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## MEMORANDUM

CWS File #14-210

To: Ben Wade, CWCB

From: Nathan Alburn *NSA*, Michelle Hatcher *MH*

cc: Katie Spahr, Steve Witter – Arapahoe County Water and Wastewater Authority

Date: July 21, 2015

Subject: 75% Progress Report for Arapahoe County Water and Wastewater Authority Municipal Water Efficiency Plan

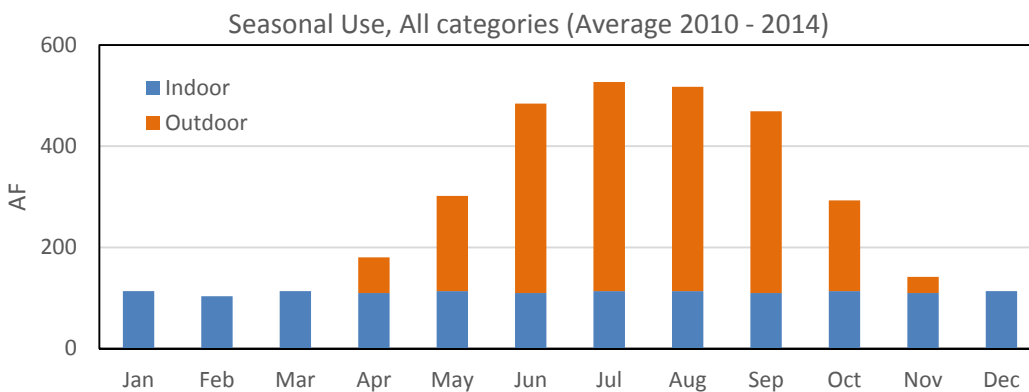
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Clear Water Solutions (CWS) is continuing to assist Arapahoe County Water and Wastewater Authority (ACWWA) with updating their Municipal Water Efficiency Plan (Plan) in accordance with State regulations following the Guidance Document (dated July 2012) produced by the Colorado Water Conservation Board. The Guidance Document outlines six steps in the water conservation planning process. To date, CWS and ACWWA have made strong progress towards the completion of Steps 1-4 which includes multiple discussions with ACWWA Staff on water efficiency activities (activities).

ACWWA delivered 3,040 acre-feet of potable water in 2014 to a population of approximately 6,440 permanent residents and over 25,000 employees that commute into ACWWA's service area. ACWWA receives its raw water for potable use from three main sources: alluvial well water pumped from Cherry Creek, deep well water pumped from the Denver Basin Aquifer, and ACWWA Flow. ACWWA Flow pulls water through senior ditch rights along the South Platte River. ACWWA has taken delivery of over 1,500 acre-feet of raw water from ACWWA Flow. ACWWA also has two main sources of non-potable water: alluvial wells that do not meet quality standards for drinking water and reclaimed water (Reg 84). In 2014 ACWWA delivered 902 acre-feet of non-potable water to customers through a dual system for purposes such as irrigation, cooling, and other non-potable uses. ACWWA delivers its water through over 300 miles of potable and non-potable distribution lines.

Among several other analyses performed during the Plan update, CWS has separated out and estimated ACWWA's indoor versus their outdoor water use. The following chart is a bar graph that symbolizes ACWWA's monthly indoor and outdoor water use. Outdoor use represents approximately 60% of the overall use.

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ACWWA and CWS staff have selected preliminary activities to continue and some new ones to add, but these are subject to change after ACWWA takes the activities before their board. CWS and ACWWA have worked together to determine an estimated amount of water savings from the previously implemented activities as well as estimate a potential savings from future activities. The various activities that have been initially studied are presented in the following table.

Water Efficiency Activities for Evaluation	Existing (E), Potential (P)	Targeted Customer Category
<b>Foundational Activities</b>		
<i>Meter Testing and Replacement/Meter Upgrades [c]</i>	P	Non-Revenue
<i>Control of Apparent Losses (with Metering)</i>	P	Non-Revenue
<i>System Wide Water Audits</i>	P	Non-Revenue
<i>Automatic Water Meter Reading Installation and Operations [c]</i>	E/P	All Categories [a]
<i>Water Reuse System</i>	E	All Categories [b]
<i>Water Efficiency Rate Structure with Regular Updates to Rate Study</i>	E/P	All Categories [b]
<i>Leak Detection and Repair</i>	P	Non-Revenue
<i>Recycling Water Treatment Plant Filter Backwash</i>	E	Non-Revenue
<i>Water Conservation Officer</i>	E	All Categories
<i>Master Plans/Water Supply Plans</i>	E	All Categories
<b>Targeted Technical Assistance and Incentives</b>		
<i>Residential and Commercial Ultra High-Efficiency Toilet Upgrade Service</i>	P	Comm, Res
<i>Water Efficient Washing Machine Rebates</i>	E	Res
<i>Rebate for ET Irrigation System Controllers</i>	E	Res, Res Irr
<b>Ordinances and Regulations</b>		
<i>Time of Day Watering Restrictions</i>	E	All Categories [a][b]
<b>Education Activities</b>		
<i>Bill Stuffers, Newsletter, Newspaper Articles, Mass Mailings, Website, Social Networking</i>	E	All Categories [a]
<i>Landscape Design (Xeriscape) and Maintenance Classes</i>	E/P	Comm Irr, Res, Res Irr, Reg 84

[a] All categories except Hydrant Meters

[c] May have overlap or may be combined

[b] All categories except Non-Revenue

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Although ACWWA's staff feels very positive about the activities they have chosen, they feel coordination with and support of their board is very important to a successful Plan. ACWWA's next board meeting when these activities and related topics will be able to be discussed will not be until September 9, 2015. We should be able to finalize our selection of activities at after that board meeting. That board meeting's date also pushes out the last schedule from our 50% progress report. The updated schedule is presented below. Our budget, however, is right on track.

Task	Date
Grant application submitted to CWCB	12/30/2014
Required CWCB details addressed	2/17/2015
CWCB approves grant and PO issued	3/3/2015
Kick-off meeting with staff	4/1/2015
Submit 50% progress report to CWCB	6/1/2015
Submit 75% progress report to CWCB	7/20/2015
<b><i>Board meets to discuss potential Water Efficiency Activities</i></b>	<b><i>9/9/2015</i></b>
<i>Submit draft plan to staff for review and comment</i>	<i>9/23/2015</i>
<i>Staff provides comment from review</i>	<i>10/7/2015</i>
<i>Submit draft report to Board for review</i>	<i>10/21/2015</i>
<i>Present draft report at Board meeting and collect comments</i>	<i>11/11/2015</i>
<i>Notify public of draft plan in paper and website</i>	<i>11/12/2015</i>
<i>Public review period (60 days)</i>	<i>1/13/2016</i>
<i>ACWWA provides public input comments to CWS</i>	<i>1/15/2016</i>
<i>CWS incorporates public comments</i>	<i>2/5/2016</i>
<i>Board formally adopts final report</i>	<i>2/10/2016</i>
<i>CWS submits final report to CWCB</i>	<i>2/11/2016</i>
<i>CWCB approves final report</i>	<i>up to 90 days</i>