Bee Branch Restoration Alignment Study

Bee Branch Citizen Advisory Committee (BBCAC)

Meeting # 2 – December 4, 2003

CDM listen. think. deliver.℠

WHKS & CO.

Meeting Agenda

- Introduction
- Project Objectives and Project Opportunities
- Model Validation and Existing System Performance
- Potential Options to Solve Flooding
- Alternative Evaluation Criteria
- Criteria Weighting
- Public Survey and Survey Results
- Moratorium

Meeting Objectives

- Agree on Project Objectives
- Review/amend Project Opportunities
- Understand existing problems in the drainage system
- Determine options that will be analyzed for feasibility
- Make first pass at criteria weighting
- Discuss public survey
- Discuss moratorium

Introduction

- Newsletter
- Meeting notes
- Information requests
- Individual meetings with CDM/WHKS
- BBCAC Survey results

Project Objectives

- Solve the Bee Branch flooding problems
- Minimize acquisitions
- Maintain safety
- Maintain pedestrian crossings
- Maintain basic commercial services
- Address flow from the subwatersheds
- Provide recreation (greenway/parkway/bike trail)
- Eliminate stagnant water
- Preserve Comiskey Park
- Prevent loss of jobs
- Be affordable (within budget allocation)

Objectives from Meeting Notes

1. Safety
2. Preserve Comiskey Park
3. Loss of jobs
4. Walk bridge
5. Maintain pedestrian walkway
6. Park setting
7. Greenway/parkway
8. No stagnant water. Bee Branch should have a constant flow of water
9. Conservation practices implemented in a watershed; i.e., reduction of impervious areas
10. Erosion control
11. Maintain “basic” commercial services; i.e., grocery stores

Project Opportunities

- ~~Determine status of Eagle Grocery at 18th and Elm~~
- H & W Trucking (30th and Jackson)
- Five Points Revitalization Plan (20th and Elm)
- Downtown School relocation
- Recreation opportunities
- Packing Plant Redevelopment
- Housing Replacement (equal cost of ownership, Roosevelt Road)

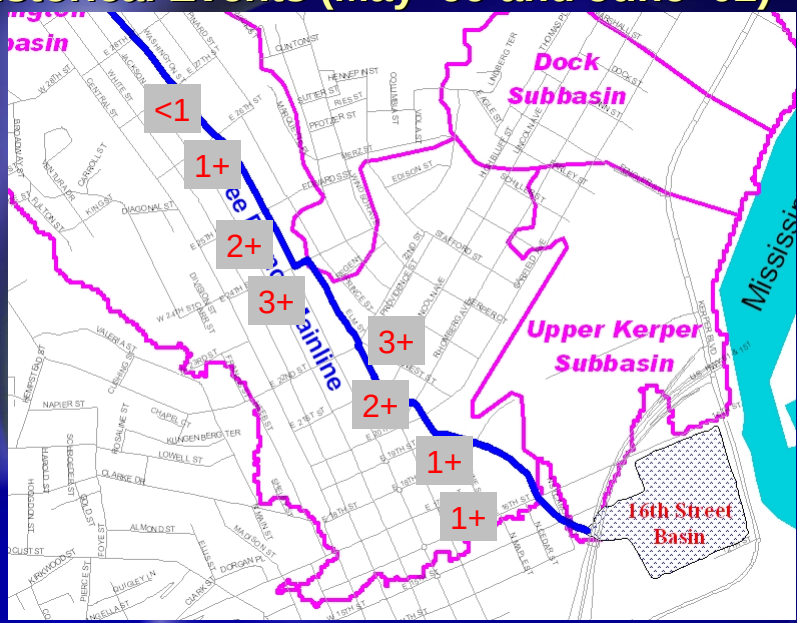
Modeling Validation and Existing System Performance

- Historical Events
- Critical Duration Rain Event
- Capacity versus flow
- System Performance
- Flooding Areas

