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# SSO 700 Integrated Watershed Action Plan Progress Report No. 15 April 2016

PREPARED FOR: Metropolitan Sewer District of Greater Cincinnati  
PREPARED BY: Frank Duran  
DATE: May 20, 2016  
PROJECT NUMBER: MSDGC: 11140010  
CH2M: 498759

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**Purpose:** The purpose of this report is to document the progress of the SSO 700 Integrated Watershed Action Plan (IWAP) project from **March 26, 2016** through **April 29, 2016**. For each task, a summary of work performed during the reporting period and the work planned for the upcoming reporting period are presented. A discussion of the project schedule and outstanding project issues is also presented.

**Overview:** This reporting period for the SSO 700 IWAP project captures the progress made on the collection system model calibration, agreement reached on the collection system model validation procedure, progress made on the water quality modeling tasks, development and submittal of the *Task 3.1 Evaluation Tools Summary Technical Memorandum*, and the development of the Phase 2 scope of work. With respect to the schedule, the water quality modeling tasks are behind schedule by approximately five weeks due to both technical challenges and response to new comments on the model calibration procedure and metrics. Based on a preliminary evaluation of the Phase 2 schedule, it appears that the schedule deficit can be resolved in Phase 2. However, while the final Phase 2 milestone, delivery of the *Final Integrated Watershed Action Plan* to the Regulators by June 2017, can still be achieved, no float remains in the schedule, and the tightness of the remaining schedule requires that many Phase 2 tasks be performed in parallel instead of in series, which may lead to less efficient use of resources. The detailed Phase 2 scope will be provided in an updated baseline schedule when the Phase 2 work is authorized.

## Section 1 - Work Progress

This section summarizes project progress by CH2M during the reporting period and identifies work planned for the upcoming reporting period by task as listed in the Contract scope of work. A log of project deliverables is attached at the end of this progress report.

### Task 1.0: Project Administration

#### 1.1 Project Management

Work completed during the reporting period:

- Submission of March 2016 progress report.
- Preparation and submission of updated Project Management Plan (Rev 1) on April 12<sup>th</sup> to capture project changes resulting from Work Order Modification #2.
- Receipt of final MSDGC and County review comments on the *Phase 1B Scope Clarification Informational Technical Memorandum*.

- Submission of revised final *Phase 1B Scope Clarification Informational Technical Memorandum, Revision 1* on April 19th, addressing final MSDGC/County comments.
- Receipt of County review comments on the initial draft Phase 2 scope of work.

Work planned for the upcoming reporting period:

- Submission of April 2016 progress report.
- Submission of revised scope of work for Phase 2 tasks upon receipt of review comments from MSDGC and the County.
- Submission of estimated level of effort for Phase 2 tasks upon completion of Phase 2 scope of work.

## 1.2 Project Meetings

Work completed during the reporting period:

- Attended meeting with Hamilton County Planning and Village of Lincoln Heights on April 7<sup>th</sup>.
- Attended City of Reading Flood Control and Public Recreation Public Meeting on April 13<sup>th</sup>.
- Held April Project Progress meeting on April 18<sup>th</sup>.
- Held Hydraulic Model meeting on April 28<sup>th</sup>.
- Held Phase 2 Scope of Work meeting on April 29<sup>th</sup>.

Work planned for the upcoming reporting period:

- Submit meeting summary from meeting with Hamilton County Planning and Village of Lincoln Heights.
- Submit meeting summary from April 2016 project progress meeting.
- Submit meeting summary from April 28<sup>th</sup> Hydraulic Model meeting.
- Submit meeting summary from April 29<sup>th</sup> Phase 2 Scope of Work meeting.

## 1.3 Quality Assurance and Quality Control

Initial planned work under this task is complete. Update of the QA/QC plan will occur as project conditions warrant.

## 1.4 Risk Management

Initial planned work under this task is complete. Update of the Risk Management Plan will occur as project conditions warrant.

## 1.5 Schedule

Work completed during the reporting period:

- Prepared an updated project progress schedule with the March progress report.

Work planned for the upcoming reporting period:

- Prepare an updated schedule in conjunction with the April progress report.

## Task 2.0: Watershed and Source Characterization

### 2.1 Watershed Selection and Delineation

Task Complete.

## 2.2 Data Collection

Task Complete.

## 2.3 Site Visits

Task Complete.

## 2.4 Inventory and Gap Analysis

Task Complete.

## 2.5 Water Quality Data Collection Program

Work completed during the reporting period:

- Revised *Water Quality Data Collection Program Summary Technical Memorandum* per comments received.

Work planned for the upcoming reporting period:

- Prepare and submit the final *Water Quality Data Collection Program Summary Technical Memorandum* addressing review comments from MSDGC and Hamilton County.
- Develop water quality sampling results maps of the watershed in response to request from the County.

## 2.6 Watershed Water Quality Models Update & Development

Work completed during the reporting period:

- Continued development and calibration of watershed and surface water quality models.
- Received County comments on the *SSO 700 IWAP Task 2.6.2 Watershed and Surface Water Quality Model Calibration Approach Technical Memorandum*, dated May 18, 2015.

Work planned for the upcoming reporting period:

- Submit *Selection of Event Mean Concentrations for the SSO 700 Watershed Model Informational Technical Memorandum*
- Develop and submit informational technical memorandum describing the WASP7 kinetic systems model.
- Revise and submit the *SSO 700 IWAP Task 2.6.2 Watershed and Surface Water Quality Model Calibration Approach Technical Memorandum* addressing review comments from MSDGC and Hamilton County.
- Proceed with development and calibration of watershed and surface water quality models.

## 2.7 Hydraulic Model Update & Development

Work completed during the reporting period:

- Continued calibration of the remainder of the SSO 700 IWAP sewershed.
- Received comments from the County on the *Task 2.7.2 Hydraulic Model Development Detailed Scope of Work and Estimated Level of Effort, Revision 1*, dated December 17, 2015.

- Developed draft Revision 2 of *Task 2.7.2 Hydraulic Model Development TM* and submitted to MSDGC and the County on April 24, 2016.

Work planned for the upcoming reporting period:

- Proceed with calibration of the remainder of the SSO 700 IWAP sewershed.
- Finalize and submit *Task 2.7.2 Hydraulic Model Development Detailed Scope of Work and Estimated Level of Effort, Revision 2*, upon receipt of any additional review comments from MSDGC and the County.
- Respond to County comments on the *SSO 700 IWAP Hydraulic Model Calibration and Validation Criteria Comparison Informational Technical Memorandum*.

### **Task 3.0: Identify Pollution Sources & Use Tools to Evaluate Collection System Response & Waterway Response**

#### **3.1 Develop Evaluation Periods and Operational Strategy**

Work completed during the reporting period:

- Submitted for review by MSDGC/County the *Task 3.1 SSO 700 IWAP Evaluation Tools Summary Technical Memorandum* on April 7<sup>th</sup> which summarizes the recommended rainfall periods and the recommended operational strategy for the SSO 700 Storage and Treatment Facility (STF) for which the models will be run for the component analysis.

Work planned for the upcoming reporting period:

- Respond to comments received from MSDGC and the County on *Task 3.1 SSO 700 IWAP Evaluation Tools Summary Technical Memorandum* and submit final technical memorandum.

#### **3.2 Apply Collection System Model to Calculate Pollutant Source Contributions**

No work has yet been performed under this task.

#### **3.3 Apply Watershed Models to Calculate Pollutant Source Contributions**

No work has yet been performed under this task.

#### **3.4 Apply Surface Water Quality Models to Determine Overflow Impacts**

No work has yet been performed under this task.

#### **3.5 Allocate Pollutant Loadings**

No work has yet been performed under this task.

#### **3.6 Rank & Compare Pollutant Sources**

No work has yet been performed under this task.

#### **3.7 Identify Pollutants & Sources Causing Impairment**

No work has yet been performed under this task.

### **Task 4.0: Summary Report**

No work has yet been completed under this task.

## Section 2 - Schedule

The progress schedule is attached to this progress report in four formats. The first schedule presents only the progress of the critical path tasks. The second schedule presents a high level overview of all the project tasks. The third schedule presents the 90-day look ahead schedule of tasks in progress or scheduled to begin. The fourth schedule presents the latest project schedule by each detailed task with the progress of the work by task shown versus the baseline schedule.

