

Economic Benefits: Nature, Development Patterns and Enhanced Property Values

Jenna Fletcher

Embrace Open Space/Trust for Public Land

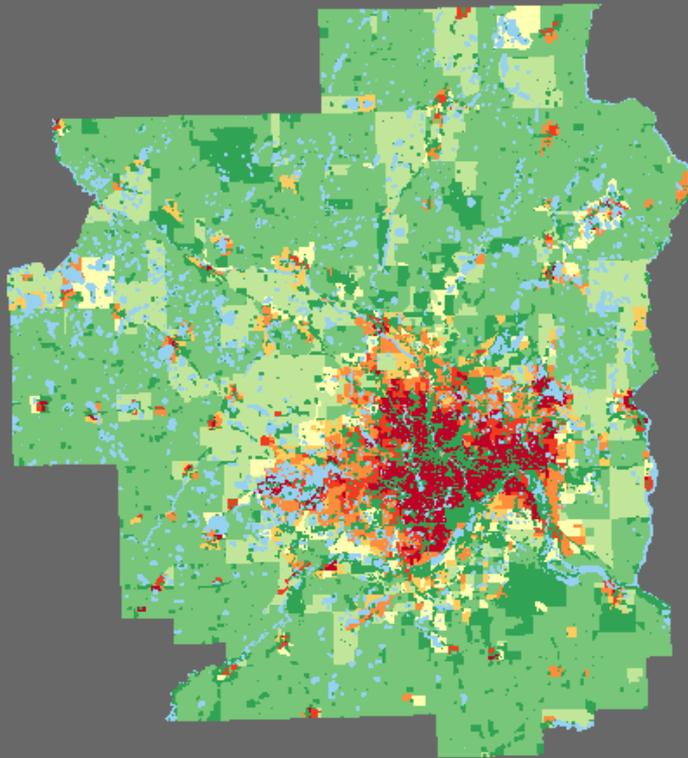


Housing Density

1940

EMBRACE OPEN SPACE

www.EmbraceOpenSpace.org



- Preserved natural areas/parks
- Undeveloped
- Rural
- Developing Rural
- Exurban
- Developed
- Densely developed
- Urban
- Water

MN Twin Cities Metro Area



This animated map shows Twin Cities' rapid growth since 1940 - and projected out to 2030

Source: Hammer, R. B. S. I. Stewart, R. Winkler, V. C. Radeloff, and P. R. Voss. 2004. Characterizing spatial and temporal residential density patterns across the U.S. Midwest, 1940-1990. Landscape and Urban Planning 69: 183-199.

Acting Now is Urgent

- **Our Natural Lands Are Threatened:**
 - One million new residents projected by 2030
- **The time is right ...the “green lining” of the recession**
 - Land values are down
 - Landowners are more interested in selling
 - Land might not be available later





Frederic Larson / The Chronicle

Is this the “open space” we desire?

Local Perspective On Counting Open Space

CITY OF RUSHFORD, MINNESOTA
GENERAL FUND
Statement of Revenues, Expenditures
and Changes in Fund Balance - Budget and Actual
For the Year Ended December 31, 2007
With Comparative Totals for December 31, 2006

