

REQUEST FOR BOARD ACTION
HENDERSON COUNTY
BOARD OF COMMISSIONERS
CANE CREEK WATER AND SEWER DISTRICT

MEETING DATE: July 16, 2008
SUBJECT: Henderson County Energy Policy and Plan
ATTACHMENTS: Yes

SUMMARY OF REQUEST:

Staff will present to the Board a resource conservation plan for Henderson County.

BOARD ACTION REQUESTED:

The Board is requested to begin discussion of resource conservation, and direct Staff accordingly.

Suggested Motion:

No motion suggested.

Henderson County Government Resource Conservation Plan July 2008 Progress Report



Resource Conservation Plan: Overview

- Why?
- Elements of the Plan
- Tools Available
- Conclusion



Resource Conservation Plan

■ Why?

- *Elements of the Plan*
- *Tools Available*
- *Conclusion*



Gas price spike hits county budgets hard

By Jim Philipps
MEDIA RELATIONS MANAGER

In a release to the media, NACo said that this spring's spike in gas prices is wreaking havoc on many county budgets at a time when revenues continue to shrink as a result of the housing and foreclosure crisis, and decreased investment earnings.

The *Associated Press* reports that gas prices are at a national average of \$3.61 a gallon, well above the year-ago average of \$3.04 a gallon. Diesel prices are at a national average of \$4.24 a gallon, up from \$2.88 per gallon in 2007.

The record high gas prices are affecting both rural and urban counties. Some counties are reportedly hundreds of thousands of dollars over budget in the current fiscal year and are seeking ways to lessen the impact of high fuel costs.

"The sudden spike in gas prices is causing great concern for the nation's counties," said NACo Executive Director Larry Naake. "Counties are in the early stages

of a serious financial crisis as a direct result of the mortgage and foreclosure crisis, and are getting hit again with record high gas prices."

A snapshot of counties struggling with high gas prices describes what steps are being taken to cope with the budget hits. In Oakland County, Mich., the sheriff's department is considering switching patrol cars from eight-cylinder

vehicles to six-cylinder vehicles to reduce fuel consumption. In Smith County, Texas, fuel costs are up 184 percent in five years, and the county is facing a \$500,000 shortfall in its fuel budget this year.

Lee County, Fla. says it may have to cut programs to offset higher fuel costs. Pasco County, Fla. may end the practice of county workers driving county vehicles home after work hours. Belmont

County, Ohio is considering purchasing its own gas tanks to avoid the federal gas tax. (See chart)

Counties have been wrestling with budget shortfalls across the county in recent weeks. A NACo snapshot released March 24 found that reasons for the budget gaps cited by the local county officials include significant declines in property tax revenues, declines in sales tax revenues and rising gas

prices. As a result, many of these counties are considering cuts in services to the public, hiring and salary freezes, budget expenditure reductions including layoffs, and raising taxes and fees.

"The initial wave of a fiscal crisis is upon us, and unless something is done at the federal level, more counties will be forced to cut services, layoff workers and raise local property taxes," Naake said.



Nation feeling gas pain

BY ALAN FRAM
The Associated Press

WASHINGTON — Four-dollar gasoline has stolen a beach vacation from Julie Jacobs' family, "little small luxuries" like exotic bath washes from Angela Crawford and dinners out from folks all over the country. Phil English has had to sell his beloved but fuel-guzzling red pickup.

Like a plague that hits every economic class, race and age, soaring fuel prices are inflicting pain throughout the U.S. Nine in 10 people are expecting the ballooning costs to squeeze them financially over the next half-year, says an Associated Press-Yahoo News poll released Monday.

