City of Louisville

Water Efficiency Grant Application Submittal

The following application is submitted by the City of Louisville (City) to receive funding from the Colorado Water Conservation Board's (CWCB) Water Efficiency Grant Program for completion of a Water Conservation Plan. The application follows the recommended format in the *Grant Guidelines for Water Conservation Planning Projects* (revised by the CWCB Board on November 20, 2008). The Water Conservation Plan would follow the Water Conservation Plan Development Guidance Document.

1. Entity Contact Information

Kurt Kowar
Director of Public Works
City of Louisville
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Email: kurtk@louisvilleco.gov

2. Project Team

The project team will include staff members from the City who are familiar with the City's water supply and water distribution systems, previous water conversation efforts, City planning and development, and City finances. Dmitry Tepo, a Water Resources Engineer, will be the City's Project Manager and the primary point of contact. He will be supported primarily by Kurt Kowar-Public Works Director, Troy Russ-Planning Director, Kevin Watson- Finance Director, and other staff members as needed.

The City is planning to hire an outside company to provide technical support to assist with preparation of the Water Conservation Plan, but the selection has not been finalized. If the selected company is CH2M HILL, Holly Werth will serve as the Project Manager and be the primary point of contact for the City. Holly is a project manager and has served clients in the Colorado Front Range for 12 years. She has a broad range of experience including assisting with conservation planning, wastewater facility planning, reuse master planning, and water and wastewater treatment facility planning and design. She is also a professional engineer in the State of Colorado. Also on the project team, as a subconsultant, will be Peter Mayer of WaterDM. Peter Mayer is a professional engineer with expertise in urban water use, water efficiency, demand management, and water resource planning. In 2013, Peter founded WaterDM – Water Demand Management, a consulting firm focused on working with utilities to develop conservation planning, drought response, water budgets, and information systems designed to educate and inform water utilities and customers alike. The budget presented in this application is for the CH2M HILL team.

3. Retail Water Delivery

The City has two water treatment facilities with capacity to treat up to 13 million gallons per day (MGD) of surface water; the City does not have any groundwater sources. The City accounts for its potable water delivery using water meters. All customers, billed or non-billed, have water meters to measure water use. There are seven customer categories, summarized in Table 1.

TABLE 1

Summary of Potable Water Delivery Customer Categories

Category	Code	Description	Metered (Y/N)	Billed (Y/N)
City	CITY	Indoor and outdoor use at City facilities including parks, recreation centers, pools, and golf courses. The golf courses can be irrigated with raw, reuse, or potable water.	Y	N
Residential-Inside	RESI	Single family home, inside City limits, indoor and outdoor use	Y	Y
Residential-Outside	RESO	Single family home, outside City limits, indoor and outdoor use	Y	Y
Multifamily	MF	Multifamily, inside and outside City limits	Y	Y
Commercial-Inside	COMI	Commercial, inside City limits, indoor and outdoor use	Y	Y
Commercial-Outside	COMO	Commercial, outside City limits, indoor and outdoor use	Y	Y
Irrigation	IRRI	Dedicated taps for outdoor water use for commercial, HOA landscaping	Y	Y

A summary of potable water consumption for the last five years (2008-2012) based on metered data is provided in Table 2.

TABLE 2

Potable Water Consumption (2008-2012 Meter Data)

Year	CITY [1] (MG)	RESI (MG)	RESO (MG)	MF (MG)	COMI (MG)	COMO (MG)	IRRI (MG)	Total (MG)	Total (acre-feet)
2008	0.01	633.38	1.85	86.80	258.20	0.00	101.41	1,081.64	3319.44
2009	0.43	539.43	1.46	79.31	219.16	0.43	81.77	922.00	2829.51
2010	24.06	568.73	1.85	82.41	217.15	0.08	89.34	983.63	3018.65
2011	20.86	594.06	2.23	86.46	225.60	0.31	145.63	1,075.15	3299.52
2012	56.87	667.56	2.49	87.61	340.66	0.00	12.93	1,168.13	3584.88

[1] *The recording system for City water use data was not reliable for the years from 2008-2012. The accounting system for the category was recently fixed in 2013. The City estimates the annual usage for this category is approximately 100 MG.*

The average annual retail water delivery for the last five years based on metered data is 3210.40 acre-feet, which qualifies the City as a covered entity. This amount does not account for real or apparent water losses in the distribution system.

