Active Living Research, 2003

Neighborhood Parks and Active Living (NPAL)
Phase I: Setting the Stage

Active Living Research Conference
February 25, 2005

NPAL Conceptual Approach

Multi-Level Factors:

As Predictors of:

Individual factors

Parks attributes

Park connectivity

Neighborhood attributes

Other factors

➢ Park Use

➢ Physical Activity

Study Design

Phase I: Descriptive Study

Understand park use dynamics
Refine hypotheses
Identify potential predictors

Phase II: Analytical Case-Control Study

Phase I: Descriptive Study

- Methods
  - Park selection and features assessment
  - Intercept surveys and physical activity assessment
- Preliminary findings park users, patterns of park use, and physical activity
- Examine residential location and travel patterns to parks
  - Neighborhood connectivity

Park Selection

Goal: Maximize variability across park types and demographic characteristics of park neighborhoods

- Study site
  - DeKalb County, GA
  - Urban core county in metro Atlanta
  - Racially/ethnically diverse
  - Diverse park types

Park Selection

- Database of DeKalb Co. Parks
  - facilities, census tract data (income, race, etc.), crime data, etc.
- Site visits
- Consulted with parks and recreation administrators and staff

12 Parks Selected

Park Name	Size (acres)	On-Site Staff	Nature trails	Walking paths	Ballfields	Open fields	Rec center	Courts	Pool	Play equipment	Lake	Number violent crimes in 2003	% non-Hispanic Black[4]	% Hispanic[4]	Median income[4]
				Park Characteristics								Neighborhood			
Bouldercrest	28				*		*			*		NA	90	1	49,497
Briarwood	18	*					*		*	*		0	31	33	40,352
Dresden	24			*	*					*		2	18	54	42,892
Freedom[1]	40		*		*							NA	6	3	51,766
Hairston	33		*	*		*				*	*	1	75	2	62,305
Mason Mill	111	*	*	*		*	*	*				0	5	1	53,688
McDaniel	5		*	*		*		*		*		0	11	13	67,423
Murphey Candler[2]	135	*	*		*	*		*	*	*	*	0	4	4	91,306
Oakhurst	8			*	*		*			*		NA	66	1	43,703
Redan[2]	65			*	*		*			*		2	89	2	52,346
Shoal Creek II	23			*		*		*		closed[3]		1	93	1	30,927
Tobie Grant[2]	14	*				*	*	*	*	*		1	81	0	23,894

[1]Freedom park is a linear park

[2]Supports youth sports programs

[3]Children's play area and equipment closed all season for repairs

[4]2000 Census tract data

Park Features Assessment

Modified park features instrument: A. Bedimo-Rung, B. Saelens (ALR Round 1 grantees)

- Inventory of park features
- Condition and accessibility

Intercept Surveys and Physical Activity Assessments

Goal: Characterize park users, patterns of park use, physical activity, daily conditions

- June – August, 2004
- 8 days per park
  - 4 weekdays
  - 4 weekend days
- 14 hours per day (6:30AM – 8:30PM)

Data collection team

➢Diverse
➢"Well-marked"
➢Well trained

All data collected using PDAs

Intercept surveys

- Stationed at entrances and exits
- 13 intercept questions

- Intercepted 6+ years old
- Spanish and English

Direct Observation of Physical Activity
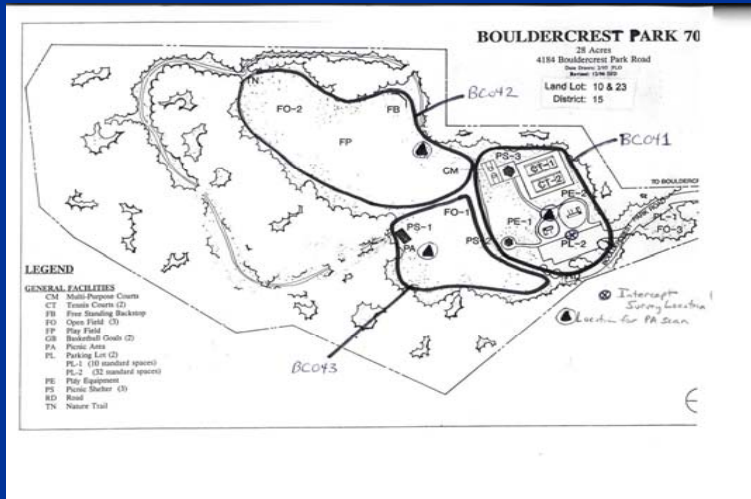
Divided parks into activity scanning areas for observation

Also recorded number crossing line on trails

McKenzie 2002
McKenzie & Cohen 2004

Results…

Intercept Surveys and Physical Activity Assessment

- 2,800 completed valid surveys
  - Overall response rate 60%
    - Varied between 50-70% by park
  - Children under age of 18 not included
- Over 12,000 physical activity assessments
  - Good reliability

