2010 Data Collection

Washington Dept. of Corrections Sustainability Report

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Washington Department of Corrections

DOC Mission:

Improve public safety

DOC Sustainability Commitment:

Reduce the environmental, economic, and human cost of prisons.

Executive Summary

Among prison facilities statewide, from 2005 to 2010 the Washington Department of Corrections (Department) has:

- Reduced solid waste to landfills by 30%
- Increased diversion to recycling by 89%
- Increased food waste diversion to composting operations by 90%
- Decreased potable water use by over 100 million gallons annually
- Decreased facility heating and energy consumption by 8%

Over the past year the Department has:

- Reduced transportation fuel consumption by 25%
- Increased biodiesel use by 9% from 2009 to 2010
- Reduced total carbon emissions by an estimated 40% from 2009 to 2010

Contents

Department Background

The Department is the third largest agency in Washington State with a $1.6 billion biennial operating budget. The Department is responsible for managing all adult prison facilities and supervising adult offenders residing in our communities.

The Department is required to provide health care, programming, treatment, correctional work programs, housing, and nutrition services for incarcerated offenders.

The prisons, work release, and community field offices are located throughout the state. Each plays a vital role in supporting successful re-entry of the offenders who will be released from confinement and those residing in the community under the Department's jurisdiction.

The Department operates 12 prison facilities, eight of these facilities have a range of custody levels including minimum, medium, and close security. In addition, the Department operates four minimum-security forest camps. These minimum-security facilities house offenders scheduled for release to the community within 48 months.

The facilities range from the 120 year-old Washington State Penitentiary to the Coyote Ridge Correctional Center completed and populated in 2010, and is the first LEED® Gold prison campus in the world.

The Department's headquarters office and Correctional Industries (CI) headquarters are located in Tumwater and both occupy LEED® Silverbuildings.

The Department focused most of the data collection over the past five years on the 12 prison facilities. This is logical given this segment represents the Department's largest consumer of resources. The second most significant resource consumer is Correctional Industries. However a majority of their industry activity is captured within the facility reporting.

The Department's goal is to reduce the environmental, economic, and human cost of prisons by training staff and offenders in sustainable practices and to manage facilities in a way that aligns with these values.

Sustainability and low-cost programs:

One of the goals of sustainable prisons is to reduce the human impact of prisons. The Department recognizes that a sustainable vision includes the social wellbeing of the community and ties directly to its core mission, public safety. Toward this, the Department has encouraged and facilitated the emergence of numerous projects that can best be described as programs that elevate the human spirit.

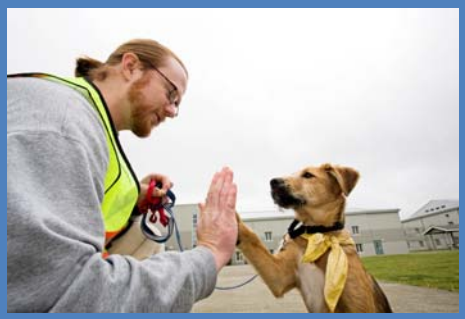
From these efforts the Department expects to realize progress on all fronts of sustainability while supporting the core mission of public safety.

Programs range from energy conservation and waste reduction, vermiculture and domestic animal rescue and rehabilitation, wheelchair and bicycle repair to rearing endangered biota for restoration projects across the state. The origins of this broad spectrum of sustainable programs active in the facilities also vary from the humble suggestion of a correctional officer to complex multi agency partnerships.

All projects take departmental support, collaboration and passion. The programs also have another thing in common. They are initiated and operate at low or no cost to the facility or to the state.

Thus far progress toward reducing the human cost of prisons is measured anecdotally. But these anecdotes and offender interviews are encouraging.

Engaging offenders in sustainability programs is successful if it improves the mood of just one offender for just one hour, ideally increasing the likelihood for further positive educational and therapeutic experiences and lessening the occurrence of behavioral problems in the facility and re-offence once released to the community.



Sustainability Goals: Synopsis of Success

A Map for Success: Providing Goals, Our Key to Achievement

The Department worked over several years toward sustainability goals that were both inspired by executive order and internal Department challenges. The Department has largely met or exceeded the goals where the technology and funding has allowed. Our tracking shows that where goals could be met by the operational and behavioral changes the department achieved its goals. This is a testament to the outstanding commitment the Department and its staff have to sustainability, being good stewards and community partners.

NUMBERS AT A GLANCE

AS A PERCENTAGE OF PRISON POPULATION PER DAY

	2005	2009	2010	
WASTE REDUCTIONS				
WASTE TO LANDFILL	2.44	2.25	1.58	LBS
ENERGY REDUCTIONS				
DIRECT ENERGY USE	68.89	67.84	64.29	KWH
WATER REDUCTIONS				
POTABLE WATER USE	147.5	141.5	114.5	GALS
TRANSPORTATION FUELS REDUCTIONS				
TRANSPORT FUELS USED	0.10	0.08	0.07	GALS

RAISING THE BAR: ADDING ANNUAL GOALS

Beginning in 2010 the Department identified a set of specific target goals to achieve within the year.

Annual target goals were devised in answer to the need for more meaningful goals as early sustainability goals were met and approaches to sustainability matured. Target goals were thought to be more responsive to both the needs and abilities of the facilities in place of blanket reduction percentage goals. Addressing and achieving these within a one-year period will move the Department toward long-term goals.

In 2010 the Department has set the following specific goals to be achieved by December 31, 2010.

Operational Goals based on defined targets for 2010

Toxics	Wherever possible, purchase environmentally preferred products and always manage wastes in accordance with state regulations.
Energy	Achieve a maximum consumption rate of 45 kWh per offender per day in minimum-security settings and 60 kWh per offender per day in higher custody settings.
Water	Achieve a maximum consumption rate of 115 gallons per offender per day in minimum-security settings and 130 gallons per offender per day in higher custody settings.
Waste	Achieve a maximum generation rate of no more than 1.5 pounds per offender per day in minimum-security settings and 2.2 pounds per offender per day in higher custody settings.
Fuel	Maintain reductions achieved in 2009.

ANNUAL GOALS

In 2010 the Department realized unprecedented success in transportation fuel reductions credited to an internally imposed goal to decrease fuel consumption by 20% within the year.

The response to this goal was astounding. All facilities meet or exceed this goal except for one facility whose data was mingled with that of external users.

This is both an illustration of the complexities of data collections and the power of setting specific goals.

Beginning in 2010 the Department defined annual short-term object goals. See 2010 goals to left.

