



HEALTHY COMMUNITIES
SURVEILLANCE AND
MANAGEMENT TOOLKIT

SURVEILLANCE AND
MANAGEMENT TOOLKIT (SMT)
BETA SITE PROJECT
SUMMARY REPORT
YEAR TWO



Acknowledgements

This project is a joint effort of a variety of South Bend Parks and Recreation Department staff, community stakeholders, consultants, and researchers.

South Bend Parks and Recreation Staff

Matthew Moyers, Special Projects Coordinator, Project Manager

Phil St. Clair, Director of Parks and Recreation

Susan O'Connor, Recreation Director

Richard Payton, Director of Development

Mark Bradley, Director of Marketing and Promotions

And many Additional Programming and Operational staff

**Thank You to all of the Department's Participating
Partners and Stakeholders in the Community!**



Healthy Communities Research Group - Project Team

Teresa Penbrooke, CPRE, MAOM, GP RED and GreenPlay, LLC, Project Manager

Contact: TeresaP@GPREd.org or 303-870-3884 www.GPREd.org

Jessica Osborne, MUD, MURP, GP RED Initiatives Director

Rob Layton, FASLA, Design Concepts

David M. Compton, MS, MPH, E.D., Professor Emeritus, Department of Environmental Health,
Indiana University; Research Consultant for GP RED

Kiboum Kim, Ph.D., Researcher, Indiana University – Bloomington



North Carolina State University

East Carolina University



Table of Contents

I. Introduction	1
II. Year Two Action Themes	3
Outcomes for Year Two	3
A. Creation of the Active Youth Initiative (AYI)	3
B. AYI Accomplishments in Year Two	4
C. Additional Accomplishments for SBPRD Parks and Recreation Operations in Year Two	6
D. Update of Assets and Affordances Inventories	7
E. Affordances Template and Financial Analysis Update	15
F. Key Indicators and Policy Analysis Update - MAUT	16
G. MAUT and Implications for Systems Modeling	21
H. Safety and Perception of Safety Analysis	27
III. Outcomes Summary and Action Plan for Year Three	29
Outstanding Year Two Action Items	29
Appendix A: South Bend Active Youth Initiative MAUT Process	31
Introduction	31
Acknowledgements	31
Methodology	32
Policy Relevance	41
Discussion	41
Conclusions	42
Appendix B: SBPRD AYI Action Plan Year Two to Year Three	51

Table of Tables

Table 1: Factors and Indicators Contributing to Healthy Communities	32
Table 2: Mean coefficients of indicators corresponding five factors	37
Table 3: Statistical Comparisons Between SBPRD and AYI Participants	38
Table 4: 2011 City of South Bend Laws and Ordinances Affecting 10-14 Year Old Youth	44

Table of Figures

Figure 1: MAUT Tree: Utility coefficients and ranking of indicators; SBPRD (n=9); AYI (n=8)	20
Figure 2: Causal Loop Diagram	22
Figure 3: Estimated South Bend Population	23
Figure 4: Elements of the South Bend System Model	25
Figure 5: Impact of Factors on Overweight	26
Figure 6: Mean coefficients of each factor rated by two groups of AYI members	35
Figure 7: Mean Coefficients of Each Factor Rated by 17 AYI Members	36
Figure 8: MAUT Tree: Utility coefficients and ranking of indicators contributing to a reduction of the prevalence of child obesity; SBPRD (n=9); AYI (n=8)	40

I. Introduction

In 2011, South Bend Parks and Recreation Department (SBPRD) elected to work with GP RED's Healthy Communities Research Group (HCRG) to participate in a three-year project as a **Beta Site** to test ***the Healthy Communities Surveillance and Management Toolkit***. This project is designed to analyze, document, and evaluate five elements related to the repositioning of parks and recreation as a primary preventative community public health provider:

- **Creating a Warrant for Agency Action** – Why? Who? What is the Impact?
- **Convening Community Stakeholders and Champions** – Residents? Partners? Providers?
- **Policies, Laws, and Procedures** – What is influencing active living?
- **Fiscal Resources and Distribution** – What funds? How should they be allocated?
- **Inventory of Assets and Affordances** – Programs? Parks? Facilities? Food?

In Year One, information for South Bend was collected through a process that included many staff and stakeholder meetings. Templates were created and used to compile digital data. From an analysis of these elements, the project moved to creation of a systems portfolio, development of strategic concepts for improvement, and future modeling for the purposes of articulation, prioritization, management, and surveillance of outcomes over time. "Findings and Visioning Sessions" were held with staff and stakeholders to review the collected information and key findings from the work in Year One, and to determine priorities for moving forward in Year Two. A key finding was the need to convene a community Task Force to move forward, called the **Active Youth Initiative**. A common Purpose Statement and Goals emerged:

The Purpose of the South Bend Active Youth Initiative (AYI) is to increase the physical activity, healthy nutrition habits, and social engagement of youth in South Bend.

- AYI will examine and monitor youth activity providers, policies, funding allocation, assets, and affordances.
- AYI will engage and organize community partners in planning, management, funding, and measurement of the AYI.
- Ongoing focus will be on reducing overweight and obese populations, specifically ages 10-14.
- Periodic progress and outcome reports will be made to participants, partners, and citizens of South Bend.

THIS PAGE INTENTIONALLY LEFT BLANK

II. Year Two Action Themes

The priorities emerged in Year One into a **Warrant for Agency** and **Action Plan** for Year Two with specific actions, outcomes, responsibilities, timeline, and funding impacts.

The Primary Action Themes Determined for Year Two for South Bend AYI were to:

1. Conduct an Educational Campaign to Change Culture and Perceptions
2. Collect More South Bend-Specific Data
3. Increase Affordances – Opportunities to Participate
4. Identify Key Asset (Built Environment) Improvements by Census Tract/Neighborhood
5. Continue to Refine and Test the HCRG Surveillance and Management Toolkit and Evaluation

Outcomes for Year Two

A. Creation of the Active Youth Initiative (AYI)

As a primary outcome of the project so far, the **Active Youth Initiative** was created in Year Two, with organization facilitated by SBPRD. One of the key findings in Year One was the identification of over 80 collaborative relationships with other private, non-profit, and for-profit organizations in South Bend.



The SBPRD assigned staff liaisons to work with AYI. Initial organizational meetings for the AYI were held in Year Two. SBPRD is the flagship organizing sponsor providing facilitation and other partners engage and provide resources (staffing, funding, programs, knowledge, momentum, etc.). An initial Steering Committee was formed, including:

- Chair: Robin Meleski – Saint Joseph’s County Public Health Department
- Sandy Sampson – South Bend Kroc Center
- Karl Nichols – Health Coalition
- Rich Payton – SBPRD
- Matthew Moyers – SBPRD

The SBPRD agreed to continue as a central distribution location for resources. In 2012 – 2013, AYI meetings were held monthly.

Who else should be involved?

Out of the initial 80+ identified organizations, 22 individuals were identified as key stakeholders interested in the Steering Committee meetings, and contact lists were created. Additional outreach continues to try and involve the Housing Authority, Unity Gardens, a chef association, Purdue Extension (Edie Sutton), Granger Community Church, Boys and Girl Scouts, Girls on the Run. Additional efforts include connecting to the faith-based institutions, the Black Pastors group, the Latino spiritual community, and church activity providers. Anyone who may be touching the lives of the youth in South Bend is invited to participate, and meetings are open to the public.

B. AYI Accomplishments in Year Two

The AYI Group and Steering Committee met monthly. There were many accomplishments, including working with the Department to address the Educational Campaign and availability of programs.

