

# Minneapolis Tree Advisory Commission

## ANNUAL REPORT

Presented April 18, 2011

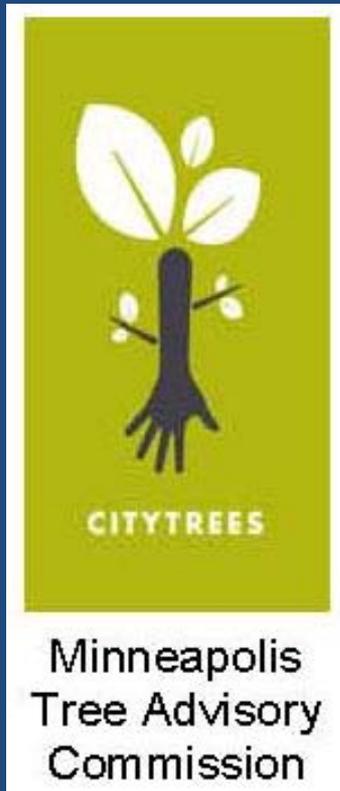


Minneapolis  
Tree Advisory  
Commission

# Minneapolis Tree Advisory Commission

Created in March 2004

by the Minneapolis Park & Recreation Board



## MISSION:

To enhance the  
Minneapolis urban forest  
and improve its  
long-term health.

# Minneapolis Tree Advisory Commission

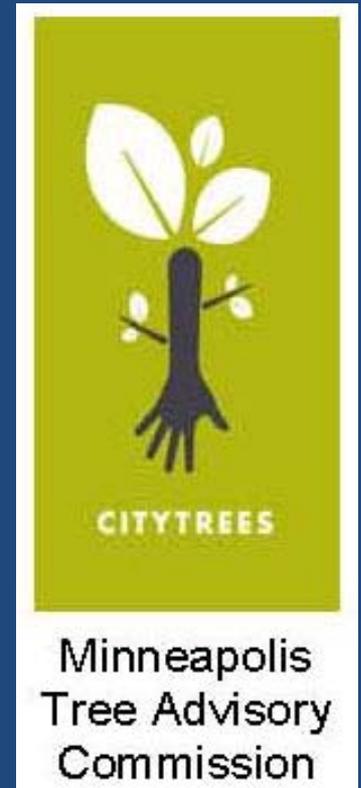
## MEMBERS

- ❖ Ralph Sievert, MPRB
- ❖ John Erwin, MPRB
- ❖ Mike Schmidt, MPRB
- ❖ Kit Richardson, developer
- ❖ Chad Giblin, U of MN
- ❖ Lorrie Stromme, MnSTAC
- ❖ Robin Garwood,  
City Council designate
- ❖ John Slack,  
Mayor's designate
- ❖ Don Willeke, citizen
- ❖ Peggy Booth, citizen
- ❖ Gay Noble, citizen
- ❖ Jean La Bore, citizen
- ❖ John Uban, citizen
- ❖ Lois Eberhart, Mpls PW
- ❖ Paul Oberg, Mpls PW
- ❖ Gayle Prest, Mpls  
Sustainability Director
- ❖ Karen Zumach,  
Tree Trust

# Minneapolis Tree Advisory Commission

## REPORT TOPICS

- Accomplishments
- Innovations
- Concerns
- Recommendations



# ACCOMPLISHMENTS

- Tree planting
- Heritage trees
- City tree standards

# ACCOMPLISHMENTS: TREE PLANTING

- 5,500 public trees planted in 2010
  - 4,000 in May – parks and boulevards



# ACCOMPLISHMENTS: TREE PLANTING

## ➤ 2010 Minneapolis Arbor Day

Jordan Park/Hmong International Academy

May 9, 2010



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**Be a GREEN Superhero!  
Plant and care for Trees!**



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# ACCOMPLISHMENTS: TREE PLANTING

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Jordan Park/Hmong International Academy

