City Council Meeting Handouts

April 1, 2024

I. Aquatics Master Plan Kickoff

II. Water Conservation Plan/Water Resource and Emergency Management Plan

AQUATIC MASTER PLAN

April 1, 2024

RICHARDSON® TEXAS

CITY COUNCIL STRATEGIC GOAL

Continue to explore unique opportunities to attract and retain residents and all stakeholders

CITY COUNCIL TACTIC

Major Planning Initiative: Aquatic Master Plan

Purpose

The purpose of tonight's briefing is to update the council on the status and launch of the Aquatics Master Plan.

OVERVIEW

Project Goals

Project Team Overview

Project Approach

Project Timelines

Next Steps

Project Goals

- Long-term strategic plan for aquatic services for the Richardson community.
- Align services with expectations in aquatics and create a guide for a future aquatic system.
- Recommendations for future aquatic features, preferred locations of facilities based on current and future demographics.
- Considers impact of future plans for staffing levels, partnership opportunities, modern mechanical structure, and operational efficiency.
- Create a comprehensive aquatic master plan that takes into consideration citizen needs to further enhance Richardson as a place where people are proud to live, work, invest, and engage in the community.

CONSULTANT TEAM OVERVIEW

- Nationally known Municipal Family Aquatic Center Planners and Designers, Park Planners, and Engineers

- Leading Pool Mechanical Engineers and Aquatic Operations and Planning

Kimley»Horn

Counsilman · Hunsaker
AQUATICS FOR LIFE

AUSTIN POWERS, PLA

- Over 16 years of Aquatic Facility Planning and Design Experience

- Recent Similar Projects
  - Aquatics Master Plan – Denton, TX
  - Citywide Aquatic Facilities Master Plan – St. Charles, MO
  - Aquatic Facilities Master Plan – Dallas, TX

- Written multiple recent articles and received recent awards from World Waterpark and Aquatics International Magazine

GEORGE DEINES

- Over 20 Years of Aquatic Experience
- Ten Years of Municipal Operations
- Recent Similar Projects with Kimley-Horn
  - Aquatics Master Plan – Denton, TX
  - Citywide Aquatic Facilities Master Plan – St. Charles, MO
  - Aquatic Facilities Master Plan – Dallas, TX
- Frequent Speaker on Aquatics with National Recreation and Parks Assoc., World Waterpark Assoc., and Athletic Business

