City of Alexandria
Aquatic Facilities Master Plan

Presented By:
Kimley-Horn
and
Counsilman • Hunsaker

June 16, 2011
Agenda

• Introduction
• Demographics
• Existing Pools
• Aquatic Users and Trends
• Example Facilities
• Input on Aquatic Needs
Aquatic Master Plan Team

• Kimley-Horn – nationally known engineers, aquatics designers, and park planners

• Counsilman-Hunsaker – the leading aquatic planning and design firm in the United States
Aquatic Master Plan Tasks

• Task 1 – Preliminary Needs Analysis (Data Collection)
• Task 2 – Preliminary Financial Impact Analysis
• Task 3 – Complete Needs Analysis (Goals/Objectives/Public Meetings)
• Task 4 – Conceptual Plan
• Task 5 – Financial Impact Analysis
• Task 6 – Final Report and Presentations
Aquatic Master Planning Process

- Market Analysis - *Needs Assessment*
  - Evaluate Existing Facilities
  - Common Vocabulary, Vision
  - Evaluate Existing Area Providers
  - Identify Potential User Groups

- Program Requirements
  - Develop Options for Programming
  - Develop Project Costs Analysis

- Operation Plan
  - Opinion of Revenue
  - Opinion of Expenses
  - Opinion of Operations Pro-forma

- Implementation Plan
  - Number of Facilities
  - Location of Facilities
  - Phasing of Facilities
City of Alexandria

• 2000 Census Population: 128,300
• Estimated 2010 Population: 148,100
  – 23% increase projected for public schools over next 5 years
• Median Age: 39.1
  – Highest age groups are 0-5 and 34-44
• Per Capita Income: $50,606
  – 82% over national average
• Median Household Income: $79,874
  – 55% over national average
### Population

#### MARKET AREA POPULATION BY DISTANCE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (000's)</td>
<td>Percent of Total</td>
<td>Number (000's)</td>
<td>Percent of Total</td>
<td>Number (000's)</td>
</tr>
<tr>
<td>0 to 1.5 Miles</td>
<td>48.5</td>
<td>3.2%</td>
<td>53.8</td>
<td>3.4%</td>
<td>58.4</td>
</tr>
<tr>
<td>1.5 to 2.5 Miles</td>
<td>104.1</td>
<td>6.8%</td>
<td>117.1</td>
<td>7.3%</td>
<td>125.5</td>
</tr>
<tr>
<td>2.5 to 5 Miles</td>
<td>298.5</td>
<td>19.5%</td>
<td>325.6</td>
<td>20.3%</td>
<td>354.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>451.1</td>
<td>29.5%</td>
<td>496.5</td>
<td>31.0%</td>
<td>537.9</td>
</tr>
<tr>
<td>5 to 7.5 Miles</td>
<td>549.5</td>
<td>35.9%</td>
<td>573.3</td>
<td>35.7%</td>
<td>593.7</td>
</tr>
<tr>
<td>7.5 to 10 Miles</td>
<td>527.9</td>
<td>34.5%</td>
<td>533.9</td>
<td>33.3%</td>
<td>535.6</td>
</tr>
<tr>
<td>Subtotal</td>
<td>1,077.3</td>
<td>70.5%</td>
<td>1,107.2</td>
<td>69.0%</td>
<td>1,129.3</td>
</tr>
<tr>
<td>Total (0-10 Miles)</td>
<td>1,528.4</td>
<td>100.0%</td>
<td>1,603.7</td>
<td>100.0%</td>
<td>1,667.3</td>
</tr>
</tbody>
</table>

**Alexandria, VA**

<table>
<thead>
<tr>
<th>Number (000's)</th>
<th>Percent of Total</th>
<th>Number (000's)</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>128.3</td>
<td>148.1</td>
<td>162.2</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Source: Demographics Now
### MARKET AREA AGE DISTRIBUTION