May 9, 2010



# ACCOMPLISHMENTS: TREE PLANTING

- “Plant Purple” with the Vikings
  - 1,500 trees planted in September



# ACCOMPLISHMENTS: TREE PLANTING

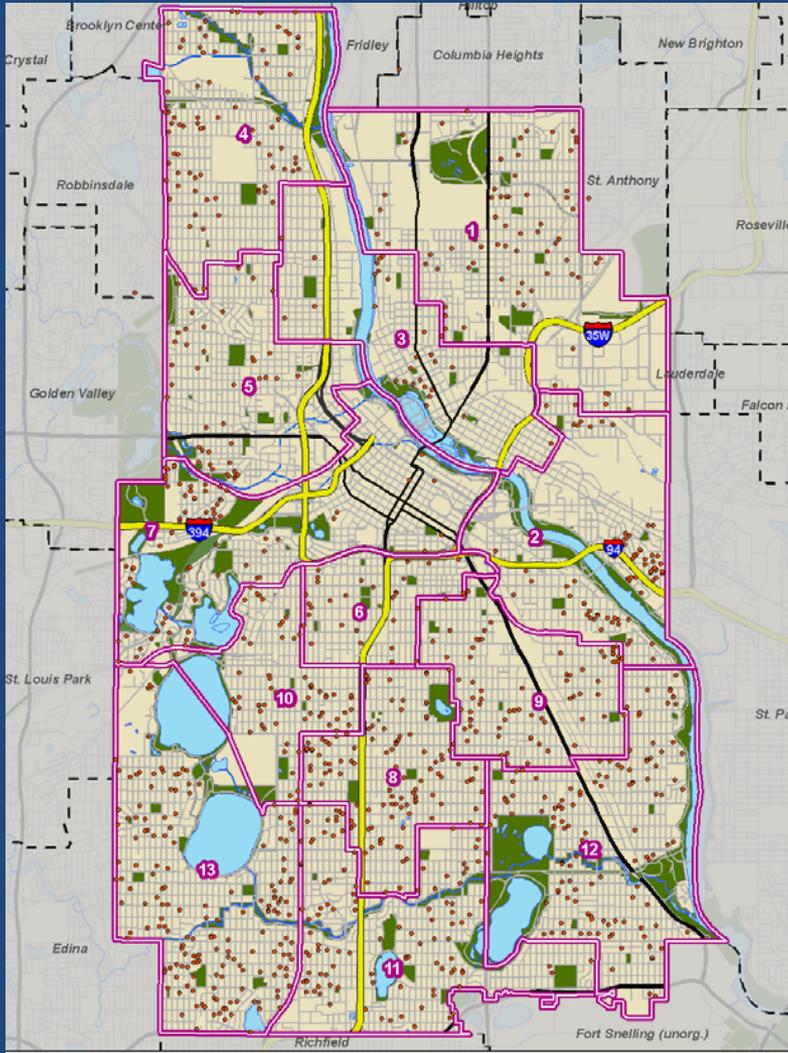
➤ “Plant Purple” with the Vikings



# ACCOMPLISHMENTS: TREE PLANTING

## ➤ City Tree program

- 1,100 trees planted in private yards in 2010
- over 6,000 trees planted since 2004



# ACCOMPLISHMENTS: TREE PLANTING

## ➤ Eagle Scout planting & mulching projects

Lake of the Isles  
& Lake Nokomis



# ACCOMPLISHMENTS: HERITAGE TREE

## ➤ Champion Black Willow

– cloned & planted in north side park



# ACCOMPLISHMENTS: HERITAGE TREE

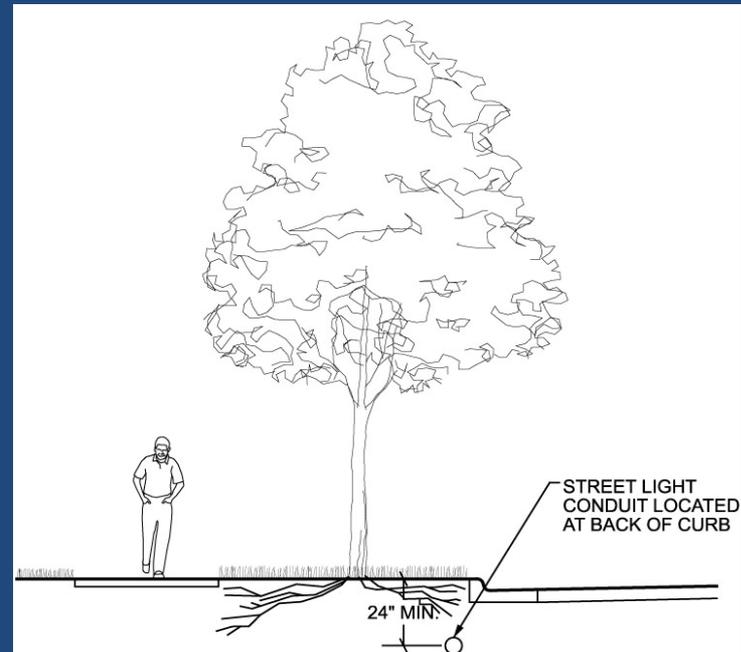
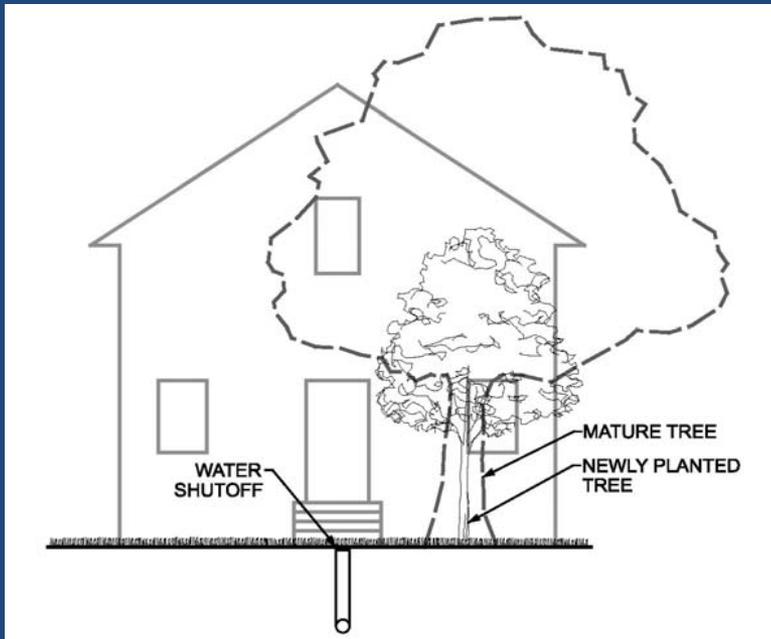
- Colossal Linden saved at Stewart Park
  - conflict with ball field resolved