The City of Louisville obtains the majority of its water supply from South Boulder Creek through direct flow rights, storage rights, and exchanges. The City is also part of the Northern Water Colorado-Big Thompson (C-BT) project and the Municipal Sub-district Windy Gap project. The City also obtains water from Boulder Creek through exchanges and has some storage and direct flow rights on Coal Creek. The City maintains water rights for the municipal water system as well as for agricultural uses.

The City has raw water storage in local reservoirs including approximately 715 acre-feet in Harper Lake and 210 acre-feet in Louisville Reservoir. The City owns 375 shares in Farmers Reservoir and Irrigation Company (FRICO) Marshall Division; this ranges between 1 to 5 acre-feet per share. The City also has approximately 627 acre-feet of storage capacity in Marshall Lake belonging to the South Boulder & Coal Creek Irrigating Ditch Company. The City has a secondary use agreement with FRICO, which permits the use of any remaining water storage space by the City after the needs of other shareholders are met. The local raw

water storage capacity in the City's raw water supply system is 2,677 acre-feet (assuming 3 acre-feet per FRICO share). Overall the raw water storage for the City is somewhat limited.

The City also has a reuse water system that uses fully consumable water from the wastewater treatment plant effluent and provides irrigation water to Coal Creek Golf Course, Community Park, City's Sports Complex, Miner's Field, and the Waste Water Treatment Plant. Reuse water taps are also metered. On average the annual reuse system demand is approximately 275 acre-feet.

4. Projected Demands

The City completed a *Water System Facilities Plan* in July 2012 (Plan). Treated water demand projections were evaluated and summarized in the Plan using two different methods: one based on total population and one based on water use in different customer categories. High and low water use projections were calculated using each method. A summary of the treated water demand projections from the *Water System Facilities Plan* is provided in Table 3.

TABLE 3

Water Demand Projections (2014-2018)[1]

Year	Population[1]	Total Demand-Low (acre-feet)[2]	Per Capita-Low (gpcd)	Total Demand-High (acre-feet)[3]	Per Capita-High (gpcd)
2014	18,671	4238.64	202.7	5057.47	241.8
2015	18,758	4256.56	202.6	5075.39	241.6
2016	18,849	4274.77	202.5	5087.43	241.0
2017	18,941	4292.97	202.3	5099.48	240.4
2018	19,032	4311.17	202.2	5111.52	239.8

[1] Population and water demand projections from Water System Facilities Plan (July 2012). Extrapolated for years 2016-2018.

[2] From Water System Facilities Plan (July 2012). Low range based on projection using total population and per capita usage.

[3] From Water System Facilities Plan (July 2012). High range based on projection from user categories and pre-drought water use.

The water demand projections in Table 3 represent a conservative range of values appropriate for water supply and capital planning purposes. The per capita values used for the projections are slightly higher than historic values (see Tables 4 and 5 below). However, the historic per capita water use values represent a service area that is closer to build out for residential customers but has more space for additional commercial development remaining. The primary driver of the City's future water demand will be the commercial and industrial uses that may occur in Centennial Valley, the Phillips 66 property, and the Colorado Technology Center.

Single family units are essentially at build out and the City estimates multifamily units will reach build out in approximately 5 years. Commercial and retail development will lag behind and extend through the build out period. Most of the vacant spaces identified in the City's *2013 Comprehensive Plan* are planned (zoned) for commercial or industrial development. As commercial development occurs the value of gross per capita water use may increase even if the residents are using water more efficiently.

Build out of the City is currently projected to occur in 2032 at a population of 22,145.

5. Background Information Characterizing Water System

The City's service area includes customers inside and outside of the City limits. A map of the City and its water service area is provided in Figure 1. The City's service area is approximately eight square mile. As of 2012 there were 7,214 metered accounts in the system.

