



NSTEP



ARKANSAS
ENERGY & ENVIRONMENT

Natural State Stewardship Program

Stewardship Project Ideas:

This list contains stewardship project examples that demonstrate what's been done previously or what's possible. All project proposals are reviewed by E&E Staff on a case-by-case basis to assess sustainability benefits.

PROJECTS MUST: Be measurable Provide a benefit Go beyond compliance

Air:

1. Reduce the amount of paint used on products by using higher transfer efficiency methods - Automate processes at your facility.
 - For example: installing an automated paint line. This can reduce material consumption by up to 30% and reduce the amount of volatile organic compounds (VOCs) emitted, among other benefits.
2. Switch to water-based or low VOC-containing materials.
3. Utilize emission controls by installing catalytic oxidizers, regenerative thermal oxidizers (RTOs), rotary concentrators, fabric filters, scrubbers, or other air pollution control devices.
4. Establish routine inspection and maintenance procedures on air pollution control devices and air pollution emitting sources.
5. Implement Ozone Action Days, cutting off vehicles that produce harmful emissions of designated ozone alert days.
 - Check DEQ's Office of Air Quality webpage for more information: <https://www.adeg.state.ar.us/air/planning/ozone/>.
6. Implement anti-idling policies for company vehicles.
7. Utilize EPA-certified "Safer Choice" products in your cleaning supplies.
 - This can help improve both indoor and outdoor air quality.
8. Look into incorporating a work-from-home policy, if possible, to reduce emissions related to vehicle use.
9. Utilize non-toxic chemicals as substitutes.
10. *If your facility uses raw materials and additives containing chromium, mercury, or lead:*
 - Dispose and replace with non-hazardous biocide alternatives, if available.
 - Train all employees to properly handle any hazardous materials that cannot be substituted accordingly.



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Energy Efficiency:

1. Update older, inefficient light fixtures and replace bulbs with LEDs.
 - Engineering, Compliance, & Construction Inc. (ECCI) was admitted into NSTEP as a **Quartz** member in 2021. ECCI replaced ten (10) light fixtures with LEDs within their first year of membership, with more to come.
2. Automate lighting controls for the facility. You could install motion sensors for lights that are used less frequently.
3. Create start-up and shut-down procedures for specialty production/manufacturing equipment. Set equipment to maintain a zero-energy use status while not operating and interface the systems to operate only when needed.
4. Turn off exhaust systems when not in operation. You could also add variable frequency drives to fan motors.
5. Replace any old motors with fuel-efficient motors. You can also add variable frequency drives here.
6. Monitor compressed air use. Reduce air leaks in pipes and equipment and/or turn off unnecessary compressed air; this can be a major source of energy loss.
 - Pratt & Whitney is a world leader in the design, manufacture, and service of aircraft units and auxiliary power units and has been a **Diamond** member in the program since 2019. Pratt & Whitney partnered with SWEPCO, an Arkansas energy utility company, to conduct a survey of the facility's compressed air system. In 2021, the survey detected 198 leaks which were subsequently repaired. The following year (2022), only 98 leaks were discovered and repaired, none of which were previous leaks. The project will help save Pratt & Whitney an estimated \$12,000 in energy usage per year.
7. Install efficient energy sources, such as ENERGY STAR-certified appliances and machines.
 - The Arkansas Department of the Military, a **Diamond** member, installed a solar array on-site at Camp Joseph T. Robinson to assist in the agency's commitment to energy reduction.
8. Apply weather stripping to all entrances and exits of your facility.
9. Install energy-efficient windows and/or roofing.
 - Dassault Falcon Jet, a **Diamond** member since 2019, utilized a water-based roof coating that provides a water membrane and creates reflectivity. The roof coating will assist in reducing energy consumption at the facility and will result in both energy and monetary savings for the company.
10. Implement technologies for the combustion of municipal solid waste to result in energy recovery.
11. Retrofit bathrooms with water and energy-efficient fixtures.
12. Replace traditional fume hoods with more efficient, lower-flow versions.
13. Implement forms of lower-emissions energy and products.
14. Utilize small-scale waste-oil micro-refinery units to recycle used oil and transform the product into diesel fuel.

