



DFG Going Green:
Next Steps Toward Sustainability
September 20, 2011

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Dear Director Bonham,

On behalf of the Going Green Work Group, Going Green volunteers, and all employees of the department, I am pleased to provide *DFG Going Green: Next Steps Toward Sustainability*. The Going Green Work Group has expanded on the original Going Green document developed at the initiative of DFG employees, further highlighting the importance of reducing DFG's carbon footprint and creating a more sustainable workplace. The topics covered in this report mean a great deal to DFG staff, and your time and attention to these challenges is greatly appreciated.

The Work Group, with the input of a volunteer group of DFG employees, has used its time together to create a vision for where we can go as a department to support the Going Green effort. This vision includes actions that can be taken immediately as well as actions that will take more time to implement. We have a unique opportunity to demonstrate how actions taken in the work place can reduce our internal carbon footprint and contribute to the quality of our work environment to benefit our employees. Your leadership and recognition of the importance of the Going Green effort in the midst of a state budget crisis and other DFG-wide challenges will not go unnoticed. Sustainability is very important to DFG employees and the Work Group is pleased to present you with our report.

Sincerely,



Sandra Morey
Deputy Director
Ecosystem Conservation Division
Department of Fish and Game

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I. Introduction

On October 29, 2009 [Director's Bulletin #2009-01](#) was sent out to all staff along with a report, "*DFG Going Green: Reducing Our Carbon Footprint*" to help the Department of Fish and Game (DFG) reduce its carbon footprint and save valuable resources.

Following the release of the report there were many inquires from employees about DFG's next steps. In response, a second [Director's Bulletin \(# 2010-01\)](#) was issued on January 19, 2010 that created a Going Green Work Group (Work Group) to help DFG create a vision of sustainability and to identify the next steps toward implementing a strategy to reduce DFG's carbon footprint and make it more environmentally sustainable.

The Going Green Work Group is comprised of six DFG employees led by Climate Change Advisor Amber Pairis, and was assisted by a volunteer team of 12 DFG staff. The Work Group along with input from the volunteers has put together this follow-up document to take a closer look at the Going Green suggestions to determine actions DFG is already taking, additional actions that would be easy to implement, and next steps to keep the Going Green effort moving forward. This document reflects the contributions and innovative thinking of many DFG staff and is a way to acknowledge our current efforts as well as inspire others to take action. The document also provides a vision of where we want to go, and reminds us that by working together and taking actions today we can have a lasting impact in furthering conservation of fish and wildlife and the places they live for future generations to enjoy.

Many thanks to all DFG employees who contributed thoughts and suggestions to the original Going Green document. Special thanks to the Work Group¹ as well as the group of DFG volunteers² who supported and contributed to the Work Group's efforts.

¹ Crilly Butler, Jeff Funk, Melissa LaPorte, Gordon Leppig, Linda Miller, Amber Pairis, and Mike Snyder.

² Penny Crawshaw, John Ekhoft, Suzanne Gilmore, Steve Juarez, Jenna Kennedy, Elizabeth Lucas, Scott Osborn, Heather Pert, Gail Seymour, Dale Steele, Terry Tillman, and Whitney Albright.

II. A Vision of Sustainability

The Work Group's vision for departmental sustainability includes three major components. The first component is to take immediate action to implement measures that DFG can feasibly put into practice to reduce our contribution to greenhouse gas emissions. The second component is to create a paperless office within the next two years to significantly reduce DFG's carbon footprint. The final part of this vision involves creating a Sustainability Coordinator position and establishing a standing Going Green Committee who together will ensure that DFG is continually working toward meeting its sustainability goals. Each concept is described in more detail in the sections that follow.

Immediate Actions: Director's Bulletin

All employees should follow the guidelines detailed in the Director's bulletin # 2011-01. The bulletin includes guiding principles for paper reduction, transportation, energy consumption and efficiency, reduction of water use, green meetings, purchasing and recycling. Please refer to [Director's Bulletin # 2011-01](#) for more details.

Creating a Paperless Office

1. Why go paperless?

Many state and local agencies are developing green information technology (Green IT) strategies, which require an examination of all elements of their IT infrastructure. Although the production of hardcopy is often overlooked by green IT strategy leadership, DFG's Information Technology Branch (ITB) believes hardcopy reduction should be a prominent feature of a green IT strategy because of the opportunities it creates for decreasing DFG's carbon footprint. Omitting an environmentally sound hardcopy strategy would be short-sighted; managing hardcopy and company document workflows must be a part of any overall green IT strategy.

The costs of using paper/toner/ink supplies and machine energy consumption associated with printers/copiers/multifunction devices are considerable. By reducing the need for hardcopy, DFG can have an annual reduction of 58,800 pages of paper per 100 users and an annual cost reduction of toner/ink costs of \$3,230 per 100 users, not to mention significant power savings and a reduction to its carbon footprint. Creating a hardcopy reduction strategy or, what is known as a Document Management System, is more than just a greening IT project, it also allows DFG to collaborate and communicate more effectively, and to reduce the costs of document retrieval, storage and eventually disposal. DFG is working to create a Document Management System that also includes options for routing documents in an automated fashion which significantly increases productivity and reduces paper and staff time. Most document management projects also have an attractive return on investment by reducing staffing costs. Additionally DFG can address paper- and file-retention policies and other compliance issues as part of the overall project, adding to the return on investment.