5a. Per capita water use for the last five years was calculated as metered per capita, residential per capita, and gross per capita according to the following methods:

- Metered per capita water use(gpcd) = Total metered water demand (gallons per day)/Total population
- Residential per capita water use (gpcd) = Total metered residential water demand (gallons per day)/Estimated single family home population
- Gross per capita water use (gpcd) = Total water production (gallons per day)/Total population

A summary of per capita water usage based on metered data from 2008 to 2012 is provided in Table 4.

TABLE 4

Per Capita Water Use Summary (2008-2012)

Year	Total Service Area Population[1]	Total Metered Water Demand (MG)	Metered Per Capita Water Use (gpcd)[1]	Single Family Population[2]	Residential Metered Water Demand (MG)	Residential Per Capita Water Use (gpcd)
2008	19,461	1,081.64	152.3	16,445	635.23	105.8
2009	19,656	922.00	128.5	16,523	540.89	89.7
2010	18,376	983.63	146.7	16,562	570.59	94.4
2011	18,410	1,075.15	160.0	16,292	596.29	100.3
2012	18,497	1,168.13	173.0	16,843	670.06	109.0

[1] *Population from Water System Facilities Plan (July 2012). The City's population in 2010 according to the 2010 US Census was 18,376. Population data from 2008-2009 was over-estimated so the per capita values are under-estimated for these years.*

[2] *Based on total number of residential customer accounts, assumes 2.6 persons per account.*

The average per capita water use from 2008-2012 was 152 gpcd and the average residential per capita water use for the same period was 100 gpcd. The population from the 2010 US Census was 18,376; population estimates from 2008-2009 were over-estimated so the per capita use values for these years is under-estimated.

The metered data in Table 4 also does not account for non-revenue water. For comparison the per capita water use based on treated water produced from the water treatment plant is summarized in Table 5, as well as the estimated percent non-revenue water. The average per capita water use from 2008-2012 based on treated water production was 185 gpcd. The average percent non-revenue water from 2008-2012 was 18 percent; this percentage reflects the water accounting error for City water demand that is a known issue. The percent non-revenue water will decrease as a result of changes to the accounting software in 2013.

TABLE 5

Per Capita Water Use Based on Treatment Plant Production

Year	Total Service Area Population[1]	Treated Water Production (MG)	Gross Per Capita (gpcd)	Non-Revenue Water (MG)	Percent Non-Revenue Water (%)[1]
2008	19,461	1,311.14	184.6	229.50	17.5
2009	19,656	1,170.81	163.2	248.82	21.3
2010	18,376	1,203.65	179.5	220.03	18.3
2011	18,410	1,262.35	187.9	187.20	14.8
2012	18,497	1,426.02	211.2	257.89	18.1

[1] *Represents unbilled authorized uses, real and apparent losses.*

5b. Population estimates for the last five years, current year, and the projected population for the next 10 years are provided in Table 6.

TABLE 6

Population Summary

Year	Estimated Population	% Change from Previous Year	Data Source
2008	19,461	-	Water Facilities Master Plan (July 2012)
2009	19,656	1.00	Water Facilities Master Plan (July 2012)
2010	18,376	-6.51	2010 US Census
2011	18,410	0.19	Water Facilities Master Plan (July 2012)
2012	18,497	0.47	Water Facilities Master Plan (July 2012)
2013	18,584	0.47	Water Facilities Master Plan (July 2012)
2014	18,671	0.47	Water Facilities Master Plan (July 2012)
2015	18,758	0.47	Water Facilities Master Plan (July 2012)
2016	18,849	0.49	Water Facilities Master Plan (July 2012)
2017	18,941	0.48	Water Facilities Master Plan (July 2012)
2018	19,032	0.48	Water Facilities Master Plan (July 2012)
2019	19,123	0.48	Water Facilities Master Plan (July 2012)
2020	19,215	0.48	Water Facilities Master Plan (July 2012)
2021	19,404	0.99	Water Facilities Master Plan (July 2012)
2022	19,594	0.98	Water Facilities Master Plan (July 2012)
2023	19,783	0.97	Water Facilities Master Plan (July 2012)
2024	19,973	0.96	Water Facilities Master Plan (July 2012)
2025	20,162	0.95	Water Facilities Master Plan (July 2012)

The population from the 2010 US Census was 18,376; population estimates from 2008-2009 were over-estimated.