# ACCOMPLISHMENTS: STANDARDS

## ➤ City Street Tree Standards – draft completed

*“The primary use of the planted boulevard in Minneapolis is for trees and tree roots.”*



# INNOVATIONS

- Managing stormwater with trees
- Quantifying our urban forest
- Special tree districts
- Caring for our trees

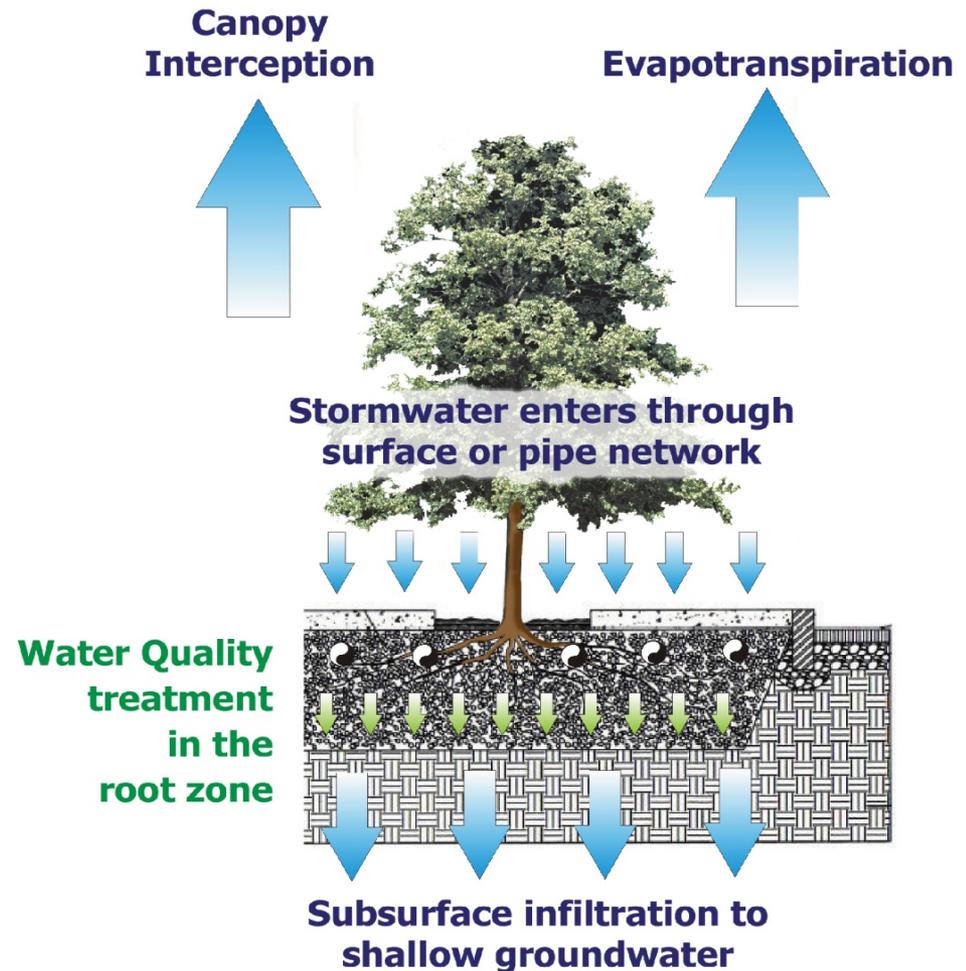
# INNOVATIONS: STORMWATER

➤ Trees help manage stormwater

## Tree-based Stormwater BMP

### Four Functions

1. Canopy Interception
2. Evapotranspiration
3. Subsurface infiltration
4. Water quality treatment in root zone



# INNOVATIONS: STORMWATER

- **Swedish soil**
  - trees thrive in rock with void spaces
  - Washington Avenue in North Loop

