

# **Impact of Park Renovations on Park Use and Park-based Physical Activity**

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# Background

- Many CBOs want to contribute to communities, especially to improve places where people can be active
- This study measured the impact of renovations to several urban parks in low-income neighborhoods in San Francisco.



# Objective

To determine the impact of park renovations on park use and physical activity among park users, especially youth by studying 6 parks.

- Two parks underwent extensive renovations



- (West Sunset, Hayes Valley)
- installation of completely new play equipment,
- new landscaping and ground surfaces,
- One had new recreation center and installed outdoor fitness equipment.



# Comparison Parks

- Two parks in the process of renovation
  - (Mission, Balboa)
- Two parks that were not physically changed from baseline
  - (Hayward, Boeddeker)





	Renovated Parks		Parks Under Renovation		Comparison Parks	
	Hayes Valley	West Sunset	Balboa	Mission	Hayward	Boedeker
Park Acres	0.6	17	25	2	2.5	1
# of sports fields	0	7	5	0	0	0
# of facilities	4	6	4	4	4	3
% households in poverty (½ mile)	17.3%	7.6%	9.4%	15.1%	18.1%	25.1%
Estimated population in a ½ mile radius	25,129	9,735	12,553	26,474	30,969	45,714

# Methods

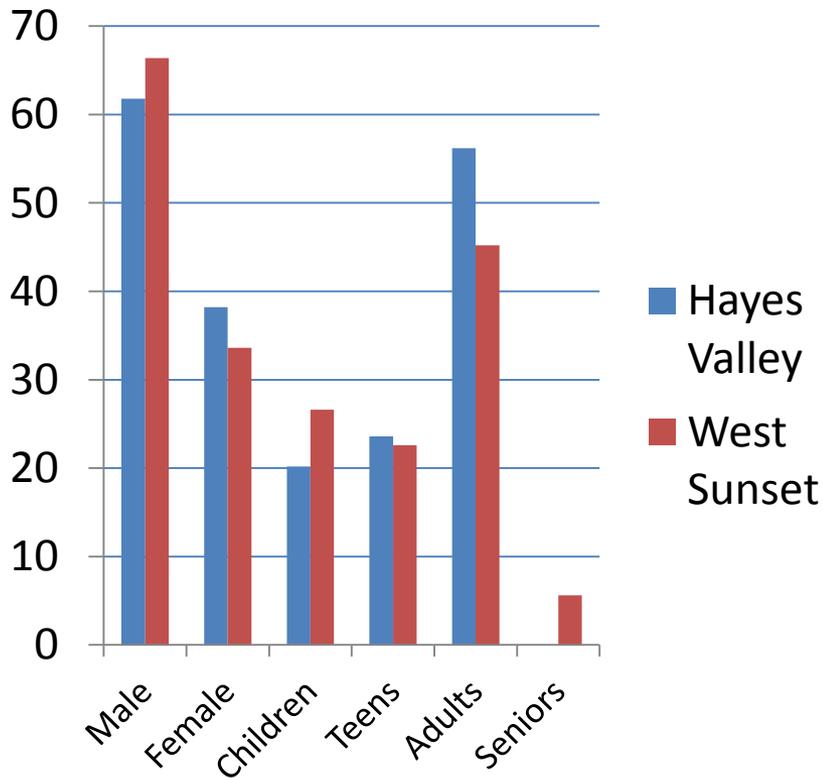
- We systematically assessed park use before and after the park renovations using SOPARC,
  - observing activity areas in 6 parks 4 times each day
  - 7 days of the week during May 2009 and May 2012.
  - Counted park users by gender, age group, activity level
- Interviewed approximately 75 park users and 75 residents within ½ mile of each park.