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>0-1.5 Miles</th>
<th>1.5-2.5 Miles</th>
<th>2.5-5 Miles</th>
<th>5-7.5 Miles</th>
<th>7.5-10 Miles</th>
<th>Alexandria, VA</th>
<th>Total U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5</td>
<td>3,841</td>
<td>7.1%</td>
<td>8,341</td>
<td>7.1%</td>
<td>21,717</td>
<td>6.7%</td>
<td>33,216</td>
</tr>
<tr>
<td>5 to 9</td>
<td>3,705</td>
<td>6.9%</td>
<td>7,952</td>
<td>6.8%</td>
<td>19,782</td>
<td>6.1%</td>
<td>32,299</td>
</tr>
<tr>
<td>10 to 14</td>
<td>2,699</td>
<td>5.0%</td>
<td>5,796</td>
<td>5.0%</td>
<td>16,322</td>
<td>5.0%</td>
<td>29,481</td>
</tr>
<tr>
<td>15 to 19</td>
<td>1,793</td>
<td>3.3%</td>
<td>4,882</td>
<td>4.2%</td>
<td>16,187</td>
<td>5.0%</td>
<td>33,228</td>
</tr>
<tr>
<td>Subtotal</td>
<td>12,038</td>
<td>22.4%</td>
<td>26,971</td>
<td>23.0%</td>
<td>74,008</td>
<td>22.7%</td>
<td>129,137</td>
</tr>
<tr>
<td>20 to 24</td>
<td>1,872</td>
<td>3.5%</td>
<td>5,889</td>
<td>5.0%</td>
<td>20,861</td>
<td>6.4%</td>
<td>44,760</td>
</tr>
<tr>
<td>25 to 34</td>
<td>7,677</td>
<td>14.3%</td>
<td>16,962</td>
<td>14.5%</td>
<td>49,326</td>
<td>15.1%</td>
<td>95,015</td>
</tr>
<tr>
<td>35 to 44</td>
<td>11,174</td>
<td>20.8%</td>
<td>22,901</td>
<td>19.6%</td>
<td>57,878</td>
<td>17.8%</td>
<td>85,054</td>
</tr>
<tr>
<td>45 to 54</td>
<td>8,712</td>
<td>16.2%</td>
<td>17,525</td>
<td>15.0%</td>
<td>48,055</td>
<td>14.8%</td>
<td>81,922</td>
</tr>
<tr>
<td>55 to 64</td>
<td>6,106</td>
<td>11.3%</td>
<td>13,330</td>
<td>11.4%</td>
<td>39,679</td>
<td>12.2%</td>
<td>69,956</td>
</tr>
<tr>
<td>65 to 74</td>
<td>3,419</td>
<td>6.4%</td>
<td>7,609</td>
<td>6.5%</td>
<td>21,755</td>
<td>6.7%</td>
<td>40,332</td>
</tr>
<tr>
<td>75 to 84</td>
<td>1,842</td>
<td>3.4%</td>
<td>3,765</td>
<td>3.2%</td>
<td>9,633</td>
<td>3.0%</td>
<td>19,059</td>
</tr>
<tr>
<td>85 and over</td>
<td>971</td>
<td>1.8%</td>
<td>2,129</td>
<td>1.8%</td>
<td>4,441</td>
<td>1.4%</td>
<td>8,098</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>53,811</td>
<td>100.0%</td>
<td>117,081</td>
<td>100.0%</td>
<td>325,636</td>
<td>100.0%</td>
<td>573,333</td>
</tr>
<tr>
<td>Median Age</td>
<td>39.7</td>
<td>39.1</td>
<td>38.5</td>
<td>37.8</td>
<td>38.4</td>
<td>39.1</td>
<td>36.7</td>
</tr>
</tbody>
</table>

Source: DemographicsNow
## Market Area Income

<table>
<thead>
<tr>
<th>Radius</th>
<th>Per Capita Incomes</th>
<th>Median Household Incomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dollars</td>
<td>Index</td>
</tr>
<tr>
<td>0 to 1.5 Miles</td>
<td>$55,675</td>
<td>2.10</td>
</tr>
<tr>
<td>1.5 to 2.5 Miles</td>
<td>$48,228</td>
<td>1.82</td>
</tr>
<tr>
<td>2.5 to 5 Miles</td>
<td>$46,444</td>
<td>1.75</td>
</tr>
<tr>
<td>5 to 7.5 Miles</td>
<td>$45,867</td>
<td>1.73</td>
</tr>
<tr>
<td>7.5 to 10 Miles</td>
<td>$45,206</td>
<td>1.71</td>
</tr>
<tr>
<td>Alexandria, VA</td>
<td>$50,606</td>
<td>1.91</td>
</tr>
<tr>
<td><strong>Total U.S.</strong></td>
<td><strong>$26,464</strong></td>
<td><strong>1.00</strong></td>
</tr>
</tbody>
</table>