Form B-5

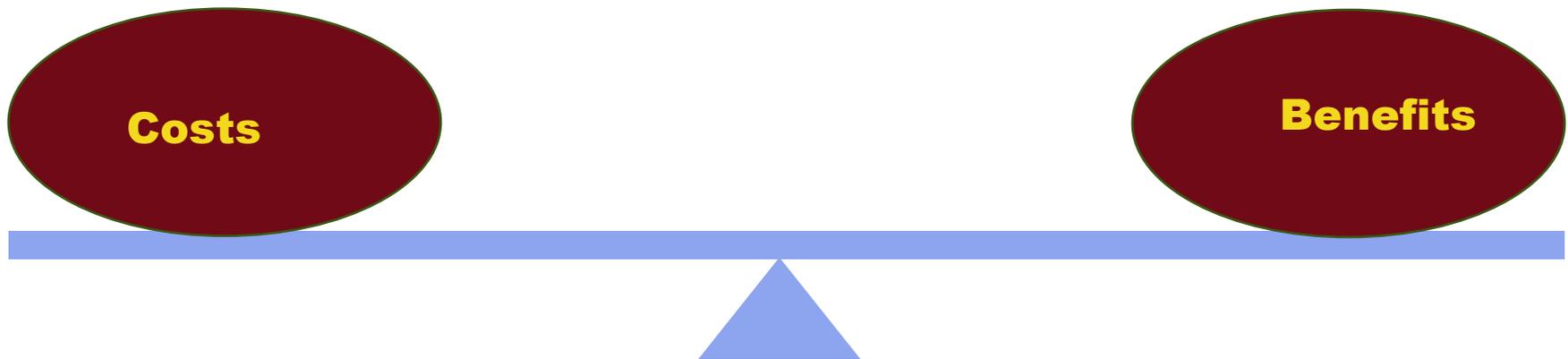
	2007			Variance Favorable (Unfavorable)	2006 Actual Amounts
	Budgeted Amounts		Actual		
	Original	Final			
REVENUES					
General Tax Levy	\$ 187,036	\$ 187,036	\$ 193,128	\$ 6,092	\$ 170,336
Licenses and Permits					
Business	3,940	4,065	4,065		3,940
Nonbusiness	11,160	11,160	79,088	67,928	14,644
Total Licenses and Permits	15,100	15,225	83,153	67,928	18,584
Lodging Taxes	2,500	2,500	1,945	(555)	1,983
Intergovernmental Revenues					
Local government aid	232,000	232,000	233,202	1,202	229,705
Market value credit	33,849	33,849	33,849		29,588
Police aid	16,000	16,000	17,028	1,028	14,235
Fire relief aid	22,000	20,966	20,966		24,384
Snowmobile and canoe trail aids	26,270	181,006	180,656	(350)	33,048
Snowmobile trail assistance	(25,920)	(180,656)	(180,656)		(33,048)
Other aid	1,765	5,445	5,795	350	2,115
Total Intergovernmental Revenues	305,964	308,610	310,840	2,230	300,027
Fines and Forfeits	7,000	14,060	14,910	850	12,316
Charges For Services					
Swimming pool	30,050	30,100	33,857	3,757	29,138
Baseball and recreation	4,600	4,600	5,570	970	4,715
Park usage fees	1,000	2,500	2,646	146	1,398
Total Charges For Services	35,650	37,200	42,073	4,873	35,251
Interest Income	4,000	10,000	15,811	5,811	9,574
Miscellaneous Revenues					
Other	8,900	10,400	9,934	(466)	12,676
TOTAL REVENUES	\$ 566,150	\$ 585,031	\$ 671,794	\$ 86,763	\$ 560,747

CITY OF RUSHFORD, MINNESOTA
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	2007			Variance Favorable (Unfavorable)	2006 Actual Amounts
	Budgeted Amounts		Actual Amounts		
	Original	Final			
Public Works					
Highways, Streets and Alleys					
Salaries	\$ 16,500	\$ 20,400	\$ 20,626	\$ (226)	\$ 12,686
Employee benefits and retirement	2,800	2,800	2,933	(133)	1,877
Gas, oil and supplies	8,000	12,000	13,930	(1,930)	6,132
General supplies	6,050	5,350	4,925	425	5,948
Blacktop and surface materials	700	500	266	234	368
Professional services	200	650	450	200	
Insurance	6,100	5,100	4,824	276	4,210
Repairs and maintenance	6,500	8,000	8,949	(949)	11,408
Miscellaneous	4,300	4,200	1,279	2,921	1,136
City garage expense	4,250	3,950	3,759	191	3,827
Street lighting	20,000	16,000	16,082	(82)	16,478
Total Highways, Streets and Alleys	75,400	78,950	78,023	927	64,070
Dikes					
Salaries	6,450	5,350	3,733	1,617	4,591
Employee benefits and retirement	1,230	1,030	869	161	848
Gas, oil and supplies	1,800	1,800	1,519	281	1,184
General supplies	200	1,900	1,813	87	146
Insurance	930	730	374	356	697
Utilities	800	600	595	5	747
Repairs and maintenance	1,200	1,200	533	667	1,218
Professional services	2,100	3,600	162	3,438	1,932
Total Dikes	14,710	16,210	9,598	6,612	11,363
Total Public Works	90,110	95,160	87,621	7,539	75,433
Parks and Recreation					
Park Department					
Salaries	6,765	7,600	7,626	(26)	6,017
Employee benefits and retirement	1,200	1,200	1,193	7	1,038
Gas and oil	1,800	1,500	1,376	124	1,219
General supplies	2,000	1,800	1,542	258	1,941
Telephone	20	20		20	4
Insurance	3,725	3,200	2,846	354	3,084
Utilities	3,100	3,100	2,319	781	4,744
Repairs and maintenance	4,700	4,000	3,264	736	3,700
Professional services		850	840	10	
Miscellaneous	50	50	362	(312)	94
Total Park Department	\$ 23,360	\$ 23,320	\$ 21,368	\$ 1,952	\$ 21,841

