Energy & Water Web Guides Featuring U.S. Government Web Sites
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Art, Design & Merchandising, English, History, Interdisciplinary Liberal Arts
Government Information Librarian

Depository Library Conference October 22, 2018
Outline

1. Food—Brief Review & Page Use
2. Energy & Water Guides
3. Identifying Opportunities and what to do
4. Q & A & Discussion
CO150 - COLLEGE COMPOSITION

Government Information

Government information can be a great resource for your research. Here are the government information guides for CO150-relevant topics:

- Government Information on Food
- Government Information on Energy
- Government Information on Water
Government Information Guide

http://libguides.colostate.edu/govinfo

Federal Depository Library

The library at CSU became a depository for materials from the Government Printing Office in 1903. The federal documents collection now totals approximately one million print pieces, and over 70,000 maps and thousands of Internet publications.

Government Information

This guide will help you find information published by selected agencies of the federal and local governments in the United States of America (USA). Suggested online locations to search for government information 24/7 are:


Selected government resources are highlighted via the Federal agencies, Federal topics, Colorado Government, and Local City County tabs found on the left-hand side of this page.

CRS Reports: Just made available to the public for the first time September 19, 2019, these excellent resources provide a thorough overview of subjects. Requestors are members of Congress.
Food—Brief Review & Use
http://libguides.colostate.edu/govinfo/food

Topical theme for many of the first year composition courses (2016-17 and 2017-18)
Food--Table of Contents

Sections on this page are:

- Food--Introduction
- Food--Eating Recommendations
- Food--Health
- Food--Safety
- Food Allergies
- Food--Eating Disorders
- Food Waste
- Food Assistance for the Food Insecure or Hungry
- Food Workers
- Food--Growing and Harvesting
- Food--National Agriculture Library (focus on harvesting and growing food: past and present)
- Food--GMOs (Genetically Engineered Organisms) Related to Crops
- Food--Imports and Exports
- Food--Recipes
- Food--Processed
- Food--International Organizations
- Food--Government Information in Print
Food Waste

Let’s talk trash.

https://www.choosemyplate.gov/lets-talk-trash

Be Food Safe

Shop refrigerated or frozen foods just before checking out. Transport items that spoil easily in a cooler or thermal bag and refrigerate or freeze within two hours of shopping.
Growing and Harvesting
Growing and Harvesting 2

https://catalog.data.gov/dataset?groups=agriculture8571
#topic=food_navigation

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MORGAN LIBRARY
COLORADO STATE UNIVERSITY
Food July 1, 2016-Jun 30, 2017

• 3593 pageviews
• 2562 unique pageviews
• Gov Info (pageviews) 4852 / (unique) 3622:
Food Jan 1-Dec 31, 2017

• 3339 pageviews [by page title]
• 2431 unique pageviews
Top Pages 2017 at CSUL

1. A-Z Databases
2. Home Res. Guides
3. A-Z Databases (Research Guides)
4. Aerial & Sat. Photos
5. Search Res. Guides
6. CO150
7. Your Mission AGRI116
8. Historic Colorado Maps
9. Food Gov Info (!)
Starting Points

Don't know where to start? Try one of these databases

- Academic Search Premier
- Business Source Complete
- Google Scholar
- News Bank
- Web of Science

Need basic information? Try a reference collection:

- Gate Virtual Reference Library

Historic Colorado Maps

Emphasis on this page is open Colorado historic maps, either in the collection at the Colorado State University Libraries or online. The arrangement is from newer maps to older.

- 1/3 (1/24,000) USGS Topographic Maps:
  - This map series was published in the 1970s. A listing of CSU Library holdings can be found by a number search in the Library catalog of the SuDoc call number MF183.C2. This list is not complete nor does the library own all editions and printings.

- County Maps (1/100,000) USGS:
  - This map series was published in the 1950s. A listing of CSU Library holdings can be found by a number search in the library catalog of the SuDoc call number M1308.C2.

- Older 20th-Century Topographic Maps:
  - Most of these maps from the USGS were published 1890 through 1940. Some from the Defense Mapping Agency date from the 1960s. Scales are usually 1/10 or 1/24. A listing can be found by a number search in the Library catalog of the SuDoc call number MF283.C2. These maps are inter-shelved alphabetically with the 1/24 Colorado maps.

- A number of these and other historical topographic maps can be found at these websites:
  - Colorado Historic Quads Maps, from the Historical Maps Archive, University of Arkansas Libraries
  - Fort Collins History Collection - Historic Maps
  - Eaton Map Library
  
See also the USGS Historical Topographic Map Explorer

AGRI116 - PLANTS AND CIVILIZATIONS

Research help for AGRI116 students.

Your mission: Library Research Assignment

Pick a plant and find 10 unique references on applicable aspects including:

- Biology / Natural history
- Social / Cultural
- Economic
- Historical
- Human health
- Policy / legal aspects of your plant and how it has interacted with humans or human cultures
Food Pages Use

- July 1, 2017-June 30, 2018 (#16 / 14)
- 2,289 pageviews
- 1,853 unique pageviews:

![Pageviews Graph]
July 2017 - June 2018

HOW TO DO LIBRARY RESEARCH
This set of pages has information on how to do library research. In all cases, once you have located sources, be sure to evaluate them, using the evaluation guides.

