ALBERT A. WEBB ASSOCIATES

2020 Urban Water Management Plan

Proposal for Professional Services

Prepared for:

Crestline Village Water District

January 15, 2021

ALBERT A. WEBB ASSOCIATES

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OFFICE OF THE DISTRICT ENGINEER

Proposal 014382

January 15, 2021

Mr. Jordan Dietz
General Manager
CRESTLINE VILLAGE WATER DISTRICT
777 Cottonwood
Crestline, California 92325

RE: Proposal for 2020 Urban Water Management Plan

Dear Mr. Dietz:

Pursuant to your request, we have prepared the enclosed proposal for the preparation of the District's 2020 Urban Water Management Plan (UWMP) in accordance with California Water Code. The attached proposal is comprised of the following sections:

1. Project Understanding
2. Scope of Work
3. Project Team
4. Manpower & Fee Estimate
5. Project Schedule

Section 5 provides the project schedule, which is designed around submittal to the state by July 1, 2021, including public noticing, at least one public hearing, and adoption by the Board of Directors.

The California Water Code has had many changes as it relates to the UWMP, including additional effort as compared to the 2015 UWMP cycle into describing resilience during long-term drought and water shortages, and the future effects of climate change on water demands and the availability of each supply source. As detailed in Section 4, based upon the project's Scope of Work, our services budget is as follows:

TASK		TOTAL ESTIMATED SERVICES BUDGET
1.	Project Management, Kickoff, Presentations	$13,800
2.	Data Collection	$9,000
3.	Service Area Description	$8,800
4.	Water Demand Documentation	$8,700
5.	Confirm 20 x 2020 Progress	$3,900
6.	Water Supply Documentation	$9,300
7.	Water Supply Reliability Assessment & Drought Risk Assessment	$12,700
8.	Water Shortage Contingency Plan	$13,000
9.	Demand Management Measures	$5,500
10.	Draft, Final Draft, Final Plan, & Errata	$17,000
11.	Reimbursable expenses	$200
	Total Services =	$77,700

This budget is based on the Draft 2020 Guidebook currently available from DWR. Should the Final Guidebook have significant additional effort, then this scope and budget would require revision. We look forward to working with the District again. Should you have any questions or require additional information, please contact our office.

Sincerely

ALBERT A. WEBB ASSOCIATES

Autumn DeWoody
Senior Environmental Analyst

Sam I. Gershon, RCE
Senior Vice President

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SECTION 1 - PROJECT UNDERSTANDING

OVERVIEW

The Urban Water Management Plan (UWMP) is an important evaluation of Crestline Village Water District's (CVWD or "District") overall effort toward sustainable water supply. Prepared on a regular five-year schedule, it provides useful information to the State and public about water suppliers and their water management programs and provides a framework for water planning to minimize the negative effects of potential water shortages.

PROJECT UNDERSTANDING

WEBB understands the District is required by the California Water Code (CWC) to prepare an accurate and informative UWMP that will evaluate water supply sustainability, assess means to maintain reliability, and to communicate with the community. The UWMP should reflect the District and be a one-stop-shop for useful information for the State, District Staff and the public. WEBB has prepared the District's UWMP in 1995, 2000, 2010, and 2015; therefore, we realize the importance of a collaborative working relationship with District staff, and to prepare a report reflective of the District size and scope of its system. We have found that the UWMP requirements have expanded since the 2015 cycle. We understand that in order for the District to be eligible for State grants or loans, the UWMP must be submitted by July 1, 2021. DWR does accept late submittals, but the District would be ineligible for State grants and loans until then. DWR will review and comment on the UWMP and require an errata, if needed.

APPROACH

Our approach to UWMPs provides compliance with the CWC and supports the District's future overall water management. WEBB intends to follow systematic technical tasks that follow the *2020 UWMP Guidebook for Urban Water Suppliers*, thus providing a process that can be easily followed and supports compliance.

