



Lane County — Sequential Biofuels

EUGENE, OR

2007 SPECIAL RECOGNITION FOR
ENERGY INNOVATION

Key Project Lesson: Innovative, safe, and sustainable new uses for old gas stations may be their redeployment as “fueling stations of the future” for biofuels and other petroleum alternatives.

Overview

The SeQuential Biofuels project shows that new uses for old gas stations may lie in their reuse as “fueling stations of the future.” In this case, the 0.7-acre property located in southeastern Eugene, Oregon, operated as a filling station from 1976 through 1991. During that time, its underground storage tank (UST) systems leaked, contaminating soil and groundwater on the property and beyond. Off-site contamination was discovered during utility excavation work and in a nearby residential well.

However, the site's location made it a natural for redevelopment as a biofuel station. The first brownfield reuse of this type ever undertaken, Eugene's biofuels service and retail center also incorporated many sustainable development elements into its design. These elements include solar power, passive solar heating, bioswales, and a green roof on the convenience store. In line with the station's theme, the unique store offers locally sourced and organic products. In addition, revitalization of the former “gasoline alley” area has created several jobs and is bringing a new focus to the underutilized bi-way.

Featured Partners

- SeQuential Biofuels
- Lane County Board of Commissioners
- Oregon Departments of Environmental Quality (DEQ), Economic and Community Development Department, and Energy
- U.S. Environmental Protection Agency

Primary Reason for Redevelopment

Given the past use of the property as a gas station, all of the requisite access points already existed, the area was predominately commercial in nature, and the size of the property would accommodate the design of the biofueling station. From a community perspective, strong interest existed in removing a neighborhood blight that was a magnet for criminal activity and illegal dumping. In addition to advantages of location and lower property acquisition costs, SeQuential also considered the publicity that remediation of the site would yield for the SeQuential brand.

Approach

The biofuels project shows that innovative, safe and new uses for old gas stations could include redeploying them as “fueling stations of the future.” In this case, SeSequential Biofuels was looking for a retail outlet for its fuel product, which is made from discarded cooking oil, mostly collected from fast food restaurants throughout the state and food processors such as Kettle Foods in Salem. The small site, which had operated as a gas station for 25 years, fit the bill.

SeSequential's cleanup and reuse plan called for redevelopment of the site into the first all-biofuels retail facility in the state, along with a natural foods convenience store. Several brownfield process elements were critical to making this vision a reality, along with activities that Lane County and the State of Oregon agreed to carry out to help prepare with property for this new use. In January 2005, Lane County directed the removal of over 400 tires, 15 drums of investigation wastes, hundreds of needles, and other surface debris from the property. The county also secured an EPA brownfield cleanup grant. This was followed by a lease-purchase agreement between the county and SeSequential, and a prospective purchaser agreement between SeSequential and the Oregon DEQ.

As these elements fell into place, cleanup and redevelopment began. Phase I work focused on contaminant source removal, which was achieved through excavation and off-site treatment of petroleum-contaminated soils. Phase II involved assessment of exposure pathways and development of a corrective action plan that included an institutional control. Many of the assessment and cleanup activities took place while the property was being redeveloped. Accordingly, activities such as determining the location and type of building; installation of a new UST system, dispenser islands, and bioswales; and consideration of entrance, exits, traffic-flow patterns and utility lines were closely coordinated with the Lane County project team, the SeSequential project team and contractor, the Oregon DEQ, and neighboring property owners.

Innovative Techniques

In addition to launching a new line of brownfield reuse opportunities, the project team assembled a creative financial package to ensure its completion. The Oregon Department of Energy provided \$1.2 million in low-interest, favorable-term redevelopment loan funding for the project through its Sustainable Energy Loan Program. Additionally, the project earned \$250,000 in business energy tax credits that helped make the energy efficiency and alternative fuel components of the project possible. SeSequential also set out to build the greenest facility possible. The company added a green roof to the convenience store, installed photovoltaic cells on the canopies over the fueling islands, and incorporated sustainable development elements such as passive solar building design and bioswales. In addition, the retail outlet offered mostly locally sourced and organic products.

