

Going forward there are a number of forestry-related strategies that can play an important role in California’s greenhouse gas emissions reduction efforts. Biomass resources from forest residue will factor into the expansion of renewable energy sources (this is currently accounted for in the Energy sector). Similarly, no reductions are yet attributed to future actions to reduce wildfire risk, but that accounting will be done following implementation. Additionally, public investments to purchase and preserve forests and woodlands would also provide greenhouse gas emission reductions that will be accounted for as projects are funded and urban forest projects can also provide the dual benefit of carbon sequestration and shading to reduce air conditioning load.

Furthermore, the Forest sector currently functions as a source of voluntary reductions that would not otherwise occur and this role could expand even further in the future. ARB has already adopted a methodology to quantify reductions from forest projects, and recently adopted additional quantification methodologies. Table 21 summarizes the emission reductions from the forest measure.

**Table 21: Sustainable Forests Recommendation**  
(MMTCO<sub>2</sub>E in 2020)

Measure No.	Measure Description	Reductions
F-1	Sustainable Forest Target	5
<b>Total</b>		<b>5</b>

## 17. Water

*Continue efficiency programs and use cleaner energy sources to move and treat water.*

Water use requires significant amounts of energy. Approximately one-fifth of the electricity and one-third of the non-power plant natural gas consumed in the state are associated with water delivery, treatment and use. Although State, federal, and local water projects have allowed the state to grow and meet its water demands, greenhouse gas emissions can be reduced if we can move, treat, and use water more efficiently. As is the case with energy efficiency, California has a long history of advancing water efficiency and conservation programs. Without this ongoing, critical work, baseline or business-as-usual greenhouse gas emissions associated with water use would be much higher than is currently the case.

Six greenhouse gas emission reduction measures are proposed for the Water sector, and are shown in Table 21. Three of the measures target reducing energy requirements associated with providing reliable water supplies and two measures are aimed at reducing the amount of non-renewable electricity associated with conveying and treating water. The final measure focuses on providing sustainable funding for

implementing these actions. The greenhouse gas emission reductions from these measures are indirectly realized through reduced energy requirements and are accounted for in the Electricity and Natural Gas sector.

In addition, a mechanism to make allowances available in a cap-and-trade program could be used to provide additional incentives for local governments, water suppliers, and third party providers to bundle water and energy efficiency improvements. This type of allowance set-aside will be evaluated during the rulemaking for the cap-and-trade program.

ARB recommends a public goods charge for funding investments in water management actions that improve water and energy efficiency and reduce GHG emissions. As noted by the Economic and Technology Advancements Advisory Committee, a public goods charge on water can be collected on water bills and then used to fund end-use water efficiency improvements, system-wide efficiency projects, water recycling, and other actions that improve water and energy efficiency and reduce GHG emissions. Depending on how the fee schedule is developed in a subsequent rulemaking process, a public goods charge could generate \$100 million to \$500 million annually. These actions would also have the co-benefit of improving water quality and water supply reliability for customers.

**Table 22: Water Recommendation  
(MMTCO<sub>2</sub>E in 2020)**

Measure No.	Measure Description	Reductions
W-1	Water Use Efficiency	1.4
W-2	Water Recycling	0.3
W-3	Water System Energy Efficiency	2.0
W-4	Reuse Urban Runoff	0.2
W-5	Increase Renewable Energy Production	0.9
W-6	Public Goods Charge	TBD
<b>Total</b>		<b>4.8<sup>(44)</sup></b>

### 18. Agriculture

*In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.*

Encouraging the capture of methane through use of manure digester systems at dairies can provide emission reductions on a voluntary basis. This measure is also a

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<sup>44</sup> Greenhouse gas emission reductions from the water sector are not currently counted toward the 2020 goal. ARB anticipates that a portion of these reductions will be additional to identified reductions in the Electricity sector and is working with the appropriate agencies to refine the electricity/water emissions inventory.