Summary of Conservation Measures and IBCC Conservation Subcommittee Recommendations

Revised 2/21/2012

Source: SWSI 2010 Municipal and Industrial Water Conservation Strategies

Table 22: Matrix of water conservation measures and savings based on Colorado Statewide Water Conservation Best Practices Guidebook and Statewide Water Supply Initiative savings estimates

#	Measure	CWW Best Practice?	Sector Impacted	Estimated Implementation or Penetration Level by 2050	Low Water Saving Strategy Savings (AFY)	Medium Water Saving Strategy Water (AFY)	High Water Saving Strategy Water (AFY)	Estimated Utility Cost Range of Program per AFY of Savings ($/AFY)	Expected Durability of Savings	Sources and Documentation	IBCC Subcommittee "Reccomendation for Consideration"	IBCC Subcommittee Specific Actions per 4/22/11 Meeting
1	Full metering	BP 1	All	100%	Contributing factor to savings listed in other sectors.	Contributing factor to savings listed in other sectors.	Contributing factor to savings listed in other sectors.	NA	NA	NA		
2	Conservation-oriented rates	BP 1	All	~100%				$1,000 - $8,000	No deterioration	AWWA Manuals - M1, M50, M52; 2008 Water Budgets and Rate Structures, 2001 Amy Vickers	"Immediate Implementation" 4.b (potential guidance on water billining format)	See Row 14 & 15
3	Conservation-oriented tap fees	BP 1	All	Low 0-5%, Medium 5-10%, High 10-50%%				$500 - $2,000	Dependent on Utility or Governing Board Decisions.	2010 Colorado Best Practices Guidebook, City of Westminster, City of Broomfield		
4	Integrated resources planning, goal setting, monitoring	BP 2	Utility	~100%				NA	NA	NA		
5	Water loss control	BP 3	Utility	Low <=7% real losses; Medium, High <=6% real losses	39,100	62,300	70,100	$2,000 to $7,000	No deterioration as program is on-going.	AWWA M36, 2009 CWCB, 2010 Best Practices Guidebook	"Immediate Implementation" 4.a	See Row 14 & 15
6	Conservation coordinator	BP 4	All	100%	Contributing factor to savings listed in other sectors.	Contributing factor to savings listed in other sectors.	Contributing factor to savings listed in other sectors.	NA	NA	NA		
7	Water waste ordinance	BP 5	All	100%				NA	NA	NA		
8	Public information and education	BP 6	All	100%				NA	NA	NA	"Immediate Implementation" 1 and 4.b (Also "Longer Term" recommendation #1 with regards to 1051 reporting)	Coordinate with the IBCC's Education Committee (PEPO) to develop statewide messaging for the Water 2012 Program in coordination with Colorado Foundation for Water Education and Colorado State University. Determine who and how to obtain both free and paid media to elevate the penetration of messaging. ☐ Work with water providers about inserts into new letters, bills, and on internet sites. Jay Winner will take the lead on pursuing these efforts.
9	Landscape water budgets	BP 7	Outdoor irrigation	Low 0-10%, Medium 10-30%, High 30-50%	102,600	159,600	208,800	$2,500 - $5,000	Limited deterioration if budgets are set fairly.	2007 Water Budgets and Rate Structures, 2009 EPA WaterSense, 2008 GreenCO		
10	Rules and regs. for landscape design and installation	BP 8	Outdoor irrigation	Low 50-65%, Medium 65-80%, High 80-100%				$500 - $1,500	Limited deterioration.	2010 Best Practices Guidebook, 2008 GreenCo, Irrigation Association	"Immediate Implementation" 5.a (potentially legislative)	See Row 14 & 15
11	Certification of landscape professionals	BP 8	Outdoor irrigation	100%				Little or no cost.	Limited deterioration.	2010 Best Practices Guidebook, 2008 GreenCo, Irrigation Association, EPA WaterSense		
12	Water efficient design, installation, and maintenance practices for new and existing landscapes	BP 9	Outdoor irrigation	Low 50-65%, Medium 65-80%, High 80-100%				Customer bears cost, except for inspection - $500 - $2,000	Limited deterioration.	2010 Best Practices Guidebook, 2008 GreenCo, Irrigation Association, 2001 Amy Vickers	"Immediate Implementation" 5.a (potentially legislative)	See Row 14 & 15
13	Irrigation efficiency evaluations	BP 10	Outdoor irrigation	Low 30-50%, Medium 50-75%, High 75-100%				$2,000 to $8,000 (assuming utility pays $200 - 500 per audit and customer pays system repair costs)	Same as if no audits are conducted - i.e. standard irrigation system on-going maintenance issues.	2010 Best Practices Guidebook, 2008 GreenCo, Irrigation Association, 2001 Amy Vickers		

