

The background of the entire page is a vibrant blue sky filled with soft, white, fluffy clouds. The clouds are scattered across the frame, with some appearing larger and more detailed than others, creating a sense of depth and a clean, natural aesthetic.

Waste Knot
ENVIRONMENTAL REPORT

SUBARU RESEARCH AND DEVELOPMENT, INC.

A N N A R B O R , M I C H I G A N

SRD RECYCLING CENTER AND SCALE TO MEASURE AND RECORD RECYCLED MATERIAL



2004 RECYCLE CENTER

REDUCE WASTE & RECYCLE!

Subaru Research and Development, Inc.

Project #1

Eliminate 800 contaminated plastic containers going to landfill

Solution:

Purchase oil, antifreeze, and windshield washer solvent in reusable 55 gallon drums

Project #2

Eliminate 408 pounds (186kg) of paper hand towels going to landfill

Solution:

Install hand dryers in the bathrooms

Lunch Room

- Soda bottles

- Soda cans

New for 2004:

- Water bottles

- Iced tea bottles

- 1 & 2 plastic bottles

- Plastic grocery bags

- Aluminum foil

- Food boxes

- Food cans

- Foam food containers

- Food paper wrappers

- Juice cartons

- Milk cartons

- Pizza boxes

Office Station:

- Paper

- Cardboard

- Batteries

- Ballpoint pens

- Pen refills

- Marker pens

- Printer cartridges

New for 2004:

- Incandescent bulbs

- Floppy discs

- CDs

- Phone books

Shop Station:

- Paper

- Cardboard

- Metals

- Wood

- Plastics

- Foam

- Car batteries

- Oil Filters

- Motor oils

- Antifreeze

- Brake fluid

- Fluorescent bulbs

- Tires

New for 2004:

- Aerosol cans

Project #3

Eliminate 352 throw-away household batteries going to landfill

Solution:

Purchase rechargeable batteries and chargers

Project #4

Reduce coffee maker electrical consumption by 66%, and eliminate 24 bottled water deliveries in one year

Solution:

Make coffee in insulated pots, and introduce filter water cooler

LUNCHROOM RECYCLING IMPROVEMENTS:



- Additional items are now recycled
- Kanji (Japanese) characters added to lists
- Reduced landfill
- Increased recycling %
- Improved appearance



OPERATION COFFEE MUG

Disposable Styrofoam cups replaced with re-usable ceramic coffee mugs



Before — throw away



After — wash and re-use



OPERATION COFFEE POT



BEFORE



AFTER

- 1800KW Savings per year
- \$72 6-Month Savings
- \$144 1-Year Savings
- Better tasting coffee!



OPERATION HAND DRYER



BEFORE



AFTER

- Landfill reduced 450lb annually
- \$745 Annual Savings
- 6 Year Payback
- Less trees cut down
- Reduce manufacturing
- Reduced truck deliveries
- Reduced janitorial time
- Reduced CO2 emissions from above
- Reduced oil consumption from above



OPERATION CHEMICAL CONTAINERS



REUSABLE BULK CONTAINERS

ADVANTAGES:

- 1000 plastic containers eliminated (reducing landfill and recycling)
- Slight cost reduction
- Reduced oil and CO2 in atmosphere
- Reduced oil and CO2 in transportation
- Reusable containers
- Spill trays to reduce environmental impact

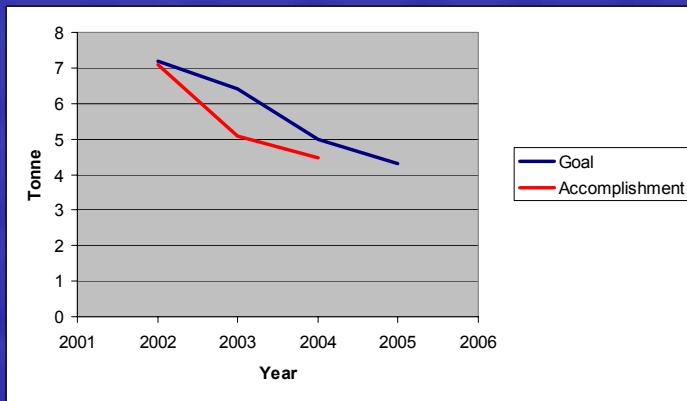


P O W E R S A V I N G S :



