

North Carolina School of
Science and Math

1219 Broad St.		
Durham	NC	27705

Rick Hess

919-416-2900

hess@ncssm.edu

Fleet Information

Total Leased Vehicles	2
Total County Titled Vehicles	0
Total State Titled Vehicles	17
Total Other Vehicles	0

Fuel Information

State Titled Vehicles Only

Fuel Type	Gallons	Pet. Eqv.
Gasoline	4,188	4,188
E10	0	-
E85	0	-
Diesel	2,105	2,105
Off-road Diesel	0	-
B5	0	-
B20	150	120
B100	0	-
CNG	0	-
Propane	0	-
Other	0	-
	Quarts	
Petroleum Motor Oils	200	50
Syn & Rec Motor Oils	0	-
	Total	6,463

Fueling Infrastructure

[illegible]

Breakdown of State Titled Vehicles Only

Vehicle Type	Quantity	Miles
Gasoline Only	4	9,000
Diesel	0	-
Hybrids	0	-
Flex-fueled Vehicles	0	-
Comp Natural Gas	0	-
Propane	0	-
Electric	1	200
10% Eligible - gas	8	45,385
10% Eligible - dsl	3	18,975
Totals	17	73,560

Instructions

Fill out all information (exception - miles if N/A)
Complete with data from fiscal year 2004-2005
Please note if fuel includes more than State Vehicles
Count hybrids and FFV's only once in the breakdown,
do not count them as gasoline vehicles
10% Eligible vehicles include police & emergency
10% eligible educational vehicles must have
specific modifications for instructional purposes

Notes/Comments	
----------------	--

Adjusted Baseline to match 06-07 Reporting
because original #'s were only estimates

Potential for Biofuels Expansion

[illegible]

Potential Reduction in Petroleum use for your organization;

Projected Reduction

Conservation	Reduce speeds, efficient cars, task pooling	194	gallons	=	3.00%
E10	Using E10 for all gasoline vehicles	419	gallons	=	6.48%
E85	Using E85 for all flex-fueled vehicles	-	gallons	=	0.00%
B5	Using B5 for all diesel vehicles	105	gallons	=	1.63%
B20	Using B20 for all diesel vehicles	421	gallons	=	6.51%
B100	Using B100 in 1/10th of your diesel vehicles	211	gallons	=	3.26%
FFV	Substituting one FFV using E85	259	gallons	=	4.00%
CNG/Propane	Replacing one vehicle with a CNG/LPG car	380	gallons	=	5.88%
Electric	Replacing one vehicle with an electric car	380	gallons	=	5.88%
Syn & Rec Oils	Using all synthetic and recycled motor oils	200	quarts	=	0.77%

**Petroleum
Displacement
Goal : 13.5%
874 gallons**

Rick Hess
919-416-2900
hess@ncssm.edu

[illegible]

North Carolina School of Science and Math

Fleet and Fuel Reporting

Rick Hess
919-416-2900
hess@ncssm.edu

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	-	-	4	9,000	4	6,000	4	5,147	4	4,978	4	5,075
Diesel	-	-	-	-								
Hybrid	-	-	-	-								
Flex-fueled Vehicles	-	-	-	-								
Comp Natural Gas	-	-	-	-								
Propane	-	-	-	-								
Electric	-	-	1	200	1	200	1	75	1	65	1	85
Education - gas (10%)	-	-	9	45,385	9	46,471	9	40,520	9	38,531	9	39,011
Education - dsl (10%)	-	-	3	18,975	3	15,714	3	17,952	3	17,011	3	16,755
Totals	N/A	N/A	17	73,560	17	68,385	17	63,694	17	60,585	17	60,926
	N/A	N/A	0%	0%	0%	-7%	0%	-13%	0%	-18%	0%	-17%

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	-	-	7,697	7,697		-		-		-		-
E10	-	-	-	-	6,898	6,208	5,047	4,542	7,419	6,677	3,296	2,966
E85	-	-	-	-		-		-		-		-
Diesel	-	-	2,379	2,379	2,419	2,419	2,264	2,264	2,154	2,154	1,573	1,573
B5	-	-	-	-		-		-		-		-
B20	-	-	150	120		-	100	80	100	80	90	72
B100	-	-	-	-		-		-		-		-
CNG	-	-	-	-		-		-		-		-
Propane	-	-	-	-		-		-		-		-
	Qrts		Qrts		Qrts		Qrts		Qrts		Qrts	
Petroleum Motor Oils	-	-	200	50	200	50	200	50	200	50	200	50
Syn & Rec Motor Oils	-	-	-	-		-		-		-		-
Total Petroleum Use		N/A		10,246		8,677		6,936		8,961		4,661
% Change in PDP		N/A		59%		34%		7%		39%		-28%

PDP goal by 2011: -13.5%

06-07 shows no change because baseline was adjusted to match, previous baseline figures were only estimates

As of 4/30/2006, NCSSM is producing it's own Bio Diesel Fuel B-20. Approximately 20 Gallons a week.

