



# Sample Municipal Drought Management Plan Draft Scope of Work

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# SCOPE OF WORK

## Phase A: Development of Sample Municipal Drought Management Plan

AMEC recently developed a Municipal Drought Management Plan Guidance Document (Guidance Document) for municipal water providers and local governments to use as a reference when developing Drought Management Plans. As a follow-up to the Guidance Document, this scope of work involves the development of a sample Municipal Drought Management Plan (Sample Plan). This Sample Plan will be a complimentary resource to the Guidance Document that closely corresponds with the template and recommendations outlined in the Guidance Document.

The Sample Plan will be developed for an example fictitious municipal water provider (“example provider”) that exhibits the following traits:

- The size of the example provider will be within the “medium range” supplying water to a residential service area population of approximately 40,000, plus significant amounts of commercial and municipal parks end uses.
- The location of the example provider will be described under neutral pretences. In other words, the example provider will not be located within a specific basin or region of the State.
- The example provider’s water supply system will be representative of the water supply systems many municipalities have throughout the State (i.e. snowmelt-driven surface water hydrology, direct flow and storage rights, surface water storage, groundwater wells and augmentation supplies, etc).
- Challenges faced by the example provider will be similar to the typical challenges many municipalities in the State are confronted with (i.e. anticipated growth, limited funds, uncertainties related to drought cycles and climate change, etc).
- The example provider will have planning tools of moderate “sophistication” for forecasting the availability of its water supplies on an annual basis as well as for estimating the firm yield of its water supply system.

Attachment A of this Scope of Work specifies the components to be included in the Sample Plan according to the Drought Management Template provided in the Guidance Document. All items specified as essential in the Template will be incorporated into the Sample Plan in addition to the majority of beneficial items. Many of the public items will also be incorporated with the objective of providing text that water providers can directly copy and paste into their Plans with minor modifications. Some items will intentionally not be incorporated to demonstrate that CWCB is not requiring water providers to include every component listed in the Template.

Where applicable figures and tables modeled after the Guidance Document worksheets will be included in the Sample Plan as a means to present consolidated information.

### Phase A Assumptions

- Major changes to the components of the Sample Plan specified in Attachment A will not be made following the finalization of this Scope of Work.
- Details related to the example provider’s water supply planning efforts will not be included in this Sample Plan but rather referred to in the example provider’s Raw Water Master Plan. This includes the example provider’s water supply forecasting tool.

### Phase A Deliverables

- Electronic First Draft of Sample Plan for review by CWCB

## Phase B: Additional Materials

The items listed below will enhance the overall utility of the Sample Plan.

- *Introduction to the Sample Plan* – This text will disclose the purpose and features of the Sample Plan. The text could be posted on CWCB's website introducing the Sample Plan and/or included as a preface to the Sample Plan document.
- *Completed Guidance Document Template* – Attachment A of this Scope of Work specifies the specific components recommended in the Guidance Document that are to be included in the Sample Plan. This information will be useful to other water providers in that it demonstrates how the Guidance Document Template can be used to develop a plan.
- *Completed Guidance Document Worksheets* – The Guidance Document provides eleven worksheets which while not essential to the development of a Drought Management Plan, are useful for developing and consolidating data for specific components of municipal drought management plans. These worksheets will be completed according to the characteristics of the fictitious water provider in the Sample Plan. Components of the worksheets will also be incorporated into the main body of the Sample Plan as tables.
- *Sample Plan Summary Table* – CWCB would like to have a streamlined process for acquiring drought planning related information from water providers. As water providers submit their Drought Management Plans to CWCB, it would be beneficial for the major elements of each Plan to be summarized in a table. In order to assist CWCB with this process, a table summarizing the major elements of the Sample Plan will be developed. If CWCB chooses to require a summary table along with submitted Drought Management Plans, this table can serve as an example of what CWCB is expecting from each provider.

### Phase B Assumptions

- The introduction to the Sample Plan will be one to two pages

### Phase B Deliverables

- Introduction to the Sample Plan
- Completed Guidance Document Template
- Completed Guidance Document Worksheets
- Sample Plan Summary Table

## Phase C: Stakeholder and Review Processes

This phase includes document review and revision as well as a stakeholder process similar to the process used to develop the Drought Management Plan Guidance Document. The stakeholder committee will include up to nine water providers both on the east and western slopes. Invitations to the workshop will be sent to the same water providers that participated in the Municipal Drought Management Plan Guidance Document workshop. The stakeholders will have the opportunity to review the Draft Sample Plan and additional materials (outlined in Phase B) prior to the workshop. The workshop will focus on receiving feedback on each of these materials. Stakeholder comments will be incorporated into the Final Draft.

