



## RESOLUTION 2015-008

### **AUTHORIZING THE CITY MANAGER TO ENTER INTO A PROFESSIONAL SERVICES CONTRACT WITH MURRAY SMITH AND ASSOCIATES, INC (MSA) FOR THE STORMWATER MASTER PLAN UPDATE PROJECT**

**WHEREAS**, the existing City of Sherwood Stormwater Master Plan was adopted by Resolution Number 2007-066 on July 17, 2007; and

**WHEREAS**, it is common industry practice to revise and update utility master plans on a seven year cycle to account for changes in the systems configuration, degradation of systems components, and to help establish a 5-year Capital Improvement Project (CIP) budget program; and

**WHEREAS**, City staff solicited a proposals for Master Plan development and jurisdictional agency process approval through the Daily Journal of Commerce (DJC) on September 3, 2014 and again on September 5, 2014. The Request for Proposal (RFP) was open to all consultants in compliance with the formal qualifications based selection procedure established by Oregon Administrative Rules (OAR) 137-048-0220 and Oregon Revised Statutes (ORS) 279A through 279C; and

**WHEREAS**, the City received one (1) qualified consultant proposal; and

**WHEREAS**, that City staff acting as a selection committee reviewed, scored and ranked the consultant submittal in accordance with the selection requirements of the RFP; and

**WHEREAS**, the final outcome of the selection review process confirmed that the proposal was a strong proposal and the firm was well qualified allowing the City to move forward with making an offer to Murray Smith and Associates, Inc. (MSA) to enter into a final scope of work and fee negotiations for the project work; and

**WHEREAS**, City staff and MSA agreed to a final scope of work and related fee which meets the RFP requirements and the budget constraints established for the project (see attached Exhibits A – Scope of Work, Exhibit B – Fee Schedule, Exhibit C - Schedule); and

**WHEREAS**, MSA's contract fee for the proposed scope of work is an amount not to exceed \$113,500.00.

### **NOW, THEREFORE, THE CITY OF SHERWOOD RESOLVES AS FOLLOWS:**

**Section 1.** The City Manager is authorized to enter into a professional services contract with Murray Smith and Associates, Inc. (MSA) for the project scope, fee and schedule described in the attached Exhibits A, B and C, in an amount not to exceed \$113,500.00.

**Section 2.** The City Manager is authorized to amend the contract by up to \$5,675.00 (5% contingency) for unanticipated issues, for a project total not-to-exceed budget amount of \$119,175.00.

**Section 3.** This Resolution shall be effective upon its approval and adoption.

**Duly passed by the City Council this 20<sup>th</sup> day of January 2015.**

  
Krisanna Clark, Mayor

Attest:

  
Sylvia Murphy, MMC, City Recorder

**EXHIBIT A  
PROPOSED SCOPE AND FEE FOR  
STORMWATER MASTER PLAN UPDATE  
CITY OF SHERWOOD, OREGON**

This scope of work is for professional engineering services between Murray, Smith & Associates, Inc. (MSA) and the City of Sherwood, Oregon (City) to develop a Stormwater Master Plan Update (Plan).

**Background**

This project will provide the City with an updated Stormwater Master Plan including conveyance system capital improvement recommendations and budget-level capital cost estimates. The Plan will also consider City input regarding maintenance and pipe condition to inform recommendations for future maintenance, repair, and replacement. A hydraulic model will be developed for the conveyance system and used as the tool for evaluating capacity deficiencies. All improvement analysis will emphasize satisfactory compliance with Oregon Department of Environmental Quality (DEQ) and Clean Water Services (CWS) regulatory requirements. Additionally, the Plan will include summaries of regulatory requirements and intergovernmental agreements (IGAs). The project will employ workshops and presentations to solicit City input and develop consensus at key points in the master planning process.

**SCOPE OF SERVICES**

**Task 1 –Project Management**

The purpose of this task is to provide management of the project team, schedule and budget. As project manager, Michael Carr, PE, will maintain communication with the City and the team throughout the duration of the project, lead meetings and workshop discussions, keep the City up-to-date on any study issues or details and make sure the City's input is incorporated into the work product.

***Subtask 1.1 – Kick-Off Meeting***

A kick-off meeting will be held, once notice to proceed has been received, to allow the City and the MSA team to begin working together. MSA will attend and lead the kick-off meeting with City Staff to introduce the project team, establish project objectives, review consultant and City communication protocol, discuss the project scope and examine the project schedule including key delivery dates. The primary focus of this meeting will be a discussion of the City's goals for the project.