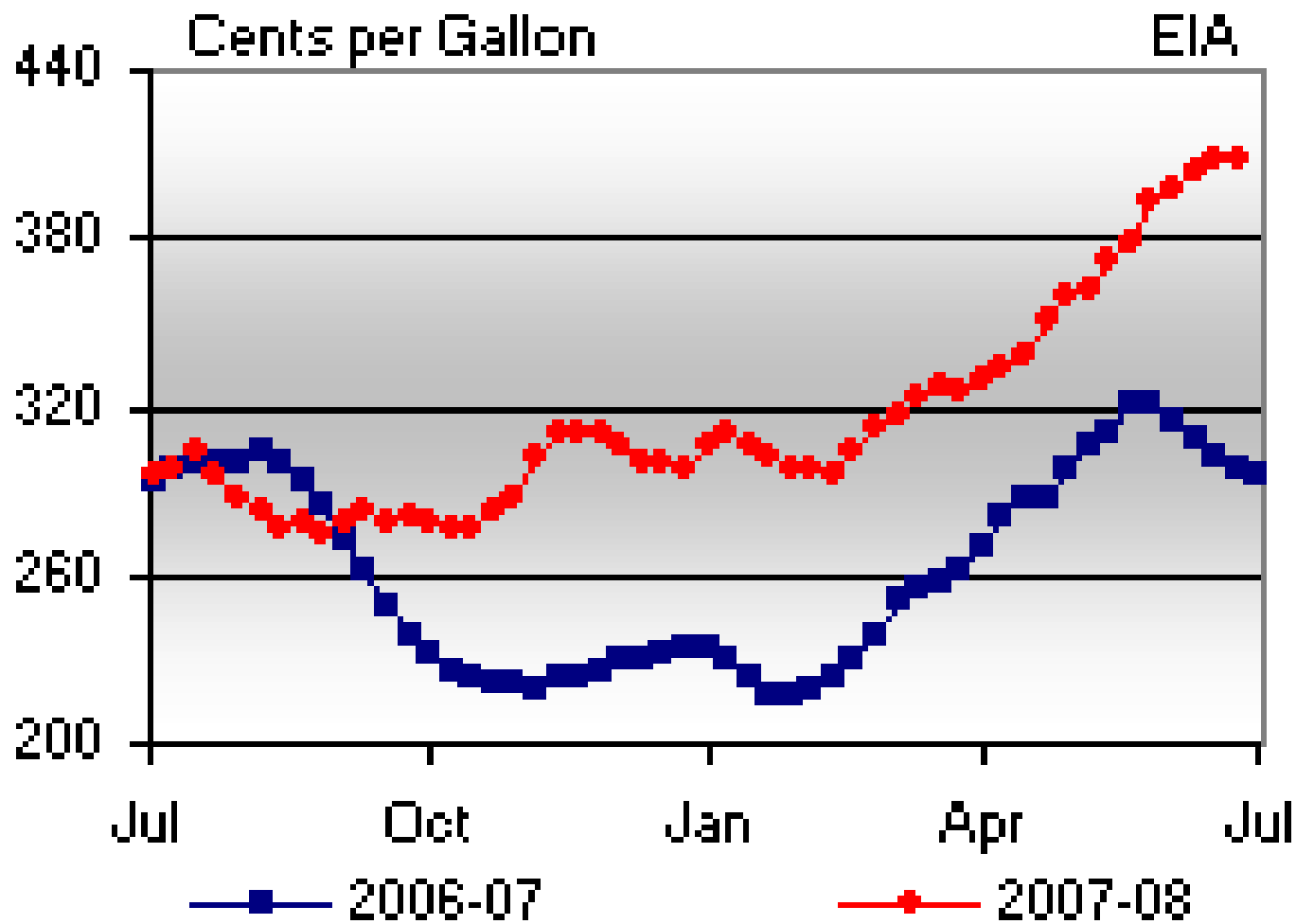
Nearly half think that hardship will be serious. To cope, most are driving less, easing off the air conditioning and heating at home and cutting corners elsewhere. Half are curtailing vacation plans; nearly as many are considering buying cars that burn less gas. U.S. auto companies are closing plants that make pickups and SUVs that people have stopped buying.

As the price of gasoline has spiraled upward, so, too, has the public's ire.

Two-thirds consider gas prices an extremely important issue, edging the economy and outpacing health care and Iraq as the country's most distressing problem. In November, when gas cost about \$1 a gallon less than today, just under half rated it extremely important.