1. Passport to Play

The **Passport to Play** program kicked off on March 17, 2013 and runs until September 2013.



Get Ready for a Season of Play!

Sunday, March 17 • 2:30 to 4:30 p.m.
HealthWorks! Kids' Museum • 111 W. Jefferson Blvd.

Powered by:

- Memorial **HEALTHWORKS!** Kids' Museum
- SOUTH BEND** PARKS AND RECREATION
- Reducing Obesity Coalition** for the South Bend Community

passport to Play
Kick-off Celebration

Exciting games and activities for the whole family!
Awesome giveaways! And, it's FREE!

Passport to Play is a season-long adventure that begins March 17.
Outdoor fun at South Bend Parks! • A different adventure each month!

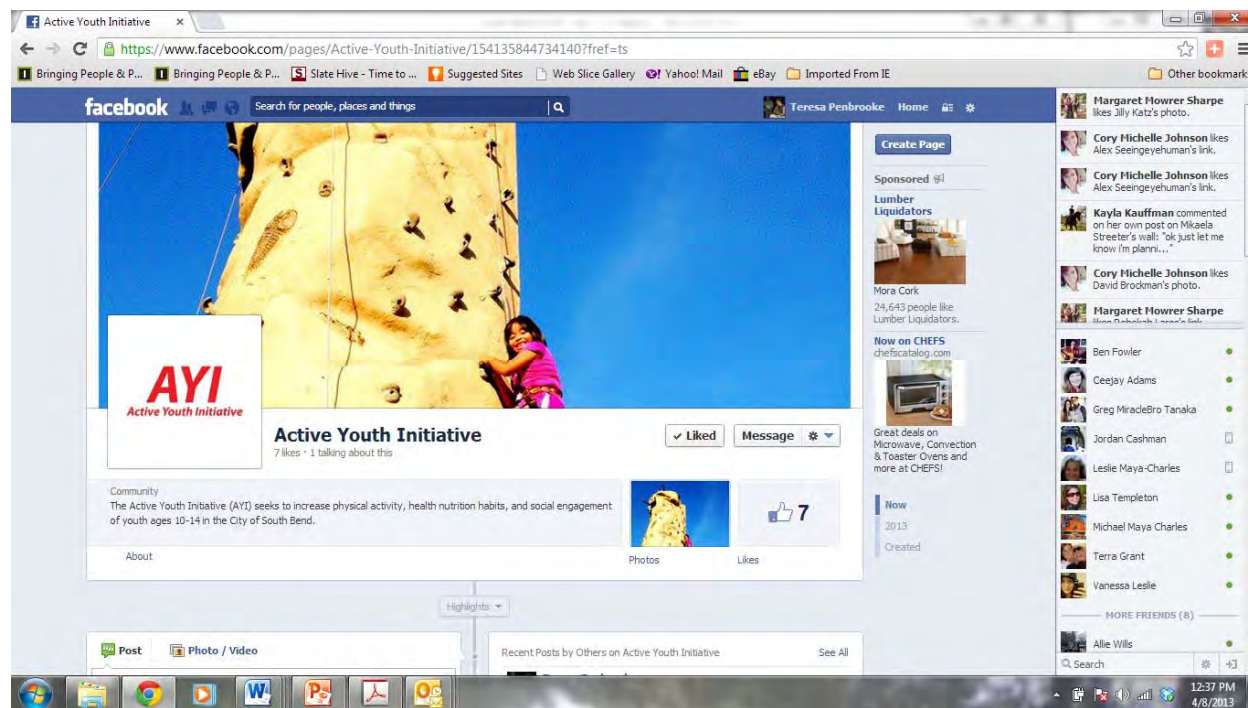
Like us on **facebook**

For more information, call **574-647-KIDS** or check us out on Facebook®; search **"Passport to Play."**

2. AYI Facebook Page

The **AYI Facebook page** has been created. The AYI will promote this more as they gain momentum through the Passport to Play program. The URL is

<https://www.facebook.com/pages/Active-Youth-Initiative/154135844734140?fref=ts>



3. Prescription to Play

The Prescription to Play program is a new program utilizing healthcare providers who will “prescribe” physical activity for 60 minutes to families who are at-risk for overweight/obesity or are trying to overcome overweight and obesity. This program kicked off on March 4, 2013 and will run until June 27 (pilot time frame). The goal is that after the pilot period, any glitches will be worked out, and AYI will be able to run this program continuously through partner agencies.

The plan is that a local healthcare provider will distribute the prescription like a regular prescription for medication. On the back of the prescription will be a list of locations for patients to attend a 60-minute physical activity and nutrition program. The pilot program is offered at the Kroc Center and YMCA, with SBPRD locations to be added in the future. Participation in the activity program will be free and open to the patient’s immediate family. The patient will be encouraged to attend weekly for four months. This program will utilize the Coordinated Approach to Children’s Health (CATCH) program. CATCH is an evidence-based program that has been proved to reduce overweight and obesity in children. More information on CATCH can be found at www.catchinfo.org. The CATCH program will be led by a St. Joseph County Health Department certified health educator.

Initial Potential Providers:

Dr. Riley- Memorial Family Medicine
Dr. Deardorff- St. Joe Family Physicians
Sister Maura Brannick Clinic

Memorial Southeast Clinic
Bendix Family Physicians

4. Update of Inventory of Alternative Providers

The AYI began adding to the inventory of Alternative Providers template and including the locations of programs of these providers to be added to the Department's dataset. This will continue in the future. Martin's Supermarkets became an active partner with AYI.

Additional Alternative Providers Added in Year Two

Michiana Family YMCA

South Bend Kroc Center

Logan Center

O.C Carmichael Jr. Youth Center

Harrison Primary Center

Wilson Primary Center

Robinson Community Learning Center

Chet Wagner Little League

St. Joseph County 4-H Fairgrounds

HealthWorks! Museum

C. Additional Accomplishments for SBPRD Parks and Recreation Operations in Year Two

The Year One report and the meetings of the AYI initiated a great number of ideas for accomplishing the desired outcomes. Key initiatives and accomplishments for the SBPRD in **Year Two** included:

1. AYI Marketing and Educational Campaign

SBPRD Marketing staff became involved in creating a culture that promotes the AYI through a variety of channels. In the departmental Activity Guide the AYI Logo was added to all programs and services that fit the goals of the AYI, and to identify these programs to the public. Lists of known AYI collaborators and partners were made available for registration and programming staff to help inform the public of additional offerings beyond those specific to the Department. Contact lists were compiled from the Year One outreach efforts, the AYI meetings, and continued outreach in Year Two.

2. Focused Programming Improvements

In addition to the key AYI programs described in the following section, the SBPRD also included additional focused classes. These included nutrition tips and classes, Zumba for family in parks, intermediate school field days, and additional outdoor activities promotions.

3. Nutrition Policy

While provision of nutrition is not a primary activity for SBPRD, the Department adopted a general policy that promotes healthy eating in programs and meetings.

Nutrition Policy for South Bend Parks & Recreation Programs & Meetings

We, at the Parks & Recreation Department, will strive to serve at our meetings and programs the healthiest food choice we can as part of our Health and Wellness commitment to the community.

4. Nourishing our Neighborhoods ConAgra Foundation Project Grant Application

This grant application for \$35,000 (\$15,000 match) was submitted in February 2013. While the grant was not approved, the Department was encouraged to apply again in the future, and good information was created for future similar grant applications.

Project Summary: Working in partnership with several community organizations, the Nourish our Neighborhoods program would increase the efficiency and capacity of the current feeding programs that are run in conjunction with the Parks and Recreation Department. Utilizing two existing community recreation centers in the identified areas most at risk, the program would address hunger in those areas most at need in the community.