Counsilman · Hunsaker
AQUATICS FOR LIFE

RICHARDSON TEXAS

STUDY PROCESS

Four Phase Approach

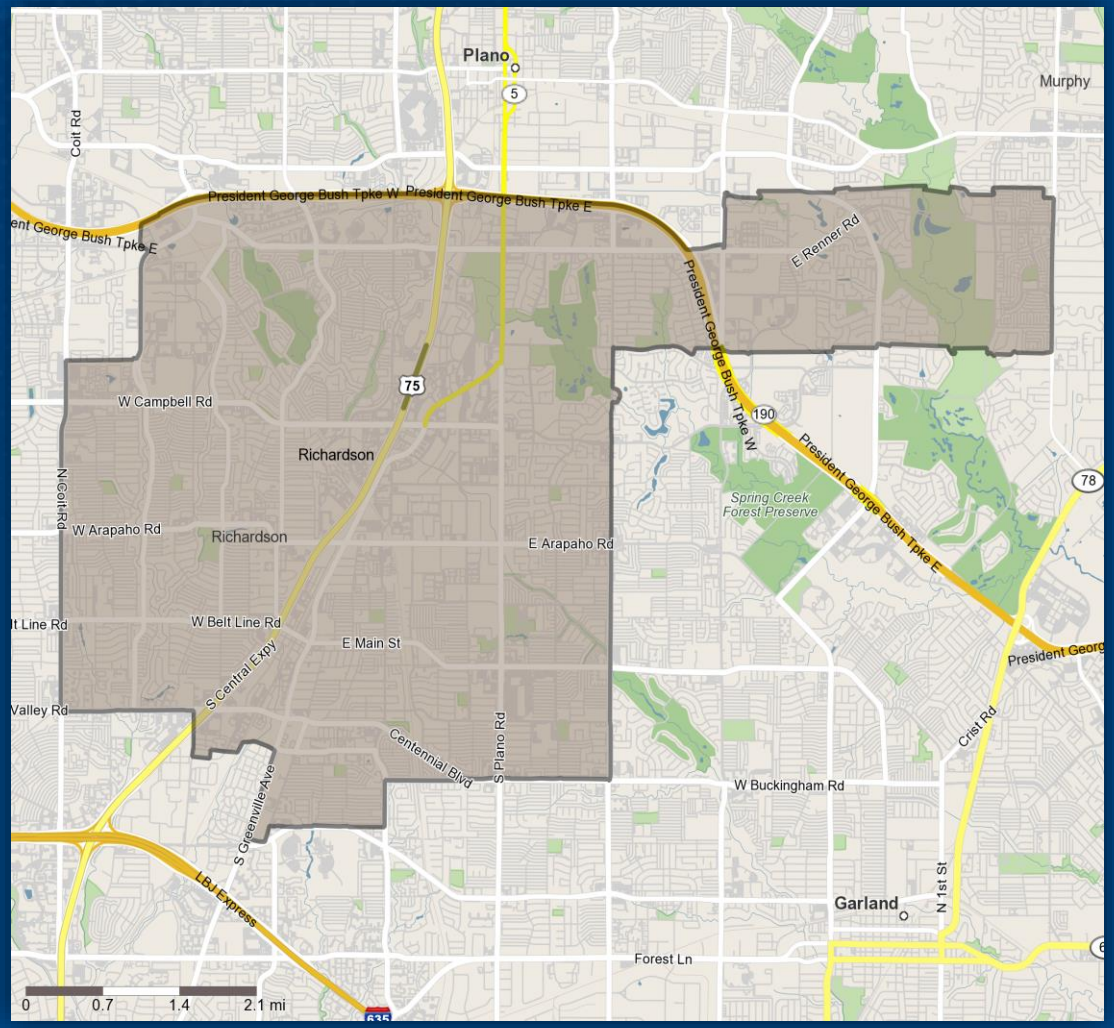
- Discovery
- Conceptual Designs
- Operational Planning
- Prioritization
- Executive Summary

TYPICAL PROCESS OVERVIEW

Discovery

- Facility Mapping and Distribution
- Aquatic Area Providers
- Benchmarking
- Demographic Research
- Community/Stakeholder Input Meetings

Needs Summary



CONSIDERED ITEMS FOR DISCOVERY

- Understand Existing Aquatic Offerings and Programs
- Other Area Providers
- Demographics, Population Distributions, Projected Growth, and Drive Times
- Geography and Physical Barriers

PUBLIC ENGAGEMENT

- In-Person Meetings
  - Public Engagement Meetings
  - City Council & Parks Commission Members
  - Stakeholder Groups
    - Swim Teams
    - Active Adults
    - Existing Facility Users
    - ISDs, Local Colleges, etc.
- Surveys

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TYPICAL PROCESS OVERVIEW

Conceptual Designs

- Site SWOT Analysis
- Programming Input from Data Collection and Needs Summary
- Operational Considerations
- Could Include Renovation or New Facility Design

TYPICAL PROCESS OVERVIEW

Operational Planning

- Maintenance and Operational Costs
- Optimizing Maintenance and Mechanical Systems
- Attendance and Revenue Projections
- Cost Recovery

OPINION OF PROBABLE COST APPROACH

- Current Costs + Contingency
  - Manufacturers
  - Specialty Contractors
- Indirect Costs (Total Project)
- Alternate Bid Items
- Inflation