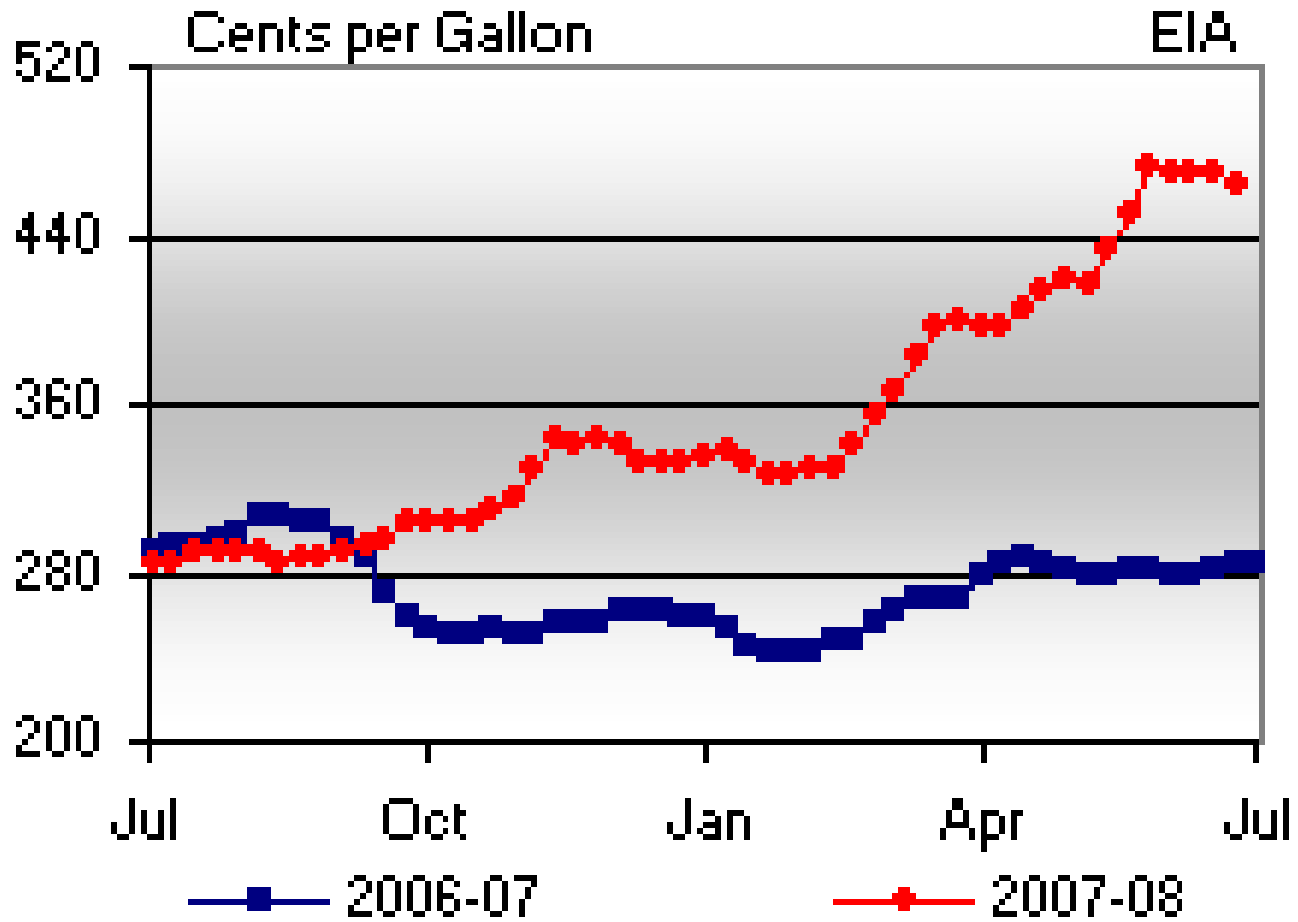
"Do you think there's an end in sight? I don't," the 33-year-old Crawford, a Dallas homemaker, said in an interview.