NEW EXPECTATIONS

In response to new legislation in 2009-2010 the Department completed:

- Greenhouse gas calculation reporting for years 2005, 2008 and 2009
- Reporting each facilities energy use into EPA's Energy Star Portfolio Manager

Challenges:

- Lack of funding to support new requests for data
- Satisfying all new requests for data would require changes to accounting systems.
- Lack of sub meters at facilities prevents the collection of energy consumption data beyond a campus level. Installation of building meters is cost prohibitive and thus will prevent the analysis of building performance in the near future.

Superintendent Cole releases prison-reared endangered frogs in nature reserve

NEW DATA COLLECTION AND MANAGEMENT SYSTEM

Department management has seen the value of, and correlation between data management and performance management.

Early data collection was challenged by lack of reporting mechanisms not by a lack of commitment. The Department was a leader in dedicating staff time to facilitate and support sustainability initiatives. The Department hired its first sustainability coordinator in 2003 and laid the backbone for the data collection system which continues to support the Department's sustainability initiatives.

In 2010 the Department invested staff time into upgrading the sustainability data management system. This new system makes the compilation and analysis of data significantly less labor intensive and also makes available a tool for management and facility staff to view and analyze the progress of their sustainability efforts.

ENVIRONMENTALLY PREFERABLE PURCHASING (EPP) - CONSERVING OUR RESOURCES

It is often thought that there are two major ways of reducing negative human impact on our ecosystems and environment. The first approach is through environmental management. The second approach is the management of resource consumption.

Committed to be good environmental stewards and community partners the Department is mindfully making decisions which support this endeavor. One strategy toward this end is to manage resource consumption by imposing "Environmentally Preferable Purchasing" standards to purchasing decisions.

Environmentally preferable purchasing (EPP) is the endeavor to purchase products which have a lesser or reduced effect on human health and the environment when compared with other products that serve the same purpose.

Benefits realized by the Departments support of Environmentally Preferable Purchasing:

- Less hazardous products improves worker safety, reduces regulatory liability, lowers disposal costs
- Energy-efficient and water-conserving products saves natural and financial resources
- Less waste by buying products that are reusable, refillable, more durable, repairable
- Recycled products keeps recycling programs going by supporting markets for the materials

Motivations:

The Governors Executive Order 05-01 requires that state agencies take all reasonable actions to reduce the lifecycle impacts of paper products.

The statute RCW 43.19 compels purchases to be considered based on environmental reasons including its recycled content, energy saving performance and lifecycle costing.

Sustainability Highlight:

As a large consumer and purchaser of resources and products the Department has a powerful role to play in encouraging the development and market for sustainable goods and services.

By engaging vendors with the Departments sustainability goals, and boosting consumer demand for more sustainable products, the Department contributes to the global conversation on sustainable responsibility and deepens its strategic integration into Department operations.

There is always a tension between buying sustainable products and making sure the Department gets value within its budget.

PAPER

Goal: Reduce paper consumption by 30%

The statute RCW 43.19 requires the purchase of 100% recycled content paper for copy and printer use.

Statue RCW 70.95.725 requires state agencies to reduce paper consumption by 30%.

Progress to Goal: Reduced by 29%

The Department has reduced its paper use by 29% from 71,795 to 51,156 reams between 2009 and 2010. Ninety seven percent of the paper consumed is 100% recycled content paper.

The Department has maintained this commitment disputed severe budget cuts.

The Department is currently replacing printing/copy equipment with multifunctional devices as the older devices fail. The use of a multifunctional device has the potential to greatly reduce not only paper consumption as it facilitates paperless document exchange and storage where appropriate to the Departments business needs, it also correspondingly reduced the purchases of ink and toner cartridges.

SOLID WASTE

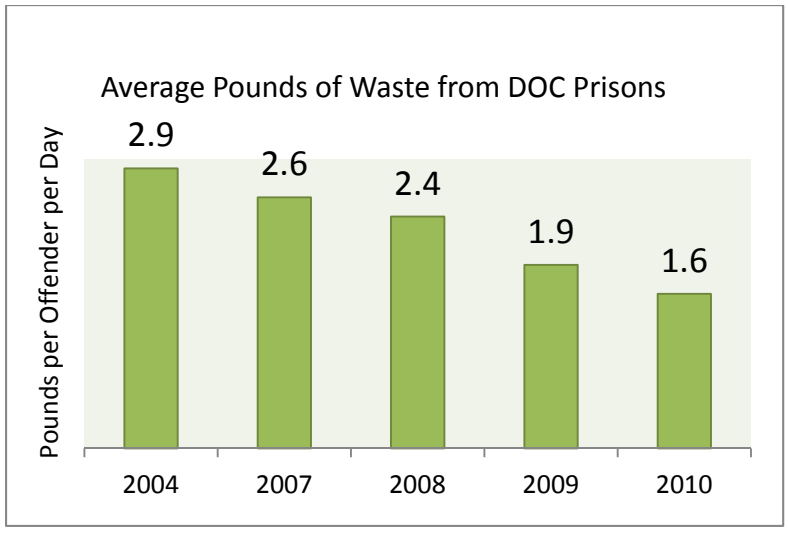
Goal: The annual goals for 2010 challenged facilities not to exceed 2.2 pound per offender per day at higher custody facilities and 1.5 at lower custody facilities.

Progress: All but two facilities met this goal with in the year. The state average is 1.49 pounds per offender per day.

The EPA reports general nonhazardous household waste generated per person per day to be about 4.3 pound for 2009.

The Department has achieved a 30% decrease in total solid waste generation from 2005 levels. This figure is not normalized for population increase. When normalized as a relationship of offender population solid waste generation was measured to have decreased by 45% from 2004.

According to the EPA the average American produces 4.39 pounds of waste a day. In 2010 the DOC prison produced 1.6 pounds per offender.




Food waste separation


Trash sorting


Used offender clothing baled for recycle


Worm bin processing food-waste


Offenders repairing medical equipment

Sustainability Highlight: Correctional Industries – Closes Loop on clothing

Correctional Industries (CI) provides both the Officers uniforms and offender clothing manufacturing much of it at the facilities. Over the past few years they have made it a priority to close the loop in this industry.

Correctional Industries repairs and reissues used clothing to offender as necessary.

50% of all newly issued clothing is used. It having been captured from releasing offenders or those turned in for repair or resizing.

Clothing that is no longer repairable is diverted to ragging or other reuse markets.

RECYCLING

As a direct result of better solid waste management the Department saw its recycling rates increased by 47% since 2005.

As the Department's solid waste reduction program matures it hopes to see recycling rates decrease in direct correlation with decreasing overall waste generation.

