

STATE OF COLORADO

Department of Natural Resources

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Description:	Water Plan Grant CSU Civi	l Enginee	ering Stormwa	ater LID		
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Colorado Water Conservation Board

Water Plan Grant - Exhibit A

	Statement Of Work
Date:	2/6/2018
Name of Grantee:	Colorado State University
Name of Water Project:	Investigation of Barriers to Policy for Low Impact Development
Funding Source:	Engagement

Water Project Overview:

The Colorado Water Plan promotes sustainable water resources across Colorado. Even in a semi-arid region, stormwater can pollute local water bodies and alter natural hydrology. Current stormwater management strategies involves capturing and treating the water quality capture volume and control and release of varying levels of design storms. Low Impact Development (LID) is a different technique that provides an alternative water source for non-consumptive use, improves water quality of water bodies, restores natural hydrologic processes in the urban environment, promotes groundwater recharge, and provides several aesthetic and other benefits to communities. Adopting policies that promote the use of LID can lead stormwater management in a direction that is cohesive with the goals in the Colorado Water Plan. Despite the many benefits of LID, many municipalities are still hesitant to adopt LID policies. The Colorado Stormwater Center seeks to help municipalities overcome these barriers and provide examples of functioning LID sites. In order to promote LID, it must first be known what the policy barriers municipalities are facing. For that reason, the Colorado Stormwater Centers proposes to conduct an indepth engagement of municipalities to determine current LID programs and identify barriers municipalities are facing in adopting LID policy.

Project Objectives:

There are two primary objectives of the proposed project. The first objective is to identify barriers municipalities are facing when attempting to adopt LID policies at the municipal level. The second objective is to identify steps necessary to allow municipalities to overcome barriers to adopting LID policies in order to promote responsible water management and sustainability across the stormwater discipline in Colorado.



Tasks

Task 1 – Questionnaire and Survey Development for GI/LID Policy Barriers

Description of Task:

The first task is to review a previous study conducted in 2009 regarding general barriers of low impact development (LID). After the review of the previous study, the Colorado Stormwater Center will develop a questionnaire to determine what barriers are preventing the adoption of policy that promotes low impact development at municipal levels. The questionnaire will include questions about the municipalities' current LID program, barriers that exist to adopt further LID policies, and will contain questions that follows up with the 2009 study to determine if previous barriers have been addressed. Finally, include a section within the questionnaire allowing municipalities to identify potential solutions for the barriers. The developed questionnaire will be simplified into a shorter survey that can be distributed to a broader audience.

Method/Procedure:

The method for Task 1 includes conducting a literature review of a study conducted by Wright Water Engineers and the Keep It Clean Partnership (KICP) regarding barriers to LID, which was conducted in 2009. After the literature review is completed, a questionnaire will be developed addressing the topics of current LID programs, policy barriers for LID, progress of LID practices, and potential solutions to the identified policy barriers. The questionnaire will be reviewed by the Colorado Stormwater Center stakeholder group made up of stormwater professionals across the state of Colorado and receive feedback for improving the questionnaire. A local LID consultant at Avery Ecological Design will also provide input for the questionnaire as a practicing professional for installing LID systems in Colorado. The questionnaire will be summarized into a shorter survey that could be more widely distributed to a broader audience. Finally, 5-10 key municipalities across Colorado will be determined for participation in interviews to go through the questionnaire regarding policy barriers for LID.

Deliverable:

The grantee proposes to develop a survey and questionnaire that will be used to identify policy barriers for LID implementation and a list of 5-10 municipalities that could be interviewed for additional details.

CWCB Deliverable: The grantee proposes to deliver the developed survey and questionnaire to the CWCB to document the completion of the first task.