Based on the current project schedule, the key tasks over the next 90 days are the completion of the water quality models, the completion of the collection system hydraulic model, commencement with the Task 3 component analysis for the development of the pollutant pie charts, and the start of Phase 2 tasks. During this period, the critical path is primarily driven through the water quality model development task, specifically the watershed runoff model and EFDC model calibrations. Per this month's progress schedule, the water quality modeling tasks are behind schedule by approximately five weeks due to the following: (1) challenges encountered with calibrating to available flow data, (2) technical challenges associated with the EFDC-WASP model linkage requiring trouble-shooting, (3) new requirements for the validation of the collection system model, and (4) addressing new comments on the water quality model calibration and validation approach. This schedule deficit is unlikely to be recovered within the water quality model development task itself. A detailed schedule for Phase 2 is currently being developed. Based on the initial Phase 2 schedule, the schedule deficit can be made up in Phase 2 and is indicated as such in the attached progress schedule. The detailed Phase 2 scope will be provided in an updated baseline schedule when the Phase 2 work is authorized.

## Section 3 – Project Issues

Currently, the only project issue of note is schedule. The water quality modeling tasks have been behind schedule due to technical challenges. Recent questions and comments from the County on the project's standards for validation of the collection system model and the calibration and validation approach for the water quality models have further impacted the project schedule. While the final Phase 2 milestone, delivery of the *Final Integrated Watershed Action Plan* to the Regulators by June 2017, can still be achieved, no float remains in the schedule, and the tightness of the remaining schedule requires that many Phase 2 tasks be performed in parallel instead of in series, which may lead to less efficient use of resources.

No other project issues have been identified at this time.



**MSDGC-Hamilton County  
SSO 700 IWAP  
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**Project Deliverable Log as of 5/20/2016**

TASK NO.	TASK NAME	DELIVERABLE TYPE	DELIVERABLE NAME	ORIGINAL SUBMITTED DATE	STATUS	FINAL VERSION DATE	COMMENT	
<b>Task 1 - Project Administration</b>								
1.1	Project Management	Major Submittal	Schedule	Baseline Schedule	1/15/2015	Final	2/2/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 1, January 2015	2/5/2015	Final	2/5/2015	Format of progress report accepted by MSDGC.
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 2, February 2015	3/18/2015	Final	3/18/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 3, March 2015	4/8/2015	Final	4/8/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 4, April 2015	5/8/2015	Final	5/8/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 5, May 2015	6/17/2015	Final	6/17/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 6, June 2015	7/9/2015	Final	7/9/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 7, July 2015	8/25/2015	Final	8/24/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 8, August 2015	9/24/2015	Final	9/24/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 9, September 2015	10/19/2015	Final	10/19/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 10, October 2015	11/17/2015	Final	11/17/2015	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 11, November/December 2015	1/15/2016	Final	1/15/2016	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 12, January 2016	2/12/2016	Final	2/12/2016	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 13, February 2016	3/13/2016	Final	3/13/2016	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 14, March 2016	4/20/2016	Final	4/20/2016	
1.1	Project Management	Informational	Progress Report and Schedule	Progress Report No. 15, April 2016	5/20/2016	Final	5/20/2016	
1.1	Project Management	Major Submittal	Plan	Project Management Plan, including Quality Control Document and Risk Register	3/5/2015	Final	4/3/2015	
1.1	Project Management	Major Submittal	Plan	Project Management Plan (Rev 1), including Quality Control Document and Risk Register	4/12/2016	Final	4/12/2016	To be updated only as warranted after first draft is approved.
1.1	Project Management	Informational	Informational Technical Memorandum	Phase 1B Scope Clarification Informational TM	1/18/2016	Final	4/19/2016	
1.1	Project Management	Informational	Informational Technical Memorandum	Phase 2 Tasks Scope of Work	2/26/2016	Revised Draft Submitted on 4/29	Under review by MSDGC and County	
1.1	Project Management	Informational	Informational Technical Memorandum	Phase 2 Tasks Level of Effort			To be determined once Phase 2 SOW finalized	
1.2	Project Meetings	Informational	Meeting Summary	Chartering Meeting Summary 12/17/2014	1/6/2015	Final	1/6/2015	
1.2	Project Meetings	Minor Submittal	Charter	Project Charter	2/19/2015	Final	4/3/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 2/19/2015	2/24/2015	Final	2/24/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 3/19/2015	3/30/2015	Final	3/30/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 4/27/2015	5/6/2015	Final	5/6/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 6/15/2015	7/16/2015	Final	7/16/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 9/14/2015	9/22/2015	Final	9/22/2015	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 12/17/2015	1/4/2016	Final	1/4/2016	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 01/28/2016	2/4/2016	Final	2/4/2016	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 03/14/2016	3/17/2016	Final	3/17/2016	
1.2	Project Meetings	Informational	Meeting Summary	Progress Meeting Summary 04/18/2016	5/9/2016	Final	5/9/2016	
1.2	Project Meetings	Informational	Meeting Summary	Steering Committee Meeting Summary 2/11/2015	2/16/2015	Final	2/16/2015	
1.2	Project Meetings	Informational	Meeting Summary	Steering Committee Meeting Summary 6/12/2015	6/23/2015	Final	7/17/2015	
1.2	Project Meetings	Informational	Meeting Summary	Steering Committee Meeting Summary 2/25/2016	3/17/2016	Final	3/17/2016	



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**Project Deliverable Log as of 5/20/2016**

TASK NO.	TASK NAME	DELIVERABLE TYPE	DELIVERABLE NAME	ORIGINAL SUBMITTED DATE	STATUS	FINAL VERSION DATE	COMMENT
1.2	Project Meetings	Informational	Meeting Summary	Phase 2 Scope of Work Meeting Summary 4/29/2016	5/10/2016	Final	5/10/2016
1.2	Jurisdictional Meetings	Informational	Meeting Summary	City of Reading Meeting Summary 3/18/2015	4/2/2015	Final	4/2/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	City of Sharonville Meeting Summary 4/8/2015	4/21/2015	Final	4/21/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	Village of Woodlawn Meeting Summary 4/15/2015	4/30/2015	Final	4/30/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	City of Blue Ash Meeting Summary 5/11/2015	9/16/2015	Final	9/16/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	City of Springdale Meeting Summary 5/22/2015	9/16/2015	Final	9/16/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	Village of Evendale Summary 8/12/2015	9/11/2015	Final	9/11/2015
1.2	Jurisdictional Meetings	Informational	Meeting Summary	Lincoln Heights and Hamilton County Planning 4/7/2016			
1.3	Quality Assurance and Quality Control	Major Submittal	Plan	Quality Control Document (included as part of PMP)	3/5/2015	Final	4/3/2015
1.4	Risk Management	Major Submittal	Plan	Risk Management Plan (Risk Register), (included as part of PMP)	3/5/2015	Final	4/3/2015 Risk register discussed at 3/19 progress meeting.
<b>Task 2 - Watershed and Source Characterization</b>							
2.1	Watershed Selection and Delineation	Major Submittal	Shapefile	SSO700_IWAP_StudyAreaBoundary.shp	1/30/2015	Final	1/30/2015
2.1	Watershed Selection and Delineation	Major Submittal	Shapefile	EBMC_Sewershed.shp	1/30/2015	Final	1/30/2015
2.1	Watershed Selection and Delineation	Major Submittal	Shapefile	EBMC_Watershed.shp	1/30/2015	Final	1/30/2015 May be further refined based on additional storm data received.
2.1	Watershed Selection and Delineation	Informational	Technical Memorandum	SSO 700 Integrated Watershed Action Plan Study Area Boundary Development	1/30/2015	Final	1/30/2015 Unofficial submittal; to be included with Data Inventory TM; comments received to be included with Data Inventory TM
2.2	Data Collection	Major Submittal	Technical Memorandum	SSO 700 Watershed Data Request	8/26/2014	Update as required	Latest version 12/12/2014
2.3	Site Visits	Major Submittal	Technical Memorandum	Watershed Site Conditions TM	5/18/2015	Final	7/7/2015
2.4	Inventory and Gap Analysis	Informational	Technical Memorandum Draft Outline	Inventory and Gap Analysis Draft Outline	2/10/2015	Comments Received	NA Comments will be addressed in draft Tech Memo
2.4	Inventory and Gap Analysis	Major Submittal	Technical Memorandum	Inventory and Gap Analysis	draft 3/9/2015	Final	11/23/2015
2.5	Water Quality Data Collection Program	Major Submittal	Technical Memorandum	Water Quality Data Collection Program Detailed SOW/LOE	4/17/2015	Final	Received authorization on 4/27/15 to begin initial documentation required for the Water Quality Sampling Program based on this TM; became Exh. C for WO Mod No. 1
2.5	Water Quality Data Collection Program	Informational	Meeting Summary	MSDGC Lab and Sampling Group Meeting Summary 4/14/2015	4/30/2015	Final	4/30/2015
2.5	Water Quality Data Collection Program	Major Submittal	Plan	Quality Assurance Project Plan (QAPP)	6/3/2015	Final	7/30/2015
2.5	Water Quality Data Collection Program	Major Submittal	Plan	Sampling and Analysis Plan	6/3/2015	Final	7/30/2015
2.5	Water Quality Data Collection Program	Informational	Plan	Health and Safety Plan			Consultant Team use only.
2.5	Water Quality Data Collection Program	Informational	Technical Memorandum	Recommendations Regarding Flow Metering of Outfalls/Overflows TM	6/18/2015	Final	6/18/2015
2.5	Water Quality Data Collection Program	Informational	Task Scope and Level of Effort	Meeting Summary for CSO/SSO Flow Monitor Discussion Meeting 6/30/2015	7/2/2015	Final	7/2/2015
2.5	Water Quality Data Collection Program	Major Submittal	Technical Memorandum	Water Quality Data Collection Program Summary Technical Memorandum	1/25/2016	Final	5/9/2016
2.6.1	Existing Watershed Water Quality Models Assessment	Informational	Technical Memorandum Draft Outline	Watershed Water Quality Models Gap Analysis and Update Assessment Draft Outline	2/10/2015	Comments Received	NA Comments will be addressed in draft Tech Memo
2.6.1	Existing Watershed Water Quality Models Assessment	Major Submittal	Technical Memorandum	Watershed Water Quality Models Gap Analysis and Update Assessment	3/12/2015	Final	5/18/2015
2.6.1	Existing Watershed Water Quality Models Assessment	Informational	Meeting Summary	Meeting Summary for Water Quality Framework Meeting 3/19/2015	3/30/2015	Final	4/6/2015
2.6.1	Existing Watershed Water Quality Models Assessment	Informational	Meeting Summary	Meeting Summary for Water Quality Sampling Program and Model Development Meeting 4/27/2015	5/6/2015	Final	5/6/2015
2.6.2	Watershed Water Quality Models Development	Major Submittal	Technical Memorandum	Water Quality Model Development Detailed SOW/LOE	4/17/2015	Final	4/27/2015 Finalized as part of work order modification.
2.6.2	Watershed Water Quality Models Development	Informational	Technical Memorandum	Watershed and Surface Water Quality Model Calibration Approach TM	5/18/2015	Final	9/14/2015 Finalized as part of work order modification.



