



**Nominee's Information:**

Name: RICHARD E. BATTERSBY

Title: FLEET MANAGER

Employer: GENERAL SERVICES DEPARTMENT, COUNTY OF CONTRA COSTA, CA

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**If you are nominating another person, please fill out your contact information below:**

Name: \_\_\_\_\_

Employer: \_\_\_\_\_

Contact Number: \_\_\_\_\_ E-Mail: \_\_\_\_\_

To be considered a candidate for the Green Fleet Award, please include a complete description using the following format. Make sure to answer each question in your entry. If you need more space, please attach a separate document.

There is **NO entry fee**. All entries **must** include this completed entry form and six (6) copies of any additional materials sent along with the entry to substantiate the entry (e.g. CD, video, reports, etc.).

Using **ONE** of the options below, submit **COMPLETE** entry form. To promote NAFA's initiative in "going green," we strongly encourage this e-mail option:

- 1. **GO GREEN!** Email [info@nafa.org](mailto:info@nafa.org). Please make sure to compile all documents in **one** PDF to send to NAFA.
- 2. If you prefer to mail your entry, please submit documents to: Green Fleet Awards; c/o NAFA; Suite 200, 125 Village Blvd.; Princeton, NJ 08540

**1. This is an entry form for: (select one)**

- NAFA's Green Fleet Award for car/light truck fleet
- NAFA's Green Fleet Award for truck/equipment fleet



**2. Describe the program.**

As part of the Countywide efforts to minimize impact on the environment and reduce the County's carbon footprint, GHG emissions, and energy consumption Contra Costa County Fleet developed a three pronged approach to green fleet operations. The main areas of focus are vehicles, fuels, and facilities.

**VEHICLES:**

Fleet expanded and created alternate fuel/hybrid clean air vehicle procurement policies and vehicle utilization policies. Fleet has established a goal of 10% annual increase in the clean air vehicle fleet size. Fleet monitors and reports County vehicle use and utilization and has also created separate specifications for alternate fuel and hybrid vehicles in equipment classifications. Hybrid vehicles have a minimum EPA mileage rating established in the specifications. Pilot projects for Biodiesel and CNG powered Animal Services trucks are in place. Short trip petroleum fueled vehicles are being replaced by suitable Neighborhood Electric Vehicles (NEV). Fleet is also conducting an extended service hybrid vehicle evaluation to determine maximum vehicle lifecycle and costs associate with operating higher mileage hybrids. The County has aggressively installed Particulate Matter (PM) traps on diesel vehicles over 14,000 GVW and achieved Early Implementation status for exceeding State mandated goals. 27% of the County's on-road fleet is an AFV or a hybrid.

**FUELS:**

Fleet switched to B20 Biodiesel use exclusively almost 2 years ago for all County diesel vehicles in addition to installing and operating an onsite CNG compression and fueling station. Last year Fleet dispensed 66,000 gallons of Biodiesel and over 20,000 gallon equivalents of CNG. The County provides B20 to other local government fleets. Fleet has also started the permitting process for installation of a 5,000 gallon above ground E85 Ethanol tank and dispenser in order to provide fuel for County FFV units as well as to local State Highway Patrol and Department of Transportation vehicles.

**FACILITIES:**

County Fleet applied for and exceeded standards in two shop environmental evaluation programs resulting in Fleet Facility certifications last year- the Bay Area "Green Business Program", and State of Calif. Dept. of Toxics "Model Pollution Prevention Vehicle Services Shop". Participating in the certification processes allowed improvement upon existing practices and focused the efforts. Some specific areas addressed: switched to re-refined lubricants, bought self filtering solvent tanks, placed timers on overhead lighting and equipment, maximized ambient and skylight lighting, non-aerosol solvents, "dry floor" spill clean-up procedure, enzyme based dry sweep, aqueous brake washers, implementing onsite "closed loop" vehicle washing, oil analysis on large equipment, minimal landscape water use, installed canopy on fuel site to minimize storm water runoff, onsite recycling of paper/cardboard/aluminum cans/batteries/metals/plastic, etc.