Strategic Alignment: The South Bend Parks and Recreation Department, supported by the Park Foundation, has been actively involved in hunger issues on the city and neighborhood scale for decades. The community centers are large sites of federal lunch and feeding programs in partnership with our local school district. Our mentoring and after school programs contain strong nutritional education and outreach components. The Department is a recognized member of the community gardens and feeding efforts and this program would be a logical extension of current efforts.

Project Goals: Demonstrably increase effectiveness and capacity to provide nutrition to the most at risk neighborhoods in our community.

D. Update of Assets and Affordances Inventories

In Year One, the inventory of assets was created using the GRASP® Composite-Values Method (CVM) to look at level of service (LOS) for the City in a number of ways. The assets inventory in Year One only included public parks, recreation, and trails assets managed by the Parks and Recreation Department, and those school facilities that are open to usage for recreation outside of school hours. In Year Two, select Alternative Providers were added, and the inventory was analyzed using zip codes to break down closer to a neighborhood level to help address equity and capital needs. Assets of other types may be inventoried and added to the digital dataset at a later time, as desired.

The following analytical maps (Perspectives) show the study area and key locations of properties. Shading on the map delineates the subareas that were defined as part of the analysis. In 2012 the method used three sub-areas (east, west, and outside City limits). In 2013 the CVM analysis was detailed to zip code level (15 sub-areas). Larger Perspectives have been provided to the Department. A detailed **quantitative analysis** is included in **Appendix A**.

Assets

Perspective A – Access to All Components

Perspective A models access to all components by all transportation modes. One-mile buffers have been placed around each component and shaded relative to the component’s GRASP® score. This represents a distance from which convenient access to the component can be achieved by normal means such as driving or bicycling. In addition, the one-third mile buffer shows the distance that a resident can reasonably walk in ten minutes. Scores are doubled within the one-third mile buffer to reflect the added value of walkable proximity, since most healthy individuals can reach a location on their own by walking, even if they do not drive or ride a bicycle.

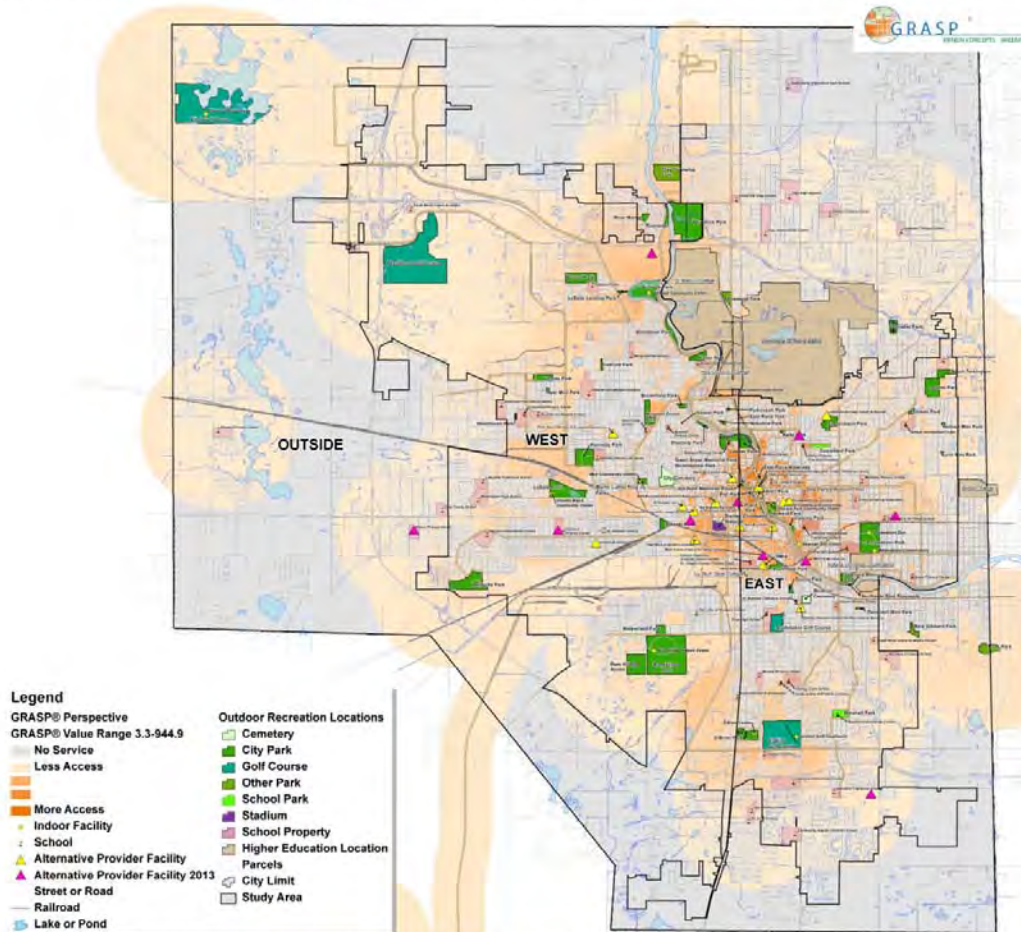
Quantitative Analysis of Perspective A

Overall, from a drivable standpoint, the City of South Bend has pretty good coverage for all components. The neighborhoods with the highest Average per Acre scores are in zip codes 46601, 46617, and 46616.

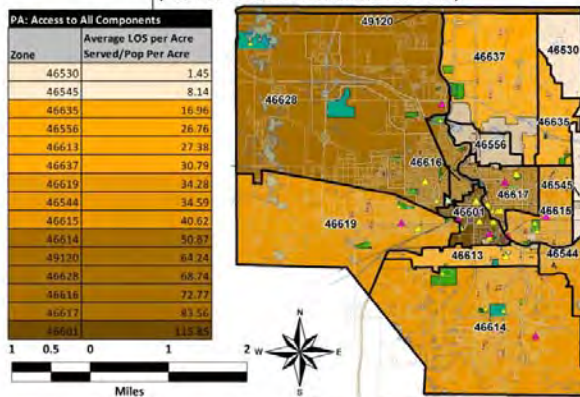
PA: Access to All Components	
Zone	Average LOS per Acre Served/Pop Per Acre
46530	1.45
46545	8.14
46635	16.96
46556	26.76
46613	27.38
46637	30.79
46619	34.28
46544	34.59
46615	40.62
46614	50.87
49120	64.24
46628	68.74
46616	72.77
46617	83.56
46601	115.85

The lowest scores are for 46530, and 46545; however, these areas are adjacent to Mishawaka, and may have services from that City (not in the data set). An average of **72.3 percent** have a LOS score for access.

