New or expanded RMS text – Agricultural Lands Stewardship

New text starting at the bottom of page 20-3:

California's 16.5 million acres of rangeland strongly differ from cropping systems in their impacts on water, and the management strategies to enhance water quality and quantity. Eight of California 12 major drainage basins are dominated by vegetation types that are commonly grazed and two-thirds of the major reservoirs in the state are located on rangeland. The location of rangelands between the forested areas and major river systems means that almost all surface water in California passes through rangeland. Rangelands in California act like a sponge capturing, filtering and releasing it slowly so it can be used for urban, recreational, agriculture and environmental uses. With climate change models predicting less precipitation as snow and more as rainfall, the ability of rangelands within to maximize capture and minimize runoff of precipitation becomes increasingly important. Compared with other agricultural land uses, healthy rangelands have the capacity to decrease erosion, and the likelihood of nutrient contamination of water may be much lower than that of other forms of more intensive agriculture. Plant root systems form dense mats that effectively serve as filters to remove contaminants before they can seep into the groundwater. Adequate plant cover also improves soil health. In addition the presence of grazing animals can build soil organic matter reserves, resulting in soils having increased water-holding capacity, increased water-infiltration rates, and improved structural stability. Rangelands play a key role in ensuring watershed function in California, and ranchers can contribute to improved water supply and quality in streams and rivers through adoption of various management practices. Benefits of those practices are not restricted to improving water quality and water yields, but extend to wildlife habitat co-benefits that improve biodiversity and to agricultural productivity. Investment in green infrastructure through rangeland conservation programs that aim to secure beneficial land uses through conservation easements and best management practices in order to protect both water supplies and water quality is a cost-effective way of protecting and maintaining healthy watersheds in California. Because rangelands and cropping systems differ in their effects on water, and management approaches to improve water quality and quantity, future Water Plan updates may present a strategy for agricultural land stewardship that is separate from stewardship of rangeland.

New text at the top of page 20-8:

California Agricultural Water Stewardship Initiative (CAWSI)

CAWSI raises awareness about approaches to agricultural water management that support the viability of agriculture, conserve water, and protect ecological integrity in California. This effort of the multi-stakeholder group, the California Roundtable on Water and Food Supply includes an online resource center of agricultural water stewardship practices and a host of additional useful resources.

New or expanded RMS text – Agricultural Lands Stewardship

Expanded text starting at the bottom of page 20-9:

Improve Drought Preparedness

Agricultural land stewardship includes practices to promote local sufficiency and sustainability. Local sufficiency and sustainability are improved through wise management of surface water and groundwater. Well-managed supplies of local groundwater can be a cost effective solution to drought preparedness. During times of drought, and at times when operating constraints prevent the delivery of allocated water supplies, landowners conserve available water by using local groundwater, reducing cultivated acreage (fallowing), shifting crops to lower water consuming crops, building the water retention capacity of soils, installing irrigation ponds to capture winter stormwater, and by such practices as stumping a portion of trees in an orchard to maintain high quality for a reduced yield. In rangelands, high root biomass of grasses can enhance water infiltration (and decrease runoff), and range management practices that increase soil organic matter increase the water retention capacity of soils.

New text – last sentence in Environmental Benefits section, page 20-10:

California's rangeland ecosystems are important for species conservation because they are the most species-rich in California, with more than 300 vertebrate, 5000 invertebrate, and 2000 plant species

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New text – Recommendation A, 1, D, page 20-19:

State and federal agencies should work with stakeholders to develop and implement payments for ecosystem services programs that compensate landowners for their stewardship while reducing the cost of regulatory compliance and delivering measurable conservation benefits

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New text – Recommendation 24, page 20-19:

Local entities should look for alternative sources of funding for ag land stewardship such as payments for watershed services.