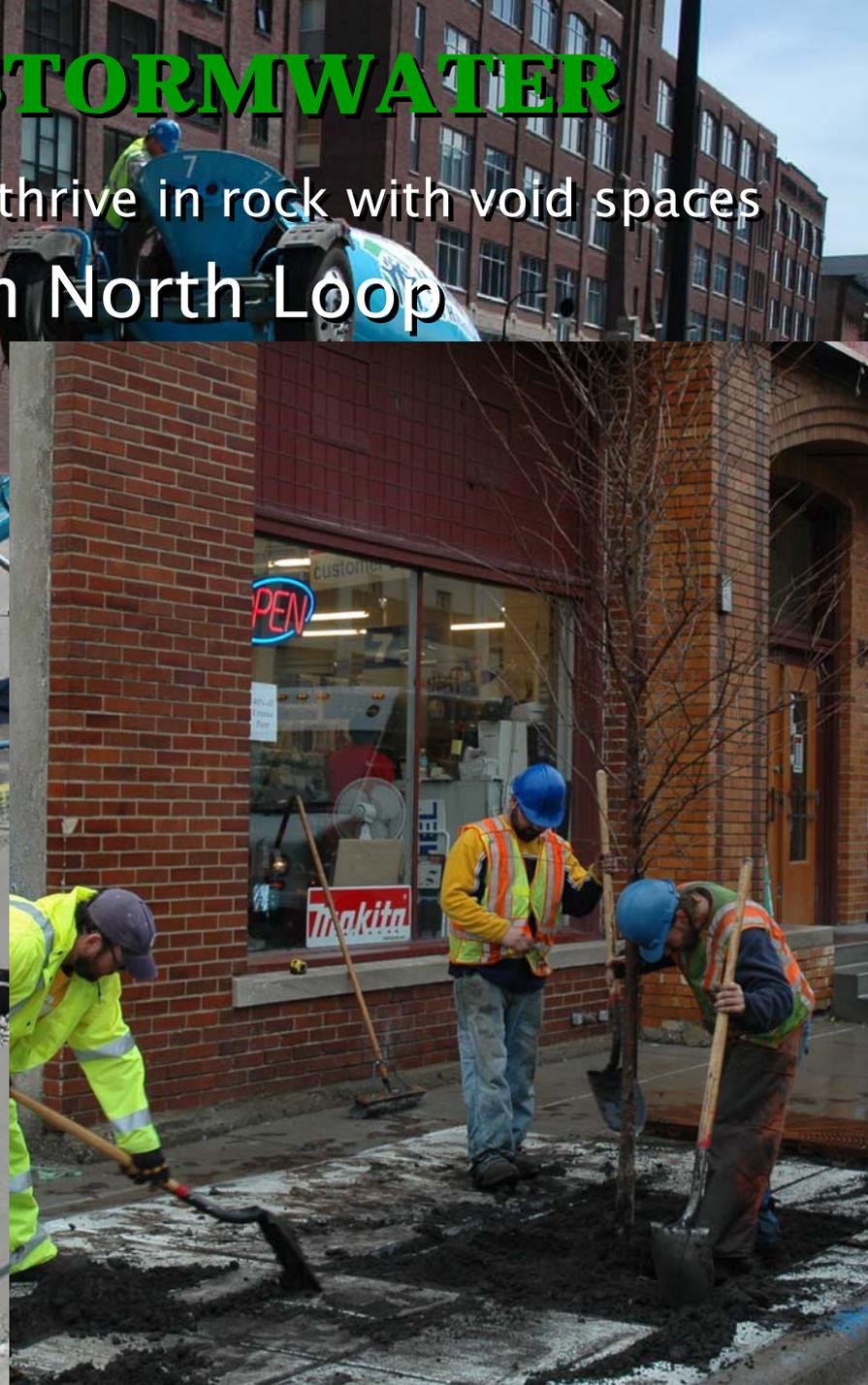


# INNOVATIONS: STORMWATER

- **Swedish soil** – trees thrive in rock with void spaces
- Washington Avenue in North Loop