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14	Rules for new residential construction	BP 11	Res.	Low 30-50%, Medium 50-75%, High 75-100%	107,000	158,000	209,000	Customer bears cost, except for inspection - $500 - $2,000	No deterioration if new fixture/appliance standards implemented and old units disposed	2010 Best Practices Guidebook, EPA WaterSense, 2008 WaterSmart Guidebook	"Immediate Implementation" 2 (potentially legislative) Also "Longer Term" recommendation #2 (potentially legislative)	Develop an outreach plan to significant statewide organizations/entities (listed in 4/22/11 meeting notes). Prepare an agenda for the meetings with these groups. Overall Purpose of the meeting: Explain seriousness of the problem and get their input on how to solve it; identify common ground on which to build. Status quo is not an option. Discuss some ideas we have so far. Taylor Hawes, Wayne Vanderschuere, Senior State Officials, and any other volunteers to take lead in this effort.
15	High efficiency fixtures and appliances - Residential	BP 12	Res.	Passive / 100%				$0 - assumes all savings are passive	No deterioration if new fixture/appliance standards implemented and old units disposed	2010 Best Practices Guidebook, EPA WaterSense, 2010, 2007, 2004 Aquacraft, 2001 Amy Vickers		
16	Residential water surveys and evaluations, targeted at high demand customers	BP 13	Res.	Low 10-40%, Medium 40-70%, High 70-90%				$2,000 to $7,000 (assuming utility pays $100 per audit and customer pays system repair costs)	Limited deterioration.	2010 Best Practices Guidebook, EPA WaterSense, 2010, 2007, 2004 Aquacraft, 2001 Amy Vickers		
17	Submetering of new multi-family res.		Res.	Low 0%, Medium 50%, High 100%				Variable ($0 to $4,000) depending upon who pays for the metering.	No deterioration	2004. National Submetering and Allocation Billing Program Study		
18	High efficiency fixtures and appliances - Non-Residential	BP 12	CII	Passive / 100%	63,500	105,800	126,900	$0 - assumes all savings are passive	No deterioration if new fixture/appliance standards implemented and old units disposed	2010 Best Practices Guidebook, 2008 WaterSmart Guidebook, 2001 Amy Vickers, 2000 Commercial and Institutional End Uses of Water	"Immediate Implementation" 3 (Executive Order for state agencies)	State Staff to take lead on drafting an Order with assistance from the Sub-Committee that is recommended and endorsed to by the IBCC and CWCB to the Governor.
19	Specialized non-residential surveys, audits, and equipment efficiency improvements	BP 14	CII	Low 0-10%, Medium 10-50%, High 50-80%				$3,300 to $16,300 (assuming utility pays $500 per audit and customer pays any repair costs)	Limited deterioration.	2010 Best Practices Guidebook, 2008 WaterSmart Guidebook, 2001 Amy Vickers, 2000 Commercial and Institutional End Uses of Water		
20	Rules for new non-residential construction	BP 11	CII	Low 30-50%, Medium 50-70%, High 70-100%				Customer bears cost, except for inspection - $500 - $2,000	No deterioration if new fixture/appliance standards implemented and old units disposed	2010 Best Practices Guidebook, EPA WaterSense, 2008 WaterSmart Guidebook		
	TOTAL PASSIVE SAVINGS				154,000	154,000	154,000					
	TOTAL ACTIVE SAVINGS				160,200	331,200	461,300					
	TOTAL				**314,200**	**485,200**	**615,300**					