RECOMMENDATIONS FOR ACTION

The League of Women Voters of San Diego County believes that the county agricultural industry is of historical, environmental and economic importance to our region. The county possesses unique and separate properties and challenges that differ from the rest of California and the United States. The arid nature of its climate, lack of water sources and high land costs present a special challenge to agriculture in our region.

Land Use

Support the preservation and expansion of land used for agricultural purposes through:

 a) adopted General and Specific Plans;
 b) zoning;
 and c) permanent dedication programs in order to encourage the long-term presence and viability of the agricultural industry in an environmentally sound manner.

Challenges to Agriculture in San Diego

Water

- 2. Encourage farmers to improve water conservation, selection of crops appropriate for our climate and end all runoff of pesticides, insecticides and fertilizers from their fields and groves, as currently recommended by the UC Agriculture and Natural Resources Division (UC ANR). In addition, local governments and water districts, as well as the San Diego County Water Authority (SDCWA) should be encouraged to facilitate ever evolving best agricultural water practices recommended by UC ANR, or similar organizations, through incentives and innovative programs.
- 3. Support the availability and use of recycled water for a dependable, sustainable source of agricultural water.
- 4. Monitor the implementation of the 2013 Sustainable Groundwater Management Act goals because groundwater, which may represent 9% of our regional water source, needs to be preserved and protected from contaminants.
- 5. Continue support of the San Diego County Water Authority (SDCWA) programs and pricing that facilitate the provision of regional agricultural water, when appropriate.

Climate Change

6. Support efforts of the county agricultural industry to adapt to climate change through promotion of research, development of new resources and implementation of environmentally sensitive technologies and conservation strategies.

Pests and Diseases

7. Support government and privately funded efforts to protect the agricultural industry and the environment from pests and diseases. Such programs include the University of California Integrated Pest Management (IPM) Program and the California Detector Dog Teams.

Pollinator Protection

8. Support efforts to protect, maintain and foster a sustainable, healthy population of bees and other pollinators to support county agriculture.

Labor

9. Support immigration policies at the local, state and federal levels which allow for a legal labor force to work in local agriculture.

Opportunities

- 10. Support new alternative water use farming practices and technologies which result in long term, sustainable, efficient water use.
- 11. Support research on, and implementation of, sustainable agricultural practices at all levels including production, processing, distribution, consumption and waste management.
- 12. Support an understanding and awareness of the concept and value of sustainable agriculture both within the agricultural community and among the public.



BIBLIOGRAPHY

SPECIAL ACKNOWLEDGEMENT

We want to especially note the valuable and informative annual publication of the San Diego County Department of Agriculture/Weights and Measures, the "2013 Crop Statistics & Annual Report". It was a crucial foundation to our understanding of the current state of agriculture in San Diego County.

INTERVIEWS

James Bethke, County Director, Nursery & Floriculture Advisor, UC Cooperative Extension

Tim Bombardier, Senior Water Resources Specialist, San Diego County Water Authority

Ha Dang, Agricultural Commissioner / Sealer of Weights and Measures, County of San Diego

Dana Friehauf, Planning Manager Water Resources, San Diego County Water Authority

Eric Larson, Executive Director, San Diego County Farm Bureau

Marilyn Tylke, Land Use and Environmental Planner, County of San Diego (information exchanged by email)

AGRICULTURE WORKERS

Employment Development Department, State of California, San Diego County Industry Employment & Labor Force by month 3/2014

Benchmark http://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQS Results.asp?selectedarea=San+Diego+County&selectedindex=37&menuChoice=localAreaPro&state=true&geogArea=0604000073&countyName=&submit1=View+Local+Area+Profile

Farm and Home Advisor, San Diego County http://cesandiego.ucanr.edu

San Diego County Farm Bureau, personal communication from Eric Larson, Executive Director eric@sdfarmbureau.org

San Diego County Adopted Operational Plan Fiscal Years 2014-15 and 2015-16 http://www.sandiegocounty.gov/auditor/opplan/adoptedlist.html