U.S. Regular Gasoline Prices



Source: Energy Information Administration

U.S. On-Highway Diesel Fuel Prices



Source: Energy Information Administration

FY2009 FUEL CONSUMPTION PROJECTION

Date Prepared: May 29, 2008

DEPARTMENT	FY2008 ESTIMATED FUEL USAGE (in Gallons)	LESS 10% REDUCTION (in Gallons)	FY2009 TARGET FUEL USAGE (Subtotal)	MOST RECENT FUEL PRICE (as of 5/2008)	PROJECTED FUEL COST BASED ON FY2009 TARGET FUEL USAGE							
					\$4.00	\$5.00	\$6.00	\$7.00	\$8.00	\$9.00	\$10.00	
					Per Gallon	Per Gallon	Per Gallon	Per Gallon	Per Gallon	Per Gallon	Per Gallon	
				Average: 3.5135/Gallon								
Animal Control	5,423	542	4,881	\$ 17,148	\$ 19,523	\$ 24,404	\$ 29,284	\$ 34,165	\$ 39,046	\$ 43,926	\$ 48,807	
Assessor	1,562	156	1,406	\$ 4,939	\$ 5,623	\$ 7,029	\$ 8,435	\$ 9,841	\$ 11,246	\$ 12,652	\$ 14,058	
Code Enforcement	1,407	141	1,266	\$ 4,449	\$ 5,065	\$ 6,332	\$ 7,598	\$ 8,864	\$ 10,130	\$ 11,397	\$ 12,663	
Cooperative Extension	443	44	399	\$ 1,401	\$ 1,595	\$ 1,994	\$ 2,392	\$ 2,791	\$ 3,190	\$ 3,588	\$ 3,987	
DSS	1,223	122	1,101	\$ 3,867	\$ 4,403	\$ 5,504	\$ 6,604	\$ 7,705	\$ 8,806	\$ 9,906	\$ 11,007	
EMS	26,633	2,663	23,970	\$ 84,218	\$ 95,879	\$ 119,849	\$ 143,818	\$ 167,788	\$ 191,758	\$ 215,727	\$ 239,697	
Fire Marshall	2,363	236	2,127	\$ 7,472	\$ 8,507	\$ 10,634	\$ 12,760	\$ 14,887	\$ 17,014	\$ 19,140	\$ 21,267	
Garage	7,326	733	6,593	\$ 23,166	\$ 26,374	\$ 32,967	\$ 39,560	\$ 46,154	\$ 52,747	\$ 59,341	\$ 65,934	
Health Department	13,617	1,362	12,255	\$ 43,059	\$ 49,021	\$ 61,277	\$ 73,532	\$ 85,787	\$ 98,042	\$ 110,298	\$ 122,553	
Inspections	13,639	1,364	12,275	\$ 43,129	\$ 49,100	\$ 61,376	\$ 73,651	\$ 85,926	\$ 98,201	\$ 110,476	\$ 122,751	
Library	1,147	115	1,032	\$ 3,627	\$ 4,129	\$ 5,162	\$ 6,194	\$ 7,226	\$ 8,258	\$ 9,291	\$ 10,323	
Motor Pool	2,050	205	1,845	\$ 6,482	\$ 7,380	\$ 9,225	\$ 11,070	\$ 12,915	\$ 14,760	\$ 16,605	\$ 18,450	
Planning	385	39	347	\$ 1,217	\$ 1,386	\$ 1,733	\$ 2,079	\$ 2,426	\$ 2,772	\$ 3,119	\$ 3,465	
Recreation	333	33	300	\$ 1,053	\$ 1,199	\$ 1,499	\$ 1,798	\$ 2,098	\$ 2,398	\$ 2,697	\$ 2,997	
Sheriff	113,084	11,308	101,776	\$ 357,589	\$ 407,102	\$ 508,878	\$ 610,654	\$ 712,429	\$ 814,205	\$ 915,980	\$ 1,017,756	
Soil & Water	449	45	404	\$ 1,420	\$ 1,616	\$ 2,021	\$ 2,425	\$ 2,829	\$ 3,233	\$ 3,637	\$ 4,041	
Travel & Tourism	119	12	107	\$ 376	\$ 428	\$ 536	\$ 643	\$ 750	\$ 857	\$ 964	\$ 1,071	
Utilities	2,283	228	2,055	\$ 7,219	\$ 8,219	\$ 10,274	\$ 12,328	\$ 14,383	\$ 16,438	\$ 18,492	\$ 20,547	
Youth Development	2,608	261	2,347	\$ 8,247	\$ 9,389	\$ 11,736	\$ 14,083	\$ 16,430	\$ 18,778	\$ 21,125	\$ 23,472	
TOTAL	196,094	19,609	176,485	\$ 620,079	\$ 705,938	\$ 882,423	\$ 1,058,908	\$ 1,235,392	\$ 1,411,877	\$ 1,588,361	\$ 1,764,846	

Resource Conservation Plan: Why?

- Cost Avoidance
- Environmental Stewardship
- Reduce Dependency on Foreign Oil
- Alternative Energy Industry = Jobs

Resource Conservation Plan: Why?

Plan Objective: This Conservation Plan is part of the County's efforts to minimize the use of scarce and costly resources which in turn limit or reduce negative impacts to the County taxpayers. Furthermore, the plan may expand in scope to assist the Citizens and other organizations within the County.

Resource Conservation Plan: Why?

Plan Outcomes:

- Reduce cost escalation & limit negative impact on County taxpayers (Energy and Water)
- Conserve energy and water for future use
- Exhibit leadership in environmental stewardship to peer governments and citizens

Resource Conservation Plan: Why?

Mandate

May 7, 2008 from County Manager:

“Reduce Energy Consumption by 10%”

*“We cannot reduce energy prices, but we can
limit costs by changing our demand”*