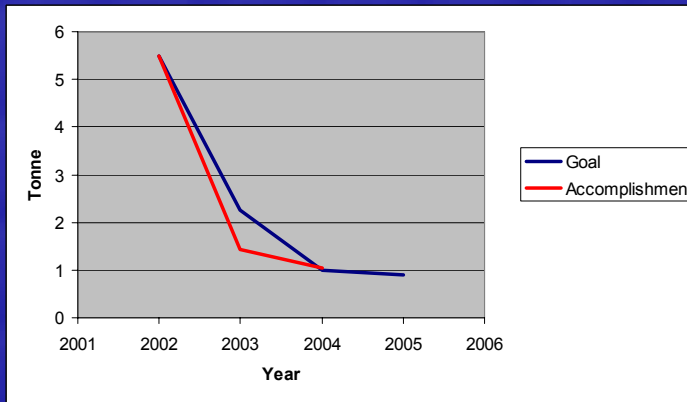
- Installed programmable HVAC thermostats and instituted climate control dial backs for evenings and weekends.





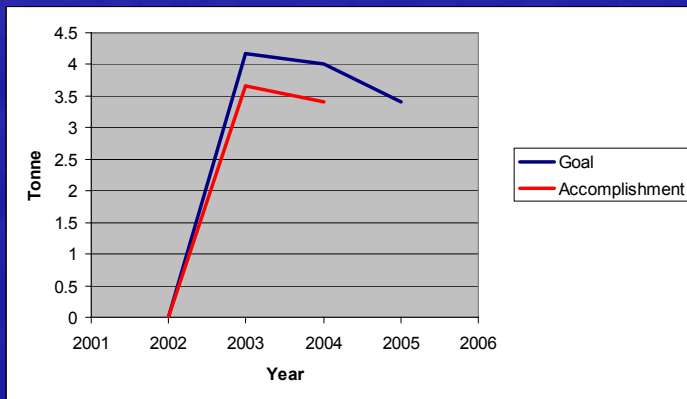
WASTE GENERATED

Year	2002	2003	2004	2005	
Goal	7.20	6.42	5.0	4.3	Tonne
Accomplishment	7.10	5.10	4.46		Tonne



LANDFILLED

Year	2002	2003	2004	2005	
Goal	5.50	2.25	1.00	0.90	Tonne
Accomplishment	5.50	1.44	1.05		Tonne

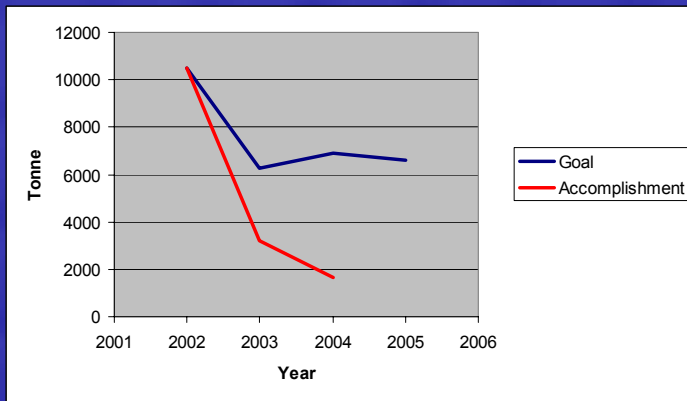


RECYCLED

Year	2002	2003	2004	2005	
Goal	1.7	4.17	4.00	3.40	KWH
Accomplishment	1.7*	3.66	3.41		KWH

