

Florida's Office of Energy

Energy-Water Nexus

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Deputy Director

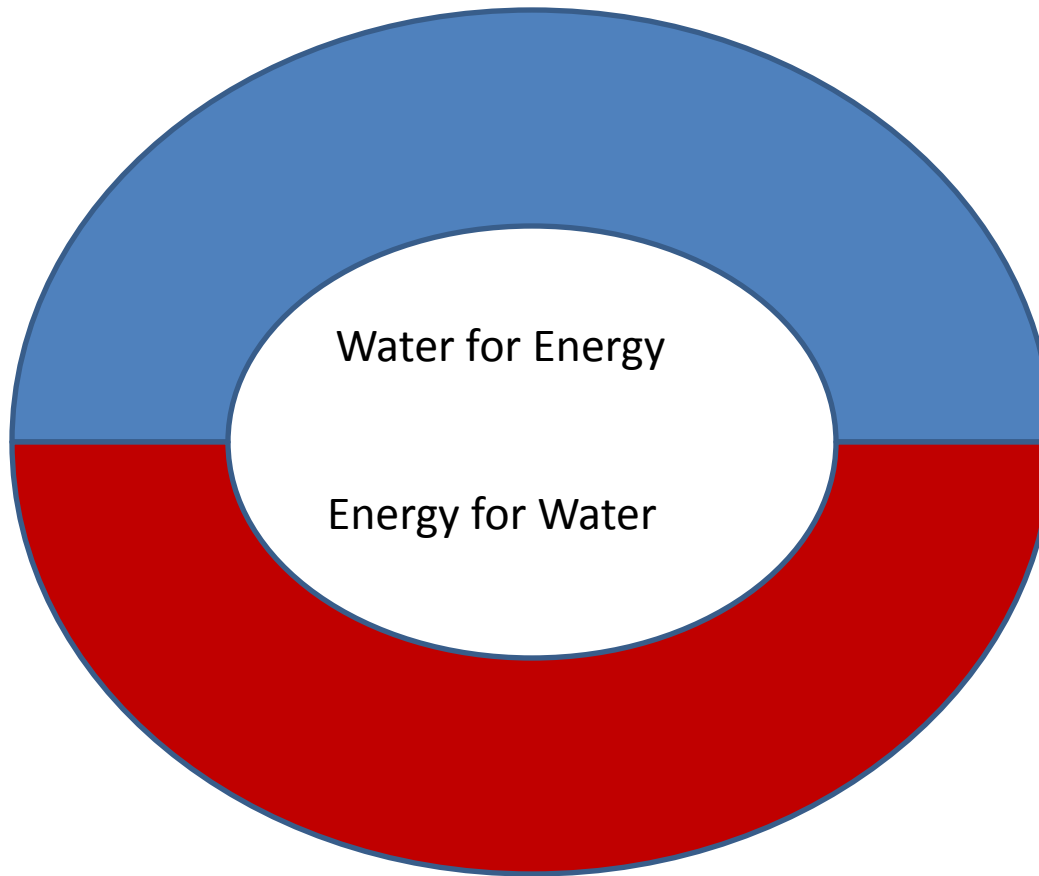
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Energy for water, water for Energy