This subtask assumes up to a two (2) hour kick-off meeting with the MSA project manager, one (1) task lead and one (1) support staff. Two (2) hours of preparation time is included for the PM. MSA will provide meeting minutes from the kick-off meeting in electronic format.

### ***Subtask 1.2 – Progress Reports and Billings***

Included in this subtask are monthly invoicing, budget and schedule review, updates, and general administrative tasks. The project will be managed to maintain the scope, schedule, and budget. At a minimum, updates on project schedule and budget will be provided as part of the monthly invoicing process.

### ***Subtask 1.3 – Progress/Work Meetings***

Progress meetings and workshop facilitation will be limited to those specifically identified in this scope of work. Additional communication will be handled through phone calls and email as needed.

### ***Subtask 1.4 – Subconsultant Coordination***

MSA will coordinate on a regular basis with our subconsultant(s) and at key project milestones.

### ***Subtask 1.5 – Quality Assurance/Quality Control (QA/QC)***

This subtask accounts for management of in-house and City reviews of various interim and final work products as outlined in the scope of work. The subtask assumes the City will provide clear, concise and timely input and review on the work products produced by the consultant. All interim deliverables (prior to compiled draft documentation in Task 4) are assumed to be delivered in electronic format (Microsoft Word and PDF).

## **Task 2 – Data Collection/Study Area Characteristics**

In this task, MSA will review background information and develop a formal data request for completion of the work. Data will be requested from both the City and Clean Water Services (CWS). This task assumes the City and CWS will provide clear, concise and timely data as requested to the consultant. Where applicable, planning assumptions will be used from the City's Sanitary Sewer (SSMP) and Water Master Plan (WMP) update to minimize duplication of effort and to maintain consistency between planning documents.

Also under this task current and prior planning will be evaluated and general study area characteristics will be documented. Stormwater basins will be defined and characterized within the Urban Growth Boundary (UGB) and designated areas of interest in the METRO Urban Reserve (URA). These areas include the West Urban Reserve, Tonquin Employment Area (TEA), Tonquin Urban Reserve, and Brookman Annexation Area. Other URAs are assumed to be excluded from the study. A draft version of the "Study Area" section of the master plan will be provided to the City for review.

### ***Subtask 2.1 – Information Compilation and Review***

Compile and review prior City and CWS studies, plans and reports, as well as available planning guidance documents and design standards. It is anticipated that the following documents will be included in this evaluation work:

- Current City budget.
- Storm Sewer collection system maintenance reports.
- Three years of accurate budget data showing real cash flow for both income and expenses.
- Intergovernmental Agreement with Clean Water Services.
- City of Sherwood Stormwater Master Plan, June 2007, Murray, Smith & Associates, Inc.
- Clean Water Services Storm Sewer Master Plan.
- City of Sherwood, Comprehensive Plan.
- Adams Avenue North Concept Plan.
- Brookman Road Concept Plan.
- Tonquin Employment Area Concept Plan.
- Sherwood Town Center Plan.
- Urban Growth Boundary expansion study areas.
- City of Sherwood GIS mapping of known existing stormwater systems showing rim and invert elevations, and pipe sizes.
- Sherwood zoning map.

### ***Subtask 2.2 – Study Area and Basin Characterization***

Review current land use designations and characteristics based on the City's current Comprehensive Plan and information provided by the City's Planning Department to define the study area and its uniqueness relative to storm sewer system analyses. Identify unique hydrologic characteristics including soil types, topography, vegetation, and others. Confirm characteristics relative to updated storm sewer system analyses.

### ***Subtask 2.3 – General Planning Criteria Review***

Identify general planning criteria that are applicable to the development of the Stormwater Master Plan, including City and CWS standards.

### ***Subtask 2.4 – Base Mapping Development***

Under this task a base map will be developed to be utilized for the storm sewer system mapping. It is anticipated that the current Water System Master Plan mapping that was recently prepared by MSA will serve as the basis for developing an up to date storm sewer system map of the City, with key information from available previous infrastructure mapping provided by the City and/or CWS. The base mapping will include drainage basins and sub-basins delineated within the study area, digital topography, rights-of-way, tax lots, land use,

zoning and other important features. The mapping will include the Tonquin, West Sherwood, and South Sherwood Urban Reserve Areas and contemplated AI's. Other mapping resources (including USGS, Metro, State, etc.) will be utilized as necessary to develop an accurate base map.

