



ADA COUNTY WEED, PEST, AND MOSQUITO ABATEMENT

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Case Study

*Prepared by Selena O'Neal, CEM, LEED AP
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Project Overview

Administrative Office: 7,775 square feet
Truck Washout Bldg: 10,400 square feet
Dry Chemical Storage: 3,500 square feet
Location: Meridian, Idaho
Utilities: Idaho Power
Intermountain Gas

Completion Date: June 2007

LEED Certification: LEED-NC v 2.1 Silver

Green Features:
Natural daylighting with light shelves;
Direct/Indirect pendant light fixtures with T-8 lamps;
Alternative transportation; Building commissioning;
Construction waste management; Office waste recycling



The Ada County Weed, Pest, and Mosquito Abatement Department has 3 primary focus areas: The **Weed Control** department is mandated to control the spread of weedy vegetation on public land in Ada County, and is also available to help County residents find resources to control weeds on their private land. Noxious weeds are invaders that have few or no redeeming qualities. They can invade fields and pastures, decreasing yields, complicating harvesting, and contaminating food and seeds. The economic livelihood of Ada County depends on our ability to keep noxious weeds under control.

The **Pest Control** department principally responds to requests for Gopher and Rodent control on land outside of any City limits in Ada County. With the growth of Ada County, large farms have started to give way to smaller, subdivided plots and even smaller building lots. In order to maintain a high level of service to those with farms and ranches, we must also increase service to those with smaller lots. The dollar value of the improvements of these residential lots is much higher thus increasing the potential for loss due to damage to adjacent ditches. Gophers and rockchucks can do significant financial damage to landscape plantings commonly found at Ada County residences.

The **Mosquito Abatement** department is a vector control district responsible for controlling mosquito populations and providing surveillance for West Nile Virus in Ada County. Mosquito Abatement is very concerned with the possibility of disease transmission

through mosquitoes and have made prudent efforts to provide for the health protection of the residents by developing local TV and radio public service announcements to raise public awareness about the dangers and ways to protect yourself from the threat of West Nile Virus.

In order to respond to an ever increasing population and the need for services, the department undertook a major construction project to build a new administration building and chemical storage facility complete with a state-of-the-art truck washout building. Construction began on the \$1.8 million project in August 2006 and was completed in June 2007. The project consisted of constructing a new office space for the department's staff along with full service facilities for safely storing and distributing weed and pest control chemicals. The new energy-efficient buildings and easy access layout encourages conservation, while streamlining the work processes for the employees.

Much planning went into the building design and site development to minimize their impact on the natural environment. More than 90% of the construction materials were recycled. Modeling performed by Boise's Integrated Design Lab helped determine the orientation of the building to maximize the use of natural daylight. A daylight factor of at least 2% is available in over 75% of the occupied space to minimize the need for artificial light by the occupants. Direct line of sight to outdoors is available in over 90% of all regularly occupied spaces. Ada County

even went the extra step to incorporate items from the local utility's incentive program and earned credit for energy efficient features such as occupancy sensors, self-luminous exit signs, a "cool" roof, and building commissioning – saving an estimated 17,000 kWh per year.

The landscaping for the site was designed to meet the requirements of the US Green Building Council's Leadership in Energy and Environmental Design (LEED) certification. As a result, the irrigation system does not require potable water but uses gravity irrigation water and drainage water from upstream users of an existing irrigation ditch system located on the property. This system also utilizes innovative rotors that irrigate at a low precipitation rate to eliminate runoff onto sidewalks and streets. Plantings consist of drought-tolerant, native plants that need less than half of the normal water as for typical landscaping in surrounding developed areas.



Incredibly no sewer system was necessary for the Truck Storage and Washout Building. The facility has a water recovery system to clean particulate matter out of the rinsate and wash water to a level that the water can be recycled and reused in routine work applications. Normally the rinse and wash water is considered hazardous waste due to the low levels of pesticide contamination in it and therefore, takes considerable resources to properly maintain. The recovery system will recycle and reuse an estimated 250,000 gallons per year and reduce maintenance resources by an estimated 50%. The

savings can be redirected for other projects and assist the department in more efficiently protecting the environment and the residents of Ada County.

People immediately notice it is a special place as soon as they enter and see the high ceilings with clerestory and natural daylight illuminating the main hallway. Also, the County chose not to use floor coverings in much of the facility and instead has low-maintenance, natural-looking sealed concrete floors in most areas. Ceilings were left "open" with exposed rafters and ductwork, and a natural textile product was used to provide sound attenuation.



The new facility meets or exceeds the County's program requirements of affordable, sustainable construction. It is actually less expensive to operate while providing a healthier environment for the occupants. Printed material about the facility is available to all visitors and walk-in customers. Signage is used throughout the facility to promote the building's recycling program, in the restrooms to promote water conservation, and labels inform people of the environmental friendly products used in the facility. The project is under review for LEED silver certification by the US Green Building Council. Upon certification, the LEED plaque and supporting USGBC information will be prominently displayed in the lobby area to further educate the public about Ada County's successful green building program.



PROJECT TEAM

Board of Ada County Commissioners:

- Rick Yzaguirre
- Judy Peavey-Derr / Paul Woods
- Fred Tilman

Design Team:

- Lombard Conrad Architects
- Eidam & Associates
- Engineering Inc
- The Land Group

Ada County Weed, Pest, and Mosquito:

Brian Wilbur, Director

Ada County Operations:

- Dave Logan, Director
- Bruce Krisko, Construction Manager

Commissioning Agent:

Heery International

General Contractor:

K-J Corporation, Inc