**Less expensive**  
**With local materials**



# INNOVATIONS: STORMWATER

➤ Swedish soil

– Washington Avenue in North Loop



40" growth  
in 1 year

# INNOVATIONS: STORMWATER

- **Silva cell** – mini reservoirs
- 2<sup>nd</sup> Street & Marquette



Pavement support  
PLUS  
Good root space

# INNOVATIONS: STORMWATER

- Silva cell – mini reservoirs
- 2<sup>nd</sup> Street & Marquette



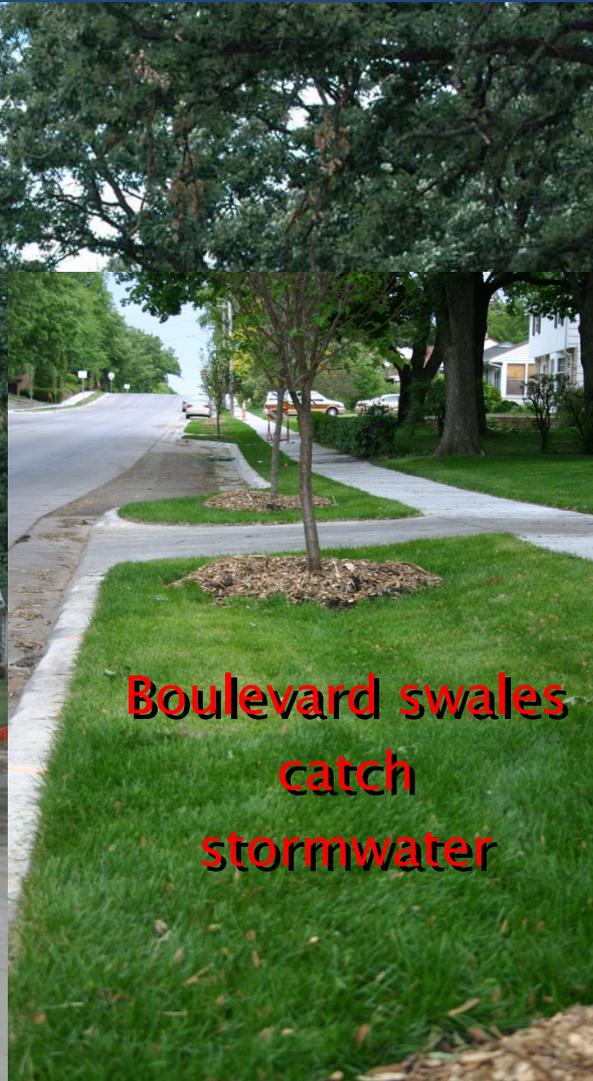
# INNOVATIONS: STORMWATER

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# INNOVATIONS: STORMWATER

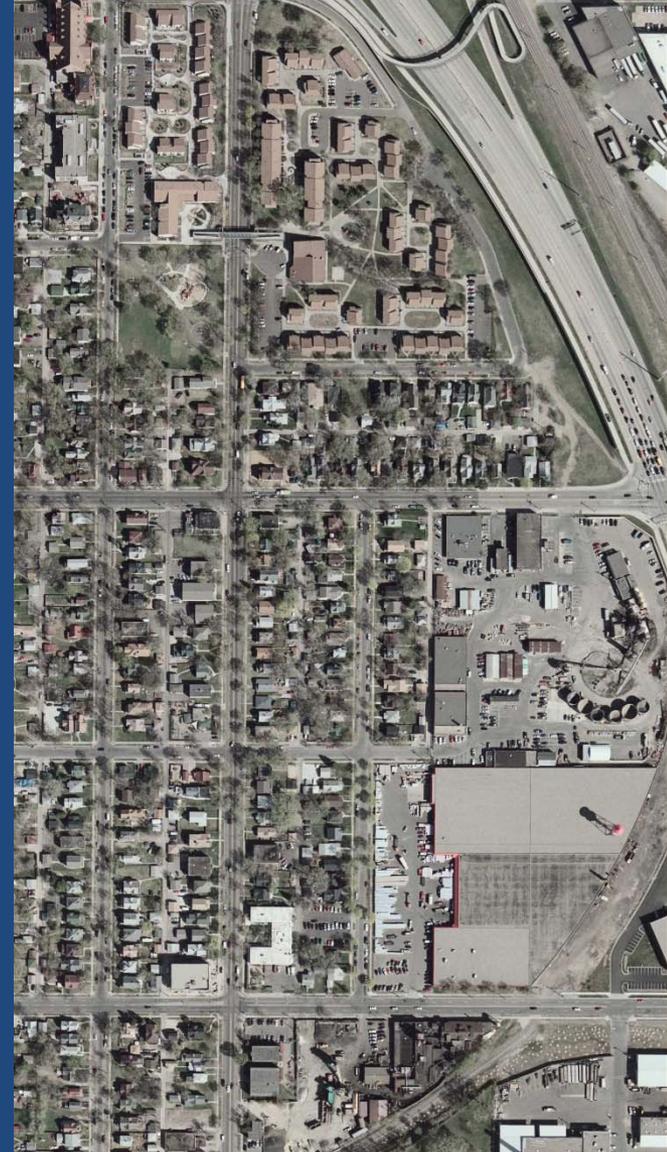
- Rock infiltration cells under street
  - W 54<sup>th</sup> St (between Penn & Upton)



# INNOVATIONS: QUANTIFYING THE URBAN FOREST

➤ Aerial mapping will set benchmark for tree canopy

- GIS-based land-cover data
  - Urban tree canopy, impervious surfaces, water, bare soil
- Baseline for measuring environmental benefits
- Quantifies value of trees in stormwater reduction, energy savings, air quality



