



General Administration
STATE OF WASHINGTON

Biodiesel Use by Washington State Agencies

January through June 2010

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REPORT HIGHLIGHTS

State agencies continue to make progress towards meeting Washington's biodiesel use mandates.

- Washington State Ferries (WSF), by far the state's largest consumer of diesel fuel, met its adjusted mandate during this six-month period as biodiesel for marine use increased to 102,000 gallons. This is a 41 percent increase over the 71,000 gallons purchased in the previous six-month period.
- Biodiesel purchases by state agencies other than WSF increased from 7.2 percent to 8.7 percent of total diesel purchased for the six-month period.
- Washington State Department of Transportation (WSDOT) serves the majority of the state's diesel-powered equipment and vehicles through its statewide network of fueling stations. During this reporting period, biodiesel purchases by WSDOT in Western Washington increased to 15 percent of total diesel purchased. Because biodiesel has not been readily or consistently available in Eastern Washington, biodiesel made up only 1 percent of the total diesel purchased in this area during the period.
- All testing and reports continue to show no major quality or performance issues related to biodiesel use by state agencies.

BACKGROUND

As a part of the state's efforts to reduce its dependence on foreign oil, reduce emissions and stimulate local production and use of biodiesel, state agencies are required to use a minimum of 20 percent biodiesel by total volume for operating diesel-powered vessels, vehicles and construction equipment. Legislation establishing this mandate, effective June 1, 2009, was enacted in 2006.

Due to serious budgetary and infrastructure constraints, the Legislature adjusted the biodiesel requirement for the WSF in the 2009 Transportation Budget and again in the 2010 budget. The revised mandate states that, for the 2009-11 biennium, all fuel purchased at only the Harbor Island truck terminal in Seattle must be a minimum of 5 percent biodiesel so long as the price does not exceed the price of diesel by more than 5 percent. WSF is no longer required to purchase biodiesel at the Anacortes truck terminal or the Seattle dockside fueling facility.

The Department of General Administration (GA) is charged with compiling agency biodiesel usage data and reporting findings and recommendations to the Governor and the Legislature on a biannual basis. To further advance biodiesel purchasing and to more effectively fulfill biodiesel reporting requirements, GA formed a biodiesel leadership team of key state agency stakeholders in the spring of 2009. One of the team's recommendations was for members to more actively participate in preparing this report, especially with respect to their areas of expertise and involvement. This report incorporates this broader input.

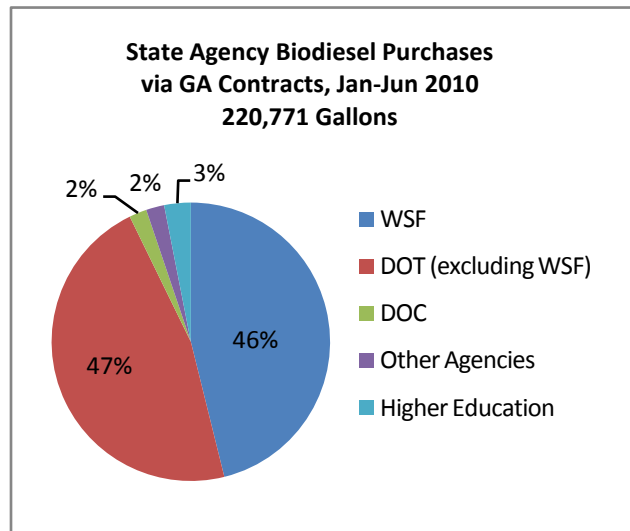
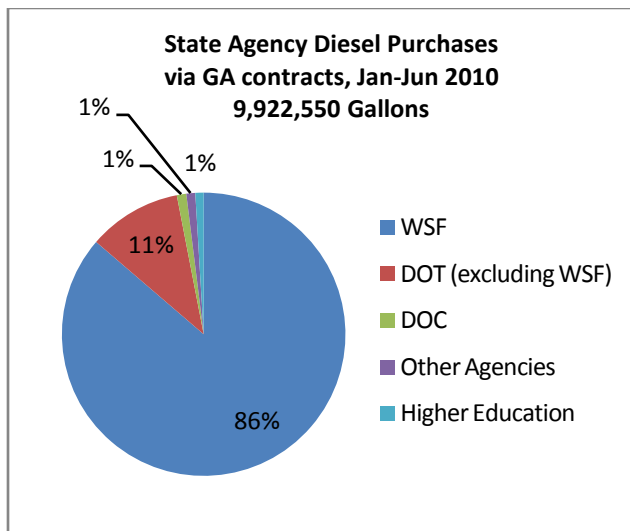
This report covers the period of January 1 through June 30, 2010. The use of the term "biodiesel" in the context of this report means pure biodiesel (B100) unless otherwise designated.