### **Task 3 - Existing Storm Sewer System Review**

Under this task, the previous existing storm sewer facilities inventory in the study area will be updated and documented on a map of the existing system. Existing storm sewer system data and features will be evaluated. Included in this task are meetings with City staff to review and verify data and to conduct site inspections of major components to quantify conditions. This task assumes the City participate in the project meetings and in interviews related to system facilities inventory work. Sensitive lands and problem areas will be identified and inventoried, and all current federal, state, and local regulations will be reviewed relative to the prospective Stormwater Master Plan Update.

#### ***Subtask 3.1 – Existing System Inventory and Conditions Update***

Based on the available mapping and data collected, all existing system inventories of the City will be updated. A review will be made of City-provided mapping for the existing storm sewer system and associated system data relative to prior 2007 planning conditions and plan update requirements. All improvements completed since the publication of the prior plan will be noted and an overall map of the existing system will be developed for purposes of master plan presentation. MSA will coordinate with City Staff to review and verify data. All physical parameters necessary for system analysis will be summarized. Sherwood's updated existing storm sewer system will be described and will include relevant revisions to the community, system infrastructure, regulatory, and financial background information.

1. *Community Background* – The existing customer base and land use; residential, commercial and industrial customers; political jurisdictions and agreements; population and history of Sherwood's storm sewer system will be updated.
2. *Storm Sewer System Infrastructure Background* – Information and mapping of the physical features of the existing system will be prepared as will an explanation of how the system is currently operated (Operational Strategy). It will also include information on storm sewer discharge volumes. CWS is responsible for trunk sewers (24-inch diameter and above). The SWMP update will have any alterations as to how the Sherwood collection system interrelates to the regional system since the last documentation. All master planning work will be consistent with the planning work being done by CWS. Included in the documentation will be a discussion of existing reserve capacity, evaluation of future urban area service potential, and a discussion of the computer model, maps, and system expansion strategies.
3. *Federal, State, and Local Rules and Regulations* – A discussion of the current federal, state and local rules and regulations that relate to the Sherwood storm

sewer system will be provided as part of plan documentation. The plan must meet the requirements of State Facilities Planning Rule OAR 660-011. By City/Agency Intergovernmental Agreement (IGA), CWS is responsible for development and updating of a regional Surface Water Management (SWM) Plan that includes the Sherwood area. By IGA, the City and CWS share responsibilities for plan implementation. Current surface water management guidance is provided by the CWS Surface Water Management Plan, the ongoing CWS Healthy Streams Plan, EPA/DEQ Watershed-Based NPDES Discharge Permit, and Tualatin River Floodplain studies with FEMA. MSA will confirm all issues and interests that have a bearing on the City's SWMP update.

4. *Funding/Budget* – An updated description and discussion of Sherwood's existing funding mechanisms encompassing operations and maintenance (O&M) and capital improvements plan (CIP) will be included in the documentation, as will a discussion of the City's system development charge (SDC) and its inter-relationship with CWS. This general informational overview will serve as the basis for additional work under Subtask 4.5.

### ***Subtask 3.2 – Evaluation of Existing Features and Data***

The purpose of this task is to evaluate existing storm sewer system features and data. Work will include the following:

1. *Data Review* – Collected data will be reviewed. Any discrepancies, inconsistencies, or shortcomings in the data will be identified and documented.
2. *Staff Coordination and Site Inspections* – Meet with City Staff to review and verify data and to conduct site inspections of major components to quantify conditions as needed. Field reconnaissance of existing physical features, conditions, and systems will be provided, and any potential need for detailed field surveys to confirm critical elevations will be identified for completion beyond this scope of work.
3. *Evaluation of Facilities* – The evaluation of existing facilities will be performed in close consultation with City operations staff to ensure that all deficiencies of the existing facilities are identified and that the staff is included in the evaluation process and the development of recommended improvements.

### ***Subtask 3.3 – Identification of Sensitive Lands and Problem Areas***

Identify sensitive lands, streams, buffers, problem areas, utility easements, and rights-of-way to document areas that may hinder development. Assess which of these areas may offer constraints or opportunities for storm/surface water control facilities.

1. *Sensitive Lands Inventory* – Obtain the current National Wetlands Inventory mapping and any other available local inventories of sensitive land and wetland areas.

