

PARKS & RECREATION COMMISSION MEETING

Council Chambers 200 H Street Antioch, CA 94509

Thursday February 19, 2015 7:00 p.m.

AGENDA

- I. CALL TO ORDER
- II. PLEDGE OF ALLEGIANCE
- III. ROLL CALL
- IV. PUBLIC COMMENTS

Residents are given the opportunity to address the Commission on Park and Recreation issues not on the regular agenda.

V. APPROVAL OF MINUTES

Recommended Action:

Motion to approve annotated agenda minutes of the Parks and Recreation Commission meeting of January 15, 2015.

VI. BUSINESS

- 1. Presentation from East County Regional Group and First 5 Contra Costa Children and Families Commission
 - Antioch Parks Assessment Report, A community-based participatory research and evaluation project
- **VII. COMMUNICATIONS** (Announcements and Correspondence)
 - 1. Staff
 - 2. Commission Communication

VIII. ADJOURNMENT

PARKS & RECREATION COMMISSION MEETING

Council Chambers 200 H Street Antioch, CA 94509

Thursday January 15, 2015 7:00 p.m.

ANNOTATED AGENDA

I. CALL TO ORDER

Call to Order by Chair Immekus at 7:00 pm

II. PLEDGE OF ALLEGIANCE

Chair Immekus led the Pledge of Allegiance

III. ROLL CALL

Commissioners Present: Cook, J. Farr, K. Farr, Immekus, Knight, McClelland, Soliz Staff Present: Nancy Kaiser, Parks and Recreation Director

IV. PUBLIC COMMENTS

There were two members of the public who addressed the Commission: Scott Bartlebaugh and Bob Liles. They each spoke about Disc Golf and provided information about what the sport/activity was and offered continued support for developing disc golf in Antioch.

V. APPROVAL OF MINUTES

Motion to Approve Minutes for Meeting of November 20, 2014 5 Yes / 0 No / 2 Abstain

- VI. BUSINESS
 - 2. Appointment of Commission Chair for 2015

Motion to Appoint Roy Immekus Chair for 2015 7/0

3. Appointment of Commission Vice-Chair for 2015

Motion to Appoint Rodney McClelland Vice-Chair for 2015 7/0

4. Adopt a 2015 Meeting Schedule

Commission consensus to meet monthly in 2015

5. Discussion of Parks and Recreation Initiatives in 2015

Discussion by Commission to consider the following initiatives for 2015: visiting parks to assist with findings that address vandalism, serious safety and emergency repair needs; touring facilities and field trips to facilities; adopt-a-park and park watch programs; disc golf; community service projects for teens; promotion of parks and facilities; East County Regional Group project presentation

- VII. COMMUNICATIONS (Announcements and Correspondence)
 - 1. Staff

Director Kaiser thanked Commissioners for attending the Mira Vista Park Open House; announced that the dome has been installed over the fitness pool for winter programs; announced that staff presentations about programs would be part of future meetings

2. Commission Communication

Chair Immekus introduced the two newest Commissioners-Lori Cook and Beverly Knight; Commissioners commented on the positive outlook for 2015 and look forward to working with the staff and residents to strengthen the community

VIII. ADJOURNMENT

The meeting was adjourned at 8:00 pm and the next meeting was announced for Thursday, February 19, 2015

6.1

ANTIOCH PARKS ASSESSMENT REPORT



A community-based participatory research and evaluation project

A collaborative project of: East County Regional Group First 5 Contra Costa Children and Families Commission Healthy & Active Before 5

Prepared January 2015







1.6.1

CONTRIBUTORS

East County Regional Group Members

Janet Costa (Chair), Roxana Garcia (Co-Chair), Priscilla Nzessi (Secretary), Connandra Robinson (Treasurer), Susana Acosta, Desiree Adams, Alma Albanes, Samantha Albanes, Wilfred Albanes, Silvia Ángeles, Nikita Crawford, DeShayla Downing, Mercy Ebong, María Galván, Imelda González, Pedro González, Pamela Goodman, Jorge Guerra, Rosa Guerra Jr., Rosa Guerra, Evangeline Jiménez, Berlén León, Fredy León, Hazel Linares, Evelyn López, Maricela López, Senaido "Sy" López, Yadira Magaña, Brenda Martínez, Mónica Martínez, Mario Menjivar, Yanira Menjivar, María Muñoz, Sariette Ngwanyia, Lorena Orellana, Deborah Polk, Veronica Redd, Pedro Reyes, Yadira Reyes, Nancy Robles, Maricela Rodríguez, Teresa Ruano, Jaynale Sherrill, Jason Sherrill Jr., Lakesha Smith, Sarah Snyder, Ornella Tchoumie, Gloria Vargas, Juan "Francisco" Vargas, Nizza Vasquez, Lakiesha Weaver, Denise Woods, Yerenia Zarate.