Site produced Biodiesel discontinued- no consumption in 2007-08

Rick Hess
hess@ncssm.edu

Results Noted (by FY 2009-10) as relate to your PLAN

all PDP participating fleets results to 2009-10

Overall Results from all participating fleets			
	FY 2004-05	FY 2009-2010	
Fuel Type	thousand of gallons	thousand of gallons	% change
Gas	14,935	3,165	-79%
E10	598	11382	1803%
E85	242	398	64%
Diesel	8,526	1602	-81%
B5	-	7	
B20	1,870	8157	336%
B100	-	2	
Total Biodiesel as B20	1,870	8,167	337%
CNG	3	0	-92%
Propane	56	5	-91%
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%

vehicles reported in PDP			
	FY 2004-05	FY 2009-2010	
Vehicle Types	#	#	% change
Gasoline	10,816	9,436	-13%
Hybrid	78	129	65%
Flex-fueled Vehicles	4,752	7,018	48%
Comp Natural Gas	14	5	-64%
Diesel	4,498	5,066	13%
Propane	192	150	-22%
Emergency/Ed (10%)	6,007	5,871	-2%
Electric	13	199	1431%
Total	26,370	27,874	6%

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

Your organization result to date

North Carolina School of Science and Math				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
-344%	NC Sch of Sci and Math	39%	Vastly improved but, far from goal, has been unable to implement plans due to budget, on-campus safety concerns	decreased miles (budget), unable to implement plan for new veh (budget)	-17.6%	7.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%

your organization plan to date

North Carolina School of Science and Math					report progress	plan next year and forward	
Petroleum Displacement	2005 thru2007	2007-2008	2008-2009	2009-2010		2010-2011	beyond 2011
Actual	59%	34%	7%	39%		-28%	
-17.6%	decrease in miles has contributed toward PDP goal						
7.6%	use of E10 has contributed significantly toward PDP (as reported '07-'08)						
0.20%	some B20 use has slightly contributed toward PDP						
Planned							
3.0%		Switch over half of diesel use to B20					
1.0%		Using all Synthetic motor oils for tune ups.					
3.0%		Implement an organization wide campaign to reduce speeds, eliminate unnecessary idling, stop fast accelerations, and encourage carpooling					
3.0%			Switch over remaining diesel to B20				
2.0%			Replace 1992 van with hybrid for transport				
2.5%			Use 2,500 gallons of E10 instead of gasoline				
2.5%				Increase E10 use to 5,000 gallons per year			

space for Plan notes

08-'09	09-'10	10-'11
11.33	11.33	
8.54	6.230	
-24.62%	-45.01%	

Conservation and Efficiency

defining steps taken to reduce petroleum consumption

your fleet efficiency appears to have decreased, down 45% below 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

	2009-'10	2010-'11		2009-'10	2010-'11
YES			NO		

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.

		2009-'10		2010-'11	
mechanical		yes	no	yes	no
1a	changed vehicle types				
1b	use fuel management system				
1c	use on-board idle reduction mechanism				
1d	other mechanical system change				

		2009-'10		2010-'11	
process		yes	no	yes	no
2a	changed fuel accounting system				
2b	reduced on-board weight				
2c	set carpooling policy				
2d	reassigned vehicles to reduce fuel use				
2e	check tire pressure routinely				
2f	evaluate MPG performance by vehicle				
2g	other process system change				

		2009-'10		2010-'11	
behavior		yes	no	yes	no
3a	trained drivers on economical driving				
3b	reminded drivers to save fuel				
3c	set policy on idle reduction				
3d	evaluate driver behavior (on economy)				
3e	carefully observe speed limit				
3f	reward economical driving or punish inefficient driving				
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

process
before 2005
FY 04-05
FY 05-06
FY 06-07
FY 07-08
FY 08-09
FY 09-10
FY 10-11

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
new in FY 2010-'11:
process
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 | -45.01% | 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	
FY	2010-11	mechanical	
FY	2011-12	mechanical	

FY	2009-10	process	
FY	2010-11	process	
FY	2011-12	process	

FY	2009-10	behavior	
FY	2010-11	behavior	
FY	2011-12	behavior	