Source: Demographics Now
Income

Household Income

- $0 - $9,999: 14%
- $10,000 - $14,999: 8%
- $15,000 - $19,999: 8%
- $20,000 - $24,999: 10%
- $25,000 - $29,999: 11%
- $30,000 - $34,999: 8%
- $35,000 - $39,999: 8%
- $40,000 - $49,999: 4%
- $50,000 - $59,999: 4%
- $60,000 - $74,999: 3%
- $75,000 - $99,999: 3%
- $100,000 - $124,999: 3%
- $125,000 - $149,999: 3%
- $150,000 +: 4%
## CLIMATOLOGICAL DATA

### Alexandria, VA

<table>
<thead>
<tr>
<th>Month</th>
<th>Temperatures</th>
<th>Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>High</td>
</tr>
<tr>
<td>January</td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td>February</td>
<td>38</td>
<td>46</td>
</tr>
<tr>
<td>March</td>
<td>47</td>
<td>57</td>
</tr>
<tr>
<td>April</td>
<td>57</td>
<td>67</td>
</tr>
<tr>
<td>May</td>
<td>66</td>
<td>76</td>
</tr>
<tr>
<td>June</td>
<td>76</td>
<td>85</td>
</tr>
<tr>
<td>July</td>
<td>80</td>
<td>89</td>
</tr>
<tr>
<td>August</td>
<td>79</td>
<td>87</td>
</tr>
<tr>
<td>September</td>
<td>71</td>
<td>80</td>
</tr>
<tr>
<td>October</td>
<td>60</td>
<td>69</td>
</tr>
<tr>
<td>November</td>
<td>50</td>
<td>58</td>
</tr>
<tr>
<td>December</td>
<td>39</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: Weatherbase
Existing Facilities

- **Indoor**
  Chinquapin (25M/8Lane/Dive Well) 1985

- **Outdoor (Community)**
  Charles Houston (Therapeutic/Instruction) Updated 2009
  Old Town (25 Yd “L”/Dive Well/6 Lane/Training Pool) 1975?
  Warwick (Irregular “L”/Dive Well/Wading Pool) - Leased

- **Outdoor (Neighborhood)**
  Nannie J. Lee (1800 SF /Underutilized/Closed)
  Nicholas Colosanto (1800 SF /Underutilized/Closed)
  John Ewald (1800 SF/Open)
Alexandria Pools
# Pools By Population

<table>
<thead>
<tr>
<th>City</th>
<th>Population</th>
<th>Pools</th>
<th>Public Pools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shreveport, LA</td>
<td>199,370</td>
<td>9</td>
<td>22,152</td>
</tr>
<tr>
<td>Spokane, WA</td>
<td>197,520</td>
<td>5</td>
<td>39,504</td>
</tr>
<tr>
<td>Irving, TX</td>
<td>193,571</td>
<td>7</td>
<td>27,653</td>
</tr>
<tr>
<td>Salt Lake City, UT</td>
<td>178,238</td>
<td>2</td>
<td>89,119</td>
</tr>
<tr>
<td>Amarillo, TX</td>
<td>185,700</td>
<td>3</td>
<td>61,900</td>
</tr>
<tr>
<td>Salem, OR</td>
<td>150,361</td>
<td>2</td>
<td>75,181</td>
</tr>
<tr>
<td>Grand Prairie, TX</td>
<td>150,000</td>
<td>4</td>
<td>37,500</td>
</tr>
<tr>
<td>Alexandria, VA</td>
<td>148,100</td>
<td>7</td>
<td>21,157</td>
</tr>
<tr>
<td>Eugene, OR</td>
<td>145,981</td>
<td>3</td>
<td>48,660</td>
</tr>
<tr>
<td>Hampton, VA</td>
<td>145,646</td>
<td>7</td>
<td>20,807</td>
</tr>
<tr>
<td>Torrance, CA</td>
<td>145,516</td>
<td>1</td>
<td>145,516</td>
</tr>
<tr>
<td>Evansville, IN</td>
<td>121,582</td>
<td>9</td>
<td>13,509</td>
</tr>
<tr>
<td>McKinney, TX</td>
<td>115,600</td>
<td>3</td>
<td>38,533</td>
</tr>
<tr>
<td>Independence, MO</td>
<td>109,159</td>
<td>1</td>
<td>109,159</td>
</tr>
<tr>
<td>Richardson, TX</td>
<td>100,500</td>
<td>5</td>
<td>20,100</td>
</tr>
</tbody>
</table>

**AVERAGE** | 152,456 | 5 | 33,630 |

Source: Counsilman-Hunsaker

Note: Alexandria currently operates 5 public pools
Trend Setting Markets

- Where To Look
  - Private Sector
    - Resort
    - Waterpark
  - University/Student Rec
Every year there are more than 360 million visits to recreation water venues.