Resource Conservation Plan

- *Why?*

- **Elements of the Plan**

- *Tools Available*

- *Conclusion*



Resource Conservation Plan: Elements of the Plan

- Facility Improvements
- Vehicles and Equipment
- Behavioral Modifications

Resource Conservation Plan: Elements of the Plan

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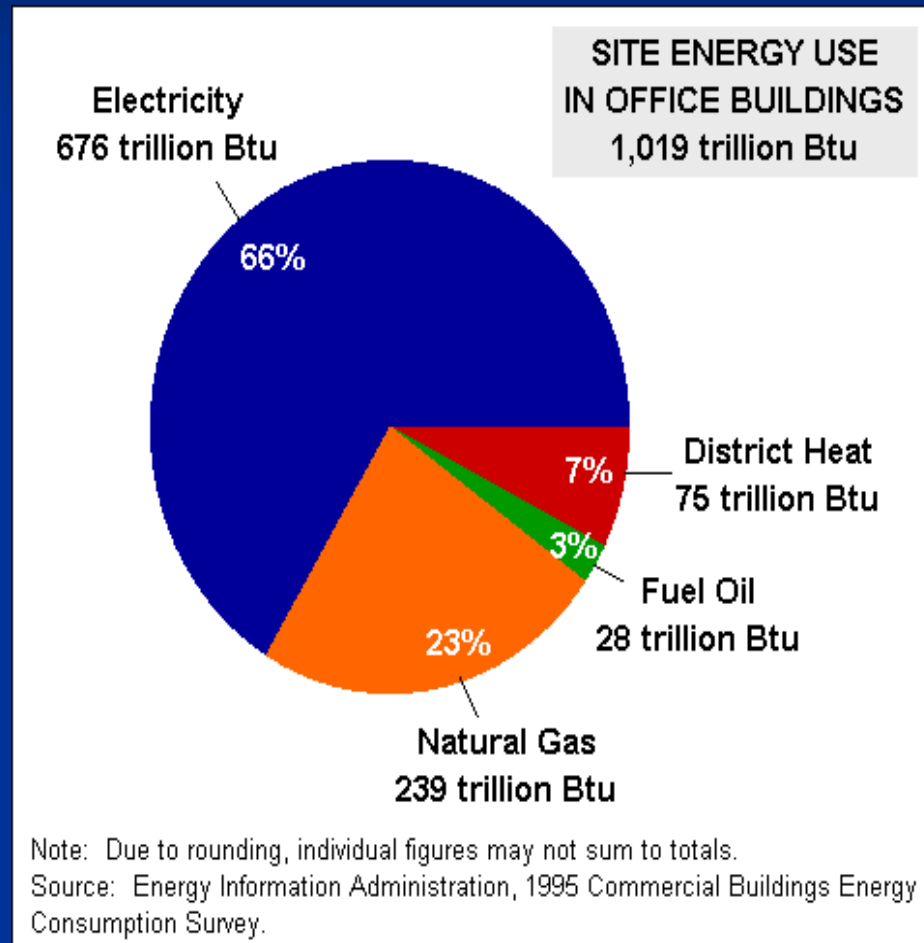
Resource Conservation Plan: Elements of the Plan

Facility Improvements

- Guaranteed Energy Savings Contract (more)
- Energy Star Replacement (Current Technology)
- Re-Commissioning Systems to Eliminate Operating Inefficiencies
- Energy Audits (Waste Reduction Partners)
- Shift from Corrective to Preventive Maintenance

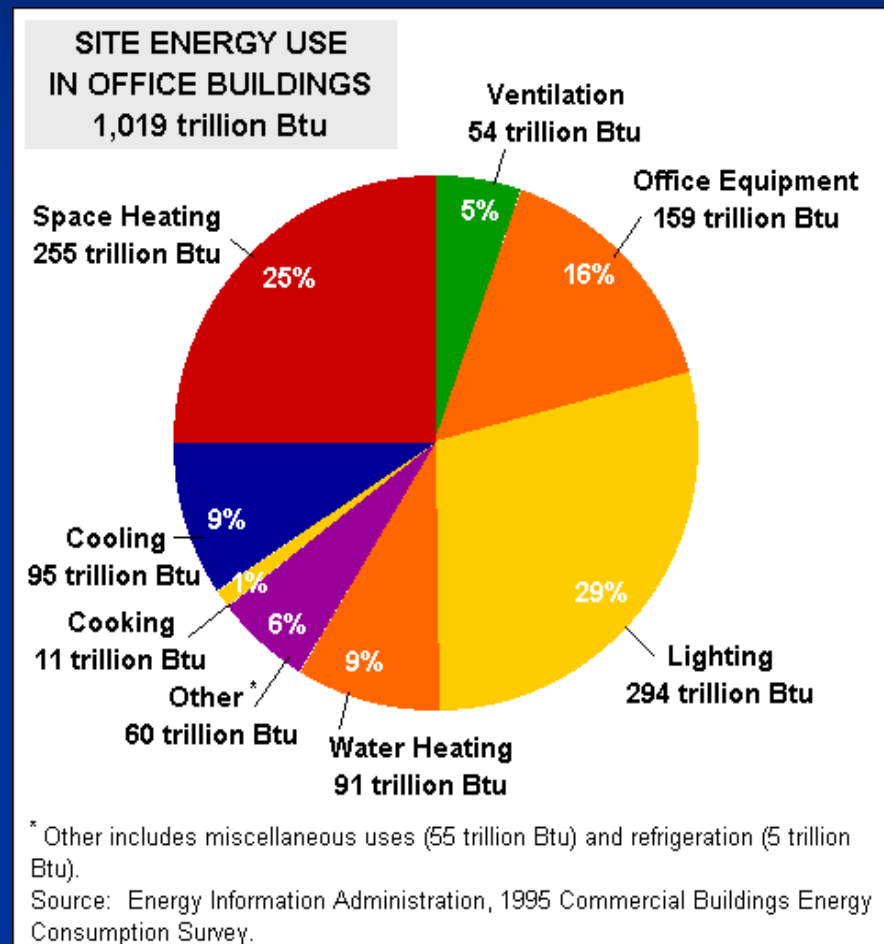
Elements of the Plan: Facility Improvements