Land:



1. Conduct strategic tree plantings.
2. Plant and maintain or expand a pollinator garden.
 - At Camp Joseph T. Robinson, the Arkansas Department of the Military has expanded its existing pollinator garden. This is an effort to preserve and protect the State's natural resources, native plants and pollinators, and their habitats.
3. Grow a community garden for community use.
4. Partner with a wildlife group to sustainably stock ponds with fish and aquatic wildlife on facility grounds.
5. Conduct ecosystem (prairies, grasslands, forests, wetlands, etc.) restoration/revitalization projects.
6. Conduct prescribed burns or prescribed burn trainings/school.
 - The Arkansas Department of the Military hosts annual prescribed burn trainings at the Camp Joseph T. Robinson site. This week-long, multi-agency collaboration provides classroom learning and hands-on participation to local area youth.
7. Create water retention installations (rainwater collection, green roofs, bioswales, etc.)
 - Pratt & Whitney installed a rainwater harvesting system in 2020 to collect water and supply the facility's evaporative cooling tower. The project helps Pratt & Whitney save about 240,000 gallons of water and approximately \$500 annually.
8. Start a composting pile; this is a good opportunity for collaboration.

Waste:



1. Implement a continuous recycling regimen AND/OR host an annual recyclable collection event.
 - The Arkansas Department of the Military hosts an annual week-long recyclable collection event at Camp Robinson. This is an effort to encourage and promote recycling for Arkansas Department of the Military employees on-site and at home.
2. Implement an email-only communication chain at your facility to reduce paper communication.
3. Donate/sell e-waste to entities that will reuse the product if it is in good working condition rather than redirecting it to a waste stream (schools, non-profits, etc.).
4. Start an Affirmative Procurement Program, where new products are manufactured using recycled materials and subsequently sold for profit.
 - The Arkansas Department of the Military maintains an ongoing buy-recycled purchasing program to help stimulate recycling in the local community.
5. If your facility produces glass waste, you could use this glass as a replacement for sand in cement and hazardous waste kilns. This can help reduce the amount of waste glass produced and sent to a landfill from your facility while reducing the amount of external resources used in production.
6. Switch to an environmentally-friendly alternative packaging solution.
7. Look into partnering with local farms. You could donate food scraps to help feed pigs and other farm animals, among a number of useful alternatives.
8. Utilize smart waste management tactics, such as sorting robots or smart waste bins.
9. Switch to launderable, reusable versions of oil absorbents.
10. Switch over to digital record-keeping or email-only communication for employees.
11. Look into utilizing alternative materials, such as Safer Choice products, that are less hazardous. Examples of Safer Choice products can be found by visiting EPA's website at <https://www.epa.gov/saferchoice/products>.
 - Alter your processes to work toward eliminating hazardous materials in their entirety.



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Water:

1. Optimize any cooling systems, and determine if they are eligible for alternative water sources.
2. Meter any and all possible water supply lines; you can even install a water meter data management system to assist in identifying water usage abnormalities.
3. Replace single-pass cooling systems with air-cooled or recirculating models to conserve water.
 - Pratt & Whitney replaced an older Carbtrol filtration system with a newer closed-loop fluorescent pentrant indicator system. This system allows the company to monitor their water usage, maintain healthy water quality levels, and alert appropriate officials of any associated issues.
4. Install membrane processes, like reverse osmosis, to separate purified water from contaminants. Ensure that all contaminants are disposed of properly.
5. You can also install carbon filtration or deionization processes to assist in increasing water quality.
6. Fit fume hoods with wet scrubbers to capture, trap, and dispose of hazardous substances (AKA: liquid fume hood scrubbers).
7. Collect and subsequently treat gray water for reuse in the facility.
8. Install WaterSense water-efficient faucet aerators in sinks. Likewise, look into installing WaterSense pre-rinse spray valves in kitchens. WaterSense-labeled products also include irrigation controls, toilets, and sprinkler systems. You could even use drain water to help in irrigation and sprinkler systems.
9. Utilize more permeable pavements for parking lots. These are considered more porous surfaces, allowing stormwater to infiltrate the soil and groundwater more efficiently.

Miscellaneous:

1. Undertake a climate resiliency assessment to identify future risks related to your facility and how to mitigate them.
2. Partner with local schools to promote outdoor and/or sustainability education.
3. Consider hosting annual sustainability trainings for your facility's employees.
4. Develop an Environmental Management System (EMS), like ISO 14001.
5. Incentivize carpooling, biking, or public transportation use.
6. Apply mulch, maintain top soil, and aerate soil to design a landscape that revitalizes the quality of soil content and water infiltration rates.
7. Revegetate bare soil to assist in preventing erosion.