# INNOVATIONS: SPECIAL TREE DISTRICTS

## ➤ Downtown Improvement District

- private initiative includes planting trees



Before



After

Example of other private street tree initiative

# INNOVATIONS: TREE CARE

- Watering gators on boulevards
  - 600 gators placed citywide



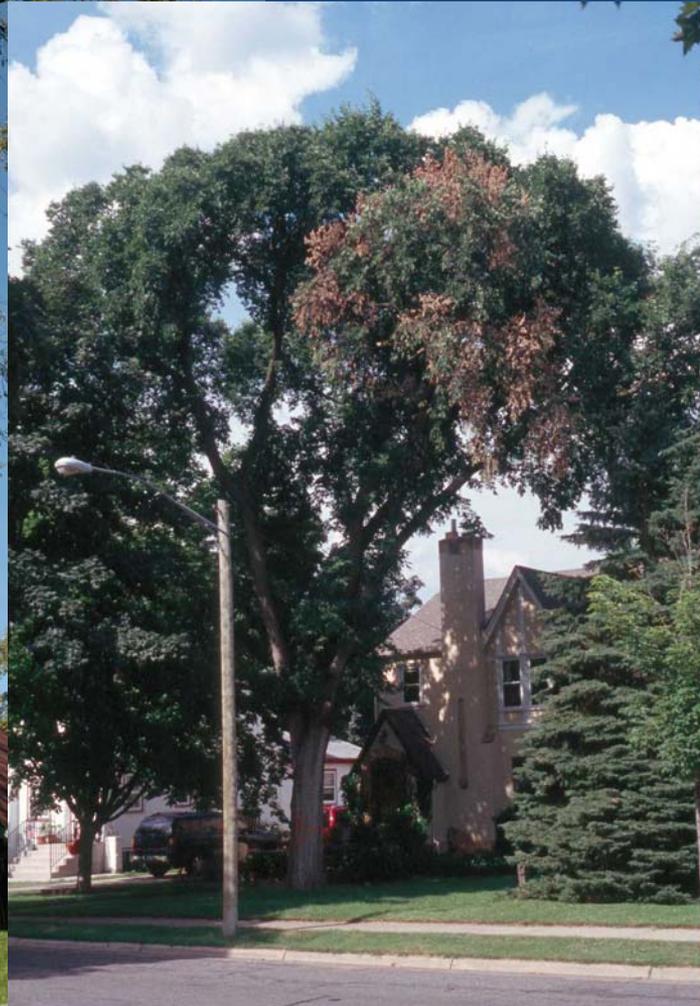
# CONCERNS

- Tree losses
- Emerald Ash Borer
- Damage to public trees
- MPRB Forestry downsizing

# CONCERNS: TREE LOSSES

## ➤ Dutch elm disease

- 2,300 public & private trees removed in 2010



# CONCERNS: TREE LOSSES

- Stressed, damaged or hazard trees
  - 2,300 removed city-wide



# CONCERNS: TREE LOSSES

➤ 333 year old Ancient Oak removed



# CONCERNS: TREE LOSSES

- 333 year old Ancient Oak removed  
... and replanted



# CONCERNS: EAB

## ➤ Emerald Ash Borer

- Quarantines in Hennepin, Ramsey, and Houston counties



# EAB management in St. Paul – not in Minneapolis

**Before: a canopy of trees**



**After: a hole in the sky**



# CONCERNS: EAB

## ➤ Minneapolis PRE-EMPTIVE ash removals

- Tower Hill Park and city-wide:
- 1,400 removed in 2010



# CONCERNS: TREE DAMAGE

- Excessive root cutting by PWD contractors
  - still happening – e.g. @ Washburn & 51<sup>st</sup> St W



# CONCERNS: MPRB FORESTRY DOWNSIZING

- Key positions eliminated in 2010
  - concerns about another round of cuts

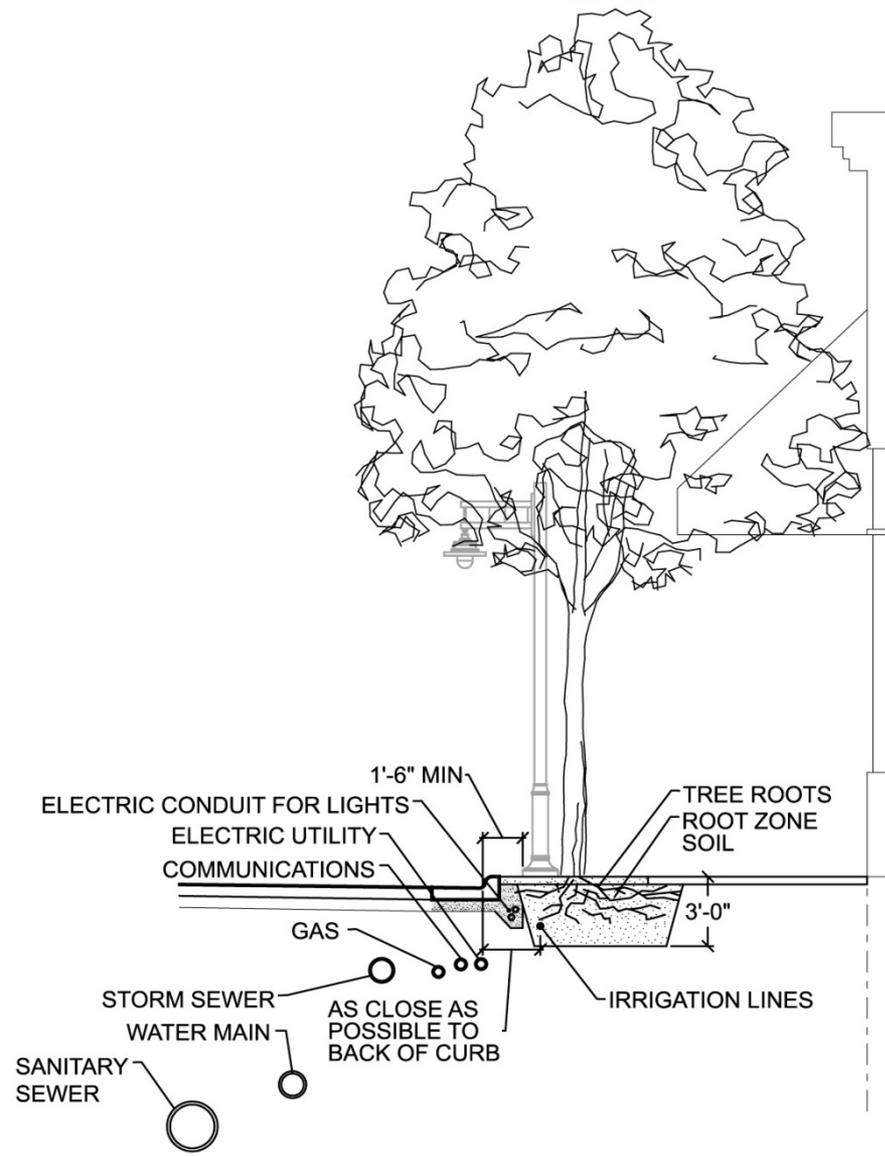


# RECOMMENDATIONS

- Finalize & adopt City street tree standards
- Complete MPRB tree inventory
- People ARE critical to sustain forest
- Strategically fight EAB
- Apply tree-friendly innovations
- Increase diverse tree canopy