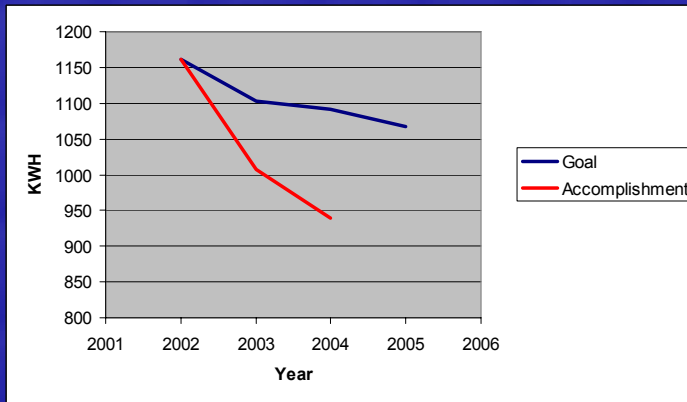
*chemical recycling only in 2002





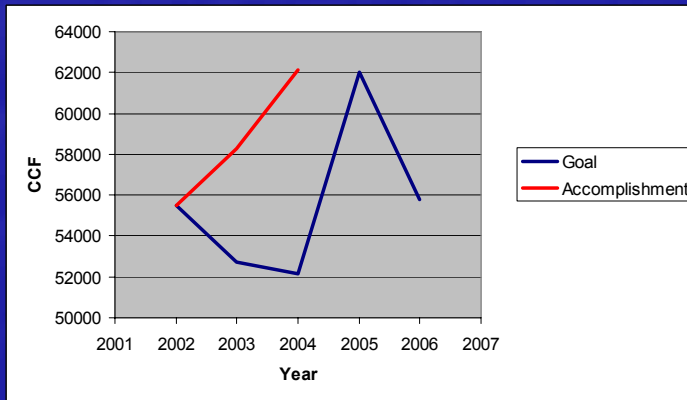
WATER-TOTAL

Year	2002	2003	2004	2005	
Goal	10,473	6,284	6,912	6,598	Tonne
Accomplishment	10,473	3,230	1,670		Tonne



ELECTRICAL

Year	2002	2003	2004	2005	
Goal	1,161	1,103	1,091	1,068	KWH
Accomplishment	1,161	1,007	940		KWH