# Methods

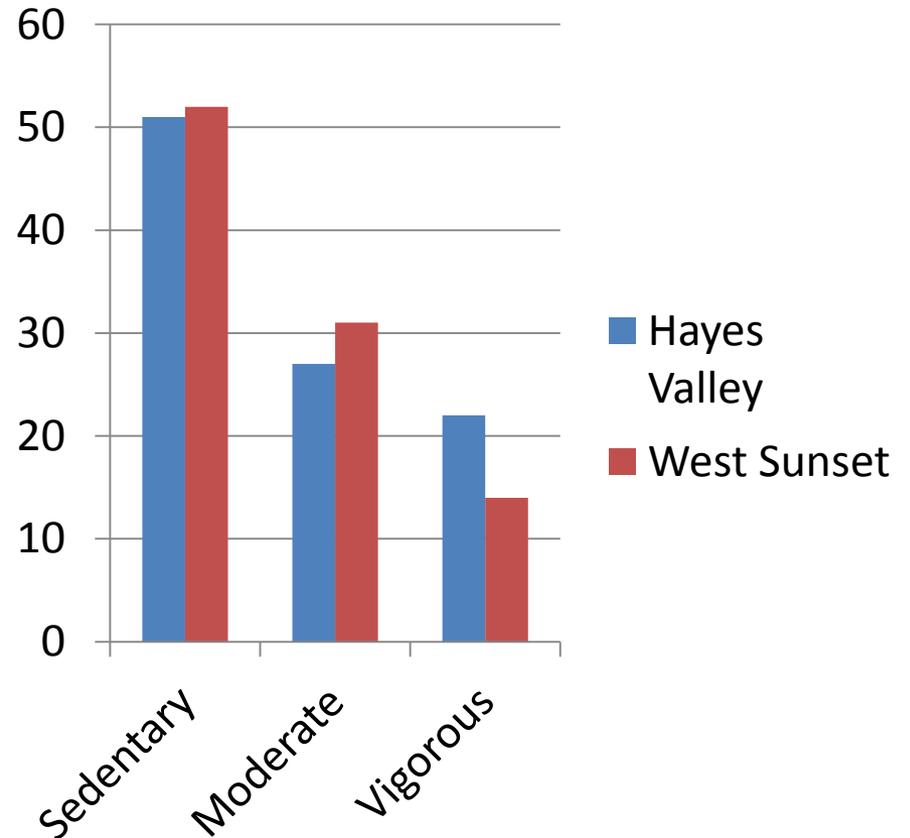
- Total park use was estimated by a mixed-effects model,
  - fixed effect controlled for park-level confounders
  - two random effects accounted for observation times (i.e., hours of the day and days of the week)
  - Changes in use were estimated by a linear contrast between the two measurement periods.
- Logit models used for survey outcomes, controlling respondent-level characteristics (e.g., age, gender, race, etc.) and park fixed-effects

# Characteristics of Park Users

## Gender and Age Group



## Activity Level



# Survey Respondent Characteristics

- 56% male
- Average age=43
  - 9% Hispanic,
  - 17% African American,
  - 40% White,
  - 15% Asian

