PHASE I IRRIGATION PLAN

November 2012
Agenda

- Introduction
- Background / History
- Charts
  - Organizational Chart
  - Stakeholder Chart
- S.W.O.T. Analysis
  - Strengths
  - Weaknesses
  - Opportunities
  - Threats
- Goals & Objectives
- Implementation/Evaluation
- Strategic Vision
INTRODUCTION
Introduction

- Irrigation has been an on-going issue for years
  - water pressure
  - water quality
  - watering restrictions
  - watering times
- Establish a strategic vision
  - hired Atkins North America, Inc.
  - formed the Irrigation Initiative Team
- Phase I – “low hanging fruit”
  - roadmap for the future
  - both a strategic & tactical plan
  - approximately 2 years to complete
Background / History

- May 2009 – selected Azad Shah, P.E. to perform irrigation study
- Four Phases
  - Phase I – understanding of regulatory environment
  - Phase II – review of water pricing methodology, withdrawal sources & distribution system
  - Phase III – recommended readily implementable solutions
  - Phase IV – review of randomized demand distribution, evaluation of existing system design, and recommended changes to infrastructure
1. Irrigation demands 200% that of schedule complaint demand.

2. During peak demand sufficient watering duration is not provided within the existing neighborhood schedules.

3. Insufficient watering duration may be promoting noncompliant schedule adherence.

4. New reclaim sources use existing pumping facilities.

5. Specific pipeline improvements were identified that would improve pressure demands.

6. Twice a week watering will assist irrigation demand needs.

7. Randomized irrigation was presented as the ultimate solution and required: Availability of reclaim water, major pipeline improvements, and an educated user.
CHARTS

Organizational Chart / Stakeholder Chart
S.W.O.T. ANALYSIS
Strengths / Weaknesses / Opportunities / Threats
**Strengths**

1. Staff Knowledge & Experience
2. Continuity (Staff & Board)
3. Head Start on Common Area System Upgrades
4. Irrigation Study Continuity
5. Progress Regarding Resident Understanding of Areas of Responsibility
6. Organized Emergency On-Call Program for System Breaks
7. Knowledgeable Service Providers
8. Organized Mapping System for Zones and Schedules
9. Routine Flushing of System
• **Weaknesses**

1. Limited Budget
2. Limited Staff and Resources
3. Funding
4. Multiple Districts as Owners of System Infrastructure
5. Limitations of Authority
6. Lack of Residential Metering
7. Aging Infrastructure
8. Lack of Personnel with Utility Background and/or Education
9. IDA Operations Department not Properly Equipped for Significant System Failures/Mainline Breaks
Opportunities

1. KHA Landscape Master Plan
2. Development of Operational Plan to Include Preventative Maintenance
3. CEVA ad hoc Irrigation Committee
4. Reclaimed Water
5. CCNA Contracts
6. Website
7. Interlocal Funding Agreement
• **Threats**