### Phase C Assumptions

It is assumed that AMEC will conduct the following:

- Invite stakeholders for the Sample Drought Plan Workshop.
- Develop second Draft of the Sample Plan and associated Phase B materials incorporating a single set of CWCB comments.
- Distribute Second Draft Sample Plan and associated Phase B materials to workshop participants for review in advance of the workshop.
- Facilitate stakeholder workshop to receive general feedback on the Sample Plan.
- Receive detailed comments from up nine stakeholders on the Sample Plan in track changes WORD format.
- Incorporate stakeholders' comments into a third draft of the Sample Plan for final review by CWCB
- Incorporate CWCB's comments into the final draft of the Sample Plan

### **Phase C Deliverables**

- Invitation letter to water providers for the Sample Drought Plan Workshop
- Electronic Second Draft of the Sample Plan and Phase B materials incorporating CWCB comments
- PowerPoint presentation for the workshop (if proven to be beneficial)
- Electronic Third Draft of the Sample Plan and Phase B materials incorporating stakeholder comments
- Electronic Final Draft of the Sample Plan and Phase B materials incorporating CWCB comments

### **Phase D: Project Administration**

This phase includes project administration activities. All invoices and progress reports submitted to CWCB will be compatible with CWCB's accounting and billing requirements.

### **Phase D Deliverables**

- Monthly invoices with brief progress reports summarizing the monthly work performed for each project phase.

## **SCHEDULE**

This Scope of Work is to be completed by the end of June 2011 assuming a start date no later than the first week of January. Key milestones and proposed target deadlines are listed below.

- |   |                     |
|---|---------------------|
| ■ Invitation to the Workshop                                  | First week of April |
| ■ Complete initial First Draft of Sample Plan for CWCB review | First week of April |
| ■ Second Draft of Sample Plan incorporating CWCB comments     | Third week of April |
| ■ Distribution of Second Draft to stakeholders                | Third week of April |
| ■ Stakeholder Workshop  | First week of May   |
| ■ Receive detailed comments from stakeholders                 | Second week of May  |
| ■ Third Draft of Sample Plan for final CWCB Review            | Fourth week of May  |
| ■ Final Draft of Sample Plan                                  | Second week of June |

# COST ESTIMATE

The proposed time and cost estimate for this Scope of Work is provided in Table 1 below.

**Table 1: Proposed Time and Cost Estimate**

STAFFING HOURLY RATE	Principal Engineer \$189	Senior Engineer \$145	Project Engineer I \$121	Technical Writer \$72	Clerical II \$63	Direct Expenses	Total
<b>Phase A: Sample Municipal Drought Management Plan</b>							
Introduction	0	0	2	0	0	\$0	\$242
1.0 Stakeholders, Objectives, and Principles	0	0	6	0	0	\$0	\$726
2.0 Historical Drought and Impact Assessment	0	0	8	0	0	\$0	\$968
3.0 Drought Vulnerability Assessment	1	0	6	0	0	\$0	\$915
4.0 Drought Mitigation and Response Strategies	0	0	8	0	0	\$0	\$968
5.0 Drought Stages, Trigger Points, and Response Targets	1	0	4	0	0	\$0	\$673
6.0 Staged Drought Response Program	0	0	4	0	0	\$0	\$484
7.0 Implementation and Monitoring	0	0	16	0	0	\$0	\$1,936
8.0 Formal Plan Approval and Updates	0	0	6	0	0	\$0	\$726
First Draft of Sample Plan	4	4	18	12	3	\$0	\$4,567
subtotal	6	4	78	12	3	\$0	\$12,205
<b>Phase B: Additional Materials</b>							
Introduction to the Sample Plan	0	1	4	0	0	\$0	\$629
Completed Guidance Document Template (Attachment A)	0	0	1	0	0	\$0	\$121
Completed Guidance Document Worksheets	0	1	8	1	0	\$0	\$1,185
Sample Plan Summary Table	0	1	4	1	0	\$0	\$701
subtotal	0	3	17	2	0	\$0	\$2,636
<b>Phase C: Stakeholder and Review Processes</b>							
Correspondence for the stakeholder workshop	0	1	5	0	0	\$0	\$750
Second Draft of Sample Plan incorporating CWCB comments	0	0	8	2	0	\$0	\$1,112
Materials and facilitation of the stakeholder workshop	0	6	18	2	0	\$200	\$3,392
Third Draft of Sample Plan incorporating stakeholder comments	0	1	12	2	0	\$0	\$1,741
Final Draft of Sample Plan incorporating CWCB comments	0	0	8	2	0	\$0	\$1,112
subtotal	0	8	51	8	0	\$200	\$8,107
<b>Phase D: Project Administration</b>							
Monthly invoices and status reports	0	0	12	0	5	\$300	\$2,052
Phase Total	0	0	12	0	5	\$300	\$2,052
<b>Total Hours</b>	<b>6</b>	<b>15</b>	<b>158</b>	<b>22</b>	<b>8</b>		<b>209</b>
<b>Total Cost w/ Phase D Stakeholder Review Process</b>	<b>\$1,134</b>	<b>\$2,175</b>	<b>\$19,118</b>	<b>\$1,584</b>	<b>\$489</b>	<b>\$500</b>	<b>\$25,000</b>