2. *Problem Area Inventory* – Interview City and CWS staff regarding known problem areas.

#### **Task 4 - Storm Sewer System Analysis and Master Plan Development**

Under this task, MSA will develop the storm sewer system analyses and documentation, and complete the SWMP update element of the project. Operational deficiencies and infrastructure deficiencies of the existing storm system will be identified through reviewing existing reports, holding interviews with the appropriate City staff, and conducting field investigation. Infrastructure requirements will include the need to make appropriate considerations for future service both inside and outside the current UGB. Existing reserve capacity will be reviewed to evaluate potential service extensions for future urban areas.

##### ***Subtask 4.1 – Hydrologic/Hydraulic Evaluation, System Analysis and Storm System Plan Development***

Perform hydrologic/hydraulic system evaluation utilizing software compatible with PC-SWMM hydraulic engine, using the “unit hydrograph” method of analysis. Model existing systems for 25-year frequency return storm design criteria in accordance with current CWS standards and develop recommendations for improvements accordingly. Sub-elements include:

1. *Update Hydrologic Component of Model* – Update hydrologic information for the drainage sub-basins. Prepare rainfall input data for the SCS Type 1A, 24-hour duration, 25-year frequency design storm, in accordance with current CWS standards. This task identifies the rainfall characteristics and corresponding stormwater run-off characteristics, by sub-basin, throughout the study area.
2. *Develop Hydraulic Component of Model* – Develop the analytical hydraulic model. This task develops the model input data that defines the storm drainage conveyance system, including existing and proposed pipe configuration, pipe size, invert elevations, pipe slopes, general open channel geometry, detention areas, etc.
3. *Perform Model Runs and Determine Improvements* – Model the storm drainage system based on the 25-year design storm. Identify required system improvements for the updated analysis approach and design criteria. Identify improvements required in the short term to correct existing deficiencies, and in the long term to provide for future development.
4. *Master Plan Map* – Develop an updated master plan map that identifies locations of deficiencies in the system.
5. *Hydrologic/Hydraulic Analysis Documentation* – Describe and document the updated analysis methodology and respective results with report text for inclusion in the Stormwater Master Plan Update.

### ***Subtask 4.2 – Alternatives Development and Evaluation***

The purpose of this task is to analyze and identify potential storm sewer facility collection and conveyance alternatives and select the most viable alternatives for further analysis. The subtask assumes the City will provide input and feedback as alternatives are developed, analyzed, screened, selected and recommended. Anticipated work under this item includes the following elements:

1. *Storm Sewer System Analysis* – Using the data collected and the hydraulic model, alternatives to improve system deficiencies, eliminate system restrictions, and accommodate future service areas will be developed and evaluated. These alternatives will include gravity storm sewers and detention facilities to adequately collect and convey stormwater under current and future flow conditions. The proposed alternative will meet the previously listed goals and will address future storm system demands, infrastructure needs, regulatory issues, and implementation. Each alternative ultimately recommended will include a detailed description, cost analysis, layout drawings, or other appropriate material.
2. *Operations Alternatives* – As part of this subtask system, operation strategies will be reviewed and alternative approaches developed. This work includes relevant CWS operations objectives and recommendations on how those can be achieved by the City.
3. *Infrastructure Alternatives* – Detailed improvement alternatives for conveyance and treatment to an approved outfall will also be developed. Alternatives for expanding the conveyance system to serve future storm system demand within the Sherwood UGB and AI will be developed, including line sizes and treatment facilities. All alternatives will be developed in close coordination with designated City staff from the Public Works and Engineering Departments. Public Works will be involved in implementing system operations and maintenance strategies. The Engineering Department will be responsible for implementing capital improvement projects.
4. *Selection of Preferred Alternatives* – Under this subtask, MSA will provide guidance and recommendations to the City with a common sense approach to complying with applicable regulations. Alternatives that are technically sound, protective of the environment, respectful of the surrounding community, and cost-effective in collecting and conveying or treating stormwater and that meet City goals and objectives, will be selected. The selected alternatives will be described in further detail and will include a project cost estimate.

### ***Subtask 4.3 – Cost Estimates***

Under this subtask planning level project cost estimates will be developed for all recommended improvements. Detailed break downs of cost estimating data will be provided to allow for quick reference and updating purposes. All project cost estimates will include appropriate allowances and contingency factors as well as cost index referencing to provide

for future cost estimate updating. SDC eligible portions of each improvement will be identified.