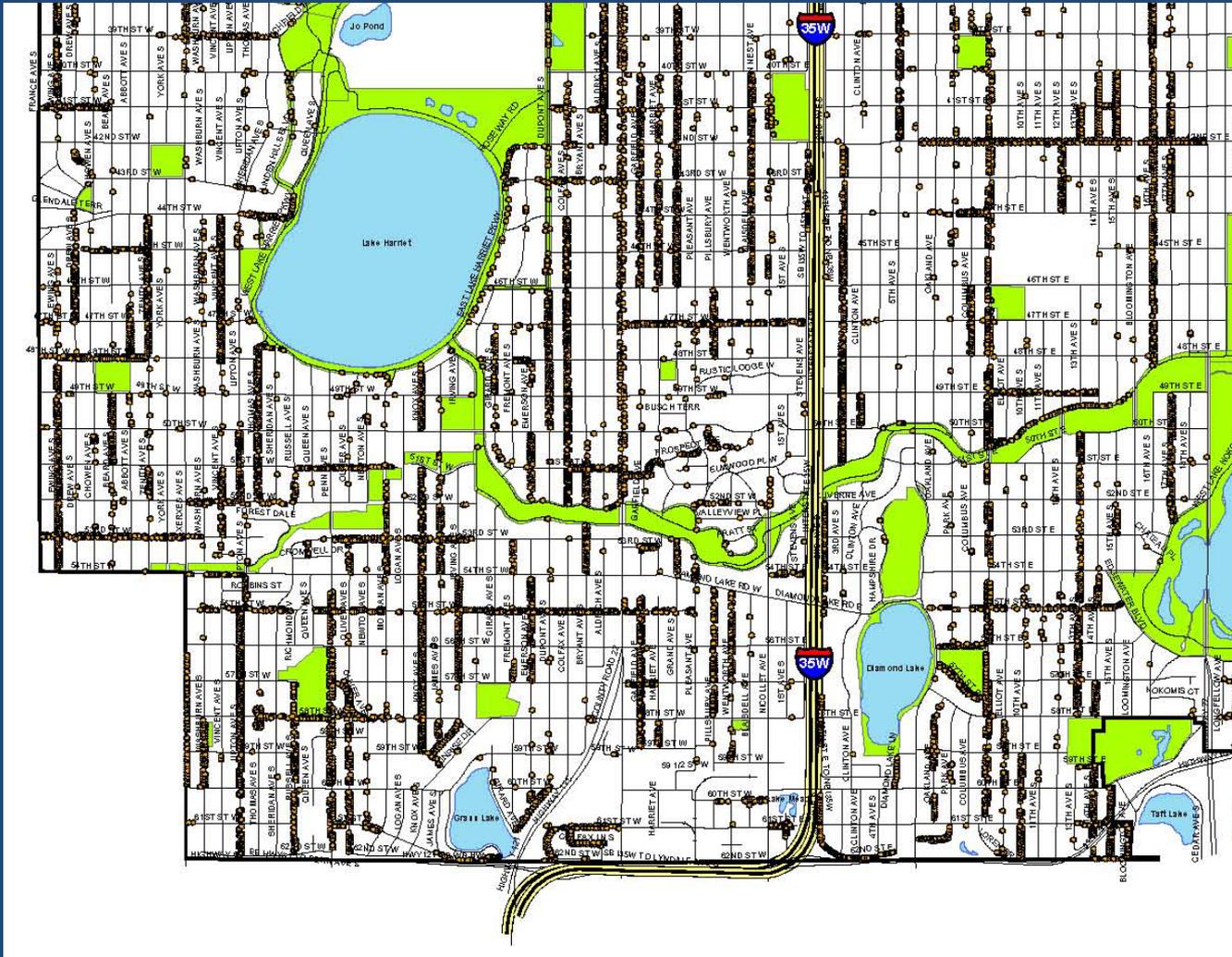
# RECOMMENDATIONS

- Finalize & adopt City street tree standards



# RECOMMENDATIONS

## ➤ Complete MPRB tree inventory



**Legend**

 = 23,978 Ash Tree Locations

# RECOMMENDATIONS

➤ People ARE critical to sustain the urban forest

- Retain at least current staffing levels
- Build on history of entrepreneur partnerships



# RECOMMENDATIONS

➤ People ARE critical to sustain the urban forest

– Adopt new approaches to citizen engagement

Launch Minneapolis iPhone app

– e.g. citizen water brigade



# RECOMMENDATIONS

➤ Strategically fight Emerald Ash Borer

– Monitor carefully



# RECOMMENDATIONS

- Strategically fight Emerald Ash Borer
  - Increase pre-emptive ash removal
  - Remove stressed trees