Diverted food waste increased in overall tonnage by 47% from 2005 to 2010. In addition, and as an indicator of overall waste reduction, food waste, as a percentage of weight per offender, decreased from 2005 by 2%.

By the end of 2011 all facilities either will be diverting their food waste to on site composting facilities or to local community operated facilities.

REUSE and REPAIR

Facilities save money and create programs by recognizing the value in broken or surplus materials and then applying innovation and skill.

Cedar Creek Corrections Center built its compost facility out of mostly found materials.

The medical equipment repair program at the Monroe Correctional Complex has saved the Department over $125,000 in costs to repair or replace durable medical equipment.

TOXICS REDUCTION

Digital x-ray: Toxic to fish, the silver laden developer used in the Department's x- ray equipment is being replaced with digital x-ray equipment statewide.

Pharmaceuticals: The department has gone beyond existing regulations by retrieving unused pharmaceuticals prescribed to offenders and disposing of them responsibly keeping them out of the natural environment.

TRANSPORTATION FUELS

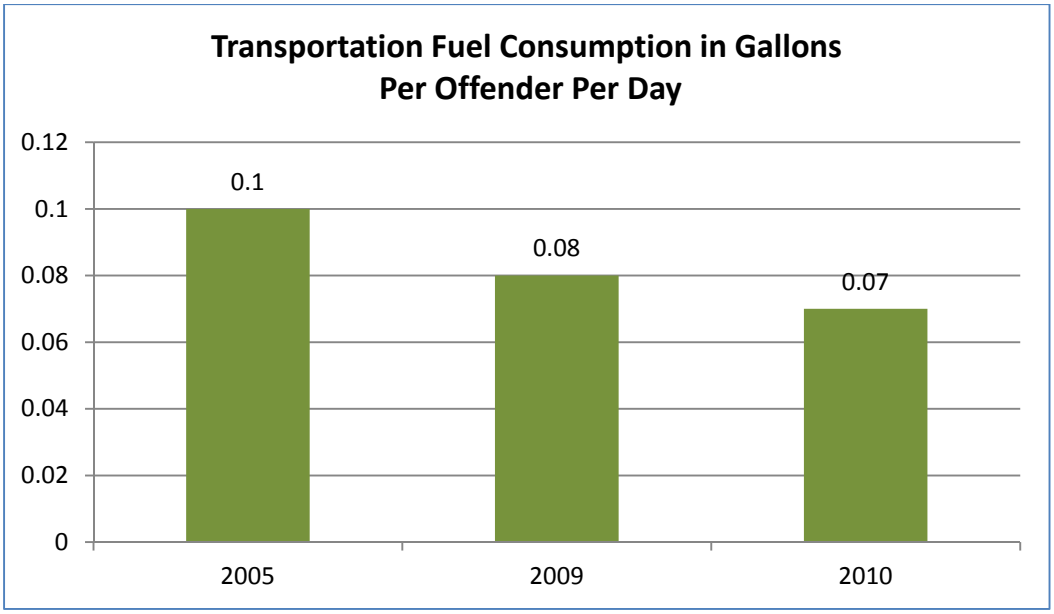
Goal: Maintain reductions achieved in 2009. All new vehicle purchases must be hybrid vehicles unless the duty level of the vehicle is not available in a hybrid design. New maintenance vehicles will be all electric where feasible, exceptions to be documented by superintendents and identified in Government Management Accountability & Performance reports (GMAP).

Progress: Transportation fuel, including gasoline, diesel and biodiesel, use decreased by 25% from 2005. This represents a loss of ground compared to the 35% decrease achieved during the previous year (from 2005 to 2009). This is an excellent example of the constant attention required to maintain an achievement.

Diesel Use: Diesel use decreased by 59% between 2009 and 2011 and 61% percent between 2005 thru 2010.

Gasoline Use: Gasoline use increased by 20 percent from 2009 to 2010. Although ground was lost from the previous reduction achieved in 2009 a 7% decrease from 2005 to 2010 remains.

Biodiesel Use: Biodiesel consumption displacing standard diesel use was increased by 42% from 2009.



Resource Consumption - Resource Management

Sustainability is increasingly supported by the positive results of frugal resource management.

For both financial and environmental reasons, careful resource management is a lynch pin behind a successful sustainability program.

It is this concept that identifies facility maintenance as a critical tactic toward achieving sustainable facilities.

Robustly supporting a preventive maintenance program, as a sustainability strategy will achieve energy, waste, water and toxics reductions.

WATER

Goal: Achieve a maximum consumption rate of 115 gallons per offender per day in minimum-security settings and 130 gallons per offender per day in higher custody settings.

Progress: Potable water consumption has decreased by 22% between 2005 and 2010 measured as a percentage of offender population.

During this period we closed one major facility while opening another and increased our offender population statewide.

Water conservation efforts, through repairs and retrofits to existing systems are sometimes seen as difficult to pay for.

When evaluating the financial feasibility of a project the return on investment is expected to be achieved within 10 years. Because this resource is significantly cheaper than the costs of infrastructure and fixtures, the time it takes to pay for water conservation projects often exceeds the desirable payback period.

Despite the challenges of funding major infrastructure retrofits the Department has been proactive and successful in its water conservation efforts. The Department has limited landscape irrigation, changed landscaping to more drought tolerant and native plantings, installed rainwater collection tanks, repaired steam lines as necessary.

All major renovations and new construction are fitted with low flow fixtures. Despite the challenging environment, use of these fixtures has not resulted in increased plumbing difficulties.

Data detailing facility specific progress found in appendix

Sustainability Highlight –LEED and High Performance building

The Department is committed to new construction and renovations meeting LEED silver standards. This drives the increase of high performance building.

Investments in high performance building appear to be paying off for the Department. Gauging the performance differential of LEED versus non LEED building is a difficult proposition DOC attempted to quantify its investment in high performance building with case comparison of two of its prison campuses fortuitously having similar size, population, climate, custody levels and industry use, but differing in age and construction -- The new Coyote Ridge Corrections Center and the Airway Heights Correction Center.

The Department's new LEED Gold Coyote Ridge Corrections Center appears to be performing 36% more efficiently than the Airway Heights Corrections Center which also increased it efficiency by 7% over the past year by completing an energy audit and corresponding upgrades. If Airway Heights had not completed a energy upgrades over the past year the difference between campus performance would be 43%.