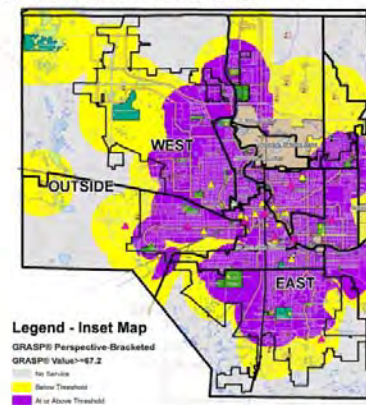
South Bend, Indiana Parks and Recreation Composite-Values Methodology (CVM) Level of Service Analysis 2013



PA - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY
(LOS PER ACRE/POPULATION PER ACRE)



PA - 2: GRASP® THRESHOLD ANALYSIS



ACCESS TO ALL COMPONENTS

PERSPECTIVE MAP: A

Perspective B – Walkable Access to Components

PB: Walkable Access to All Components	
Zone	Average LOS per Acre Served/Pop Per Acre
46530	0.00
46545	2.16
46556	5.49
46613	6.40
46635	6.65
46615	7.97
46544	9.13
46637	12.88
46616	13.16
46617	13.45
46601	13.75
46619	15.19
46614	18.73
46628	26.71
49120	120.00

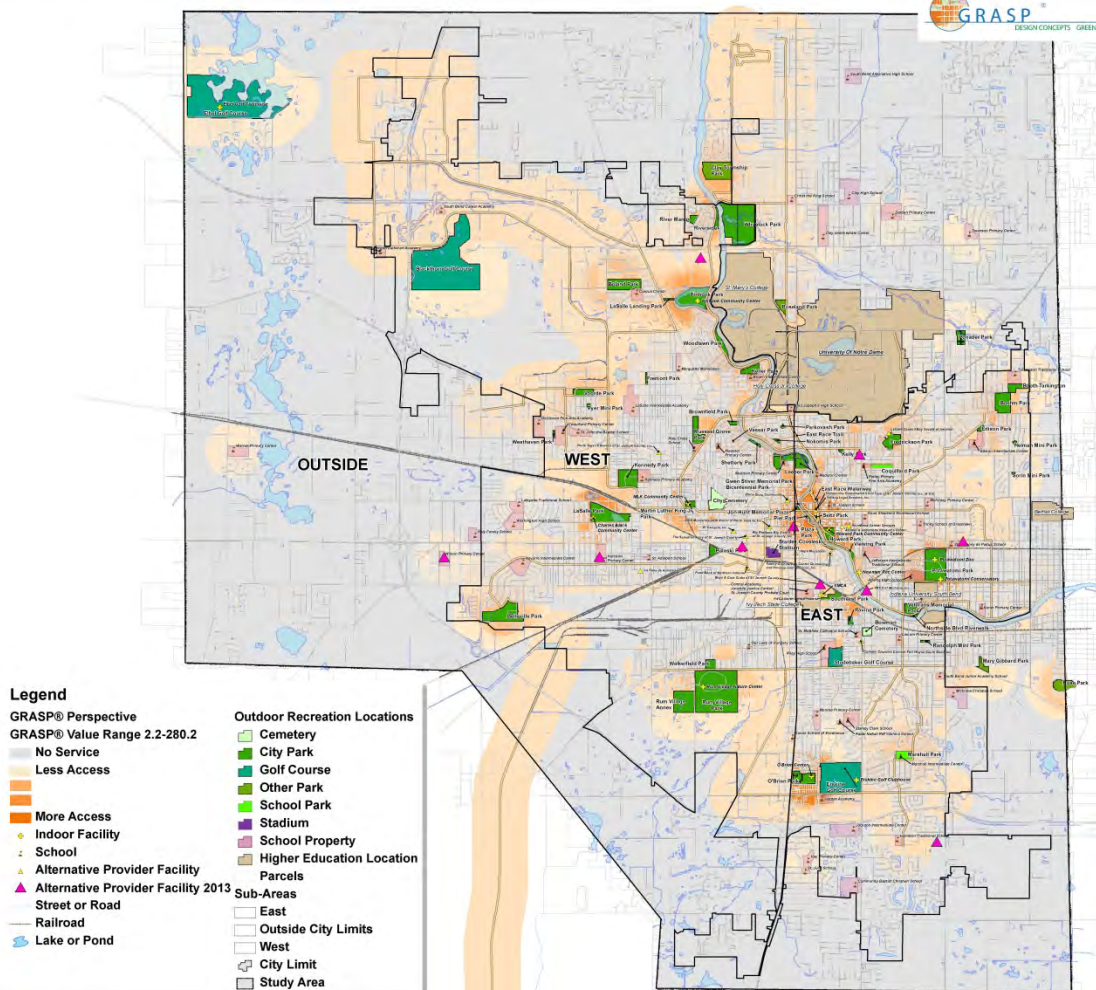
When walkability is added as a factor to the analysis (including major barriers and 1/3 mile buffers), the scoring for average level of service drops dramatically.

An average of **47.1 percent** of the City has a LOS from a walkable standpoint, and the zip code areas with the highest average LOS per acre served taking into population density changes.

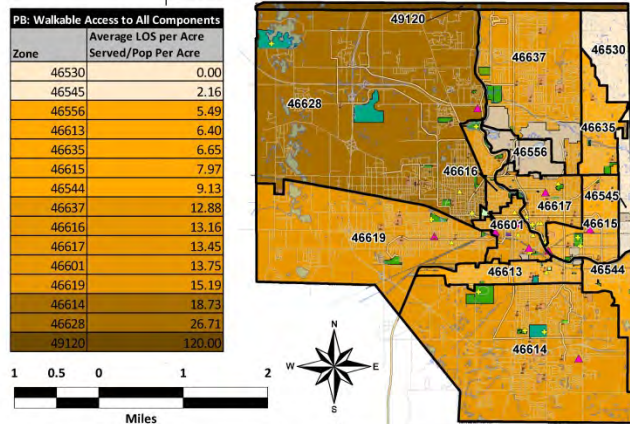
The highest LOS is found in zip codes 49120, 46628, and 46614.

South Bend, Indiana Parks and Recreation

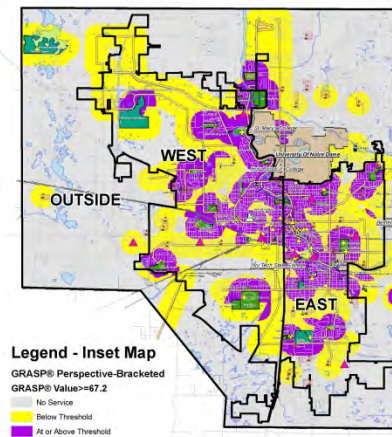
Composite-Values Methodology (CVM) Level of Service Analysis 2013



PB - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY
(LOS PER ACRE/POPULATION PER ACRE)



PB - 2: GRASP® THRESHOLD ANALYSIS



Map Produced For The City of South Bend, Indiana Park and Recreation Master Plan - By The GRASP® Team
This Map is Intended For Planning & Discussion Purposes Only - Please Refer To The Project Document For Map Details
Legend Elements May Vary Slightly In Size, Color and Transparency From Those Shown On Map. Labels are limited to ensure legibility.
GIS Data Sources May Include: City of South Bend, State of Indiana, US Census, ESRI, GRASP® Team - March 2013
Copyright © 2013 South Bend

WALKABLE ACCESS TO ALL COMPONENTS PERSPECTIVE MAP: B

Affordances (Programs and Services)