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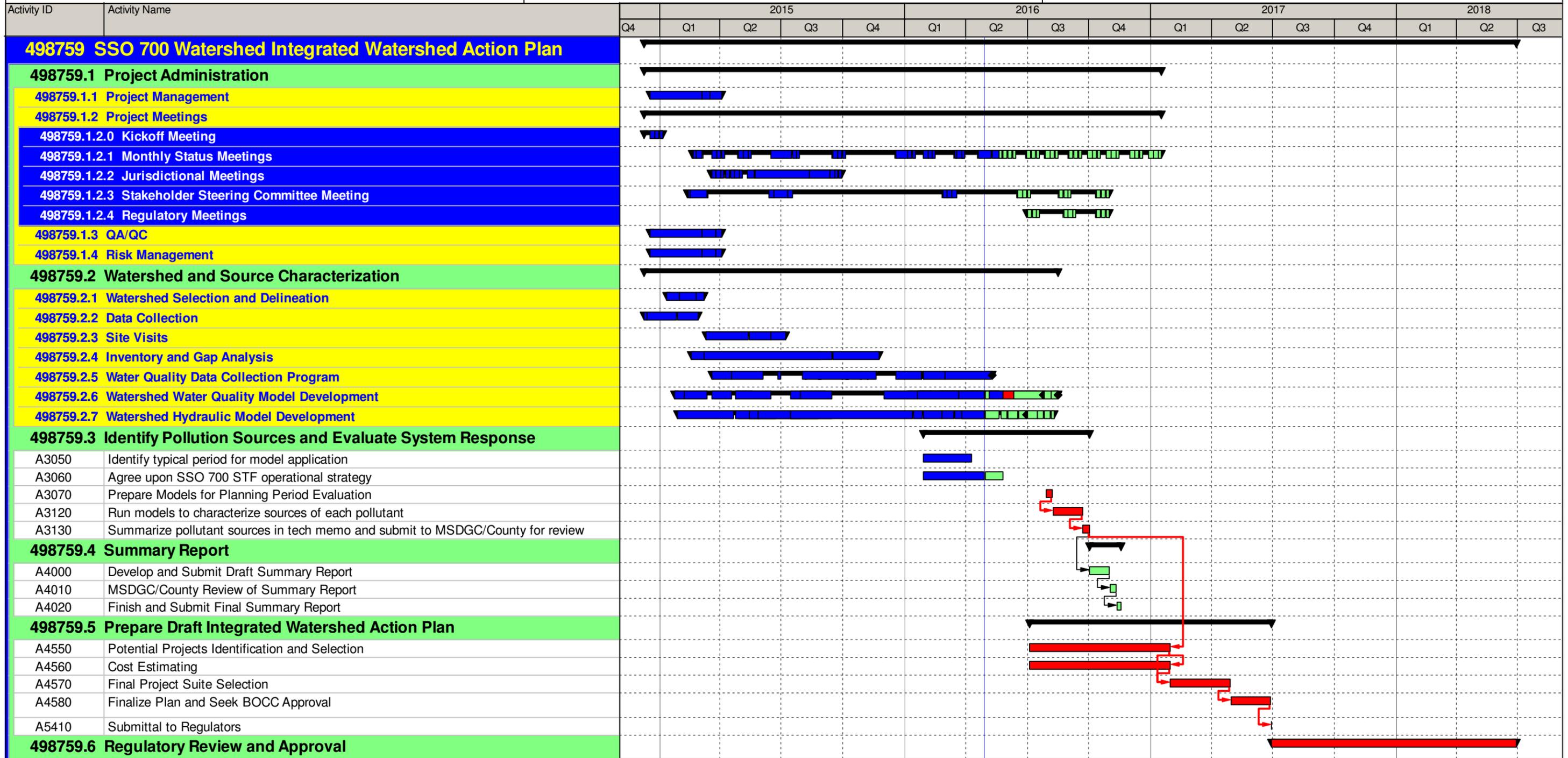
**Project Deliverable Log as of 5/20/2016**

TASK NO.	TASK NAME	DELIVERABLE TYPE	DELIVERABLE NAME	ORIGINAL SUBMITTED DATE	STATUS	FINAL VERSION DATE	COMMENT	
2.6.2	Watershed Water Quality Models Development	Informational	Informational Technical Memorandum	Watershed Model Subcatchment Delineation for the SSO 700 IWAP Project Area TM	9/4/2015	Final	9/4/2015	Comments will be addressed in the draft Watershed and Surface Water Quality Model Development and Calibration TM
2.6.2	Watershed Water Quality Models Development	Informational	Informational Technical Memorandum	Task 2.6.2.3 EFDC Surface Water Quality Model Expansion and Update Informational TM	2/8/2016	Final	2/8/2016	Comments will be addressed in the draft Watershed and Surface Water Quality Model Development and Calibration TM
2.7.1	Existing Hydraulic Model Assessment	Informational	Meeting Summary	Meeting Summary for Model Validation and Calibration Meeting 1/13/3015	1/20/2015	Final	1/20/2015	
2.7.1	Existing Hydraulic Model Assessment	Informational	Technical Memorandum Draft Outline	Watershed Collection System Hydraulic Models Gap Analysis and Update Assessment Draft Outline	2/10/2015	Comments Received	NA	Comments will be addressed in draft Tech Memo
2.7.1	Existing Hydraulic Model Assessment	Minor Submittal	Technical Memorandum	Hydraulic Model Validation Period Selection	2/27/2015	Final	2/27/2015	Comments will be addressed in Watershed Collection System Hydraulic Models Gap Analysis and Update Assessment TM. Approval to proceed with model validation received on 3/9/2015.
2.7.1	Existing Hydraulic Model Assessment	Informational	Meeting Summary	Meeting Summary for Model Calibration Meeting 3/9/2015	3/16/2015	Final	3/16/2015	
2.7.1	Existing Hydraulic Model Assessment	Major Submittal	Technical Memorandum	Watershed Collection System Hydraulic Models Gap Analysis and Update Assessment	4/20/2015	Final	8/24/2015	
2.7.2	Hydraulic Model Development	Major Submittal	Task Scope and Level of Effort	Hydraulic Model Development SOW/LOE - final	5/28/2015	Final	9/14/2015	
2.7.2	Hydraulic Model Development	Major Submittal	Task Scope and Level of Effort	Hydraulic Model Development SOW/LOE - Rev 1	12/17/2015	Final	12/17/2015	
2.7.2	Hydraulic Model Development	Major Submittal	Task Scope and Level of Effort	Hydraulic Model Development SOW/LOE - Rev 2	4/26/2016	Final	5/11/2016	
2.7.2	Hydraulic Model Development	Informational	Meeting Summary	Meeting Summary for Collection System Hydraulic Model Recalibration SOW/LOE 6/22/2015	7/7/2015	Final	7/7/2015	
2.7.2	Hydraulic Model Development	Informational	Meeting Summary	Meeting Summary for Hydraulic Model Pilot Metershed Review Meeting 3/14/2016	3/25/2016	Final	3/25/2016	
2.7.2	Hydraulic Model Development	Informational	Informational Technical Memorandum	Hydraulic Model Calibration and Validation Criteria Comparison	3/25/2016	Final	3/25/2016	
2.7.2	Hydraulic Model Development	Informational	Meeting Summary	Meeting Summary for Hydraulic Model Calibration and Validation Meeting 4/28/216	5/10/2106	Final	5/10/2016	
2.7.3	<i>Flow Monitoring Data Collection Program (OPTIONAL TASK)</i>		<i>Task Scope and Level of Effort</i>	<i>Detailed scope of work and level of effort - if required</i>				
<b>Task 3 - Identify Pollution Sources &amp; Evaluate System Response</b>								
3.1	Develop Evaluation Periods and Operational Strategy	Major Submittal	Technical Memorandum	SSO 700 IWAP Evaluation Tools Summary	4/7/2016	Draft		Comments have been received.
3.7	Identify Pollutants and Sources Causing Impairment	Major Submittal	Technical Memorandum	Characterization of Relative Impacts of Pollutant Sources on Water Quality				
<b>Task 4 - Summary Report</b>								
4	Summary report	Major Submittal	Report	IWAP Phase 1 Summary Report				