First 5 Contra Costa, Community Engagement Program

Rhea Elina Laughlin, MPH, Community Engagement Program Officer

Alejandra Plascencia, East and Central County Community Liaison

Carolina López-Flores, Community Engagement Program Assistant

Healthy & Active Before 5

Emily Warming, MPH, MSW, Director

Tonya Love, Program Associate

ACKNOWLEDGEMENTS

The collaborative partners extend their sincere gratitude to the following individuals and organizations that provided support for this project:

Abigail Kroch, Ph.D., M.P.H | Director of Epidemiology, Planning and Evaluation | Contra Costa Health Services

Ange Burnett, MS | Inclusion Project Coordinator | Contra Costa Child Care Council

Contra Costa Health Services' report: Health Indicators and Environmental Factors Related to Obesity for Antioch, Bay Point, and Pittsburg

Denece Dodson | Evaluation Specialist | First 5 Contra Costa

Lisa Nguyen, DTR | Program Assistant | Healthy & Active Before 5

Nancy Kaiser | Parks and Recreation Director | City of Antioch Recreation Department

Stephanie Arcayena | Graduate Intern | Healthy & Active Before 5

Tracy Irwin | Public Affairs Manager | First 5 Contra Costa

Walter Aab | Public Affairs Assistant II | First 5 Contra Costa |

Will Dominie, MURP | Community Health Planner | San Mateo Health System

Martha Ugaz de Potts | Interpreter and Community Partner

FUNDERS

The Antioch Parks Assessment Report was made possible thanks to generous funding from:

First 5 Contra Costa Children and Families Commission

Kaiser Permanente

Abstract

In fall 2013, a collaborative team of resident advocates and early childhood health organizations assessed 32 Antioch city parks to determine their suitability for young children and families to play and engage in physical activity. The partners included: the East County Regional Group—a parent advocacy group comprised of residents of Antioch and East Contra Costa County; staff from First 5 Contra Costa Children & Families Commission; and staff from Healthy & Active Before 5 (HAB45)—a collaborative of Contra Costa agencies committed to promoting early childhood health and preventing chronic disease. During follow-up workshops, project partners: analyzed the park assessment data; identified exemplary playspaces; selected priority parks and areas in need of improvement; and developed recommendations for improvements. The partners found that the overall quality of the 32 parks assessed varied considerably. An analysis of the data showed a disparity in the quality of parks located in lower- versus higher-income neighborhoods and revealed issues specific to each park. Among parks needing improvements, four thematic priority areas emerged from the data analysis: safety, play equipment, bathrooms, and water fountains. The partners recommend immediate improvements are made to Prosserville and Contra Loma Estates Parks because these parks rated very poorly, are located in neighborhoods where poverty and crime rates are high, and have a high concentration of children under age 5.

1. Introduction

Public parks are crucial community assets that promote physical activity, social cohesion, and healthy neighborhoods. Parks promote environmental health and can enhance the economic value of neighborhoods. For low-income families, access to quality, safe public parks is particularly important to facilitate social, emotional, and physical development of young children and overall community health. These opportunities for safe outdoor play are essential for promoting early childhood health and preventing chronic disease. 1,2

To promote increased park use among young children, a collaborative team of East Contra Costa County residents and early childhood health organizations embarked on a community-led project in fall 2013, to assess the quality of public parks in the City of Antioch, identifying the best parks and those in need of improvement. The collaborative partners included: the East County Regional Group (ECRG); First 5 Contra Costa Children & Families Commission; and Healthy & Active Before 5 (HAB45).

These partners convened with a shared goal of promoting outdoor play among young children and equitable environmental conditions that foster healthy, safe, and family-friendly communities.

The partners grounded their approach in the principles of community-based participatory research (CBPR). As defined by Minkler and Wallerstein, CBPR is a "collaborative approach to research, [that] equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community with the aim of combining knowledge and action for social change to improve community health and eliminate health disparities."