5c. The City has limited local raw water storage capacity and water conservation is a component of the City's future water supply plan. The goal of the water efficiency plan will be to decrease treated water requirements by 500 acre-feet by build-out. Depending on how the City develops to build out this is approximately 5 to 10 percent of the forecasted total water demand.

5d. The City of Louisville is located in the South Platte Basin in Boulder County. The City has water rights along South Boulder Creek, a tributary to the South Platte River. In the most recent Statewide Water Supply initiative (SWSI) completed in January 2011, the South Platte Basin is one the basins facing an M&I gap in 2050. The M&I gap is the difference between the projected municipal and industrial (M&I) water demand and supplies from existing sources and supplies from Identified Projects and Processes (IPPs). The M&I gap for the South Platte Basin is projected to be 36,000 to 170,000 acre-feet per year depending on the success rate of IPPs (see Table 5-19 of SWSI). The SWSI also noted that from "a regional perspective, the largest gaps occur in the Northern region, consistent with the high levels of current and future demands and urbanization in Boulder, Larimer, and Weld Counties". There is also little to no unappropriated water remaining in the South Platte Basin.

The City's water supply originates from two primary sources: South Boulder Creek and the Northern Water Colorado-Big Thompson (C-BT) Project. The City is also part of the Municipal Subdistrict for the Windy Gap project. No additional raw water acquisitions are planned by the City; the existing water rights portfolio and efficient water use are thought to be adequate for supply.

6. Water Efficiency Plan Scope of Work

The Water Efficiency Plan Scope of Work is included as Attachment 1.

7. Water Efficiency Plan Budget

The estimated budget to complete the Water Efficiency Plan is included as Attachment 2.

Attachment 1 – Scope of Work

CH2M HILL Engineers, Inc. (Consultant) agrees to furnish the City of Louisville (City) professional services for the Water Conservation Plan. The Consultant's basis for estimating engineering costs for the project is based on the elements included in task descriptions and assumptions hereinafter.

Introduction

The City of Louisville (City) will complete a Water Conservation Plan with assistance from Consultant and Subconsultant. The Subconsultant is Peter Mayer with WaterDM. The estimated project fee in Attachment 2 is based on the task descriptions below.

The City's Water Conservation Plan will generally be developed following the Colorado Water Conservation Board's (CWCB's) July 2012 *Municipal Water Efficiency Plan Guidance Document* (CWCB Guidance Document). Tasks are aligned with the five planning steps to simplify review of scope and tracking of project progress.

The key deliverables to the CWCB are the Draft and Final Water Conservation Plans, as well as the 50 and 75 percent progress reports to the CWCB. A Draft Plan will be prepared for the City to review and comment. The Draft Plan will also be made available to the public for their review and comment following initial review by the City.

Task 1 – Profile Existing Water System

The Consultant will prepare a description of the existing water supply system and service area, provide an overview of the existing water supply reliability, identify water supply system limitations, future needs and planned actions to address these limitations and needs. A Project Kickoff meeting will be held with the City, Consultant, and Subconsultant.

Consultant will summarize the following in the Water Efficiency Plan as part of Task 1:

- City's location with respect to areas of current and future water needs as identified by the State Water Supply Initiative (SWSI) and other regional planning efforts,
- Summary of water supply system limitations and future challenges the City has for planning and operating the systems,
- Description of how the City intends to address its water supply system limitations and future challenges. This may include a description of specific facility enhancements, water acquisition, or water efficiency efforts necessary to meet the limitations/needs described above.

The City will provide Consultant with relevant prior reports or master plans that include information on the existing water system to support this and all subsequent tasks. Consultant will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City.

Meetings under this task include:

- Project Kickoff Meeting (1 hour)

Task 2 – Profile of Water Demands and Historical Demand Management

Consultant will describe customer categories, service area population and other information relevant to water demands such as housing age and large water users. Consultant will summarize historical water demand data and past and current demand management activities. Consultant will discuss how demand management activities and other factors have impacted historical water use and will estimate the amount of water saved through previous efforts. Consultant will summarize demand forecasts assuming no modifications to the currently implemented demand management activities. Consultant will developed a

water demand forecasts for the conservation planning horizon of 10 years based on per capita water demand and anticipated growth in the service area.