The Balancing Act: Costs and Benefits of Land Conservation



- **Both** the costs and benefits
- Short-term and long-term for **both**

Top Ten Benefits of Conserving Land

1. Protects and enhances water quality
2. Provides access to healthy living
3. Improves mental health and learning
4. ***Enhances property values***
5. Strengthens local economy
6. Protects healthy habitat
7. Enhances livability
8. Builds sense of community
9. Builds social skills
10. Defines national identity



Measuring Economic Impact – Multiple Approaches

Analysis Method	Usefulness
<p>Enhanced property values – <i>Proximate principle</i> says that market values of properties near open spaces are > than similar properties elsewhere. Uses mathematical regression analysis to conduct <i>hedonic pricing analysis</i>, to isolate impact of multiple variables of home value</p>	<p>The most direct and undisputed measure of economic value of open space -- real estate market value</p> <p>Data currently available</p>
<p>Visitor/Recreational use – parks, trails, etc. attract recreational users who generate usage fees, spend money in the local area, and pay sales tax</p>	<p>Calcs only a portion of value of parks</p> <p>Significant time to gather data to determine discretionary expenditure choices by visitors</p> <p>Requires assumptions about travel decisions to the parks</p>
<p>Ecosystem services/Return on Investment – value of ecosystem goods and services (e.g. water regulation by freshwater wetlands) provided by open space</p>	<p>Time consuming to calculate (2 years to estimate the total value of New Jersey's natural capita)</p>