Perspective C: Composite Access to All Affordances

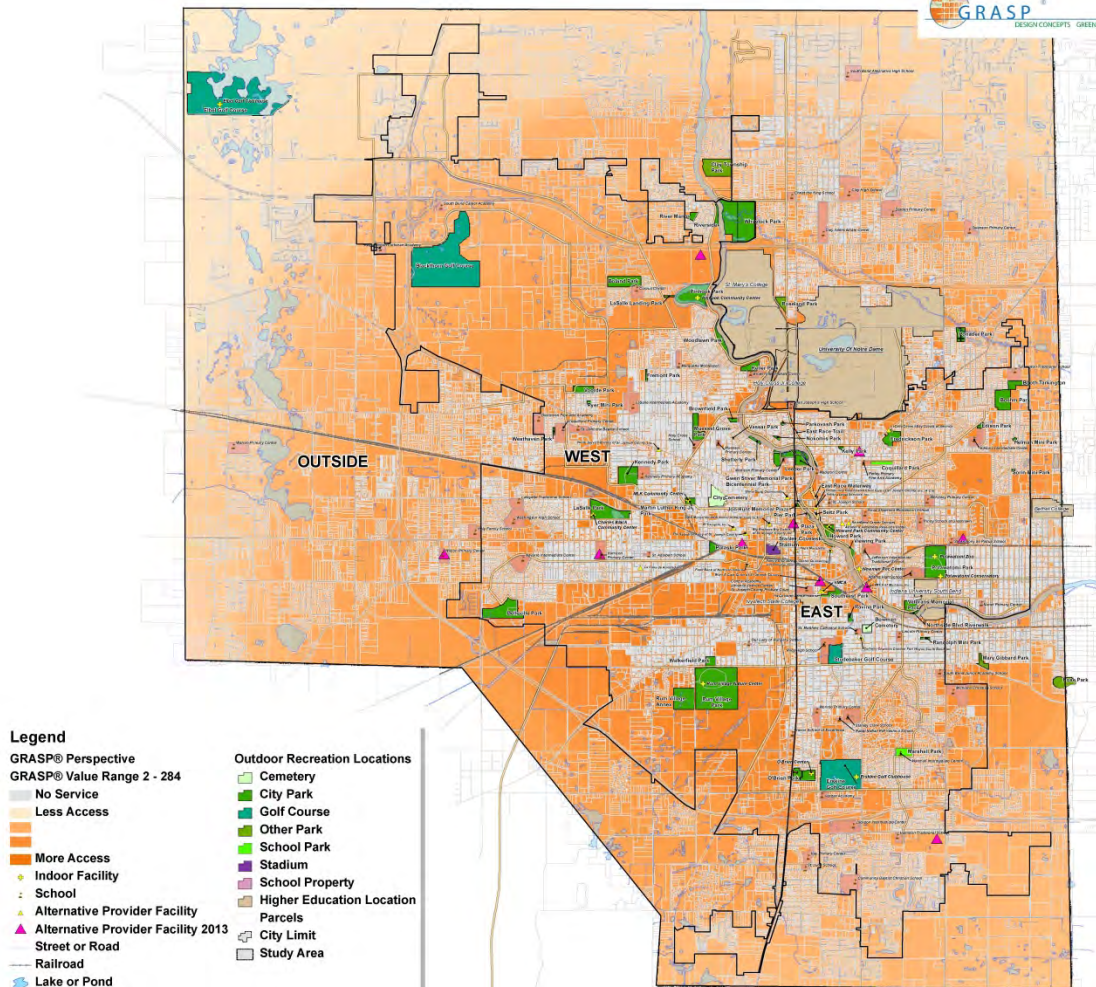
PC: Composite Affordances	
Zone	Average LOS per Acre Served/Pop Per Acre
46613	467.61
46530	533.02
46615	620.75
46616	692.67
46545	744.44
46544	803.72
46617	820.52
46601	892.47
46635	939.16
46619	1090.30
46637	1426.42
46628	1544.91
46614	1694.61
49120	4891.41
46556	25869.61

Perspective C indicates that from an aspect of including transportation, the entire City has coverage, with 100 percent having at least some LOS. This percentage of LOS is larger than the assets coverage, as the affordances analysis includes a “catchment” characteristic. Rather than just looking at a mile drive from an asset, many of the affordances are looked at a having a City-wide “catchment.” Participants will drive where needed to participate in a program within the City.

This means that if they have transportation, most of the City is served. That being said, there are still some zip codes with lower levels of service, and this can be addressed through targeted programming.

South Bend, Indiana Parks and Recreation

Composite-Values Methodology (CVM) Level of Service Analysis 2013

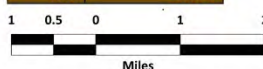
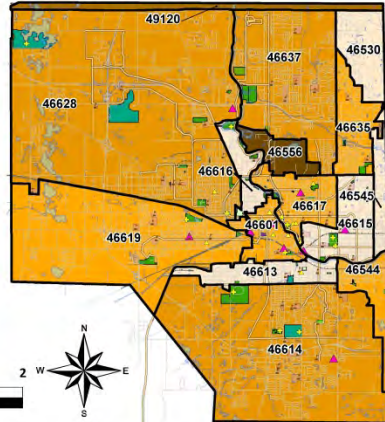


- Legend**
- GRASP® Perspective
GRASP® Value Range 2 - 284
- No Service
 - Less Access
 - More Access
 - Indoor Facility
 - School
 - Alternative Provider Facility
 - Alternative Provider Facility 2013
 - Street or Road
 - Railroad
 - Lake or Pond
- Outdoor Recreation Locations**
- Cemetery
 - City Park
 - Golf Course
 - Other Park
 - School Park
 - Stadium
 - School Property
 - Higher Education Location
 - Parcels
 - City Limit
 - Study Area

PC - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY
(LOS PER ACRE/POPULATION PER ACRE)

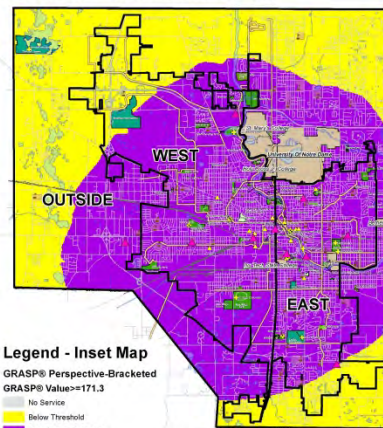
PC: Composite Affordances

Zone	Average LOS per Acre Served/Pop Per Acre
46613	467.61
46530	533.02
46615	620.75
46616	692.67
46545	744.44
46544	803.72
46617	820.52
46601	892.47
46635	939.16
46619	1090.30
46637	1426.42
46628	1544.91
46614	1694.61
49120	4891.41
46556	75869.61



Map Produced For The City of South Bend, Indiana Park and Recreation Master Plan - By The GRASP® Team
This Map is Intended For Planning & Discussion Purposes Only - Please Refer To The Project Document For Map Details
Legend Elements May Vary Slightly In Size, Color and Transparency From Those Shown On Map. Labels are limited to ensure legibility.
GIS Data Sources May Include: City of South Bend, State of Indiana, US Census, ESRI, GRASP® Team - March 2013
Copyright © 2013 South Bend

PC - 2: GRASP® THRESHOLD ANALYSIS



- Legend - Inset Map**
- GRASP® Perspective-Bracketed
GRASP® Value=171.3
- No Service
 - Below Threshold
 - At or Above Threshold

ACCESS TO ALL AFFORDANCES

PERSPECTIVE MAP: C

Perspective D: Walkable Access to All Affordances

PD: Walkable Affordances	
Zone	Average LOS per Acre Served/Pop Per Acre
46530	0.00
49120	0.00
46545	14.29
46544	15.38
46635	19.05
46613	19.44
46616	25.20
46617	40.10
46615	41.67
46601	46.96
46637	58.25
46619	98.38
46628	138.35
46614	216.02
46556	406.81

The walkable service for affordances (programs and services) is still limited, even after adding in the additional Alternative Providers identified in Year Two. Note that youth from many parts of the City cannot walk to affordances and must rely on transportation. Additional analysis could examine the role that public transportation plays for this age group.