ENGLISH LANGUAGE & LITERATURE
This guide has links to resources for doing literary research. Some give general research advice and others are specific to an author or subject.

PSYCHOLOGY

Food--
16: actually 14

MORGAN LIBRARY
COLORADO STATE UNIVERSITY
Food: Jan 1-Jun 30, 2018

- 778 pageviews  (30% of Gov Info)
- 627 unique pageviews (29%)
- Gov Info site  (pageviews) 2577 /  (unique) 2130:
Average Time on Page

- July 1, 2017-June 30, 2018: 2:42
- Jan 1, 2018-June 30, 2018: 2:25

- So—for everyone who jumped on and left immediately, someone stayed close to or over 5 minutes
Food Pages: Success!

- Heaviest Government Information page use
- Jan-Jun 2018, next heaviest has less than half as many hits (279 vs. 778)
- Looking forward to seeing how Energy & Water do!
Variables to Consider

• Number of sections with Food as a topic
• Number of sections with Food, Water, & Energy as a topic
• Instructors or course may choose a different topic after the first year
Food, Energy, & Water
Topical theme for many of the first year composition courses 2018-19
Hearings . . . the covers might be dull, but the contents are golden!

Most of the hearings on display are also available online via the library catalog.
Energy

Energy--Information from Various Governmental Sites

One thing to note about these Web sites, and any others for that matter, is that content can change at any time. Be sure to save any content that you might use later. Some of the links below go to the same larger organization, but are listed separately for faster locating.
Solar Energy Basics

Solar is the Latin word for sun—a powerful source of energy that can power our homes and businesses. That's because more energy falls on the earth in one hour than is used by everyone in the world in one year.
Thermal/Geothermal Energy

This section has information on thermal/geothermal energy. "Geothermal energy is heat within the earth." (Geothermal Explained.)
Radiant/Electromagnetic Energy

Radiant energy is energy from electromagnetic waves. "The visible light from the Sun is only one type of radiant energy. The other types of radiant energy are known as gamma rays, x rays, ultraviolet, infrared, microwaves, and radio waves."

NIH NATIONAL CANCER INSTITUTE
Electromagnetic Fields and Cancer

ON THIS PAGE
- What are electric and magnetic fields?
- What are common sources of non-ionizing EMFs?

FDA U.S. FOOD & DRUG ADMINISTRATION
Radiation-Emitting Products

Ultraviolet (UV) Radiation
- What is UV Radiation?
- How is radiation classified on the electromagnetic spectrum?
- What are the different types of UV radiation?
Kinetic/Motion/Hydrokinetic Energy

"Kinetic energy is the motion of waves, electrons, atoms, molecules, substances, and objects." [Energy Kids]

Energy 101: Marine and Hydrokinetic Energy

What is Energy?

Energy forms are either potential or kinetic. Potential energy comes in forms that are stored including chemical, gravitational, mechanical, and nuclear. Kinetic energy is energy in movement and includes electrical energy, heat, light, and sound.

Cars and Kinetic Energy – Some Simple Physics with Real-World Relevance

The Physics Teacher 50, 395 (2012); https://doi.org/10.1119/1.4752039

Raghuvire Parthasarathy

Naomi Lederer
Test your Power Grid IQ

Do you know your synchrophasors from your microgrids? Test your knowledge of the electric grid with our grid IQ test.

https://www.energy.gov/maps/quiz-test-your-grid-iq
Wind Energy

Find an introduction to wind energy in Alternative Energy: Find more on wind energy in Energy: In Context, or wind energy in Environmental Encyclopedia, or wind energy in Berkshire Encyclopedia of Sustainability. See also wind energy in Encyclopedia of Contemporary American Social Issues. The bibliographies in these reference articles will also be useful.

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https://www.energy.gov/maps/quiz-test-your-wind-energy-iq
Nuclear Energy


**Glossary**

See also the Full-Text Glossary.

- Nuclear power plant
- Nuclear Radiological Incident Annex
- Nuclear reactor
- Nuclear steam supply system
- Nuclear waste

**Homeland Security**

Nuclear Reactors, Materials, and Waste Sector

From the power reactors that provide electricity to millions of Americans, to the medical isotopes used to treat cancer patients, the Nuclear Reactors, Materials, and Waste Sector covers more aspects of America's civilian nuclear infrastructure. The Nuclear Sector-Specific Agency within the Department of Homeland Security is responsible for coordinating the security and resilience of the Nuclear Sector.

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**GLOBAL CLIMATE CHANGE**

Nuclear Energy

Atoms are tiny particles that make up everything in the universe. The bonds that hold atoms together contain a huge amount of energy. When atoms are split apart, this energy can be used to make electricity. This process is called nuclear fission.

In a nuclear power plant, fission takes place inside a reactor. Most nuclear power plants use uranium as fuel because its atoms are easily split apart. Uranium is a metal found in rocks all over the world. Although uranium is not a renewable resource, fairly large quantities of it still exist, and it only takes a small amount to produce a lot of energy.

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**EPA**

United States Environmental Protection Agency

LEARN THE ISSUES | SCIENCE & TECHNOLOGY | LAWS & REGULATIONS | ABOUT EPA

RadTown USA

Nuclear Power Plants

Nuclear power plants produce electricity from the heat created by splitting uranium atoms.