***Subtask 4.4 – Improvement Prioritization and CIP Coordination***

Included in this subtask is a review of proposed improvements and associated costs with City staff to establish prioritization guidance. With City input on project priorities, a prioritized CIP will be developed for inclusion in the master plan document. The CIP will be tabulated with grouped and prioritized annual recommended improvements and include project cost estimates and tabulated annual capital cost needs, as well as average capital cost needs, on a five-year increment basis. The CIP will consist of a list of recommended improvements and budget level project cost estimates for each proposed improvement, consistent with Oregon Administration Rule (OAR) 660-011-0005(2) and OAR 660-011-035.

The list will include a brief description of each improvement and the benefits of undertaking and completing the improvement. The CIP will include an implementation program that will identify and prioritize the recommended improvements so that immediate improvements can be included in the current 5-year CIP and others can be programmed into subsequent planning horizons. The program will also identify key regulatory dates or other critical dates when specific improvements may be required.

***Subtask 4.5 – Stormwater Master Plan Update Documentation***

Under this subtask, an updated comprehensive Stormwater Master Plan document that includes text narrative, tables, figures, and maps that describe and present findings and recommendations will be developed. For budgeting purposes, it is assumed that:

- a. Ten (10) Draft Plan copies will be provided for City review and comment;
- b. Twenty-five (25) bound copies of the Final Recommended Plan, and twenty-five (25) copies of a simple summary brochure will be provided to City staff to begin the public hearing process;
- c. One (1) CD with electronic files in PDF format, along with twenty-five (25) bound copies of the Final Adopted Plan, and fifty (50) copies of a simple executive summary brochure, will be provided to the City within two (2) weeks of final adoption.

Key elements of this documentation work include:

1. *Project Purpose, Background, and Need Statement* – Develop a summary description of the overall purpose of the Stormwater Master Plan Update, the background on the stormwater collection and treatment, and the need for the plan.
2. *Recommended Plan* – A clear description and documentation of the recommended improvements plan will be presented, allowing Sherwood to meet the goal of providing stormwater service to existing and future users within the UGB. The

plan will include the recommended stormwater system operational strategy and include other recommended operational and maintenance improvements.

3. *Prioritized Capital Improvement Plan* – Annual project cost summaries tabulated for the 20-year planning horizon and at saturation development will be developed. This table outlines and tabulates proposed plans and alternatives developed and prioritized jointly by the entire project team. The recommended physical improvements will encompass treatment, collection, detention and transmission to the CWS system. Detailed mapping, narrative project descriptions, and cost tables will be included. Costs will be based on the current year and will be indexed to the most applicable ENR index for future construction.
4. *Executive Summary, Conclusions, and Recommendations* – An executive summary will be completed as part of the plan documentation work and will provide a brief and concise summary of the findings of the Master Plan, including a statement of the project purpose and goals behind the preparation of the Master Plan. It will include conclusions and summaries, as well as a detailed list of the recommendations for the Master Plan, including project descriptions and cost estimates, an operational strategy and a detailed capital improvement plan.
5. *Appendices* – The Master Plan appendix will include data, modeling results, reference list, maps, other reports, and any additional material necessary to provide all background information used in developing the Master Plan recommendations. If appropriate, the appendix may be bound in a separate volume.

#### ***Subtask 4.7 – Areas of Interest (AI) Documentation***

Growth within potential Urban Growth Boundary (UGB) expansion areas, Urban Reserve Areas (URAs) and other Areas of Interest (AI) will drive the improvement needs within the City's existing stormwater system. However, due to constraints placed on municipalities for planning for these future areas by the Oregon Department of Land Conservation and Development (DLCD), explicit documentation of areas outside of the METRO delineated URAs must be omitted from master planning reports. Under this subtask, a separate technical memorandum will be prepared documenting the findings of potential impacts to the City's stormwater system due to development with the study area defined by the City, including all UGB infill, UGB expansions, URAs, and AI. The subtask assumes the City will provide input as the AI are further identified, defined and configured.

Documentation will include a summary of hydraulic capacity interests, a general assessment of likely impacts, and general recommendations for long-term management of natural stream corridors that may be subjected to urbanized development conditions.