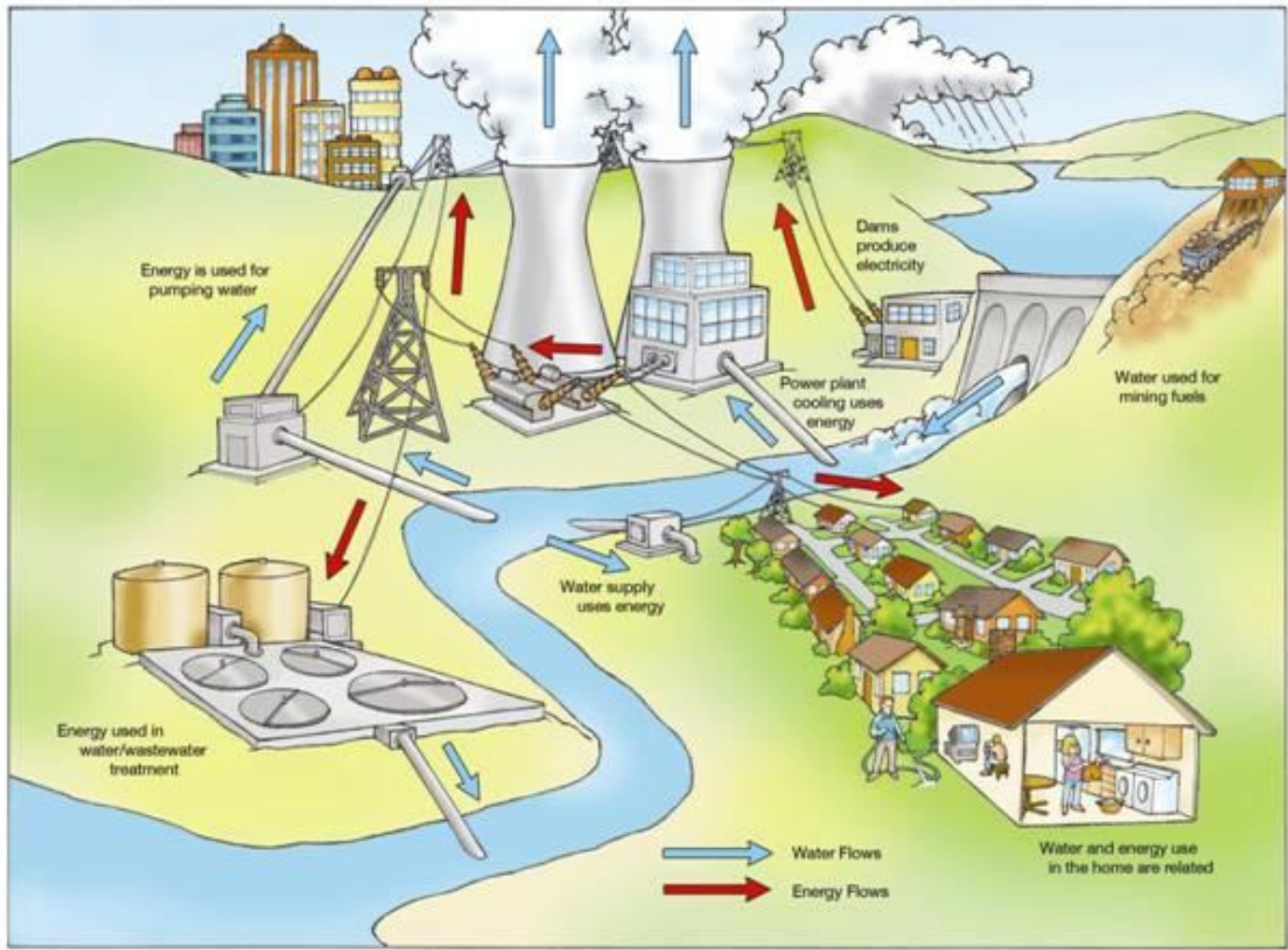
- Energy Extraction
- Fuel Processing
- Transportation
- Generation
- Emissions Control



- Water extraction
- Conveyance
- Distribution
- Treatment
- Consumer end use

There is an inextricable connection between water and energy
...This connection is called the **WATER-ENERGY NEXUS**







WATER & ENERGY

Water and energy systems are interdependent.

Water is used in all phases of energy production. Energy is required to extract, pump and deliver water for use by humans, and to treat wastewater so it can be safely returned to the environment.

How we use water for energy



Electricity Generation

Nearly half of all water withdrawn in the U.S. keeps power plants cool enough to function safely & efficiently.



Oil & Gas

Water is used for hydraulic fracturing, enhanced oil recovery and other fossil fuel production processes.



Renewables

Essential for hydropower, water is also used for concentrated solar power, for geothermal energy and to produce bioenergy.

How we use energy for water



Pumping

We use energy to pump water from aquifers for agriculture and to transport to treatment facilities and consumers.



Water Treatment

Energy is needed to desalinate water and treat wastewater before it's returned to the environment.



Heating & Cooling

Energy and water work together to keep buildings and equipment at safe, comfortable temperatures.



Delivery

We use energy to distribute and heat water for cooking, showering, cleaning and drinking.



Farm Energy & Water Efficiency Realization (FEWER) Program

- Grant program to promote the adoption of innovative technologies and practices that increase energy and water efficiency on farms
- Approximately \$5 million in available funding
- Collaborative effort
- Contracting with the Suwannee County Conservation District (SCCD) to operate pilot program
- Pilot was limited to Suwannee County but has expanded



Farm Energy & Water Efficiency Realization (FEWER) Program

Process:

- The agricultural entity applies for an audit from SCCD
- SCCD forwards the application to a qualified auditor
- The auditor contacts the agricultural entity, gathers some essential information and schedules a time to complete the audit
- The audit is completed and the agricultural entity is presented a report
- The agricultural entity then decides which activities, if any, they would like to undertake



Farm Energy & Water Efficiency Realization (FEWER) Program

Eligible Activities:

- Upgrade diesel pumps
- Upgrade from a diesel pump to an electric pump
- Upgrade motors
- Lighting
- Upgrades to center pivots
- Solar pumps
- Upgrade cooling and heating systems



Farm Energy & Water Efficiency Realization (FEWER) Program

As of October 9th:

- We have received 108 applications for audits
- 20 audits were completed
- All 20 applicants indicated that they will apply for cost share
- One applicant has completed the suggested activities and is in the process of receiving cost share



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