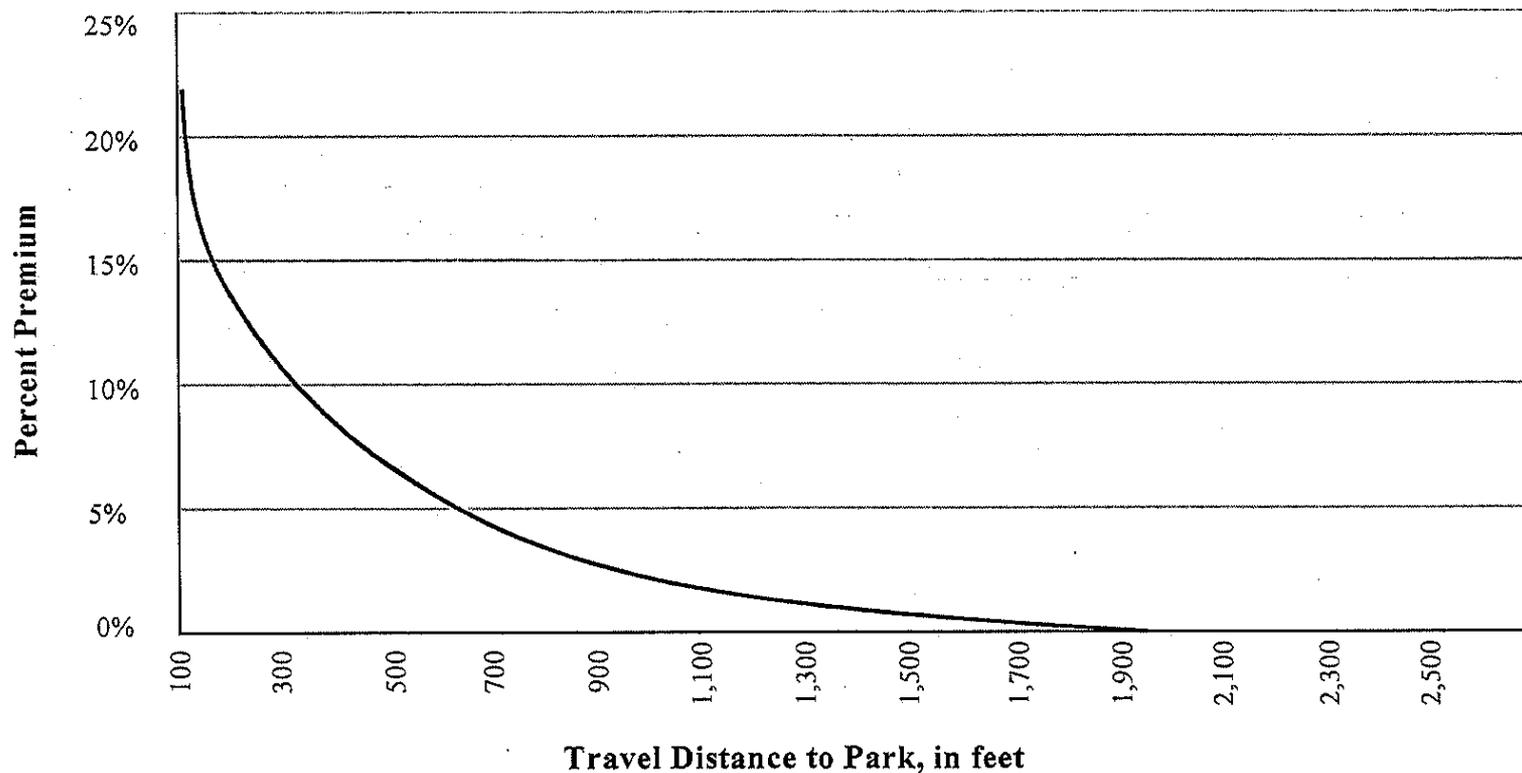
Land Conservation's impact on property values

Summary of national studies

- Parks have a significant impact on home values, creating a premium that ranges from 3 – 30%
- Parks in urban areas and more densely populated suburbs typically show greater premiums than those in more sparsely-populated areas
- Generally natural areas have largest premiums - larger than urban parks



Generalized Open Space Premiums



Sample Property Value Premiums

Philadelphia, PA



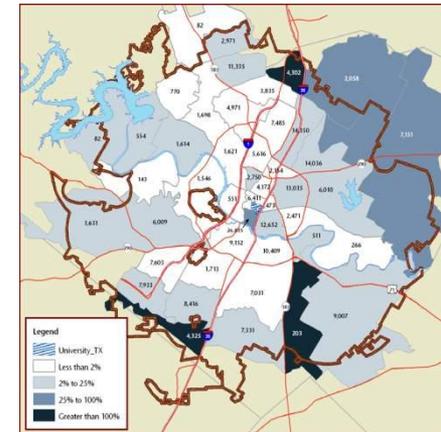
30%
premium for
homes
fronting
parks
and **10%**

Greenville, SC



13%
premium
for
homes
located
near

Austin, TX



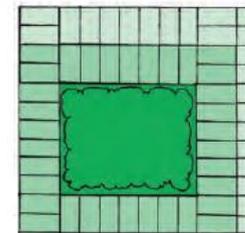
10%
premium for
homes near
bike
greenway

Enhanced Property Values: Embrace Open Space Study

Washington County, MN (2006):

- Average home value premium \$16,750 when near open space
~ 6% increase in home value
- Increased countywide property valuation by \$148 million
- Generates additional tax revenues of \$1.56 million each year