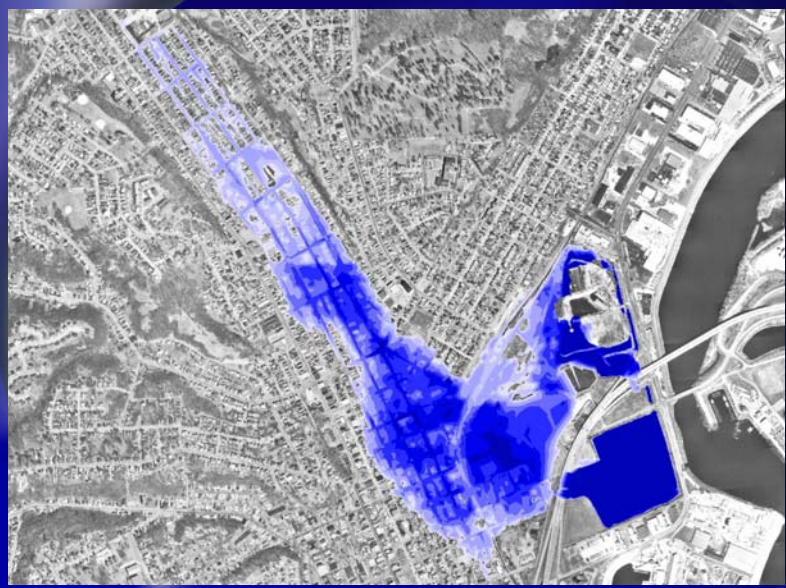
Historical Events

- May 16, 1999 – Over 3.5 inches in 4 hours (5.63 inches in 24 hours)
- June 4-5, 2002 – Approx. 5 inches in 6 hours (5.72 inches in 48 hours)
- July 6, 1993 Event – 3.2 inches in 24 hours

Historical Events (May '99 and June '02)

