

# Photo Credits for Course on Understanding Climate Change Impacts on Water Resources

Photos and graphics used for this course were taken from a number of public domain galleries, reference documents, and U.S. EPA. The sources of the photos used in the course are listed below.

## **Climate Change 101**

Trinity Lake, California in February 2014 - U.S. Geological Survey,

<http://ca.water.usgs.gov/data/drought/images/carousel/Trinity-Lake-drought-04Feb2014.jpg>

## **What is causing climate change?**

U.S. Global Change Research Program, Climate Change Impacts in the United States: The Third National Climate Assessment, <http://www.globalchange.gov/browse/multimedia/human-influence-greenhouse-effect>

## **What is causing this rise in greenhouse gases?**

National Climate Assessment; Our Changing Climate -

<http://nca2014.globalchange.gov/highlights/report-findings/our-changing-climate#tab2-images>

## **What are the indicators of climate change?**

National Oceanic and Atmospheric Administration, National Climatic Data Center,

<http://www.globalchange.gov/browse/multimedia/ten-indicators-warming-world>

## **What are the observed and projected changes in the U.S.?**

<http://www.globalchange.gov/browse/reports/climate-change-impacts-united-states-third-national-climate-assessment-0>

## **The Water Cycle**

Our Changing Planet: The Fiscal Year 2003 U.S. Global Change Research Program,

<http://data.globalchange.gov/file/d7b7addb-6458-4587-87b4-d82661811e8b>

## **Vulnerability of Water Resources to Climate Change**

Upper: Flooded cropland in southwest Iowa by Keith McCall, USDA NRCS,

<http://photogallery.nrcs.usda.gov/netpub/server.np?find&catalog=catalog&template=detail.np&field=itimid&op=matches&value=3033&site=PhotoGallery>

Lower: Devil's Golf Course in Death Valley, CA, <http://www.istockphoto.com/photo/devils-golf-course-in-death-valley-np-11945953?st=5f50600>

### **Local Case Study – Colorado Springs Utilities, CO**

Left: Juhan Sonin, [www.flickr.com](http://www.flickr.com), Creative Commons,

<https://www.flickr.com/photos/juhansonin/463545370/in/photolist-GXMTy-2xPpBs-aBebK5-c4zmSs-4esZNa-3KudVa-58egJW-ob62Jx-5Kwc2y-sF6uA-qKvLV-4pMnbv-7KY69Y-sF625-8brCnH-dgr9ks-69SQMC-36Birs-te8Jz-sWaUZ-tf2kj-sWbfY-9hKSAQ-dq97m6-74givB-nCjZoK-bkjWL-nCjZpM-9kN9Qo-nQJpX5-9hKSrG-duZpUH-9hKSCm-9hKSKf-mQqJY-sWbqu-sQLUC-kposY-76GfY5-4gnE7q-38u7JB-nTwpnd-9eFTod-9tvC4f-nStQgt-nSLboL-objctR-nq91G-nCiZvc-sm1H>

Middle and Right: Mary, Monterey Bay Aquarium, [www.flickr.com](http://www.flickr.com), Creative Commons,

<https://www.flickr.com/photos/42614915@N00/456172287/in/photolist-GXMTy-5HujBx-7b5GBM-Gj18r>

### **Local Case Study – Tuolumne Utilities District, Sonora, CA**

Left: Lyons Reservoir, Courtesy of TUD, [www.tudwater.com](http://www.tudwater.com)

Middle: Regional Wastewater Treatment Plant in Sonora, Courtesy of TUD, [www.tudwater.com](http://www.tudwater.com)

Right: TUD Main Office, Courtesy of TUD, [www.tudwater.com](http://www.tudwater.com)

### **Local Case Study – Kansas City, MO**

Kansas City Water Services

[www.kcwaterservices.org](http://www.kcwaterservices.org)

### **Local Case Study – Southfork Nooksack River, WA**

Small Fish: Juvenile Chinook by Roger Tabor, U.S. Fish and Wildlife Service

Large Fish: Josh Larios, [https://commons.wikimedia.org/wiki/File:Chinook\\_salmon1.jpg](https://commons.wikimedia.org/wiki/File:Chinook_salmon1.jpg)

