Irrigation demand shall be determined based on the Menlo Park Municipal Code Chapter 12.44 Water-Efficient Landscaping Ordinance.
      b. Demand from other outdoor uses shall be specific to the requirements and intended use of the proposed system(s).

E. The applicant may propose adjustments to the water budget methodology that more accurately reflect specific uses from the project subject to the review and approval by the Public Works Director.

Alternate water source assessment

A. The Alternate Water Source Assessment shall include the following:
   1. Project background, building size, land use designation, location and applicant information.
   2. Description of alternative water source(s) and projected monthly and annual generation rates based on availability and seasonal variability.
   3. An annual water budget as described in Section B that quantifies the projected potable water demand, demand of City approved non-potable applications and reduction in total water demand resulting from the use of an alternative water source. The water budget shall include monthly water demand / reduction projections.
   4. Proposed method of water treatment and system capacity.
   5. Description of the non-potable application(s), distribution method, monthly demand and potable make-up / supplemental needs, if applicable.
   6. Conceptual design drawings and flow diagrams.
   7. Planned method of system operation, maintenance and monitoring.
   8. Compliance with State, San Mateo County and City regulatory requirements.
   9. Description of all required permits, permitting process and schedule.
   10. Other information as required by the Public Works Director and Community Development Director.

B. Applicants may meet the alternate water source requirements through conservation measures with approval from the City Council.

1. The conservation plan shall include the following:
    - Project background, building size, land use designation, location and applicant information.
    - Description of conservation measures.
    - An annual water budget as described in Section B that quantifies the projected potable water demand, demand of City approved non-potable applications and reduction in total water demand resulting from the conservation measures. The water budget shall include monthly water demand / reduction projections.
    - Compliance with the minimum potable water demand reduction requirements.
2. Approval from the City Council must be obtained prior to certification of building occupancy.

Monitoring requirements

A. Twelve (12) months after the date of the certification of occupancy, the building owner shall submit data and information to the City's Public Works Director sufficient to allow the City to compare the actual water use to the allocation in the approved water budget.
B. In the event that actual water consumption exceeds the water budget, a water conservation program, as approved by the City's Public Works Director, shall be implemented. Twelve (12) months after City approval of the water conservation program, the building owner shall submit data and information sufficient to allow the City to determine compliance with the conservation program. If water consumption exceeds the budgeted amount, the City's Public Works Director may prohibit the use of water for irrigation or enforce compliance as an infraction pursuant to Chapter 1.12 of the Municipal Code until compliance with the water budget is achieved.