

Appendix 600-H GUIDELINES FOR PREPARING SUB-AREA MASTER PLAN

I. PURPOSE

The purpose of this guideline is to identify specific information to be included in developer Sub-Area Master Plans (SAMPs). This guideline will help develop uniformity and consistency in development projects and will be used to help the Groveland Community Services District (District) assess whether it is or will become deficient in water and/or sewer transmission, storage, pumping or treatment capacity, as well as to assess deficiencies in park, fire, or community building facilities or services. SAMPs are typically required on tract map subdivisions, complex industrial/commercial developments, and other unique high water demands developments. SAMPs will also evaluate the capital costs of alternatives, as well as the long-term cost of the operations and maintenance of these alternatives.

The SAMP for a development shall be completed and approved prior to the developer beginning any environmental documentation, as required by the California Environmental Quality Act (CEQA).

The Engineer of Work retained by the developer of a proposed project shall use the format and information presented in this section as a basis for SAMP development.

If the Engineer of Work desires to deviate from the criteria presented in this section only the District Engineer or General Manager can approve the change.

II. GENERAL

The user of these documents shall be responsible for making reference to and/or utilizing industry standards not otherwise directly referenced within this document. The Engineer of Work may not deviate from the criteria presented in this section without prior written approval of the Agency Engineer.

- A. The District shall approve the Engineer of Work to perform the Sub-Area Master Plan.
- B. The District shall determine the necessity for a SAMP for water, sewer, recycled water, parks and recreation, fire, and community buildings.
- C. Units of measurement to be used in developing the SAMP shall be determined by the District Engineer prior to initiating work on the SAMP.

III. SAMP FORMAT

The following outlines the information required in the chapters and appendices for a SAMP and the format of the information (description, table, figure, appendix).

A. Executive Summary

The Executive Summary shall provide a summary of alternatives for the District to provide water, wastewater, recycled water, parks and recreation, fire, and community buildings. In addition to summarizing the technical issues of each alternative, the developer shall also provide a summary of the capital and long-term operations and maintenance costs for each alternative, as well as how the developer intends to have these costs paid for so that existing District customers are not subsidizing the new development.

B. Section 1: Introduction

The Introduction provides an overview of the proposed development project, including parcel descriptions, maps, development intentions, and the services that the developer wants the District to furnish to the proposed development. The following is an outline of subchapter headings that should be included in this section.

Introduction-description

- a. Project Overview-description
- b. Vicinity Map-figure
- c. Development Information
 1. Total gross acreage of development-description
 2. Dwelling unit density description and table
 3. Land use description (i.e., Single family)-table
 4. Unit/areas grouped by pressure zone-table
 5. Gross acres for each unit/area (Note that sum of gross acres for each unit/area must total gross acreage of development and include a category that covers street/road right of way)-table
 6. Total dwelling units and EDUs for each unit/area-table
 7. Figure of development showing all unit/areas geographically-figure
 8. Pressure Zones
 9. Water-description
 10. Recycled water-description
- d. Drainage Basin (Sewer)
 1. Watershed topography for gravity sewer-description
- e. Parks, Recreation and Open Space
 1. Parks-description and figure
 2. Open Space-description and figure
 3. Recreation facilities-description
- f. Fire Services
 1. Access considerations-description
 2. Fire facilities and special equipment-description
- g. Community Buildings

1. Community Buildings-description

C. Section 2: Planning Criteria

In this section, the developer will describe the planning criteria used to evaluate needs and capacities for the various services desired from the District. These criteria will be used to conduct the facilities alternative analyses in the SAMP.