"Sex" of Respondents

Overall: 55% males; 45% females

"Race" of Respondents

- Multirace 3%
- Asian 3%
- Other 2%
- Black 32%
- White 60%
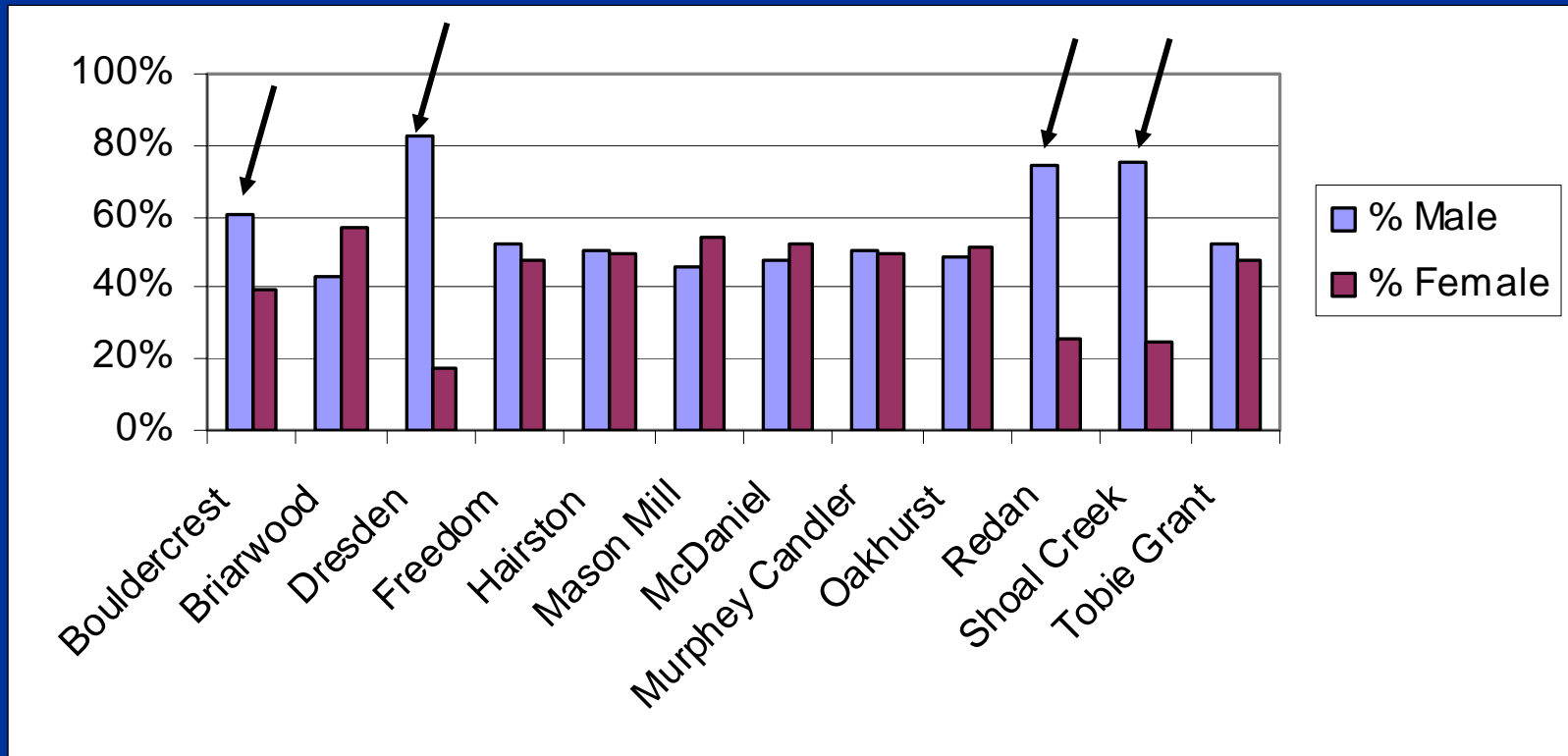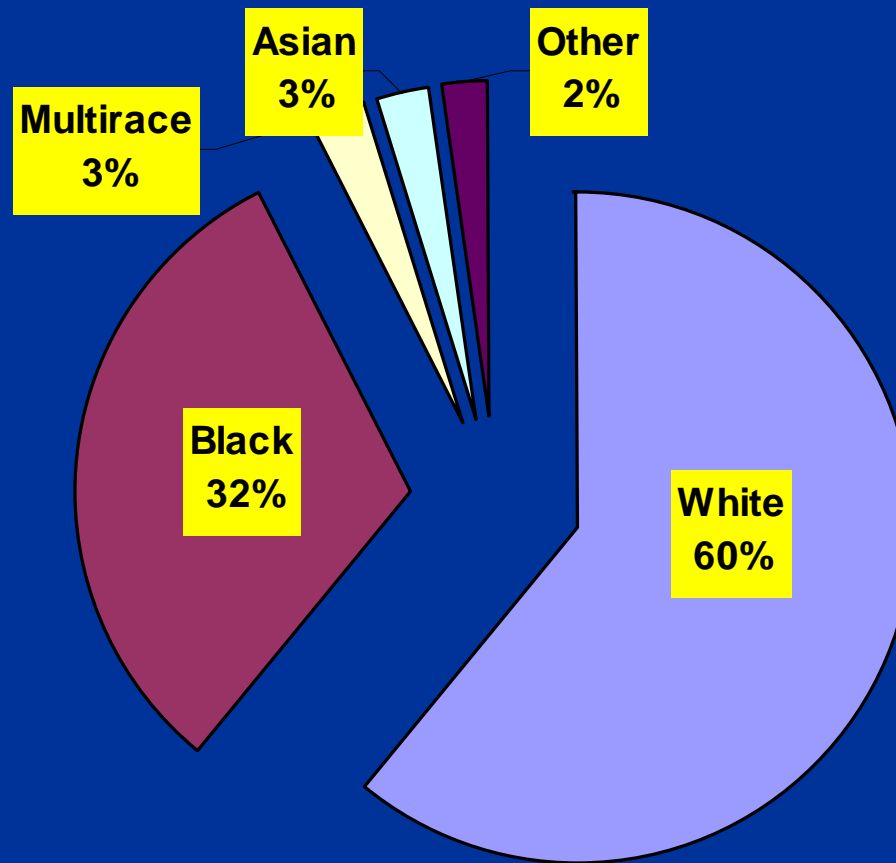
"Race" of Respondent by Park
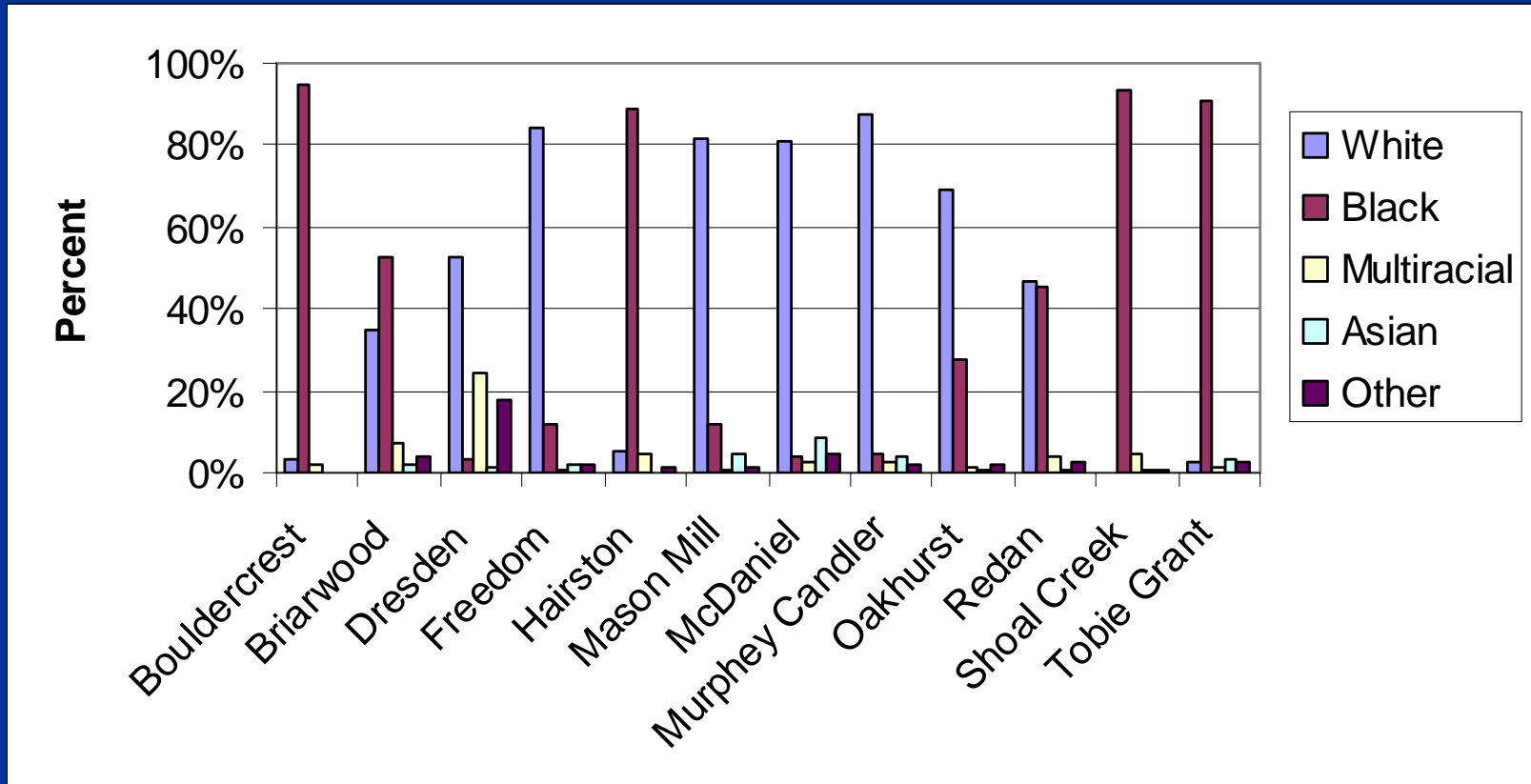
"Frequency of Park Visits"
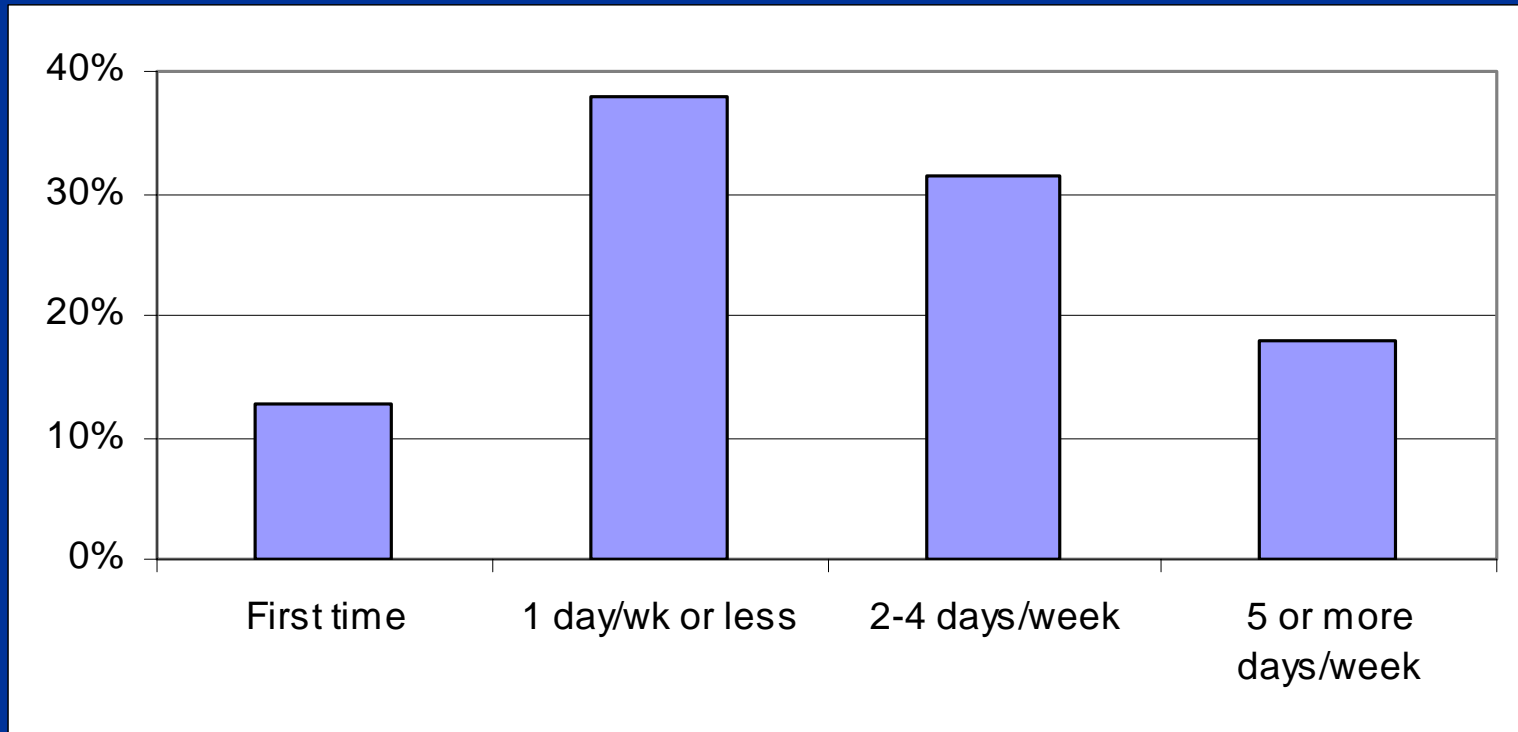
Who are "Frequent Park Visitors"?

