Urban Forest Management Plan

Edmonton's Urban Forest – Taking Root Today for a Sustainable Tomorrow
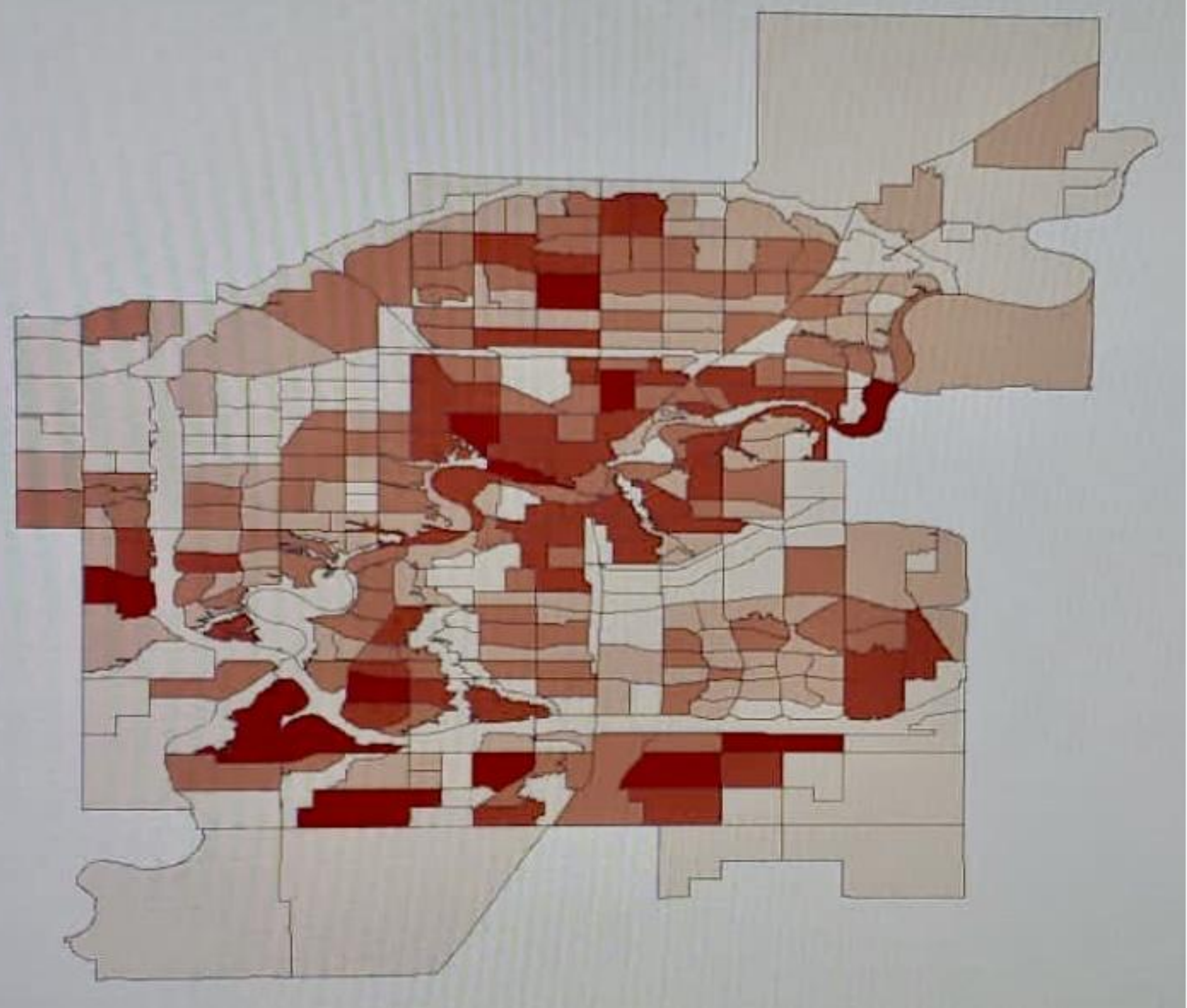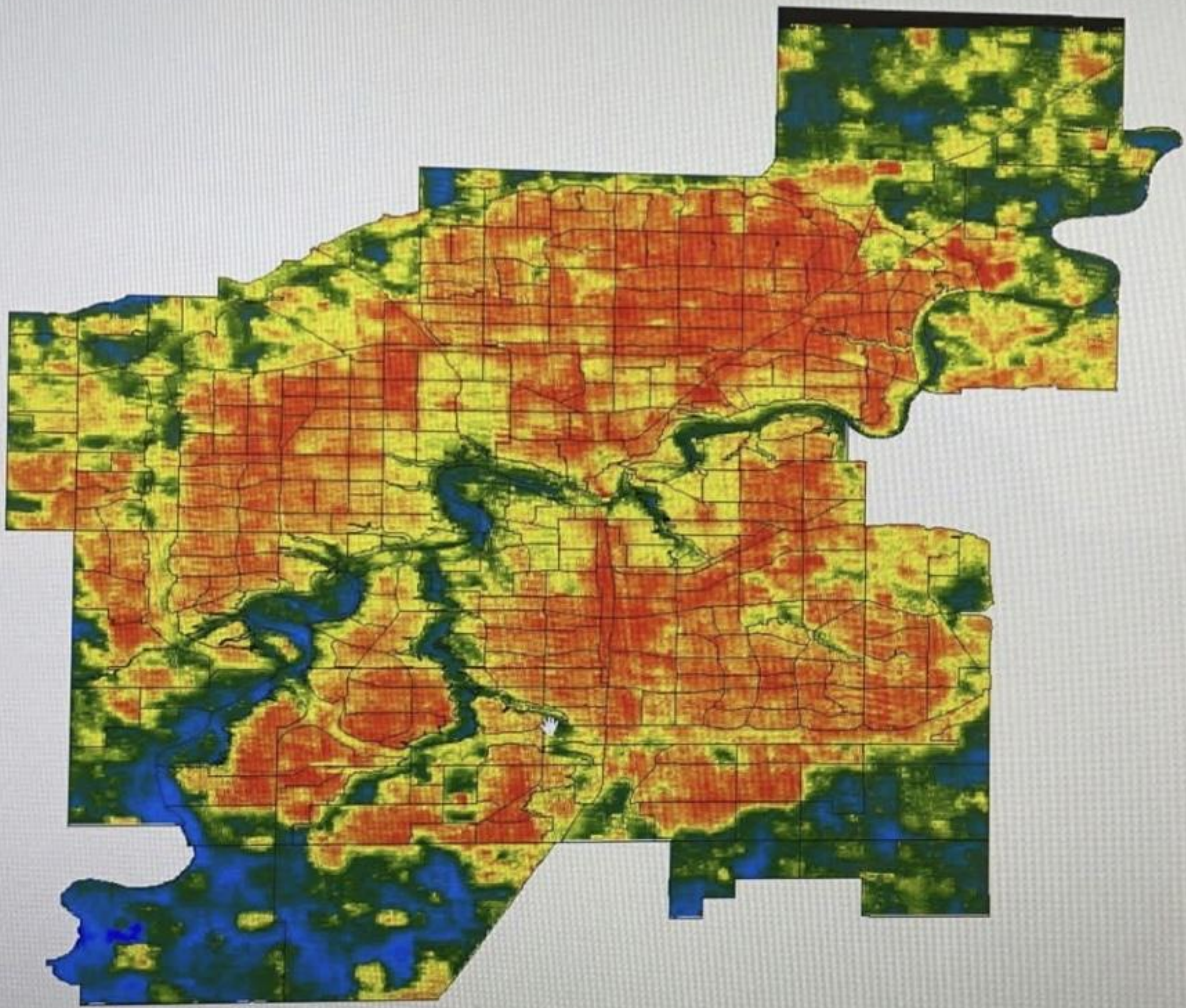
ENVIRONMENTAL AND ECOLOGICAL BENEFITS