Tasks Task 2 - Municipality Interviews and Surveys Description of Task: The second task involves the conduction of interviews going through the entire questionnaire with MS4 and Stormwater Managers in the key municipalities identified in Task 1. Additionally, the survey will be disseminated to stormwater organizations and partners of the Colorado Stormwater Center such as the Colorado Stormwater Council and the Keep It Clean Partnership in order to receive more input about barriers to adopting policy for LID implementation. Avery Ecological Design will also help conduct the interviews as an expert in the practical installation of LID. Method/Procedure: The method for Task 2 involves contacting the municipalities through their individual stormwater programs to set up a time to meet and go through the developed questionnaire. During the arranged time, the Colorado Stormwater Center with Avery Ecological Design will conduct the interview with stormwater managers for each key municipality and discuss current LID policy/implementation program, policy barriers, advancements that have been made in LID within municipality over the past 10 years, and what the next steps are to further advancing LID policy. Then the shorter survey will be disseminated to additional municipalities in order to provide additional input regarding the policy barriers of LID implementation. Deliverable: Grantee expects to create completed questionnaires for each of the conducted interviews and collecting survey responses from any of the survey participants hoping for at least a 50% participation rate. The Grantee agrees to provide to CWCB the completed questionnaires that are developed throughout interviewing each of the key municipalities.

Tasks



Tasks

Task 3 – Summarizing and Reporting Results

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Descri	ption	OI	Task:

After each of the interviews is completed and a sufficient time is allowed to receive survey responses, the results of the questionnaires and surveys will be collected and summarized in a report. The report will include a summary of current LID programs in Colorado, a list of barriers to LID policy, and a prioritization of barriers. The developed summary will also include results from the interviews and survey responses. Additionally, included in the report will be a summary of advancements made in LID policy during the previous 10 years. The final section of the report will include next steps needed to take in order to overcome barriers to LID policy.

Method/Procedure:

Task 3 will require the collection of the questionnaire and survey responses from Task 2. These responses will be summarized in a report that will be reviewed by members of the Colorado Stormwater Center stakeholder group and Avery Ecological Design. Finally, additional next steps that can be taken to overcome barriers to LID policy will be determined and included in the report.

Deliverable:

Grantee will develop a report summarizing the results of the entire study including a summary of current LID programs in Colorado, barriers to LID policy, progress made over the past 10 years to overcoming barriers and next steps to continue overcoming barriers.

The Grantee will provide CWCB with the final report as documentation for the completion of the task.



Budget and Schedule

This Statement of Work shall be accompanied by a combined Budget and Schedule that reflects the Tasks identified in the Statement of Work and shall be submitted to CWCB in excel format.

Reporting Requirements

Progress Reports: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of issuance of a purchase order, or the execution of a contract. The progress report shall describe the status of the tasks identified in the statement of work, including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Report: At completion of the project, the applicant shall provide the CWCB a Final Report on the applicant's letterhead that:

- Summarizes the project and how the project was completed.
- Describes any obstacles encountered, and how these obstacles were overcome.
- Confirms that all matching commitments have been fulfilled.
- Includes photographs, summaries of meetings and engineering reports/designs.

The CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.

Payment



Payment

Payment will be made based on actual expenditures and must include invoices for all work completed. The request for payment must include a description of the work accomplished by task, an estimate of the percent completion for individual tasks and the entire Project in relation to the percentage of budget spent, identification of any major issues, and proposed or implemented corrective actions.

Project costs not covered by those or other grants, and are therefore the responsibility of the grantee, will be eligible for CWCB funds at the following percentages of project costs:

	Percent of Project Costs							
	Recommended Grant Funding	Max Grant Funding Request (All CWCB	Minimum Funding Match (Non-CWCB					
Type of Activity	Request	Sources)	Sources)					
Engineering & Construction	20%	50%	50%					
Feasibility Study	50%	50%	50%					
Reducing Agricultural Dry Up	50%	80%	20%					
Conservation/Efficiency Methods	50%	80%	20%					
Educational Efforts	50%	80%	20%					
Environmental Conservation	50%	80%	20%					
Watershed Improvements	50%	80%	20%					
Stream Improvements	50%	80%	20%					
Land Use Planning	20%	50%	50%					
Recreational Projects	20%	80%	20%					

Costs incurred prior to the effective date of this contract are not reimbursable. The last 10% of the entire grant will be paid out when the final deliverable has been received. All products, data and information developed as a result of this contract must be provided to CWCB in hard copy and electronic format as part of the project documentation.