Activity ID	Activity Name	Remaining Duration	Start	Finish	2016			2017			2018					
					Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
<b>498759</b>	<b>SSO 700 Watershed Integrated Watershed Action Plan</b>	792	12-Feb-16 A	29-Jun-18	498759 SSO 700 Watershed											
<b>498759.2</b>	<b>Watershed and Source Characterization</b>	91	12-Feb-16 A	28-Jul-16	498759.2 Watershed and Source Characterization											
<b>498759.2.6</b>	<b>Watershed Water Quality Model Development</b>	91	12-Feb-16 A	28-Jul-16	498759.2.6 Watershed Water Quality Model Development											
<b>498759.2.6.2</b>	<b>Water Quality Model Development</b>	91	12-Feb-16 A	28-Jul-16	498759.2.6.2 Water Quality Model Development											
<b>498759.2.6.2.2</b>	<b>Build Stormwater and Non-point Source Watershed Model</b>	21	12-Feb-16 A	19-May-16	498759.2.6.2.2 Build Stormwater and Non-point Source Watershed Model											
A5630	Select representative EMCs from literature values using 2015 WQ data as guide	14	12-Feb-16 A	12-May-16	Select representative EMCs from literature values using 2015 WQ data as guide											
A5640	Apply selected EMCs to existing land uses	7	19-Mar-16 A	12-May-16	Apply selected EMCs to existing land uses											
A5661	Calibrate/validate Remaining pollutant loading	7	06-Apr-16 A	19-May-16	Calibrate/validate Remaining pollutant loading											
A5660	Calibrate/validate Conservative pollutant loading using historical data and 2015 WQ data	7	06-Apr-16 A	19-May-16	Calibrate/validate Conservative pollutant loading using historical data and 2015 WQ data											
<b>498759.2.6.2.3</b>	<b>Expand and Update EFDC Surface Water Model</b>	40	25-Apr-16 A	10-Jun-16	498759.2.6.2.3 Expand and Update EFDC Surface Water Model											
A5720	Re-calibrate EFDC model using 2015 WQ data	40	25-Apr-16 A	10-Jun-16	Re-calibrate EFDC model using 2015 WQ data											
<b>498759.2.6.2.4</b>	<b>Build WASP Surface Water Quality Model</b>	64	05-May-16 A	28-Jul-16	498759.2.6.2.4 Build WASP Surface Water Quality Model											
A5770	Calibrate WASP7 model using 2015 WQ data	30	05-May-16 A	24-Jun-16	Calibrate WASP7 model using 2015 WQ data											
A5990	Validate WASP7 model	10	25-Jun-16	04-Jul-16	Validate WASP7 model											
A6710	Check Calibration/Validation with Hydraulic Model	24	05-Jul-16	28-Jul-16	Check Calibration/Validation with Hydraulic Model											
<b>498759.3</b>	<b>Identify Pollution Sources and Evaluate System Response</b>	65	29-Jul-16	01-Oct-16	498759.3 Identify Pollution Sources and Evaluate System Response											
A3070	Prepare Models for Planning Period Evaluation	10	29-Jul-16	07-Aug-16	Prepare Models for Planning Period Evaluation											
A3120	Run models to characterize sources of each pollutant	45	08-Aug-16	21-Sep-16	Run models to characterize sources of each pollutant											
A3130	Summarize pollutant sources in tech memo and submit to MSDGC/County for review	10	22-Sep-16	01-Oct-16	Summarize pollutant sources in tech memo and submit to MSDGC/County for review											
<b>498759.5</b>	<b>Prepare Draft Integrated Watershed Action Plan</b>	360	05-Jul-16	29-Jun-17	498759.5 Prepare Draft Integrated Watershed Action Plan											
A4550	Potential Projects Identification and Selection	209	05-Jul-16	29-Jan-17	Potential Projects Identification and Selection											
A4560	Cost Estimating	209	05-Jul-16	29-Jan-17	Cost Estimating											
A4570	Final Project Suite Selection	90	30-Jan-17	29-Apr-17	Final Project Suite Selection											
A4580	Finalize Plan and Seek BOCC Approval	60	30-Apr-17	28-Jun-17	Finalize Plan and Seek BOCC Approval											
A5410	Submittal to Regulators	1	29-Jun-17	29-Jun-17	Submittal to Regulators											
<b>498759.6</b>	<b>Regulatory Review and Approval</b>	365	30-Jun-17	29-Jun-18	498759.6 Regulatory Review and Approval											
A5420	Regulatory Review and Approval	365	30-Jun-17	29-Jun-18	Regulatory Review and Approval											

█ Actual Work     █ Critical Remaining Work     ◆ Milestone  
█ Remaining Work      Primary Baseline     ▶ Summary

**TASK filter: Critical.**



█ Actual Work    
 █ Critical Remaining Work    
  Summary  
█ Remaining Work    
 ◆ Milestone