# RECOMMENDATIONS

➤ Strategically fight Emerald Ash Borer

– Test larval freezing & bio-control



# RECOMMENDATIONS

## ➤ Apply tree-friendly innovations

– Install & test more root-friendly infrastructure:

- Swedish soil
- silva cell
- continuous tree trenches



# RECOMMENDATIONS

## ➤ Apply tree-friendly innovations

- Use more tree plantings to treat stormwater



# RECOMMENDATIONS

## ➤ Increase diverse tree canopy

– Hit City's Sustainability indicator targets:

- ✓ Maintain 26% tree canopy through 2015\*\*
- ✓ Increase to 30% canopy by 2030\*\*
- ✓ Plant 4000+ trees on public land in 2010
- ✓ Increase to 6000 trees/year by 2015



# RECOMMENDATIONS

## ➤ Increase diverse tree canopy

- Aim more plantings at underserved areas ... to improve livability & environmental quality



# RECOMMENDATIONS

## ➤ Increase diverse tree canopy

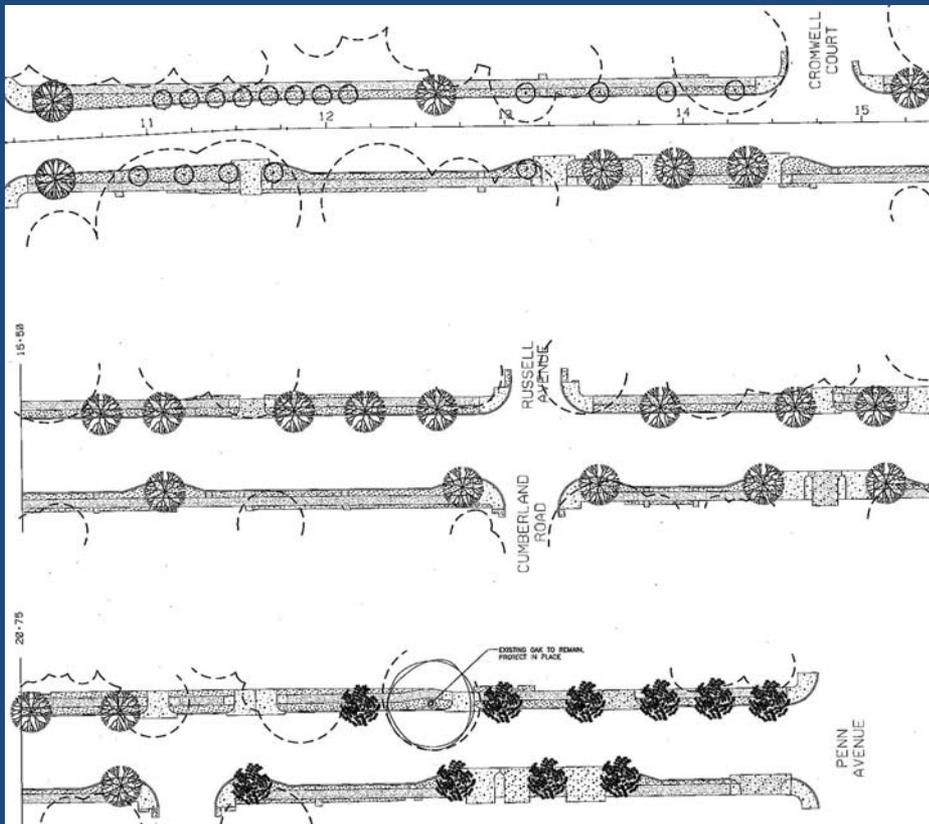
- Continue funding the City Tree Program ...
  - ✓ At least at 1500 trees/year (2011 level)
  - ✓ For all types of property
  - ✓ Market bigger shade trees



# RECOMMENDATIONS

## ➤ Increase diverse tree canopy

- Achieve greater boulevard tree diversity ... considering site specific conditions



54TH ST W FROM STATION 10+12.01 TO STATION 15+50.00



HIS MAJESTY AMUR CORKTREE  
PHELLODENDRON AMURENSE 'HIS MAJESTY'



BIG TOOTHED ASPEN  
POPULUS DELTOIDES



IVORY SILK JAPANESE TREE LILAC  
SYRINGA RETICULATA 'IVORY SILK'



STATELY MANOR KENTUCKY COFFEETREE  
GYMNOCLADUS DIOICUS 'STATELY MANOR'



NORTH LINE SILVER MAPLE  
ACER SACCHARINUM 'NORTH LINE'

# RECOMMENDATIONS

## ➤ Increase tree canopy

- Utilize Minneapolis Tree Cover Analysis for strategic tree placement

False color image of multispectral data for a sample area



Classification: Trees, Grass & shrubs, Buildings, Streets & other Impervious, Water



Image Segmentation



Decision Rules

# **In Summary**

## **MINNEAPOLIS TREE ADVISORY COMMISSION RECOMMENDATIONS**

- **Finalize & adopt street tree standards**
- **People ARE critical to sustain forest**
- **Strategically fight EAB**
- **Apply tree-friendly innovations**
- **Increase diverse tree canopy**