## Facility Adoption of Energy Management BMP's

Val Halla is committed to reducing our environmental impact through many avenues. Although it may be obvious, there is a direct connection between energy consumption and the environment. Through our energy conservation efforts, we reduce our carbon footprint and help to protect natural resources and ecosystems from fumes released by power plants.

## **Lithium Golf Carts & Utility Vehicles**

Recently, all of our electric golf carts using lead-acid batteries were replaced with new carts that use lithium-ion technology. Lithium carts are significantly lighter than lead-acid batteries; 49 lbs. per cart compared to 328 lbs. per cart. This helps play into their efficiency - lithium carts are up to 59% more efficient than those using lead-acid batteries. Less energy consumed means less energy required to charge. On average, lithium carts use half the out-of-wall consumption as an AC, lead-acid cart; 2.98 KWhr compared to 6.23 KWhr. We also replaced a majority of our lead-acid utility vehicles with lithium technology.



## **VFD** Pumps

When the irrigation system was updated, we also installed a brand new pump station. The pump station was custom designed for efficiency at our property specifically. It consists of two main pumps and a pressure maintenance pump. All three are VFD (variable frequency drive) pumps controlled by a computer. The old pump station had pumps that would run wide open regardless of how many heads were running; they were either off or on. VFD's will only run at the RPM desired by the computer. This means if we turn on one or two heads, the pump motor will run at a very low RPM - whatever is needed to maintain system pressure - instead of running at 100%. With sophisticated central control software and VFD pumps, we were able to lower our electric usage by almost 25% annually.



## **LED** Lighting

Where possible, we have replaced high consumption exterior lighting (metal halide) with efficient, LED lights at our tennis courts, maintenance facility and clubhouse. We have also converted the interior lighting inside the maintenance facility from fluorescent and high pressure sodium, to efficient LED packs. Motion sensors were also added to all main interior lighting in a effort to conserve energy further.







