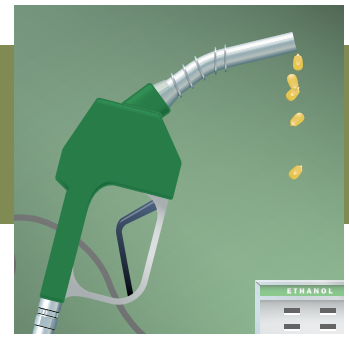


NCGA Talking Points

Ethanol



Water Use by Ethanol Plants

- On average, the production of one gallon of ethanol requires three gallons of water. (*Renewable Fuels Association*)
- In most cases, an ethanol plant's process water is not discharged from the facility. Most of the water is recycled and reused by the boilers, while only a small portion leaves the plant as water vapor from the thermal oxidizer stack.
- Any water that is discharged from a plant is treated at a wastewater treatment facility and recycled for use elsewhere.
- Water may also leave the plant as a component of the plant's feed coproduct, distillers wet grains, which are fed to beef and dairy cows. Producing distillers wet grains allows the ethanol plant to significantly reduce energy costs by forgoing the distillers grains drying process.
- New technologies allow ethanol plants to use lower quality water such as sewage treatment plant effluents and potentially even recycled water from animal feeding operations.
- According to the Minnesota Department of Natural Resources, new technologies and increased efficiency allowed Minnesota ethanol plants to reduce water usage by 28 percent from 1998 to 2005.
- New ethanol processes, such as low-temperature starch hydrolysis (often called "cold cook"), can further reduce an ethanol plant's water consumption by about 25 percent.
- As is the case with other industries, water use and discharge at ethanol plants is tightly regulated by state and federal agencies.
- Many ethanol plants are drilling deep wells and drawing water from confined aquifers. This means the ethanol plant's water usage does not impact shallow residential or commercial wells.
- To put the ethanol industry's water use in perspective, consider that in Minnesota (the nation's fourth-leading ethanol producer) ethanol accounted for just 2.5 percent of the state's total industrial processing water use in 2004. The state's mining industry used nearly 30 times more water than the ethanol industry, while the pulp and paper processing industry used seven times more water. In fact, industrial sand and gravel washing used an equivalent amount of water as the state's ethanol industry. (*Minnesota Department of Natural Resources*)
- The U.S. ethanol industry requires a total of about 44 million gallons of fresh water per day (based on 5.3 billion gallons of annual ethanol production). That equates to less than three-tenths of 1 percent of total U.S. industrial daily fresh water usage (18.5 billion gallons per day). (*U.S. Geological Survey*)
- A typical 40 million gallon per year ethanol plant uses about 330,000 gallons of water per day. Compare that to the 23 million gallons of water used per day by an urban area of 180,000 residents (roughly the size of Champaign-Urbana, Ill.) or the 500 million gallons per day that the city of Chicago pumps from Lake Michigan. (*Associated Press*)