The following report is a summary of the park assessment findings and final recommendations. It seeks to promote immediate public and private investment in key Antioch parks in order to foster overall community health for children and families. Finally, the report highlights a community-based methodology that served to strengthen partnerships, build leadership capacity, and empower residents through shared project ownership and participation.

About the Partners

East County Regional Group (ECRG): A group of East Contra Costa parent and community advocates whose mission is to create a healthy, safe, and family friendly community by supporting leadership development, and advocacy on behalf of young children and their families.

First 5 Contra Costa Children and Families Commission: First 5 Contra Costa invests Proposition 10 tobacco tax revenues in local health and education programs for expectant parents and children, birth to age five. First 5-funded programs help young children grow up healthy, ready to learn, and supported in safe, nurturing families and communities. First 5 Contra Costa sponsors the ECRG.

Healthy & Active Before 5: A collaborative in Contra Costa County with a mission to prevent obesity in children ages 0-5, by building partnerships and environments for healthy eating and active play. The collaborative is lead by a steering committee that includes representatives from: Contra Costa Child Care Council: Contra Costa County Employment & Human Services: Community Services Bureau: Contra Costa Health Services; Contra Costa WIC; Contra Costa Health Plan; First 5 Contra Costa; Kaiser Permanente; and John Muir Health. The HAB45 advisory board is comprised of diverse interdisciplinary representation, including over 80 community organizations, public agencies, churches, funders, hospitals, and other stakeholders.

2. METHODOLOGY

Prior to assessing the parks, the collaborative partners developed a park survey tool that incorporated community input, questions from an independent park survey⁴, and information gathered through key-informant interviews with local evaluation and Americans with Disabilities Act (ADA) experts. The survey covered seven assessment areas: family amenities, maintenance, safety,

innovative/creative play atmosphere, ADA accessibility, young child experience, and overall parent rating (Table 1). The survey included a combination of Likert scale ratings and open-ended questions to capture surveyors' observations, Partners consulted the City of Antioch website and staff to identify all city-owned parks, and then performed a preliminary review of the parks to confirm their locations (Appendix, Image 5). On Saturday, November 16, 2013, staff and ECRG members conducted an assessment of 32 Antioch parks. Upon completing the assessments, project staff compiled the survey data into an Excel spreadsheet and facilitated a series of five workshops in 2014 with ECRG members. During the workshops, staff and ECRG members assessed the survey data to identify themes across highly-rated parks and those parks in need of improvement. Partners consulted data from the surveys, the East Contra Costa County health indicator report, and U.S Census Bureau^{5,6} to identify two priority parks and to agree upon recommendations for park improvements. Lastly, the partners designed a bilingual Antioch park map brochure that highlights the city's highest-rated parks, and distributed over 1,800 of these maps to Antioch families, childcare providers, and community-based organizations in an effort to promote increased use of the City's exemplary playspaces (Appendix, Image 8).

Table 1: Survey Tool, Areas Assessed

Category	Description	
Family Amenities	Restrooms, seating, shade, water fountains, toys, asphalt games, sports fields, barbeque pits, picnic area	
Maintenance	Landscaping, trees, litter, cleanliness, trash cans, maintenance of play equipment, signs, and surfaces	
Safety	Lighting, perception of neighborhood, graffiti, noise and air pollution, visibilit protection from street traffic	
Innovative / Creative Play Atmosphere	Unique and accessible play equipment for young children, nature, water, the elements, art, gardens, free-standing activity panels etc.	
ADA / Special Needs Accessibility	Ramps, wide paths, smooth surfaces, wheelchair-accessible swing, braille panels and signs, picnic areas connected by paved paths	
Young Child Experience	Parent impression of young children's experience of the park	
Parent Overall Rating	Parent overall rating of the park	

3. FINDINGS AND ANALYSIS

The following assessment results primarily reflect the perspectives and needs of parents of young children who rely on parks to support their children's optimal development. For the purposes of the findings, the "Parent Overall" rating was used as an indicator of overall park quality.