- Females
- Travel to park on foot or by bike
- White
- Dog walkers
- Adults taking kids to park
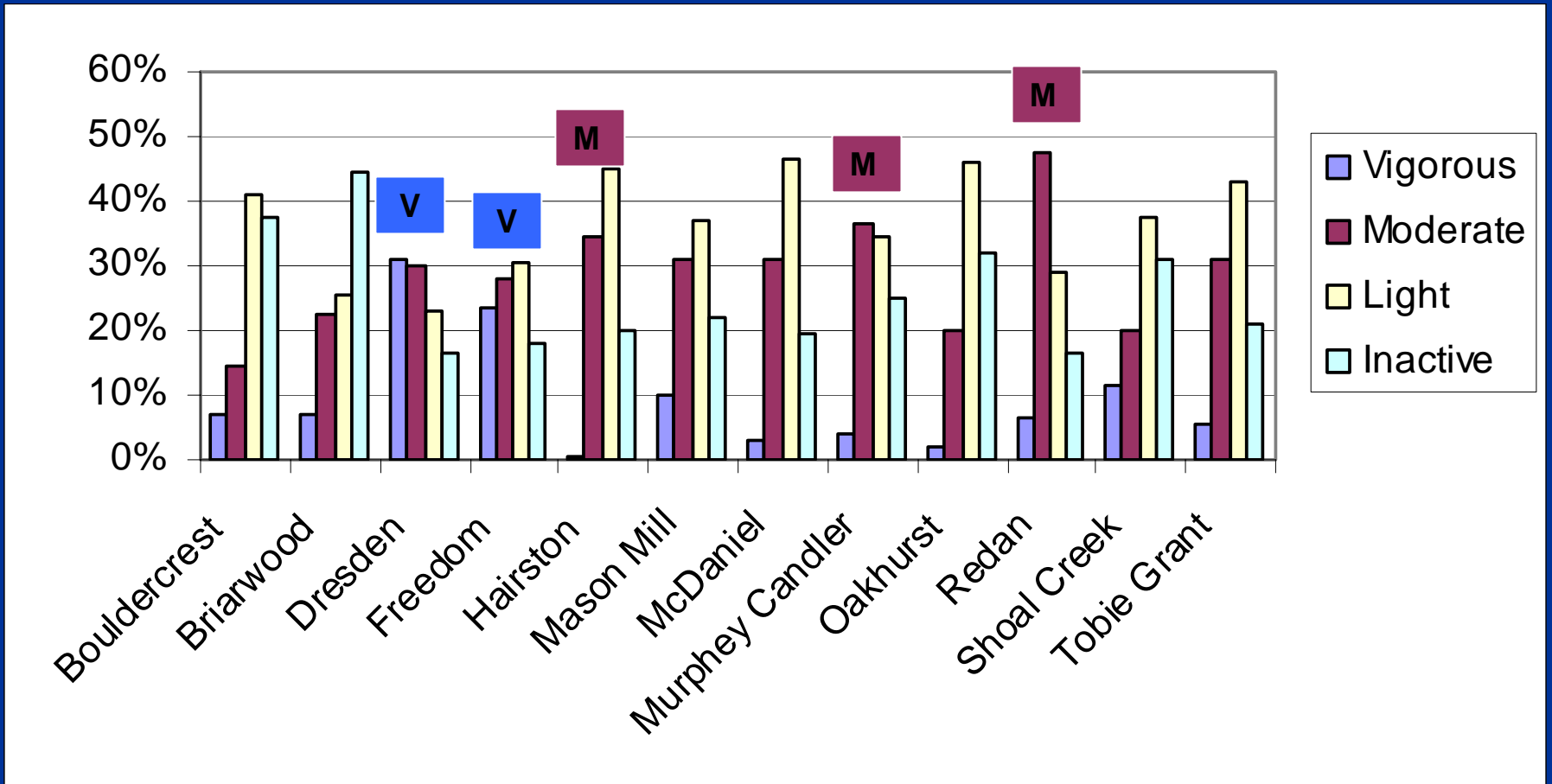
"Percent of Weekly Exercise in Park"
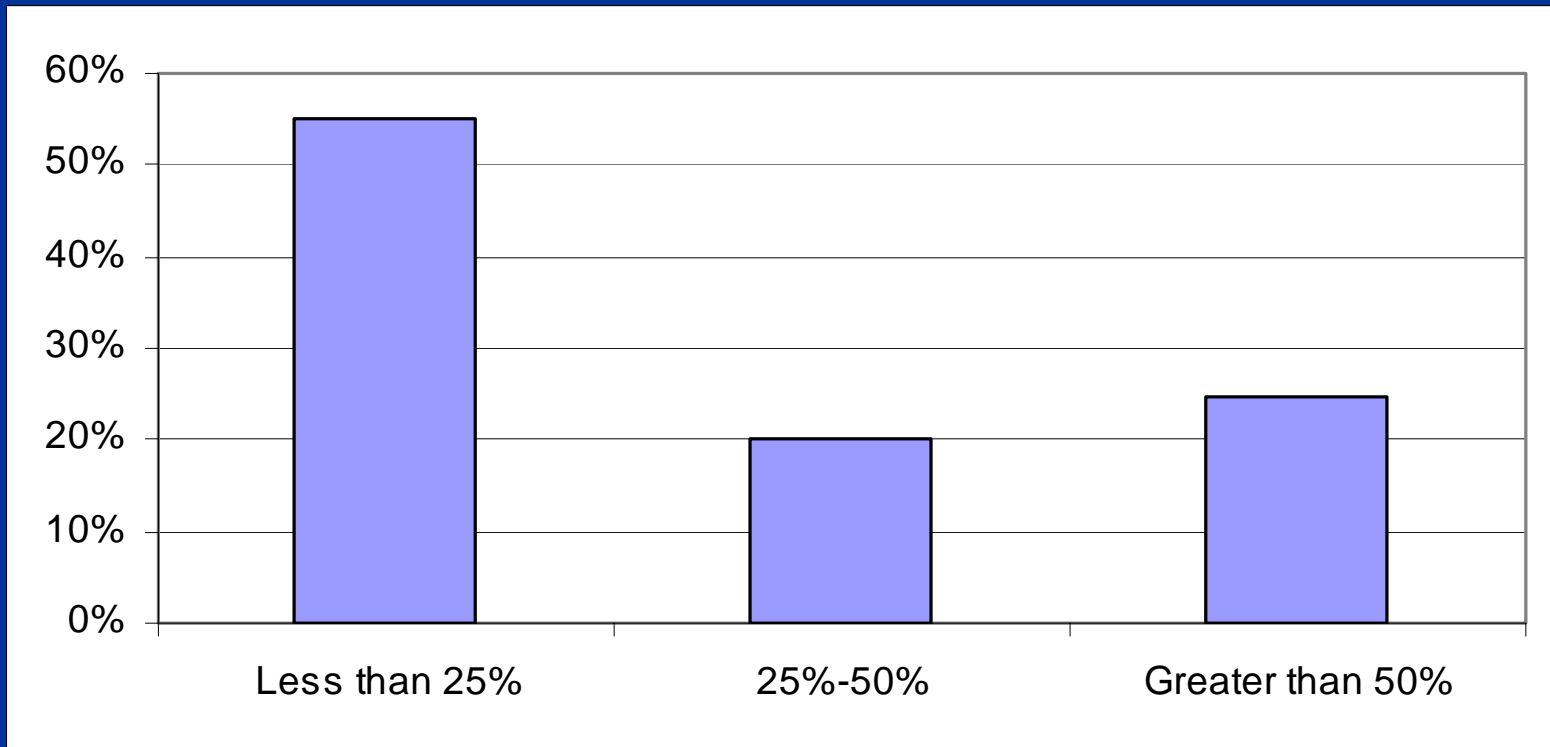
Who reports "Greater % Exercise in Parks"?