See Appendix for details

ENERGY

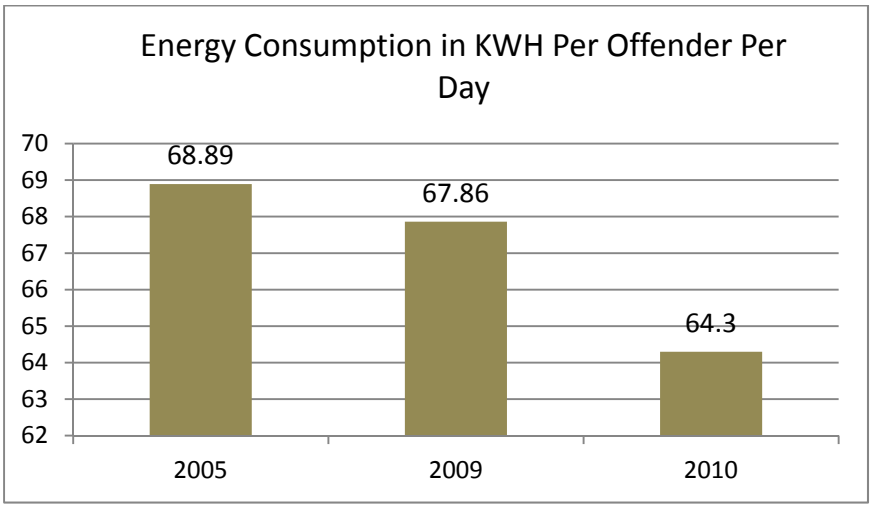
Goal: Achieve a maximum consumption rate of 45 kWh per offender per day in minimum-security settings and 60 kWh per offender per day in higher custody settings.

Result: The Department achieved an 8% reduction in energy use as a percentage of offender population from 2005 to 2010.

Four out of the eight higher custody facilities have meet the annual goal. Not surprisingly it is the newer facilities which have reached or are reaching the goal and the older facilities which are struggling. One out of the four minimum camps has met the goal. **See appendix for details.**

Energy costs associated with the operations of Prison facilities are significant. Reducing energy consumption is an ongoing priority for the Department. The Capital programs division is constantly engaged in evaluating and facilitating energy reduction measures such as:

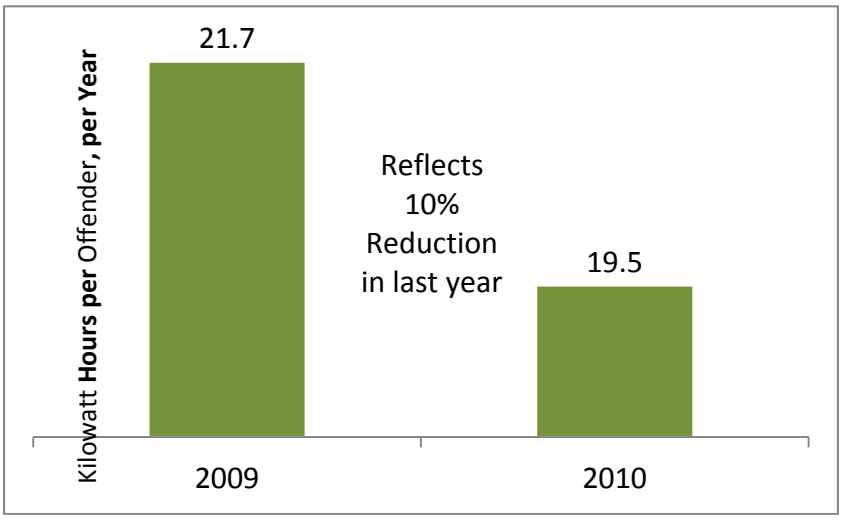
- Facility and systems maintenance
- Energy Audits and resulting upgrades
- High performance construction
- Alternative Energy investments
- Promoting conservation behaviors



Paying for Energy Conservation

- ESCO projects are a very cost-effective process for completing energy upgrades to aging buildings and a means to use utility savings to pay for the project costs.
- In 2010 alone the Department received $550,000 in utility incentives from energy conservation projects.
- Without the use of ESCO contracts the DOC initiates and completes smaller scale conservation projects by working directly with the utility utilizing incentives to help pay for upgrades to lighting and electronics.

Energy Conservation Project
Airway Heights Correction Center



The significant energy reduction achieved within the year at the Airway Heights Correction Center was the result of energy upgrades to air-handler units and repairs to steam-lines.

Facilities are encouraged to conduct energy audits to identify areas such as these where the projects indicate a favorable cost benefit analysis.

Proactive Facility Maintenance –cost avoidance

Building maintenance is directly correlated to building performance and thus energy consumption. Deferred maintenance such HVAC filter cleaning and deferred repairs such as steam line leaks results higher energy consumption and ultimately lead to major equipment failures and the premature replacement of equipment.

Building Sustainable Prisions: Capital Programs

DOC designs new facilities, expansions and renovations with sustainability in mind.

Sustainable Features routinely include:

- **Daylighting in common and cell areas**
- **Natural ventilation**
- **Views for 90% of normally occupied spaces**
- **Native landscaping**
- **Rainwater harvesting for toilet flushing**
- **Waterless urinals and low flow fixtures**

Piping to receive future sources of reclaimed water as well as solar hot water as they become available to the facilities is also being incorporated into buildings as are operational features such as trash sorting areas inside housing units to facilitate the upstream sorting of waste and recycling.

Intigrating these features into the physical environment is both a product of sustainable thinking and supports and reinforces sustainable thinking and facility operations. Sustainability literally becomes part of the landscape.

LEED

In 2004, the Department established a sustainability goal to design and construct new buildings to Leadership in Energy and Environmental Design (LEED) (www.usgbc.org) Silver standards. The following year, the 2005 legislative session passed a new law requiring LEED Silver standards for state-funded building projects.

When managing the construction, renovation and repair of a facility Department engineers are mindful of the impact their choices have on the environment. In their professional capacity they automatically evaluate the lifecycle costs of project components ultimately choosing those that are most sustainable from the choice of floor coverings to heating and cooling systems.

For example, 75% of the new Coyote Ridge Corrections Center floors are polished concrete to avoid the use of carpet or vinyl which would need to be periodically disposed of, ultimately resulting in less maintenance, product consumption and waste.

The Department has established itself as a national and world leader in the building of sustainable and energy efficient prison facilities.

The Department now has 40 LEED buildings completed including the nation's first LEED Gold Prison, the Coyote Ridge Corrections Center.

Offenders at WSP taking pride in their well built garden gate at one of the facilities several gardens.

SUSTAINABLE FOOD SERVICE

Farm to Prison Pilot Project: The Department has partnered with the Washington State Department of Agriculture and General Administration to conduct a two-year pilot program to facilitate local food sourcing from Washington farms. Modeled after the WSDA Farm-to-School Program the project partners see it as an opportunity to expand institutional direct markets for farms and develop institutional procurement models that will benefit similar projects.