DWR has provided guidance materials at workshops, of which WEBB attended on March 10, 2020 and September 16, 2020. WEBB has attended all of the webinars conducted by DWR on the UWMP requirements thus far and is registered to attend the remainder scheduled for the coming months. Because WEBB prepared the District's 2015 UWMP, we intend to use as much of that information as possible to avoid duplication of effort.

The drought of 2012-2017 brought about many changes to the CWC. Specifically, for the 2020 UWMP cycle the state is looking at long-term reliability and resilience to drought and climate change. The following are key items DWR has targeted for inclusion in the 2020 UWMP:

- Water Shortage Contingency Plan with prescriptive elements;
- 5-Year Drought Risk Assessment;
- Lay person's description of reliability;
- Required long-term forecast for each water supply source, including climate change effects;
- Projected land use changes in demand forecasting;
- Seismic risk assessment and mitigation plan;[1]
- Required energy use analysis;
- Water savings from codes, standards, or ordinances is now required;
- Include 5 prior years of system water loss audits; and
- Groundwater Sustainability Plans, when applicable.

The Water Shortage Contingency Plan shall be a part of the UWMP but written like a standalone document that is adopted and periodically updated separate from the UWMP. Similarly, it is recommended the Drought Risk Assessment is written like a standalone document for revisions to be made in the future, as needed.

The Final 2020 UWMP Guidebook is not yet available; therefore, this scope and budget is based on the Draft Guidebook. Should the Final Guidebook have significantly more effort than the Draft Guidebook, then our scope and budget would require revisions. Our review of the Draft Guidebook suggests that the changes in the CWC will result in increased effort on the part of the water supplier and the plan preparer as compared to the 2015 cycle.

[1] At this time, we believe this requirement can be met by submitting the 2017 *San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan*, in addition to a general discussion about seismic risk and the District's infrastructure.

SECTION 2 - SCOPE OF WORK

GENERAL

WEBB will perform the following Scope of Services for preparation of the 2020 UWMP. WEBB's scope and fee is based upon the project schedule in Section 5.

Task 1: Plan Coordination

This task includes project management, a kickoff meeting, agency collaboration, public outreach, close coordination with District staff, one public presentation, and a public hearing for consideration of adoption of the UWMP and Water Shortage Contingency Plan.

Task 1.1: Kickoff Meeting

The Project will begin with a kickoff meeting to identify and acquire needed information, gain insight from District staff, and discuss potential issues. The kickoff meeting should include key staff from the District, in particular the engineering and finance staff. It will include identification of several components, such as team member roles, affected agencies and interested parties to be included in the process. We will confirm a schedule, discuss methods to obtain data, and review the technical approach. A data request will be circulated prior to the kickoff meeting.[2]

Task 1.2: Agency Coordination and Public Outreach

When a supplier shares a common supply source, the CWC requires communication and collaboration with the other users. Therefore, the 2020 UWMP will include input from local and regional agencies. We recommend the following to receive notices and solicited for comments and/or data on the UWMP as appropriate:

- Crestline Lake Arrowhead Water Agency and its member retail water agencies;
- Lake Arrowhead Community Services District;
- County of San Bernardino Planning Department, U.S. Department of Agriculture, U.S. Forest Service, and California Department of Parks and Recreation; and
- Crestline Sanitation District.

[2] WEBB will participate in these meetings and public presentations via teleconferencing.

WEBB understands that the District has a list of interested parties and requirements for notifications. We will assist in updating the list and provide a timeline for notifications with the understanding that District staff will manage the notifications. We assume the District will update its Web site with relevant notices, a copy of the draft UWMP and ultimately the final UWMP.

Task 1.3: Presentations and Public Hearing

WEBB has budgeted to prepare a brief presentation of the Final Draft to the District Board and at the public hearing for consideration of adoption of the Final UWMP by the District Board. [3]

The public hearing will need to be noticed in the local newspaper in accordance with Section 6066 of the Government Code. We anticipate that District staff will handle the scheduling, announcements, public notifications (and associated fees), but WEBB can assist as needed.