- Males

- Hispanic

- White

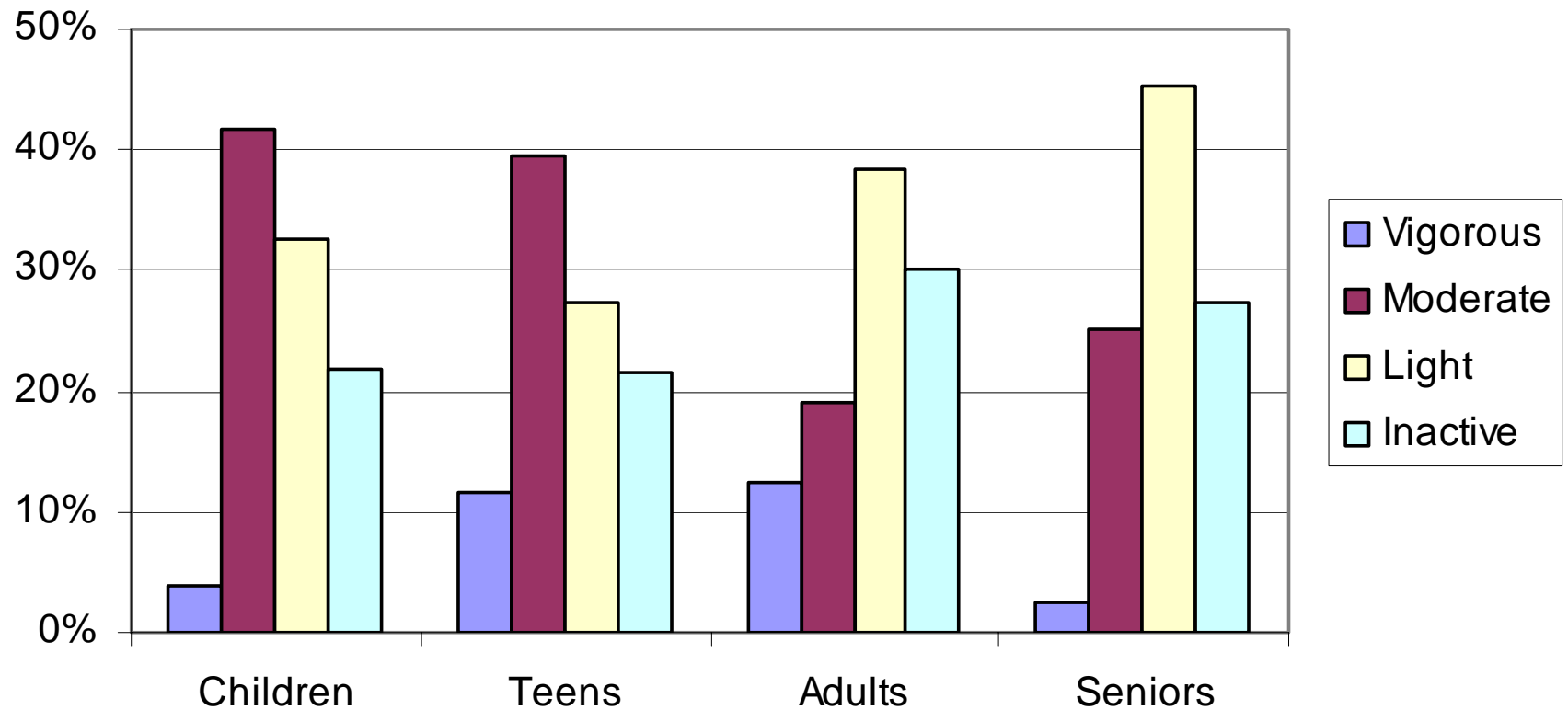- Travel to park on foot or by bike

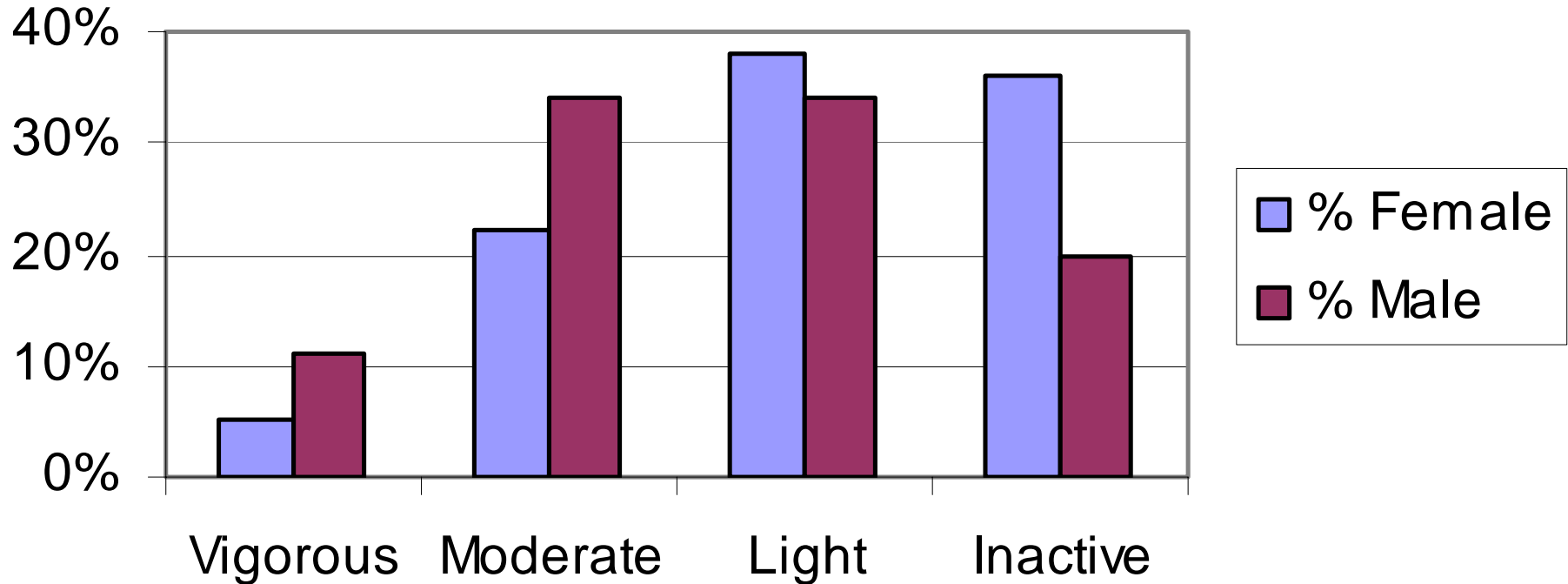- Frequent park users

Physical Activity Across All Parks
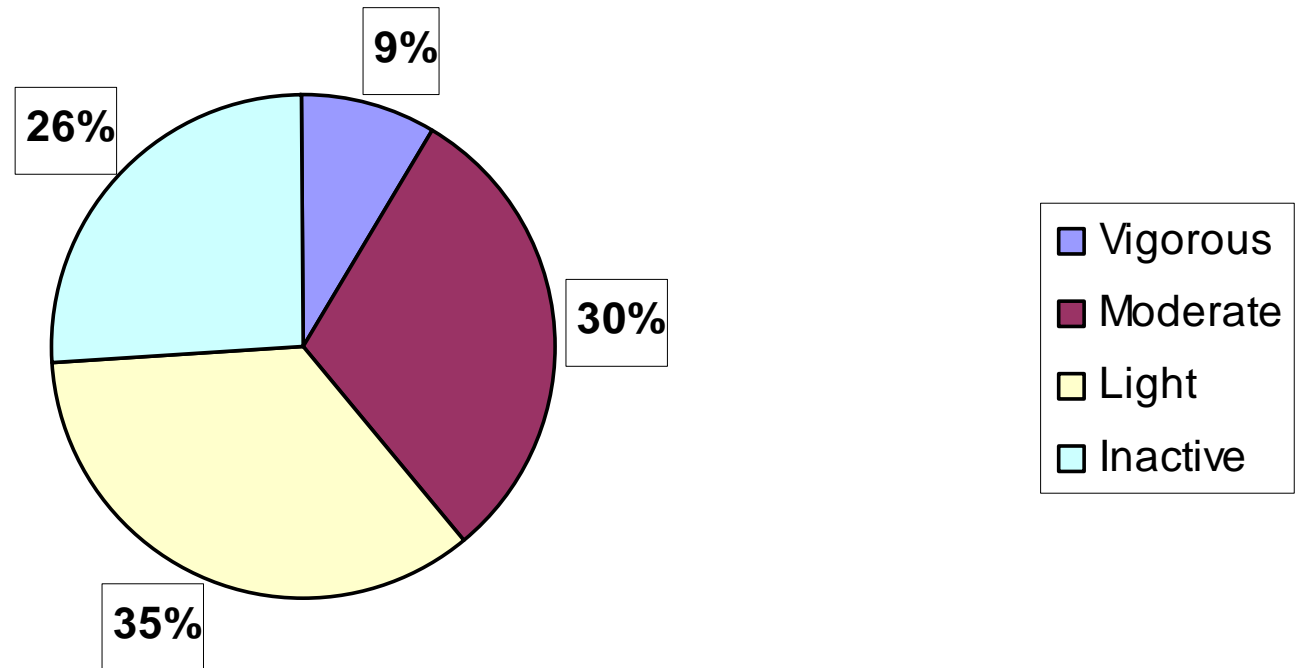
Physical Activity by Park