- In the event of a nuclear power plant emergency, follow instructions from emergency responders and elected officials.

On this page:

- About Nuclear Power Plants
- Sales and Guides
- What you can do
- Where to learn more
Chemical Energy

As a separate entry, there isn't a lot directly on chemical energy in government publications. However, there are a few useful items worth exploration.

h=true&Q=86,111,48,90,45,96,129,204,98,35,202,11,7,128,203,
76,137,9,103,75
Energy Consumption, Prices, Various

Read about energy conservation in Energy: Supplies, Sustainability, and Costs.

U.S. DEPARTMENT OF ENERGY
Home Energy Score
Know your home. Know your Score.

UNITED STATES DEPARTMENT OF LABOR
BUREAU OF LABOR STATISTICS
Average Energy Prices for the U.S., regions, census divisions, and selected metropolitan areas

Gasoline, price per gallon

<table>
<thead>
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<td>Philadelphia</td>
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<td>2.461</td>
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<td>2.270</td>
<td>2.954</td>
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</table>

NISTIR 85-3273-32

Annual Supplement to NIST Handbook 135

Punya D. Lavges
Josua D. Kivelst
Eric O. O’Ree

This publication is available free of charge from: https://doi.org/10.3185/700351-85-3273-32

Naomi Lederer
MORGAN LIBRARY
COLORADO STATE UNIVERSITY
Energy Climate

Climate and energy, in brief.

Energy, Water, Land, and Climate Interactions

Energy, Water, and Land Use

Climate change affects energy, water, and land use as well as the interactions among these sectors. The combination of these factors affects climate change vulnerability as well as adaptation and mitigation options.

Explore climate change impacts on the intersections of energy, water, and land use.

Key Message 7: "Cascading Events"

Energy, water, and land systems interact in many ways. Climate change affects the individual sectors and their interactions, the combination of these factors affects climate change vulnerability as well as adaptation and mitigation options for different regions of the country.
Agency Web Sites--Energy

- **Department of Energy (Energy.Gov)**
  A gateway for federal government resources dealing with energy.

- **Energy Information Administration**
  The EIA is the source for information and statistics on petroleum, oil, gasoline, natural gas, and many other energy related topics for US states and countries of the world.

- **Office of Scientific and Technical Information**
  OSTI is the research arm of DOE and a gateway for numerous databases pertaining to energy research.

- **Department of Energy - Solar Decathlon**
  Information about an "award-winning program that challenges collegiate teams to design, build, and operate solar-powered houses that are cost-effective, energy-efficient, and attractive."

Statistical Resources--Energy

- **Prices and Trends**
  A starting point for petroleum, gasoline, and diesel prices and data, as well as a gateway to other major statistical sources.

- **Annual Energy Outlook**
  Provides data and projections for the next 20 years. Annual issues are online from 1990 to the present. Print and microticle annual copies from 1983 to 2002 can be found at E3 1/4 Doc.

- **Annual Energy Review**
  Compiles current and historical statistics, some back to 1949. Annual issues are online from 1995 to the present. Some tables are linked from the Monthly Energy Review. Print and microticle copies from 1982 to 2003 can be found at the call number E3 1/2 Doc.

- **Monthly Energy Review**
  A publication of recent and historical energy statistics. This publication is online from 1983 to the present. Paper copies from 1974 to 2001 can be found at the call number E3 5 Doc. Full text available for 2000 to 2010 through Discovery using HD9964. M666eg call number.

- **Country Analysis Briefs**
  Very useful for narrative and basic statistics on energy needs of countries and regions.

- **Petroleum Data Publications**
  A starting point for numerous statistical and analytical petroleum publications.

- **FuelEconomy.gov**
  Find automobile make and model mpg, fuel economy, energy impact, and carbon footprint as well as comparisons.

- **Energy Information Administration**
  The EIA is the source for information and statistics on petroleum, oil, gasoline, natural gas, and many other energy related topics for US states and countries of the world.

Existing content? Copy it over (or point/link) to new subject page. (LibGuide here.)

Then realize other page doesn’t have images and add one to liven it up a tad. (Sometimes.)
Water

How much water...

How much water does it take to make a t-shirt?

- "It can take 2,700 liters to produce the cotton needed to make a single t-shirt." *(That's 713 gallons!)*
- See also "Carbon Footprint of Textile throughout its Life Cycle: A Case Study of Chinese Cotton Shirts." *(CSU affiliates only)*

How much water does the average person use at home per day?

- "Estimates vary, but each person uses about 80-100 gallons of water per day." †
- "The average American family of four uses 400 gallons of water per day." †

What percentage of water is used for Agriculture in the United States?

- Agriculture accounts for "approximately 80 percent of the Nation's consumptive water use and over 90 percent in many Western States." ‡
Water--Introduction

Water. Without water there would be no life on Earth as we know it. Two-thirds of the planet is covered with water. What is it? According to The Gale Encyclopedia of Science it is a chemical compound with one oxygen atom bonded to two hydrogen atoms; it is "odorless, tasteless, transparent liquid that appears colorless but is actually very pale blue"; it has a high boiling point; it has three states: solid (ice), liquid, and gaseous (steam).