2. Implementing paperless strategies

Given the strong economic and environmental reasons to reduce our paper consumption and printing and postage costs, DFG is working assiduously to expedite the development of paperless office strategies and to maximize use of electronic documents. DFG is continuously implementing and assessing new strategies to reduce paper and printer costs and streamline our document production and management approaches, for both internal DFG forms and documents and for those directed to the public and other agencies. Many DFG offices have already implemented paperless or near-paperless processes, including double-siding documents, sending electronic copies (ec) rather than hard copies (cc) of documents, submitting entire documents electronically and utilizing online processes, such as for examinations and recruitment. In the coming months, ITB will be working to maximize the use and effectiveness of the online [Document Library](#) and shared drives to store and share electronic documents.

A critical component of implementing paperless processes will be expanding DFG's use of electronic signatures. DFG possesses the technologies required to implement electronic signatures for internal use with Adobe Acrobat Professional. Currently, DFG does not have a policy that mandates the dissemination of electronic documents with electronic signatures in every applicable case. Dissemination of documents for internal use is currently accomplished utilizing a variety of technologies and methods, including electronic signatures. DFG staff can expect to see policies and software changes in the coming months that will offer greatly expanded opportunities to utilize electronic signatures and develop entirely paperless processes. Also, some of DFG's near-paperless document processes still maintain a single paper copy, a so called "golden copy," as a backup. DFG is working to eliminate any need or requirement to maintain backup paper copies. In general, California Government and Civil Codes speak to the issue of electronic signatures in numerous sections as noted in Appendix I. DFG may be constrained by other laws and/or regulations; however it is committed to pursuing a process to implement the use of electronic signatures to the greatest extent possible.

To continue our transition to a paperless office environment, the Work Group has targeted a number of our processes that can be feasibly modified to an electronic or online format. These include Lake and Streambed Alteration Agreements, Internal Equipment Transfer (FG-158) forms, and the Director's Action Request (DAR) process. DFG also intends to work more closely with the Governor's Office of Planning and Research and with state and local agencies to dramatically increase the percentage of California Environmental Quality Act (CEQA) documents that we receive in an electronic, online, or compact disk format. The Work Group is continuously looking for other DFG processes and forms to transfer from paper to electronic formats.

Through department-wide cooperation and implementation of these strategies, the Work Group expects that nearly all internal DFG forms and documents used by all branches in the Administrative Division could be paperless by the end of 2012. In early 2012, DFG should have the capability to make the vast majority of public documents produced by DFG in an electronic or web-based format. Despite how ambitious these goals are, the

Work Group believes that with robust staff support and our innovative and creative can-do attitude, DFG can implement paperless office strategies in the next two years that will reduce paper, postage, printer toner, and printer electrical use and servicing by greater than 75 percent. Thus this initiative will vastly streamline our work process, save staff time, reduce document storage needs, measurably decrease our carbon budget, and significantly reduce DFG's operating costs, while increasing our efficiency. For additional resources on paperless office ideas please see Appendix II.

Sustainability Coordinator and a Going Green Committee

The purpose of the Going Green initiative is to aggressively reduce our carbon footprint and greenhouse gas emissions (thereby minimizing our contribution to climate change) in order to better protect the state's valuable natural resources. To that end, the Work Group recommends that one of the most effective ways to implement this initiative is to hire a Sustainability Coordinator and maintain a standing Going Green/Sustainability Committee that includes all programs within DFG.

In the past decade hundreds of state and local governments, universities, and corporations across the country have hired Sustainability Coordinators to reduce energy costs, reduce generation of solid waste, hazardous waste and pollution, implement green building standards, and promote other programs and technologies that advance energy efficiency and sustainability and reduce greenhouse gas emissions.

The primary goals of a DFG Sustainability Coordinator will be to 1) utilize the best available technologies and techniques to minimize DFG's consumption of energy, supplies and equipment, 2) minimize greenhouse gas emissions from DFG activities that contribute to climate change, and 3) save precious resources and operating expenses that can be more effectively used for core functions.

The Sustainability Coordinator will lead DFG's effort to implement the Going Green effort by engaging and enabling DFG staff to change behaviors necessary to model the best sustainability practices. The position would oversee and guide a committee of representatives charged with providing resources and recommendations to DFG leadership on initiatives and efforts to reduce DFG's carbon footprint. This Sustainability Coordinator, with the help of the committee, will lead DFG's efforts to create and implement a DFG-wide sustainability plan and will collaborate with senior management, staff, and contractors to advance sustainability initiatives. This coordinator will also collaborate on sustainability issues with other state offices, DFG facility property managers and liaise with sustainability leaders at other state agencies, departments and institutions. A job description and key responsibilities of this position are listed in Appendix III.

III. Additional Actions For Director Consideration

Actions can be taken now to put DFG on a path toward greater sustainability. This section summarizes a list developed by the Work Group of potential next steps toward

achieving the overarching vision of DFG sustainability. These action recommendations are relatively easy to implement and will not require excessive devotion of time or resources.

Duplex Printing

Establish duplex printing as DFG's normal business practice. An average American uses 749 pounds of paper every year, and only 120 pounds of paper per person per year end up in recycling bins.