**The Economic Impact of Proximity
to Open Space on Single-Family Home Values
in Washington County, Minnesota**

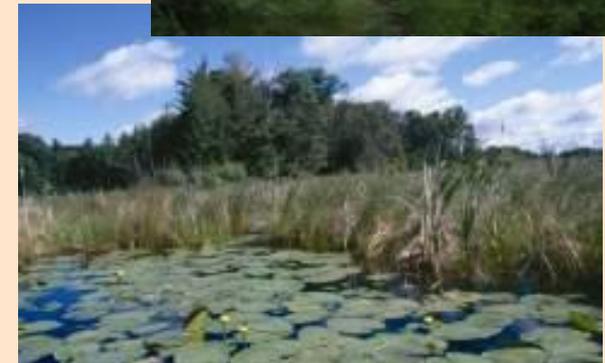
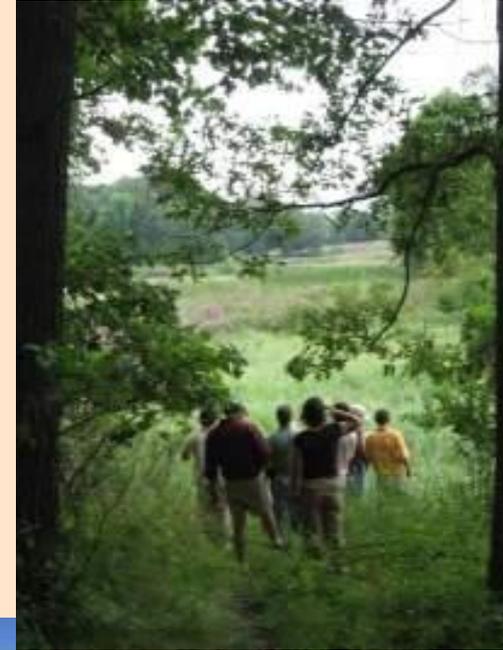


*A report on the findings
of a study commissioned by*
Embrace Open Space

May 2007

What “open space” in EOS studies?

- Public parks and greenways, but not highly developed recreation parks, such as ball fields
- Natural areas such as woodlands, wetlands, prairies and waterways
- Open space owned by charitable organizations
- Conservation easements in cluster developments



Enhanced Property Values: Embrace Open Space Study

Hennepin County, MN (2009):

- Study includes impact on homes immediately adjacent -- within 200 feet -- of open space, **but also...**
- ***NEW: Impact on city-wide property values due to city-wide percentage of open space***
- ***NEW: Impact of being within a half-mile of very large open space (50+ acres)***



Overview of Hennepin County Results

- Open space comprises 18% of Hennepin County
- 218,000 single-family homes out of 270,000 enjoy open-space premium (*81% of homes!*)
- Average premium per home - \$16,300 (*5.2% increase*)
- Increased countywide property valuation - \$3.6 billion
- Generates additional tax revenues of ~ \$36 million per year



NEW: City-wide Percentage of Open Space

A measure more broad than just homes *near* open space...captures quality of life amenity values

Varying levels of open space in each city:

- * Osseo = 1.1% open space
- * Hanover = 30.1% (of which 30% is Three Rivers)
- * County wide = 18% (of which 5.8% is Three Rivers)



EXAMPLE: If open space % in a community increases by one percentage point (e.g. from 2% to 3% or from 20% to 21%), the value of relevant homes will increase by .2%

Communities see a positive community-wide impact of adding open space to their community in all but high income neighborhoods



NEW: Large open space (50+ acres) MATTERS!