Government documents lend themselves excellently to the topic of water. Water is important in the political arena. Society and individuals have a vested interest in an adequate supply of fresh, clean, and uncontaminated water. Water is needed to grow food. Dirty water (sewage, remains from industry--including agriculture) needs to be disposed of in a manner that does not harm humans, animals, fish, birds, plants--which is to say pretty much anything and everything that is alive on Earth. Of course, this view of water disposal is a relatively new one, but historical incidents have amply demonstrated the danger of simply dumping contaminated water wherever it is convenient.
About Water


Answers the questions! Learn about different kinds of water.

The USGS Water Science School

How much water is there on, in, and above the Earth?

The Earth is a watery place. But just how much water exists on, in, and above our planet? About 71 percent of the Earth’s surface is water-covered, and the oceans hold about 96.5 percent of all Earth’s water. Water also exists in the air as water vapor, in rivers and lakes, in icecaps and glaciers, in the ground as soil moisture and in aquifers, and even in you and your dog.

Water is never sitting still. Thanks to the water cycle, our planet’s water supply is constantly moving from one place to another and from one form to another. Things would get pretty stale without the water cycle!

Earth’s Water

- Where is Earth’s water?
- How much water is there?
- The water cycle
- Follow a water drop through the water cycle
- Rain
- How wet is your state?
- Glaciers and icecaps
- Watersheds
- How Does Water Behave in Outer Space?

Water Topics

- Water basics
- Water properties
- Water cycle - Adults
- Water cycle - Kids
- Surface water
- Groundwater
- Water quality
- Activity center
- Picture gallery
- Water Q&A
- Water use

Water is remarkable!

Water is one of the most amazing substances on our planet. Did you know that every single living thing needs water? It is in each of the cells in our bodies and in the bodies of all plants, animals and other creatures. Water is special because it can mix with many different liquids and solids. Its ability to stay warm for a long time makes it special too. This helps keep the temperature inside our bodies around 98 degree Fahrenheit. It also helps keep the temperature in oceans, lakes and rivers from changing very quickly.
Water Resources Archive

Water as a resource in Colorado and the American West has a lengthy history. Colorado territory was created on February 28, 1861. Given that water in the semi-arid region was (and is) going to be precious, water rights and laws became (and still are) a major concern.

The Colorado State University Water Resources Archive is a joint effort of the University Libraries and the Colorado Water Institute. The Archive consists of collections from individuals and organizations that have been instrumental in the development of water resources in Colorado and the West.

Subject areas include water resources management, engineering, law and legislation, endangered species, and more. Geographic coverage focuses on Colorado but extends across the American West and around the world.

Document types range from meeting minutes, reports, and correspondence to maps, photographs, and audiotapes. These primary materials relate to all aspects of water in Colorado and to contributions made by Coloradoans to water activities.

The Water Resources Archive actively acquires new collections, digitizes materials, and assists researchers. Donations greatly assist in making Colorado’s historical water documents available to all.
Drinking Water Safety

Drinking water is used in the United States for many things that go beyond drinking it. "Other uses include toilet flushing, bathing, cooking, cleaning, and lawn watering." *Drinking water treatment* discusses how water is made safe for public consumption—something which varies from community to community and property to property (e.g. wells).

Ground Water and Drinking Water

Basic Information about Lead in Drinking Water

Boiling tap water does not get rid of radioactive material. You should have bottled water in your emergency supplies.

Safe Drinking Water Act (SDWA)

The Safe Drinking Water Act (SDWA) is the federal law that protects public drinking water supplies throughout the nation. Under the SDWA, EPA sets standards for drinking water quality and with its partners implements various technical and financial programs to ensure drinking water safety.

The Law

Regulatory Programs
Recreational Water Safety

"Recreation in and on Freshwaters" and "Recreation in and on the Oceans" describe recreational uses of water. Take note that there are also dangerous waters.

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

Healthy and Safe Swimming Week
MAY 21-27, 2018

US Army Corps of Engineers

Water Safety: Rivers and Streams

Be Aware of Hazards

Be cautious anytime you or your family are near rivers and streams. Consider these precautions as spring snow melts and rivers and streams rise. Also be cautious when waters appear warm or slow moving, but actually have strong and sometimes dangerous currents below the surface.

- Water Temperature: Air temperatures may feel hot and the water may feel or appear warm, but temperatures can be extremely cold below the surface. Hypothermia can quickly set in and overwhelm even the strongest of swimmers, becoming too weak to escape.
- Currents: In as little as six inches, water that may look calm on the surface and slow-moving can have enough force to knock you off your feet and sweep you downstream. Even a slow current can take you where you don't want to go, towards hazards, and leave strong swimmers unable to reach the shore.
- Water Hazards: A slippery and uneven river bottom combined with the stream's current can suddenly sweep you off your feet. Debris and underwater features such as trees, branches and logs, and even narrow gaps between rocks can trap you under water, causing hypothermia or even death.
## Water Safety

### Travel (focus on International) Drinking Water Safety

<table>
<thead>
<tr>
<th>Eat</th>
<th>Drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Food that is cooked and served hot</td>
<td>• Water, sodas, or sports drinks that are bottled and sealed (carbonated is safer)</td>
</tr>
<tr>
<td>• Food from sealed packages</td>
<td>• Water that has been disinfected (boiled, filtered, treated)</td>
</tr>
<tr>
<td>• Hard-cooked eggs</td>
<td>• Ice made with bottled or disinfected water</td>
</tr>
<tr>
<td>• Fruits and vegetables you have washed in safe water or peeled yourself</td>
<td>• Hot coffee or tea</td>
</tr>
<tr>
<td>• Pasteurized dairy products</td>
<td>• Pasteurized milk</td>
</tr>
</tbody>
</table>