Task 1.4: Project Management

This task includes regular communication with staff, no less than once every 3 weeks, and a monthly update of the project budget as a line item on our invoice.

Task 2: Data Collection

As District Engineer to the District, WEBB maintains an extensive library of information on the District and surrounding agencies. However, the most recent data will be needed to have a complete understanding of CY 2020 water use and supply. A data request will be prepared and circulated prior to the kickoff meeting; this will include CY 2020 water consumption and production data. Data collection will be an ongoing process while preparing the plan.

Task 3: Service Area Description

Task 3 corresponds to Chapter 3 of the Draft 2020 UWMP Guidebook. WEBB will update the description of the District's service area based on input from the District, as well as updated demographics from government sources. CWC now requires several new elements as part of the system description including, socioeconomic information, coordination with the land use agency for the service area, as well as consideration of climate change conditions. In addition, it will include a discussion of the water system, recent water system improvements, and major potential developments.

[3] WEBB will participate in these meetings and public presentations via teleconferencing.

Task 3.1: Population

Population data are fundamental to water demand estimates. DWR requires that the method used by the District to estimate population and projections meets their minimum standards. WEBB will first determine whether the population estimates the District reports to the State meet DWR standards; in the event they do not, WEBB will assist the District in developing another method that meets is acceptable to DWR. Population data will be presented in five-year increments from 2020 to 2045.

Task 4: Water Demand Documentation

Task 4 corresponds to Chapter 4 of the Guidebook (Water Use).

Task 4.1: Recorded and Current Water Demand

WEBB recommends using DWR's Planning Tool and DWR's climate change form to determine effects on water use. WEBB will work with the District to complete the climate change form, analyze the results, and collaborate on adaptation strategies. In addition to Chapter 4 (Demand) this climate change analysis will also be used in Chapters 6 (Supply), and 7 (Reliability). Water use by source for the last five years and projected water use by customer type and by source will be reported in five-year increments from 2020 to 2045.

Task 4.2: Future Water Demand

Future water demands will be evaluated in five-year increments to 2045. These estimates will be prepared to be consistent with past methodologies whenever possible; methodologies or values will be explained, including for example, the effect of climate change, mandatory water use restrictions and the potential impact of listing those restrictions in the future.

Task 5: Confirm Progress on 20% Use Reduction by 2020

With the adoption of the Water Conservation Act of 2009, also known as Senate Bill X7-7 (SB X7-7), the State is required to set a goal of reducing urban water use by 20 percent by the year 2020. This task will include completing the DWR tables that confirm District progress over the last five years to achieving the 2020 target water use determined in the 2015 UWMP. We have assumed that the District service area has not changed sufficiently since 2015 to warrant re-calculation of baseline or targets.

Task 6: Water Supply Documentation

WEBB will update the District's description of its existing water supply portfolio and management methods including three aspects of each supply source:

maximum allotment based on rights, entitlements, or contracts; typical production rates; and maximum production rates based on pumping capacities. Other supply limitations including water quality issues will be described for each source. Clarifying these details for each source is an additional step and additional effort as compared to the 2015 UWMP. This effort will translate to data that the District can use for future planning efforts. Opportunities for future projects like recycled water, transfers, exchanges, or desalinated supply would also be described. Projections of reasonably available water supplies by source will be projected in five-year periods from 2020-2045. Supply reliability will include description of way the District will maximize resources and minimize the need for imported water.

Task 6.1: Groundwater

The UWMP is required to have specific considerations for groundwater supplies. As required by CWC 10631(b)(4)(B), each groundwater basin utilized by the District will be described including location, amount, and sufficiency of groundwater pumped for the past five years. The amount projected to be pumped by the District will also be estimated. Although the District uses horizontal wells in fractured bedrock, which are not within a basin as defined by DWR Bulleting 118, a discussion is still required.