Physical Activity by Age Categories
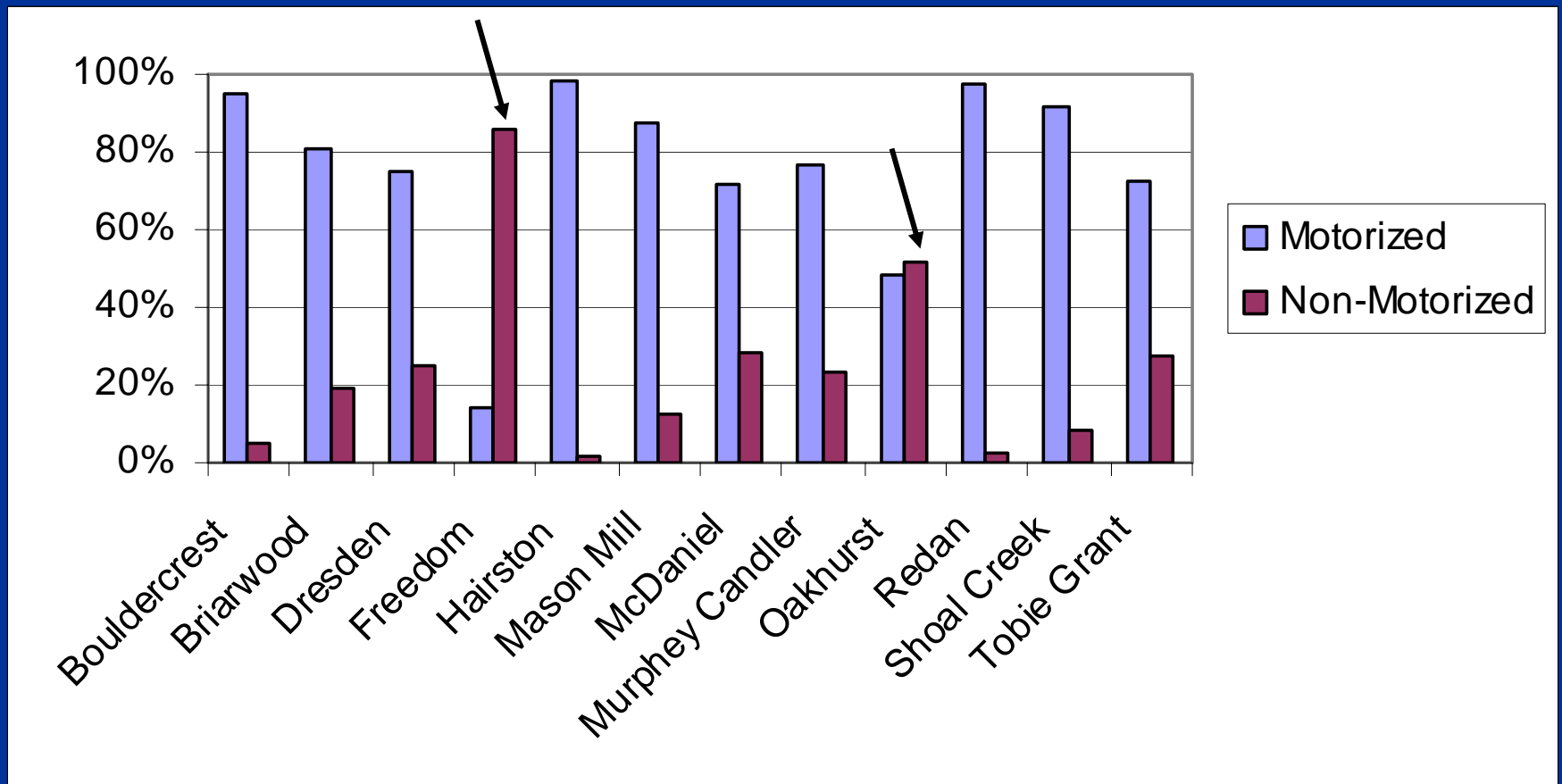
Physical Activity by Sex

Travel Patterns to Park

- Mode to park
- Residential location by mode

Travel Mode to Park

Overall: 69% motorized; 31% non-motorized
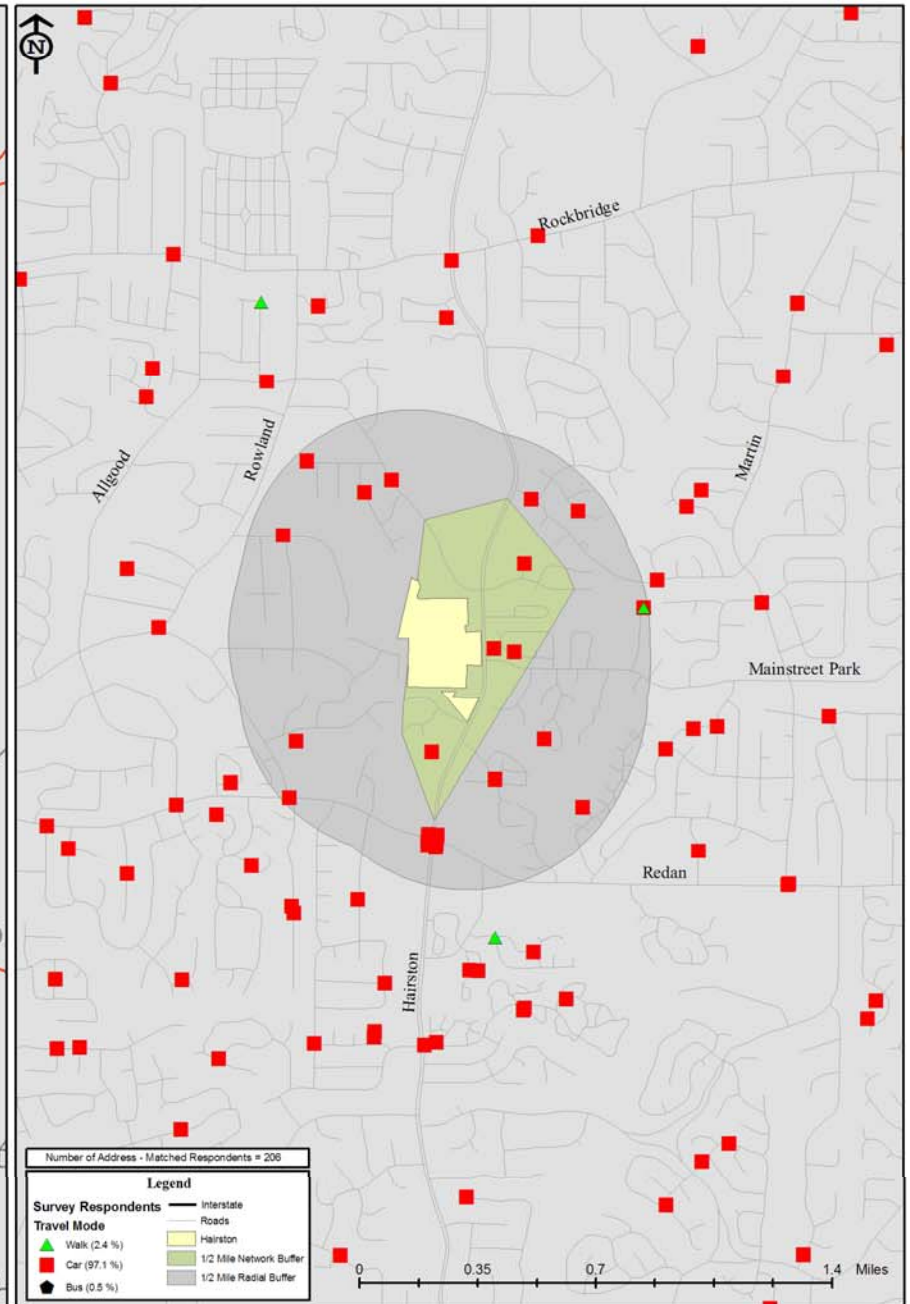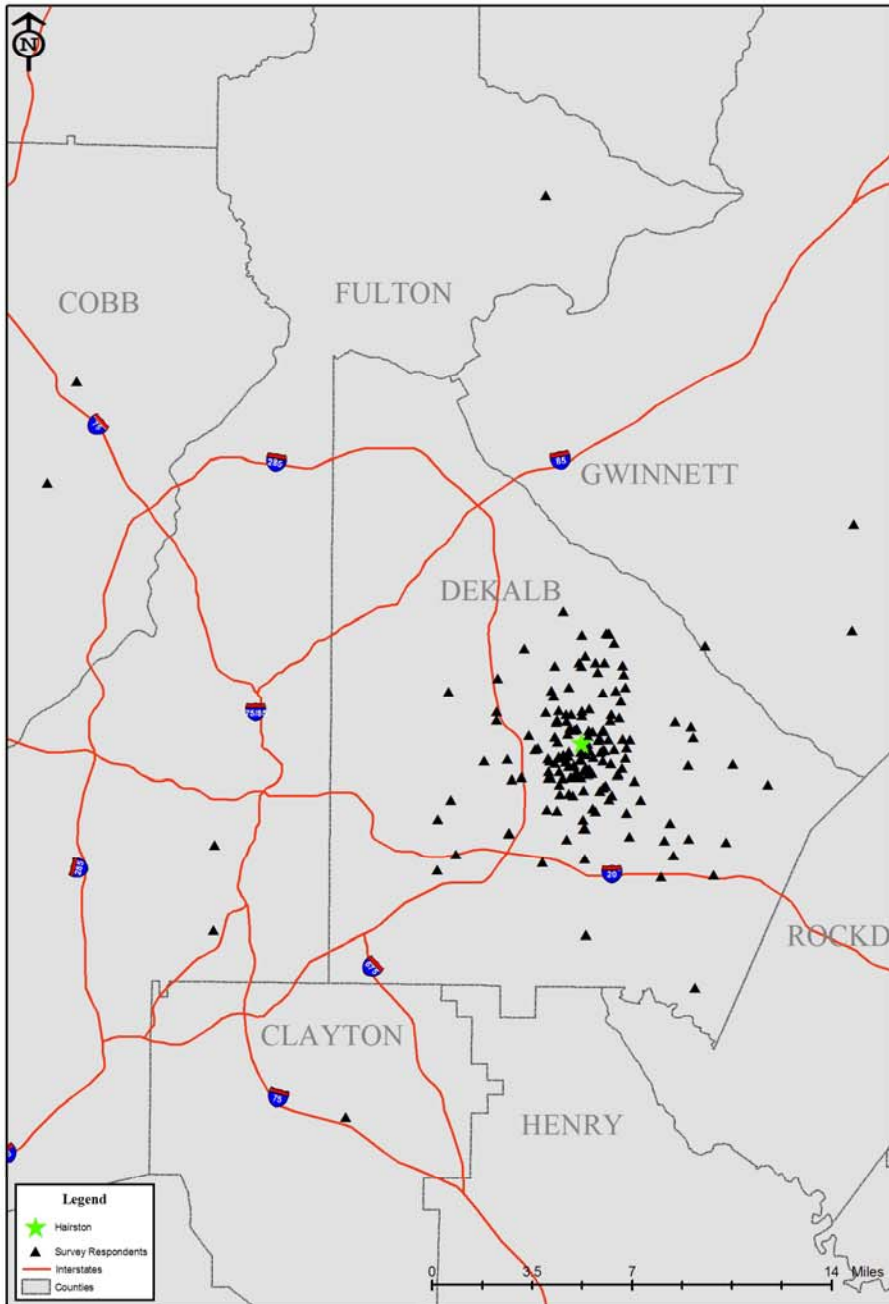
Travel Mode to Parks