### Don’t Eat

- Food served at room temperature
- Food from street vendors
- Raw or soft-cooked (runny) eggs
- Raw or undercooked (rare) meat or fish
- Unwashed or unpeeled raw fruits and vegetables
- Condiments (such as salsa) made with fresh ingredients
- Salads
- Flavored ice or popsicles
- Unpasteurized dairy products
- Bushmeat (monkeys, bats, or other wild game)

### Don’t Drink

- Tap or well water
- Fountain drinks
- Ice made with tap or well water
- Drinks made with tap or well water (such as reconstituted juice)
- Unpasteurized milk
Water and Health

Read about Human health and water for a quick summary of the topic.

Water helps your body:
- Keep your temperature normal
- Lubricate and cushion joints
- Protect your spinal cord and other sensitive tissues
- Get rid of wastes through urination, perspiration, and bowel movements

Your body needs more water when you are:
- In hot climates
- More physically active
- Running a fever
- Having diarrhea or vomiting

Drinking Water Contaminant Human Health Effects Information

On this page:
- Drinking Water Standards and Advisory Tables
- Human Health Benchmarks for Pesticides
- Human Health and Drinking Water Advisory Documents for Chemical Contaminants
- Regulatory Support Documents for Chemical Contaminants
- Human Health and Drinking Water Advisory Documents for Microbial Contaminants
- Fluoride Risk Assessment and Relative Source Contribution
Water Conservation

"Water conservation is the use and management of water for the good of all consumers. It is used in agriculture, industry, and the home." CSU affiliates may read a selection of encyclopedia definitions of water conservation.

Careers in Water Conservation

James Hamilton
September 2013 — Report 12

Land and Water Conservation Fund

Protecting Lands and Giving Back to Communities

The Land and Water Conservation Fund was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard our natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. Using zero taxpayer dollars, the fund invests earnings from offshore oil and gas leasing to help strengthen communities, preserve our history and protect our national endowment of lands and waters. The LWCF program can be divided into the "State Side" which provides grants to State and local governments, and the "Federal Side" which is used to acquire lands, waters, and interests therein necessary to achieve the natural, cultural, wildlife, and recreation management objectives of federal land management agencies.

RCA Appraisal

Soil and Water Resources Conservation Act
Water Rights

The National Park Service (NPS) seeks to protect and conserve surface waters and groundwaters in park units as integral components of water and land ecosystems. The Water Rights Program and Branch (WRB) in the Water Resources Division was established in 1985 and provides staff expertise and resources to effectively address water quantity and water-right issues for NPS units throughout the United States. The program secures and protects water rights, flows, and lake and groundwater levels for the preservation and management of the national park system through all available local, state, and federal authorities.

Office of Congressional and Legislative Affairs
Water Rights Act

H.R. __, Water Rights Protection Act (Discussion Draft)

Statement for the Record
U.S. Department of the Interior
Before the
Water, Power, and Oceans Subcommittee
Committee on Natural Resources
U.S. House of Representatives
HR__ (Discussion Draft) the Water Rights Protection Act

May 18, 2017

Water Rights

Water rights vary from place to place. The focus here will be on Colorado.
How We Use Water

Water Use Overviews

<table>
<thead>
<tr>
<th>Total Water Use</th>
<th>Surface Water and Groundwater Use</th>
<th>Trends in Water Use</th>
</tr>
</thead>
</table>

Total water use: Estimated total water use for all categories and sources by State.

Surface Water and Groundwater Use: Water-use estimates for groundwater and surface water by State.

Trends: How water use is changing over time, starting with the initial USGS estimates for 1959.

Water Use in the United States

The Earth might seem like it has abundant water, but in fact less than 1 percent is available for human use. The rest is either salt water found in oceans, fresh water frozen in the polar ice caps, or too inaccessible for practical usage. While population and demand on freshwater resources are increasing, supply will always remain constant. And although it's true that the water cycle continuously returns water to Earth, it is not always returned to the same place, or in the same quantity and quality.

How much water does the average person use at home per day?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Water Use (gallons)</th>
<th>Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bath</td>
<td>A &quot;full tub&quot; varies, of course, but 36 gallons is a good average.</td>
<td></td>
</tr>
<tr>
<td>Shower</td>
<td>Old showers used to use up to 5 gallons of water per minute. About 2 gallons per minute.</td>
<td></td>
</tr>
<tr>
<td>Teeth brushing</td>
<td>&lt;1 gallon. Newer bath faucets use about 1 gallon per minute.</td>
<td></td>
</tr>
<tr>
<td>Hands/face washing</td>
<td>1 gallon. Tip: Simply turn the faucet off when brushing teeth.</td>
<td></td>
</tr>
<tr>
<td>Face/leg shaving</td>
<td>1 gallon. Tip: Simply turn the faucet off before drying your hands. Run the faucet until it gets hot before using it. Installing water flow rate.</td>
<td></td>
</tr>
<tr>
<td>Dishwasher</td>
<td>6-16 gallons. Newer, Energy Star models use 6 gallons or less. Dishwashers might use up to 16 gallons per cycle.</td>
<td></td>
</tr>
</tbody>
</table>
| Dish washing by hand | About 8-27 gallons. This all depends on how efficient your faucets use about 1.5-2 gallons per minutes, whereas oil
Water and Agriculture

Agriculture uses the majority of fresh water in the United States.