1. Time
2. Failure to View the System as Whole/Singular
3. Lack of Terms of Service Agreement with BRU
<table>
<thead>
<tr>
<th>TASK #</th>
<th>TASK</th>
<th>PRIORITY</th>
<th>$</th>
<th>ASSIGNED TO</th>
<th>COMMENTS</th>
<th>PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Summary of Phase IV Report</td>
<td>1</td>
<td></td>
<td>Operations</td>
<td>• On Sept Agenda &lt;br&gt;• Completed</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Atkins (Facilitator) Report of August 1st Meeting</td>
<td>1</td>
<td></td>
<td>Atkins</td>
<td>• 8/19/12 - Received from Atkins; staff reviewing.  &lt;br&gt;• Completed</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Present Phase I Plan</td>
<td>1</td>
<td></td>
<td>Team</td>
<td>• Scheduled for Nov Board Meetings</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>TCOA Mainline Meter</td>
<td>1</td>
<td></td>
<td>BRU/Ops</td>
<td>• 11/8 - BRU exploring alternatives to take TCOA out of the loop so that their irrigation does not pass through Phase I</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Consumption Education</td>
<td>1</td>
<td></td>
<td>Eva/Jessica</td>
<td>• Conservation page on site &lt;br&gt;• Swag from County Ext &amp; SWFMD &lt;br&gt;• U of F links; educational materials &lt;br&gt;• Grant Opportunities</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Establish Allocation Methodology for a Unified System</td>
<td>1</td>
<td></td>
<td>Steve</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TASK #</td>
<td>TASK</td>
<td>PRIORIT</td>
<td>$</td>
<td>ASSIGNED TO</td>
<td>COMMENTS</td>
<td>PROGRESS</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
<td>---------</td>
<td>---</td>
<td>-------------</td>
<td>----------</td>
<td>----------</td>
</tr>
</tbody>
</table>
| 7      | Residential SWFMD Soil Moisture Program | 1 |   | Community Association Services | • Meet w/Bob Simons  
• Understand cost impact to residents  
• BRU cost contribution | • 9/10 - Met w/Bob  
• 10/2 - Bob met w/Mizner reps  
• 10/9 - SMR reviewing waiver  
• 10/15 - Waivers distributed  
• 11/8 - Waivers returned to BRU. Install planned for week of 11/12 |
| 8      | Irrigation Controller Upgrades & Moisture Sensors / Weather Stations | 1 | $ | Operations | • Ongoing  
• $64,710 Budgeted for FY2013  
• Target date of 9/30/14 for upgrades | • 8/29 - Ryan to present landscape beautification at Sept. Board meetings  
• 10/10 - Ryan to discuss common area watering at Oct CEVA meeting |
| 9      | Convert from Rotor to Spray Heads as needed | 1 | $ | Operations | • Ongoing  
• Prioritize areas based on pedestrian traffic, turf variety, budget | |
| 10     | WMD Variance for smart technology upgrades | 1 |   | Operations | • Combine w/educational info/communication on variance  
• Ops to re-fill out paperwork | |
<table>
<thead>
<tr>
<th>TASK #</th>
<th>TASK</th>
<th>PRIORITY</th>
<th>$</th>
<th>ASSIGNED TO</th>
<th>COMMENTS</th>
<th>PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Stakeholder Relationship Building</td>
<td>1</td>
<td></td>
<td>Everyone</td>
<td>•Ongoing</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>GIS Analysis of irrigable area</td>
<td>2</td>
<td></td>
<td>BRU</td>
<td>•BRU conducting GIS analysis of Phase I; Staff to confirm billing accuracy</td>
<td>•9/10 - Bob Simons reported BRU working on analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•11/8 - Priority for BRU – within 3 mos.</td>
</tr>
<tr>
<td>13</td>
<td>Semi-annual public mtgs &amp; educational workshops</td>
<td>2</td>
<td></td>
<td>Eva</td>
<td>•Planned for March &amp; September</td>
<td>•Present plan to December CEVA Landscape Meeting</td>
</tr>
<tr>
<td>14</td>
<td>Irrigation Project Page on website</td>
<td>2</td>
<td></td>
<td>Eva</td>
<td>•January 2013</td>
<td>•11/8 - BRU to provide updates and information for webpage.</td>
</tr>
<tr>
<td>15</td>
<td>Water Quality Testing and Analysis</td>
<td>2</td>
<td>$</td>
<td>Ops and Contractors</td>
<td>•Quarterly Testing</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Florida Friendly Landscape Conversion</td>
<td>2</td>
<td>$</td>
<td>Operations (Common) CAS (Residential)</td>
<td>•Work with landscape architect on beautification plan</td>
<td>•8/29 - Gary to contact IFAS for possible workshop to HOA’s</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>•CAS to work on updating landscape palette and encourage FF landscaping</td>
<td>•10/18 - All districts approved plan</td>
</tr>
<tr>
<td>17</td>
<td>Installation of Pressure Monitoring Devices</td>
<td>2</td>
<td></td>
<td>BRU/Ops</td>
<td></td>
<td>•9/10 - Met w/BRU. They are purchasing an additional, utilize ours if necessary. BRU offered software to take readings.</td>
</tr>
<tr>
<td>TASK #</td>
<td>TASK</td>
<td>PRIORIT</td>
<td>$</td>
<td>ASSIGNED TO</td>
<td>COMMENTS</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>---------</td>
<td>---</td>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| 18     | Analysis of current meters – identify where/if more are needed       | 3       | $ | Atkins/BRU  | • Golf courses, Lake Uihlein, etc.  
• Value of moveable strap-on meters  
• Professional services not budgeted  
• Plan for FY14 expenditure                                                                                                                                                                                                                                               |
| 19     | New Hydraulic Model                                                 | 3       |    | Atkins      |                                                                                                                                                                                                                                                                                                                                         |
| 20     | Twice per week watering for residential                             | 3       |    | BRU         | • Ask BRU what it will take. What can we do?                                                                                                                                                                                                                                                                                          |
| 21     | D6 Participation                                                    | 3       |    | Operations  | • Connected to our system through mainline                                                                                                                                                                                                                                                                                           |
| 22     | Add staff in FY14                                                    | 3       | $ | Steve       | • Develop job description & justification  
• Utility Mgt Experience                                                                                                                                                                                                                                                                                                               |
| 23     | Monitor BRU Water Use Permit                                        | 3       |    | Operations  | • Suggested by Atkins during strategic workshop                                                                                                                                                                                                                                                                                       |
| 24     | Develop Annual O&M Plan                                            | 3       |    | Operations  | • Suggested by Atkins                                                                                                                                                                                                                                                                                                               |
EVALUATION
Implementations & Evaluation

- **Implementation**
  - Goals prioritized
  - Approximately 2 years
  - Funding considerations

- **Evaluation**
  - Quarterly status reports
Strategic Vision

- One Authority
- Residential Metering
- Phased Funding