- a. Planning Criteria-Reference source of data (e.g., District Master Plan)-description
- b. Water Planning Criteria
 1. Residential dwelling unit density and unit water demand factors used for development-description, table
 2. Non-residential water demand factors used for development-description, table
 3. Peaking factors used for development-put peaking factor graph(s) in SAMP-figure(s)
 4. Fire flow rate and duration required from governing fire department-description, fire marshal letter
 5. Static and dynamic pressure criteria-description and table
 6. Velocity criteria-description, table
 7. Pump station criteria, including off- and semi-peak pumping requirements-description
 8. Operational storage reservoir criteria-description
- c. Sewer Planning Criteria
 1. Residential and non-residential sewer flow factors-description, table
 2. Peaking factors used for development-description, peaking factor graph(s) in SAMP-figure(s)
 3. Depth to diameter ratios-description
 4. Slope and velocity criteria-description
 5. Sewer lift station criteria-description
 6. Wetwell volume-description
 7. Force main velocity criteria-description
- d. Recycled Water Planning Criteria
 1. Recycled water demand factors-description
 2. Peaking factors-description
 3. Static and dynamic pressure criteria-description
 4. Velocity criteria-description
 5. Pump station criteria, including off- and semi-peak pumping requirements-description
 6. Operational storage reservoir criteria-description
- e. Fire Service Planning Criteria
 1. Fire Apparatus-description
 2. Response Times-description
- f. Parks and Recreation Planning Criteria
 1. Park use-description
 2. Recreation programs-description
- g. Community Buildings Planning Criteria

1. Community Building venues-description

D. Section 3: Projected Water, Sewer, and Recycled Water Demand and Flow
In this section, the developer will use the criteria developed in Section 2 will evaluate the demand and flow for water, sewer, and recycled water systems for the proposed development.

- a. Water Demand-description and tables
- b. Sewer Flow-description and table
- c. Recycled Water Demand
 1. Permanent
 - o Potential recycled water use areas-description and figure
 - o Projected recycled water demand-description and table
 2. Temporary (grading, dust control, etc. if allowed by the District)-description

E. Section 4: Existing Facilities

In this section, the developer will evaluate the use and capacities of existing District services and infrastructure. The District has Water, Wastewater, Parks and Fire Master Plans available for use in preparing this section.

- a. Existing Water Facilities
 1. Treatment and Supply-description
 2. Transmission and distribution system and pressure zones-show existing pipelines as dashed and pressure zones different color-description and figure
 3. Storage reservoirs-description, table, and figure
 4. Pump stations-description and figure
- b. Existing Sewer Facilities
 1. Treatment-description
 2. Collection system-show existing pipelines as dashed-description and figure
- c. Sewer lift stations and force mains-description and figure
- d. Existing Recycled Water Facilities
 1. Treatment and Supply-description
 2. Transmission and distribution system and pressure zones-show existing pipelines as dashed and pressure zones different color-description and figure
 3. Storage reservoirs-description, table, and figure
 4. Pump stations-description and figure
- e. Existing Fire Service Facilities and Equipment
 1. Fire and Rescue response equipment-description and figure
 2. Fire Department facilities-description and figure
- f. Existing Parks and Recreation Facilities
 1. Park Facilities-description and figure
 2. Recreational opportunities-description
- g. Existing Community Buildings
 1. Community Buildings-description and figure

F. Section 5: Alternative Water Facilities

In this section, the developer will develop and analyze alternative on- and off-site water infrastructure facilities for the proposed development. The District's current Water Master Plan may be used in these analyses. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.

- a. Recommended On-site and Off-site Water System-description and figure
 1. Transmission and Distribution Systems-description and figure
 2. Pump Station Capacity Analysis-description
 3. Storage Capacity Analysis-description
 4. Capital Improvement Program Facilities-description and figure
- b. On- and Off-site Water System Analysis-description
 1. Computer Model-description
 2. Computer Modeling Summary-appendix
- c. For developments that water pump stations, storage, and water treatment facilities need to include:
 1. SCADA Monitoring and Control Systems
 2. Emergency Power
 3. Facility Security
- d. Alternative Project Cost Estimates
 1. Alternative Capital Improvements-description and table
 2. Associated Long-term (Annualized) Operations and Maintenance-description and table

G. Section 6: Alternative Sewer Facilities

In this section, the developer will develop and analyze alternative on- and off-site water infrastructure facilities for the proposed development. The District's current Wastewater Master Plan may be used in these analyses. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.