San Diego County General Plan – Housing Element Background Report, pp 23, 23. http://www.sandiegocounty.gov/content/dam/sdc/pds/advance/HousingElementUpdate/Background Report final.pdf

San Diego County General Plan Update EIR, August 2011
http://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/BOS_Aug2011/EIR/F
EIR 2.02 - Agriculture 2011.pdf

San Diego County Water Authority, sdcwa.org/annualreport/2014

USDA, 2012 Census of Agriculture, Table 7 — County Data, National Agricultural Statistics Service https://www.agcensus.usda.gov/Publications/2012/

US Department of Agriculture, Economic Research Service <u>www.ers.usda.gov/farm-economy/farm-labor/background.aspx</u>

Wikipedia – Farmworker https://en.wikipedia.org/wiki/Farmworker

ECONOMICS

The National University System Institute for Policy Research Economic Ledger Report:
Recent Revision of San Diego GDP Show Uneasy Economic Recovery Continues, Nov.
2013 (based on data from the U.S. Bureau of Economic
Analysis). http://www.nusinstitute.org/assets/resources/pageResources/Economic_Ledger
_GDP_Nov2013.pdf
tc_Ledger_GDP_Nov2013.pdf

SANDAG info, December 2012 Traded Industry Clusters in the San Diego Region - High dollar value of all fruits and vegetables. http://docplayer.net/1988890-Info-traded-industry-clusters-in-the-san-diego-region-sandag-december-2012.htm

San Diego County Department of Agriculture/Weight and Measures Crop Report, 2014 http://www.sandiegocounty.gov/content/dam/sdc/awm/docs/Crop Report-Final.pdf

San Diego Foundation 2050 Report http://www.sandiego.edu/2050/ <a href="http:/

CLIMATE CHANGE

Cayan, D. et al (2006) Scenarios of Climate Change in California: On Overview. White Paper Report from: California Climate Change Center http://www.energy.ca.gov/2005publications/CEC-500-2005-186/CEC-500-2005-186-5F.PDF

United States Environmental Protection Agency (EPA) (2013) Climate Impacts on Agriculture and Food Supply http://www.epa.gov/climatechange/impacts-adaptation/agriculture.html

Friend, A.D., et al (2014) Carbon residence time dominates uncertainty in terrestrial vegetation response to future climate and atmospheric CO₂. PNAS 111(9), 3280-3285.

Rosenzweig, C, et al (2014) Assessing agricultural risks of climate change in the 21st century in a global gridded crop model intercomparison. PNAS 111(9) 3268-3273.

L.Hartwell, Allen, Jr, et al. (1993) 4. The CO₂ fertilization effect: higher carbohydrate production and retention as biomass and seed yield. Food and Agriculture Organization of the United Nations http://www.fao.org/docrep/w5183e/w5183e06.htm#TopOfPage

Van de Geijn, S and Goudriaan, J. (1993) 5. The effects of elevated CO₂ and temperature change on transpiration and crop water use. Food and Agriculture Organization of the United Nations http://www.fao.org/docrep/w5183e/w5183e07.htm#TopOfPage

The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. (2008) U.S. Climate Change Science Program. Synthesis and Assessment Product 4.5

http://www.usda.gov/oce/climate_change/SAP4_3/CCSPFinalReport.pdf

Walthall, C.L., 2012. Climate Change and Agriculture in the United States: Effects and Adaptation. USDA Technical Bulletin 1935. Washington, DC. 186 pages http://www.usda.gov/oce/climate_change/effects_2012/CC%20and%20Agriculture%20Rep ort%20(02-04-2013)b.pdf

Wikipedia – Climate Change https://en.wikipedia.org/wiki/Climate change

HISTORY OF AGRICULTURE IN SAN DIEGO COUNTY

240 Years of Ranching -- "Historical Research, Field Surveys, Oral Interviews, Significant Criteria and Management Recommendations for Ranching Districts and Sites in the San Diego Region" www.sohosandiego.org/warners/images/240yearsofranching.pdf

