

Water – SIO35 Winter Quarter 2015

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, Riley Gannon

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

Course Syllabus

Monday, January 5 – Introduction – Discuss Properties of Water

Wednesday, January 7 – Origin of Water in the Universe

Friday, January 9 – Origin and Distribution of Water on Earth

Monday, January 12 – Chemistry & Physics of Water

Wednesday, January 14– Water Cycle - Evaporation, Precipitation, Atmospheric circulation

Friday, January 16 – Tectonic and Orographic Effects

Monday, January 19 – MLK Holiday

Wednesday, January 21 – Rivers, Streams, & Groundwater

Friday, January 23 – Floods and Landscape evolution

Monday, January 26 – Lakes and Seasonality

Wednesday, January 28 – Glaciers and Ice Caps

Friday, January 30 - Sea Ice and Permafrost

Monday, February 2 – Oceans and Seas I (Depth and Volumes – Age of the Oceans)

Wednesday, February 4 - Oceans and Seas II (The Salty Sea, Circulation – e.g., Gulf Stream)

Friday, February 6 – Oceans and Seas III (Sea level changes and Tides)

Monday, February 9 - Climatic Impacts (e.g., Sierra snow pack, global Warming)

Wednesday, February 11 – Climatic Impacts (e.g., Sierra snow pack, global Warming)

Friday, February 13 – Mid -Term

Monday, February 16 – Presidents Holiday

Wednesday, February 18 – Weather versus Climate (precipitation changes in the last decade)

Friday, February 20 – California Water Landscape (Pristine versus Urban Landscapes)

Monday, February 23 – Californian Rivers and Watersheds I (North Coast – San Fran)

Wednesday, February 25 - Californian Rivers and Watersheds II (San Joaquin – South Lahontan)

Friday, February 27 - Californian Rivers and Watersheds III (South Coast and Colorado River Region)

Monday, March 2 – Water Distribution System (demand versus supply)

Wednesday, March 4 – Aqueducts and California delivery system (Los Angeles, Hetch Hetchy, and Mokelumne Aqueducts)

Friday, March 6 – Ground water supplies and Alternative Water Sources (e.g., desalination, new dams, reclaimed water) I

Monday, March 9 –Challenges to Water Management (application to California) & Meeting Future Water Demands

Wednesday, March 11 – Water Shortages in Western U.S. short-term and long-term solutions

Friday, March 13 – Global Water Hotspots and Political Implications

Finals – March 16 - 20