Activity ID	Activity Name	Physical % Complete	Remaining Duration	Start	Finish	Predecessors	Total Float	2016			
								May	Jun	Jul	Aug
<b>498759</b>	<b>SSO 700 Watershed Integrated Watershed Action Plan</b>		276	28-Jan-16 A	29-Jan-17		516				
<b>498759.1</b>	<b>Project Administration</b>		69	20-May-16	27-Jul-16		702				
<b>498759.1.2</b>	<b>Project Meetings</b>		69	20-May-16	27-Jul-16		702				
<b>498759.1.2.1</b>	<b>Monthly Status Meetings</b>		69	20-May-16	27-Jul-16		702				
<b>498759.1.2.1.16</b>	<b>Apr 2016</b>		5	20-May-16	24-May-16		766				
A6370	Finish and Submit Meeting Summary	0%	5	20-May-16	24-May-16	A6360	766				
<b>498759.1.2.1.17</b>	<b>May 2016</b>		20	25-May-16	13-Jun-16		746				
A6380	Meeting - Date TBD	0%	1	25-May-16*	25-May-16		746				
A6390	Prepare and Submit Meeting Summary	0%	7	26-May-16	01-Jun-16	A6380	746				
A6400	MSDGC/County Review Meeting Summary	0%	7	02-Jun-16	08-Jun-16	A6390	746				
A6410	Finish and Submit Meeting Summary	0%	5	09-Jun-16	13-Jun-16	A6400	746				
<b>498759.1.2.1.18</b>	<b>Jun 2016</b>		20	29-Jun-16	18-Jul-16		711				
A6420	Meeting - Date TBD	0%	1	29-Jun-16*	29-Jun-16		711				
A6430	Prepare and Submit Meeting Summary	0%	7	30-Jun-16	06-Jul-16	A6420	711				
A6440	MSDGC/County Review Meeting Summary	0%	7	07-Jul-16	13-Jul-16	A6430	711				
A6450	Finish and Submit Meeting Summary	0%	5	14-Jul-16	18-Jul-16	A6440	711				
<b>498759.1.2.1.19</b>	<b>Jul 2016</b>		1	27-Jul-16	27-Jul-16		683				
A6460	Meeting - Date TBD	0%	1	27-Jul-16*	27-Jul-16		683				
<b>498759.1.2.3</b>	<b>Stakeholder Steering Committee Meeting</b>		20	16-Jun-16	05-Jul-16		724				
<b>498759.1.2.3.6</b>	<b>Qtr 2 - 2016</b>		20	16-Jun-16	05-Jul-16		724				
A6000	Meeting - Date TBD	0%	1	16-Jun-16*	16-Jun-16		724				
A6010	Prepare and Submit Meeting Summary	0%	7	17-Jun-16	23-Jun-16	A6000	724				
A6020	MSDGC/County Review Meeting Summary	0%	7	24-Jun-16	30-Jun-16	A6010	724				
A6030	Finish and Submit Meeting Summary	0%	5	01-Jul-16	05-Jul-16	A6020	724				
<b>498759.1.2.4</b>	<b>Regulatory Meetings</b>		20	30-Jun-16	19-Jul-16		710				
<b>498759.1.2.4.6</b>	<b>Qtr 2 - 2016</b>		20	30-Jun-16	19-Jul-16		710				
A6120	Meeting - Date TBD	0%	1	30-Jun-16*	30-Jun-16	A6000	710				
A6130	Prepare and Submit Meeting Summary	0%	7	01-Jul-16	07-Jul-16	A6120	710				
A6140	MSDGC/County Review Meeting Summary	0%	7	08-Jul-16	14-Jul-16	A6130	710				
A6150	Finish and Submit Meeting Summary	0%	5	15-Jul-16	19-Jul-16	A6140	710				
<b>498759.2</b>	<b>Watershed and Source Characterization</b>		99	12-Feb-16 A	05-Aug-16		693				
<b>498759.2.6</b>	<b>Watershed Water Quality Model Development</b>		99	12-Feb-16 A	05-Aug-16		693				
<b>498759.2.6.2</b>	<b>Water Quality Model Development</b>		99	12-Feb-16 A	05-Aug-16		693				
<b>498759.2.6.2.2</b>	<b>Build Stormwater and Non-point Source Watershed Model</b>		21	12-Feb-16 A	19-May-16		0				
A5630	Select representative EMCs from literature values using 2015 WQ data as	90%	14	12-Feb-16 A	12-May-16	A5610	-37				
A5640	Apply selected EMCs to existing land uses	90%	7	19-Mar-16 A	12-May-16	A5630	-37				
A5660	Calibrate/validate Conservative pollutant loading using historical data and 2015 WQ data	75%	7	06-Apr-16 A	19-May-16	A5650, A5640	0				
A5661	Calibrate/validate Remaining pollutant loading	75%	7	06-Apr-16 A	19-May-16	A5650, A5640, A	0				
<b>498759.2.6.2.3</b>	<b>Expand and Update EFDC Surface Water Model</b>		74	25-Apr-16 A	14-Jul-16		14				
A5720	Re-calibrate EFDC model using 2015 WQ data	40%	40	25-Apr-16 A	10-Jun-16	A5660, A5710, A	0				
A5980	Validate EFDC model	0%	10	11-Jun-16	20-Jun-16	A5720	4				
A6700	Check Calibration/Validation with Hydraulic Model	0%	24	21-Jun-16	14-Jul-16	A5910, A5980	14				
<b>498759.2.6.2.4</b>	<b>Build WASP Surface Water Quality Model</b>		91	21-Mar-16 A	28-Jul-16		701				
A5740	Prepare a description of the new WASP7 kinetic systems model	90%	22	21-Mar-16 A	20-May-16	A5730	764				
A5770	Calibrate WASP7 model using 2015 WQ data	5%	30	05-May-16 A	24-Jun-16	A5720, A5540, A	0				
A5750	Submit description in informational TM to MSDGC/County for review	0%	0		20-May-16	A5740	764				
A5760	Present model framework to MSDGC/County in monthly progress meeting	0%	1	26-May-16	26-May-16	A5750	764				
A5990	Validate WASP7 model	0%	10	25-Jun-16	04-Jul-16	A5770	0				
A6710	Check Calibration/Validation with Hydraulic Model	0%	24	05-Jul-16	28-Jul-16	A5990, A5910	0				
<b>498759.2.6.2.5</b>	<b>Document Watershed and Surface Water Quality Modeling</b>		56	11-Jun-16	05-Aug-16		683				
A5920	Prepare final draft TM describing all models and their calibrations	0%	45	11-Jun-16	25-Jul-16	A5990	683				
A5930	Submit final draft TM to MSDGC/County for review	0%	0		25-Jul-16	A5920	683				
A5940	Present TM to MSDGC/County in monthly progress meeting	0%	1	26-Jul-16	26-Jul-16	A5930	683				
A5950	MSDGC/County review of TM	0%	10	27-Jul-16	05-Aug-16	A5940	683				
<b>498759.2.7</b>	<b>Watershed Hydraulic Model Development</b>		98	15-Mar-16 A	04-Aug-16		689				
<b>498759.2.7.2</b>	<b>Hydraulic Model Development</b>		98	15-Mar-16 A	04-Aug-16		689				
<b>498759.2.7.2.2</b>	<b>Model Updates and Calibration</b>		20	15-Mar-16 A	18-May-16		16				

█ Remaining Level of Effort   
 █ Remaining Work   
 ◆ Milestone   
 █ Actual Work   
 █ Critical Remaining Work   
 ▼ Summary

**TASK filters: 90-Day Look Ahead, In Progress.**  
90-Day Look-ahead

Activity ID	Activity Name	Physical % Complete	Remaining Duration	Start	Finish	Predecessors	Total Float	2016			
								May	Jun	Jul	Aug
A5810	Calibrate model (including field verification of flooding manholes)	90%	20	15-Mar-16 A	18-May-16	A6250	16	Calibrate model (including field verification of flooding manholes)			
<b>498759.2.7.2.3 Document Hydraulic Model Calibration</b>			<b>65</b>	<b>25-Mar-16 A</b>	<b>04-Aug-16</b>		<b>689</b>	498759.2.7.2.3 Document Hydraulic Model Calibration			
A5820	Develop final draft of Hydraulic Model Calibration TM	20%	30	25-Mar-16 A	30-Jun-16	A5810, A5900	689	Develop final draft of Hydraulic Model Calibration TM			
A5830	Submit final draft of TM to MSDGC/County for review	0%	0		30-Jun-16	A5820	704	Submit final draft of TM to MSDGC/County for review			
A5840	Present TM to MSDGC/County in monthly progress meeting	0%	15	01-Jul-16	15-Jul-16	A5820	689	Present TM to MSDGC/County in monthly progress meeting			
A5850	MSDGC/County review of TM	0%	10	16-Jul-16	25-Jul-16	A5830, A5840	689	MSDGC/County review of TM			
A5860	Address MSDGC/County comments	0%	10	26-Jul-16	04-Aug-16	A5850	689	Address MSDGC/County comments			
<b>498759.2.7.2.4 Run Re-calibrated Model for 2015 Water Quality Sampling Period</b>			<b>51</b>	<b>29-Apr-16</b>	<b>18-Jun-16</b>		<b>16</b>	498759.2.7.2.4 Run Re-calibrated Model for 2015 Water Quality Sampling Period			
A5880	Verify/Modify SSO 700 STF controls to correspond to 2015 operational strategy	0%	22	29-Apr-16	20-May-16	A5810	16	Verify/Modify SSO 700 STF controls to correspond to 2015 operational strategy			
A5890	Run Re-calibrated Model for 2015 Water Quality Sampling Period (June thru October)	0%	10	23-May-16	01-Jun-16	A5880, A5810	16	Run Re-calibrated Model for 2015 Water Quality Sampling Period (June thru October)			
A5900	Compare results to Telog and Flow Data	0%	15	02-Jun-16	16-Jun-16	A5890	16	Compare results to Telog and Flow Data			
A5910	Export data and provide to WQ modeling team	0%	1	18-Jun-16	18-Jun-16	A5900	16	Export data and provide to WQ modeling team			
<b>498759.3 Identify Pollution Sources and Evaluate System Response</b>			<b>27</b>	<b>28-Jan-16 A</b>	<b>25-May-16</b>		<b>765</b>	498759.3 Identify Pollution Sources and Evaluate System Response			
A3060	Agree upon SSO 700 STF operational strategy	90%	27	28-Jan-16 A	25-May-16		765	Agree upon SSO 700 STF operational strategy			
<b>498759.5 Prepare Draft Integrated Watershed Action Plan</b>			<b>209</b>	<b>05-Jul-16</b>	<b>29-Jan-17</b>		<b>0</b>	498759.5 Prepare Draft Integrated Watershed Action Plan			
A4550	Potential Projects Identification and Selection	0%	209	05-Jul-16	29-Jan-17	A3130, A5990	0	Potential Projects Identification and Selection			
A4560	Cost Estimating	0%	209	05-Jul-16	29-Jan-17	A4550, A5770	0	Cost Estimating			