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STATE BIODIESEL USE

During the period January 1 to June 30, 2010, more than 9.9 million gallons of diesel were purchased by state agencies through the state fuel contracts, including 221,000 gallons of biodiesel. This is an increase of more than 22 percent from the 172,000 gallons purchased in the last six months of 2009. Total biodiesel use by state ferries increased, as a B5 biodiesel blend continued to be the standard fuel for six vessels in the fleet. Biodiesel purchases by state agencies through the state fuel contract for use in vehicles and equipment increased to 119,000 gallons, up 19 percent over the previous six months, primarily due to higher blends becoming available at WSDOT fueling stations.

Biodiesel purchases by institutions of higher education are included in the data. However, since the institutions are not required to use the state fuel contract, this report does not fully capture all fuel they may have purchased from distributors for use in diesel-powered vehicles and equipment.



MARINE SECTOR

Updates:

- WSF purchased more than 8.5 million gallons of fuel in the first six months of 2010, accounting for 82 percent of state fuel contract purchases. WSF met its adjusted biodiesel use mandate during this six-month period with purchases of 102,000 gallons of biodiesel. This is a 41 percent increase from the 71,000 gallons purchased in the previous six-month period.
- In-line blended biodiesel continues to be available at the Seattle Harbor Island truck terminal. One of three locations where WSF receives fuel, this terminal supplies almost one-third of the total annual volume for the fleet. Harbor Island currently provides a B5 blend to the six vessels that serve the South Sound routes.

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- The 5 percent price differential limitation placed on WSF purchases under the State Transportation Budget has not been a factor. The daily average difference between petroleum diesel and a B5 biodiesel blend during the reporting period was 2.25 percent.
- WSF applied for an EPA grant through the National Clean Diesel Funding Assistance Program in December 2009. The grant application was not successful. The grant would have underwritten storage and blending infrastructure improvements at Anacortes, which would have brought in-line blended biodiesel to vessels sailing the Northern Sound routes. WSF continues to look for opportunities and to work with its fuel supplier to expand the use of biodiesel in the fleet.
- WSF had no biodiesel-related quality or performance issues during the period.

Biodiesel Use by Washington State Ferries: January 2009 to June 2010

Time Period	Diesel Gallons	Biodiesel Gallons	Total Gallons	% Biodiesel
Jan - Jun 2010	8,460,112	101,840	8,561,952	1.2%
Jul - Dec 2009	8,463,792	71,224	8,535,016	0.8%
Jan - Jun 2009	8,269,302	30,714	8,300,016	0.4%

LAND SECTOR

State agency purchases of biodiesel for use in vehicles and equipment increased from 101,000 gallons in the last six months of 2009 to 119,000 gallons in the first six months of 2010. On a percentage basis, state agency biodiesel purchases increase from 7.2 percent to 8.7 percent of total diesel purchased.

WSDOT is the largest single purchaser of diesel under the state fuel contract. WSDOT maintains a comprehensive, statewide network of fueling stations that serves the majority of the state's diesel-powered equipment and vehicles. During this reporting period, biodiesel purchases by WSDOT in Western Washington increased to 15 percent of total diesel purchased. However, because biodiesel has not been readily or consistently available in Eastern Washington, biodiesel made up only 1 percent of the diesel fuel purchased in this area during the period.

Only seven other agencies purchased more than 1,000 gallons of diesel fuel under the state contract during the period, with the Department of Corrections (DOC) the largest purchaser in this group. With respect to biodiesel purchases, the departments of Natural Resources and Ecology led this group in percent biodiesel of total bulk fuel delivered, purchasing 12.2 percent and 19.9 percent biodiesel, respectively.

Among the 12 higher education institutions purchasing off the state contract this period, the University of Washington led the way with biodiesel making up 14.4 percent of diesel fuel purchased.