- a. Alternative On- and Off-site Sewer System-description and figure
 - Distribution System-description and figure
 - Lift Station, Wet well, and Force Main Capacity Analysis-description
 - Treatment Capacity Analysis-description
 - Capital Improvement Program Facilities-description and figure
- b. On- and Off-site Sewer System Analysis-description
 - Computer Model-description
 - Computer Modeling Summary-appendix
- c. For developments that required sewer lift stations and wastewater treatment facilities need to include:
 1. SCADA Monitoring and Control Systems
 2. Groundwater Monitoring
 3. Solid Waste Management and Disposal

- 4. Emergency Power
- 5. Facility Security
- d. Alternative Project Cost Estimates
 - 1. Alternative Capital Improvements-description and table
 - 2. Associated Long-term (Annualized) Operations and Maintenance-description and table

H. Section 7: Alternative Recycled Water Facilities

In this section, the developer will develop and analyze alternative on- and off-site recycled water infrastructure facilities for the proposed development. The District's current Recycled Water Disposal Plan may be used in these analyses. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.

- a. Alternative On- and Off-site Recycled Water System-description and figure
 - 1. Transmission and Distribution Systems-description and figure
 - 2. Pump Station Capacity Analysis-description
 - 3. Storage Capacity Analysis-description
 - 4. Capital Improvement Program Facilities-description and figure
- b. On- and Off-site Recycled Water System Analysis-description
 - 1. Computer Model-description
 - 2. Computer Modeling Summary-appendix
- c. For developments that required recycled water handling (pump stations, disposal facilities, etc.) need to include:
 - 1. SCADA Monitoring and Control Systems
 - 2. Groundwater Monitoring
 - 3. Emergency Power
 - 4. Facility Security
- d. Alternative Project Cost Estimates
 - 1. Alternative Capital Improvements-description and table
 - 2. Associated Long-term (Annualized) Operations and Maintenance-description and table

I. Section 8: Alternative Fire & Rescue Services, Equipment, and Facilities

In this section, the developer will develop and analyze alternative on- and off-site fire service and facilities for the proposed development. The District's current Fire Master Plan may be used in these analyses. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.

- a. On-and Off-Site Fire Service, Equipment, and Facilities-description, figure and table
 - 1. Fire Storage-description and figure
 - 2. Fire Hydrants-description and figure
 - 3. Fire Station-description and figure

- b. Fire Service Analyses
 - 1. Response Times-description, figure, and table
 - 2. Fire Flows-description and table
 - c. Alternative Project Cost Estimates
 - 1. Alternative Capital Improvements-description and table
 - 2. Associated Long-term (Annualized) Operations and Maintenance-description and table
- J. Section 9: Alternative Parks, Recreation Facilities, and Open Space
- In this section, the developer will develop and analyze alternative on- and off-site parks and recreation facilities and open space to be developed as part of the proposed project development. The District's current Parks Master Plan and Land Use Plan may be used in these analyses. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.
- a. On-and Off-Site Parks and Recreation Facilities and Designated Open Space-description, figure and table
 - 1. Parks-description and figure
 - 2. Recreation Venues-description and figure
 - 3. Designated Open Space-description and figure
 - b. Alternative Project Cost Estimates
 - 1. Alternative Capital Improvements-description and table
 - 2. Associated Long-term (Annualized) Operations and Maintenance-description and table
- K. Section 10: Alternative Community Buildings
- In this section, the developer will develop and analyze alternative on- and off-site community buildings to be owned by the District to be constructed as part of the proposed development. The alternatives will also be analyzed for their initial capital costs and their long-term (annualized) operations and maintenance costs. These alternatives will be used in subsequent environmental analyses conducted in compliance with CEQA requirements.
- a. On-and Off-Site Community Buildings-description, figure and table
 - b. Alternative Project Cost Estimates
 - 1. Alternative Capital Improvements-description and table
 - 2. Associated Long-term (Annualized) Operations and Maintenance-description and table
- L. Section 11: Project Phasing
- In this section, the developer will describe the phasing of the project. As part of this discussion, the developer will discuss how the District will be protected if the developer should default on its Development Agreement with the District and leave the project partially completed.
- a. Phasing-Development Phase, Units, Year-description, table, and figure

- b. Phasing-Water Pipelines by Phase-figure
- c. Phasing-Sewer Pipelines by Phase-figure
- d. Phasing-Recycled Water Pipelines by Phase-figure

M. Section 12: Cost and Financing (at District's option)

Using the financial analyses prepared in Sections 5 through 10, the developer will discuss how the project will be funded, as well as guarantees that the project will be completed or restored to its original site conditions.