Non-Motorized

- Frequent park visitors (40% visit park more than 5 times per week)
- Women
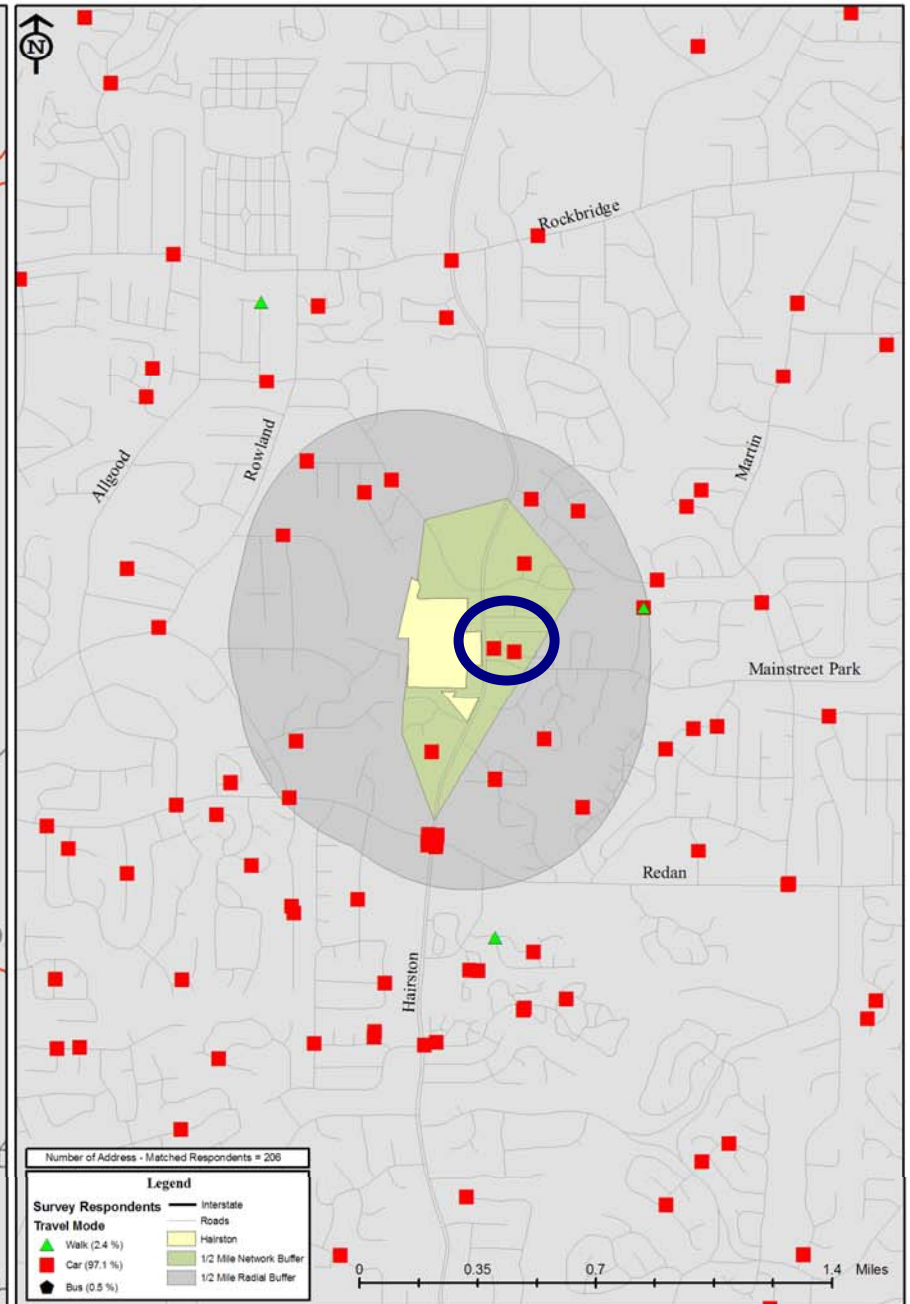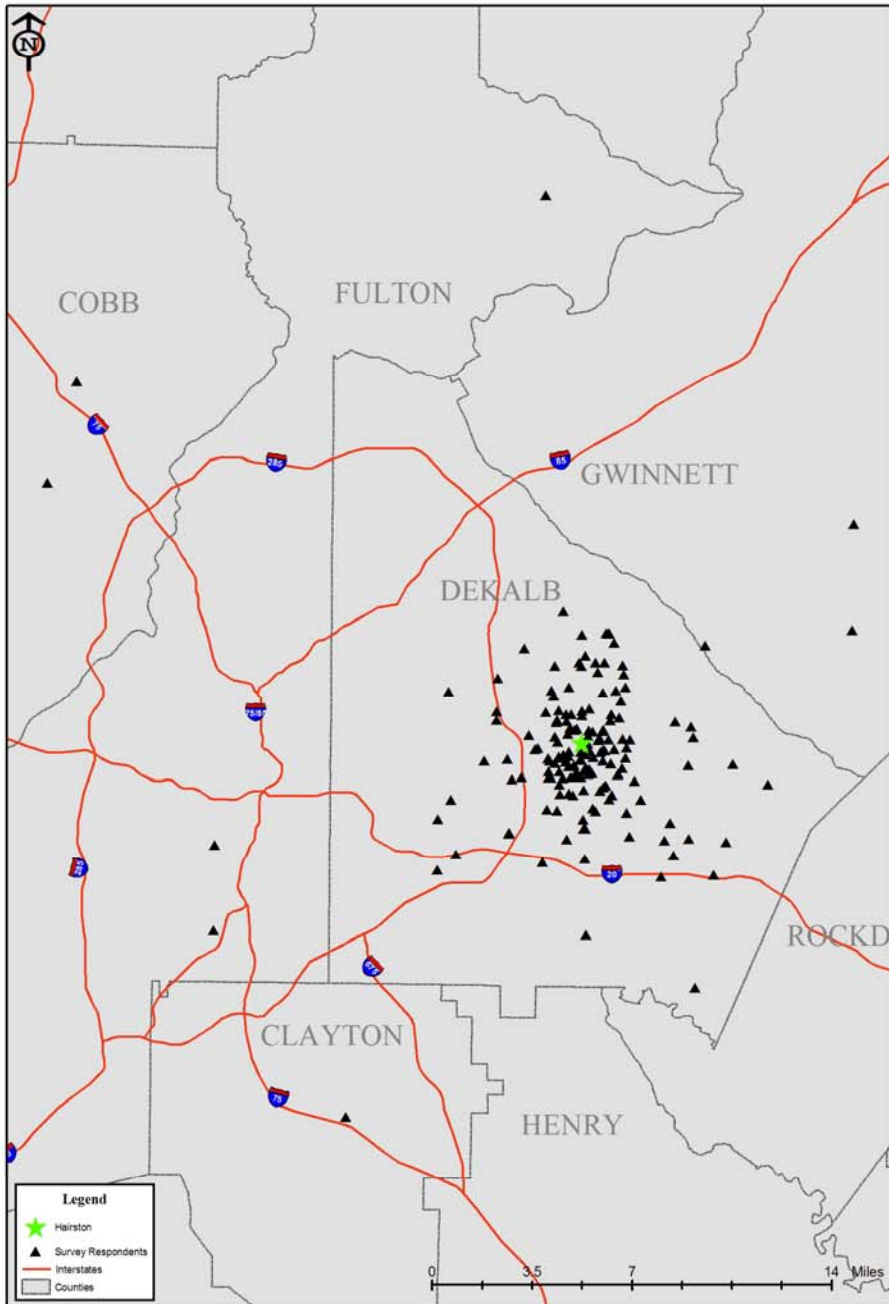- Get more exercise at park (40% get more than 50% of weekly exercise at park)