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Biodiesel Purchases by State Agencies (Other than WSF): January to June 2010

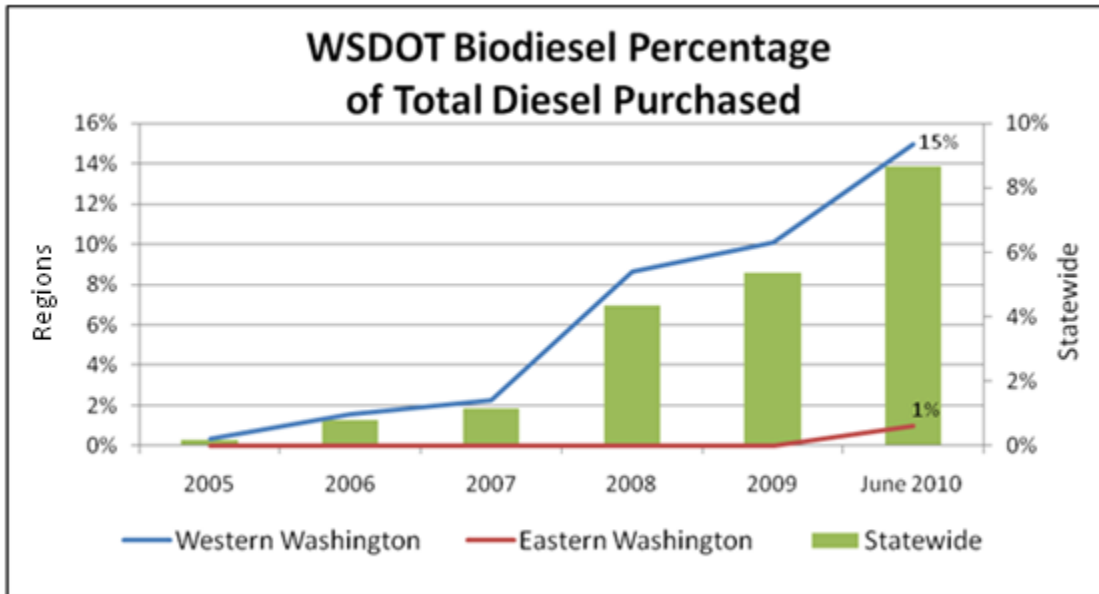
Purchasing Agency	Diesel Gallons	Biodiesel Gallons	Total Gallons	% Biodiesel
WSDOT (excl. WSF)	955,356	102,976	1,058,332	9.7%
Dept. of Corrections	103,184	4,500	107,684	4.2%
Other Agencies	95,933	4,655	100,588	4.6%
Higher Education	87,195	6,800	93,995	7.2%
Total	1,241,667	118,931	1,360,599	8.7%

Note: includes purchases from state fuel contract vendors only.

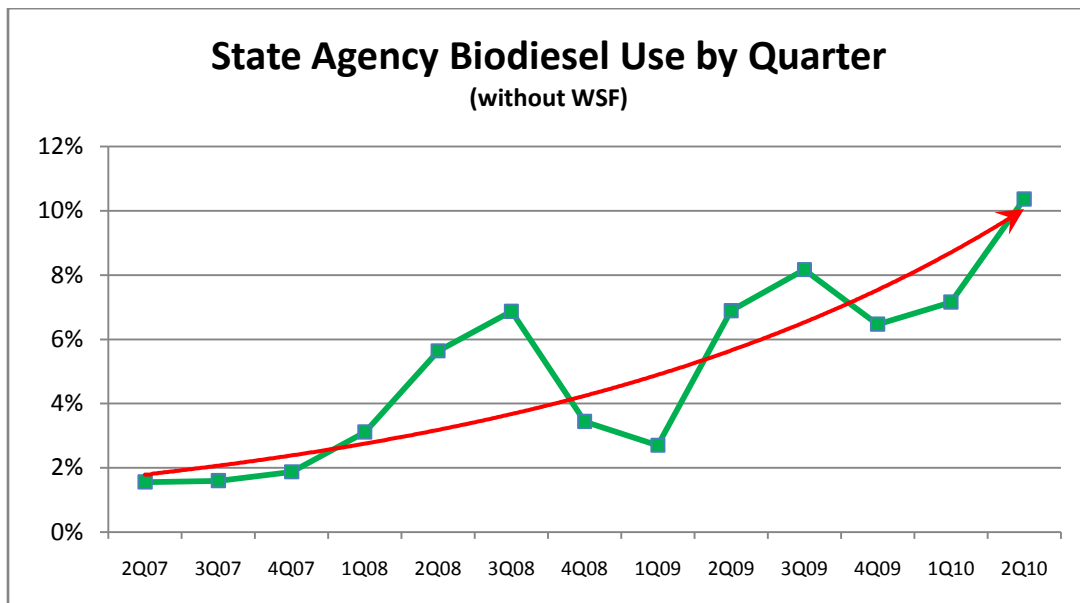
Updates:

- WSDOT increased the number of fueling sites providing biodiesel blends this period. As of June 30, there were 44 WSDOT fueling sites in Western Washington that had B20 available. Starting in May 2010, biodiesel became available in Eastern Washington and, as of June 30, WSDOT had 28 sites in Eastern Washington offering B2.
- In Eastern Washington, WSDOT began ordering B10 this spring but state contract vendors instead delivered B5 or less. WSDOT and GA are working together to discuss availability and delivery issues with vendors.
- WSDOT entered into a contract with a fuel distributor to supply biodiesel to its fueling stations in north central Washington starting July 1, 2010. This is the one region of the state where there is no vendor through the state fuel contract.
- WSDOT continued testing of various biodiesel blends – ranging from B40 to B90 – in three trucks operating out of Olympia. WSDOT found that: 1) cold weather can have an impact and it is important to regulate biodiesel concentration accordingly; 2) tank and filter maintenance is critical in maintaining fuel quality; and 3) fuel turn-over schedules need to be considered to maintain fuel quality and prevent tank contamination.
- WSDOT’s growing experience with biodiesel blends continues to demonstrate the need for site-specific planning to implement the state’s biodiesel mandate. For example, in remote, cold, low-utilization sites such as its Shuksan fueling station, use of biodiesel is not advised due to gelling concerns and fuel degradation associated with low turn-over. WSDOT is developing a strategy to reach the 20 percent biodiesel by volume mandate by using higher blends at sites where climate, storage conditions and use patterns do not present significant storage and performance concerns.
- Other issues that came up during this period included inconsistent delivery of fuel during cold weather due to some distributors having difficulties with fuel gelling and continuing issues with vehicle maintenance and repair that arise when manufacturer warranties do not cover use of blends higher than 20 percent biodiesel.

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The seasonal nature of biodiesel use by state agencies can be seen in historic quarterly data, with the highest use in the warmer months and lower use in the colder months. This has been primarily due to concerns about gelling, especially for WSDOT snow removal equipment. Even so, state agencies are making steady progress in biodiesel use, when comparing quarterly use from year to year.



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FUEL QUALITY

Washington State Department of Agriculture (WSDA) continues to monitor the quality of diesel and biodiesel used by state agencies as part of the state's overall Motor Fuel Quality Program. WSDA inspectors checked and/or sampled diesel and biodiesel at 23 WSDOT fueling locations during the first six months of 2010.

Collected samples were analyzed to ensure the fuels met American Society for Testing and Materials (ASTM) quality standards. On-site tests were also conducted to check for water and contaminate in both diesel and biodiesel fuel storage tanks. For both fuels, the majority of ASTM quality standards were met. A few diesel samples showed below acceptable levels for lubricity and there were isolated cases of both biodiesel and diesel samples not meeting distillation standards, which could be the result of cross contamination of gasoline and diesel fuels at the distribution level. Overall, biodiesel fuel quality remained good during the period.

No major fuel quality issues were identified, and none were reported to WSDA by state agencies during the reporting period.

WSDA also sampled and monitored biodiesel sold in the private sector during the same period. The most common biodiesel blend offered for sale to the general public was B5 and, consistent with previous testing, quality remained good. Samples were also collected and analyzed from the four major biodiesel producers in the state. Test results showed the majority of samples met ASTM quality standards.

WSDA will continue to work with state agencies to monitor the quality of biodiesel used in state fleets, educate agencies on proper handling, and address any quality issues that arise.

STATE FUEL CONTRACTING

- **Contract Challenges:** For the state to make meaningful progress toward biodiesel mandates in Eastern Washington, the fuel terminals in this region must consistently offer biodiesel at requested blend ratios otherwise Eastern Washington contractors must either incur costly infrastructure upgrades at their facilities to support biodiesel, or acquire biodiesel from Western Washington fuel terminals.
- **Contract Extensions:** The marine fuel delivery contracts have been extended through June 2011, and the land fuel delivery contract has been extended through its final term ending April 12, 2011.
- **Replacement Contract:** The rebid process headed by the GA Enterprise contracting team is underway. By all accounts, the state has been well-served by the current contract. The aim of the new contract is to uncover and implement areas for improvement.