HIGH-RATED PARKS

With 32 parks citywide, Antioch has a relatively high number of parks serving its residents and surrounding communities. Eight parks are located north of Highway 4, while 24 are located south of the Highway (Appendix, Image 5). The survey data shows that 22% of parks assessed are rated highly by parents and are not in need of improvement. Parents gave the highest overall ratings to Antioch Community, Markley Creek, Hansen, Antioch City Park, and Eaglesridge parks, with the first three rating highest. Antioch Community received the highest Parent Overall, Young Child Experience, and Amenities ratings of all the parks assessed. It also received a relatively high rating in Safety. One survey respondent remarked on Antioch Community Park:

"I visit this park because it is large and has many things to entertain the family."

Another participant noted,

"I really like this park [because]...it has two separate playgrounds—one for kids ages 2-5, the other is for 5-12—[and] it has a lot of shade."

Markley Creek received high Parent Overall and Young Child Experience ratings and rated relatively high in both Amerities and Innovation. One parent respondent noted:

"The park is well maintained!"

Hansen Park received high ratings in the areas of Amenities, Maintenance, and Parent Overall. One parent said of Hansen:

"[There is] lots of open space, fun structure[s] for climbers, [and] seating for parents."

These comments highlight some elements that make a park a quality public space for parents with young children.

LOW-RATED PARKS

While some Antioch residents benefit from these highly-rated outdoor playspaces, the data shows that quality across the 32 parks varies considerably. According to Parent Overall ratings—a measure of parents' perception the of overall park quality for young children—78% of the parks assessed need some kind of improvement and, within that, nearly 19% need major improvement.

Priority Areas for Low-Rated Parks: Among parks most in need of improvements, four thematic priority areas emerged from the data analysis: safety, play equipment, bathrooms, and water fountains (Table 2). An analysis of the qualitative data showed that most negative survey comments related to one of these four priority areas. Concerning one of the most poorly-rated parks, one survey participant noted:

"The park is full of graffiti, even over the trees. [It's] a big park surrounded by trees, but [it] seems unsafe."

Another comment reveals:

"This park needs various repairs: bathrooms are dirty [and] the water fountain is old, with paint and dirt."

A parent participant commented about another poorly-rated park:

Table 2: Thematic Priority Areas Across all Low-Rated Parks

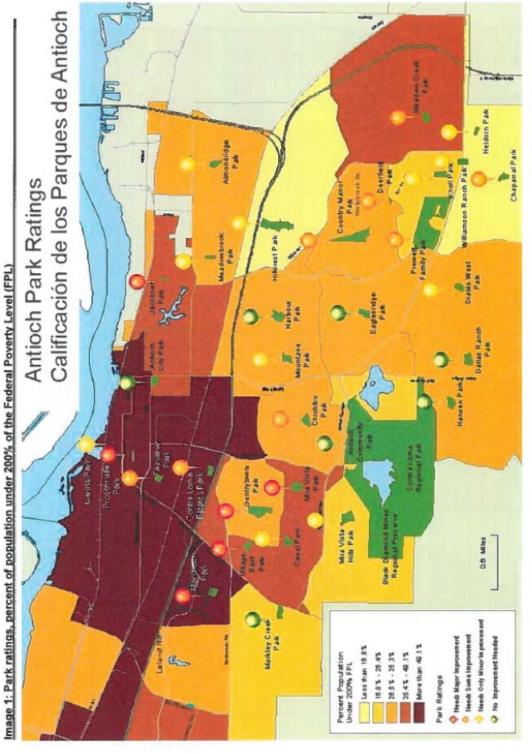
Safety
Play Equipment
Bathrooms
Water Fountains

"There are no bathrooms, lighting...benches, [or] barbeque pits. This park is neglected."

The issues highlighted in these comments are representative of the common themes that arose

The issues highlighted in these comments are representative of the common themes that arose across all the lowest-rated parks. Both assessment data and community workshop discussions indicated that, in order to facilitate family access to Antioch parks, all poorly-rated parks in Antioch need improvement most to the four priority areas of safety, play equipment, bathrooms, and water fountains.

Low-Rated Parks and Poverty Rates: In addition to the survey data, Antioch census data shows that many of the low-rated parks are located in the city's lowest income neighborhoods (Image 1). ^{7,8} of the 6 parks included in the 19% of parks needing major improvement (Mira Vista, Prosserville, Jacobson, Village East, and Marchetti) are located in very low-income areas (defined as areas where over a third of the population is living at 200% below the Federal Poverty Level (FPL)). Table 3, demonstrates the disparity in park quality by neighborhood socioeconomic status. The parks with the lowest ratings are generally located within lower-income areas, while the highest-rated parks tend to be located in the higher-income neighborhoods. Of the 11 parks located in very low-income areas, 18% need minor improvement, 27% need some improvement, and 45% need major improvement. Taken together, 91% of the parks located in very low-income areas are in need of improvement. It is of note that of these 11 parks, 5 are located in areas where nearly half of the population lives in dire poverty (Table 3).