█ Remaining Level of Effort   
 █ Remaining Work   
 ◆ Milestone  
█ Actual Work   
 █ Critical Remaining Work   
 ▼ Summary

Activity ID	Activity Name	Physical % Complete	Remaining Duration	Start	Finish	Predecessors	Total Float	2015												2016												2017						
								Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
<b>498759</b>	<b>SSO 700 Watershed Integrated Watershed Action Plan</b>		792	09-Dec-14 A	29-Jun-18		0																															
<b>498759.1</b>	<b>Project Administration</b>		242	09-Dec-14 A	16-Jan-17		529																															
<b>498759.1.1</b>	<b>Project Management</b>		0	18-Dec-14 A	03-Apr-15 A																																	
A1000	Develop and Submit Project Management Plan	100%	0	18-Dec-14 A	05-Mar-15 A	A1030, A1060, A																																
A1010	MSDGC/County Review of PMP	100%	0	05-Mar-15 A	16-Mar-15 A	A1000																																
A1020	Finish and Submit PMP	100%	0	17-Mar-15 A	03-Apr-15 A	A1010, A1050, A																																
<b>498759.1.2</b>	<b>Project Meetings</b>		242	09-Dec-14 A	16-Jan-17		529																															
<b>498759.1.2.0</b>	<b>Kickoff Meeting</b>		0	09-Dec-14 A	05-Jan-15 A																																	
A1100	Kickoff Meeting	100%	0	09-Dec-14 A	09-Dec-14 A																																	
A1110	Prepare and Submit Meeting Summary	100%	0	18-Dec-14 A	24-Dec-14 A	A1100																																
A1120	MSDGC/County Review Meeting Summary	100%	0	25-Dec-14 A	31-Dec-14 A	A1110																																
A1130	Finish and Submit Meeting Summary	100%	0	01-Jan-15 A	05-Jan-15 A	A1120																																
<b>498759.1.2.1</b>	<b>Monthly Status Meetings</b>		242	19-Feb-15 A	16-Jan-17		529																															
<b>498759.1.2.1.2</b>	<b>Feb 2015</b>		0	19-Feb-15 A	06-Mar-15 A																																	
A4070	Meeting	100%	0	19-Feb-15 A	19-Feb-15 A																																	
A4080	Prepare and Submit Meeting Summary	100%	0	20-Feb-15 A	24-Feb-15 A	A4070																																
A4090	MSDGC/County Review Meeting Summary	100%	0	24-Feb-15 A	06-Mar-15 A	A4080																																
A4100	Finish and Submit Meeting Summary	100%	0	06-Mar-15 A	06-Mar-15 A	A4090																																
<b>498759.1.2.1.3</b>	<b>Mar 2015</b>		0	19-Mar-15 A	07-Apr-15 A																																	
A4110	Meeting	100%	0	19-Mar-15 A	19-Mar-15 A																																	
A4120	Prepare and Submit Meeting Summary	100%	0	20-Mar-15 A	26-Mar-15 A	A4110																																
A4130	MSDGC/County Review Meeting Summary	100%	0	27-Mar-15 A	02-Apr-15 A	A4120																																
A4140	Finish and Submit Meeting Summary	100%	0	03-Apr-15 A	07-Apr-15 A	A4130																																
<b>498759.1.2.1.4</b>	<b>Apr 2015</b>		0	27-Apr-15 A	17-May-15 A																																	
A4150	Meeting	100%	0	27-Apr-15 A	27-Apr-15 A																																	
A4160	Prepare and Submit Meeting Summary	100%	0	28-Apr-15 A	06-May-15 A	A4150																																
A4170	MSDGC/County Review Meeting Summary	100%	0	06-May-15 A	12-May-15 A	A4160																																
A4180	Finish and Submit Meeting Summary	100%	0	13-May-15 A	17-May-15 A	A4170																																
<b>498759.1.2.1.6</b>	<b>June 2015</b>		0	15-Jun-15 A	28-Jul-15 A																																	
A4230	Meeting	100%	0	15-Jun-15 A	15-Jun-15 A																																	
A4240	Prepare and Submit Meeting Summary	100%	0	16-Jun-15 A	16-Jul-15 A	A4230																																
A4250	MSDGC/County Review Meeting Summary	100%	0	17-Jul-15 A	23-Jul-15 A	A4240																																
A4260	Finish and Submit Meeting Summary	100%	0	24-Jul-15 A	28-Jul-15 A	A4250																																
<b>498759.1.2.1.9</b>	<b>Sep 2015</b>		0	14-Sep-15 A	04-Oct-15 A																																	
A4350	Meeting	100%	0	14-Sep-15 A	14-Sep-15 A																																	
A4360	Prepare and Submit Meeting Summary	100%	0	15-Sep-15 A	22-Sep-15 A	A4350																																
A4370	MSDGC/County Review Meeting Summary	100%	0	23-Sep-15 A	29-Sep-15 A	A4360																																
A4380	Finish and Submit Meeting Summary	100%	0	30-Sep-15 A	04-Oct-15 A	A4370																																
<b>498759.1.2.1.12</b>	<b>Dec 2015</b>		0	17-Dec-15 A	16-Jan-16 A																																	
A4470	Meeting	100%	0	17-Dec-15 A	17-Dec-15 A																																	
A4480	Prepare and Submit Meeting Summary	100%	0	18-Dec-15 A	04-Jan-16 A	A4470																																
A4490	MSDGC/County Review Meeting Summary	100%	0	05-Jan-16 A	11-Jan-16 A	A4480																																
A4500	Finish and Submit Meeting Summary	100%	0	12-Jan-16 A	16-Jan-16 A	A4490																																
<b>498759.1.2.1.13</b>	<b>Jan 2016</b>		0	28-Jan-16 A	15-Feb-16 A																																	
A4510	Meeting	100%	0	28-Jan-16 A	28-Jan-16 A																																	
A4520	Prepare and Submit Meeting Summary	100%	0	29-Jan-16 A	04-Feb-16 A	A4510																																
A4530	MSDGC/County Review Meeting Summary	100%	0	05-Feb-16 A	10-Feb-16 A	A4520																																
A4540	Finish and Submit Meeting Summary	100%	0	11-Feb-16 A	15-Feb-16 A	A4530																																
<b>498759.1.2.1.15</b>	<b>Mar 2016</b>		0	14-Mar-16 A	29-Mar-16 A																																	
A6300	Meeting	100%	0	14-Mar-16 A	14-Mar-16 A																																	
A6310	Prepare and Submit Meeting Summary	100%	0	15-Mar-16 A	17-Mar-16 A	A6300																																
A6320	MSDGC/County Review Meeting Summary	100%	0	18-Mar-16 A	28-Mar-16 A	A6310																																
A6330	Finish and Submit Meeting Summary	100%	0	25-Mar-16 A	29-Mar-16 A	A6320																																
<b>498759.1.2.1.16</b>	<b>Apr 2016</b>		5	18-Apr-16 A	24-May-16		766																															
A6340	Meeting	100%	0	18-Apr-16 A	18-Apr-16 A																																	
A6350	Prepare and Submit Meeting Summary	100%	0	19-Apr-16 A	09-May-16 A	A6340																																
A6360	MSDGC/County Review Meeting Summary	100%	0	09-May-16 A	19-May-16 A	A6350																																
A6370	Finish and Submit Meeting Summary	0%	5	20-May-16	24-May-16	A6360	766																															

■ Remaining Level of Effort   
 ■ Remaining Work   
 ■ Actual Work   
 ■ Critical Remaining Work   
 ◆ Milestone   
 ▼ Summary