Breakdown of Energy Use in Offices Nationwide



Elements of the Plan: Facility Improvements

Breakdown of Electricity Consumption of Offices Nationwide



Elements of the Plan: Facility Improvements

Guaranteed Energy Savings Contract (GESC) :

a contract for the evaluation, recommendation or implementation of energy savings measures, including the design and installation, measuring equipment, repair or replacement of existing equipment in which all payments are to be made over time and in which operational and utility savings are guaranteed to exceed costs.

Elements of the Plan: Facility Improvements

- GESC Update for Henderson County
 - Facility Analysis Indicates Potential Projects
 - Currently Developing Request for Proposals
 - Proposal to Board: Late Summer
 - Guaranteed Energy Savings from Improvements Pay for the Debt Service

Resource Conservation Plan: Elements of the Plan

- Facility Improvements
- Vehicles and Equipment
- Behavioral Modifications

Elements of the Plan: Vehicles and Equipment

- Reduce Fleet Size
 - Evaluate Fleet Needs
 - Expand Fleet Motor Pool
- Purchasing Decisions
 - Traditional Vehicles with High Gas Mileage
 - Alternative Technology and Fuels

Elements of the Plan: Vehicles and Equipment

- “Right Tool for the Job”
- Sheriff’s Department Contains the Majority of the County Fleet

Resource Conservation Plan: Elements of the Plan

- Facility Improvements
- Vehicles and Equipment
- Behavioral Modifications

Resource Conservation Plan: Elements of the Plan

Behavioral Modifications

- Each County Department is Developing a Plan
- Department Heads Responsible and Accountable
- Resource Audits

Resource Conservation Plan: Elements of the Plan

Behavioral Modifications: Examples

- Turn off Lights (Don't Turn on Lights)
- Thermostat Settings
- No Space Heaters
- Close Window Blinds / Shades
- Turn off Equipment Not in Use
- No Idle Policy (non-emergency vehicles)
- Limit "Take Home Vehicles"

Elements of the Plan: Behavioral Modifications

Department Energy Plan Example

- The following four slides are the Department of Public Health's Energy Plan

Policy: Energy Conservation Policy & Program – draft				Policy #: unassigned	
Program:	General/Administration	Location of Original:	Personnel Policies and Procedures		
Effective Date:	06/01/2008	Revision Effective:			
Approval by:	_____		_____		
	<i>Health Director</i>				
Review Date & Initials:					

I. Purpose

- A. To comply with Henderson County energy conservation of electricity, gas usage practices for maintenance and operation of the facility and equipment.

II. Definitions *(if applicable)*

- A. HCDPH - Henderson County Department of Public Health Example
- B. EHD – Henderson County Environmental Health Department

III. Policy

- A. It is the policy of the HCDPH and EHD to use conservative methods to efficiently utilize electric and gas energy of the facility and equipment as long as it does not hinder delivery of services to the citizens of Henderson County.

IV. Procedures

A. Energy Use Standards

i. HVAC - Heating & Cooling

- Cooling set points of facility: 75 – 78 degrees Fahrenheit
- Heating set points of facility: 68 – 72 degrees Fahrenheit
- The computerized system of the facility automatically turns off HVAC system after hours of normal operation.
- Work with central services workers to create a standard temperature throughout the facility to reduce temperature variations and eliminate the need for auxiliary heat units.
- Encourage staff to dress in layers to allow for personal preferences of temperature.
- Water heater temperature is to be set at 120 degrees.
- Monthly or quarterly inspections of equipment to maintain efficiency levels.
- Encourage staff to close window blinds during the summer months to reduce solar heating of building.

ii. Lighting

- Energy efficient fluorescent bulbs/tubes used in task lighting in offices.
- Office lights automatically turn off when no motion is in an office/exam is detected by motion sensors.
- Computerized system automatically turns off all corridor lights on Monday through Friday at 9:00 P.M.
- Computerized system automatically turns on all corridor lights Monday through Friday at 7:00 A.M.