Percent of Population Under 200% of Federal Poverty Level (FPL) Por Ciento de la Población Menos del 200% del Nivel de Pobreza

Data Searce (On sex 2868 T10 ERVine, the Atac 2861) On the Carda Desarthern Est Con versalian and Development, Jene 25 til

Abspreaded by Los & Centre Castes hard in resetty and black burnesh. Castes Siller and Hill States has like 1080 data acuted in this tag.

Los & Castes Caste in statement in compression to the attractive time from contrastive to the statement.

-

Parent 4.75 3.75 Table 3; Park ratings, stratified by percent of population living under 200% of the Federal Poverty Level in area surrounding park 4.25 4.25 4.2 3.75 3.25 Child 5 4.2 2.3 ADA Access 3.25 1.3 3.6 4.4 2.3 Innovation 3.5 Safety 3.5 2.88 3.25 3.25 4.75 4.5 Maintenance 4.5 3.25 4.5 4.4 4 2.5 2.2 Amenities 2.25 Meadow Creek Estates Contra Loma Estates Prosserville Marchetti Barbara Price Marina Antioch Community Mira Vista Hills Williamson Ranch Almondridge Meadowbrook Prewettt Ranch Country Manor Markley Creek Dallas Ranch Diablo West Sentrytown Antioch City Village East Park Name Eaglesridge Mountaire Mira Vista acobsen Chaparral Chichibu Deerfield Hansen Heidorn Harbour Canal % Population Under 35.4% - 49.1% 16.8% - 26.4% 26.5% - 35.3% < 16.8% > 49.2% 200% FPL

4.00 - 5.00	3.00 - 3.99	2.00 - 2.99	1.00-1.99
o Improvement	Needs Only Minor	Needs Some	Needs Major
Needed	Improvement	Improvement	Improvement

Low-Rated Parks and Young Children: Concerning who lives in these very low-income areas, recent census data for Antioch shows that nearly 23% of all parks assessed are located in areas that are both very low-income and inhabited by a high concentration of young children (areas with more than 650 children under age 5). Overall, 41% of parks are located in areas where a high concentration of young children live (Image 2).



Image 2: Park ratings, households with children 0-5 years of age

Households with Children 0-5 Years of Age Casas de Niños de 0-5 Años de Edades is is sooner (Descrict 1888 140 Billioner, term vilon 1986); is also Cords Department of Conservation and is exception, Jane 18 M

May produced by I and b Coation Coations Safety of Prescript and Action Server Common Stationar's GLUThyma from Man 1988 and a mass of the Hosp Louis Coation Coation and Action and Action to the program of the Action Control Professionary.

Low-Rated Parks and Community Safety: Included among the parks located in the lowest-income neighborhoods with a high concentration of young children, are Prosserville and Contra Loma Estates. Antioch crime data from September 2013 through September 2014⁹ demonstrates that a high incidence of certain crimes occurred near (within a half-mile radius of) these two low-rated parks (Images 3 and 4). During this time period, 10% of all aggravated assaults in Antioch happened near Prosserville and nearly 18% happened near Contra Loma Estates, for a combined total of nearly 28%. Almost 10% of burglaries occurred near Prosserville and over 15% happened near Contra Loma Estates, for a combined total of over 25%. A relatively high number of motor vehicle

theft incidents occurred near these parks as well. Close to 14% occurred near Prosserville and over 24% occurred near Contra Loma Estates for a combined total of 38%. Lastly, the data showed a high incidence of arson near both parks: 11.4% occurred near Prosserville and approximately 32% near Contra Loma Estates. Combined, over 43% of reported arson incidents occurred near these parks (Table 4).