**TASK filter: All Activities**  
WBS-Phase1 Focused

Activity ID	Activity Name	Physical % Complete	Remaining Duration	Start	Finish	Predecessors	Total Float	2015												2016												2017										
								Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
<b>498759.1.2.1.17 May 2016</b>																																				<b>498759.1.2.1.17 May 2016</b>						
A6380	Meeting - Date TBD	0%	1	25-May-16*	25-May-16		746																													Meeting - Date TBD						
A6390	Prepare and Submit Meeting Summary	0%	7	26-May-16	01-Jun-16	A6380	746																													Prepare and Submit Meeting Summary						
A6400	MSDGC/County Review Meeting Summary	0%	7	02-Jun-16	08-Jun-16	A6390	746																													MSDGC/County Review Meeting Summary						
A6410	Finish and Submit Meeting Summary	0%	5	09-Jun-16	13-Jun-16	A6400	746																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.18 Jun 2016</b>																																				<b>498759.1.2.1.18 Jun 2016</b>						
A6420	Meeting - Date TBD	0%	1	29-Jun-16*	29-Jun-16		711																													Meeting - Date TBD						
A6430	Prepare and Submit Meeting Summary	0%	7	30-Jun-16	06-Jul-16	A6420	711																													Prepare and Submit Meeting Summary						
A6440	MSDGC/County Review Meeting Summary	0%	7	07-Jul-16	13-Jul-16	A6430	711																													MSDGC/County Review Meeting Summary						
A6450	Finish and Submit Meeting Summary	0%	5	14-Jul-16	18-Jul-16	A6440	711																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.19 Jul 2016</b>																																				<b>498759.1.2.1.19 Jul 2016</b>						
A6460	Meeting - Date TBD	0%	1	27-Jul-16*	27-Jul-16		683																													Meeting - Date TBD						
A6470	Prepare and Submit Meeting Summary	0%	7	28-Jul-16	03-Aug-16	A6460	683																													Prepare and Submit Meeting Summary						
A6480	MSDGC/County Review Meeting Summary	0%	7	04-Aug-16	10-Aug-16	A6470	683																													MSDGC/County Review Meeting Summary						
A6490	Finish and Submit Meeting Summary	0%	5	11-Aug-16	15-Aug-16	A6480	683																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.20 Aug 2016</b>																																				<b>498759.1.2.1.20 Aug 2016</b>						
A6500	Meeting - Date TBD	0%	1	31-Aug-16*	31-Aug-16		648																													Meeting - Date TBD						
A6510	Prepare and Submit Meeting Summary	0%	7	01-Sep-16	07-Sep-16	A6500	648																													Prepare and Submit Meeting Summary						
A6520	MSDGC/County Review Meeting Summary	0%	7	08-Sep-16	14-Sep-16	A6510	648																													MSDGC/County Review Meeting Summary						
A6530	Finish and Submit Meeting Summary	0%	5	15-Sep-16	19-Sep-16	A6520	648																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.21 Sep 2016</b>																																				<b>498759.1.2.1.21 Sep 2016</b>						
A6540	Meeting - Date TBD	0%	1	28-Sep-16*	28-Sep-16		620																													Meeting - Date TBD						
A6550	Prepare and Submit Meeting Summary	0%	7	29-Sep-16	05-Oct-16	A6540	620																													Prepare and Submit Meeting Summary						
A6560	MSDGC/County Review Meeting Summary	0%	7	06-Oct-16	12-Oct-16	A6550	620																													MSDGC/County Review Meeting Summary						
A6570	Finish and Submit Meeting Summary	0%	5	13-Oct-16	17-Oct-16	A6560	620																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.22 Oct 2016</b>																																				<b>498759.1.2.1.22 Oct 2016</b>						
A6580	Meeting - Date TBD	0%	1	26-Oct-16*	26-Oct-16		592																													Meeting - Date TBD						
A6590	Prepare and Submit Meeting Summary	0%	7	27-Oct-16	02-Nov-16	A6580	592																													Prepare and Submit Meeting Summary						
A6600	MSDGC/County Review Meeting Summary	0%	7	03-Nov-16	09-Nov-16	A6590	592																													MSDGC/County Review Meeting Summary						
A6610	Finish and Submit Meeting Summary	0%	5	10-Nov-16	14-Nov-16	A6600	592																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.23 Nov 2016</b>																																				<b>498759.1.2.1.23 Nov 2016</b>						
A6620	Meeting - Date TBD	0%	1	30-Nov-16*	30-Nov-16		557																													Meeting - Date TBD						
A6630	Prepare and Submit Meeting Summary	0%	7	01-Dec-16	07-Dec-16	A6620	557																													Prepare and Submit Meeting Summary						
A6640	MSDGC/County Review Meeting Summary	0%	7	08-Dec-16	14-Dec-16	A6630	557																													MSDGC/County Review Meeting Summary						
A6650	Finish and Submit Meeting Summary	0%	5	15-Dec-16	19-Dec-16	A6640	557																													Finish and Submit Meeting Summary						
<b>498759.1.2.1.24 Dec 2016</b>																																				<b>498759.1.2.1.24 Dec 2016</b>						
A6660	Meeting - Date TBD	0%	1	28-Dec-16*	28-Dec-16		529																													Meeting - Date TBD						
A6670	Prepare and Submit Meeting Summary	0%	7	29-Dec-16	04-Jan-17	A6660	529																													Prepare and Submit Meeting Summary						
A6680	MSDGC/County Review Meeting Summary	0%	7	05-Jan-17	11-Jan-17	A6670	529																													MSDGC/County Review Meeting Summary						
A6690	Finish and Submit Meeting Summary	0%	5	12-Jan-17	16-Jan-17	A6680	529																													Finish and Submit Meeting Summary						
<b>498759.1.2.2 Jurisdictional Meetings</b>																																				<b>498759.1.2.2 Jurisdictional Meetings</b>						
<b>498759.1.2.2.1 Mtg 1</b>																																				<b>498759.1.2.2.1 Mtg 1</b>						
A4590	Meeting - Reading	100%	0	18-Mar-15 A	18-Mar-15 A																															Meeting - Reading						
A4600	Prepare and Submit Meeting Summary	100%	0	19-Mar-15 A	25-Mar-15 A	A4590																														Prepare and Submit Meeting Summary						
A4610	MSDGC/County Review Meeting Summary	100%	0	26-Mar-15 A	01-Apr-15 A	A4600																														MSDGC/County Review Meeting Summary						
A4620	Finish and Submit Meeting Summary	100%	0	02-Apr-15 A	06-Apr-15 A	A4610																														Finish and Submit Meeting Summary						
<b>498759.1.2.2.2 Mtg 2</b>																																				<b>498759.1.2.2.2 Mtg 2</b>						
A4630	Meeting - Sharonville	100%	0	08-Apr-15 A	08-Apr-15 A	A4590																														Meeting - Sharonville						
A4640	Prepare and Submit Meeting Summary	100%	0	09-Apr-15 A	15-Apr-15 A	A4630																														Prepare and Submit Meeting Summary						
A4650	MSDGC/County Review Meeting Summary	100%	0	16-Apr-15 A	22-Apr-15 A	A4640																														MSDGC/County Review Meeting Summary						
A4660	Finish and Submit Meeting Summary	100%	0	23-Apr-15 A	27-Apr-15 A	A4650																														Finish and Submit Meeting Summary						
<b>498759.1.2.2.3 Mtg 3</b>																																				<b>498759.1.2.2.3 Mtg 3</b>						
A4670	Meeting - Woodlawn	100%	0	15-Apr-15 A	15-Apr-15 A	A4630																														Meeting - Woodlawn						
A4680	Prepare and Submit Meeting Summary	100%	0	16-Apr-15 A	22-Apr-15 A	A4670																														Prepare and Submit Meeting Summary						
A4690	MSDGC/County Review Meeting Summary	100%	0	23-Apr-15 A	29-Apr-15 A	A4680																														MSDGC/County Review Meeting Summary						
A4700	Finish and Submit Meeting Summary	100%	0	30-Apr-15 A	04-May-15 A	A4690																														Finish and Submit Meeting Summary						
<b>498759.1.2.2.4 Mtg 4</b>																																				<b>498759.1.2.2.4 Mtg 4</b>						
A4710	Meeting - Blue Ash	100%	0	11-May-15 A	11-May-15 A	A4670																														Meeting - Blue Ash						
A4720	Prepare and Submit Meeting Summary	100%	0	12-May-15 A	16-Sep-15 A	A4710																														Prepare and Submit Meeting Summary						

█ Remaining Level of Effort   
 █ Remaining Work   
 █ Actual Work   
 █ Critical Remaining Work   
 ◆ Milestone   
 ▼ Summary