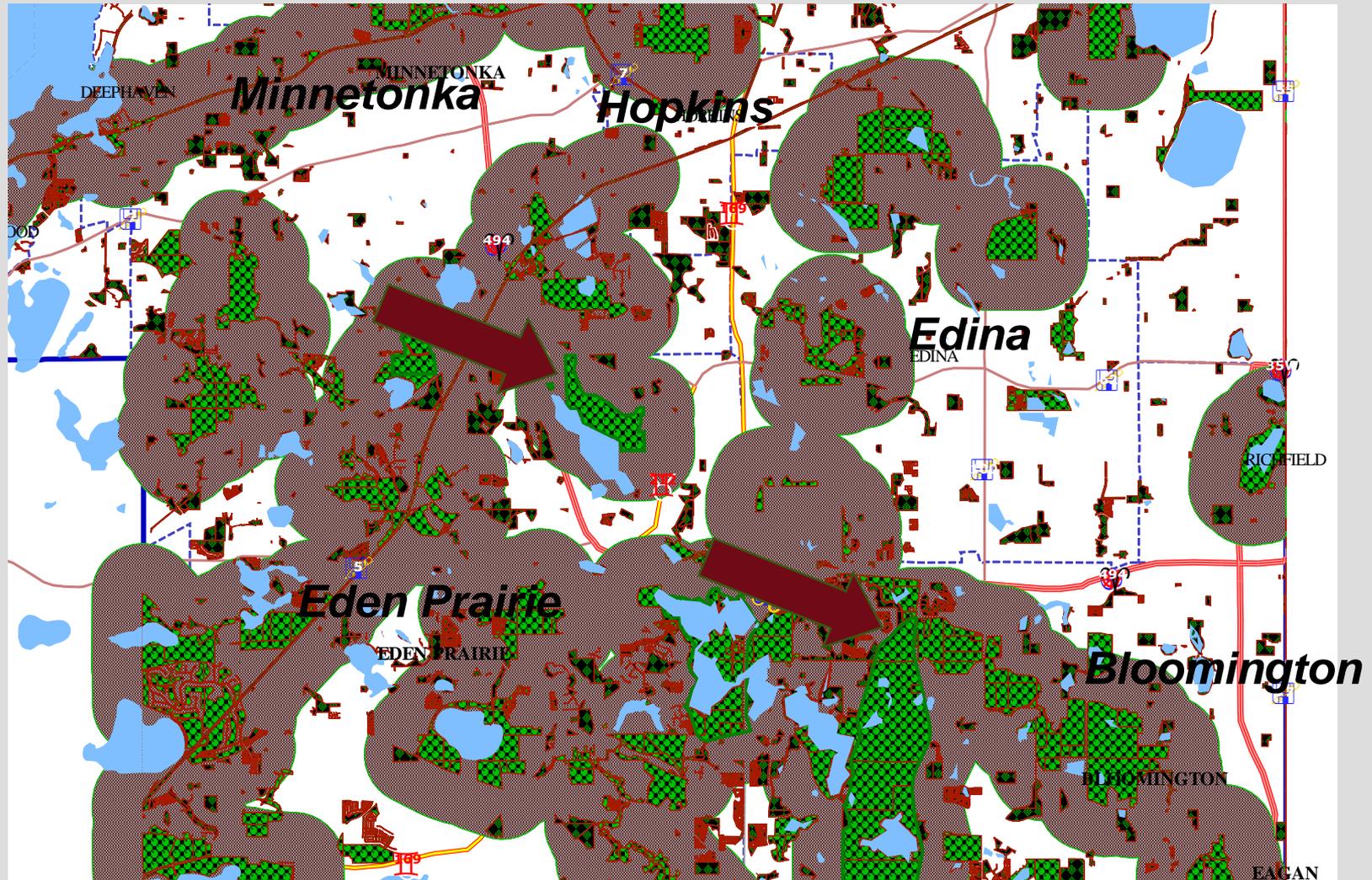
*People pay more to live close to very large open spaces; homes **within a quarter-mile of large open spaces are worth almost 4.8% more**; those beyond a quarter mile but within half a mile are worth 3% more.*

In this study, over 143,000 homes are within a ½ mile of large open spaces that benefit from this component of the open space premium.

The average value increment per home is \$15,000 and the total value countywide is \$2.15 billion



MAP: Open Spaces with half-mile band



Why EOS conducted these analyses...