- Duplex printing, also referred to as two-sided printing, allows the user to print on both sides of the page, **cutting paper use** by up to 50 percent.
- **Save Time and Toner:** Automatic duplex printing saves time by allowing the user to print double-sided and the properties on the printer can be adjusted to save on toner used.
- **Save Space:** Less paper takes up less room and results in fewer records to manage and less paper to buy.
- **Shrink your Carbon Footprint:** Beyond the trees that go into making paper, there is also an environmental impact to transporting paper and producing it.
- Local ITB staff can **assist employees** in determining whether their printer supports duplex printing.

Staff Recognition

Feature a DFG office (regional, satellite, headquarters) and describe the green innovations and ideas (large and small) that have been implemented. Each year an office will be acknowledged and given a "DFG Going Green" certificate. This would require that someone gather the relevant information by interviewing that office's Administrative Officer or Manager.

Communicate Going Green Activities

Permanently post DFG Going Green suggestions in meeting/conference rooms (from Director's Bulletin and others) so that employees see them frequently. Creative cartoons and other graphics could be used to display these ideas as they are more likely to catch someone's attention than bulletins or memos. Find ways to communicate going green activities within DFG through an Intranet page with information on the Going Green Work Group and the Director's initiative. Additionally, a monthly or quarterly e-mail of going green tips generated from the Director's office could provide ideas and examples to help staff make easy changes in their work environment. DFG might consider creating a special logo or other kind of emblem that represents its commitment to sustainability that can be displayed in offices, reports, and letterhead to highlight actions DFG is taking to be more sustainable.

Transit Passes for Outlying Areas

Maintain and increase commuter benefits for employees. This will address limited or expensive parking, reduce traffic congestion, improve employee recruiting and retention, and minimize the environmental impacts associated with drive-alone commuting. DFG

could also pursue acquisition of transit stickers from Yolo Bus with no advance payment, which will help employees that commute to work from outlying counties.

For the last several years, DFG has supported employees by providing an opportunity for commuters to purchase a Regional Transit monthly pass and the Yolo Bus express sticker. The total subsidized cost of this combination pass has risen over the last couple years from around \$30 to \$60; however, the convenience of going to a central location in the main Natural Resources Agency Building each month, writing a single check and purchasing everything at once, far outweighs the increase in the subsidized price. A recent change in the agreement between Regional Transit and Yolo Bus, however, now requires employees to purchase their passes directly from Yolo Bus. This necessitates a trip to West Sacramento or Woodland to purchase stickers, a trip to Sacramento to purchase a Regional Transit pass, payment of the entire unsubsidized price in advance, and then submission of a Travel Expense Claim (TEC) through CalATERS to get reimbursed. Contacts at Yolo Bus have expressed their eagerness to provide stickers to DFG without any payment in advance. The Work Group strongly suggests that the Accounting Branch sell subsidized monthly transit passes for RT and all outlying districts (e.g. Yolo Transportation District, Solano Transportation District, etc.) in the Natural Resources Agency Building each month.

Free Energy Audits and Assessment of Contract/Loan Programs

Another Work Group idea for DFG to consider is utilizing free energy audits and efficiency programs. The following suggestions detail opportunities that DFG might pursue to help financially support efforts to reduce energy use at facilities.

- The Department of General Services (DGS) has a \$25 million fund from the American Recovery and Reinvestment Act (ARRA) for revolving loans to state agencies to provide incentives for energy efficiency upgrades of state facilities. Loans are paid back with the energy savings. The funds are now fully allocated; however in theory, in 2-3 years, loan repayments should make more funds available for DFG to utilize.
- All investor owned utilities e.g., PG&E, San Diego Gas and Electric (SDGE), Southern California Edison, etc., have large efficiency rebate and loan programs. PG&E has a rebate of five cents/ kWh saved for residential customers but a 15 cent /kWh rebate for state agencies. Sacramento Municipal Utility District has similar programs. SDGE offers zero percent, no-money down “bill financing” of up to \$250,000 per meter for efficiency upgrades. The entire project is funded by SDGE and paid off with the energy savings in the monthly bill.
- Web-based database software developed by the U.S. Environmental Protection Agency called Portfolio Manager (PM) scores the energy efficiency of all state buildings. Buildings receive a score from 0 (Bad) to 100 (Good). DFG has 67 buildings in PM, but like most state buildings, all but one has no score or ranking. However, we can look at raw data gross energy use (KWH/ft²) to get a sense of

which facilities are using the most energy. All of our facilities would likely need new energy audits, unless they were done recently.

IV. Ongoing Department-wide Sustainability Activities

The Work Group would like to recognize and acknowledge DFG-wide efforts and employee-initiated activities that are contributing to the overall going green effort. The Work Group has compiled the following list of highlights that illustrate the enduring commitment and innovative thinking that is keeping DFG on a path toward environmental sustainability.

Resolving Vehicle Mileage Requirements

DFG is actively investigating the possibility of reducing or eliminating our fleet vehicle minimum mileage requirements, or more realistically, changing the standards to reflect a full year's worth of use instead of the current monthly assessment. It is widely accepted that auto emissions are one of the largest contributors to climate change. Therefore, making internal policies that allow programs enough flexibility to drive their fleet vehicles as needed is one of the most important actions that could be taken to reduce DFG's overall carbon footprint. Current policy does not support emission reduction in most cases because state agencies are required to relinquish vehicles in cases where the minimum monthly mileage requirement was not met, despite legitimate reasons for not reaching the minimum mileage standard.