- a. Cost and Financing-description
- b. Capital Improvement Program-description
- c. CIP Pipelines-Water, sewer, and recycled water CIPs shall have one table each with the following information:
 - 1. CIP number-table
 - 2. Project where pipeline will be constructed-table
 - 3. Project phase-table
 - 4. Street name-table
 - 5. Pipeline size-table
 - 6. Approximate pipeline length, LF-table
 - 7. Unit cost, \$/LF-table
 - 8. Cost of each CIP-table
 - 9. Total cost of all CIP pipelines-table
 - 10. Pressure zone-table
- d. Development Pipelines-Water, sewer, and recycled water shall have one table each with the following information:
 - 1. Unit/area-table
 - 2. Estimated water meters-table
 - 3. Size of pipelines in unit/area-table
 - 4. Approximate pipeline length, LF-table
 - 5. Unit cost, \$/LF-table
 - 6. Cost of pipelines in each unit/area-table
 - 7. Total cost of pipelines-table
 - 8. Pressure zone-table
- e. CIP for Fire, Parks and Community Buildings
- f. Long-term Operations and Maintenance Costs for Water, Sewer, Recycled Water, Fire, Parks and Recreation, and Community Buildings

N. Bibliography-Include all referenced material

O. Appendices

IV. SAMP REVIEW PROCESS

A. Water, Sewer, Fire, Parks and Recreation, and Community Buildings SAMPs

1. A water, sewer, fire, parks and recreation, and community buildings SAMP for the proposed development shall be submitted to the District for review prior to improvement plan preparation as determined by the District.
2. Correction comments will be indicated on the SAMP and returned to the Engineer of Work. Depending on the complexity of the development, more than one submittal may be necessary.
3. The SAMP will be reviewed by the District, taking into account the following:
 - a. Existing pipeline locations, size and capacity
 - b. The proposed points of connection and system
 - c. The estimated water demands and/or sewer flow calculated
 - d. Fire flow requirements (flow rate, duration, hydrant spacing, etc)
 - e. District's Master Plans
 - f. District's planning criteria and standards
 - g. Water quality maintenance
 - h. Size of system and number of lots to be served
 - i. Fire Response Goals
 - j. Parks and Recreation Goals
 - k. Community Building needs
4. Typically, SAMP preparation should occur prior to preparing the required CEQA documentation. After CEQA requirements have been satisfied, the developer will file a tentative map with the county for the development. At this point, if the proposed development is to be annexed into the District, then the developer and District will enter into an Annexation Agreement. If the proposed development is within the District's service area, then the developer and District will enter into a Development Agreement based on the SAMP and county Conditions of Approval for the development.

V. REFERENCE

- A. SHOULD THE READER HAVE ANY SUGGESTIONS OR QUESTIONS CONCERNING THE MATERIAL IN THIS GUIDELINE, PLEASE CONTACT THE DISTRICT ENGINEER.
- B. THE PUBLICATIONS LISTED BELOW FORM A PART OF THIS SECTION TO THE EXTENT REFERENCED AND ARE REFERRED TO IN THE TEXT BY THE BASIC DESIGNATION ONLY. REFERENCE SHALL BE MADE TO THE LATEST EDITION OF SAID PUBLICATIONS UNLESS OTHERWISE CALLED FOR. THE FOLLOWING LIST OF PUBLICATIONS, AS DIRECTLY REFERENCED WITHIN THE BODY OF THIS DOCUMENT, HAS BEEN PROVIDED FOR THE USER'S CONVENIENCE. IT IS THE RESPONSIBILITY OF THE USER OF THESE DOCUMENTS TO MAKE REFERENCE TO AND/OR

UTILIZE INDUSTRY STANDARDS NOT OTHERWISE DIRECTLY REFERENCED WITHIN THIS DOCUMENT.

1. Water Master Plan
2. Wastewater Master Plan
3. Parks Master Plan
4. Fire Master Plan
5. District Land Use Plan
6. Section 600 of the District's Operational Policies and Procedures Manual
7. Template for Annexation Agreement
8. Template for Development Agreement