Task 6.2: Energy Use

Water supply systems rely on significant amounts of energy to move water from source to treatment to customer. A new requirement for 2020 will be describing to the extent possible the energy used (that is within the District's operational control) to extract, divert, convey, treat, distribute, or store the District's water supplies. WEBB will work with the District Staff to complete a table created by DWR in the Guidebook to meet this requirement.

Task 7: Water Supply Reliability and Drought Risk Assessment

The state has placed keen interest in supply reliability and resiliency during long-term drought and water shortage conditions. Chapter 7 of the 2020 UWMP will contain an assessment of water service reliability, as well as a five-year Drought Risk Assessment (DRA). The reliability assessment will include current constraints on the District's water supply, such as inconsistent availability or water quality issues. Known future constraints will then be discussed, including planned actions or strategies to address noted vulnerabilities. Actions could include plans to supplement or replace water sources with alternative sources or demand management strategies to the

extent practicable. The quality of the source water and how it may affect water management strategies will be described.

Task 7.1: Drought Risk Assessment

DWR recommends the DRA to be written like a standalone section that can be modified or updated more frequently than every five years with the UWMP. The DRA will be based on the five driest consecutive years on record. It is also required that the analysis include plausible changes in climate (i.e., recorded drought hydrology), regulations, and other locally applicable criteria. The data, methods, and basis for one or more supply shortage conditions is required. The DRA will be part of the information considered in developing the DMMs (Chapter 9 of the 2020 UWMP) and future water supply projects (Chapter 6 – Supply). The DRA will include a determination of the reliability of each source of supply under a variety of water shortage conditions.

Task 8: Water Shortage Contingency Plan

Chapter 8 of the UWMP will contain the District's Water Shortage Contingency Plan (WSCP). The WSCP is a detailed plan for how the District intends to act in the case of an actual water shortage condition. The WSCP was an analysis in the 2015 UWMP, but for 2020, the state requires that it be written like a standalone document and amended separately from the UWMP as needed in the future. The WSCP must also be adopted by the District Board of Directors when it adopts the UWMP. Fortunately, many of the required elements of the 2020 WSCP were in the 2015 UWMP or part of standard operations and maintenance protocols of water suppliers, therefore WEBB will work with the District to describe how they managed the last big drought event. The WSCP will have the following 12 sections pursuant to CWC Section 10632, including the effects on revenue and expenses during a water shortage, and how the District would mitigate those effects.

8.1. Water Supply Reliability Analysis
8.2. Annual Water Supply and Demand Assessment Procedures
8.3. Six Standard Water Shortage Stages
8.4. Shortage Response Actions
8.5. Communication Protocols
8.6. Compliance and Enforcement
8.7. Legal Authorities
8.8. Financial Consequences of WSCP
8.9. Monitoring and Reporting
8.10. WSCP Refinement Procedures

8.11. Special Water Feature Distinction
8.12. Plan Adoption, Submittal, and Availability

Task 9: Demand Management Measures

Chapter 9 of the 2020 UWMP will describe the programs (and future programs) implemented by the District to meet its urban water use reduction targets. No changes to this requirement were made since 2015. The following must be specifically addressed: water waste prevention ordinances, metering, conservation pricing, public education/outreach, programs to assess and manage distribution system real loss, water conservation program coordination and staffing support, and any other measures that have an impact on water use as measured in gallons per capita per day, including innovative measures. WEBB will work closely with the District's Water Conservation Coordinator (or equivalent) to accomplish this task.

Task 10: Administrative Draft, Draft and Final Plans

WEBB will prepare a report to satisfy DWR requirements and to provide a plan that supports the District in their cooperative planning and management of water resources. We intend to provide a report that is complete, succinct, readable, and accessible to District staff, policy makers, and interested stakeholders. Specifically, a "layperson's description" will be added to the beginning of each chapter to meet the new CWC requirement. The plan will basically follow the tasks outlined herein, be appropriately illustrated, and include all required tables. Detailed analyses and relevant documents will be provided in the appendices.