Address common local concerns about land conservation's impact on local finances

Concern: *“We lose tax revenues when the land is not developed”*

Our Argument: The lost tax revenue can be offset in part if homes adjacent to open space have greater value and produce higher property tax revenue



Methodology: Regression Analysis

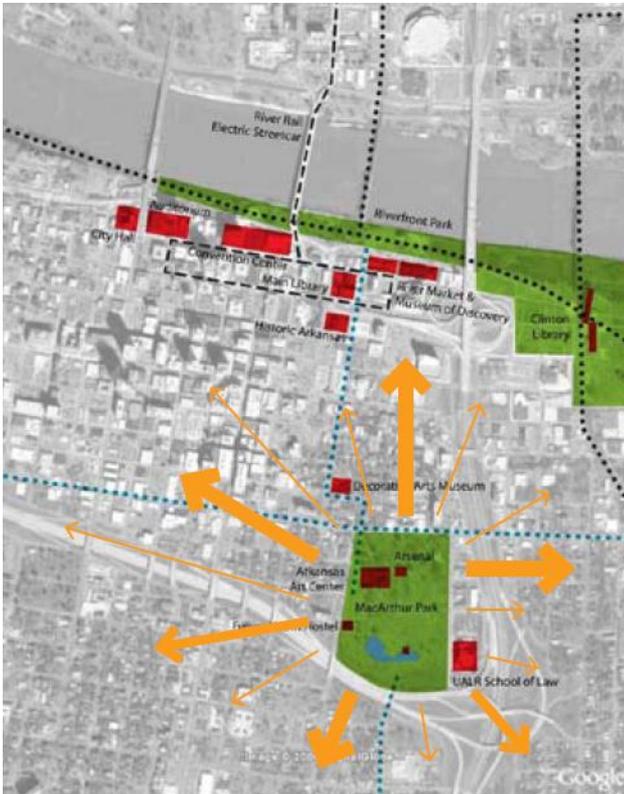
- ✓ Useful to identify impact of each explanatory factors on overall home value (*e.g. finished square feet, size of lot, neighborhood income level, and proximity to water or open space*)
- ✓ To address challenge of multiple causation, the analysis used multi-variate regression -- statistical procedure that isolates the impact of each variable, holding all other factors constant

EOS' Enhanced Property Values Study Methodology

1. Obtain open space dataset(s) that include city, county, regional and other parks & natural areas (*Met Council's Land Use dataset*)
2. Obtain data re: homes sold (*County Taxpayer Services, and Met Council's Regional Parcel dataset*)
3. Link to census block information
4. GIS buffering/distancing of open spaces
5. Conduct regression analysis



Enhanced Property Values – Commercial?



Need more analyses of open space impacts on surrounding **commercial** land uses

Little Rock image used with permission of Conway+Schulte Architects/Bill Conway

Cost of community services

- Cost of community services (COCS) - fiscal impact of land uses at a particular point in time
- Open space generates less revenue than residential, commercial or industrial properties, but requires little public infrastructure and services
- COCS results are displayed as ratios comparing local government revenues to expenditures per dollar

	<u>Rev</u> : <u>Exp</u>
<i>Residential</i>	1.00 : 1.10 (I.e net drain on budget)
<i>Commercial/industrial</i>	1.00 : 0.79
<i>Farm/forest/open land</i>	1.00 : 0.77

Source: Results for Farmington from Farmland and the tax bill: The cost of community services in three Minnesota towns. American Farmland Trust, 1994.

Ecosystem Services/Return on Investment

New Jersey:

Every \$1 invested will return \$10 in ecosystem benefits

Colorado:

Every \$1 invested in agricultural land and open spaces through conservation easements returns \$6 in ecosystem benefits

Who benefits matters...

Developing a piece of land may yield, say \$20M in benefits for a single developer, but conserving it may yield \$10M in ecosystem benefits to the general public. ***Not the same return, but it allows a broader group of people to benefit from it...***



Development Patterns....