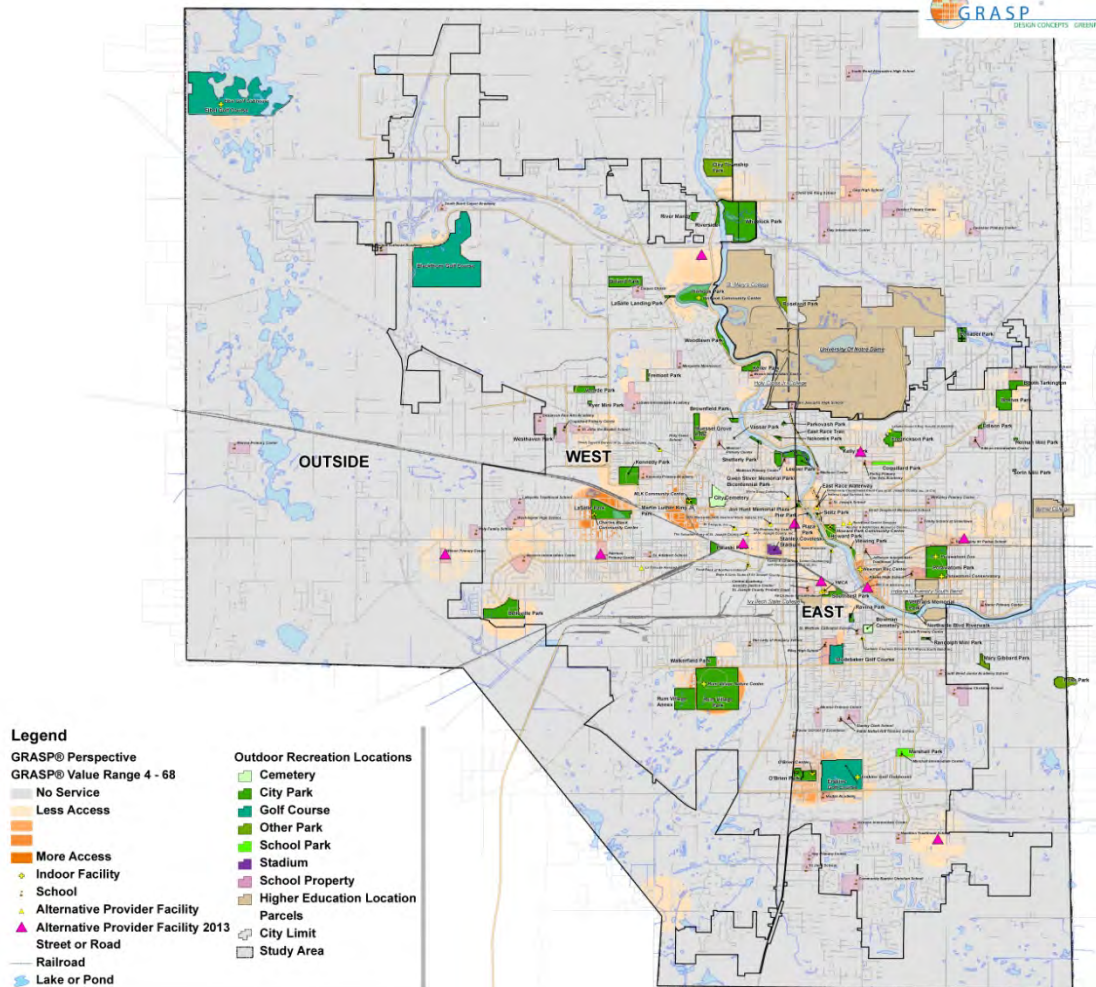
Only **13.8 percent** of the City has walkable access (1/3 mile access) to affordances available for this target age group. The threshold value (based on average value of LOS for all areas with service on the map) for this Perspective is only 12.9 compared to the value of 181.59 in the previous Perspective. Only **3 percent** of the study area is above the threshold score. From this analysis, in order to increase service, adding programs and services at current locations alone will not suffice. Locations or transportation would also need to be added for greater access.

The percent of total with LOS from last year has increased slightly by adding the alternative providers. The percent total area above the threshold remained the same as last year, indicating that the providers did not provide enough services to increase this percentage. Average LOS per acre also remained at 13 for both years. The benefit of alternative providers is that they added to coverage of level of service,

but did not add enough services to increase existing levels of service above threshold. When adding programs and services in Year Three, it would be especially helpful to look at those zip code areas which have lower levels of service.

South Bend, Indiana Parks and Recreation

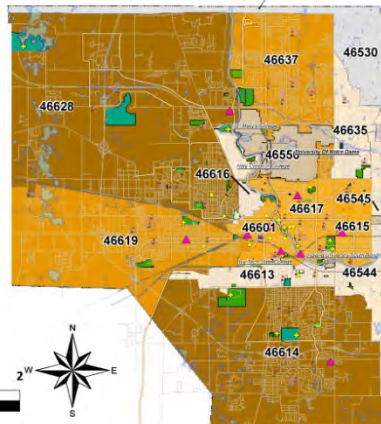
Composite-Values Methodology (CVM) Level of Service Analysis 2013



PD - 1: AVERAGE GRASP® LOS PER POPULATION DENSITY (LOS PER ACRE/POPULATION PER ACRE) 49120

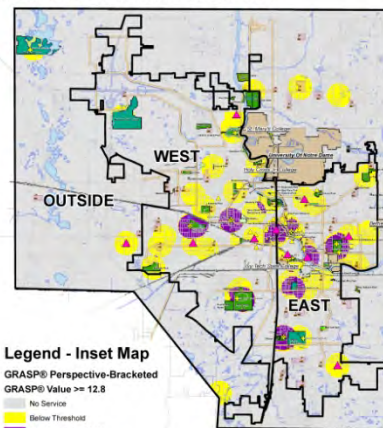
PD: Walkable Affordances

Zone	Average LOS per Acre Served/Pop Per Acre
46530	0.00
49120	0.00
46545	14.29
46544	15.38
46635	19.05
46613	19.39
46616	25.19
46617	33.02
46615	34.98
46601	39.81
46637	58.23
46619	82.10
46628	132.72
46614	175.28
46556	406.81



Map Produced For The City of South Bend, Indiana Park and Recreation Master Plan - By The GRASP® Team
This Map is Intended For Planning & Discussion Purposes Only - Please Refer To The Project Document For Map Details
Legend Elements May Vary Slightly In Size, Color And Transparency From Those Shown On Map. Labels are limited to ensure legibility
GIS Data Sources May Include: City of South Bend, State of Indiana, US Census, ESRI, GRASP® Team - March 2013
Copyright© 2013 South Bend

PD - 2: GRASP® THRESHOLD ANALYSIS



WALKABLE ACCESS TO ALL AFFORDANCES PERSPECTIVE MAP: D

E. Affordances Template and Financial Analysis Update

Year Two included an update of the Affordances Template, as indicated in the previous section for the creation of the Affordances Perspectives. This template includes detailed analysis of locations and characteristics for all programs and services offered by SBPRD. While the HCRG is interested in this template for analysis of those programs and services affecting ages 10-14, the Department has broadened the usage of this template for over 120 agency-wide programs and planning.

In addition, further detail was collected to incorporate Financial Analysis within the same template. Detailed spreadsheet templates have been provided to SBPRD for future use for management analysis and tracking.