Task 10.1: Administrative Draft

WEBB will prepare and submit an electronic Administrative Draft for staff review. A review time of approximately one week and comments provided in one location is assumed. Any comments incorporated from this review will produce the draft UWMP presented to the Board members in a public presentation (see Task 1.3).

Task 10.2: Final Draft UWMP

Any additional comments received from the Board or public during the Board presentation will be incorporated into a Final UWMP to be uploaded to DWR.

Task 10.3: Final UWMP

WEBB will compile any further edits into the Final UWMP. The document will be delivered electronically and two hardcopies for District use. No later than 30

days after adoption, WEBB will assist with submittal of the plan to DWR, the State Library, and San Bernardino County.

Task 10.4: Errata

It is not uncommon for errata to be prepared for the UWMP to address comments after DWR's review. In 2015, comments were received from DWR in October. WEBB will respond to and prepare an UWMP Errata, if necessary. We assume the errata will be posted publicly wherever the Final UWMP is located, and that a new UWMP document will not be created.

ADDITIONAL SERVICES

Services which are not specifically identified herein as services to be performed by Webb Associates are considered Additional Services of the purposes of this Proposal. The District may request that Webb Associates perform services which are additional services. Webb Associates will perform such additional services upon execution of an amendment to this Agreement setting forth the scope, schedule and fee for such additional services.

EXCLUSIONS

Any work relating to the following is specifically excluded for the services proposed herein, and, if required, must be contracted for under a separate contract or as an addendum to this contract:

1. Legal review and input of document
2. The District is to pay for reproduction of documents.
3. Filing and posting fees (County Clerk, newspaper, etc.) are not included in this scope and budget and are to be paid directly by the District.
4. Any other work tasks not specifically indicated in the Scope of Services.

SECTION 3 - PROJECT TEAM

The Webb Associates project team is anticipated to be as follows:

NAME	PROJECT ROLE
Sam I. Gershon, RCE	Principal In Charge
Autumn DeWoody	Project Manager
Eliza Laws	Technical Expert on Climate Change and Energy
Chandler Draschlin	Engineering Data Analyst and GIS
Monica Tobias	Data Analyst
Guillermo Gonzalez, PLA	Exhibits
Annette Trussell	Project Coordinator
Noemi Avila	Analyst, Document Assembly and Clerical Support

SECTION 4 - MANPOWER AND FEE ESTIMATE

Task	Task Description	Principal II - $265	Associate I - $161	Senior I - $197	Assistant III - $119	Associate II - $171	Assistant I - $87	Associate I - $161	Assistant V - $150	Total Hours	
Task 1	Plan Coordination, kickoff, agency coord., presentations, PM	20	30	5	5	5	5	5		**75**	**$13,800**
Task 2	Data Collection	5	20	8	10	8	4			**55**	**$ 9,000**
Task 3	Service Area Description, population	6	20	8	5	5	4		4	**52**	**$ 8,800**
Task 4	Water Demand Documentation	6	20	5	8	8			4	**51**	**$ 8,700**
Task 5	SBX7-7	2	10		8	5				**25**	**$ 3,900**
Task 6	Water Supply Documentation	10	20	5	8	6			3	**52**	**$ 9,300**
Task 7	Water Supply Reliability and Drought Risk Assessment	10	20	15	15	10	4			**74**	**$12,700**
Task 8	Water Shortage Contingency Plan	10	20	15	15	10	4		2	**76**	**$13,000**
Task 9	Demand Management Measures	2	20			10				**32**	**$ 5,500**
Task 10	Draft, Final, Errata	15	40	15	15	15	20	5	10	**135**	**$17,000**
Expenses	Mileage										**$ 200**
	Total	**86**	**220**	**76**	**89**	**82**	**41**	**10**	**23**	**627**	**$77,700**

We propose to provide the services outlined in Section 2 for a total not to exceed **$77,700 on a time and materials (T&M) basis.**

Unforeseen additional work activities may arise as the project progresses. As such, the District may wish to allocate an additional 10-15 percent of the total budget for internal budget allocation purposes only.