#### **Task 5 – Master Plan Coordination and Presentation**

Under this task, MSA will participate in project progress reviews and workshops, coordinate with City and CWS staff, and assist City staff in the presentation of the Stormwater Master

Plan. The task assumes the City will assist in the preparation and presentation strategies for the Planning Commission, the City Council presentations, public hearings and other public workshops.

***Subtask 5.1 – City Staff Reviews***

As draft chapters are completed, they will be presented to City staff for review and comment. It is anticipated that reviews will occur at the 60% and 90% completion levels. Upon submission of the draft plan documents, MSA will meet with City staff to review drafts and discuss any comments or questions regarding the draft documents. Meeting minutes will be developed to reflect discussions and comments. Responses to the City’s comments will be prepared and, where applicable, incorporated into the final recommended documents. The City anticipates at least four weeks for reviews.

***Subtask 5.2 – City and CWS Coordination***

Coordinate analysis and planning methodologies and approaches with City and CWS staff. Ensure interagency support of analysis methodologies as work progresses. A copy of the plan will be submitted to CWS review and comment. Review CWS comments with City staff and address and incorporate comments as appropriate with final direction from City staff.

***Subtask 5.3 –Participate in Public and City Meetings***

MSA will assist City staff in presenting the draft and final plan at the following meetings. Meeting are assumed to be two hours in duration.

1. *Preliminary Planning Commission Meeting* – The meeting will be held prior to completion of the draft documentation. The presentation will address the goals of the master plan update, provide background on planning assumptions, and review the preliminary CIP. A PDF version of the presentation will be provided in advance to be included in the meeting packet.
2. *Technical Advisory Committee Meeting* – The meeting will be held after the City has reviewed the draft master plan document. The presentation will address the purpose of the master plan update, provide details on planning assumptions and improvement alternatives analysis, and present the CIP.
3. *Planning Commission Meeting* – The meeting will be held after completion of the draft final master plan document. The presentation will address the purpose of the master plan update, provide background on planning assumptions and improvement analysis, and present the finalized CIP. A PDF version of the presentation and master plan “Executive Summary” will be provided in advance to be included in the meeting packet.
4. *Public Open House* – The open house will be held after completion of the draft final master plan document. A brief presentation will address the purpose of the

master plan update, provide background on planning assumptions, and present the finalized CIP. MSA will provide four D-size posters for display.

5. *City Council* – The meeting will be held to adopt the master plan document. A brief presentation will address the purpose of the master plan update, provide background on planning assumptions, and present the finalized CIP. A PDF version of the presentation and master plan “Executive Summary” will be provided in advance to be included in the meeting packet.

### BUDGET

The overall not to exceed budget estimate for this project is \$113,500 as shown in Table 1 and Exhibit B. The work provided in this Scope of Work will be billed on a time and expense basis.

**Table 1. Total Project Fee**

Item	Hours	Fee
Task 1: Project Management	54	\$9,906
Task 2: Data Collection/Study Area Characteristics	60	\$7,933
Task 3: Existing Storm Sewer System Review	120	\$18,692
Task 4: Storm Sewer System Analysis and Master Plan Development	462	\$60,440
Task 5: Master Plan Coordination and Presentation	100	\$16,529
<b>Project Total</b>		<b>\$113,500</b>

### TIME OF PERFORMANCE

The Plan is anticipated to be completed over a period of approximately 10 months, beginning in January 2015. MSA will make every effort to complete the work in a timely manner; however, it is agreed that MSA cannot be responsible for delays occasioned by factors beyond its control, nor by factors that could not reasonably have been foreseen at the time this scope was executed. A schedule is provided in Exhibit C.