For many field-going programs, a certain number of vehicles are absolutely necessary to carry out mandated activities for a portion of the year. During this time there are no problems meeting the mileage requirements; however weather and other factors can limit field work during winter months. During these months, it is often difficult to meet the mileage and/or days of usage requirements. Vehicles can be temporarily "loaned" to other programs in need, but this kind of activity often results in overlooking needed repairs. This oversight is unacceptable as state vehicles are frequently used by field crews to haul travel and boat trailers, often in remote locations, and vehicle safety and reliability is critical. Additionally, difficulties associated with procuring a new vehicle make maintaining one's existing fleet imperative.

Over the past two years, the Statewide Equipment Council, of which DFG is part, and representatives from all state agencies have been discussing these vehicular issues. The group agrees that the directive poses a conflict. The Equipment Council, chaired by the Department of General Services (DGS), is working on a new policy that would not require minimum use. It has been recommended to the Equipment Council by state agencies such as DFG that they develop a policy that requires departments to certify that they have looked at the historic utilization of their fleet and have made attempts to improve it. With all the work being conducted by the Office of Fleet Administration, this proposal has not been made a high priority and there is no anticipated release date. All agencies are struggling with the current requirements and are lobbying heavily for change. Even though progress is slow, DFG is committed to seeing that necessary

changes are made. DFG has been in contact with DGS on this subject however requests for exemptions to the minimum usage have not been addressed. To see a sample letter sent to DGS from DFG on this subject please refer to Appendix IV.

Web Conferencing Technology

The California Natural Resources Agency negotiated WebEx agreements for a number of departments including DFG, and the WebEx service was made available to all regions and branches in the fall of 2010. This new technology allows DFG staff and any partners or stakeholders with an Internet connection to participate in virtual meetings, training events, or presentations from their respective offices. Using WebEx allows DFG to cut down on travel and associated emissions as well as allowing more staff to participate in important meetings.

The Document Library

DFG's [Document Library](#) could technically be described as an Internet-based digital data repository. In simpler terms, the Document Library is an online tool for managing important digital documents in such a way as to make them fully searchable and available on the Internet. Its primary function is to allow the upload, storage, indexing, and distribution of key documents frequently used by DFG employees, our cooperators and the public. Like a physical library, DFG's Document Library is intended to make documents available to the broadest possible audience while also having the ability to limit access to specific user groups if needed. This reduces the need to print out hardcopies and store them on the shelf or to pass out hardcopies at meetings.

Paperless Examination/Recruitment

Effective May 5, 2010, DFG transitioned to a paperless examination and recruitment online selection process. This is a user-friendly, web-based, Internet accessible system where employees can store applications online after creating a profile.

Automation of Data Requirements for Climate Change Emissions Report

Greenhouse gases (GHG) produced by DFG are tracked using the Climate Action Registry Reporting Online Tool (CARROT). Items tracked include electricity, natural gas, gasoline, and diesel use, which is further identified as mobile or non-mobile. There are no other controllable sources of GHG produced by DFG. The main purpose of CARROT is to convert the energy used by DFG into tons of carbon dioxide released into the atmosphere, for the purposes of tracking. For several years the Business Management Branch (BMB) manually collected information on DFG's energy use, spending approximately 3,000 person-hours between January 1, 2008 and June 30, 2008 because the Business Information System (BIS), Payment and Procurement module did not include all the necessary data fields. The BMB and ITB worked together to automate the data collection and create a comprehensive report that has eliminated the manual process and cut the required number of person-hours in half.

Legislative Office-Paperless Process

All requests for bill analyses and subsequent responses are now sent and received electronically. In the past, all requests for analyses were printed out and stored in a file with appropriate notations and any relevant correspondence. This process is now completed on the computer using Capitol Track, a legislative tracking program to which DFG subscribes. This program allows all requests and corresponding notes to be stored electronically. In addition, all bill analyses themselves are saved in an appropriate bill folder on a shared drive. Previously, the analyses were printed and then returned in draft form to Legislative Office (LO) analysts and the Deputy Director for review. Now they are only printed for the final review draft. After the analyses are processed through the Director's Office and returned to the LO, who prints the necessary copies for Agency, a final copy is scanned and saved on the shared drive.

In addition, DFG no longer keeps paper bill files. Acquiring paper bills previously required a costly subscription to The Daily File for delivery of the hard copies of bills affecting DFG. Now that the bills are received online for free through the California State Senate website, DFG no longer subscribes to The Daily File.

Greening Efforts in ITB Server Room

ITB has made significant strides in its continual efforts to go 'green'. Prior to 2006, ITB had at least a one-to-one relationship between server services and hardware devices. In some cases, such as Geographic Information Services (GIS), there was a one-to-many relationship for redundancy purposes. Beginning in 2006, virtualization (splitting one physical server into partitions, with each functioning as if it were a separate hardware device) was designated as a DFG priority. Through careful implementation, ITB Windows staff members have presently changed that ratio to at least five-to-one, meaning five server services co-located on a single hardware device. This paradigm shift reduced power consumption, met environmental requirements and reduced hardware costs, while increasing the number of services to DFG staff and customers.

Presently, ITB is hosting more than 90 server services using virtualization. Services range from Blackberry and antivirus software maintenance to GIS development, test and production. These 90 services are all running on eight physical VMWare hosts, utilizing shared storage (VMWare is the company that provides the virtualization software). As DFG moves forward on migrating from Novell to Microsoft server systems, there is a projected further reduction of 10 physical servers.