- Reduces the heat island effect that occurs as urban development modifies land surfaces.
- Improves air quality by filtering dust and absorbing ozone, carbon monoxide, sulphur dioxide, nitrogen oxides, airborne ammonia and heavy metals.
- Improves water quality by shading streams, lowering water temperature and filtering out pollution that would otherwise enter the river.
- Moderates temperatures, reducing the energy needed for heating and cooling.
- Counteracts greenhouse effects and global climate change by removing carbon from the atmosphere and releasing oxygen for people to breathe.
- Reduces exposure to ultraviolet (UV) rays by offering shade and absorbing up to 95% of UV radiation.
- Provides essential habitats and corridors for wildlife movement while linking humans to our natural environment.
- Reduces damage from stormwater runoff by absorbing rainfall or delaying its flow into drainage areas.
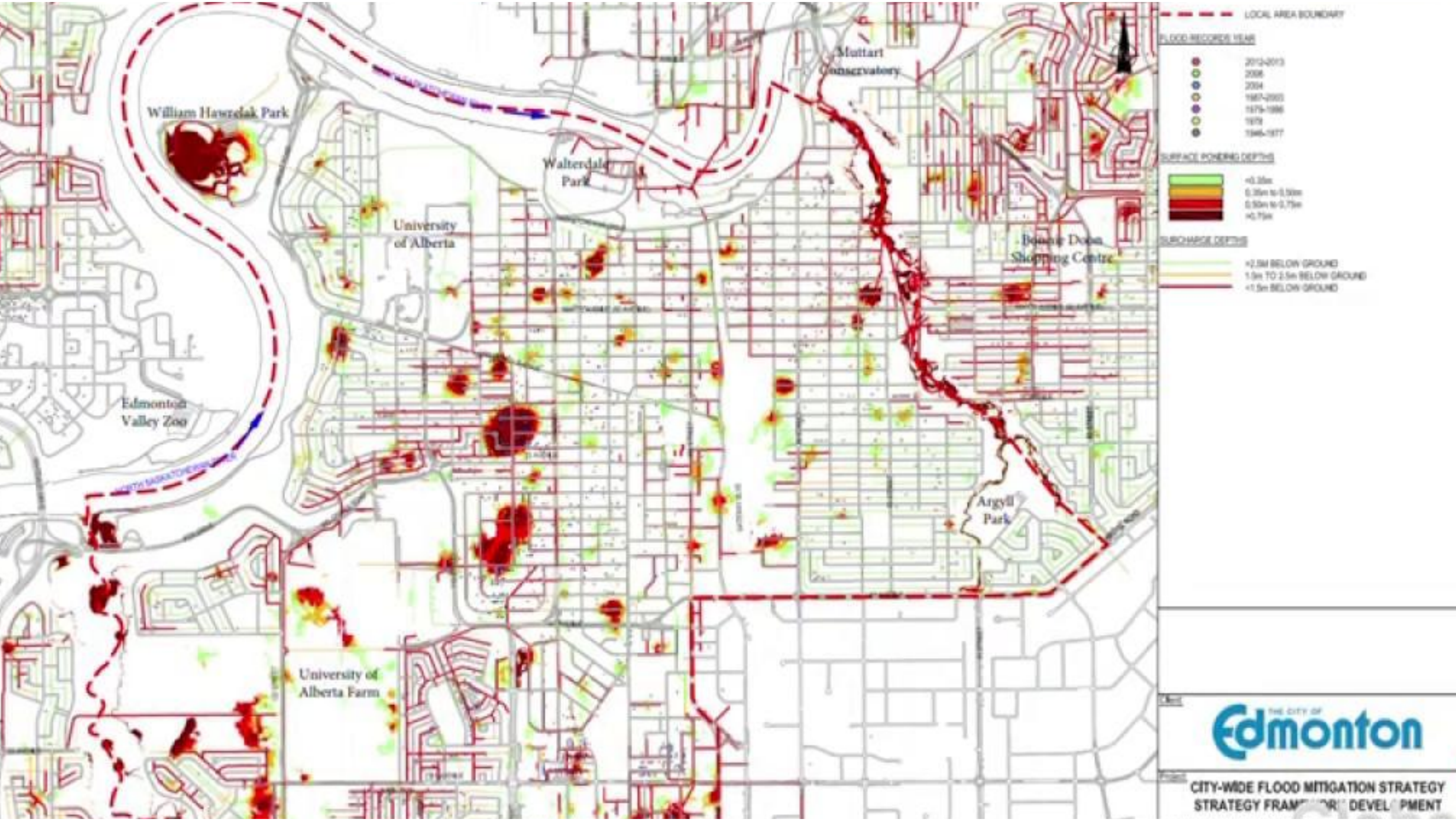
ECONOMIC BENEFITS