Consultant will summarize the following in the Water Efficiency Plan as part of Task 2:

- Description of customer categories (e.g. single-family, multi-family, commercial, municipal, irrigation),
- Historical water demand data (metered), distributed water from the treatment plant, and reclaimed water,
- Describe limitations associated with the availability of the demand data,
- Per capita water use,
- Estimate of non-revenue water,
- Monthly and annual treated metered water use by customer category,
- List of demand management activities implemented prior to this plan and the date of initial implementation,
- Estimated water savings from previous efforts,
- Water demand forecasts for the conservation planning horizon of 10 years based on per capita water demand and anticipated growth in the service area.

Task 3 – Integrated Planning and Water Efficiency Benefits and Goals

The purpose of this task is to summarize the role that water efficiency has in the City's water supply planning process. Consultant will summarize the City's current water supply planning efforts, water supply limitations, planned future water acquisitions or capital improvement projects, and the anticipated benefits of the water efficiency plan.

Consultant will organize a workshop (2 hours in length) with City staff to discuss the development of Tasks 1-3 with the final purpose of developing qualitative and quantitative water efficiency goals that support the City's water supply needs. The goals developed at the workshop will be used in the screening and evaluation process in Task 4 and will consider targeted total water savings, targeted water savings by customer class, and targeted water savings from system water loss control.

Consultant will summarize the following in the Water Efficiency Plan as part of Task 3:

- City's current water supply planning efforts, water supply limitations, planned future water acquisitions or capital improvement projects, and the anticipated benefits of the water efficiency plan,
- List of water efficiency goals for this plan and the how the City will measure the success of the goals,
- Forecast of the water demand for the conservation planning horizon of 10 years that incorporates the selected water efficiency elements from Task 4 (this will be completed after Task 4).

Meetings under this task include:

- Goal-Setting Workshop (2 hours)

Task 4 – Selection of Water Efficiency Activities

The purpose of Task 4 is to select and evaluate water efficiency activities for implementation. Consultant will follow the four-phased approach outlined in the CWCB Guidance Document: assessment, identification, qualitative screening, and evaluation and selection. Consultant will organize a workshop (2 hours) with City staff to discuss screening, evaluation and selection of water efficiency activities.

Water efficiency activities to be considered will be consistent with the SWSI Levels Framework:

- Foundational activities – including data tracking, metering and demand data collection, water rates, tap fees, and system water loss management control;
- Ordinances and regulations – including existing service area ordinances, new construction regulations, and points of sales ordinances for existing building stock;
- Targeted technical assistance and incentives –including utility/municipality water efficiency, management of largest customers demands, and management of remaining customer demands;
- Education activities – including one-way education, one-way education with feedback, and two-way education.

Consultant will summarize the following in the Water Efficiency Plan as part of Task 4:

- Description of the identification, screening and evaluation processes used to select the final activities and that demonstrate full evaluation,
- List of final selected water efficiency activities included in the new water efficiency plan,
- Justification for efficiency activities not implemented,
- Estimate of the amount of water that will be saved through water efficiency activities when the plan is implemented,
- Past, current, and selected metering programs including relevant past costs, estimated water savings, and lessons learned.
- Modifications and/or new metering programs planned as a result of this water efficiency planning effort,
- Existing billing system, frequency of billing, and available demand data,
- Modifications to the data collection and billing systems planned as a result of this water efficiency planning effort,
- Existing water rate structure by customer category and any proposed changes to the water rate structure or rates,
- Current and selected system water loss management and control programs,
- Current and selected incentives. Incentives to be considered include water-efficient fixtures and appliances (including toilets, urinals, clothes washers, showerheads, and faucet aerators); incentives to implement water efficiency techniques (including rebates to customers to encourage the installation of water efficiency activities); low water use landscapes, drought resistant vegetation, and efficient irrigation; and water-efficient industrial and commercial water-using processes; and reclaimed water systems.
- Selected educational activities.