Project objectives include:

- Waste reduction
- Carbon emissions reduction
- Support for sustainable farming practices
- Support for local economies
- Creation of diversified markets for small farms
- Development of community partnerships
- Offender job and educational opportunities

During the first year of the pilot the two test facilities realized a 26% cost savings in produce purchased through the pilot.

Food-waste Diversion: Offenders compost food from the kitchen to create a closed-loop operation.

- One prison alone saves $60,000 each year just by diverting its food waste from the local landfill.

- Ten out of twelve facilities divert food waste to compost programs either onsite or to local commercial facilities.

Eliminating Styrofoam: Eliminating styrene dining-wear is not as simple as product choice. Because of the cost difference between styrene and compostable products the facilities simple could not afford to replace one product with another without eliminating some use. This impacts emergency feeding, staff overtime meal service and medical unit service.

All facilities are in the process of eliminating styrene and introducing alternative service methods.

Social Sustainability, Safety and Security

Offenders participate in science lectures as part of the Sustainable Prisons Project

Two-fold meaningful activities reduce occurrence of negative outcomes and save money.

Sustainability programs provide low cost meaningful activities and employment for offenders. This is especially important during these financially difficult times when funding for offender programs has been cut. It is well documented that offender idleness contributes to an increase in offender violence.

The use of low cost sustainable programs is answering some of this need. Sustainability programs continue to exist in tight budgetary times because by definition they have to be economically sustainable, making sense financially in recycling and composting, reuse and repair programs. Other programs such as conservation efforts are done in partnership with other agencies and organizations making these efforts a win-win situation for the community the environment, and the budget.

The existence of the numerous sustainability programs such as wheelchair repair, bee keeping, gardening, and compost operations, yield, meaningful jobs, job training, and incentives for good behavior, add a therapeutic value, and a calmer overall environment.

> "A trend that has been noted in prisons as well as other institutions where individuals have limited access to nature and the world (e. g. assisted living centers, mental institutions) is the positive power of working with growing plants and animals. Horticultural therapy and activities involving training of guide dogs, for example, have been shown to reduce aggression, increase patience, social contacts, and enhance empathy for other living things (Grinde and Patil 2009, Weinstein et al. 2009, Lee et al. 2009). These are exactly the characteristics that are valued by corrections administrators who wish to reduce violence, increase social interactions, and ultimately, bring down rates of recidivism". Nadkarni 2010

Prison reared endangered frogs

Endangered butterflies to be reared at unique facility at women's prison

Prison reared wildflower transplanted to prairie reserve

Offenders attending arboriculture seminar

Sustainable Prisons Project:

A Unique Partnership

The Sustainable Prisons Project is a partnership of the Department and The Evergreen State College.

The mission of the Sustainable Prisons Project is to bring science and nature into prisons. We conduct ecological research and conserve biodiversity by forging collaborations with scientists, inmates, prison staff, students, and community partners. Equally important, we help reduce the environmental, economic, and human costs of prisons by inspiring and informing sustainable practices within and beyond the prison walls.

Project Highlights:

Oregon Spotted Frogs: In 2009 & 2010, inmates successfully raised 149 frogs, with an impressive average survivorship rate of 77%. Another indicator of the program's success is that the prison-raised frogs are consistently larger than those raised by area zoos. The promise of captive rearing as conservation strategy was illustrated in 2011 field surveys revealed new frog egg masses, evidence that captive-reared frogs are reproducing**.**

Native Prairie Plants: In 2009-2011, inmates raised 515,000 native plants of 16 different species for South Sound prairie habitat restoration. Recovery of several prairie-dependent species is reliant on habitat restoration.

Butterflies: A team including female inmates will rear Taylor's Checkerspot butterflies, a federal candidate for endangered listing, in a new custom rearing facility.

SPP
Sustainable Prisons Project

PROJECT BENEFITS

Responses to this project have been universally positive. The project is seen as:

- Providing green collar job training in arboriculture; gardening and composting; and bee-keeping and conservation.
- Creating awareness that prisons have positive impacts on society through the extensive media coverage by regional, national, and international newspapers, media (e.g., CNN, PBS Newshour, NPR) the project has received.
- Opportunity for conservationist to grow biota needed to enhance drastically diminishing populations in a cost effective way through the non-exploitive offender labor.
- Providing education, enhanced social interactions, and chance to reduce infractions by mentally engaging offenders.

Evergreen Professor Nalini Nadkarni delivering a sustainability lecutre

PARTNERSHIPS and COLLABORATIONS

Project participants include inmates, correctional officers, administrators and facility managers, as well as Evergreen faculty and students, visiting scientists, and community partners such as the Washington Department of Fish and Wildlife, Fort Lewis, The Oregon Zoo, and The Nature Conservancy.

RECOGNITION AND AWARDS

National Science Foundation - Evergreen Professor Nalini Nadkarni received the National Science Foundation's Public Service Award for her work with the Sustainable Prisons Project. She received the award in May at a dinner hosted by the U.S. Department of State in Washington, D.C.

LEED-Gold Prison Campus - Coyote Ridge Corrections Center in Franklin County became the first prison in the world to have its entire campus designated LEED-certified Gold by the U.S. Green Building Council.

Washington Correctional Association - This year's Education Award went to Evergreen Professor Nalini Nadkarni for her work with the Sustainable Prisons Project.

Harvard University Innovation Award - Harvard University's John F. Kennedy School of Government designated the project as "Bright Idea" to be shared with the public sector, nonprofits and universities. The program is administered by the Ash Center for Democratic Governance and Innovation.

COST SAVINGS

As cost of operations continue to increase with the steady rise of utility, fuel and service costs DOC responds by valuing sustainability as core business. Identifying efficiencies, committing to high efficient building, being a champion for preventive maintenance, instituting low cost programming through sustainability efforts are an essential tactic toward cost containment.

- Reduced solid waste to landfills by 35%
- Increased diversion to recycling by 90%
- Increased food waste diversion to composting operations by 90%
- Decreased facility heating and energy consumption by 8%
- Reduced all transportation fuel consumption by 25%

2005-2010	Percent reduced	Cost savings
Energy	8%	$1,300,000
Water	22%	$394,193
Transportation Fuels	25%	$322,021
Landfill Waste	35%	$260,000
Medical equipment repair	n/a	$125,000
Total Savings		**$2,401,214**

Estimated costs based on 2010 expenditures. Metrics based on reductions achieved between 2005 and 2010 as a percentage of offender population.

Dan Pacholke, Prison Director and Co founder of Sustainable Prison Project

Working Together for Excellence: Staff Leadership

Progress toward our sustainability goals can be attributed, in part, to how we managed our approach.

