

Water – SIO35 Winter Quarter 2016

Center Hall 115

MWF 11:00-11:50

Instructor Neal Driscoll (ndriscoll@ucsd.edu)

Office Hours Wednesday 3:00 – 6:00 PM

TAs – Lana Graves, Boe Derosier, and Brendon Mendenhall

Resource for SIO35: Introduction to WATER in California, by David Carle

Course Syllabus

Monday, January 4 – Introduction – Discuss Properties of Water

Wednesday, January 6 – Origin of Water in the Universe

Friday, January 8 – Origin and Distribution of Water on Earth

Monday, January 11 – Chemistry & Physics of Water

Wednesday, January 13– Water Cycle - Evaporation, Precipitation, Atmospheric circulation

Friday, January 15 – Tectonic and Orographic Effects

Monday, January 18 – MLK Holiday

Wednesday, January 20 – Rivers, Streams, & Groundwater

Friday, January 22 – Floods and Landscape evolution

Monday, January 25 – Lakes and Seasonality

Wednesday, January 27 – Glaciers and Ice Caps

Friday, January 29 - Sea Ice and Permafrost

Monday, February 1 – Oceans and Seas I (Depth and Volumes – Age of the Oceans)

Wednesday, February 3 - Oceans and Seas II (The Salty Sea, Circulation – e.g., Gulf Stream)

Friday, February 5 – Oceans and Seas III (Sea level changes and Tides)

Monday, February 8 - Climatic Impacts (e.g., Sierra snow pack, global Warming)

Wednesday, February 10 – Climatic Impacts (e.g., Sierra snow pack, global Warming)

Friday, February 12 – Mid -Term

Monday, February 15 – Presidents Holiday

Wednesday, February 17 – Weather versus Climate (precipitation changes in the last decade)

Friday, February 19 – California Water Landscape (Pristine versus Urban Landscapes)

Monday, February 22 – Californian Rivers and Watersheds I (North Coast – San Fran)

Wednesday, February 24 - Californian Rivers and Watersheds II (San Joaquin – South Lahontan)

Friday, February 26 - Californian Rivers and Watersheds III (South Coast and Colorado River Region)

Monday, February 29 – Water Distribution System (demand versus supply)

Wednesday, March 2 – Aqueducts and California delivery system (Los Angeles, Hetch Hetchy, and Mokelumne Aqueducts)

Friday, March 4 – Ground water supplies and Alternative Water Sources (e.g., desalination, new dams, reclaimed water) I

Monday, March 7 –Challenges to Water Management (application to California) & Meeting Future Water Demands

Wednesday, March 9 – Water Shortages in Western U.S. short-term and long-term solutions

Friday, March 11 – Global Water Hotspots and Political Implications

Finals – March 14 - 18