**Stormwater Master Plan Update  
City of Sherwood  
Fee and Labor Estimate  
EXHIBIT B**

	LABOR CLASSIFICATION (HOURS)					Total Hours	ESTIMATED FEES			
	Project Manager	Project Coordinator	Project Engineer	Senior Reviewer	Admin. I		Labor	Subconsultant	Expenses	Total
	M. Carr \$172	N. McMurtrey \$132	T. Walsh \$108	\$186	\$69			M. Wolfe Regulatory		
<b>Task 1: Project Management</b>										
1.1 Project Kick Off Meeting and Project Schedule	4	2		2		8	\$ 1,324		\$ 13	\$ 1,337
1.2 Progress Reports and Billings	16					16	\$ 2,752		\$ 28	\$ 2,780
1.3 Progress Meetings	8	4			4	16	\$ 2,180		\$ 22	\$ 2,202
1.4 Subconsultant Coordination	4					4	\$ 688		\$ 7	\$ 695
1.5 Quality Assurance/Quality Control (QA/QC)	8			8		16	\$ 2,864		\$ 29	\$ 2,893
<b>Task 1 Subtotal</b>	<b>40</b>	<b>6</b>	<b>0</b>	<b>10</b>	<b>4</b>	<b>60</b>	<b>\$ 9,808</b>	<b>\$ -</b>	<b>\$ 98</b>	<b>\$ 9,906</b>
<b>Task 2: Data Collection/Study Area Characterization</b>										
2.1 Information Compilation and Review	2	8	8			18	\$ 2,264		\$ 87	\$ 2,351
2.2 Study Area and Basin Characterization	2	8	4			14	\$ 1,832		\$ 50	\$ 1,882
2.3 General Planning Criteria Review	2	8	4			14	\$ 1,832		\$ 50	\$ 1,882
2.4 Base Mapping Development	2	4	8			14	\$ 1,736		\$ 81	\$ 1,817
<b>Task 2 Subtotal</b>	<b>8</b>	<b>28</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>\$ 7,664</b>	<b>\$ -</b>	<b>\$ 269</b>	<b>\$ 7,933</b>
<b>Task 3: Existing System Inventory, Flow Projections and Planning Criteria</b>										
3.1 Existing System Inventory and Conditions Update	4	8	4	4		20	\$ 2,920	\$ 11,000	\$ 61	\$ 13,981
3.2 Evaluation of Existing Features and Data	4	16	4			24	\$ 3,232		\$ 64	\$ 3,296
3.3 Identification of Sensitive Lands & Problem Areas	2	8				10	\$ 1,400		\$ 14	\$ 1,414
<b>Task 3 Subtotal</b>	<b>10</b>	<b>32</b>	<b>8</b>	<b>4</b>	<b>0</b>	<b>54</b>	<b>\$ 7,552</b>	<b>\$ 11,000</b>	<b>\$ 140</b>	<b>\$ 18,692</b>
<b>Task 4: Sanitary Sewer System Analysis and Alternatives Analysis</b>										
4.1 Hydrologic/Hydraulic Evaluation, System Analysis & Storm Sewer System Plan Development	8	32	60	4		104	\$ 12,824		\$ 608	\$ 13,432
4.2 Alternatives Development and Evaluation	8	24	24			56	\$ 7,136		\$ 263	\$ 7,399
4.3 Cost Estimates	4	24	4			32	\$ 4,288		\$ 75	\$ 4,363
4.4 Improvement Prioritization & CIP Coordination	4	60	24			88	\$ 11,200		\$ 304	\$ 11,504
4.5 Stormwater Master Plan Update Documentation	8	60	8	4	40	120	\$ 13,664		\$ 1,810	\$ 15,474
4.6 Areas of Interest (AI) Documentation	8	40	8	2	4	62	\$ 8,168		\$ 100	\$ 8,268
<b>Task 4 Subtotal</b>	<b>40</b>	<b>240</b>	<b>128</b>	<b>10</b>	<b>44</b>	<b>462</b>	<b>\$ 57,280</b>	<b>\$ -</b>	<b>\$ 3,160</b>	<b>\$ 60,440</b>
<b>Task 5: Development of Recommended Plan and Capital Improvement Program (CIP)</b>										
5.1 City Staff Reviews	8	8	4	2		22	\$ 3,236		\$ 64	\$ 3,300
5.2 City & CWS Coordination	8	8	4			20	\$ 2,864	\$ 2,200	\$ 61	\$ 5,125
5.3 Participate in Public and City Meetings	24	16	8			48	\$ 7,104		\$ 1,000	\$ 8,104
<b>Task 5 Subtotal</b>	<b>40</b>	<b>32</b>	<b>16</b>	<b>2</b>	<b>0</b>	<b>90</b>	<b>\$ 13,204</b>	<b>\$ 2,200</b>	<b>\$ 1,125</b>	<b>\$ 16,529</b>
<b>TOTAL - ALL TASKS</b>	<b>138</b>	<b>338</b>	<b>176</b>	<b>26</b>	<b>48</b>	<b>726</b>	<b>\$ 95,508</b>	<b>\$ 13,200</b>	<b>\$ 4,792</b>	<b>\$ 113,500</b>

