

Linden Golf and Country Club

Irrigation Project 2016

Linden Irrigation Overview

Current System

- ▶ Antiquated pump and electrical systems built in 1962
- ▶ 146 manually operated sprinklers
- ▶ 72 automated sprinklers
- ▶ Inconsistent coverage
- ▶ Existing pump setup typically fails several times per year
- ▶ Costly to operate (night watering staff) and maintain (replacement of pumps, lines and other worn components)
- ▶ Insufficient water volume at times of greatest need
- ▶ Creates hazardous conditions (i.e., tripping on in-ground couplers)
- ▶ Pulls grounds crew from other projects
- ▶ Interferes with member play at times

Proposed System

- ▶ New dual vertical turbine pump station provides volume & redundancy
- ▶ Fully automated operation
- ▶ 391 heads with yardage markers
- ▶ Overlapping coverage to reduce burnout areas
- ▶ Eliminates need to overwater in case of failures
- ▶ Less wasted water
- ▶ Reduces vulnerability to fungus & disease = Fewer chemical applications (healthier for staff & golfers, saves money)
- ▶ Lusher, denser, more resilient fairways & approaches
- ▶ More consistent greens surfaces
- ▶ Few to no interruptions to member play

Funding Plan

Strategy

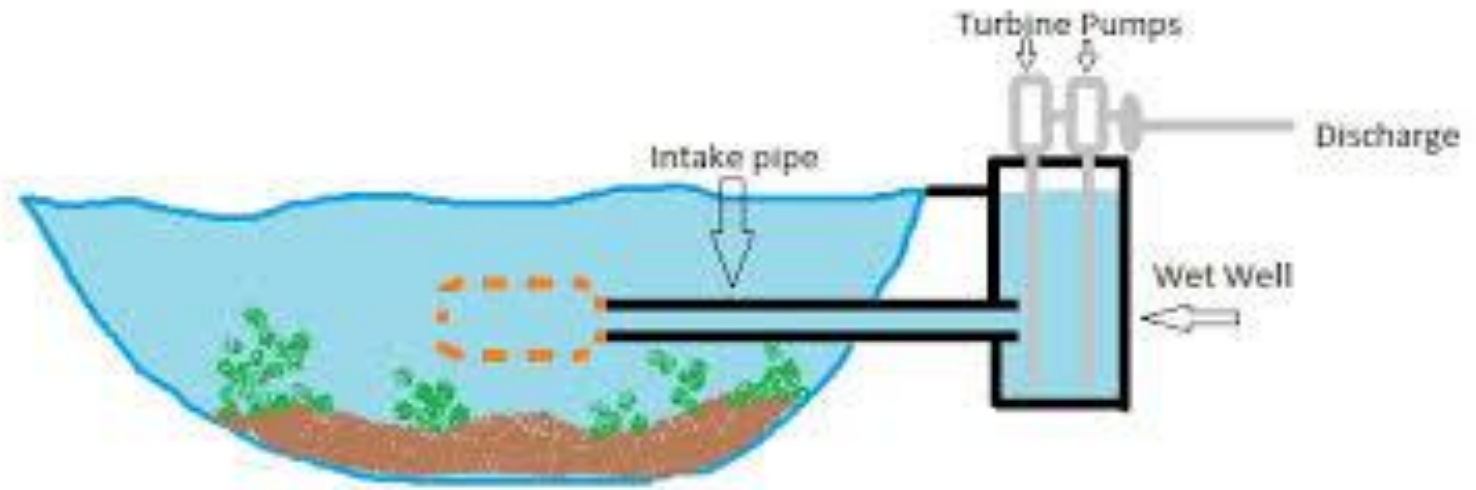
- ▶ Project costs estimated at \$200,000 for pump station and \$300,000 for irrigation distribution system
- ▶ Funding to be combination of supplier financing, bank loan and existing reserves
- ▶ We are taking advantage of the favorable current interest rates
- ▶ A monthly dues increase of \$22 will cover finance payments (last dues increase was August 2011)

Benefits for Club Members

- ▶ Maintains reserve fund for other important projects
- ▶ NO MEMBER ASSESSMENTS!! 😊
- ▶ Keeps grounds crew available to continue maintaining the course
- ▶ Makes it possible to complete the project quickly & disrupt member play as little as possible
- ▶ New system will be under warranty

Scope of Plan

- ▶ Replace pump house and pump system with dual vertical turbine system
- ▶ Excavate sediment and deepen pond by 2 feet
- ▶ Install 60" diameter wet well, 24 feet deep, adjacent to pond
- ▶ Install 24" flume pipe from wet well to center of pond
- ▶ Decommission the "Hogan Bridge" to beautify the pond
- ▶ Lay main lines
- ▶ Pull branch lines and wires with specialized equipment for quick, clean installation (15-20 miles!!)
- ▶ Install heads at predetermined locations



Timeline

- ▶ Fall 2014: Completed irrigation evaluation by Mears Design Group
- ▶ Late 2015: Signed 30 year lease with Nix family
- ▶ Spring 2016: Azure Green located all existing sprinklers with drone, along with AutoCAD-based orthophotos
- ▶ Spring 2016: Linden Board initiated a preliminary design by Mears
- ▶ Mid-July 2016: Authorize final engineering and consultation by Mears
- ▶ Late July 2016 (est): Finalize financing packages as soon as practical
- ▶ Late July 2016: Obtain final bids from Rain Bird & Toro for complete project
- ▶ Early August 2016: Order pump station
- ▶ Late August: Begin work on wet well and pond excavation
- ▶ Late September: Begin installation of main line and branch lines
- ▶ November 1st: Estimated project completion. (Possibly a couple months later if the club determines we can save money by taking advantage of contractors' off-season rates.)
- ▶ Irrigation system will be kept operable during most stages of construction

