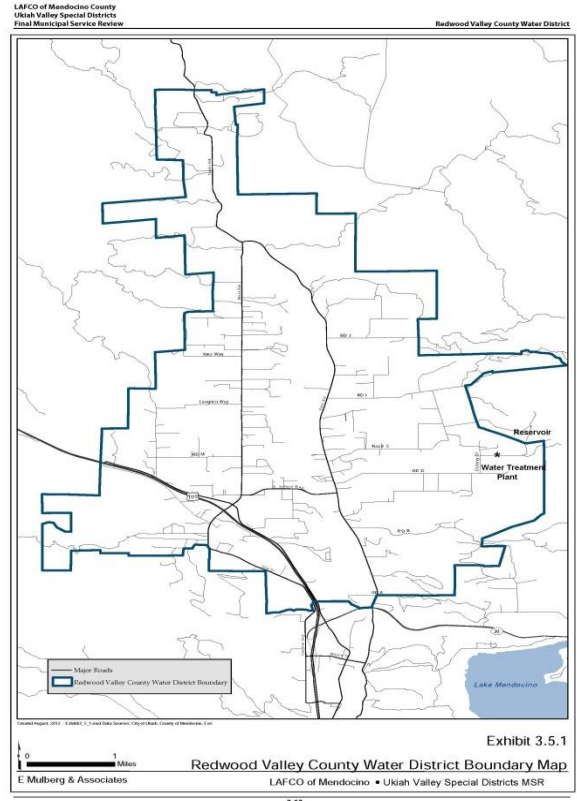
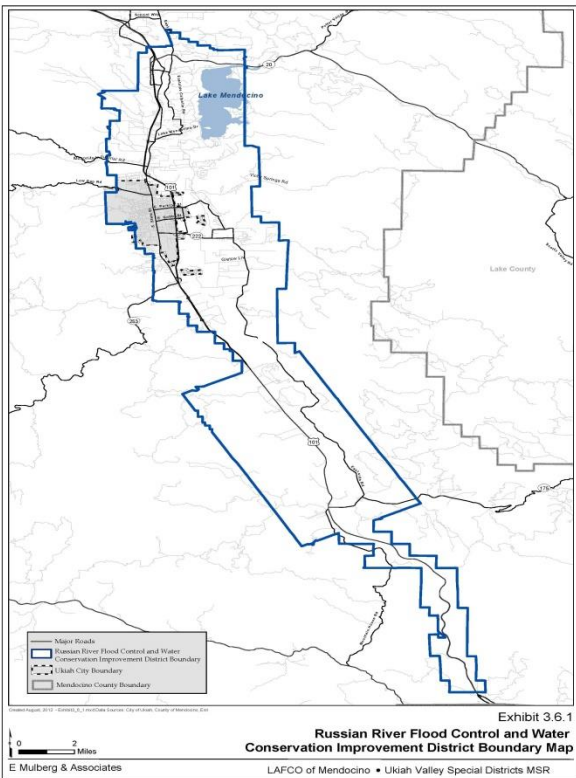


**The Economic Impacts of Water and Agricultural Industries:
Inland Mendocino County
December 2015**

Total Economic Impact of Agriculture in the Study Area = \$743,387,400

**The Study Area
(Lake Mendocino is in both maps for reference),
Sources: LAFCO of Mendocino County, Russian River Flood Control District**



The economic impacts related to agriculture in the study area which would be influenced by changes in water availability.

SUMMARY IMPACTS	Totals
Direct, Full-Time Equivalent Jobs	3,036
Direct Business Income	\$488,503,800
Number of Acres Driving Impacts	12,826 ac
Indirect and Induced Impacts	\$254,883,600
Total Jobs	5,008
Local Tax Revenue	\$16,066,652
Total Economic Impact	\$743,387,400

Employment

The mix of jobs and industries that employ workers in Mendocino County is diverse, and somewhat similar to the state overall, though more skewed toward agriculture in Mendocino County and away from professional and business services. This mix defines how agriculture can affect the rest of the county economy. A broad set of industries are affected, from construction to non-profit organizations. The flow of tourists adds more retail sales, more support for local businesses, and more tax revenue in the form of transient occupancy tax (TOT) to local cities.

Water Use

Although reliability for domestic water supply has two features not available to reliability for agricultural water, these features do not completely eliminate the likelihood of reduction of supply to agriculture during times of shortage. The first feature is that available supply is more likely to be increased through expanded use of groundwater for domestic than for agriculture. This is due to the greater ability for public water systems to distribute water from a point source to a larger area in comparison to a single farm or ranch. It is also due in part to the ability of public drinking water systems to accept the cost of improving impaired chemical water quality of source waters. The second is the statutory right of drinking water to take priority over irrigation water during times of shortage. The importance of water use in agriculture is to determine the economic value of water.¹ Assumptions connecting these impacts to water are as follows:

- One acre of vineyard uses approximately 0.75 acre feet of water per year
 - This implies 8,677.5 acre feet was used in the Study Area per year in 2015
- One acre of pear and apple orchard uses 2.31 acre feet of water per year
 - This implies 2,901.4 acre feet was used in the Study Area per year in 2015
- For tourism
 - Since tourists are “transitional households” locally when staying here, hotels and B&Bs are like apartment houses for water use;
 - We will estimate that the effects of tourism will follow the effects of the wine industry in terms of the value of a water change on the tourism impacts.

