

## **Appendix H – Capacity Limitations**

The following guidelines are provided in the interest of facilitating the design process for projects financed by the Drinking Water State Revolving Fund (DWSRF), and provide detail on determining the eligible capacity of such projects. Exceptions to these guidelines may be allowed by the Deputy Director of the Division of Financial Assistance (DFA) on a case by case basis, except as required by federal or state regulation.

### **Sizing of Projects**

**(1) Projects financed by the DWSRF:** (a) must be sized to meet existing Maximum Day Demand (MDD), (b) may be sized to include the design capacity needed to meet the fire protection requirements of the local fire authority, and (c) may include the design capacity needed for a reasonable amount of population growth expected to occur over a twenty year period, if documentation is submitted to support the need. The combined capacity of (a), (b), and (c) generally equates to the eligible capacity of a DWSRF funded project.

**(a) Maximum Day Demand:** MDD means the amount of water utilized by consumers during the highest day of use (midnight to midnight), excluding fire flow, as determined pursuant to Section 64554 of the California Code of Regulations. Projects financed by the DWSRF must be designed to meet the existing MDD of the water system, and must ensure minimum pressure is maintained under all flow conditions at all points in the distribution system.

**(b) Fire Protection:** The DWSRF allows for fire flow consideration in facility design, if the local fire protection regulatory authority requires it. If fire protection is to be provided, the applicant shall ensure that minimum fire flow pressures, hydrant spacing, etc., are designed in accordance with the requirements of the local fire authority.

Conversely, federal regulation strictly prohibits the DWSRF program from financing “projects needed primarily for fire protection.” (40 CFR 35.3520 (e)(4)) For example, a project which is limited in scope to installing or upgrading fire hydrants on existing distribution mains would be ineligible for DWSRF financing.

**(c) Reasonable Amount of Growth:** The DWSRF allows for the design of projects to include the capacity needed for a reasonable amount of growth expected to occur over a twenty year period. In determining population change, applicants will be required to submit the population projection from an independent source (e.g. Regional Council of Governments, Department of Finance, Water Quality Management Plans) for the service area. If the applicant is unable to provide documentation substantiating the population projection, excess design capacity above the existing MDD and fire flow demand will be considered ineligible.

**(2) Excess design capacity above that of (1a), (1b), and (1c) is considered ineligible,** and the applicant must identify another means of funding the cost to provide such excess capacity.

**(3) Projects with a design capacity in excess of 3x the existing MDD, and/or those that are substantially needed to serve undeveloped areas, are ineligible for DWSRF financing.** Federal regulation prohibits the DWSRF program from financing “projects needed primarily to serve future population growth.” (40 CFR 35.3520 (e)(5)) Therefore, in combination with the maximum allowable

for fire protection (1b), the project as a whole is deemed ineligible if its design capacity exceeds 3x the existing MDD.

### **Notes and Applications**

**(4)** Special consideration may be given to consolidation projects, or those that extend service from an existing Public Water System (PWS). In such cases, the estimated water demand of all users to be served by the project should be included in capacity calculations.

**(a)** If the restructured water system does not have the capacity needed to serve its new users over the useful life of the project in its design capacity, the applicant will be required to submit a plan for meeting that demand.

**(b)** If the design capacity of the project exceeds that which is needed to meet (1a), (1b), and (1c), the applicant may submit a request for an exemption. In such cases, the restructured water system must provide the DFA with an adopted Urban Water Management Plan, reference to local code or ordinance, or other approved document, to demonstrate that the capacity limitations pose a valid threat to the viability of the project. Determinations of eligible capacity will be made by the DFA on a case-by-case basis. If the design capacity exceeds the eligible capacity established by the DFA, the applicant will be required to identify another means of funding the cost difference.

**(5)** These capacity limitations apply to projects and their components, including water sources, treatment units, pumping equipment, storage facilities, and pipelines.

**(6)** Design of water transmission or distribution mains, where fire protection is not being considered, may be based on peak hour demand, as determined pursuant to Section 64554 of the California Code of Regulations. However if the demand needed for fire protection is included in design criteria, then peak hour demand should not be used in place of the MDD.

**(7)** If a specific project component is not available in the size determined to be eligible, the next larger available size may be used.

**(8)** While the allowable capacity of a project to accommodate a reasonable amount of growth is limited, applicants can include provisions within the design of a project that will facilitate construction in the future. For example, valve arrangements can be designed to accommodate the future installation of additional treatment units or filters.

**(9)** Excessive retention time may result in low flow areas and/or water quality deterioration during normal operating conditions. Facilities should be sized to achieve a balance between hydraulic requirements and water quality maintenance. For example, if the project involves the replacement of water transmission or distribution mains, and the design capacity includes fire protection and an amount for the population growth expected to occur over a twenty year period, flushing devices should be installed in low flow areas and an operational plan should be implemented to routinely flush such areas.