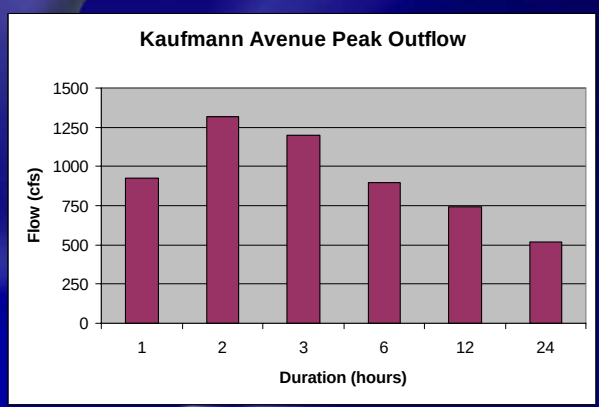


Drainage Basin Master Plan
W. 32nd & Carter Rd. Detention Basins



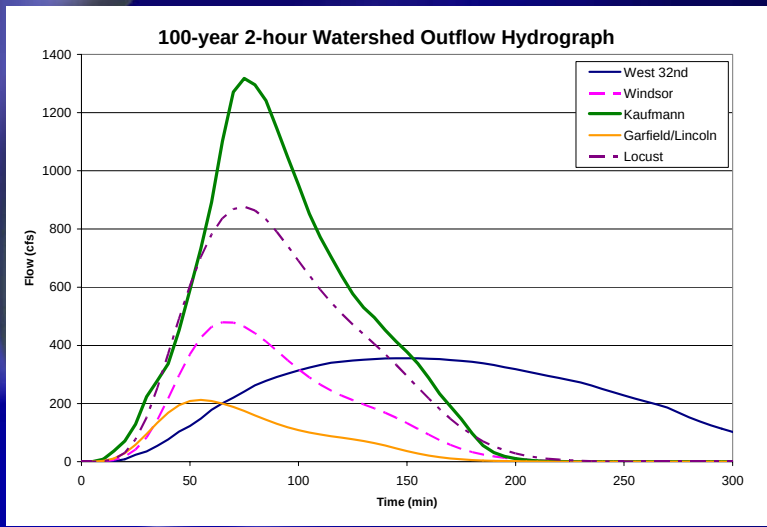
Critical Duration Rain Event

- **100-year Durations versus Peak Flow Plot (representative Basin: Kaufmann)**

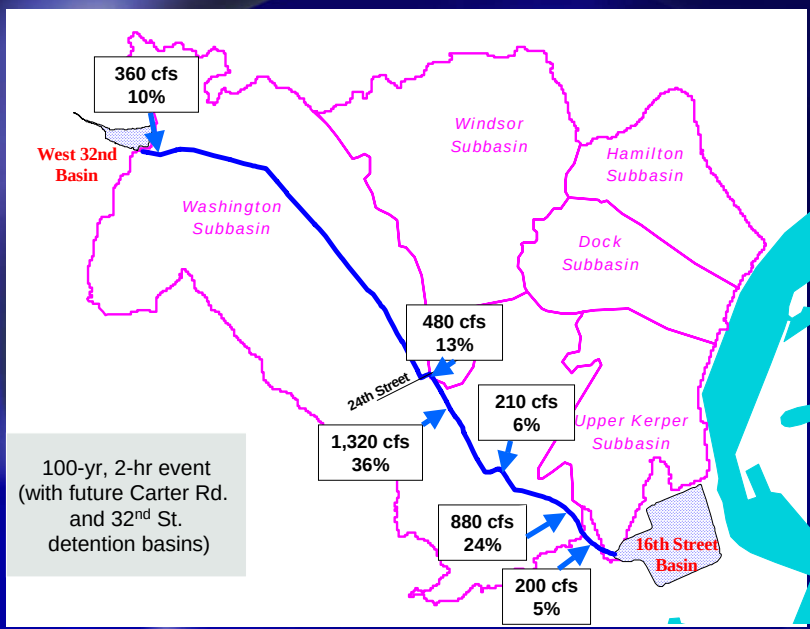


Duration (hrs)	Inches of Rain
1	3.2
2	4.1
3	4.5
6	5.3
12	6.3
24	7.0

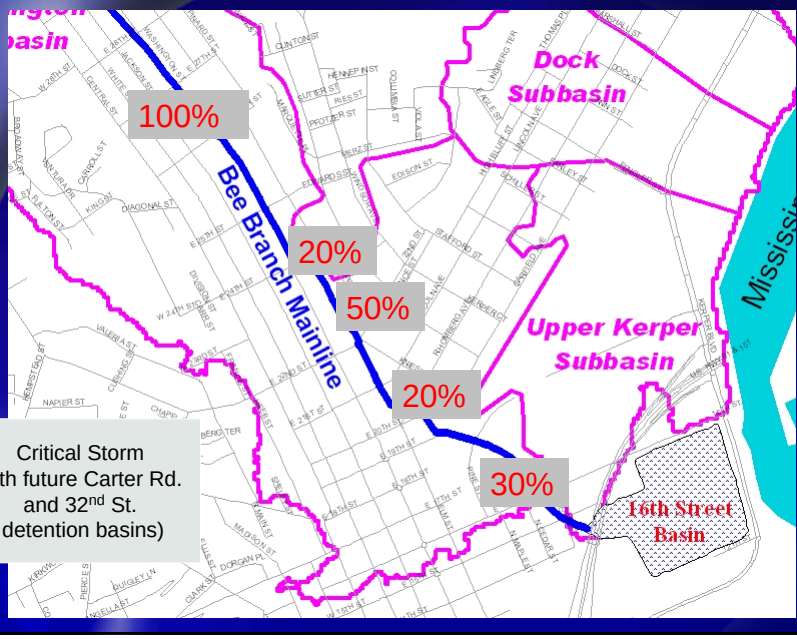
Critical Duration Rain Event



Major Tributary Inflows



Bee Branch Capacity



Critical Storm (with future Carter Rd. and 32nd St. detention basins)

Potential Options to Solve Flooding

- Open Channel
- Buyouts
- Local/Regional Storage
- Relief Pipe
- Levee
- Floodproofing
- Stormwater Reduction Practices
- Pipe Efficiency Improvements
- Street Lowering
- Pumping