Kimley»Horn

Denton 8-Lane Indoor / Medium Outdoor

1/5/2023

Item	Unit	Quantity	Cost	Item Cost
General Conditions (+/- 6%)	LS	1	$1,500,000.00	$1,500,000.00
Indoor Pool Building (160' x 180)	SF	29,000	$400.00	$11,600,000.00
Filtration/Restroom Building	SF	2,800	$350.00	$980,000.00
8 Lane x 25 YD Competition Pool	SF	4,588	$450.00	$2,064,600.00
Wellness Pool	SF	2,800	$450.00	$1,260,000.00
Indoor Pool Heating System	LS	1	$150,000.00	$150,000.00
20' Dia. Umbrella Shade Structures	EA	10	$8,500.00	$85,000.00
Multi-Use Pool	SF	10,500	$450.00	$4,725,000.00
Waterslides Allowance	LS	1	$900,000.00	$900,000.00
Play and Spray Features Allowance	LS	1	$500,000.00	$500,000.00
30' Group Pavilion Allowance	EA	2	$30,000.00	$60,000.00
30'X 60' Group Pavilion	EA	1	$60,000.00	$60,000.00
5" Concrete Pool Deck Allowance	SF	39,740	$10.00	$397,400.00
4" Concrete Sidewalk Allowance	SF	4,850	$9.00	$43,650.00
8 ' HT. Vinyl Coated Chain Link Fence Allowance	LF	540	$80.00	$43,200.00
Grading, Site Preparation Allowance	LS	1	$200,000.00	$200,000.00
Onsite Utilities and Drainage Allowance	LS	1	$200,000.00	$200,000.00
6" Concrete Parking Lot	SF	72,950	$11.00	$802,450.00
Landscape and Irrigation Allowance	LS	1	$200,000.00	$200,000.00
FFE	LS	1	$250,000.00	$250,000.00
Contingency	LS	1	$200,000.00	$200,000.00
Sub Total Construction Costs				$26,221,300.00
CONSTRUCTION COSTS (SAY)				**$26,250,000.00**
10% Indirect Costs (Topo, Geo-tech, Engineering)				$2,625,000.00
Sub Total Project Costs w/ Indirect Expenses				$28,875,000.00
10% Inflation				$2,887,500.00
Sub Total Project Costs w/ Inflation				$31,762,500.00
TOTAL PROJECT COSTS w/ TWO YEARS INFLATION (SAY)				**$32,000,000.00**

TYPICAL PROCESS OVERVIEW

Prioritization

- Needs versus Costs
- Funding Strategies and Implementation Plan

TYPICAL PROCESS OVERVIEW

Executive Summary

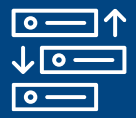
- Process
- Results
- Implementation Plan

TIMELINE: MOST STUDIES ARE A 5-7 MONTH PROCESS

4 Milestones

Discovery

Concept



Prioritization

Implementation

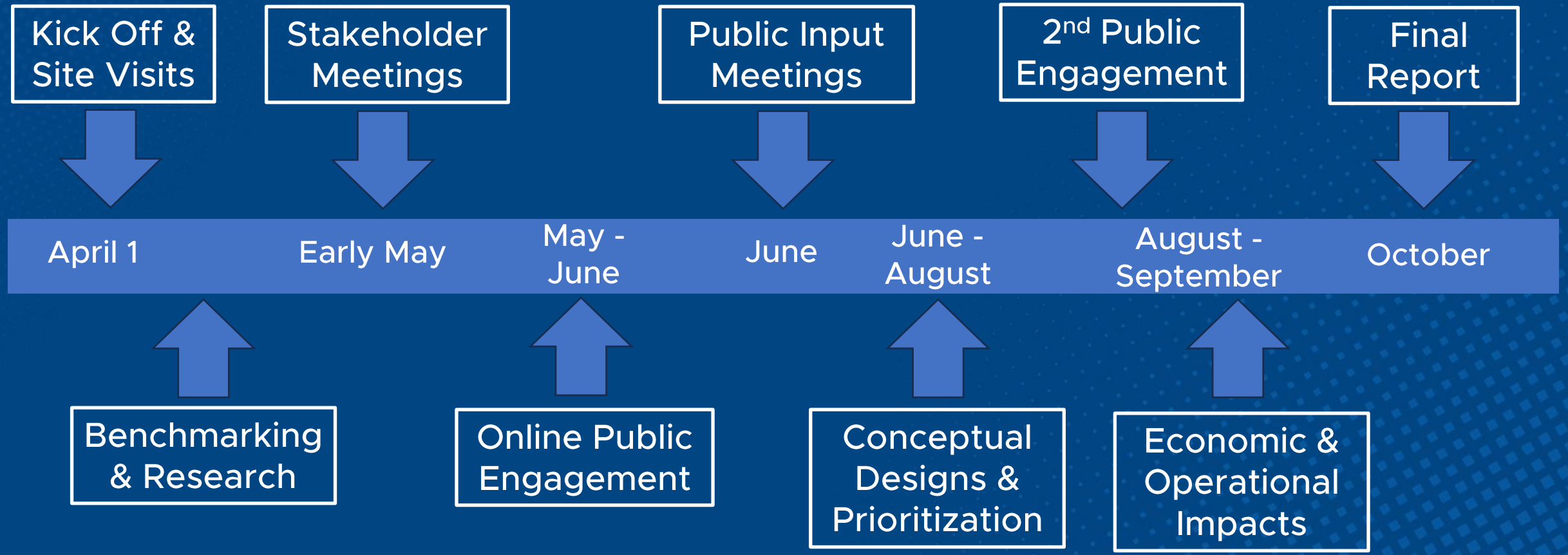
Schedule Considerations

Public Engagement

Park Commission Meetings & Approval

City Council Meetings

RICHARDSON'S TENATIVE TIMELINE:



Next Steps

- Consultants start facility assessments this week
- Coordinate schedules - set dates for stakeholder visits and meetings

PUBLIC SERVICES

WATER CONSERVATION & WATER RESOURCE AND EMERGENCY MANAGEMENT PLANS

April 1, 2024

RICHARDSON TEXAS

CITY COUNCIL STRATEGIC GOAL

Value, Protect, and Create a Positive Return on City, Resident, and Other Stakeholder Investments in the City

CITY COUNCIL TACTIC

Discuss environmental Initiatives

INTRODUCTION

- Current Water Conservation and Water Resource Management Plan adopted in 2019
- TCEQ requires the plans to be updated every 5 years
- City coordinates with NTMWD and other member cities to develop recommendations
  - Individual plans may vary slightly based on local considerations
- Comparisons between 2019 and 2024 plans
  - Restrictions
  - Gallons Per Capita per Day (GPCD)
  - Drought Conservation Triggers
- Council review and feedback

WATER CONSERVATION PLAN - PURPOSE

- To reduce the loss and waste of water
- To improve efficiency in both indoor and outdoor water use
- To maximize the level of recycling and reuse
- To protect and preserve environmental resources
- To extend the life of current water supplies
- To raise public awareness of water conservation and encourage responsible personal behavior through public education programs

WATER CONSERVATION AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN – REGULATORY REQUIREMENTS & GUIDANCE

- Texas Commission on Environmental Quality (TCEQ) developed guidelines and minimum requirements governing water conservation plans
- This plan incorporates strategies and measures from the 2024 North Texas Municipal Water Districts (NTMWD) Water Conservation Plan
- Texas Water Development Board (TWDB) and TCEQ provide guidance on calculations and methodology on water use for reports and water conservation plans
- North Texas Regional Landscape Initiative is a resource for best management practices to help reduce water waste and encourage water conservation

RICHARDSON TEXAS

WATER CONSERVATION PLAN – 2019 and 2024 Comparison

Restrictions	2019 Plan	2024 Plan
Twice per week outdoor watering	√	√
Hours between 10am to 6pm (Apr. 1 to Oct. 31)	√	√
Irrigation systems that water impervious surfaces prohibited	√	√
Outdoor watering during precipitation or freeze events prohibited	√	√
Poorly maintained sprinkler system that waste water prohibited	√	√
Water Conservation Pricing	√	√
Plumbing Codes – Water Conservation Fixtures	√	√
Irrigation System Requirements for New Systems	√	√
Excessive runoff or other obvious waste prohibited	√	√

WATER CONSERVATION PLAN – 2019 and 2024 Comparison (Continued)

Restrictions	2019 Plan	2024 Plan
Overseeding, sodding, sprigging, broadcasting or plugging with cool season grasses or watering cool season grasses, except for golf courses and athletic fields	X	?
The use of potable water to fill or refill residential, amenity, and any other natural or manmade ponds. A pond is considered to be a still body of water with a surface area of 500 square feet or more. This does not include recreational swimming pools	X	?
Hotels and motels that do not offer a linen reuse water conservation option to customers	X	?
Restaurants, bars, and other commercial food or beverage establishments that provide drinking water to customers unless a specific request is made by the customer for drinking water	X	?