### **Local Case Study – South Monmouth, NJ**

<http://www.smrta.org/>

[https://www.fema.gov/sites/default/files/images/femaphotosrosannaarias-9926\\_medium\\_9.jpg](https://www.fema.gov/sites/default/files/images/femaphotosrosannaarias-9926_medium_9.jpg)

### **Local Case Study – Wailuku-Kahului Wastewater Reclamation Facility, HI**

Kahului Wailuku Wastewater Treatment Plant, Juan Rivera, County of Maui, Wastewater Reclamation Division

<http://mauinow.com/2012/09/20/shoreline-protection-proposed-at-kahului-wastewater-facility>

### **Watershed Degradation: EPA National Water Program Highlight**

Photo by Tetra Tech, Inc., Fairfax County, VA

### **Local Case Study – Taunton River Watershed, MA**

Left: Map of Taunton River Watershed, U.S. Geological Survey,

[https://en.wikipedia.org/wiki/File:Taunton\\_River\\_Watershed.gif](https://en.wikipedia.org/wiki/File:Taunton_River_Watershed.gif)

Right: Railroad bridge over Taunton River near Dean Street, Taunton, Massachusetts, by Marbela,

[https://en.wikipedia.org/wiki/List\\_of\\_crossings\\_of\\_the\\_Taunton\\_River#/media/File:Taunton\\_River\\_third\\_RR\\_bridge.JPG](https://en.wikipedia.org/wiki/List_of_crossings_of_the_Taunton_River#/media/File:Taunton_River_third_RR_bridge.JPG)

### **Local Case Study – San Juan Bay Estuary Program, PR**

<http://sanjuanbayestuary.blogspot.com/>

[http://water.epa.gov/type/oceb/nep/programs\\_sjb.cfm](http://water.epa.gov/type/oceb/nep/programs_sjb.cfm)

### **EPA National Water Program Highlight – Marine Ecosystem Valuation, Modeling and Monitoring**

<http://www3.epa.gov/climatechange/science/indicators/oceans/acidity.html>

### **Local Case Study – Casco Bay National Estuary Program, ME**

Left: Sea Snail, Nina Bednarek, National Oceanic and Atmospheric Administration Pacific Marine Environmental Laboratory, <http://nca2014.globalchange.gov/report/regions/oceans#tab2-images>

Middle and Bottom Right: Landscape photo/little boy photo, <http://www.cascobayestuary.org/about-us/>

Upper Right: People moving pH monitor, Brian Rappoli, USEPA

### **Explore Your Region**

All graphics in the Explore Your Region slides are from the National Climate Assessment unless otherwise indicated: <http://nca2014.globalchange.gov/report#section-1948>

### **Explore Your Region (map)**

<http://scenarios.globalchange.gov/regions>

### **Impacts on Vulnerable Populations**

[www.iStock.com](http://www.iStock.com)

### **Congratulations!**

Streambank willow planting in the Johnson Creek Watershed in Portland, OR. Photo by Tetra Tech.

### **Climate Change Impacts in the U.S. – Temperature**

<http://www.globalchange.gov/browse/multimedia/global-temperature-change-decade-averages>

### **Climate Change Impacts in the U.S. – Precipitation**

<http://www.globalchange.gov/browse/multimedia/observed-us-precipitation-change>

### **Climate Change Impacts in the U.S. – Weather**

<http://nca2014.globalchange.gov/sites/report/files/images/web-large/Figure-2.21hi.jpg>

<https://www.ncdc.noaa.gov/billions/>

### **Climate Change Impacts in the U.S. – Sea Level**

<http://www.globalchange.gov/browse/multimedia/past-and-projected-changes-global-sea-level-rise>

### **Climate Change Impacts in the U.S. – Ocean Environment**

Coral reef survey off the coast of Puerto Rico – EPA Flickr,

<https://www.flickr.com/photos/usepagov/7932040500/in/album-72157629017469667/>