- As lot size increases, its value rises—but not by very much incrementally
- Consider this diminishing value & the open space premium. Example: 200-acre development:
 - Traditional: 100 homes on two-acre lots (worth \$124,400) => \$12.5M
 - Cluster: 200 homes on ¼ acre lots, remaining 150 acres in open space => \$15.6M
 - Cluster around open space: 200 ¼ acre cluster lots designed to be directly adjacent or w/in 200 feet of open space => \$18.9M

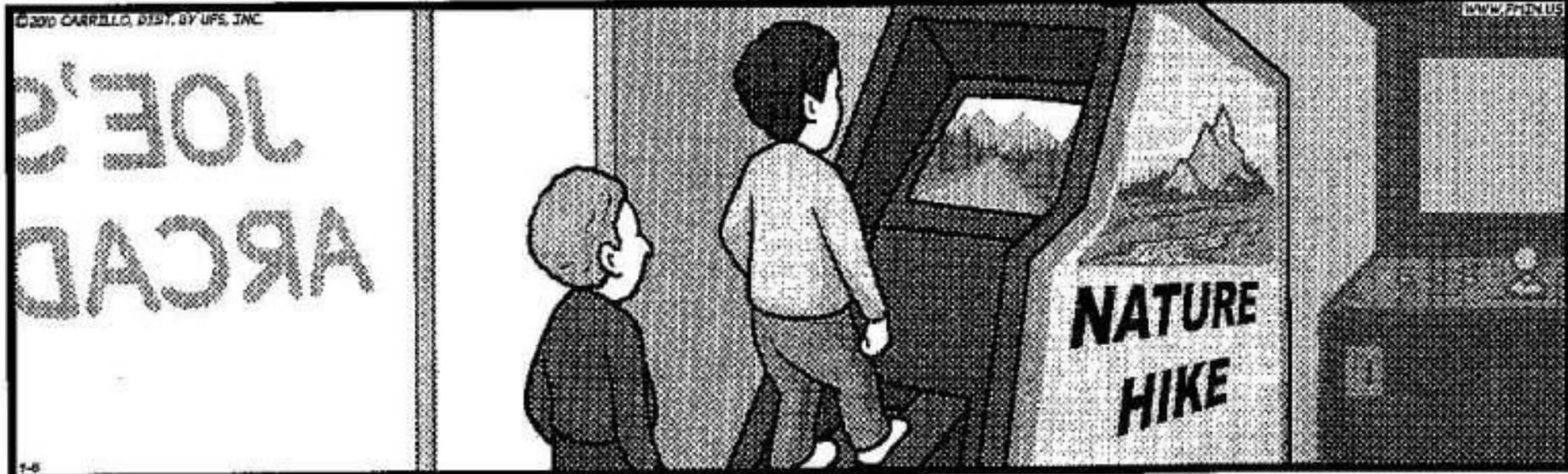
Washington County: Incremental values for increasing lot sizes

<i>Lot size</i>	<i>Increased valuation per 1/10 acre</i>
$\leq 1/10$ acre	\$63,900
1/10 to ½ ac	\$9,500
½ to 2 acres	\$1,500
2 ac to 5 ac	\$1,000
> 5 acres	\$400

Challenge...

Nationally, as many as 2 out of 3 city residents do not have access today to a nearby park, playground, or open space

F MINUS TONY CARRILLO



Embrace Open Space

A collaborative serving as a catalyst for greater citizen and elected leadership to conserve and steward natural areas and parks, lakes and rivers in the eleven-county Twin Cities area

A program housed by The Trust for Public Land, funded by McKnight Foundation

Audience and partners:

Public agencies

Watershed districts

National Park Service

Local elected officials

Non-profits

Local park & open space planners

Citizen groups

Local staff (planners, natural resource, etc.)

- ✓ Increase support for parks and natural area conservation by providing clear and compelling communications
- ✓ Build local capacity for open space conservation

Takeaways....

- When considering park and natural area conservation, recall the economic short-term and long-term benefits that can offset the costs
- Property values increase when near open space, and increase even more when part of a development with smaller lots and homes within 200 feet of open space
- Open space may generate less revenue than residential, commercial or industrial properties, but requires little public infrastructure and services