Meetings under this task include:

- Water Efficiency Activity Assessment Workshop (2 hours)

Task 5 – Implementation and Monitoring Plan

The purpose of this task is to present how the City will implement and monitor the Water Efficiency Plan. As part of this task the Consultant will summarize the activities necessary to implement the water efficiency plan and monitor the overall effectiveness of the water efficiency plan.

Consultant will summarize the following in the Water Efficiency Plan as part of Task 5:

- Description of the steps the City will use to implement each of the water efficiency activities,
- Discussion on how reductions in water use could impact revenue and actions that will be taken by the City to help mitigate negative impacts,
- List of demand data and frequency to be collected during the monitoring period that may include total water use tracking such as total treated water distributed, system per capita water use, total indoor/outdoor water use, and/or system peak day water use, water use by customer category such as treated metered water use, per capita water use and/or indoor/outdoor metered use,
- List of other relevant data to be collected specific to the implementation of the activities that may include annual costs and avoided costs, lessons learned, water saving estimates, water efficiency participation tracking, precipitation data, and changes to the water efficiency program,
- The process to communicate monitoring and evaluation results to decision-makers, including the frequency of communication.

Task 6 – Public Review Process

A public review process is required as part of the approval process for the Water Efficiency Plan. It is assumed the City will organize and implement the Public Review Process in accordance with the CWCB Guidance Document. Consultant will attend one public meeting (2 hours) to support the City's presentation. The City will solicit, collect, and organize comments from the public and provide a summary of comments to the Consultant electronically. The City will provide a summary of any public meetings held during the process electronically in a Word document. The Consultant will attend one meeting with the City (via teleconference) to discuss public review comments.

The Consultant will summarize the following information in the Water Efficiency Plan as part of Task 6 to meet the requirement of the CWCB Guidance Document:

- Public review process and how the public accessed the plan,
- Public comments along with how the comments were addressed and summary of the meetings held during the review process,
- Process the City used for the plan to be officially adopted,
- Future steps to review and revise the plan, how monitoring results will be incorporated into update plans, and anticipated date of next water efficiency plan update.

Meetings under this task include:

- Public Meeting (2 hours)
- Meeting to discuss Public Comments (1 hour via teleconference)

Task 7 – Progress Reports and Water Efficiency Plan Preparation

The purpose of this task is to prepare the 50 and 75 percent progress reports for CWCB, and prepare the draft and final Water Efficiency Plans. Consultant will prepare the progress reports and plan and provide to the City. The City will prepare the submittal and send the documents to the CWCB. Consultant will organize a comment review meeting with the City to discuss review comments. The draft plan will be updated and a Public Review copy will be prepared for public review. If necessary the Consultant will attend one meeting with the City (via teleconference) to discuss CWCB comments.

Deliverables under this task include:

- 50 Percent Progress Report (provided to City electronically in Word)
- 75 Percent Progress Report (provided to City electronically in Word)

- Draft Water Efficiency Plan for City Review (provided electronically in Word and Adobe Acrobat)
- Public Review Water Efficiency Plan (provided electronically in Word and Adobe Acrobat)
- Water Efficiency Plan for Submittal to CWCB (provided electronically in Word and Adobe Acrobat)

Meetings under this task include:

- Comment Review Meeting (1 hour)
- Meeting to discuss CWCB Comments (1 hour via teleconference)

Task 8 – Project Management

Consultant will prepare, implement, monitor, and update the project execution plan throughout delivery of the work. The Consultant will manage, administer, coordinate, and integrate engineering services to deliver these services within budget and on schedule. Consultant will manage the subcontract and the work with the Subconsultant. Deliverables for each task will be internally reviewed by a Senior Technical Consultant prior to distribution to the City.

Deliverables under this task include:

- Monthly invoices with project status reports.