WATER CONSERVATION AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN – ENFORCEMENT

- The first violation of any water conservation measures within the plan will result in the customer receiving a letter, educational material on water conservation, and provided reasonable time to correct the violation
- A second violation of any water conservation methods, the city may issue the customer a citation and a fine not to exceed $2,000
- The city's current five-tier level rate structure is in effect year- round to encourage water conservation

WATER CONSERVATION PLAN – GALLONS PER CAPITA PER DAY (GPCD)

- Texas Commission on Environmental Quality (TCEQ) and Texas Water Development Board (TWDB) require goals for Total GPCD, Residential GPCD, and Water Loss GPCD
- Total GPCD
  - Defined as all water use
  - (Total gallons used in water system/Permanent Population)/365
- Residential GPCD
  - Defined as Single Family + Multi Family Residential use
  - (Gallons used for Residential Use/Residential Population)/365

WATER CONSERVATION PLAN – GALLONS PER CAPITA PER DAY (GPCD)

- Water Loss GPCD
  - Defined as non metered water
    - Fire Fighting, Main Breaks, Hydrant Flushing
  - (Total Water Loss/Permanent Population)/365
- GPCD Impacts
  - Increases in industrial production
  - Weather patterns, dry versus rainy summers

PER CAPITA WATER USE GOALS

Table 1: Five- and 10-Year Per Capita Water Use Goals

	Historic 5-Year Average	5-Year Goal 2029	10-Year Goal 2034
Total (GPCD)[1]	213	254	246
Residential (GPCD)[2]	87	117	111
Water Loss (GPCD)[3]	38	30	25
Water Loss (Percentage)[4]	18	12	10

[1]Total GPCD = (Total Gallons in System / Permanent Population) / 365
[2]Residential GPCD = (Gallons Used for Residential Use / Residential Population) / 365
[3]Water Loss GPCD = (Total Water Loss / Permanent Population) / 365
[4]Water Loss Percentage = (Total Water Loss / Total Gallons in System) x 100; or (Water Loss GPCD / Total GPCD) x 100

WATER CONSERVATION AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN – PUBLIC EDUCATION

- Water Efficiency Network of North Texas
- Water My Yard, Texas A&M AgriLife
- Water IQ
- Fix a Leak Week
- Water conservation materials provided by city staff:
  - Cottonwood Arts Festival
  - Neighborhood Leadership and Realtor Workshops
  - Regularly scheduled outreach setups at local businesses

WATER CONSERVATION AND WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN – OTHER RESOURCES

- Use of ET-Based weekly watering advice and recommendations
- Water efficient landscape initiatives
- Additional water saving measures for new irrigation system requirements
- NTMWD and their consultants provide a Water Efficiency Opportunity Surveys for ICIM customers

WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN - PURPOSE

- To save water during droughts, water shortages, and emergencies
- To save water for domestic use, sanitation, and fire protection
- To protect and preserve public health, welfare, and safety
- To reduce the adverse impacts of shortages
- To reduce the adverse impacts of emergency water supply conditions
- To reduce the loss and waste of water

WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN – DROUGHT CONSERVATION TRIGGERS

Drought Stage		April to October	November to March	Demand Reduction Goal	Outdoor Watering Restrictions
		Percent Combined Storage[1]			
Stage 1	Initiation	70%	60%	2%	2X per week (Apr-Oct) 1X per week (Nov-Mar)
	Termination	75%	65%		
Stage 2	Initiation	55%	45%	5%[2]	1X per week (Apr-Oct) 1X every other week (Nov-Mar)
	Termination	70%	60%		
Stage 3	Initiation	30%	20%	30%[3]	No outdoor watering
	Termination	55%	45%		

[1]2019 supply was only Lavon Lake, 2024 supply includes Lavon Lake and Bois D'Arc Lake
[2]2019 Stage 2 reduction goal was 10%
[3]2019 Stage 3 reduction goal was TBD

WATER RESOURCE AND EMERGENCY MANAGEMENT PLAN - 2019 and 2024 COMPARISON

Restrictions	2019 Plan	2024 Plan
Stage 1: 2 x week outdoor watering	√	√
Stage 2: 1 x week outdoor watering	√	√
Stage 3: No outdoor watering	√	√
Stage 2: Prohibit overseeding, sodding, sprigging, broadcasting or plugging, except for golf courses and athletic fields	X	?
Stage 3: Hosing and washing of paved areas, buildings, structures, windows, or other surfaces is prohibited except by variance and performed by a professional service using high efficiency equipment	X	?
Stage 3: Prohibit the operation of interactive water feature such as water sprays, dancing water jets, waterfalls, dumping buckets, shooting water cannons, inflatable pools, temporary splash toys or pools, slip-n-slides, or splash pads that are maintained for recreation	X	?

NEXT STEPS

- April 1st – Council Briefing
- April 8th – Public input opportunity and draft plans submitted
- April 22nd – Final plans on council agenda for consideration
- May 1st – Post final plans per public notification requirements