Summary of 2011 Direct Cost Recovery Financial Analysis (completed in 2012)

2011 Expenses	Total SBPRD	Fund 201 (Recreation)	Fund Non-Reverting 203	X% for Target (ages 10-14)	Total Ages 10-14
Personnel	511,220.60	131,138.00	380,082.60	27%	138,029.00
Supplies	86,896.12	20,068.00	66,828.12	22%	19,117.00
Contractuals	85,763.97		85,763.97	31%	26,605.00
Capital	12,500.00		12,500.00	0%	
Admin/Maint	7,457.00	1,850.00	5,607.00	41%	3,035.00
Total Expense	703,837.69	153,056.00	550,781.69	27%	186,786.00
2011 Revenues					
Fees & Charges	1,838,187.03	158,569.00	1,679,618.03	21%	377,379.00
Federal Funds	0.00	0.00	0.00		
State Funds	0.00	0.00	0.00		
Operating Funds	22,720.00	22,720.00		100%	22,720.00
Grants	0.00	0.00	0.00		
Spons/other	14,957.00	0.00	14,957.00	83%	12,369.69
Vol @ \$21.79/hr.	15,700.15	4,546.15	11,154.00	86%	13,489.56
Total Revenues	1,875,864.03	181,289.00	1,694,575.03	21%	400,099.00
Direct Cost Recovery	261%	104%	305%		202%

Note: these figures do not include indirect or capital costs.

There are no “right” or “wrong” levels of cost recovery, and all agencies are different in how they define “direct” costs. The levels of cost recovery are determined by current budget availability, local expenses, market, community expectations, and the consensus of decision makers.

The SBPRD now has a reliable tool and template for detailed analysis by program type to monitor financial tracking over time. If cost recovery analysis become more of an issue for review, or there is a need to further define agency-wide core services, the Department now has basic tools to do so in an analytical, quantitative, and objective manner. Additional tools, such as the Pyramid Method and the Public Sector Services Assessment Matrix can now be utilized if needed for management assessment.

F. Key Indicators and Policy Analysis Update - MAUT

Multi-Attribute Utility Theory (MAUT)

In Year Two of this Beta Site project SBPRD and the AYI focused attention on policies that guide every day activities of the City and its citizens. Of particular importance was the identification of factors and indicators that would guide future policy development, revision and adoption. The HCRG Team used a Multi-Attributes Utility Theory (MAUT) process, a nominal group technique used for decision making, to identify and quantitatively determine factors and indicators. A detailed overview of the MAUT process is available in **Appendix B**.

The HCRG staff along with **17 members** of the AYI met in October 2012 to address the need for further developing consensus to guide policies that may positively influence youth, family, and community behavior and lead to the reduction of obesogenic behaviors. The results of this process are intended to guide actions of policy makers and professionals in their practice, leading to documented policy, environmental, systems, and behavioral change in the immediate future.

Critical factors and relevant indicators were identified for policies contributing to the reduction of the prevalence of overweight and obesity among youth age 8-14 years. Five factors and corresponding indicators were deduced from the literature reviews and input of the HCRG experts.

These factors included:

- 1) Nutrition regimen
- 2) Social interaction
- 3) Transportation services
- 4) Physical activity
- 5) Safety

In addition, five indicators corresponding to each factor were identified.

Factors and Indicators Contributing to a Healthy Community in South Bend

Nutrition regimen: A balanced intake of food that is comprised of various solids, liquids, fresh, and prepared foods that provide the necessary daily nutrients for an active lifestyle and is culturally relevant.	
Availability of healthy food	Support and provide incentives for farmers' markets and grocery stores serving fresh food and healthy food.
Information, education, and training	Increase programming and communication campaigns for healthy cooking, gardening, and recipe testing, along with messaging about healthy eating consequences
Healthy food/drink options	Limited to healthy food/drink at public P&R venues or related agencies that are relevant.
Collaboration with local restaurants	Affinity programs that adds points on a score card when one chooses a healthy menu, which may be redeemed at the P&R.
Community gardens	Increasing number of community gardens at several places in the service area and land them at a lower cost.
Social interaction: Positive social relations with peers, adults in various settings. Engaging in social discourse. Developing and maintaining friendships with others.	
Efforts to prevent bullying and hazing	Establish programs, campaigns, etc. for those who are ostracized or socially isolated, and those who engage in bullying behaviors.
Non-competitive organized activity options	Encourage more youth to participate in non-competitive activities to increase retention in programs/activities.
Establish practices of social inclusiveness	Emphasize the virtue of friendships, teamwork, and a sense of belonging in the every program
Positive social environment	Create positive atmosphere where all youth are welcomed, valorized, and respected. Establish a strong policy strictly prohibiting bullying or hazing behaviors.
Relevancy of programs/services	Offering programs, services, and activities based on customer identified needs, and appropriateness (e.g.) age, gender, religious preference, cultural norms, etc.
Transportation services: Various modes of transportation of individuals or groups including vehicles offered by public, private, or family members. Primarily used for getting youth to and from a program, event, or activity.	
Accessibility, availability, and interconnectivity of public transportation	Transportation in communities is multi-modal and requires close access, available when most needed, synchronized with programs, services, and operating hours, and account for interconnectivity across the community at large.
Cost of services	Collaboration with schools, local businesses, and other agencies when utilizing public modes of transportation to and from P&R facilities and programs.

Convenience	Synchronization with P & R programs, events, services, activities of P&R.
Consumer knowledge of public transportation services	Information and training strategies to increase the level of awareness of public transportation to and from P & R facilities, programs, events, services, activities.
Utilization rates	Monitor utilization rates by type of customer, location, mode of transportation, frequency, time/day, etc.
Physical activity: The array of opportunities in a community that require physical skills and capacities (e.g. balance, strength, flexibility, etc.) and often specific venues in which to engage during free or discretionary time.	
Quality of natural and built assets	Increase the number of amenities. Invest more financial resources for maintenance.
Varied physical demands of programs/services	Utilize analysis to examine the level of required physical skills in programs, events, activities, sport types by age, gender, etc. to sustained engagement across the lifespan.
Availability of assets/programs	Using GIS to document the location and operating hours/days of all natural and built assets; likewise, do the same with all programs, services, activities, events by age, program type, etc.
Application of evidence based standards, practices by staff	Using national, state, and other physical fitness standards, seek to increase the physical capacity of each individual in community. Review and implement evidence based practices to increase physical capacity (aerobic, strength, flexibility, balance, etc.).
Marketing and promotion of increased physical capacity	Utilize varying modes of increasing physical activity through collaboration, partnerships, sponsorships, campaigns to increase awareness of the vital role in personal and public health.
Safety: Provision of programs, activities, events, places, spaces (indoors or outdoors) that are not likely to cause avoidable harm, personal injury, or perceived threat of same.	
Crime rate at or near assets/programs	Collaborate with law enforcement to reduce crimes in areas managed by P & R. Install surveillance cameras. Hire police or security officers. Utilize CPTED principles or positive activation.
Parent/children perception of safety level	Make streetlights brighter, more people on trails, add speed bumps near P&R buildings and pedestrian walkways, etc.
Prevention practices of direct and affiliated service providers	Staff training for accident/injury free environment and safety education for participants.
Safety inspection and risk management	Conduct frequent and regular inspections to assure safe operations at facilities (built or natural) and in programs/events/services.
Staff supervision and surveillance efforts	Establish standards for supervision and surveillance at all sponsored programs, events, activities as well as managed assets.

MAUT Ranking Process and Results

After instruction and a facilitated ranking process, utility coefficients (group means) for each indicator were calculated and ranked them in order to identify which indicators are deemed to be more important. As seen in **Figure 1**, arithmetic means and rank orders were derived within each group (SBPRD, AYI, and combined group).

Results indicated that SBPRD considered 1) enhancing accessibility of transportation services, 2) delivering educational programs on nutrition, 3) constricting positive social environment, 4) providing healthy foods and drink options, and 5) creating healthy food available as the five most important indicators (Coefficients equal to 5.50 and higher).