The Departments approach to sustainability through the use of a strategic plan and performance management tool is influencing all operational divisions. Clear expectations, aggressive but achievable goals, collaboration, inspiration and leadership at all levels are some of the keys to success at DOC.

Success Factors:

- Have a plan – It has been important to have a clearly communicated plan and expectations. An example of this key to success was the response of the facilities to a challenging goal for fuel reduction.
- Be the champion - DOC's executive leadership has been the champion of Sustainability having the vision that pursuing sustainability is complementary and beneficial to society, environment and the department's mission.
- Ask Questions - Questions helped the agency develop analysis tools. From there strategies emerged and best practices could be identified and shared. Historically used to measure and improve key dynamics such as escapes, violence and offender grievance today DOC is using performance management strategies more and more for program implementation.
- Collaboration – Partnerships, both internal and external, have opened doors allowing some unlikely and valuable projects and programs to emerge and thrive within the prisons benefiting offenders, the Department and the community. These partnerships bring the intrinsic resources of each group together, whether it is the expertise, the funding, or the labor necessary for success to build a strong cohesive and low-cost program.

APPENDEX A - LEED and High performance building Case Study Possible support for investment in high performance building.

Quantifying the advantage of high performance construction is a difficult task within the portfolio of DOC prison building given that:

- Each building is unique.
- The LEED buildings are located among a number of prison facilities.
- The doc lacks the resources to track building individually and no two buildings are enough alike to permit comparison.

However the new Coyote Ridge Corrections center and the airway heights Corrections center share a remarkable number of similarities making a campus-to-campus comparison plausible.

Both campuses are:

- In a similar climate
- Of similar size
- Same custody levels
- Have minimum custody camps
- Similar industries operating on campus

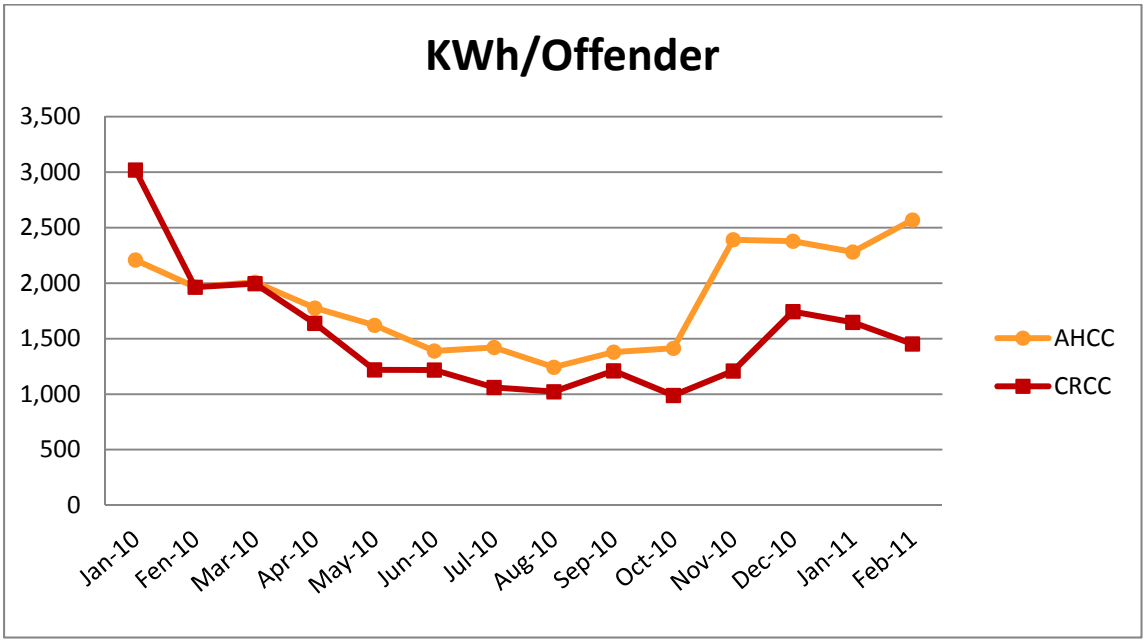
Coyote Ridge Corrections Center

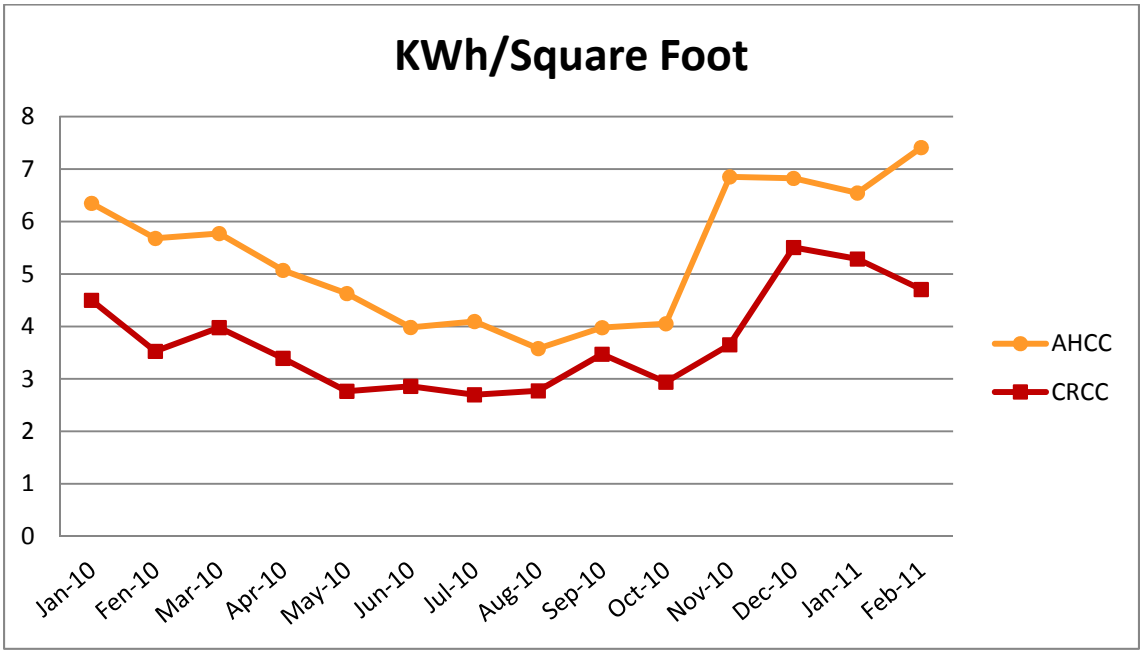
- Opened in February 2009
- 738,029 sq ft
- 395,341 sq ft Housing
- 73,564 sq ft Industries
  - Food Factory
  - Laundry
  - Mattresses
  - Meat Plant
- 269,164 sq ft Support
- 2,353 Inmates; 637 Staff