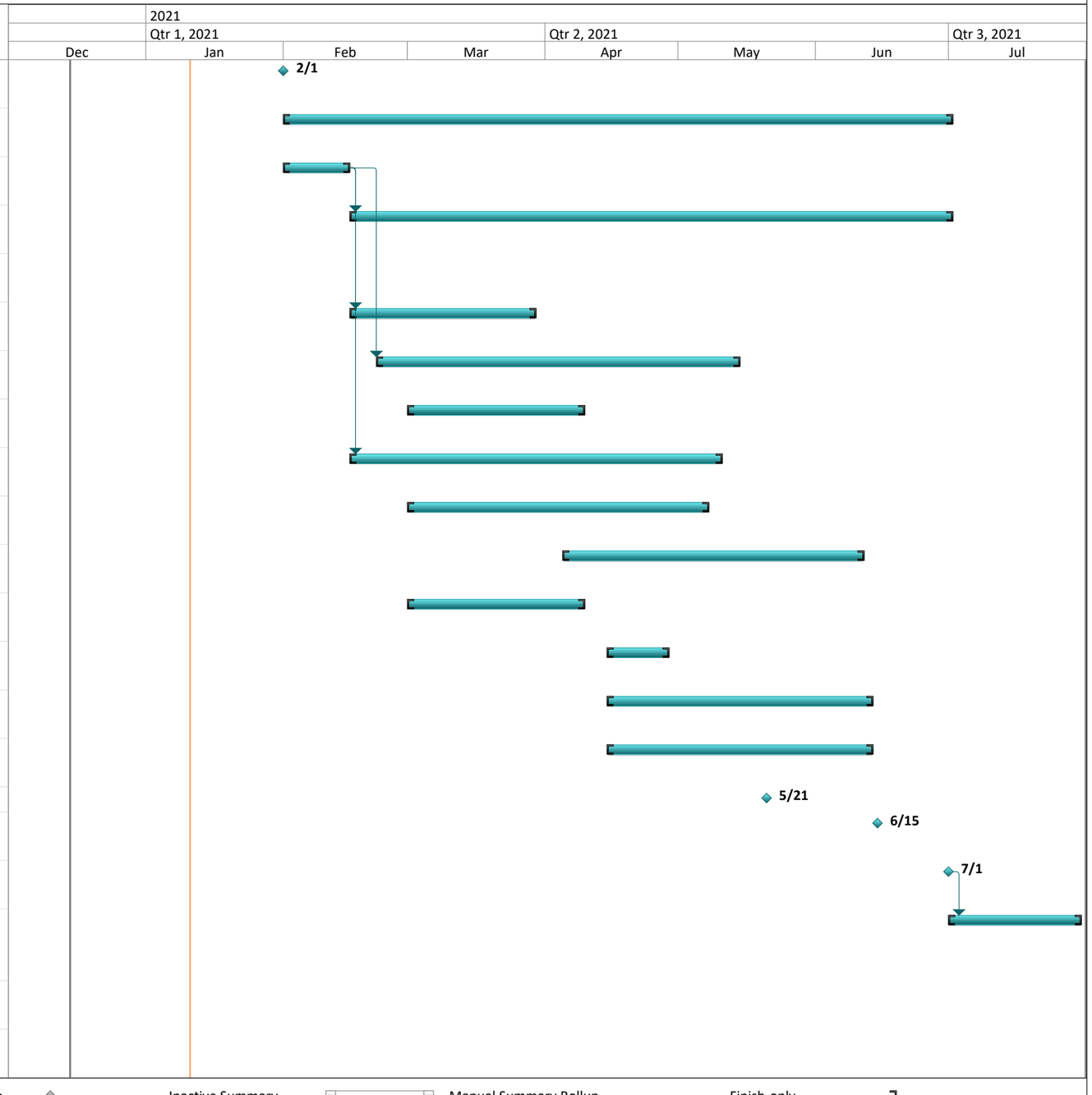
The amounts indicated for each individual project task are estimated budget amounts; and accordingly, the actual amounts may be more or less than shown. However, the overall total for services as described in the Scope of work will not be exceeded without written authorization from the District.