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- Alternate lights off in corridors if sufficient lighting is maintained for safety.
- All lamps use energy efficient bulbs.
- Replace hallway incandescent bulbs with florescent bulbs.
- All outdoor lighting attached to building must use energy efficient wattage as long as adequate lighting is provided for safety of employees and building.

iii. Equipment

- Contact vendors of vending machines to install energy misers on their equipment.
- Computer equipment to be turned off/shut down at the end of the work day.
- Replace unusable equipment with energy efficient equipment.

iv. Vehicle Use/Gas consumption

- Require employee car pooling to off-site training.
- Require staff to use in-house phone, internet, or video-conferencing technology when available, rather than traveling out-of-county training events.
- No unnecessary engine idling.
- Arrange fieldwork geographically when possible.

v. Further study:

Gas Consumption

- Explore the feasibility to allow 37.5 hours, 5 day work week to be achieved in a four day work week for the community health nurses and the environmental health inspection staff.
- Explore possibility of employee reporting for duty at school or patient home instead of reporting to work at facility.
- Explore the cost of providing more parking space to allow environmental employee-owned vehicle to be parked at facility and only use county vehicle while on-the-job.
- Records & Reports. Ask County to provide a report of energy usage for agency to monitor travel reimbursement per employee or county-owned vehicle. This would allow supervisors and employees to set goals for reduction in travel/gas consumption.

V. Legal Authority (*laws or regulations*)

A. None

i.

VI. References (*if applicable*)

A. Central Services

i.

VII. Policy History

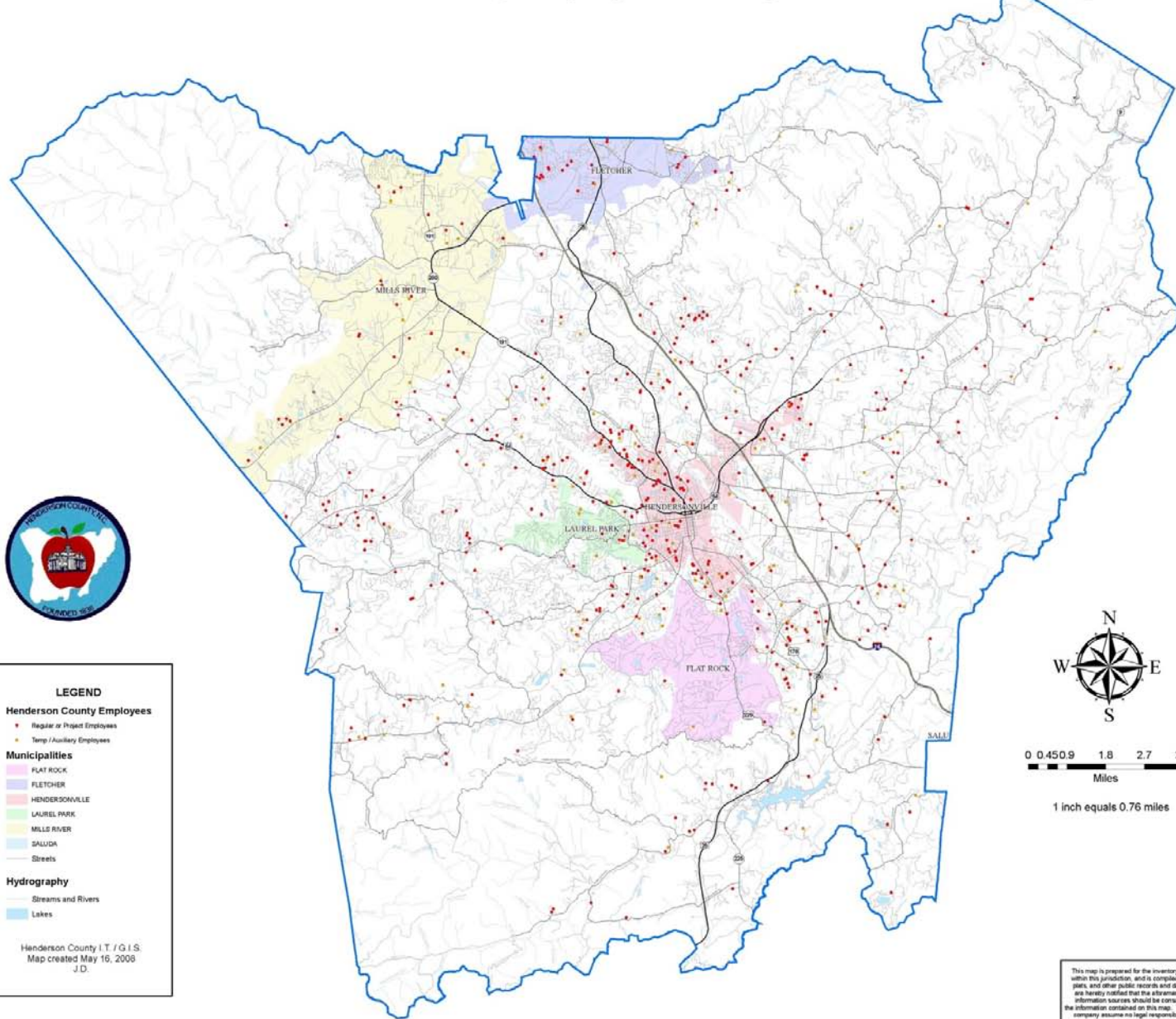
A. None

Elements of the Plan: Behavioral Modifications

Carpooling

- NACO's Drive Smarter Challenge
- Highly feasible for County employees
- Can be done on voluntary basis
- 120 employees have expressed interest
- Savings on fuel, morale boost
- Next Slide: Indicates Proximity of Employees

