

Winston-Salem  
State University

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Winston-Salem	NC	27110

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Fleet Information	
Total Leased Vehicles	20
Total County Titled Vehicles	0
Total State Titled Vehicles	33
Total Other Vehicles	8

Breakdown of State Titled Vehicles Only		
Vehicle Type	Quantity	Miles
Gasoline Only	30	66,775
Diesel	2	4,926
Hybrids	0	-
Flex-fueled Vehicles	0	-
Comp Natural Gas	0	-
Propane	0	-
Electric	0	-
Other	0	-
10% Eligible	1	2,400
<b>Totals</b>	<b>33</b>	<b>74,101</b>
adj 13% for growth 06-07	<b>37</b>	83,734
re-adj to 21% for growth	<b>40</b>	89,662

Fuel Information		
State Titled Vehicles Only		
Fuel Type	Gallons	Pet. Eqv.
Gasoline	8,361	8,361
E10	0	-
E85	0	-
Diesel	1118	1,118
Off-road Diesel	0	-
B5	0	-
B20	0	-
B100	0	-
CNG	0	-
Propane	0	-
Other	0	-
	<b>Quarts</b>	
Petroleum Motor Oils	50	13
Syn & Rec Motor Oils	0	-
	<b>Total</b>	9,492
adj by 13%		10,726
re-adj by 21%		11,485

[illegible]

Instructions	Notes/Comments
Fill out all information (exception - miles if N/A)	The 10% eligible car is gasoline
Complete with data from fiscal year 2004-2005	
Please note if fuel includes more than State Vehicles	Baseline information is for 2005-06 reporting
Count hybrids and FFV's only once in the breakdown,	with reductions for off-road based on 06-07
do not count them as gasoline vehicles	reporting
10% Eligible vehicles include police & emergency	Oil changes estimated at every 4k at
10% eligible educational vehicles must have	4 quarts per change
specific modifications for instructional purposes	

[illegible]

Potential Reduction in Petroleum use for your organization;		Projected Reduction			
Conservation	Reduce speeds, efficient cars, task pooling	285	gallons	=	3.00%
E10	Using E10 for all gasoline vehicles	836	gallons	=	8.81%
E85	Using E85 for all flex-fueled vehicles	-	gallons	=	0.00%
B5	Using B5 for all diesel vehicles	56	gallons	=	0.59%
B20	Using B20 for all diesel vehicles	224	gallons	=	2.36%
B100	Using B100 in 1/10th of your diesel vehicles	112	gallons	=	1.18%
FFV	Substituting one FFV using E85	196	gallons	=	2.06%
CNG/Propane	Replacing one vehicle with a CNG/LPG car	288	gallons	=	3.03%
Electric	Replacing one vehicle with an electric car	288	gallons	=	3.03%
Syn & Rec Oils	Using all synthetic and recycled motor oils	50	quarts	=	0.13%

**Petroleum Displacement Goal : 19.7%**  
1,870 gallons

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Petroleum Displacement	2006-2007	2007-2008	2008-2009	2009-2010	Initial Cost	Yearly Cost
1.5%	Switch over about half diesel to B20 (600 gallons)				0	
1.0%	Purchase additional electric carts to replace pickup trucks					
0.2%		Change to synthetic motor oils				
1.0%		Purchase additional electric carts to replace pickup trucks				
3.0%		New employee orientation program and continued tip and good practice conservation information				
1.5%		Switch over all diesel to B20 (600 more gallons)				
			Purchase additional electric carts to replace pickup trucks			
			New employee orientation program and continued tip and good practice conservation information			
3%				Switch all diesel to B20 (5,366 g)	0	
				Purchase 6 street-rated EVs	\$ 79,200	
<b>Totals</b>	<b>3%</b>	<b>8%</b>				