SECTION 5 - PROJECT SCHEDULE

- WEBB proposes a project start date of February 1, 2021.
- WEBB and the District will finalize a schedule at the kickoff meeting.
- WEBB plans to provide an administrative draft to the District Staff no later than Friday, May 21, 2021, which is approximately 80 business days from February 1.
- WEBB has assumed the public hearing and report approval will be done at the June 15, 2021 Board of Directors meeting.
- Unless directed otherwise, WEBB anticipates an aggressive schedule to meet the State deadline of July 1, 2021. This includes regular meetings wherein data will be exchanged. We anticipate staff reviews and data to be provided in less than one weeks' time.

CRESTLINE VILLAGE WATER DISTRICT
2020 URBAN WATER MANAGEMENT PLAN

ID	Task Name	Duration	Start	Finish	Predecessors
1	Notice to Proceed	0 days	Mon 2/1/21	Mon 2/1/21	
2	Project Administration and Project Meetings	109 days	Mon 2/1/21	Thu 7/1/21	
3	Kickoff Meeting	11 days	Mon 2/1/21	Mon 2/15/21	
4	Data Collection, Data Review, PM, presentations	98 days	Tue 2/16/21	Thu 7/1/21	3
5	Bi-Weekly Meetings (Every 2 Weeks)				
6	System Description	30 days	Tue 2/16/21	Mon 3/29/21	3
7	Water Use Characterization	60 days	Mon 2/22/21	Fri 5/14/21	3
8	SBX7-7 Baseline and Targets	30 days	Mon 3/1/21	Fri 4/9/21	
9	Water Supply Characterization	60 days	Tue 2/16/21	Mon 5/10/21	3
10	Water Service Reliability and Drought Risk Assessment	50 days	Mon 3/1/21	Fri 5/7/21	
11	Water Shortage Contingency Plan	50 days	Mon 4/5/21	Fri 6/11/21	
12	Demand Management Measures	30 days	Mon 3/1/21	Fri 4/9/21	
13	Prepare Public Notices	10 days	Thu 4/15/21	Wed 4/28/21	
14	Within 60-Days Prior to Public Hearing, Send Notice to County	60 edays	Thu 4/15/21	Mon 6/14/21	
15	Place Public Notice in Local Newspaper (at least once a week for two successive weeks)	60 edays	Thu 4/15/21	Mon 6/14/21	
16	Draft to District Staff	0 days	**Fri 5/21/21**	Fri 5/21/21	
17	Board of Directors Public Hearing and Adoption of UWMPand Water Shortage Contingency Plan	0 days	Tue 6/15/21	Tue 6/15/21	
18	UWMP Due to DWR by July 1, 2021	0 days	Thu 7/1/21	Thu 7/1/21	
19	Within 30 Days of Adoption, UWMP Must be Made Publicly Available and Sent to California State Library and County of Riverside	30 edays	Thu 7/1/21	Sat 7/31/21	18
20	As Directed by DWR, Prepare and Submit UWMP Errata: date TBD				
21					



Project: 3. Schedule
Date: Mon 1/11/21

Task — Summary — External Milestone — Inactive Summary — Manual Summary Rollup — Finish-only
Split — Project Summary — Inactive Task — Manual Task — Manual Summary — Deadline
Milestone — External Tasks — Inactive Milestone — Duration-only — Start-only — Progress