Irrigation & Water Use

Agriculture is a major user of ground and surface water in the United States, accounting for approximately 80 percent of the Nation's consumptive water use and over 90 percent in many Western States. Efficient irrigation systems and water management practices can help maintain farm profitability in an era of increasingly limited and more costly water supplies. Improved onfarm water management practices can help farmers maintain productivity and profitability in an era of increasing water scarcity.

What is agricultural water?

Agricultural water is water that is used to grow fresh produce and sustain livestock. The use of agricultural water makes it possible to grow fruits and vegetables and raise livestock, which is a main part of our diet. Agricultural water is used for irrigation, pesticide and fertilizer applications, crop cooling (for example, light irrigation), and frost control. According to the United States Geological Survey (USGS), water used for irrigation accounts for nearly 65 percent of the world’s freshwater withdrawals excluding thermoelectric power (1). There are 330 million acres of land used for agricultural purposes in the United States that produce an abundance of food and other products (2).
Aquaculture

Aquaculture: Fisheries. National Oceanic and Atmospheric Administration. NOAA.

Overview, regulation & policy, science & technology, regional activities, international collaboration, and more.

Aquaculture Research Programs. USDA.

Research programs, data and statistics, market trends, monitoring, and resources.

Aquaculture Water Use. USGS.

Use by location (state) in the United States.

Hydroponics


"Hydroponics, or growing plants in a nutrient solution root medium, is a growing area of commercial food production and also is used for home food production by hobbyists. Learn about the state-of-the-art techniques for producing food in a controlled, soilless setting." Link to sites and documents on the topic.


Benefits, types, how to incorporate into concession food operations, and more.

Hydroponics

Hydroponics, or growing plants in a nutrient solution root medium, is a growing area of commercial food production and also is used for home food production by hobbyists. Learn about the state-of-the-art techniques for producing food in a controlled, soilless setting.
Water -- Power from

Using water for power has a long history. "Power for Technology: Water" gives examples from the medieval time period.

5 Promising Water Power Technologies

Water Power Projects Across the United States

GLOBAL CLIMATE CHANGE

Water Energy

If you’ve ever stood in a fast-moving stream, under a waterfall, or on the ocean shore as waves come crashing in, then you’ve felt the power of the water. The energy from moving water can be used to create electricity in several different ways. For example:

- A hydroelectric dam captures energy from the movement of a river. Dam operators control the flow of water and the amount of electricity produced. Dams create reservoirs (large bodies of calm water) behind them, which can be used for recreation, wildlife sanctuaries, and sources of drinking water.
- Wave power captures energy from waves on the surface of the ocean using a special buoy or other floating device.
- Tidal power captures the energy of flowing waters with the help of turbines as tides rush in and out of coastal areas.
Water--City Utilities, State Plans (examples)

Colorado

Colorado's Water Plan.

The plan, delivered in November 2015, was "developed in order to ensure the state's most valuable resource is protected and available for generations to come." Governor Hickenlooper issued a proclamation declaring November 16 as Colorado's Water Implementation Day. Click on The Plan to read it (entire, executive summary, or by chapter).

Boulder Water Utilities Division. City of Boulder Colorado.

Covers "Water, Wastewater, Stormwater, and Flood Management." Drinking water has multiple sections. Water education has information on the history of water in Boulder (beginning in 1859) as well as other topics.

Denver Water. Denver, Colorado

Sections at top of page as of late Nov. 2016 are: Water Service & Support; Billing & Rates; Conservation; Water Quality; Supply & Planning; Recreation; Construction Projects; and Education & Outreach. Foot of page includes Operating Rules and Engineering Standards.

Fort Collins Utilities. Fort Collins, Colorado.

Information on water quality, treatment, supply & demand, distribution, drought, and more.
Colorado Water

Daily streamflow conditions for Colorado stations with at least 30 years of record. Build a custom table, see Colorado streamflow, precipitation, groundwater, lakes and reservoir, water-quality, and meteorological tables, daily stage, streamflow, and stage & streamflow.

USGS Current Water Data for Colorado. USGS.

National Water Information System: Web Interface

USGS Water Resources

Data Category: Current Conditions

Geographic Area: Colorado

United States

Dist. of Columbia

Alaska

Hawaii


Colorado Water Plan. (2015). The nearly 600-page document discusses the supply and demand challenges for each of Colorado’s seven basins and how the state is planning to address future need.

Here are some other helpful publications that address the issues of water supply and population growth in the Front Range:

Mapped Box Entries

Water Information and Data and Water Quality:
- Annual Water Data Reports
  View current and historical streamflow, groundwater level, and water-quality data. Reports for Water Year 2006 to present.

Water and Dams--Colorado
- Big Thompson Watershed
  Links to data and other information about this watershed region.
- Cache La Poudre Watershed
  Links to data and other information about this watershed region.

Water Resources--Bureau of Reclamation
- Bureau of Reclamation Water Operations
  Useful information arranged by region, although data and statistics vary.