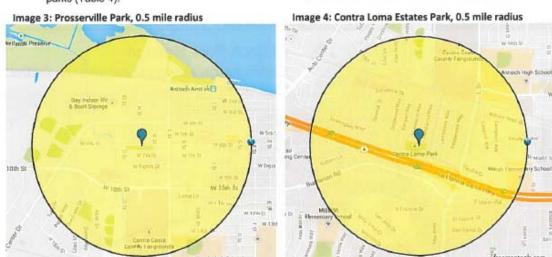


Table 4: Percentages of repo percentage of all reported cri	mes in Antioch, betwee	n 9/2013 and 9/2014	only i only is a
Crime Type	Prosservile	Contra Loma Estates	Combined Total
Aggravated Assaults	10.02	17.59	27.62
Burglaries	9.77	15.63	25.4
Motor Vehicle Theft	13.89	24.23	38.12
Arson	11.36	31.82	43.18

Quality Parks are Used Parks: While over a third (34%) of Antioch parks are located in very-low income areas, survey data shows the present state of these parks is inadequate for young children. Research shows that the presence of parks alone does not ensure access or usability of these critical community spaces, but instead, public parks need adequate amenities, play structures, and safety to be frequented.¹⁰

4. RECOMMENDATIONS

Overall, the partners recommend that the parks prioritized for immediate improvements are those located in very low-income areas (areas where 35.4% of the population or more is living at or below 200% of the FPL) and those areas where the highest concentration of young children live. The partners recommend that the attention given to these parks focuses on the four priority areas of safety, play equipment, bathrooms, and water fountains.

In particular, the partners recommend that Prosserville and Contra Loma Estates parks (Appendix, Images 6 and 7) receive immediate and more comprehensive attention in the areas of amenities,

maintenance, play equipment, and safety. While analysis of the data indicated that 78% of Antioch parks are in need of at least minor improvements—especially those in lower-income areas—ultimately, the partners prioritized Prosserville and Contra Loma Estates parks for immediate

improvement because they: received low ratings; are located in the lowest-income neighborhoods (where more than 49.2% of the population is living at or below 200% of the FPL); are located in an area inhabited by a high concentration of young children under age 5¹¹; and had high crime rates for violations of particular concern to park users. The specific improvements recommended for the two priority parks are listed in Table 5 below.

The recommendations reflect a comprehensive vision for park redesign that community members assert will promote equitable park access, increased park use by young children and families, increased social cohesion, and neighborhood safety.

The partners recommend that the City of Antioch allocate city capital improvement funds and work with the partners to seek additional park improvement grant funding to implement the suggested renovations. Partners also encourage Antioch city staff and elected officials to work with community partners—including the partners in this park assessment project—to explore other revenue generating strategies to fund the recommended park improvements at Prosserville and Contra Loma Estates. Lastly, the partners recommend that a coalition of

"Every child deserves to be able to go down the block and enter the world of wonder that is the local park, but for many of us, a safe and clean park is not down the street but across the city. It is sad to know that only a select amount of children are allowed to have that" —ECRG member

local law enforcement, Antioch residents, and community safety advocates is formed in partnership with the Antioch Crime Prevention Commission to implement a robust violence prevention strategy in the neighborhoods where Prosserville and Contra Loma Estates are located. Because safety in both parks was identified as a pressing issue, it is critical that community health prevention strategies are explored to address root issues of the area's poor park conditions.

Table 5: Priority Parks, Prosserville and Contra Loma Estates				
Priority Area	Recommendations by Needs and Issue Areas			
Amenities	Shade Basketball courts Soccer fields Water fountains Benches	 Picnic tables Grills Walking trails ADA Accessibility Volleyball court[†] 		
Maintenance	Bathrooms	Garbage and recycling cans		
Play Equipment	Innovative playground for children ages 0-5	New play structure for older children (slides, climbing walls, tire swings, etc.)		
Safety	Change sand to rubber surface Lighting	Higher fencing Video surveillance		

[†] Contra Loma Estates Park only

10

4. CONCLUSION

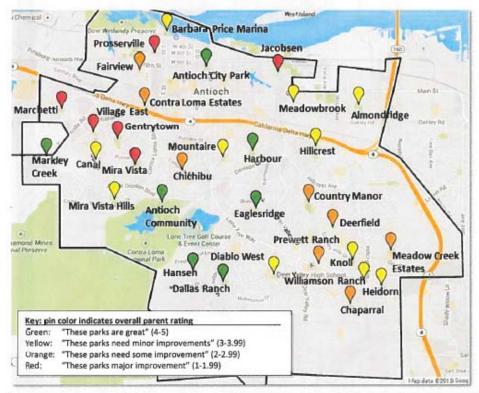
Public parks are essential spaces for promoting community health, and in particular, physical activity among families with young children. The City of Antioch has many parks, some of which are excellent, and others with potential for improvement to their amenities, maintenance, play equipment and safety. The park partners recommend that Prosserville and Contra Loma Estates Parks are prioritized for immediate improvements in these four areas. These two parks not only rated very poorly on the assessments, they also are located within the lowest-income neighborhoods in Antioch that experience high crime incidence, and are inhabited by a high concentration of young children under age 5.