ITB's Additional Going Green Activities

1. Monitoring Personal Computer (PC) and printer usage to ensure that all are being turned off at night and on weekends.
2. Increasing duplex printing to reduce paper usage.
3. Increasing the use of electronic documents to decrease printing on paper.
4. Encouraging telecommuting for some portion of the workweek to reduce driving mileage.
5. Recycling cans and bottles in addition to DFG-wide paper recycling efforts already under way.

The Engineering Unit

DFG's Engineering Unit designs structures and systems in compliance with California Code of Regulations (CCR), Title 24, also known as the California Building Standards Code. It includes building, electrical, mechanical, plumbing, fire, and energy codes. Engineering is providing energy savings and reduced DFG's carbon footprint in the following ways:

- Installing new windows with low-emittance dual-pane glazing.
- Installing radiant barrier on new roofs and during re-roofing contracts.
- Installing reflective asphalt shingles (cool roofs) with solar reflectance and thermal emittance.
- Installing heating, ventilating, and air conditioning (HVAC) units with Energy Star ratings that meet the minimum energy requirements of Title 24.
 - Minimum Cooling Requirement: (SEER – 13)
 - Minimum Heating Efficiency: (AFUE – 78 percent)
- Installing programmable thermostats.
- Installing variable-speed motors on hatchery wells.

Additional initiatives that Engineering is working on include the following:

- Installing automated systems on wildlife pumps to allow pumping at night during reduced energy rates.
- Putting all landscape irrigation systems on timers and setting them to water during the evenings or early mornings; this practice requires less water to keep a lawn healthy since the water does not evaporate before it is absorbed (as often occurs during the afternoon). Additionally, putting plant (shrubs, small trees, etc.) irrigation systems on drip irrigation will translate to less energy consumption.
- Investigating the use of energy surveys completed by outside entities to identify potential utility cost savings in state-owned buildings. To implement the energy saving project, DFG could use state funds or enter into an Energy Savings Performance Contract where an outside entity would pay the upfront installation costs and get reimbursed from the lower monthly utility bill.

V. Sampling of Employee Initiated Sustainability Activities

In compiling the list of department-wide Going Green activities, the Work Group also discovered many employee initiated activities that have taken place in the regions and branches that support the Going Green effort. The list of activities below is meant to highlight the enduring commitment and innovative thinking that so many DFG employees exhibit on a daily basis.

Going Paperless-Highlights from Headquarters

- Since July 2009 the Wildlife and Fisheries Division and the Fish and Game Commission have been processing documents electronically. All documents from the branches have been sent electronically to the division and commission and vice versa. Doing this has reduced paper and toner use, as well as employee time that was previously required to print, scan and distribute.

- Regional Managers and Branch Chiefs have been using the CalATERS system to complete their TECs, again saving staff time and printing materials.
- Reports (DFG vacancy reports, Executive Review Committee reports, etc.) are now e-mailed to Deputy Directors instead of being delivered as hardcopy.
- DFG has started an online resource named "Trading Post," modeled after Craigslist.org, which attempts to match the haves with the have-nots to better utilize all existing resources, including vehicles and equipment.

Habitat Conservation Planning Branch

The Habitat Conservation and Planning Branch (HCPB) has created and instituted a procedure for electronic review of correspondence. This procedure includes a detailed step-by-step guide to ensure that all appropriate correspondence is reviewed and responded to appropriately, and that it is stored electronically in a way that does not require the letter itself, the reviewer's comments or response to be printed. HCPB is also looking into options for making the California Endangered Species Act (CESA) review process paperless, possibly through use of the Document Library.

BMB: Common Kitchen Composting Experiment

BMB with a staff of about 22, started an experiment to separate the common-area kitchen garbage in order to bring awareness to current office waste management practices. BMB designated one container for cans and bottles, one container for wet garbage which consisted of things like coffee grounds, banana peels, lunch scraps, etc., and one container for soiled paper products such as paper towels. A recycle bin outside the kitchen door is used for mixed paper and plastic (such as boxes and wrappers that are recyclable).

The importance of composting cannot be overstated. Soiled paper and food scraps (which emit greenhouse gases as they decay) account for nearly 46 percent of commercial trash in the landfill. Even when composting pick-up costs are factored into the waste disposal service, it still costs much less to compost food scraps than it does to landfill them. In addition, staff purchased a set of dishes from the dollar store to reduce office dependency on plasticware and paper plates.

***Region 1 Climate Committee*³**

This regional committee was formed to assist regional staff in better understanding and managing the numerous issues associated with climate change in our personal and professional lives, and to help move DFG forward on climate change issues. The committee assisted with developing the original Going Green document and has put forward a proposal for a paperless office pilot project and digital signature initiative that includes looking for ways to reduce production/consumption of paper in office communications and business. The committee has also made great strides in integrating

³ Members of the Region 1 Climate Committee: Mark Smelser, Jennifer Carlson, Vicki Frey, Gayle Garman, Eric Haney, Sharon Hope, Tony LaBanca, Gordon Leppig, Rich Lis, Linda Miller, Amber Pairis, Bruce Webb, Mark Wheatley

climate change considerations into CEQA activities, both for project proponents (public) and for DFG staff responsible for reviewing projects.