Wine Industry Impacts

- The Study Area has approximately 11,570 acres of wine grapes.
 - The amount of annual business revenue made by these vineyards, wineries, and other wine-related businesses of \$384.7 million as part of \$586.4 million of total economic impacts;
 - A total of 3,150 jobs are supported, including 1,610 wine-related jobs; and
 - Over \$6.94 million is annually made in local tax revenue from this industry’s current size.

¹ Please see University of California Cooperative Extension, Mendocino County (2008) for more and for these data.

Major Industries Affected

Business Income Impacts, Wine Industry	Jobs Supported, Wine Industry
<ul style="list-style-type: none"> • Real estate • Maintenance of residential homes • Management Consulting • Lessors of nonfinancial intangible assets • Banks and Credit Unions • Hospitals • Winery/Vineyard Management • Other local government enterprises • Truck transportation • Maintenance/repair, commercial • Insurance agencies • Offices of physicians • Legal services • Automotive repair and maintenance 	<ul style="list-style-type: none"> • Vineyard management • Real estate • Management Consulting • Individual and family services • Hospitals • Truck transportation • Accounting and payroll services • Investment Banking • Banks and Credit Unions • Retail – Department Stores • Retail – Grocery Stores • Services to buildings • Maintenance/repair, commercial • Automotive repair and maintenance

Pear and Other Fruit Industries Impacts

The Study Area has 1,256 acres of pear and other fruit orchards.

- These orchards generate approximately \$9 million of revenue annually, and support total economic impacts of over \$13.4 million;
- There are 92 jobs directly related to growing fruit, and a total of 139 jobs supported due to these orchards and the economic impacts; and
- There is over \$167,000 of local tax revenues generated annually.

Major Industries Affected

Business Income, Pear and Other Fruit	Jobs Supported, Pear and Other Fruit
<ul style="list-style-type: none"> • Orchard Management • Maintenance of residential homes • Real estate • Hospitals • Banks and Credit Unions • Other local government enterprises • Maintenance and repair construction • Limited-service restaurants • Offices of physicians • Retail – Grocery Stores • Retail – Department Stores • Retail - Motor Vehicle and Auto Parts • Outpatient care centers • Offices of dentists 	<ul style="list-style-type: none"> • Support activities for agriculture and forestry • Bars and Restaurants • Real estate • Individual and family services • Hospitals • Wholesale trade • Retail – Grocery Stores • Retail – Department Stores • Banks and Credit Unions • Nursing and community care facilities • Offices of physicians • Personal care services • Maintenance and repair construction • Elementary and secondary schools

Tourism Impacts

The wine industry is a large tourism draw for the Study Area’s tasting rooms, restaurants, hotels, grocery stores, and retail across Mendocino County.

- There are over 1,710 jobs overall supported annually, including 1,330 jobs directly related to tourism from the Study Area’s wine industry;
- Over \$94.7 million annually comes to Mendocino County through the Study Area, drawn for the local wine industry, and supporting a total of \$143.5 million of business revenue; and
- Because of sales and transient occupancy tax (TOT) being major outcomes of tourism, there is \$8.9 million in annual local taxes generated by these Study Area tourism impacts.

Major Industries Affected

Business Income, Tourism	Jobs Supported, Tourism
<ul style="list-style-type: none"> • Real estate • Residential home maintenance • Wholesale trade • Hospitals • Other local government enterprises • Management Consulting • Banks and Credit Unions • Construction, commercial 	<ul style="list-style-type: none"> • Real estate • Individual and family services • Services to buildings • Hospitals • Wholesale trade • Management Consulting • Construction, commercial • Banks and Credit Unions

What This Study Provides

Combining these data gives us an algorithm for each of the Study Area’s focal industries when there is a gain or loss of 100 acre feet of water. These results depend on the relative size of the industry in terms of income and jobs, as well as our assumptions on the water consumption per acre. These data also allow a comparison of the cost of increasing water capacity in Lake Mendocino for the Study Area’s use by 100 acre feet to the potential benefits in the local economy.

Per 100 Acre Feet of Water Lost	Wine Industry	Pears/Fruit	Tourism	Totals
Total Economic Impact	\$6,758,000	\$462,000	\$1,653,000	\$8,873,000
Total Jobs	36.3	4.8	19.7	60.8
Local Tax Revenue	\$80,100	\$5,780	\$103,180	\$189,060

This study provides ways for policy makers and advocates to estimate the economic impacts of restricting water (as in limiting frost protection use) or expanding water infrastructure (as in raising Coyote Dam to increase Lake Mendocino’s capacity) as related to the agricultural industry within the Study Area.