Dams, Reservoirs, Projects--Army Corps of Engineers
- Divisions and Districts
  This site map is an entry point for the individual divisions and districts and their projects.
- Major Dams of the United States
  This map layer portrays major dams of the United States, including Puerto Rico and the U.S. Virgin Islands.

(Haven’t gotten around to adding images yet.)
Identify Opportunities

And then . . .
Create a Guide

• Introduce the topic
• Link to government sites and pages
• Essential—annotate!
• Describe content—what’s in there
Introduce the Topic

Food--Introduction

Food is necessary for life. Its abundance, sufficiency, or lack thereof has a direct impact on whether animals live or die. Dietary needs vary, even among mammals. There are herbivores who are omnivores. Humans attribute a lot to food and have spent either their entire lives looking for it (even today, called food insecurity), or, having sufficient food for survival (food security), have explored other avenues of thought—art, music, architecture, sport, philosophy, literature, etc. Wars have been fought over access to food. Myth and legend from multiple cultures include food. Staples make up the mainstay of people's diets (and vary from culture to culture, family to family, and person to person). Eating habits explore why and how people eat and drink. Thus, there are multiple subtopics to explore on the topic of food.

Water--Introduction

Water. Without water there would be no life on Earth as we know it. Two-thirds of the planet is covered with water. What is it? According to The Gale Encyclopedia of Science, it is a chemical compound with one oxygen atom bonded to two hydrogen atoms; it is odorless, tasteless, transparent liquid that appears colorless but is actually very pale blue; it has a high boiling point; it has three states: solid (ice), liquid, and gaseous (steam).

Energy--Introduction

There are many different types of energy—and a number of ways to create or produce it. There is solar, electrical, kinetic, thermal, geothermal, bond (chemical bond between atoms), and more. It is measured in more than one way. There are social and political aspects of energy. Who controls it? Who has access to it? Who pays for it? Are there waste products associated with it? (For example, coal burning and the pollution it generates.) Find a variety of definitions and descriptions on energy in the reference books found in Gale Virtual Reference Library and elsewhere.
Annotations—Essential!

**Agriculture Water:** What is Agriculture Water? Centers for Disease Control and Prevention (CDC).

Sections on: What is agricultural water?, Why should I be concerned?, and Where does agricultural water come from?

**Water Energy:** A Student’s Guide to Global Climate Change.

Defines three different types of water power—hydroelectric, wave power, tidal power. Diagram of a hydroelectric dam.

**Department of Energy:**

Science & innovation; energy economy, security & safety; save energy, save money. Energy news, blog podcast, twitter. Also resources.

**Transportation Energy Data Book:** Oak Ridge National Laboratory.

Quick facts; twelve chapters on various forms of transport, 3 appendices, a glossary (18 pdf pages), and useful Web sites. PDF version of edition 36 has 400 pages.


Scope; Introductions to the Topic; Subject Headings; Basic Texts; Specialized Titles; Conference Proceedings; Selected Technical Reports and Government Publications; Standards and Guidelines; Dissertations; Representative Journal Articles; Selected Materials; Selected Internet Resources, and more. Use for identifying additional materials on this topic.

**Thermal Energy Conversions:** Technical Reference D. ENERGY STAR (R) Portfolio Manager. EPA.

7 page document with information on delivery of thermal energy described in various units (kBtu or GJ). Figures show: overview of processes; quick reference multipliers; and conversion factors to kBtu by meter type for U.S. and Canada. Meter types include natural gas, diesel, kerosene, coals, wood, and others.


Describes the amount of water on our planet and how it is in motion all of the time. Challenges of using this energy. Prototype wave energy converter.
Tip: Take Direct Quotes from Sites

Water Topics: The USGS Water Science School, USGS.

School has “information on many aspects of water, along with pictures, data, maps, and an interactive center where you can give opinions and test your water knowledge.” Water Basics discusses Earth’s water, water properties, hydroelectricity, using water, saline water, and more. Water Q&A answers a variety of questions. Sections in Spanish (e.g., El agua de la tierra) and Chinese (e.g., 介绍水循环).

The Energy Data Initiative. Data.gov

“The goal of the Energy Data Initiative is to fuel entrepreneurs with newly available and previously untapped data—both government and non-government data—to spur new products and services that help American families and businesses save money on utility bills and at the pump, protect the environment, and ensure a safe and reliable energy future.” Updates, data (over 245 datasets as of April 2018), and apps.

Basic Information about Lead in Drinking Water. Ground Water and Drinking Water: Environmental Protection Agency. (Archive.)

“EPA and the Centers for Disease Control and Prevention (CDC) agree that there is no known safe level of lead in a child’s blood. Lead is harmful to health, especially for children.” Information about how lead gets into drinking water and what you can do about it.


“The U.S. Department of Energy Solar Energy Technologies Office (SETO) supports early-stage research and development to improve the affordability, reliability, and performance of solar technologies on the grid. The office invests in innovative research efforts that securely integrate more solar energy into the grid, enhance the use and storage of solar energy, and lower solar electricity costs.”

(Use quotation marks to cite properly.)

Naomi Lederer

MORGAN LIBRARY
COLORADO STATE UNIVERSITY
Integrate Gov Info

• Into as many guides as possible
• Along with other relevant (non-gov) items
• Make it locally relevant (State or City sites on the topic)
• Keep an eye out for new/additional resources after “finished” (which is never)
Get a Bit Long Winded?