## Possible additional vehicle purchases from 2006 - 2011

Year	Quantity, Vehicle Type and Description	Purpose	Fuel / Hybrid	Additional Cost
2006-2007	8 electric carts purchased and placed in service	Maintenance, Mail & IT		
2006-2007	6 vehicles were purchased and placed in service	Maintenance		
2007-2008	Purchase 2 diesel buses	Athletics		
2007-2008	Purchase 2 gasoline buses	Student shuttle		
2007-2008	Purchase 3 additional electric carts	Maintenance		
2007-2008	Replace GMC diesel trash truck with new diesel	Waste Management		
2008-2009	Purchase 1 gasoline bus	Student shuttle		
2008-2009	Purchase 3 additional electric carts	Maintenance		
2008-2009	Purchase 4 trucks	Maintenance		
2009-2010	Purchased 15 new vehicles, 2 buses and 1 van for the campus shuttle service, 2 vans (1 old van will be surplus), 7 small pickups, 2 full sized pickups, 1 new trash truck and seven street rated electric vehicles. Only one of the electrics is currently tagged for street use.	Campus Shuttle Service, Maintenance, Police		
2010-2011	Purchased 20 new vehicles including two vehicles for the shuttle fleet (only one went into service), 12 new trucks for Facilities, three FFVs, and 7 additional street rated EVs although now only five of 14 are currently licensed for street use. The additional diesel vehicle is a Mobile Health unit for the School of Nursing.	Campus Shuttle Service, Facilities, Maintenance, Campus police and the School of Nursing		

# Winston-Salem State University

## Fleet and Fuel Reporting

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Fleet Information	2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011	
Vehicle Type	Total #	Miles	Total #	Miles	Total #	Miles	Total #	Miles	Total #	Miles	Total #	Miles
Gasoline	31	66,775	37	76,526	39	135,040	40	159,699	46	169,356	57	253,276
Diesel	2	4,926	2	4,473	4	35,195	3	24,989	5	43,056	5	53,748
Hybrid	-	-	-	-								
Flex-fueled Vehicles	-	-	-	-					4	2,114	7	6,024
Comp Natural Gas	-	-	-	-								
Propane	-	-	-	-								
Electric	-	-	2	1,000					1	43	5	6,284
Emergency/Ed (10%)	1	2,400	1	1,498	1	438	1	191	1	587	1	1,007
Emergency/Ed (10%)Diesel											1	3,819
<b>Totals</b>	<b>34</b>	<b>74,101</b>	<b>42</b>	<b>83,497</b>	<b>44</b>	<b>170,673</b>	<b>44</b>	<b>184,879</b>	<b>57</b>	<b>215,156</b>	<b>76</b>	<b>324,158</b>
	<b>3%</b>	<b>0%</b>	<b>27%</b>	<b>0%</b>	<b>33%</b>	<b>90%</b>	<b>10%</b>	<b>106%</b>	<b>43%</b>	<b>140%</b>	<b>90%</b>	<b>262%</b>

Fuel Information	2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011	
Fuel Type	Gal	Petr.	Gal	Petr.	Gal	Petr.	Gal	Petr.	Gal	Petr.	Gal	Petr.
Gasoline *	8,361	8,361	9,339	9,339	15,550	15,550	778	778	706	706	23	23
E10	-	-	-	-		-	24,053	21,648	26,454	23,809	28,206	25,385
E85	-	-	-	-		-		-		-	17	3
Diesel	1,118	1,118	400	400	2,869	2,869	2,206	2,206	5,366	5,366	6,821	6,821
B5	-	-	-	-		-		-		-		-
B20	-	-	780	624	1,200	960	1,097	878	883	706	749	599
B100	-	-	-	-		-		-		-		-
CNG	-	-	-	-		-		-		-		-
Propane	-	-	-	-		-		-		-		-
	<b>Qrts</b>		<b>Qrts</b>		<b>Qrts</b>		<b>Qrts</b>		<b>Qrts</b>		<b>Qrts</b>	
Petroleum Motor Oils**	74	19	20	5	74	19	62	15	32	8	66	17
Syn & Rec Motor Oils	-	-	-	-		-		-		-		-
<b>Total Petroleum Use</b>		<b>9,498</b>		<b>10,368</b>		<b>19,398</b>		<b>25,525</b>		<b>30,595</b>		<b>32,847</b>
<b>% Change in PDP</b>		<b>0%</b>		<b>-3%</b>		<b>69%</b>		<b>122%</b>		<b>166%</b>		<b>186%</b>

**PDP goal by 2011: -19.7%**

ref line # 41 JON

\* Note: Effort has been made to separate the off-road from on-road usage in 2006-2007. Off-road fuel use controls have been implemented and totals were removed from on-road use since 2008-2009.