Region 1 Memo on Reducing Unnecessary Paper Use

In December 2009, a Senior Environmental Scientist in Region 1 sent a memo to the Acting Regional Manager and Region 1 Program Managers for Administrative Services, Fisheries, Wildlife and Habitat Conservation regarding “Reducing the Department’s Carbon Footprint by Avoiding Unnecessary Paper Use.” The memo called to attention the region’s use of paper and opportunities for cutting down on paper use through duplexing, scanning and decreasing margin size. The memo served as a call to colleagues for active direction and support to help the Region set an example of action for others.

A Sampling of Habitat Conservation Staff Activities in Eureka

- DFG Coastal Timberland Planning has worked with CALFIRE to transition to all digital versions of Timber Harvesting Plans (THPs). All THPs are submitted and filed electronically and almost all associated review documents and comment letters are submitted electronically as well; this has saved considerably on paper and file cabinet needs as a result.
- DFG Coastal Timberland Planning will no longer "cc" hard copies of correspondence unless specifically requested. Only "ec" (electronic copies) will be used.
- Habitat Conservation staff has complied with vehicle reduction requirements, resulting in greater efficiency and maximized use of fewer vehicles. They also choose the most fuel-efficient vehicle to accomplish a trip, and are seeking more fuel-efficient vehicles to add to their fleet.
- A number of Eureka office employees commute to the office via bicycle. One employee has commuted from Arcata to Eureka (about 10 miles one-way) two to five times a week since 2005. He averages about 2,300 to 2,600 miles per year commuting by bicycle.

Region 2 Staff Activities

Region 2 has a recycling program that has been ongoing for several years. Employees regularly recycle cans, plastic bottles, recyclable food containers, corrugated cardboard, used batteries, and ink cartridges. Region 2 also stores used desks, chairs, file cabinets, and other office supplies that are often exchanged between employees rather than making new purchases. In Region 2 office buildings, hallway lights are often turned off to conserve energy, and lighting in the office break room was replaced by more energy efficient bulbs.

Region 2 staff is encouraged to practice duplex printing. Public Record Act response documents are being printed double-sided when practicable, and staff is employing electronic copies (ec) rather than hard copies (cc) unless specifically requested. Staff is also scanning and e-mailing documents instead of faxing or mailing whenever possible.

Staff now submits the majority of draft Streambed Alterations Agreements electronically to applicants, which saves on paper and postage. They have created and are about to implement new procedures for electronic route slips for document review and surname. They have also created many folders on the Region shared drive where documents are stored and transmitted without being printed.

A Sampling of Activities at the Feather River Hatchery

- A computer was installed in the crew break room for viewing DFG documents to reduce printing and improve employee computer skills.
- A container has been designated for paper recycling.
- Ink cartridges are recycled.
- Printers are set to reduce paper and ink resources.
- Teleconferencing is used as appropriate for meetings.
- A recycling program is established: One staff member at the Feather River Hatchery has assumed responsibility for the recycling program. This employee separates all trash into individual containers (e.g. paper, glass, plastic, cans, batteries, and electronics) and has also set up the recycling of plastic feed bags, which are placed in a separate container located in the feed room. This program has been ongoing for many years and staff dedication to this effort is outstanding.

Region 3 Staff Activities

In the Yountville and Hopland Offices staff members are very conscious of energy conservation and recycling. For example, staff often takes paper that has been printed on one side and re-uses it as scratch paper or prints on the other side. They also set their office thermostats to a heat maximum of 65°F and an air-conditioning minimum of 75°F. They use natural air flow (open windows and doors) to control temperature when possible, and turn off the HVAC systems when the weather is nice or when staff is not in the office. In addition, they only use lighting in areas where employees are working and only when needed.

Additionally, monthly Fisheries Branch staff meetings are always done by conference call and semi-annual staff retreats are planned for face-to-face meetings at centrally located venues. Staff carpools to these whenever possible, and efforts are made to keep vehicle tires inflated to get the most fuel efficiency and greatest tire longevity. Trips are planned in conjunction with field work, work-related errands, etc. to save fuel and wear and tear on the vehicle, as well as time and stress. Meeting notes are primarily taken on a laptop and filed on a hard drive to reduce the need for paper copies. In general, staff avoids printing e-mails and instead files important documents on the hard drive.

Many staff members make the extra effort to bring their lunch and snacks to meetings and fieldwork in order to avoid the excessive packaging that often accompanies prepared lunches. They also use wax paper bags rather than plastic when possible. Staff members that have flexibility in their schedules are telecommuting regularly to reduce commute time and vehicle wear and tear.

