



Symbiont Service Corp – Geothermal Installation

Consent Agenda Item
Summary

IFB-3-2019

Geothermal Pool Heater

Cady Way Pool

Summary/Overview:

The Parks and Recreation Department is looking to move forward with award of contract to Symbiont for installation of a Geothermal heating system at Cady Way Pool. Geothermal heating was the desired heating method when the project originally was funded in conjunction with the Central Florida YMCA. After review of solar installation cost and feasibility at the site, it has been determined that geothermal provides a lower installation price, greater function and reliability, and a similar cost for annual operation.

The City has invested considerable resources to bring the sports complex/recreation campus made up of Ward Park, Cady Way Park, and Showalter Stadium to a higher standard through our major renovations at Showalter Stadium and currently the Loch Lomond portion of Ward Park. This project would continue the efforts to rejuvenate one of the City's largest and most utilized recreational sites in a location with direct pedestrian and bike access via the Cady Way Trail.

In conjunction with heating of the Cady Way Pool, the Parks and Recreation Department would shift year round operations to Cady Way Pool and resume seasonal operations at the Winter Park Community Center. This swap would result in minimal impact on department expenses while providing the City with a much greater potential for increasing service level and revenue when compared to the Community Center pool.

Solar vs Geothermal:

While the money budgeted for heating of Cady Way Pool has always been earmarked for a geothermal system, the department felt that a solar option needed to be given consideration. When comparing the two options the following factors were considered.

Functionality: Geothermal offers a more consistent heat source as the heat is harnessed from below ground where conditions are relatively constant. Additionally, geothermal has the capability to cool a pool during excessively hot months. While this may not seem important for recreational swimming, pools that host competitive meets or training should be kept no higher than low to mid 80's (82 per FINA). This function would be highly used from May through early October to accommodate our existing swim programs as we currently use a manual aerator for this span of months in attempt to get temperatures in a safe range for our swim clubs.

Practicality: In order for a solar panel system to sufficiently heat the Cady Way Pool the facility would need approximately 6000 square feet of solar panels. The current structure at Cady Way offers approximately 6000 square feet of roof space, but due to shade cover and other obstacles only approximately 3500 square feet could be used for solar panels. As a result, we would need to build and maintain a support structure for upwards of 2500 square feet of panels.

Cost: The total cost for geothermal will comfortably fit within the \$185,000 currently budgeted for the project.

Geothermal

Installation and Materials (Symbiont) - \$135,000

Upgrade of Cady Way Pool Control System - \$15,000

Site Upgrades and Preparation - \$10,000

Total Project Cost - \$160,000

Solar

Installation and Materials - \$100,000

Support Structure – \$150,000+

Total Project Cost - \$250,000+

Pricing is highly variable depending on style and materials. Case study provided by Graef from 2012 for a similar project had a structural cost of nearly \$200,000.

Heating System	Geothermal	Solar	Gas	Air Heat Pumps
Annual O&M	\$15,000	n/a*	\$45,000	\$28,000
Maintain target Temp.?	Yes	No	Yes	Yes
Cooling capability?	Yes	No	No	Yes
Lifespan	15 years	n/a	7 years	7 years
Warranty**	1/5/7	n/a	n/a	n/a

* Solar not likely to maintain target temperatures due to impacts related to adverse ambient conditions (low air temperatures, shorter daylight periods and cloud cover.

** Symbiont's warranty covers the entire project (parts and labor) for 1 year. Symbiont components have a 5 year labor and 7 year parts warranty. Titanium parts have a lifetime warranty.

Current Conditions:

The Parks and Recreation Department currently operates two aquatic facilities with a seasonal operation at Cady Way Pool and year round operation at the Winter Park Community Center.

The Winter Park Community Center pool sees an annual usage of approximately 7000 swimmers with a bulk of the usage taking place between May and September. The department offers numerous programs with a focus on community swim lessons, drown prevention, and community open swim. Annual net cost to City for operation of pool was approximately \$36,000 in FY 17 (seasonal operation only) and \$89,000 in FY 18 (year round operation).

The Cady Way Pool has been maintained by the City of Winter Park's Public Works Department and operated through a community partnership with the Winter Park YMCA until the spring of 2017. In spring 2017, the YMCA stepped away from its operational role due to the financial strain caused by operating the facility. The Parks and Recreation Department took over operations effective May 2017 and has operated the site with the same seasonal schedule as the YMCA with the following results:

In FY 17, the Parks and Recreation Departments inclusion of Cady Way operations had a net cost to the City of approximately \$14,000 with over 8000 visits. In FY 18, net cost to City for operation of the facility was approximately \$13,000 with over 12,000 visits.

Since taking over the pool operations in FY 2017 the Parks and Recreation Department has built relationships with both public and private entities to increase usage and programming at the facility. In addition, the City has made significant improvements to the overall site with landscaping, painting and other upgrades over the past 2 years.

Projected Budget Impact:

The department does not anticipate a major increase to the operational budget if winter operations shift from the Community Center to Cady Way Pool. The current cost associated with heating the smaller Community Center pool is slightly less than the projected operational cost of the geothermal system at Cady Way due to the larger pool size, but the efficiency of the geothermal system keeps this increase at a minimum. Staffing and other operational costs would remain consistent as the Community Center, while smaller, has several blind spots that requires additional guards for safe operation when compared to a more traditionally designed pool at Cady Way.

Overall, the department forecast a \$15,000-\$20,000 increase in the department's operational budget with \$15,000 - \$20,000 increase in revenues for the first year of operation with expenses staying relatively constant and revenues increasing as operation matures.

Service Level Impact:

The Cady Way pool is one of only a handful of long course (50m) pools in the region. The facilities central location within the region and proximity to Cady Way Trail, positions our facility to not only provide additional recreation opportunities to our residents, but also offset the cost of a year round operation through regional and local aquatic events in conjunction with the local swim and triathlete communities. The department has already established relationships with multiple swim teams and other public and private organizations to maximize usage during our summer operations. The Parks and Recreation Department should easily be able to leverage these existing relationships as well as foster new relationships that will ensure a reasonable level of usage during the winter season that exceeds our current usage at the WP Community Center.

While we expect some minor increases in revenue in the first year of transitioning seasonal operations from Community Center to Cady Way, we see the long term benefit being much greater when compared to continuing winter operations at the Winter Park Community Center with only marginal increases in operational costs.