Challenges

The early coordination of the conceptual project seemed to be the greatest challenge. Lane County was hesitant to take on this project and did not want to coordinate the cleanup work. To overcome this challenge, Oregon DEQ agreed to use the state's orphan site program contractors, who completed the removal and cleanup activities, and provided staff to oversee that work. This was accomplished through an intergovernmental agreement that detailed the roles and responsibilities of the county and state government entities.

Benefits

Since the biofuels service station opened in August 2006, the SeSequential cleanup and redevelopment project has shown many immediate benefits, and the project meets a range of environmental and community development goals. This unique, comprehensive approach to green marketing demonstrates the company's philosophy and recognizes that consumer demand is growing for green products and design. Today, the former gas station is a mixed-use property that provides biodiesel and ethanol-blended fuels to a growing fleet of environmentally friendly vehicles. Ten jobs have been created at a former abandoned site, and \$4,000 in annual property tax revenues have been generated from a property that had been tax-delinquent. And, of course, the development itself features a state-of-the-art service station that incorporates the latest in energy efficiency and renewable energy techniques. The “living roof” on the convenience store contains almost 5,000 plants in six inches of soil, which slows the flow of rainwater and helps to keep the convenience store cool in the summer by deflecting the intense summer sun. Even runoff from the site is contained or slowed, enhancing biological remediation before it leaves the site in grassy swales.



Site Address:	750 Front Street NE, Salem, OR 97301
Contact:	Jim Glass, Oregon Department of Environmental Protection
Phone:	(503) 378-5044
Email Address:	glass.jim@deq.state.or.us
Names of Participants:	Oregon DEQ, SeSequential Biofuels, U.S. EPA Region 10, Lane County Property Management, Lane County Board of Commissioners, Oregon Economic and Community Development Department, Oregon Department of Energy
Number of Acres:	0.70 acres
Former Use:	fueling station
Current Use:	environmentally friendly biofueling station
Former number/Types of jobs:	2-3, gas station employees
New number/Types of jobs:	10, managers, shift supervisors, fuel attendants
Type of Site:	fueling station
Regulatory Program:	Oregon DEQ Leaking Underground Storage Tank Program
List of Major Contaminants:	primarily free-product gasoline and dissolved-phase petroleum
Magnitude of Contamination:	over 30 inches of gasoline on groundwater in on-site monitoring well; deeper drinking water aquifer also impacted with dissolved-phase petroleum contamination
Greatest Challenge:	early project coordination and conceptualization
Length of Time to Remediate Site:	3 years
Primary Reason for Redevelopment:	location, size, brand equity
Years Abandoned or Challenged:	more than 10 years
Cleaned up under Consent Decree:	no
List of Financial Assistance:	Brownfields Cleanup Grant, Oregon Brownfields Redevelopment Loan Program, Oregon Department of Energy Sustainable Loan program
Other Financial Techniques Utilized:	county tax foreclosure, lease-purchase agreement between Lane County and SeSequential Biofuels
New Tax Revenues:	\$4,000
Community Outreach Activities:	continued community involvement plans
Innovative Environmental Regulatory Techniques:	prospective purchaser agreement
Innovative Remediation Techniques:	risk-based decision making for current and reasonably likely future use
Innovative Economic Development:	all-biofuels station offers biodiesel and blended ethanol for flex-fuel vehicles, natural foods market provides healthier food choices for customers and the surrounding community
Land Conservation:	abandoned commercially zoned property returned to productive reuse adding economic vitality to a low-income residential and agricultural area
Sustainable Development:	bioswales around perimeter to cleanse and slow runoff, a living roof, and a 33-k solar array that provides one-half to one-third of the stations needs
Federal Partners:	EPA