Region 4 Sustainability Activities

- All installations have recycling containers.
- Paper-intensive operations like environmental document review are transitioning to paperless.
- Printed materials are typically printed double-sided.
- The Region upgraded its servers to support increased use of documents in electronic form.
- A recent office space expansion incorporated dual-level lighting (high/low) in offices to reduce energy use.
- Employees responsible for vehicle maintenance regularly check tire pressure and operating condition of vehicles to improve gas mileage.
- Increasing numbers of meetings are conducted by teleconference or web conference.
- Thermostats are monitored and optimized to reduce energy use.
- Ceiling and portable fans are used to reduce air-conditioning use.
- When buildings are replaced or remodeled, or electrical or plumbing fixtures replaced, water and energy efficient fixtures, appliances, doors and windows are installed, and insulation is upgraded, as feasible.
- Employees in several locations regularly commute by carpooling, bicycling, and walking.
- If not already in electronic format, documents are often scanned and e-mailed for distribution, in place of hard copies.
- Selected shared supplies and equipment are located strategically around the Region to minimize drive times for users.
- Most memos and internal cc's on correspondence are distributed electronically.
- Solar well pumps have been installed in a few locations, and current solar technologies are evaluated when planning any replacement or new pumps or other applications.
- A large green waste pile (25,000 + cubic feet) at San Joaquin Hatchery has recently been reduced to small wood chips and will now be used by the Hatchery for interpretive trails and landscaping.
- The San Joaquin River Restoration Program office uses shared printers and motion controlled light switches. They pool their vehicle use by sharing and coordinating through the use of an electronic calendar as none of the vehicles are individually assigned. The office also uses electronic file management which is accessible to all staff but maintained by one individual. They also have a duplicate hard copy file but it is shared by staff and likely reduces the tendency to print off large documents that they are reviewing.

Region 5 Efforts to Reduce Paper and Toner Use

The Regional Manager for Region 5 has been encouraging staff to avoid printing documents when it is unnecessary and to employ strategies for reducing toner usage. Through e-mail reminders he is encouraging staff to act on suggestions put forward by Region 5 ITB staff that detail how to change settings on staff computers to automatically duplex all print jobs and to save toner.

Region 5 Community Promoted Restoration at Bolsa Chica

DFG's Region 5, along with partners, is participating in a community-implemented habitat restoration project in Huntington Beach to create healthy viable grasslands and other native habitats. Design objectives include creating four viable habitats totaling approximately 110 acres; protecting two environmentally sensitive habitat acres, adjacent wetlands, potential Native American artifacts and native wildlife; utilizing community volunteers and colleges to do most of the restoration; and using a portable self-sufficient native plant nursery. This native plant nursery will produce most of the native plants used for restoration and serve as main command center for restoration, management and wildlife monitoring activities. Specific to the Going Green effort, this nursery is fitted with solar and wind power technologies, and has Internet access video cameras for wildlife observation, security and education. Power sources include solar, wind and biofuels for the diesel tractor and backup generator. Solar and wind energy will be produced onsite and stored in batteries. Biofuels will be produced at a local community college or obtained from a biofuel co-op. Manufacturers of these technologies will participate in the development of community college curriculum and the management of their products at the terra farms.

Region 6 Staff Activities

- One staff member was instrumental in getting a recycling service for the Bishop office.
- Staff set default printer settings to print double-sided.
- HabCon staff members in the Bishop office ask the counties and cities to send their environmental documents on compact disks rather than on paper in binders.
- Staff carpool whenever possible, share vehicles, and walk or ride bikes to places that are accessible.
- In the Bishop office, most of the offices have two light fixtures, each with four, 4-foot linear fluorescent bulbs. Staff has removed half of the bulbs from each fixture for areas where it does not impact light to a workspace.
- In the Ontario office, one staff member takes all of the paper trash to a recycling center. Office staff is currently attempting to develop a recycling program.
- Some of the staff members with windows use natural light instead of turning on lights in their office.
- Region staff purchases recycled products when reasonably priced and recycle aluminum cans, plastic bottles, and paper.

Bike Month Activities

For the past three years staff from DFG participated in the annual May is Bike Month event in the Sacramento region. In 2011 more than 7,000 riders in the region pledged more than 1.5 million miles for this event. In 2010, DFG had a team of more than 30 riders who pledged more than 5000 miles and exceeded that goal. Individuals, businesses, agencies, teams, schools, and bike clubs all participated. For the last three years, the effort has produced more than 1,000,000 miles of bike riding and has had a

very positive effect on traffic congestion, air quality, individual health and all-around fun.
More information at <http://mayisbikemonth.com/>.

Appendix I: Codes and Law for Use of Electronic Signatures

1. Section 1633.2 (h) of the Uniform Electronic Transactions Act (Civil Code) defines an electronic signature as the following: “[it] means an electronic sound, symbol, or process attached to or logically associated with an electronic record and executed or adopted by a person with the intent to sign the electronic record.” Further, section 1633.7 (d) states. “If a law requires a signature, an electronic signature satisfies the law.” It should be noted that there are specific constraints and exclusions to the application of this act, such as wills, codicils, or testamentary trusts, but the general intent is to give credence to electronic authorizations.
2. Section 27391 of the Electronic Recording Act allows for the acceptance of electronic signatures as part of an electronic recording delivery system specifically approved and certified by the Attorney General of California.
3. Section 14608 allows for California government departments to “authorize acts or transactions” utilizing a “secured electronic signature.”
4. Section 71066 of the Public Resources Code prescribes the techniques “by which a report may be signed electronically by a person who would otherwise place a written signature on a paper version.”