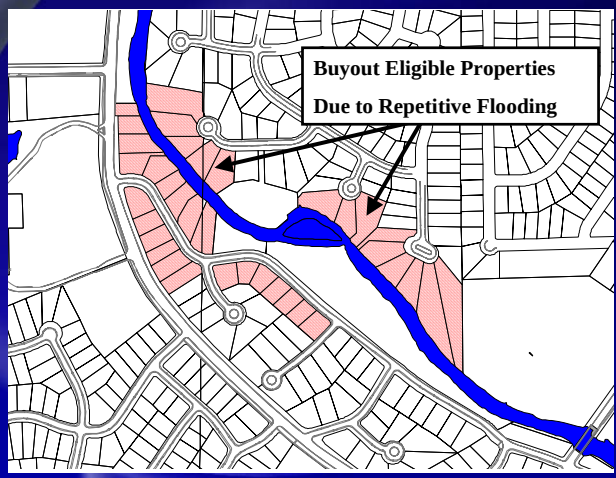
Screening Criteria

- Solves flooding problem
- Affordable
- Preserves/Enhances Quality of Life
- Minimizes Residential Property Acquisitions

Open Channel

- Alignment
- Size
- Treatment
- Multi-use?
- Aesthetics

Buyouts



Local / Regional Storage

Relief Pipe

Levee / Floodwall

Floodproofing

Stormwater Reduction Practices

- Rain Barrels
- Porous Pavement
- Green Roof
- Green Parking Lots
- Rain Gardens

Pipe Efficiency Improvement

Street Lowering

Pumping

Constraints and Criteria

- Constraints will be a condition that can be answered yes or no for each alternative
  - Example: Does the alternative solve the flooding along the mainstem Bee Branch?
- Criteria will be used to evaluate the project and can be measured on some type of scale
  - Example: Number of Acquisitions required

Constraints

- Is the estimated project cost within the budget allocation ($17.1M)?
- Does the alternative solve the flooding along the mainstem Bee Branch?
- Preserve Comiskey Park
- Incorporates a factor of safety

Evaluation Criteria

- Minimize loss of jobs
- Minimize cost
- Preserve neighborhood access/connectivity
- Protect environment
- Restore Bee Branch Creek
- Preserve commercial/non-commercial services
- Minimize health and safety risk
- Minimize residential property acquisitions
- Incorporate “Opportunities”
- Provide multi-objective components
- Enhance quality of life

Planning/Decision Process

Criteria Weighting Exercise

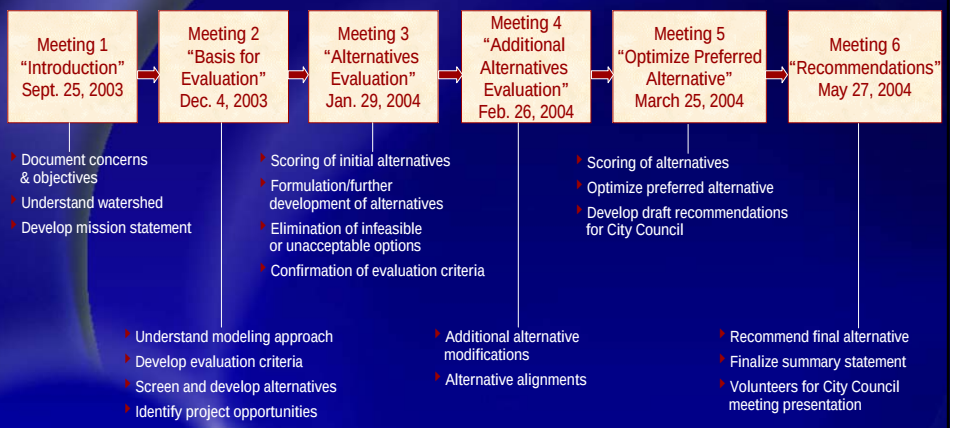
- **Criteria can be weighted to establish relative priorities**

High Importance

Moderate Importance

Low Importance

Planning Process



Next Meeting

- "Alternatives Evaluation"
  - Scoring of initial alternatives
  - Formulation/further development of alternatives
  - Elimination of infeasible or unacceptable options
  - Confirmation of evaluation criteria
- January 29, 2004 – 5:30PM