- Include a Table of Contents

### Energy: Table of Contents

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<th>Energy Information</th>
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<td></td>
<td>Energy—Information from Various Governmental Sites</td>
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<td>Chemical Energy</td>
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<td>Energy Consumption, Prices, Various</td>
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### Table of Contents for Water

| Water Information | Water Information and Data and Water Quality (includes Colorado Specific) (mapped) |
| Water Resources   | Water Resources—Bureau of Reclamation (mapped) |
| Water—EPA         | Water Resources—EPA (mapped) |
| Water and Dams—Colorado (mapped) | Water and Dams—Colorado (mapped) |
| Water and Agriculture | Dams, Reservoirs, Projects—Army Corps of Engineers (mapped) |
| Water—Power from Water | Water—Power from Water |
| Water—City Utilities, State Plans (examples) | Water—City Utilities, State Plans (examples) |
| Colorado Water    | Colorado Water                 |

Sections on this page are:
- Water and Health
- Water Conservation
- Water Rights
- Water Use
- Water and Agriculture
- Water—Power from Water
- Water—City Utilities, State Plans (examples)
- Colorado Water
Audience Easily Diverted?

- Add images

- US Gov sites are a good place to look for royalty-free images

- Nevertheless, check for copyright ©

- And don’t overdo it as I did here

  - I hope I didn’t accidentally use any © images! (Will remove stat if informed.)
For example 1 (relevant images):
For example 2:

**Subcommittee on Energy, Committee on Science, Space, & Technology**

“The Subcommittee on Energy shall have jurisdiction over the following subject matters: all matters relating to energy research, development, and demonstration projects therefor; commercial application of energy technology; Department of Energy research, development, and demonstrator programs; Department of Energy laboratories; Department of Energy science activities; energy supply activities; nuclear, solar, and renewable energy, and other advanced energy technologies; uranium supply and enrichment, and Department of Energy waste management; fossil energy research and development; clean coal technology; energy conservation research and development, including building performance; alternate fuels, distributed power systems, and industrial process improvements; pipeline, research, development, and demonstration projects; energy standards; other appropriate matters as referred by the Chairman; and relevant oversight.” Learn about the history of the committee and more.

**Transportation Energy Data Book**

Quick facts, twelve chapters on various forms of transport, 3 appendices, a glossary (18 pdf pages), and useful Web sites. PDF version of edition 36 has 400 pages.

**U.S. Energy Information Administration**

“Today in Energy,” what's new, coming up, data highlights, features, outlooks, expert's speech/testimony, top picks, and information for specific groups (job seekers, policy analysts, media, researchers, students, etc). Foot of page has sources & uses, topics, geography, tools, policies, and related sites.

**What is Energy? Explained**

U.S. Energy Information Administration.

Lists different forms of energy, and the two types of energy. Categories for energy. Links to more information.

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**Radiant/Electromagnetic Energy**

Radiant energy is energy from electromagnetic waves. *The visible light from the Sun is only one type of radiant energy. The other types of radiant energy are known as gamma rays, x rays, ultraviolet, infrared, microwaves, and radio waves.*

**Definitions & Descriptions**


Examples of different types of energy. Definition of waves and more, including frequency. See other definitions in the Electromagnetic Spectrum Video Series & Companion Book, including visible light.


Audio and visual information about electromagnetic radiation. Chalk talks are “a video glossary to define specific scientific terms or concepts.”

The Electromagnetic Spectrum. NASA. Goddard Space Flight Center.

Straightforward introduction to the electromagnetic (EM) spectrum. Graphic showing spectrum as wave lengths (e.g. AM radio, microwave oven, TV remote control, UV light from the Sun, etc.). Information on measuring electromagnetic radiation.

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**Topics**
Provide Search Tips

• Search

• Browse

• Point out any challenges (font size is small, hard to read color, etc.) and recommended fixes for excellent content, but difficult-to-use sites.
Talk with Colleagues

• Mention relevant government resources at staff meetings.
• Point out and praise existing use of government resources.
• Emphasize that referrals to you are welcome (it worked for me).
Academic Opportunities

- Courses that have research assignment where gov info would help.
- Questions on topic where gov info would help at Reference/Help Desk.
- Casual conversation with teaching faculty.
Article of Interest


• Nursing/health and social work emphasis

• “The government documents’ librarian can familiarize faculty and other librarians with key government sources.” (37)
Community Opportunities

• Homework assignments: most (all?) states teach State history in 4th grade.

• Have State guide available and promote to elementary schools. Be sure to include kid-friendly sites.
Community Opportunity

• Create kid-friendly U.S. History guide with government resources and promote to local schools. (Link to Ben’s Guide.)

• Academic library? Promote guide to local public libraries.
Strategy

• Volunteer to create the subject or topical guide
• Do it!
• Send the link to primary interested person(s)
• Integrate any feedback
Making It Easy: Actions

• Offer to identify and annotate government resources for colleagues
• Offer to do the “coding”—in HTML, LibGuide, or applicable format
• Tap local information resources (e.g. State publications library)
What courses or community activities might be opportunities to promote government resources in your communities?
Think of Something Later?

• Send me an email: Naomi.Lederer@colostate.edu
Thank you for attending