\*\* Estimated at 4 qts.. Per 4000 miles. FY0809, FY0910 and FY1011 are actual use.

Shuttles contributed 71,482 miles to the 2008-2009 total. The shuttle 2009-2010 total was 88,083 miles. In 2010-2011 the total was 113,509 miles.

Adjusted because of justified mileage expansion continued in 2007-08, '08-'09, '08-'09

### Off Road

			09-10	10-11
Diesel Tractor	3	6	6	1
Diesel Gators	2	2	2	2
Gasoline Gators	3	4	4	10
Electric Carts	5	13	16	27
Gasoline Carts	1	1	1	3
Gas Tractors				5
Boom Lift diesel				1
Scissors Lift Elect				1

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## Results Noted (by FY 2009-10) as relate to your PLAN Plan for FY 2011-2012

all PDP participating fleets results to 2009-10									
Overall Results from all participating fleets					vehicles reported in PDP				
	FY 2004-05		FY 2009-2010		FY 2004-05		FY 2009-2010		
Fuel Type	thousand	of gallons	thousand of gallons	% change	Vehicle Types	#	#	% change	
Gas		14,935	3,165	-79%	Gasoline	10,816	9,436	-13%	
E10		598	11382	1803%	Hybrid	78	129	65%	
E85		242	398	64%	Flex-fueled Vehicles	4,752	7,018	48%	
Diesel		8,526	1602	-81%	Comp Natural Gas	14	5	-64%	
B5		-	7		Diesel	4,498	5,066	13%	
B20		1,870	8157	336%	Propane	192	150	-22%	
B100		-	2		Emergency/Ed (10%)	6,007	5,871	-2%	
Total Biodiesel as B20		1,870	8,167	337%	Electric	13	199	1431%	
CNG		3	0	-92%	Total	26,370	27,874	6%	
Propane		56	5	-91%	Of the Overall 17.5 % petroleum reduction: 3.95% displaced by reduced mileage (conservation) 4.01% displaced through E10 use 0.49% displaced through E85 use 4.7% displaced through biodiesel use 4.3% displaced through efficiency				
Petroleum Motor Oils		48	35	-27%					
Syn & Rec Motor Oils		3	6	115%					
Total Fuel		26,283	24,760	-5.8%					
Total Petroleum		25,581	21,638	-15.4%					
T.Fuel (adj. for growth)		26,877	24,760	-7.88%					
T.Petro (adj for growth)		26,153	21,638	-17.26%					

Your organization result to date														
Winston-Salem State University														
results to date (2009-10)					% Reductions Caused by PDP Actions (by FY 09-10 as reported)									
% of Goal	State Organization	Petro Use	Petroleum Displacement Achievements	PDP Actions (Petroleum Reduction)	Miles	E10	E85	B5	B20	B100	CNG	Prop	Syn Moil	
-842%	Winston-Salem SU	166%	Not close to Goal, Transit adding miles and fuel usage, adopted E10 and B20	new campus shuttle increased mileage dramatically	140%	7.9%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	

your organization plan to date										
Winston-Salem State University					report progress	plan next year and forward				
Petroleum Displacement	2005 thru2007	2007-2008	2008-2009	2009-2010		2010-2011	beyond 2011			
Actual	-3%	69%	122%	166%		186%				
140.0%	Shuttle Buses and Athletic Program buses increased mileage			Shuttle mileage increased		Dispell myths about bio-diesel and use B20 in all campus on-road diesel vehicles.	Still pursuing B20 acceptance for 4 of 6 campus diesel vehicles.			
7.9%			use of E10				Select primary alternate fuel for use on campus	An alternative fuel system has not been decided.		
0.5%	Switch over about half diesel to B20 (600 gallons)									
		Switch over all diesel to B20 (600 more gallons)								
PLAN										
0.2%		Change to synthetic motor oils		did this happen?			Apply for grant money for alternate fuel infrastructure, conversion, and new vehicles	Convert slelected fleet vehicles to alternate fuel of choice.		
1.0%		Purchase additional electric carts to replace pickup trucks		Additional carts (7) were purchased						
3.0%		New employee orientation program and continued tip and good practice conservation information		did this happen? No			New employee orientation program and continued tip and good practice conservation information			
		Purchase additional electric carts to replace pickup trucks		Additional carts (7) were purchased						
		New employee orientation program and continued tip and good practice conservation information		did this happen? No						

space for Plan notes

Adjusted because of justified mileage expansion  
adj continued in 2007-08, '08-'09