- Reduces energy costs for winter heating and summer cooling as much as 25% when trees are sited to provide shade and windbreak.
- Increases land and property values as much as 20% when landscaped and tended; properties near green spaces also have higher value.
- Attracts and maintains businesses and tourism, contributing to economic stability as well as community spirit and pride.
- extends the life of hard infrastructure such as sidewalks and roadways.

SOCIAL AND HEALTH BENEFITS

- Provides aesthetic value and improves quality of life.
- Creates a sense of privacy and adds character to surroundings.
- Reduces crime by revitalizing neighbourhoods and fostering the social ties needed to empower citizens.
- Reduces recovery time for people recuperating from surgery.
- Promotes environmental responsibility and ethics.
- Reduces stress—people who drive to work along tree-lined streets arrive less stressed than those who travel along roadways without trees.
- Calms the speed of traffic

Muttart Conservatory

William Hawrelak Park

Walterdale Park

University of Alberta

Bonnie Doon Shopping Centre

Edmonton Valley Zoo

Argyll Park

University of Alberta Farm

THE CITY OF
Edmonton

CITY-WIDE FLOOD MITIGATION STRATEGY
STRATEGY FRAMEWORK DEVELOPMENT

Land Use	% Tree Canopy	Estimated Number of Trees
Ag/Urban Residential	7.60	3,475,220
Commercial	5.00	142,787
Industrial	8.40	693,328
Direct/Other (roadways)	1.30	26,550
Park and Natural areas	14.80	1,008,891
Residential	15.50	7,155,637
Institutional	8.40	305,778
CITY TOTAL	10.30	12,808,191

Figure 4. Edmonton's complete tree canopy

Using USDA Urban Forest Effects (UFORE) model, 2009

56% of Edmonton's Urban Forest is on Private Residential Property

Two million new urban trees planted

The urban canopy makes a quantifiable contribution to the long-term livability of our city. Edmonton's forest, city-wide, removed an estimated 531 tonnes of pollutants in 2009 alone, a feat worth more than $3 million. Edmonton's urban forest represents a significant municipal asset. Edmonton's tree count is currently estimated at 12.8 million trees. Of those, about 380,000 are publicly owned trees that enhance Edmonton's boulevards, roadways and parks. Aiming to increase the urban tree count in Edmonton by two million net new trees means that we will add greenery throughout our nodes and corridors, parks, private and public realm.

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EDMONTON CITY PLAN

~3% of Edmonton's Urban Forest is Publicly Owned

LONG-TERM STRATEGIES AND ACTIONS

Strategy 1.8: Research best management practices for tree protection on private lands and develop guidelines and public education material.

Action a: Promote planting, protection and preservation of trees on public and private land.

Action b: Maintain tree protection through policies, standards and bylaws, including the Corporate Tree Policy and Community Standards bylaws.

Strategy 2.2: Increase awareness about urban forest management issues and related standards.

Action a: Review and update design standards and inform affected stakeholders (contractors, private industry and the public) about actions needed to sustain our urban forest.

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City	Current Tree Canopy %	Future Tree Canopy target %
Calgary	7.1	20
Kelowna	13	25
Oakville	29.1	30
Ottawa	27	30
Toronto	20.5	30
Edmonton	10.3	20

Figure 5. Average tree canopy in Canadian cities

Sources: Municipalities, USDA Forest Service, 2007; UFORE