Motorized

- Infrequent park visitors (45% visit park 1 day per week or less)
- Men
- Get little or no exercise at parks (40%)

NPAL - Hairston Park Intercept Data - Regional and Neighborhood Views

Rockbridge

COBB

FULTON

GWINNETT

DEKALB

ROCKD

CLAYTON

HENRY

Allgood

Rowland

Martin

Mainstreet Park

Hairston

Redan

Legend

★ Hairston

▲ Survey Respondents

— Interstates

☐ Counties

0   3.5   7   14   Miles

Number of Address - Matched Respondents = 206

Legend

Survey Respondents
Travel Mode

△ Walk (2.4 %)

■ Car (97.1 %)

⬟ Bus (0.5 %)

— Interstate

Roads

☐ Hairston

☐ 1/2 Mile Network Buffer

☐ 1/2 Mile Radial Buffer

0   0.35   0.7   1.4   Miles

NPAL - Hairston Park Intercept Data - Regional and Neighborhood Views

Greater car use related to neighborhood characteristics and connectivity?

Aerial photo Hairston Park
GIS Center, Georgia Inst. of Tech.
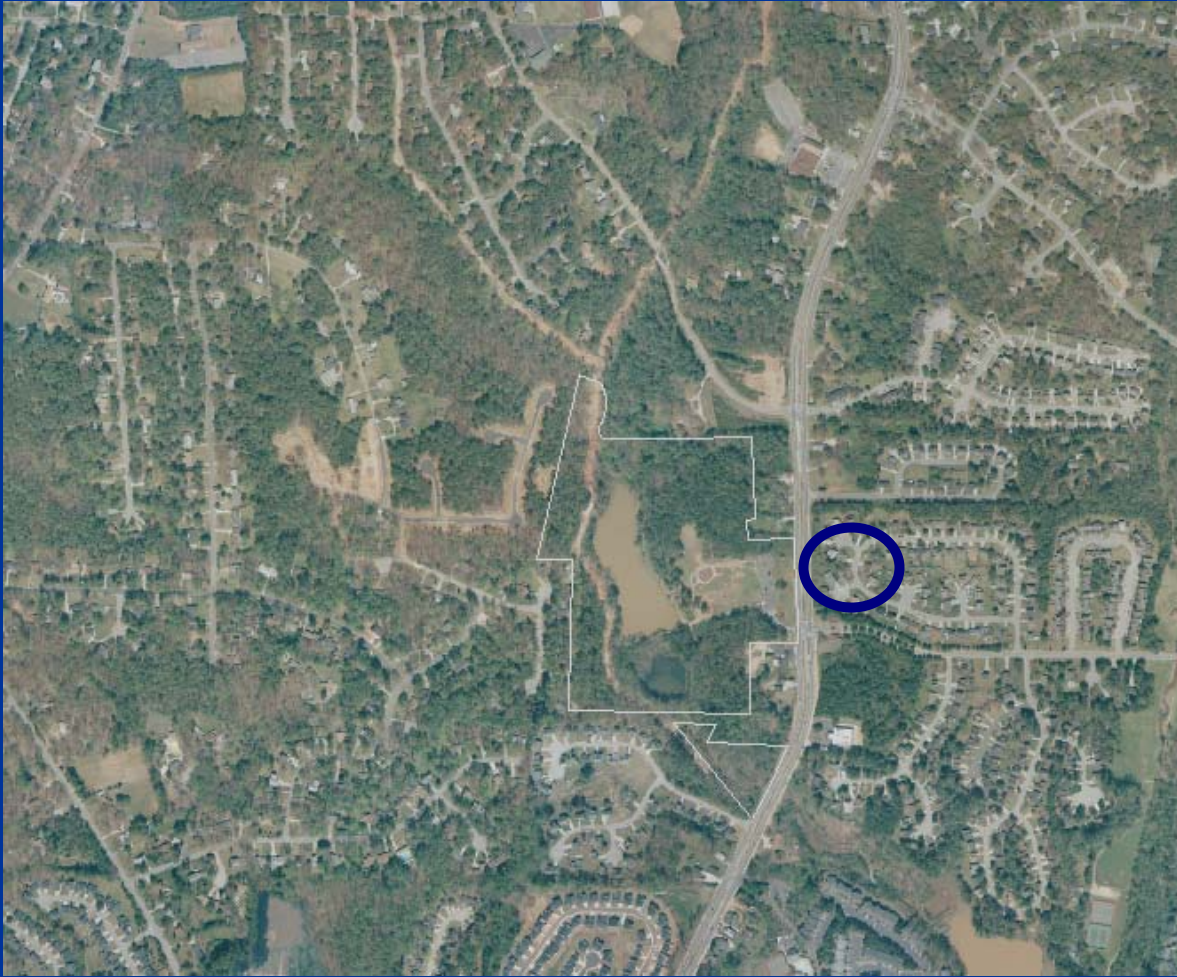
Loop & lollipop-type neighbor-hood