Swimming is the second most popular recreational activity in North America – The most popular for children
Identifying Your Key Aquatic Users

- Competition
- Recreation
- Instructional
- Wellness and Therapy
25 - Yard
6 25-Yard Lanes
3,375 Sq. Ft.

25-Yard By 25-Meter
11 25-Yard Lanes
6,150 Sq. Ft.
10 25-Meter Lanes

50-Meter By 25-Yard
8 or 10 (50-Meter Lanes)
17-22 (Cross Course 25-Yard Lanes)
12,600 Sq. Ft.
Competition Pools
Recreation

Changes in Expectation Since 1960’s

– Entertainment value
– Extreme
– Creature comforts
– Activity specific design solutions
– Increased customer service
Family Waterslides
Thrill Slides

Pro-Bowl Slide

Drop Slide

Mat Racer
Flow Rider
Participatory Play Features
Moving Water
Water Spraygrounds and Fountains
Climbing Walls
Lap Lanes
Shade, Deck and Grassy Areas
Instruction and Lesson Programs

- Learn to swim
- Water safety instruction, Lifeguard instruction
- Life safety skills
- Survival swimming
- Scuba
- Other aquatic skills
Therapy and Wellness Aquatic Use

- Programmed Activities
  - Instructional, Fitness, Wellness, Therapeutic
- Aquatic Exercise increased from
  - 5.8 million in 2004
  - 7.2 million in 2007**
- Trends 1998-2007*
  - Aerobic dance decreased by 17.3%
  - Cycling decreased by 23.2%

Source: The Aquatic Therapist*
Aquatic Exercise Association**
Lion’s Spraypark

- 14,300 sq. ft. aquatic playground featuring many interactive water features.
- Date Completed: 2007

Measurable Results!
Within the first 31 days of operation there were nearly 5,000 users, an average of 160 per day. The adjoining pool saw a 15% increase in users as a result of the spray park.
Meade Park Family Aquatic Center

- 6,000 Sq. Ft. Leisure Pool
- Zero Depth Entry
- Play Feature
- Current Channel
- Fitness Lap Lanes
- Family Water Slide
- Crossing Activity
- Completed Summer 2009
Inez Carter Park Family Aquatic Center

- 2,800 SF Bathhouse
- 1,800 SF Filtration
- 7,460 SF Leisure Pool
- 3,380 SF Lap Pool
- Two Water Slides
- 200 LF Lazy River
- Teen Bowl Slide
- Water Play Features
- Opened May 2011
Pirate’s Cove Aquatic Center

6,600 sq. ft. Leisure Pool
- 35 ft. tower where three waterslides emerge
- Zero-depth entry
- Lazy river
- 1,135 sq. ft. vortex

820 sq. ft. Sprayground

3,739 sq. ft. Competition Pool
- 1-meter springboard diving
- Six lap lanes
Claude Moore Recreation Center

12,800 sq. ft. 50-meter Competition Pool
  • Movable bulkhead
5,200 sq. ft. Leisure Pool
  • Children’s play area
  • Fitness lap lanes
200 sq. ft. whirlpool spa
Green Ridge Recreation Center

- 6,200 sq. ft. Indoor Leisure Pool
  - Vortex
  - Current channel
  - Waterslide
- 250 sq. ft. whirlpool spa
- 8,000 sq. ft. Outdoor Leisure Pool
  - Current channel
  - Children’s play feature
  - Waterslide
  - Bowl Slide
Next Steps

- Task 1 – Preliminary Needs Analysis (Data Collection)
- Task 2 – Preliminary Financial Impact Analysis
- Task 3 – Complete Needs Analysis (Goals/Objectives/Public Meetings)
- Task 4 – Conceptual Plan
- Task 5 – Financial Impact Analysis
- Task 6 – Final Report and Presentations
City of Alexandria
Aquatic Facilities Master Plan

Presented By:
Kimley-Horn
and
Counsilman • Hunsaker

June 15, 2011