Airway heights Corrections Center

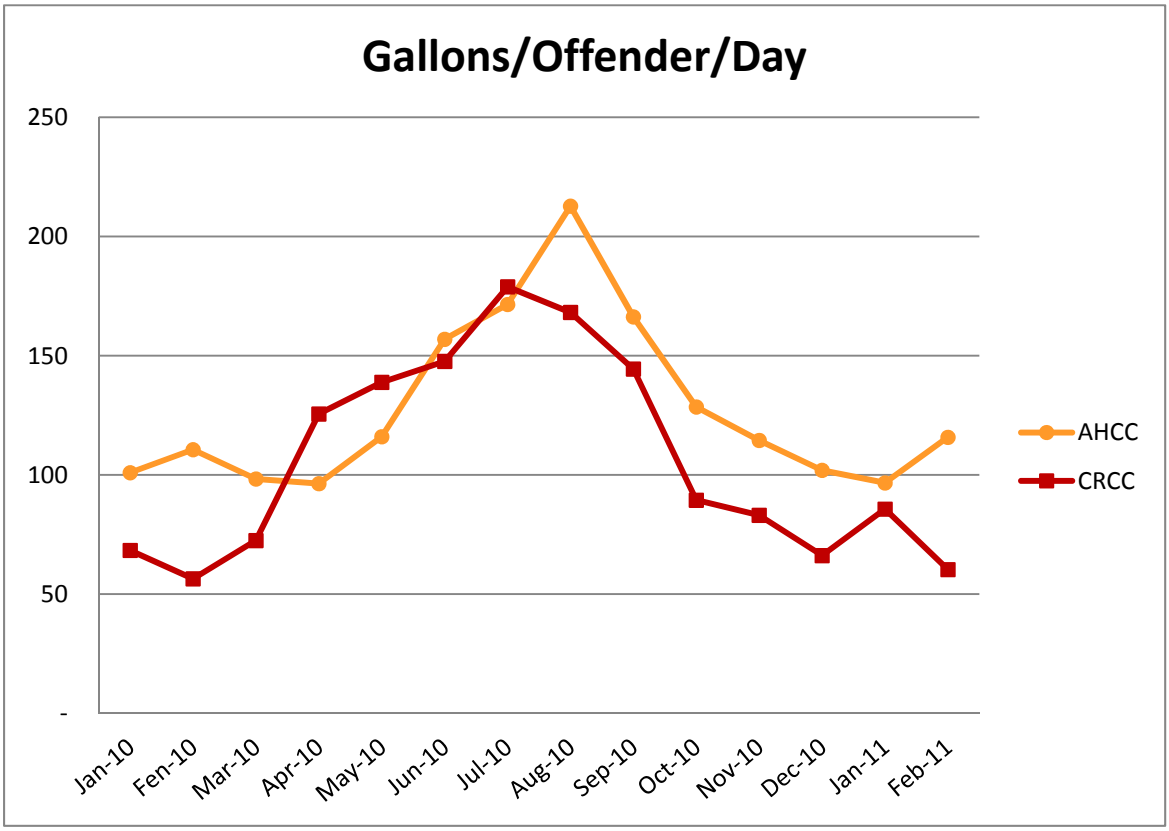
- Opened in April 1992
- 717,000 sq ft tota3
- 320,875 sq ft Housing
- 95,573 sq ft Industries
  - Food Factory
  - Laundry
  - Optical
  - Textiles
- 301,493 sq ft Support
- 2,174 Inmates; 663 Staff

Comparison using energy data for all sources converted to kilowatt hours and displayed as a percentage of offender population and square footage of conditioned building space.





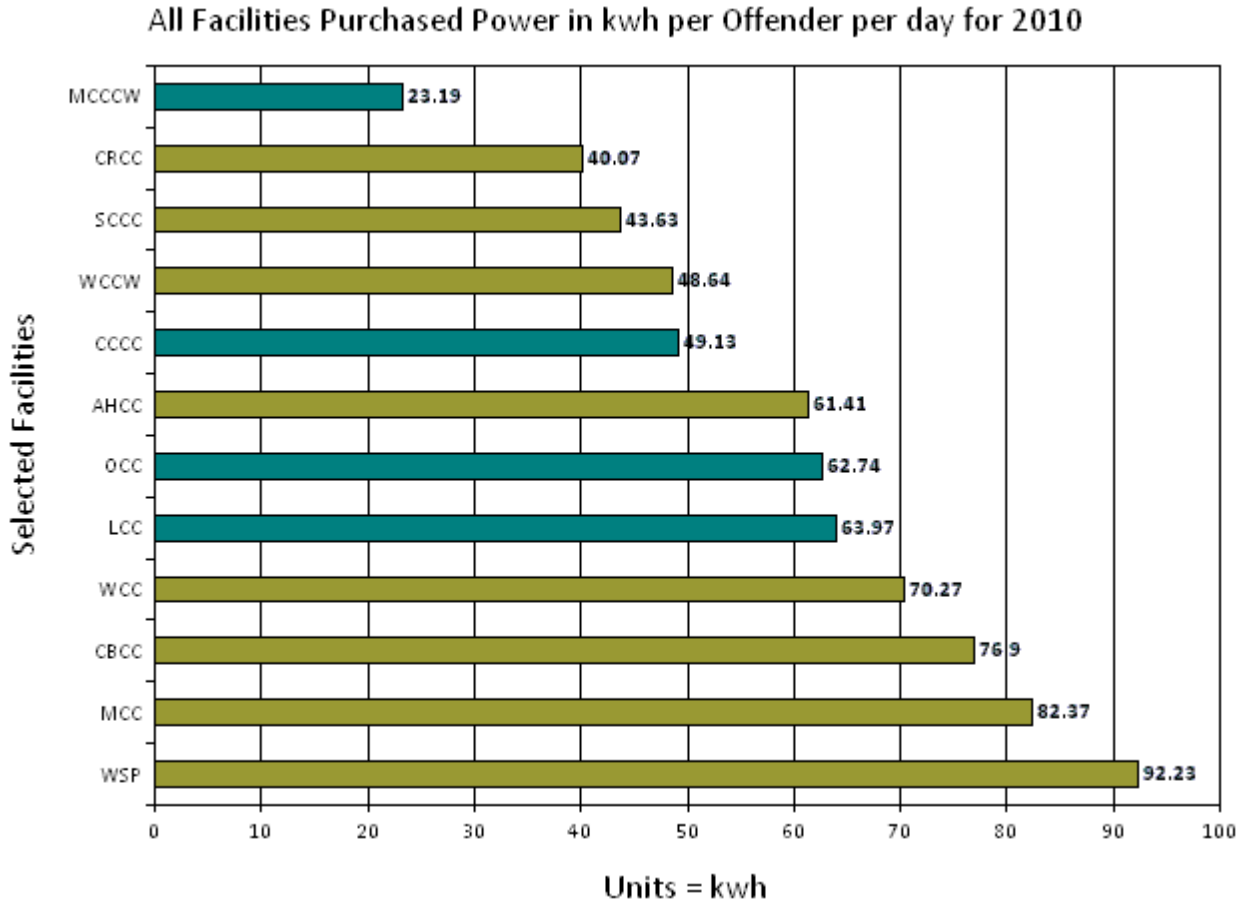
Comparison of water consumption displayed as percentage of offender population per day.