Addresses of Henderson County Employees Living in Henderson County



Resource Conservation Plan

- *Why?*
- *Elements of the Plan*
- **Tools Available**
- *Conclusion*



Resource Conservation Plan: Tools Available

- EPA's Energy Star Program
- NC State Energy Office
- Resource Data Management and Audits
- Flexible Workweek
- Published Resource Conservation Plan
- Mandate from Manager with Board Support

Resource Conservation Plan: Tools Available

Energy Star Certification

- Accountability of Conservation Efforts
- National “Language” for Energy Conservation
- Allows for National recognition of leadership



Resource Conservation Plan: Tools Available

Energy Star Program

- Management Portfolio for Tracking and Analyzing Efforts
- Efficient Equipment Identification
- Energy and Water



Resource Conservation Plan: Tools Available

Resource Data Management

- Use May 2007 to May 2008 as a baseline
- Determine totals for diesel, propane, gasoline, natural gas, electricity, water, track by units of usage
- Data to be gathered for each department
- Preliminary data shows room for measurable reduction in consumption

Resource Conservation Plan: Tools Available

Resource Data Management (continued)

Tracking this data will allow us to:

- Set targets
- Gauge progress
- Reassess current and future usage practices

Resource Conservation Plan: Tools Available

Resource Data Management (continued)

- Use of “Energy Star Portfolio Tracker”
- Monthly Reports to County Manager and Department Heads
- Semi-Annual Report to Board of Commissioners and Citizens

Resource Conservation Plan: Tools Available

Billing Audits

- Review Bills for Errors
- Review Rate Structure for Optimum Rates
- Seek billing adjustments

Resource Conservation Plan: Tools Available

Resource Audits

- Offer this service to other departments
- Walk-throughs, determine inefficient practices, behaviors
- Identify possible improvements and make recommendations
- “You get what you inspect, not what you expect”

Tools Available: Flexible Workweek Concept

azdailysun.com - Flagstaff and Northern Arizona News, Photos, Obituary, Calendar Even... Page 1 of 2



Utah announces 4-day work week

Friday, June 27, 2008

SALT LAKE CITY (AP) -- Gov. Jon Huntsman will order thousands of state employees to stay home on Fridays as part of a four-day week intended to cut energy costs at government buildings.

Starting in August, Huntsman expects about 17,000 people will be affected by the yearlong program where employees would work 10 hours a day, four days a week.

Tools Available: Flexible Workweek Concept

Benefits to employees include:

- Potential fuel savings, up to 20% off of commute fuel load
- Reserving the 20% for other uses
- Increased productivity, decreased absenteeism, and time for family and personal matters

Tools Available:

Flexible Workweek Concept

Benefits to County Government include:

- Significant energy and fuel savings
- Reduces operational costs
- Possible reduction in labor costs
- ‘Big Picture’ impact includes national savings in crude oil, emissions and greenhouse gases
- Exhibits leadership

Tools Available: Flexible Workweek Concept

Implementation Options: Pilot Program with King Street Facility

- Planning
- Cane Creek Water & Sewer District
- Permit Center / Addressing / Zoning
- Building Inspections / Erosion Control
- EMS

Tools Available: Flexible Workweek Concept

King Street Conservation Plan

- Operations: Flexible Work Week

	M	T	W	H	F
Open	7:00	7:00	7:00	7:00	Closed
Close	6:00	6:00	6:00	6:00	Closed

Tools Available: Flexible Workweek Concept

King Street Conservation Plan

Benefits	Obstacles
Customer Convenience	Customer Convenience
Energy Savings	Holidays
Fuel Consumption	Child Care

Resource Conservation Plan

- *Why?*
- *Elements of the Plan*
- *Tools Available*
- **Conclusion**



Resource Conservation Plan: Conclusion

- Future Conservation Opportunities
 - Wind
 - Solar
 - Waste to Energy
 - ??????

Resource Conservation Plan: Conclusion

- Direction from the Board
 - Guaranteed Energy Savings Contract
 - Vehicle Purchasing Criteria
 - Flexible Workweek
 - Authorize Carpooling Facilitation

Resource Conservation Plan: Conclusion

Thank You

Questions?