Performance Measures

Performance measures for this contract shall include the following:

- (a) Performance standards and evaluation: Grantee will produce detailed deliverables for each task as specified. Grantee shall maintain receipts for all project expenses and documentation of the minimum inkind contributions (if applicable) per the budget in Exhibit B. Per Water Plan Grant Guidelines, the CWCB will pay out the last 10% of the budget when the Final Report is completed to the satisfaction of CWCB staff. Once the Final Report has been accepted, and final payment has been issued, the purchase order or grant will be closed without any further payment.
- (b) Accountability: Per Water Plan Grant Guidelines full documentation of project progress must be submitted with each invoice for reimbursement. Grantee must confirm that all grant conditions have been complied with on each invoice. In addition, per Water Plan Grant Guidelines, Progress Reports must be submitted at least once every 6 months. A Final Report must be submitted and approved before final project payment.
- (c) Monitoring Requirements: Grantee is responsible for ongoing monitoring of project progress per Exhibit A. Progress shall be detailed in each invoice and in each Progress Report, as detailed above. Additional inspections or field consultations will be arranged as may be necessary.
- (d) Noncompliance Resolution: Payment will be withheld if grantee is not current on all grant conditions. Flagrant disregard for grant conditions will result in a stop work order and cancellation of the Grant Agreement.



Colorado Water Conservation Board

Water Plan Grant - Exhibit B Budget and Schedule

Name of Grantee: Colorado State University

Name of Water Project: Investigation of Barriers to Low Impact Development Policy

Task No.	Task Description	Start Date	End Date	Grant Funding		Match Funding	Total	
110.				Request		•		
1	Task 1 - Questionnaire and Survey Development for GI/LID Policy Barriers	4/1/2018	4/15/2018	\$ 2,000	\$	400	\$2,400	
2	Task 2- Municipality Interviews	4/15/2018	6/30/2018	\$ 6,000	\$	1,500	\$7,500	
3	Task 3 - Summarizing and Reporting Results	7/1/2018	7/31/2018	\$ 2,000	\$	600	\$2,600	
							\$0	
							\$0	
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							\$0	
							\$0	
							\$0	
		<u> </u>	Total	\$10,000)	\$2,500	\$12,500	

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Colorado Water Conservation Board

Water Plan Grant - Detailed Budget Estimate Fair and Reasonable Estimate

Name of Grantee:* Colorado State University

Name of Water Project: Investigation of Barriers to Low Impact Development Policy

**Colorado State University provides hourly labor rates for budgetary purposes only.

EXAMPLE A: Coordination

		Hourly				Item					Other Matching
Sub-task	Item	Rate**	# Hours	Sub-total	Item Cost	Quantity	Sub-total		Total	CWCB Funds	Funds
Personnel- T.Dell (Salary+Fringe) Training Services Indirect Costs Personnel (T.Dell Cost share)		\$ 31.97	41.88708	\$ 1,339 \$ 261 \$ -			\$ 400 \$ -	\$ \$ \$	400 261		400
TOTAL		\$ - \$ -		\$ - \$ - \$ - \$ - \$ -	\$ -		\$ - \$ - \$ - \$ - \$ -	\$ \$ \$	- - - -		
								٦	2,000		
Task 2- Municipality Interviews		Hande				14					Oth ou Matchine
Sub-task Sub-task	Item	Hourly Rate**	# Hours	Sub-total	Item Cost	Item Quantity	Sub-total		Total	CWCB Funds	Other Matching Funds
Personnel- T.Dell (Salary+Fringe) Training Services Indirect Costs Personnel (T.Dell Cost share)		\$ 31.97	100.6378	\$ 3,217 \$ - \$ 783 \$ -			\$ 2,000	Ç	2,000 783		1500
TOTAL								Ş	6,000.00		

Sub-task	Item		Hourly Rate**	# Hours	Sub-total	Item Cost	Item Quantity	Sub-tot	al		Total	CWCB Funds	Other Matching Funds
Personnel- T.Dell (Salary+Fringe) Personnel- M.Arabi (Salary+Fringe) Training Services Indirect Costs Personnel (T.Dell Cost share)		\$ \$	31.97 98.21	9.617767 10.50453				\$ \$	-400	\$ \$ \$ \$	307 1,032 400 261		600
		\$ \$			\$ - \$ - \$ - \$ - \$ -	\$ -		\$ \$ \$ \$	- - - -	\$ \$ \$ \$	- - - -		

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NOTES:

*When the application has been approved by the Board, and this budget document is being submitted for PO or contract processing, the "Name of Applicant" field MUST be changed to "Name of GRANTEE" and remove the DATE field.

Ensure that pagination is included and correct, i.e., Page 1 of 2, Page 2 of 2, etc.