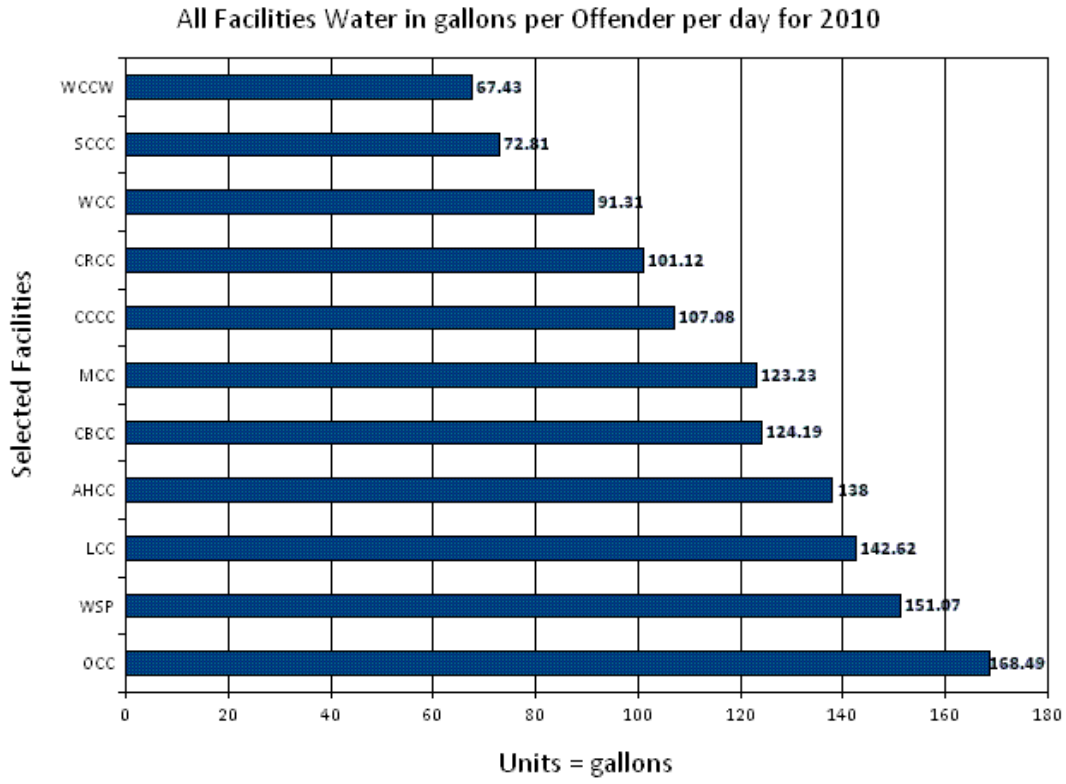
Using the average difference between these facilities and state wide average energy costs and the utility rates of Airway Heights for the analysis

- Energy costs would be about $460,000 less per year
- Water Costs would be about $53,000 less per year
- Wastewater costs would be about $460,000 less per year
- Total Cost Savings ~ $978,000 per year

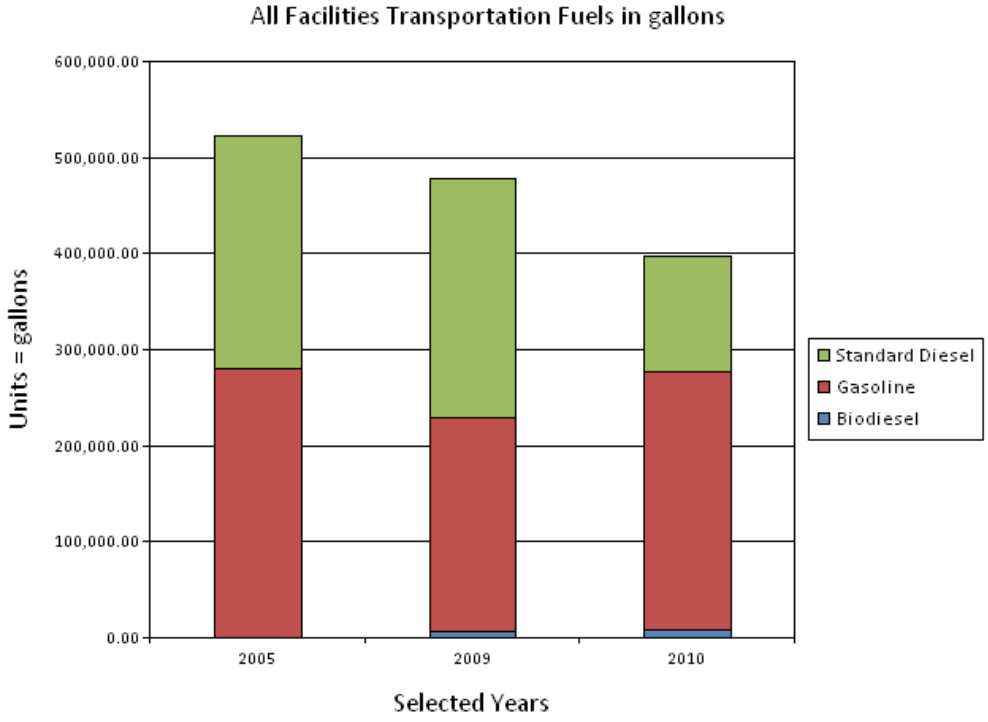
Graph#1: Illustrates energy consumption as a percentage of population. Darker color indicates lower custody facilities.



Graph#2: Illustrates water consumption as a percentage of population.



Graph #3: Illustrates fuels reduction progress over time



Graph # 4: Illustrates energy consumption as a percentage of offender population.