Schedule

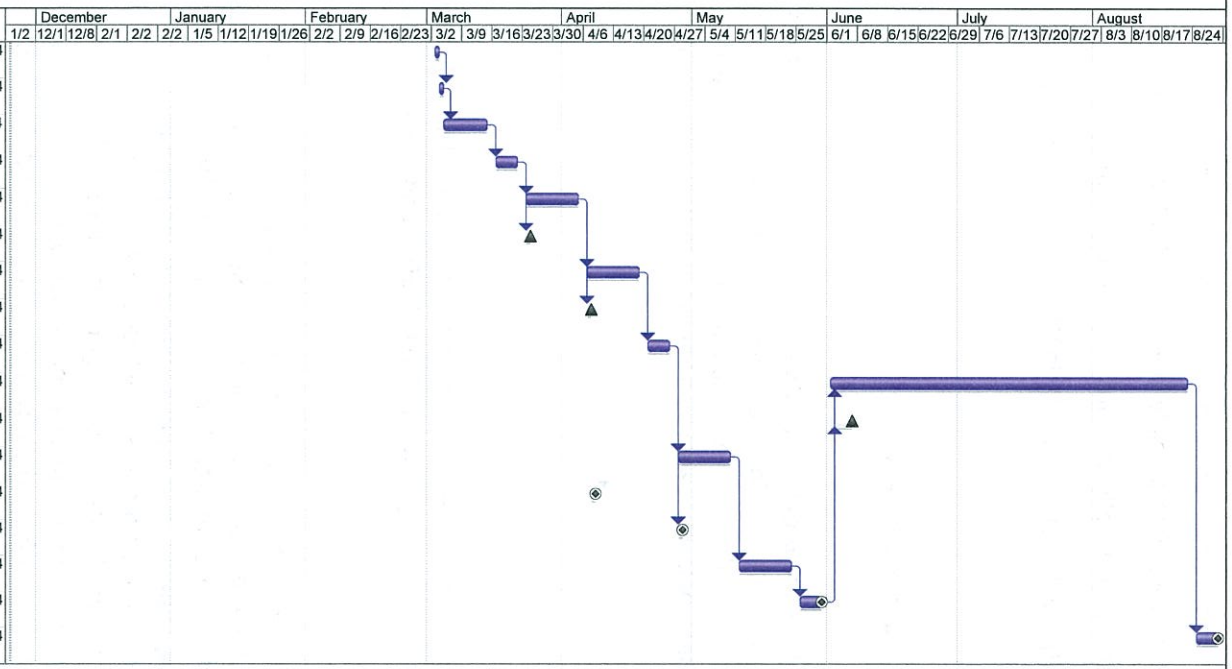
The schedule is dependent on the City's available budget and the approval of the CWCB Grant. The following schedule in Figure 1 assumes a notice to proceed from the City is given on March 3, 2014 and represents an estimated overall project schedule.

Payment

Compensation will be on a time and expense basis with labor billed at a raw labor multiplier of 3.10. The hourly billing rates will include allowances for salary, benefits, overhead, and profit. Subconsultant expenses billed at actual cost plus multiplier of 1.05, and direct expenses at actual cost or standard billing rates. Direct expenses will include travel, printing, mailing, copying, supplies, and other similar costs incurred in performance of the work. A budgetary amount for Consultant's services is included in Attachment 2. Consultant will make reasonable efforts to complete the work within this budget and will keep the City informed of progress toward that end so that the budget or work effort can be adjusted if found necessary. Consultant may adjust effort between tasks without approval from the City, but will not exceed the total budgetary amount without prior written approval from the City.

FIGURE 1
Estimated Project Schedule

ID	Task Name	Duration	Start
1	Notice to Proceed	1 day	Mon 3/3/14
2	*Kickoff Meeting*	1 day	Tue 3/4/14
3	**Task 1 - Profile Existing Water System**	8 days	Wed 3/5/14
4	**Task 2 - Profile Water Demands & Demand Management**	5 days	Mon 3/17/14
5	**Task 3 – Integrated Planning & Water Efficiency Benefits/G**	10 days	Mon 3/24/14
6	*Goal-Setting Workshop*	1 day	Mon 3/24/14
7	**Task 4 - Selection of Water Efficiency Activities**	10 days	Mon 4/7/14
8	*Water Efficiency Activity Assessment Workshop*	1 day	Mon 4/7/14
9	**Task 5 - Implementation & Monitoring**	5 days	Mon 4/21/14
10	**Task 6 - Public Review Process**	60 days	Mon 6/2/14
11	Public Meeting	5 days	Mon 6/2/14
12	**Task 7 - Progress Reports & Plan Preparation**	10 days	Mon 4/28/14
13	50% Progress Report to CWCB	1 day	Tue 4/8/14
14	75% Progress Report to CWCB	1 day	Mon 4/28/14
15	Draft Water Efficiency Plan (City Review)	10 days	Mon 5/12/14
16	Public Review Water Efficiency Plan Delivered to City	5 days	Mon 5/26/14
17	Water Efficiency Plan for CWCB Submittal	5 days	Mon 8/25/14