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RELATED ACTIVITIES

- **Industry Meetings:** WSDA convened two meetings with biodiesel producers and petroleum industry representatives this spring, providing information on activities related to increasing biodiesel use in Washington. Topics included the latest data on state agency use of biodiesel, activity related to updating the state energy strategy, and the process and timeline for rebidding the state fuel contract. Participants found the information useful and agreed to continue quarterly meetings.
- **State Fleet Managers Meeting:** A meeting of fleet managers from the top diesel-using agencies and the six four-year higher education institutions was held in June. Participants discussed GA, WSDOT, and WSDA efforts to support the state biodiesel use mandate, and explored how these major users can best meet their use and reporting requirements. There was good participation and sharing of information, concerns and ideas at the meeting.

OTHER FACTORS AFFECTING BIODIESEL USE AND AVAILABILITY

- **Biodiesel Pump Labeling:** Legislation passed during the 2010 session that better aligns state law with national recommendations on biodiesel labeling. Washington's strict labeling requirement for very low blends has discouraged some distributors and retailers from selling biodiesel. Effective June 10, 2010, fuel pumps that offer a biodiesel blend of up to and including 5 percent are to be identified with a label that states "may contain up to 5 percent biodiesel" rather than the specific blend. Biodiesel blends above 5 percent must still be labeled with the specific blend being sold.
- **Federal Biodiesel Tax Credit:** The prolonged lapse of the biodiesel blender's credit continues to strain the state's biodiesel producers and marketers. Beginning in 2005, blenders of biodiesel were eligible to receive a \$1 per gallon federal tax credit, which is reflected in state contract prices. The extension of the tax credit, which expired at the end of 2009, has passed both the House of Representatives and the Senate at different times but has not become law. Congressional efforts to extend the credit were continuing at the end of this period. Pricing and availability may be affected if the credit is not extended.
- **State Renewable Fuel Standard (RFS):** An effort to increase biodiesel use throughout Washington was spearheaded by the state's biodiesel industry during the 2010 legislative session. The industry proposed to change the state's RFS from a volumetric approach (requiring an average of 2 percent biodiesel in the state's diesel supply) to a universal approach (requiring at least 2 percent biodiesel in every gallon of diesel, with some exceptions). The state's current RFS cannot be effectively implemented and administered. The legislative proposal (HB 2504) passed the House of Representatives but was not fully considered by the Senate. The bill was supported by the Governor's Office, state agencies, and environmental and agricultural groups, but faced opposition from oil companies, truckers, and others.

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- **Federal RFS2 & Canola:** The U.S. Environmental Protection Agency (EPA) published the final rule revising the National Renewable Fuel Standard program (commonly known as RFS2) on March 26, 2010. The rule, which takes effect on July 1, establishes new volume standards for cellulosic biofuel, biomass-based diesel, advanced biofuel, and total renewable fuel in the nation's transportation fuel supply. RFS2 is expected to increase biodiesel availability in the state, but it may hurt in-state producers as EPA has yet to complete the lifecycle assessment for biofuel from additional feedstocks, including canola and other oilseeds being utilized by regional biodiesel producers. A final determination on canola is anticipated this Fall.

RECOMMENDATIONS/ACTION ITEMS

- Continue working with WSF and fuel suppliers to identify and resolve infrastructure fueling barriers at the Harbor Island Marine Fuel Terminal and at Anacortes. A potential source of funding is the Department of Commerce's State Energy Program, which may have loan funds to help address biodiesel infrastructure challenges.
- Continue to work with bulk delivery contractors to supply in-line blended biodiesel to ensure coverage throughout Eastern Washington. Pursue other options, as appropriate to ensure stable supply of biodiesel in Eastern Washington
- Continue to work with state fleet managers to help them meet biodiesel use and reporting requirements, including supporting efforts to identify best practices for cold weather biodiesel purchasing and long-term storage.
- As part of the preparations to award and implement a new, improved land fuel delivery contract by April 2011:
 - Assemble industry and customer stakeholder teams to assess the current land-based contract and identify opportunities for improvement.
 - Review biodiesel specifications and modify as indicated by current industry best practices.
 - Refresh fuel tank profile data to ensure bidders have the most current and accurate information needed to formulate bid responses.

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