It is well established that early childhood is a critical time in the life-course for promoting health and preventing chronic disease. With improved access to quality parks in their own neighborhoods, Antioch children are more likely to benefit from opportunities for a healthy start to their young lives.

The data and findings of this report are distinct in that community members were central to the park evaluation process from beginning to "As a kid, I spent my summers at my local park. I learned so much about the outdoors, people, and myself during those hours spent running around playing. I did not have to worry about glass in the sand, unsafe play equipment, or the lack of water fountains. I also did not have to travel far to play. I would have missed out on so many great moments and lessons if I did not have that great park by my house and unfortunately, too many children do not have the chance to play at the park and build similar memories. I know that we can do better for our kids"—ECRG member

present. This community-based participatory project is uniquely positioned to provide rich, invaluable data and promote innovative health improvement strategies that are possible when local organizations, city governments, and residents join efforts to improve community health.

APPENDIX Image 5: Antioch park locations by Parent Overall ratings



APPENDIX Images 6 and 7: Prosserville and Contra Loma Estates Parks





Above. Prosserville Park. Unsafe metal slides, rust, no shade, no tot lot, no fence, duct-taped swing, sand. Left: Contra Loma Estates Park. Trash dumping, no shade, dilapidated play equipment, sand, no tot lot, no fence, basketball court without nets.



References

¹ Harnik, P., & Welle, B. (2009). Measuring the Economic Value of a City Park System. The Trust for Public Land, 1-28.

² Taylor, W., & Lou, D. (2011). Do All Children Have Places to Be Active? Disparities in Access to Physical Activity Environments in Racial and Ethnic Minority and Lower-Income Communities. Active Living Research, 1-24.
³ Michiga M. & Mallandoin M. (2011). (2012).

Minkler, M., & Wallerstein, N. (Eds.). (2003). Community based participatory research in health. San Francisco: Jossey-Bass.

⁴ Moore, E., Prakash, S., Garzón, C., Hernandez, C., McNeil, L., Pérez, C., Violich, C. (2009). City Park Conditions. In Measuring What Matters: Neighborhood Research for Economic and Environmental Health and Justice in Richmond, North Richmond, and San Pablo (p. 105). Oakland: Pacific Institute.

Rattray, T., Kroch, A., Ritterman-Weintraub, M., Rovira-Osterwalder, T., & Milosevich, D. (2013). Health Indicators and Environmental Factors Related to Obesity for Antioch, Bay Point, and Pittsburg (p. 86). Martinez: Contra Costa Health Services.

U.S. Census Bureau, 2008-2012 American Community Survey. Obtained by Contra Costa Health Public Health Epidemiology, Planning, and Evaluation Department, April 2014

⁷ U.S. Census Bureau, 2008-2012 American Community Survey. Obtained by Contra Costa Health Public Health Epidemiology, Planning, and Evaluation Department, April 2014

Rattray, T., Kroch, A., Ritterman-Weintraub, M., Rovira-Osterwalder, T., & Milosevich, D. (2013). Health Indicators and Environmental Factors Related to Obesity for Antioch, Bay Point, and Pittsburg (p. 86). Martinez: Contra Costa Health Services.

Public Records request and City of Antioch Crime Statistics: 2013 and 2014. (2014, December 31).
Retrieved January 10, 2015, from http://www.ci.antioch.ca.us/CityGov/Police/crime-maps/crime-maps.htm
¹⁰ Wen, M., Zhang, X., Harris, C., Holt, J., & Croft, J. (2013). Spatial Disparities in the Distribution of Parks and Green Spaces in the USA. The Society of Behavioral Medicine. Retrieved January 11, 2015, from http://link.springer.com/article/10.1007/s12160-012-9426-x/fulltext.html

¹¹ U.S. Cersus Bureau, 2008-2012 American Community Survey. Obtained by Contra Costa Health Public Health Epidemiology, Planning, and Evaluation Department, April 2014