Appendix II: Paperless Office Related Web-Links

California inaugurates digital signatures October 19, 1999

<http://www.cnn.com/TECH/computing/9910/19/california.digital.idg/index.html>

Government Paperwork Elimination Act (GPEA)

<http://www.archives.gov/records-mgmt/policy/electronic-signature-technology.html>

California Dept. of Mental Health Dec. 2008 Memo

http://dmh.lacounty.info/hipaa/downloads/Statee_SignatureAnnouncementDec2008.pdf

New York State Electronic Signatures and Records Act (ESRA)

<http://www.oft.state.ny.us/Policy/ESRA/esra.htm>

State of Arkansas Policy Statement on the Use of Electronic Signatures by State Agencies June 2008

http://www.dis.arkansas.gov/poli_stan_bestpract/pdf/Electronic%20Signature%20Policy%20Statement%202008.pdf

OMB Guidance on Implementing the Electronic Signatures in Global and National Commerce Act

<http://www.whitehouse.gov/omb/memoranda/m00-15.html>

California Regulations Approved By Office of Administrative Law on June 12, 1998

<http://www.sos.ca.gov/digsig/digital-signature-regulations.htm>

<http://www.interlinkelectronics.com/esign/markets/government.html>

Appendix III: Sustainability Coordinator Job Description

(Modified from the University of Idaho)

Provide Leadership and Manage Programs related to DFG's Sustainability

Initiatives by: researching, planning, establishing and developing policies, goals, outcomes, and assessment criteria for program success related to DFG sustainability initiatives; developing sustainability initiatives and assessing their cost effectiveness, technical feasibility and means of implementation; analyzing and reporting the effectiveness and results of sustainability projects; identifying, addressing, and mitigating the removal of obstacles and barriers to enable the success of DFG's Going Green Initiative; developing and maintaining sustainability indicators for DFG such as energy and natural resources usage, waste generation and recycling, environmental awareness activities, and transportation and parking trends; researching and compiling information on best practices and recommending appropriate courses of action; undertaking fundraising activities such as seeking external grants; and coordinating efforts with the Climate Change Committee; increasing awareness regarding sustainability initiatives among DFG staff; and integrating sustainability concepts into DFG's daily operations

Key responsibilities include:

- Manage a portfolio of sustainability and energy efficiency programs, including development, application, analysis, monitoring, and adaptive management phases;
- Develop, promote, and explain energy efficiency and sustainability programs to DFG management and staff, contractors, suppliers, and the public; respond to and/or redirect inquiries about energy efficiency and sustainability programs;
- Perform or review facility energy audits, feasibility studies, and reports for adherence to program standards;
- Assist in the development and implementation of quality assurance and implementation procedures for energy and green building programs;
- Review calculations and assumptions used to estimate or measure savings due to energy efficiency or green projects; and
- Coordinate with energy and equipment suppliers and other stakeholders to maximize energy efficiency.

Appendix IV: Vehicle Mileage Requirements

State of California
Department of Fish and Game

Memorandum

To: Rick Shedd
Office of Fleet and Asset Management
Department of General Services

Date: August 27, 2008

From: Lisa Gallegos, Acting Branch Chief
Business Management Branch
Department of Fish and Game

Subject: **UNDERUTILIZED VEHICLE REPORT – REQUEST FOR EXEMPTION**

The Department of Fish and Game (DFG) has prepared this memorandum for the purpose of submitting the January through June 2008, Underutilized Vehicle Report and to request a permanent exemption from the minimum utilization requirement for certain specified vehicles.

The DFG operates a very diverse fleet of vehicles and mobile equipment in pursuit of the mission and objectives of the Department. Many of these vehicles are specially equipped for a particular purpose, specially funded for a specific use and/or are used seasonally, all of which complicate the Department's ability to reach the minimum vehicle utilization requirement.

The Department's previous efforts to increase the utilization of DFG owned fleet assets included the implementation of a vehicle pooling program and ultimately, a fleet and mobile equipment reduction program. The vehicle pooling program experienced limited success due to the specialized equipping and funding complications identified above.

The DFG also initiated a department-wide fleet and mobile equipment reduction program that was undertaken specifically to reduce the number of underutilized vehicles and mobile equipment. That reduction program identified 243 items for reduction, including 119 vehicles. Although the reduction program was successful in identifying items for reduction, a review of the current

Underutilized Vehicle Report indicates that a significant number of remaining vehicles are still underutilized according to policy.

Because climate change and energy conservation initiatives are in direct conflict with minimum vehicle utilization requirements, the DFG is requesting a permanent exemption from the minimum vehicle utilization requirements for specified vehicles.

With the Office of Fleet and Asset Management concurrence, vehicles to be exempted from the minimum utilization requirement would include:

- **Specialty Equipped Vehicles:** Vehicles specially equipped to perform a specific function such as fish feeding, fish planting, undercover and surveillance and can not reasonably be used for any other purpose.
- **Specialty Funded Vehicles:** Vehicles specially funded where any use of the vehicle, other than for the purpose identified in the respective funding agreement, is prohibited or not authorized. This would include any vehicle that is purchased and funded through a federal fund, federal grant, wildlife restoration grant and habitat conservation grant.
- **Seasonally Used Vehicles:** Vehicles used seasonally would not be exempted from utilization standards except where the off-season period eclipsed the reporting period and the vehicle did not reach the minimum utilization requirement.

If approved, the DFG will continue to study the utilization of Department owned assets to ensure that vehicles are used to the maximum extent possible without unnecessary use.

Questions regarding this memorandum should be directed to the DFG fleet and procurement manager, Mr. R. "Bo" Bohanan at (916) 445-3779, or RBohanan@dfg.ca.gov.

Attachment: June 2008 Underutilized Vehicle Report

cc: Cynde Jones, Assistant Deputy Director Administration Division