Greater car use related to neighborhood characteristics and connectivity?
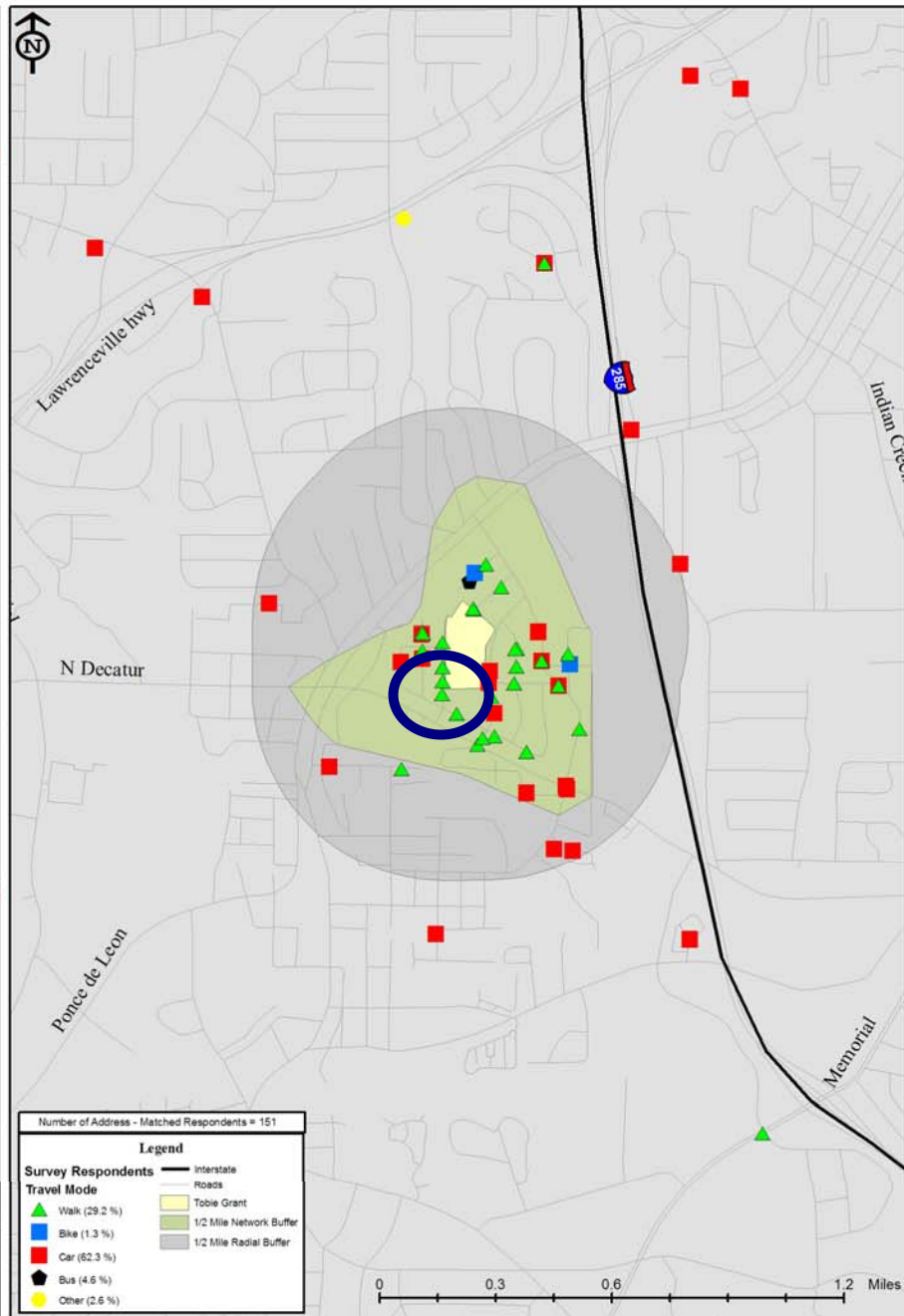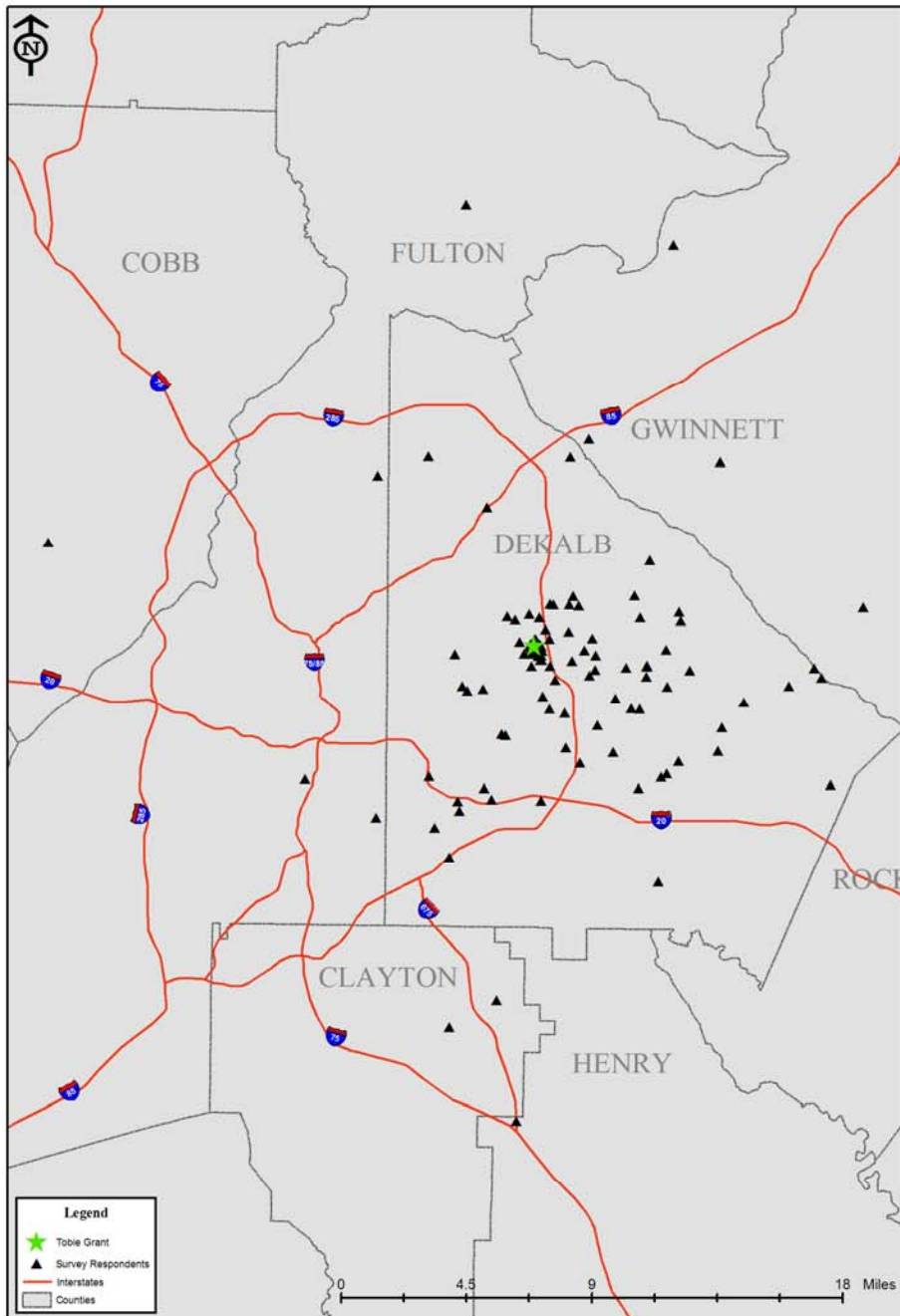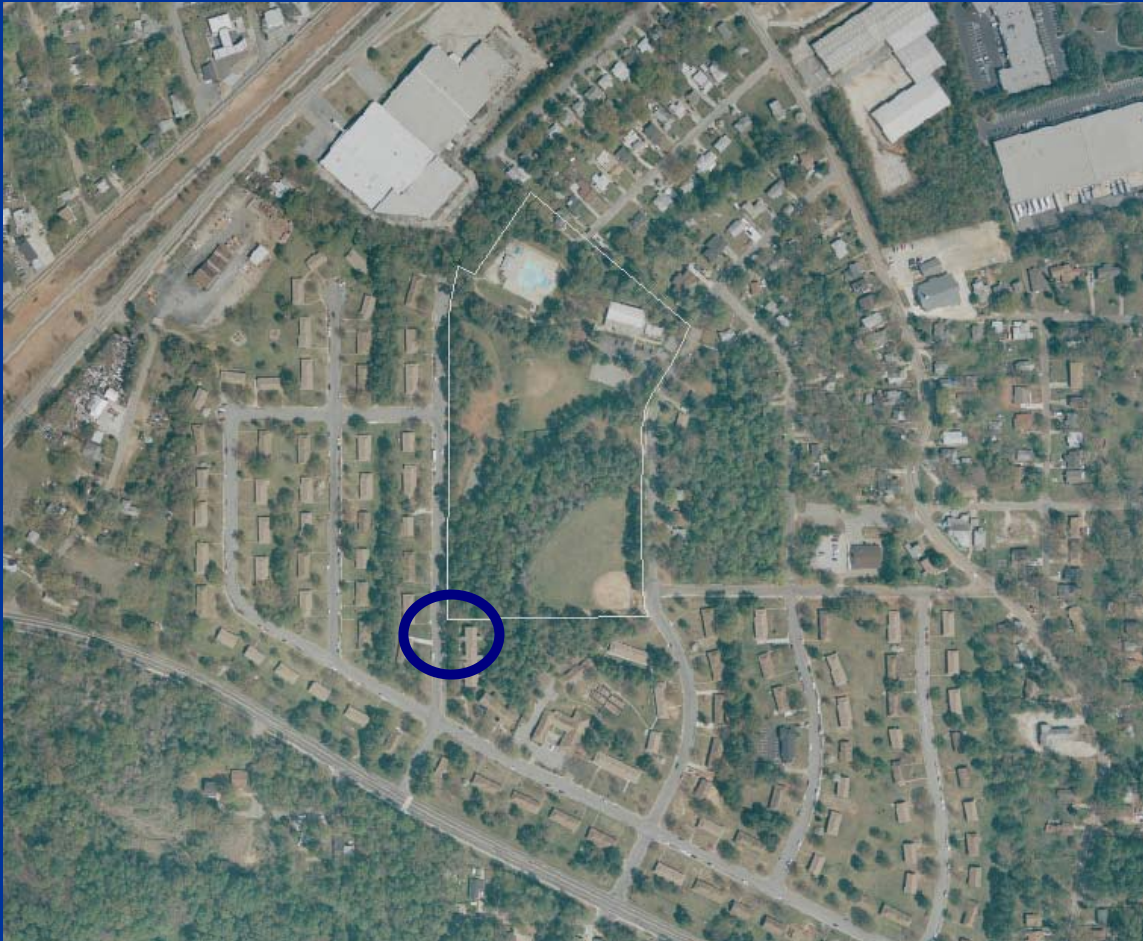

Single entrance along busy roadway

No sidewalks

Hairston Park

NPAL - Tobie Grant Park Intercept Data - Regional and Neighborhood Views

Greater walkability associated with neighbor-hood configuration and connectivity?

More gridded street pattern

Aerial photo Tobie Grant Park
GIS Center, Georgia Inst. of Tech.

Greater walkability associated with neighbor-hood configuration and connectivity?

Multiple park entrances

Sidewalks

Tobie Grant Park

Summary of Phase I Efforts

- Characterized variability in patterns of use and physical activity across parks and among users

- Identified potential predictors of park use and physical activity in parks

- Developing park "catchment" areas for selection of controls

$\Rightarrow$ Summer 2005 - Phase II (case control study)

NPAL Research Team

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