**Conservation and Efficiency**

defining steps taken to reduce petroleum consumption

your fleet efficiency appears to have decreased more than 17% from baseline

In the process of reporting PDP results we have been able to directly attribute petroleum use changes due to: mileage; alternative fuel use; number of vehicles; use of synthetic or recycled motor oil. Indirectly we have been attributing any other change to "change in efficiency", a positive change may be called "conservation". To better define what portion of PDP performance is due to "change in efficiency or conservation" Please answer the following:

Has your agency/ department/ organization initiated any steps, **not previously reported**, intended to improve fleet vehicle efficiency? Please place "X" as appropriate

YES

2009-'10

2010-'11

NO

2009-'10

2010-'11

**what** did you change? Place "X" in appropriate box(es)  
examples: a mechanical change could include equipment changes to vehicles or fueling infrastructure to make them more efficient. New hybrid autos or new fuel card reader systems would be mechanical. Process change could be an accounting system change, vehicle reassignment, or a carpooling system. Behavior could be drivers improving fuel economy by driving more efficiently or drivers combining errands or carpooling to reduce mileage.

mechanical

2009-'10

2010-'11

yes

no

yes

no

1a

changed vehicle types

X

1b

use fuel management system

X

1c

use on-board idle reduction mechanism

X

1d

other mechanical system change

process

2009-'10

2010-'11

yes

no

yes

no

2a

changed fuel accounting system

X

2b

reduced on-board weight

X

2c

set carpooling policy

X

2d

reassigned vehicles to reduce fuel use

X

2e

check tire pressure routinely

X

2f

evaluate MPG performance by vehicle

X

2g

other process system change

behavior

2009-'10

2010-'11

yes

no

yes

no

3a

trained drivers on economical driving

X

3b

reminded drivers to save fuel

X

3c

set policy on idle reduction

X

3d

evaluate driver behavior (on economy)

X

3e

carefully observe speed limit

X

3f

reward economical driving or punish inefficient driving

X

3g

other behavior change

**when** did you first change it? Place "question #" in box best marking when process began. There may be multiple marks.

mechanical

before 2005

FY 04-05

FY 05-06

FY 06-07

FY 07-08

FY 08-09

FY 09-10

FY 10-11

1a

process

before 2005

FY 04-05

FY 05-06

FY 06-07

FY 07-08

FY 08-09

FY 09-10

FY 10-11

2e

2a

behavior

before 2005

FY 04-05

FY 05-06

FY 06-07

FY 07-08

FY 08-09

FY 09-10

FY 10-11

**How** did you change it? Please note question # you are referring to.

examples may include new procedures, training, or directives affecting vehicle choice or vehicle use; installation of new equipment to dispense fuel or account for its use.

mechanical

1a - New vehicles include four FFVs and several street worthy electric carts only one of which has its license tag.

*new in FY 2010-'11: There are now seven FFVs in the fleet, however, the nearest E85 fueling station is over 30 minutes away. Only one use of E85 fuel was recorded this past year. There are 14 total electric street rated vehicles now on campus. Of these, five have a license tag for street use.*

process

2a - WSSU went to a fuel reporting firm in 0708. Each vehicle has its own individual fuel card as of 0910 versus a specific driver card. A separate card also exists for off-road gasoline fueled vehicles.

2e - regular PM servicing of all vehicles, including tire pressure checks, frequency is uncertain.

*new in FY 2010-'11:*

behavior

*new in FY 2010-'11:*

From your Results Noted tab you are now aware of what portion of your PDP performance change (positive or negative) was attributed to efficiency and conservation last year.

Your '09-'10 PDP report indicated

-17.44%

was attributed to change in efficiency. Of the noted changes in each of these three categories what part will you attribute to current and future activities in each?

Your answers may total 0% if not applicable, otherwise the total will be 100%.

FY

2009-10

mechanical

70

FY

2010-11

mechanical

FY

2011-12

mechanical

FY

2009-10

process

20

FY

2010-11

process

FY

2011-12

process

FY

2009-10

behavior

10

FY

2010-11

behavior

FY

2011-12

behavior