San Diego Native Plants in the 1830's by Thomas Coulter and Thomas Nuttall www.sandiegoflora.com/1830sSDCNP.pdf

Union Tribune story from May 31, 2008, "Before malls, cows rule Mission Valley," by Richard Crawford.

www.sandiegouniontribune.com/uniontrib/20080531/news_1cz31history.html

Journal of San Diego History www.sandiegohistory/org/journal

Summer 1999, article on San Diego agriculture.

Summer 1974 article on agriculture before European settlement.

Fall 1978 article about the Japanese in San Diego.

Winter 1975 article, "Merchants and Dons."

Spring 1971 article, Role of the San Diego River in the development of Mission Valley Paper by William Smyth on San Diego history from 1542 to 1908

National Park Service article, Old Mission Dam, San Diego https://www.nps.gov/nr/travel/american latino heritage/Old Mission Dam.html

San Diego County Farm Bureau website - History section https://www.sdfarmbureau.org/AboutUs/Farm-Bureau-History.php

San Diego Tourist Authority, "A History of Winemaking in Southern California" from August 2011 www.sandiego.org/members/wineries/milagro-farm-vineyards-and0winery/articles/a-history-of-winemaking-in-southern-california.aspx#JSDzZLy3vwDOKWXP.97

Wine Institute of California and San Diego County Vintners Association sandiegowineries.org/

PESTS AND DISEASES

Detector Dog Program, San Diego County Department of Agriculture/Weights and Measures https://www.cdfa.ca.gov/plant/dogteams/news.html

San Diego County Farm Bureau, personal communication from Eric Larson, Executive Director eric@sdfarmbureau.org

State of California Department of Food and Agriculture https://www.cdfa.ca.gov

State of California Department of Pesticide Regulation http://www.cdpr.ca.gov

University of California, Agriculture and Natural Resources, http://www.cesandiego.ucdavis.edu

POLLINATION

San Diego County Department of Agriculture/Weights and Measures http://www.sandiegocounty.gov/content/dam/sdc/awm/docs/Crop Report-Final.pdf

State of California Department of Food and Agriculture https://www.cdfa.ca.gov

State of California Department of Pesticide Regulation http://www.cdpr.ca.gov

Effects of neonicotinoids on Bees inhttp://journals.plos.org/plosone/article?id=10.1371/journal.pone.0029268

http://blog.ucsusa.org/doug-gurian-sherman/genetically-engineered-crops-in-the-real-world-bt-corn-insecticide-use-and-honeybees-2?

"The Fall and Rise of the Honey Bee", Peter Loring Borst http://slideplayer.com/slide/4402987

"The Plight of the Honeybee", Bryan Walsh, Time Magazine, August 19, 2013

SAN DIEGO COUNTY AGRICULTURAL LAND USE

County of San Diego Board of Supervisors, Wednesday, December 4, 2013, Minute Order No. 3: Purchase of Agriculture Conservation Easement (PACE) Program http://www.sandiegocounty.gov/content/dam/sdc/pds/advance/PACE/pacebosminuteorder120413.pdf

County of San Diego Planning and Development Services, General Plan, Adopted August 3, 2011: Chapter 3: Land Use Framework; Chapter 5: Conservation and Open Space (COS) Element and COS Goals: County of San Diego, Planning and Development Services, September

2014, http://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/LandUseElement.pdf and

http://www.sandiegocounty.gov/content/dam/sdc/pds/gpupdate/docs/GP/ConservationandOpenSpace.pdf

Purchase of Agriculture Conservation Easement (PACE) Program Guidelines http://www.sandiegocounty.gov/pds/advance/PACE.html

SAN DIEGO COUNTY WATER USAGE

San Diego Water Authority 2014-15 Annual Report http://sdcwa.org/annualreport/2015/