Activity ID	Activity Name	Physical % Complete	Remaining Duration	Start	Finish	Predecessors	Total Float	2015												2016												2017						
								Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
<b>498759.1.3 QA/QC</b>								498759.1.3 QA/QC																														
A1030	Develop and Submit Quality Control Document	100%	0	18-Dec-14 A	03-Apr-15 A	A1100		Develop and Submit Quality Control Document																														
A1040	MSDGC/County Review of QCD	100%	0	05-Mar-15 A	26-Mar-15 A	A1030		MSDGC/County Review of QCD																														
A1050	Finish and Submit QCD	100%	0	26-Mar-15 A	03-Apr-15 A	A1040		Finish and Submit QCD																														
<b>498759.1.4 Risk Management</b>								498759.1.4 Risk Management																														
A1060	Develop and Submit Risk Management Plan	100%	0	18-Dec-14 A	05-Mar-15 A	A1100		Develop and Submit Risk Management Plan																														
A1070	MSDGC/County Review of RMP	100%	0	05-Mar-15 A	26-Mar-15 A	A1060		MSDGC/County Review of RMP																														
A1080	Finish and Submit RMP	100%	0	26-Mar-15 A	03-Apr-15 A	A1070		Finish and Submit RMP																														
<b>498759.2 Watershed and Source Characterization</b>								498759.2 Watershed and Source Characterization																														
<b>498759.2.1 Watershed Selection and Delineation</b>								498759.2.1 Watershed Selection and Delineation																														
A2000	Develop and Submit GIS File of Study Area Boundary	100%	0	12-Jan-15 A	30-Jan-15 A	A2040		Develop and Submit GIS File of Study Area Boundary																														
A2010	MSDGC/County Review of Study Area Boundary	100%	0	30-Jan-15 A	24-Feb-15 A	A2000		MSDGC/County Review of Study Area Boundary																														
A2020	Finish and Submit Study Area Boundary	100%	0	24-Feb-15 A	09-Mar-15 A	A2010		Finish and Submit Study Area Boundary																														
<b>498759.2.2 Data Collection</b>								498759.2.2 Data Collection																														
A2030	Develop and Submit Data Request Memo	100%	0	09-Dec-14 A	12-Dec-14 A			Develop and Submit Data Request Memo																														
A2040	Receive Requested Data from MSDGC	100%	0	13-Dec-14 A	26-Jan-15 A	A2030		Receive Requested Data from MSDGC																														
A2050	Develop SP Library of Received Data	100%	0	27-Jan-15 A	27-Feb-15 A	A2040		Develop SP Library of Received Data																														
<b>498759.2.3 Site Visits</b>								498759.2.3 Site Visits																														
A2060	Visit Watershed Area and Submit Technical Memo	100%	0	11-Mar-15 A	13-May-15 A			Visit Watershed Area and Submit Technical Memo																														
A5310	MSDGC/County Review of Watershed Conditions TM	100%	0	14-May-15 A	15-Jun-15 A	A2060		MSDGC/County Review of Watershed Conditions TM																														
A5320	Finish and Submit Watershed Conditions TM	100%	0	16-Jun-15 A	07-Jul-15 A	A5310		Finish and Submit Watershed Conditions TM																														
<b>498759.2.4 Inventory and Gap Analysis</b>								498759.2.4 Inventory and Gap Analysis																														
A2070	Develop and Submit Data Inventory TM	100%	0	18-Feb-15 A	28-Aug-15 A	A2000, A2040		Develop and Submit Data Inventory TM																														
A2080	MSDGC/County Review of Data Inventory TM	100%	0	09-Mar-15 A	14-Sep-15 A	A2070		MSDGC/County Review of Data Inventory TM																														
A2090	Finish and Submit Data Inventory TM	100%	0	15-Sep-15 A	23-Nov-15 A	A2080		Finish and Submit Data Inventory TM																														
<b>498759.2.5 Water Quality Data Collection Program</b>								498759.2.5 Water Quality Data Collection Program																														
A2100	Develop and Submit WQ Data Collection Program Scope and LOE	100%	0	20-Mar-15 A	17-Apr-15 A	A2130		Develop and Submit WQ Data Collection Program Scope and LOE																														
A2110	MSDGC/County Authorize WQ data Collection Program	100%	0	18-Apr-15 A	04-Jun-15 A	A2100		MSDGC/County Authorize WQ data Collection Program																														
A5435	Dry Weather Event #1	100%	0	26-Jun-15 A	30-Jun-15 A			Dry Weather Event #1																														
A2265	Flow Characterization	100%	0	01-Aug-15 A	18-Nov-15 A			Flow Characterization																														
A2255	Wet Weather Event #1	100%	0	06-Aug-15 A	07-Aug-15 A			Wet Weather Event #1																														
A5445	Dry Weather Event #2	100%	0	24-Aug-15 A	28-Aug-15 A			Dry Weather Event #2																														
A5665	Wet Weather Event #2	100%	0	29-Sep-15 A	30-Sep-15 A			Wet Weather Event #2																														
A5455	Dry weather Event #3	100%	0	05-Oct-15 A	09-Oct-15 A			Dry weather Event #3																														
A5470	Wet Weather Event #3	100%	0	27-Oct-15 A	28-Oct-15 A	A5665		Wet Weather Event #3																														
A5480	Wet Weather Event #4	100%	0	06-Nov-15 A	07-Nov-15 A	A5470		Wet Weather Event #4																														
A2330	Prepare Sampling Program Summary	100%	0	18-Dec-15 A	25-Jan-16 A	A2265, A5455		Prepare Sampling Program Summary																														
A2275	Submit final draft of Sampling Program Summary TM to MSDGC/County	100%	0		25-Jan-16 A	A2330		Submit final draft of Sampling Program Summary TM to MSDGC/County																														
A2290	Present Findings of TM to MSDGC/County in monthly progress meeting	100%	0	28-Jan-16 A	28-Jan-16 A	A2275		Present Findings of TM to MSDGC/County in monthly progress meeting																														
A2300	MSDGC/County review of TM	100%	0	29-Jan-16 A	29-Feb-16 A	A2290, A2275		MSDGC/County review of TM																														
A2310	Revise per Comments received	100%	0	01-Mar-16 A	09-May-16 A	A2300		Revise per Comments received																														
A2320	Submit Final Sampling Program Summary TM	100%	0		09-May-16 A	A2310		Submit Final Sampling Program Summary TM																														
<b>498759.2.6 Watershed Water Quality Model Development</b>								498759.2.6 Watershed Water Quality Model Development																														
A2125	Receive Water Quality Data from MSDGC	100%	0	23-Jan-15 A	06-Feb-15 A			Receive Water Quality Data from MSDGC																														
A2130	Develop and Submit Draft WQ Model Assessment TM	100%	0	07-Feb-15 A	12-Mar-15 A	A2125, A2040		Develop and Submit Draft WQ Model Assessment TM																														
A2135	Develop and Submit Final Draft WQ Model Assessment TM	100%	0	12-Mar-15 A	12-Mar-15 A	A2130, A4590		Develop and Submit Final Draft WQ Model Assessment TM																														
A2160	Submit WQ Model Update Plan and LOE	100%	0	20-Mar-15 A	17-Apr-15 A	A2130		Submit WQ Model Update Plan and LOE																														
A2140	MSDGC/County Review of WQ Model Assessment TM	100%	0	24-Apr-15 A	08-May-15 A	A2130, A2135		MSDGC/County Review of WQ Model Assessment TM																														
A2170	MSDGC/County Approve WQ Model Plan	100%	0	24-Apr-15 A	15-Jun-15 A	A2160		MSDGC/County Approve WQ Model Plan																														
A2150	Finish and Submit WQ Model Assessment TM	100%	0	09-May-15 A	18-May-15 A	A2140		Finish and Submit WQ Model Assessment TM																														
<b>498759.2.6.2 Water Quality Model Development</b>								498759.2.6.2 Water Quality Model Development																														
<b>498759.2.6.2.1 Update Headwater Flow and Load Calculations</b>								498759.2.6.2.1 Update Headwater Flow and Load Calculations																														
A5500	Headwater Flow Re-calculation	100%	0	23-Jan-16 A	08-Feb-16 A			Headwater Flow Re-calculation																														
A5510	Compile/analyze historical water quality data at boundary	100%	0	23-Jan-16 A	08-Feb-16 A	A5500		Compile/analyze historical water quality data at boundary																														
A5520	Compile/analyze new (2015) water quality data at boundary	100%	0	08-Feb-16 A	19-Mar-16 A	A5510		Compile/analyze new (2015) water quality data at boundary																														
A5530	Statistically derive concentrations of Conservative Substances	100%	0	22-Feb-16 A	02-May-16 A	A5510, A5520		Statistically derive concentrations of Conservative Substances																														
A5540	Statistically derive concentrations of Remaining Substances	100%	0	22-Feb-16 A	02-May-16 A	A5510, A5520, A		Statistically derive concentrations of Remaining Substances																														

■ Remaining Level of Effort   
 ■ Remaining Work   
 ◆ Milestone  
■ Actual Work   
 ■ Critical Remaining Work   
 ▼ Summary



