

PROJECT	Splash Blocks Apartments
LOCATION	Portland, OR
OWNER	Security Properties



Key Elements

- Central Water Heating System
- Low GWP Refrigerant
- Earth Advantage Certification
- Space Efficiency
- Cold Climate Operation

/ PROJECT PROFILE

Creating an Energy-Efficient Community with a Central Heat Pump Water Heating System

Splash Blocks is a modern residential complex built on the former site of a Pepsi Bottling Company in Portland, OR. The project, undertaken by Security Properties, features two 8-story towers and a central pavilion. The development aims to create a community space that is energy-efficient and meets modern sustainability standards.

Among the objectives of the Splash Blocks project were to create an eco-friendly and energy-efficient living facility and community space that could achieve Earth Advantage multifamily certification. In addition to using all ENERGY STAR appliances, Security Properties opted for installing heat pump water heaters (HPWHs) for maximum efficiency.

The proposed water heating solution needed to accommodate for the lack of space as well as operate in cold climate conditions. The system also needed to integrate with the existing 208V 3-phase electrical system because most available HPWH options in the market required costly electrical upgrades.

Nyle Water Heating Systems helped to address these challenges by providing three e360 air source, cold climate

heat pumps to act as a central water heating system for the whole building, saving a significant amount of space. Other manufacturers would have required four units to meet the building demand and a transformer.

The Nyle e360 heat pump water heaters integrated seamlessly into the existing electrical infrastructure. In addition, the units were installed in the parking garage where the minimum ambient temperature is expected to be 40°F, but the heat pumps will run down to 10°F. The entire system was piped as a single pass configuration with four 750-gallon storage tanks and one 120-gallon swing tank.

The Splash Blocks project achieved a 50% lower Energy Use Intensity (EUI) than similar buildings by using the Nyle e360 heat pump water heating system. Energy usage data will continue to be collected to optimize the facility's efficiency. Ultimately, the project was able to find a solution that saved space and met hot water demand all without expensive electrical upgrades.