**3. Describe the development and implementation stages. Your answer might include what prompted the idea, who developed the practice, what steps were taken to develop and implement the project, and approximate costs.**

The County's green fleet initiatives are an ongoing and constantly evolving process. Multiple parties at all levels are involved and have input. Ideas are solicited and encouraged from all staffing levels and ideas have been fielded and implemented that originated from equipment service workers as well as the Department Director. Most process improvements come about from staff meetings, fleet publications, training, certification programs, networking with other fleet managers, employee suggestion boxes, word of mouth, etc. Before implementation, proposals are discussed with affected staff to determine benefits, operational impacts, and additional costs, if any. Once the impacts and costs are identified the decision is made whether to implement and the best way to do so. Some specific examples:

**B20 Biodiesel** costs approximately 10 cents/gallon more than regular diesel, yet substantially reduces vehicle Particulate Matter (PM) and NOX emissions. Research determined that it was also probable to experience increased filter changes during the 6 month transition period and that the existing diesel tank should be thoroughly scrubbed and rinsed before using Biodiesel. The County incurred approximate upfront costs of \$2500 and ongoing 10 cents/gallon operational costs to reduce petroleum consumption and emissions. In time the operational costs are expected to reside to equal to or cheaper than diesel and in the mean time we reduce petroleum consumption and lower exhaust emissions.

**Re-refined oil** is priced the same as "virgin" motor oil. There were no equipment or vehicles modifications needed. Re-refined engine oil use was implemented at zero cost increase and with minimal effort.

**CNG sedans** average \$6,000 more than a midsize sedan. The additional procurement costs are partially offset by incentives ranging from \$2,000 to \$3,000 and the CNG fuel saves \$2.00/gallon vs. gasoline. Assuming similar repair and maintenance costs, the CNG sedan recoups the incremental additional purchase cost at approximately 35,000 miles of use and is carpool lane eligible w/lower emissions.

**Hybrid sedans** average \$6,000 higher purchase price than a midsize sedan but are expected to retain an additional \$3,000 in resale value. Due to better fuel economy and assuming similar repair and maintenance costs, a hybrid sedan recoups the incremental additional purchase cost at approximately 67,000 miles of use while offering reduced tailpipe emissions.

**4. Describe the benefits. This section may answer questions such as: how did this program help reduce energy consumption and going green? What was the impact of this innovation on fleet operations? Your answer may include specific documentation on cost reductions, improved services, and a letter from employer/organization that describes the benefits.**

While there are many difficult to measure positive benefits relating to implementation of green fleet initiatives (such as positive publicity, recognition of staff and operations, and simply the satisfaction of doing your part to maintain the environment) there are also many quantifiable aspects of green fleet operations. For example:

**CNG-** In 2007 the County dispensed over 20,000 gallon equivalents of CNG resulting in:

- Directly displaced consumption on 17,500 gallons of gasoline
- Saved \$42,000 over the cost of purchasing bulk gasoline to travel the same distance
- Reduced tailpipe emissions

**B20 Biodiesel-** In 2007 the County dispensed 66,000 gallons of B20 Biodiesel resulting in:

- Directly displaced consumption of 13,200 gallons of diesel fuel
- Reduced Particulate Matter (PM) and carbon monoxide (CO) emissions by 16% - 17%

**Particulate Matter (PM) Traps-** The County has installed several styles of PM traps on 34 diesel vehicles resulting in:

- Reduced Particulate Matter (PM) emissions by up to 85%
- Reduced Nitride of Oxygen (NOX) emissions by up to 25%

**Hybrid vehicles-** In 2007 the County operated 86 hybrid vehicles 943,000 miles resulting in:

- Avoided the consumption of 22,722 gallons of gasoline
- Saved approximately \$65,000 in fuel costs
- Eliminated over 200 metric tons of CO<sub>2</sub> emissions

**Vehicle use and utilization policies-** The County increased focus on vehicle use and operation in 2007 resulting in:

- Reduction in County total fuel consumed by 60,000 gallons over 2006 consumption
- Reduced overall County miles driven by over 1 million miles over previous year averages
- Redirection of 8 underutilized vehicles resulting in cost avoidance of \$175,000 in new vehicle purchases
- Redirected another 15 underutilized vehicles to high demand customers

**Re-refined petroleum products and anti-freeze-** The County used re-refined/recycled fluids resulting in:

- Diverted 5700 gallons of petroleum and ethylene glycol products from the waste stream

**Self-filtering aqueous based solvent tanks-** In 2007 the County purchased self filtering solvent tanks resulting in:

- Elimination of 550 gallons of used solvent previously disposed of as hazardous waste
- Reduction of VOC emissions from petroleum based solvents

**Dry floor clean-up/Microbial dry sweep-** The County practices dry floor spill clean-up procedures and uses microbial dry sweep resulting in:

- Elimination of 50 pounds of used dry sweep disposed of as hazardous waste annually

**Refillable spray bottles-** The County uses refillable spray bottles for carburetor and brake cleaner resulting in:

- Savings of \$900 annually
- Elimination of approximately 600 aerosol cans previously consumed and disposed of annually