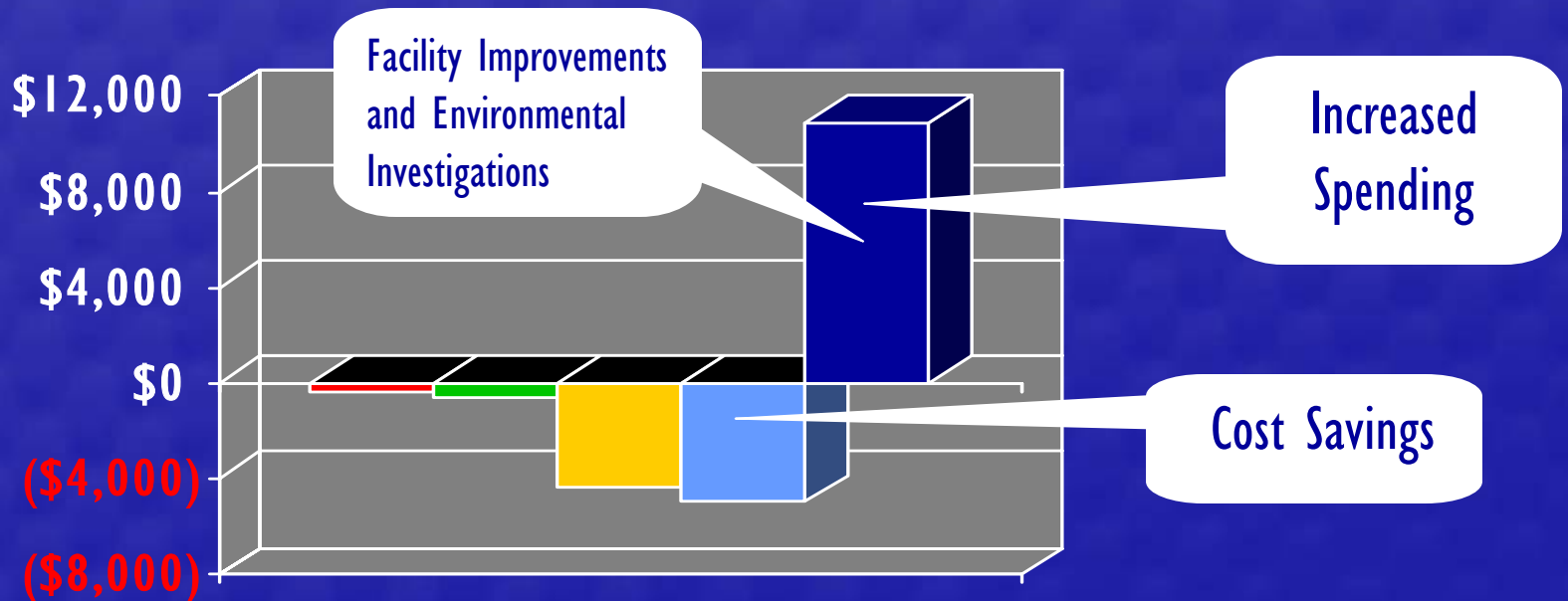


NATURAL GAS

Year	2002	2003	2004	2005	2006
Goal	55,509	52,733	52,178	62,000	55,800
Accomplishment	55,509	58,285	62,137		



2003 ENVIRONMENTAL ACCOUNTING



Green Purchasing

Chemical Recycling

Landfilled Waste

Energy Use Savings

Improvement Expenditures



SRD'S ENVIRONMENTAL ACCOUNTING

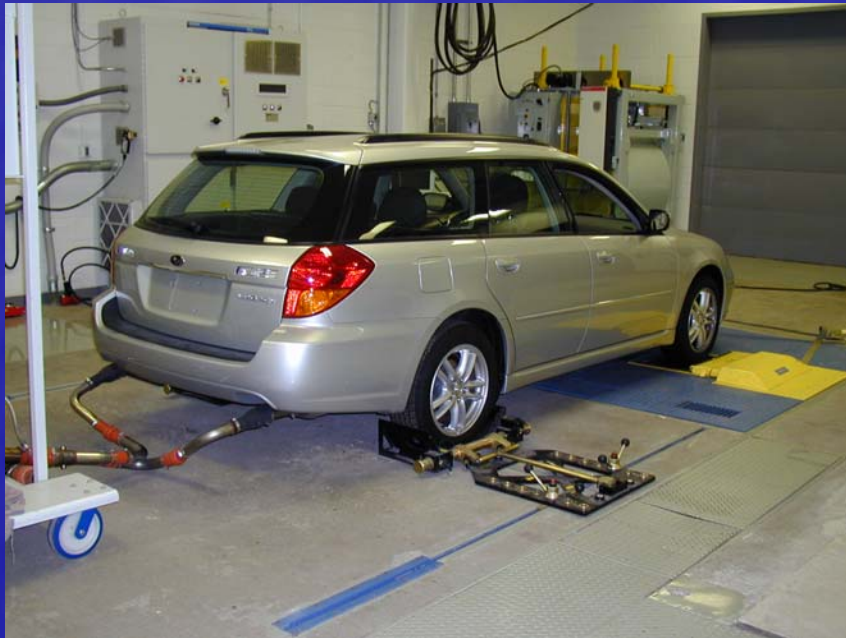
2004 YEAR END ACCOMPLISHMENTS

ITEM	SAVINGS
COFFEE POT	\$144.00
GREEN PURCHASING	\$888.00
LANDSCAPING/SNOW REMOVAL	\$8,100.00
CHEMICAL RECYCLING	\$1,145.00
LANDFILL	-0-
ELECTRICAL	\$6,238.00
WATER	\$2,451.00
PAPER TOWELS	\$745.00
HAND DRYERS	(LOSS) \$4,536.00
CHEMICAL SPILL CONTAINERS	(LOSS) \$998.00
ENV. PURCHASES OR IMPROVEMENTS	(LOSS) \$444.00
RECYCLING PURCHASES OR IMPROVEMENTS	(LOSS) \$5,877.71

\$13,733.00 SAVINGS



POWER EFFICIENCY THROUGH ENGINEERING



- Improve engine power without negative effects on fuel economy or emissions



2 0 0 5 G O A L S

- ISO 14001 certification
- EMS paper-free system
- Improved air makeup unit controls
- New high efficiency boilers
- Reduced natural gas consumption
- Reduced CO2 emissions
- Reduced waste generated
- Reduced landfill



2004 ENVIRONMENTAL RECOGNITION



2004 ENVIRONMENTAL RECOGNITION



Washtenaw County's premier award of the year for environmental excellence.



END OF PRESENTATION

SUBARU RESEARCH AND DEVELOPMENT, INC.

A N N A R B O R , M I C H I G A N