Project: WC Plan Schedule
Date: Mon 11/25/13

Task | Progress | Summary | External Tasks | Deadline
Split | Milestone | Project Summary | External Milestone

Attachment 2 - Budget Summary
City of Louisville - Water Conservation Plan

	Holly Werth Project Manager		Brian Skeens Sr. Technical Advisor		Tyler Nading Project Engineer		Administration Summary	Contracts		Accounting		Administration		Labor Hours	CH2M Labor $	Peter Mayer Subconsultant		Expenses	Total Consultant Team Cost	Estimated City Hours	Estimated City $ In Kind	Total Project Cost	CWCB Grant Request
Hourly Rates [1]	$157.77		$189.34		$116.10		-	$173.76		$77.19		$74.94			$	$173.25	$	$	$	Hours	$85	$	$
	Hours	$	Hours	$	Hours	$		Hours	$	Hours	$	Hours	$			Hours							
Task 1 - Profile Existing Water System	6	*$946.62*	0	*$0.00*	0	*$0.00*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	12	$946.62	6	$1,039.50	$0.00	$1,986.12	8	$680.00	$2,666.12	1,999.59
Task 2 - Profile Water Demands & Historical Demand Mangement	12	*$1,893.24*	0	*$0.00*	8	*$928.80*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	26	$2,822.04	6	$1,039.50	$0.00	$3,861.54	16	$1,360.00	$5,221.54	3,916.16
Task 3 - Integrated Planning, Water Efficiency Benefits & Goals	16	*$2,524.32*	0	*$0.00*	4	*$464.40*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	40	$2,988.72	20	$3,465.00	$20.00	$6,473.72	30	$2,550.00	$9,023.72	6,767.79
Task 4 - Selection of Water Efficiency Activities	20	*$3,155.40*	0	*$0.00*	8	*$928.80*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	52	$4,084.20	24	$4,158.00	$20.00	$8,262.20	30	$2,550.00	$10,812.20	8,109.15
Task 5 - Implementation & Monitoring Plan	8	*$1,262.16*	0	*$0.00*	4	*$464.40*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	24	$1,726.56	12	$2,079.00	$0.00	$3,805.56	16	$1,360.00	$5,165.56	3,874.17
Task 6 - Public Review Process	4	*$631.08*	0	*$0.00*	0	*$0.00*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	8	$631.08	4	$693.00	$20.00	$1,344.08	36	$3,060.00	$4,404.08	3,303.06
Task 7 - Progress Reports, Plan Preparation	24	*$3,786.48*	0	*$0.00*	32	*$3,715.20*	0	0	*$0.00*	0	*$0.00*	0	*$0.00*	74	$7,501.68	18	$3,118.50	$20.00	$10,640.18	14	$1,190.00	$11,830.18	8,872.64
Subconsultant Summary	-	-	-	-	-	-	-	-	-	-	-	-	-	*90*		*90*	*$15,592.50*	*$45.20*	$15,637.70	-	-	$45.20	-
Task 8 - Project Management & Quality Control	8	*$1,262.16*	6	*$1,136.04*	0	*$0.00*	16	4	*$695.04*	8	*$617.52*	4	*$299.76*	30	$4,010.52	-		$100.00	$4,110.52	9.45	$803.25	$4,913.77	3,685.33
Total	**98**	***$15,461.46***	**6**	***$1,136.04***	**56**	***$6,501.60***	**16**	**4**	***$695.04***	**8**	*$617.52*	**4**	***$299.76***	**266**	**$24,711.42**	**90**	**$15,592.50**	**$225.20**	**$40,529.12**	159.45	$13,553.25	$54,082.37	**40,527.88**