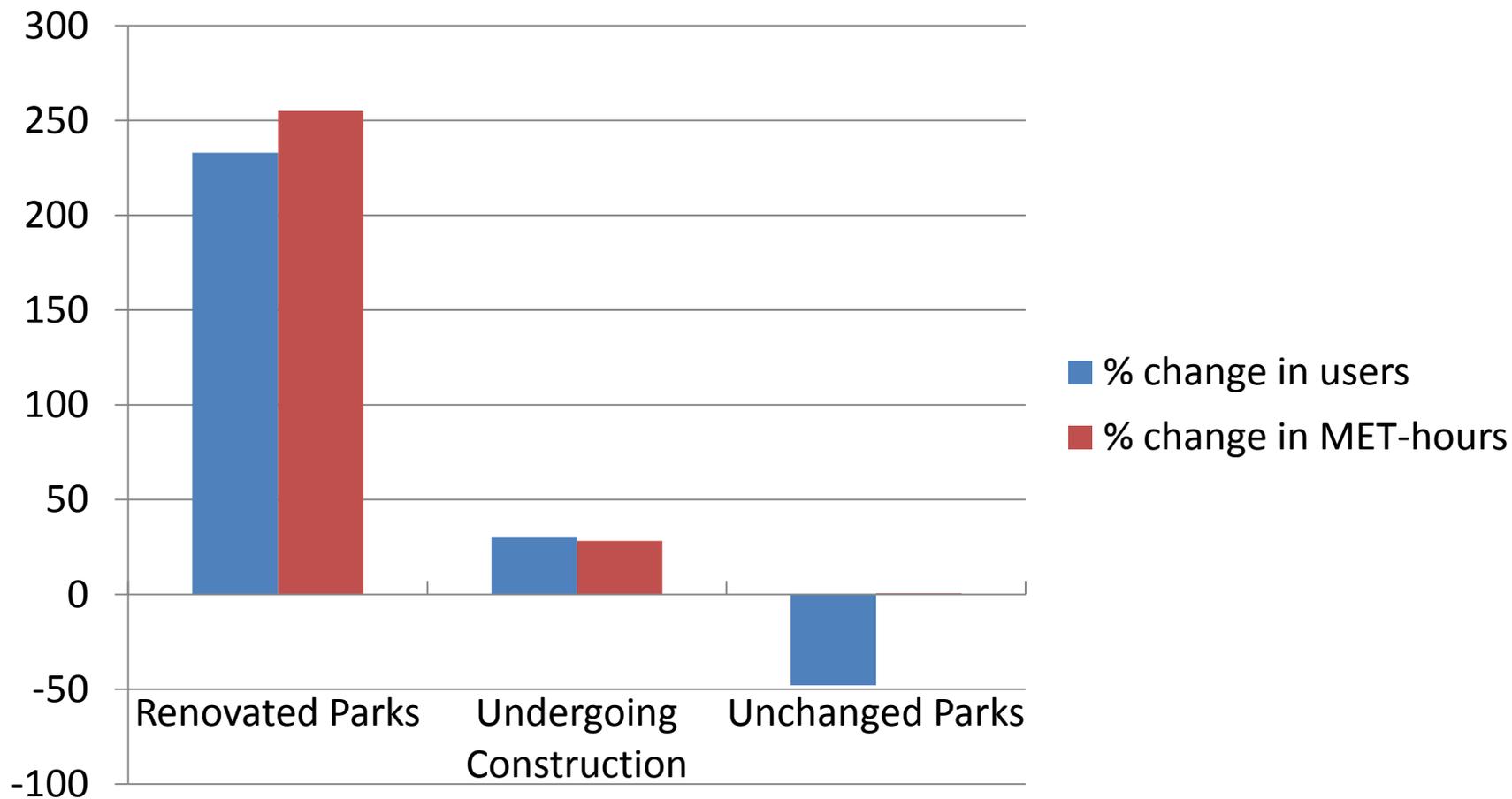
# Park Use and Perceptions of Safety (Baseline)



# Results

- In parks where there were no physical renovations or changes, general use declined.
- In one of these parks, the decline could partly be explained by reductions in accessibility, since the park's hours of operation were restricted.
- No significant change in use was noted at the parks undergoing construction, in spite of several areas being inaccessible.

# Changes In the Number of Park Users and MET-hours Gained





# Results



- Use of the two renovated parks increased substantially compared to baseline.
- Use of the smallest park increased more than 5-fold, from an estimated 156 users to over 1,000 users per week.
- Use of the second renovated park increased from an estimated 5,500 users to more than 9,300 users per week.
- Use by children and adults increased substantially, while there was no change in use by seniors and 51% decline in use by teens.

# Survey Results

- Although park users and residents both reported using the renovated parks more frequently, residents living near parks that were not renovated also reported using them more often.
- Even though at baseline, most residents and park users considered their parks safe, park renovations were associated with an increased perception of park safety.

# Cost Analysis

- Benchmark is \$0.50-\$1.00 for Cost-effectiveness
- Assumes 45 weeks of clement weather
- Assumes results would be the same for each week of the year
- Using \$/MET gained:
  - For West Sunset : \$.27/MET gained
  - For Hayes valley total: \$2.66/MET gained
  - For Hayes Valley, assuming only outdoor improvements: \$1.25/MET gained

# Summary

- Park renovations can have dramatic effects on increasing park use and physical activity levels among park users and improve perceptions of park safety.



# Challenges

- Unanticipated delays
- Reaching all age groups
- Code/construction requirements increase costs



# Conclusion

- In future projects, increasing park use by all age groups could be addressed by
  - offering outreach and programming that target specific age groups (such as teens or seniors),
  - by building park features that appeal to different age groups in ways that will not adversely affect other park users.