On the other hand, AYI emphasized on 1) preventing an incidence of bullying and hazing, 2) suggesting non-competitive activity options, 3) offering the opportunity of community gardens, 4) delivering educational programs on nutrition, and 5) securing a close collaboration with local restaurants (ranked 1-5, coefficient > 4.75).

Both groups dismissed the importance of such indicators as “Prevalence practices of service providers,” “Safety inspection and risk management,” and “Application of evidence based standards and practices by staff” (all with mean of 3.00 and less). Despite a general consistency, deviations in the importance of the criteria between two groups were evident. For example, AYI emphasize the efforts on preventing an incidence of bullying and hazing (Rank 1), providing non-competitive activity options (Rank 2), and collaborating with local restaurants (Rank 5) while SBPRD considered them as an low impact (Rank , 15, 20, and 25 respectively).

Key Findings from the MAUT Process

The findings suggest that the focus of policy review, adoption, and implementation in South Bend, Indiana should be guided by the following:

1. Collaboration among and between the SBPRD and the AYI is clearly an example of unity of focus in the community on the public health issues related to obesogenic behaviors.
2. The findings from the MAUT session with AYI members was an excellent validation of findings in year one of the Healthy Communities Project. The collective efforts of the community on reducing obesogenic behaviors among its youth are pioneering and a national model for community planning.
3. It appears that there is consensus among AYI members that the immediate focus on policy analysis should be placed on two factors (nutrition regimen and social interaction). In addition, physical activity, especially policies that address marketing and promotion of the health benefits of physical activity, availability of tiered programs that offer opportunities to all skill levels, and improved asset quality.
4. Current policies adopted by South Bend that appear to influence or impact increases in active living are, for the most part, negative or punitive in content and tone. They appear to restrict rather than afford youth the opportunity to seek and engage in activities that would be beneficial to their health and the well-being of the community. It appears possible to reexamine current policies by engaging all stakeholders in a process that would tilt the policy table toward positive policies that lead to behavior change and the reduction of sedentary, isolating, and/or confrontational behaviors.

Figure 1: MAUT Tree: Utility coefficients and ranking of indicators; SBPRD (n=9); AYI (n=8)

Policies Preventing Obesogenic Behaviors											
Group	Factors	Indicators	Utilities			SBPRD		OAYI		Combined	
	Utilities		SBPRD	OAYI	Combined	Coefficient	Rank	Coefficient	Rank	Coefficient	Rank
SBPRD	Nutrition regimen	Availability of healthy food	23.13%	23.33%	23.24%	5.55%	5	5.57%	14	5.44%	3
		Education	24.38%	27.78%	26.18%	5.85%	2	6.64%	4	6.13%	1
		Healthy food options	23.88%	20.00%	21.82%	5.73%	4	4.78%	11	5.11%	6
		Collaboration	7.63%	10.56%	9.18%	1.83%	25	2.52%	5	2.15%	24
		Comm. Gardens	21.00%	18.33%	19.59%	5.04%	7	4.38%	3	4.59%	7
SBPRD	Social interaction	Prevention efforts	17.50%	16.11%	16.76%	3.68%	15	4.21%	1	3.72%	14
		Activity options	14.13%	21.11%	17.82%	2.97%	20	5.51%	2	3.95%	12
		Social inclusiveness	21.13%	17.22%	19.06%	4.44%	9	4.50%	9	4.23%	9
		Social environment	27.63%	20.00%	23.59%	5.80%	3	5.22%	10	5.23%	2
		Relevancy of programs	19.63%	25.56%	22.76%	4.12%	10	6.67%	15	5.05%	4
SBPRD	Transportation services	Accessibility	28.75%	27.44%	28.06%	6.22%	1	4.57%	7	4.70%	5
		Cost	25.38%	23.67%	24.47%	5.49%	6	3.94%	13	4.10%	8
		Convenience	16.38%	17.22%	16.82%	3.54%	16	2.87%	19	2.82%	18
		Customer knowledge	14.13%	17.22%	15.76%	3.05%	18	2.87%	20	2.64%	20
		Utilization	15.38%	14.44%	14.88%	3.32%	17	2.41%	23	2.49%	21
SBPRD	Physical activity	Asset quality	25.18%	20.56%	22.73%	4.44%	8	4.00%	12	4.55%	13
		Service demands	17.03%	17.44%	17.25%	3.00%	19	3.39%	17	3.45%	17
		Availability of programs	21.24%	24.22%	22.82%	3.74%	14	4.71%	6	4.56%	11
		Evidence based practices	13.35%	14.56%	13.99%	2.35%	23	2.83%	21	2.80%	23
		Marketing & Promotion	23.20%	23.22%	23.21%	4.09%	11	4.52%	8	4.64%	10
SBPRD	Safety	Crime rate	17.63%	22.78%	20.35%	2.78%	22	3.16%	18	3.59%	19
		Safety perception	25.88%	25.00%	25.41%	4.08%	12	3.47%	16	4.48%	15
		Prevention practices	18.75%	17.00%	17.82%	2.95%	21	2.36%	24	3.15%	22
		Inspection & management	13.00%	16.11%	14.65%	2.05%	24	2.24%	25	2.58%	25
		Staff supervision & efforts	24.75%	19.11%	21.76%	3.90%	13	2.65%	22	3.84%	16
SBPRD	Nutrition regimen	Availability of healthy food	23.13%	23.33%	23.24%	5.55%	5	5.57%	14	5.44%	3
		Education	24.38%	27.78%	26.18%	5.85%	2	6.64%	4	6.13%	1
		Healthy food options	23.88%	20.00%	21.82%	5.73%	4	4.78%	11	5.11%	6
		Collaboration	7.63%	10.56%	9.18%	1.83%	25	2.52%	5	2.15%	24
SBPRD	Social interaction	Prevention efforts	17.50%	16.11%	16.76%	3.68%	15	4.21%	1	3.72%	14
		Activity options	14.13%	21.11%	17.82%	2.97%	20	5.51%	2	3.95%	12
		Social inclusiveness	21.13%	17.22%	19.06%	4.44%	9	4.50%	9	4.23%	9
		Social environment	27.63%	20.00%	23.59%	5.80%	3	5.22%	10	5.23%	2
SBPRD	Transportation services	Accessibility	28.75%	27.44%	28.06%	6.22%	1	4.57%	7	4.70%	5
		Cost	25.38%	23.67%	24.47%	5.49%	6	3.94%	13	4.10%	8
		Convenience	16.38%	17.22%	16.82%	3.54%	16	2.87%	19	2.82%	18
		Customer knowledge	14.13%	17.22%	15.76%	3.05%	18	2.87%	20	2.64%	20
SBPRD	Physical activity	Asset quality	25.18%	20.56%	22.73%	4.44%	8	4.00%	12	4.55%	13
		Service demands	17.03%	17.44%	17.25%	3.00%	19	3.39%	17	3.45%	17
		Availability of programs	21.24%	24.22%	22.82%	3.74%	14	4.71%	6	4.56%	11
		Evidence based practices	13.35%	14.56%	13.99%	2.35%	23	2.83%	21	2.80%	23
SBPRD	Safety	Crime rate	17.63%	22.78%	20.35%	2.78%	22	3.16%	18	3.59%	19
		Safety perception	25.88%	25.00%	25.41%	4.08%	12	3.47%	16	4.48%	15
		Prevention practices	18.75%	17.00%	17.82%	2.95%	21	2.36%	24	3.15%	22
		Inspection & management	13.00%	16.11%	14.65%	2.05%	24	2.24%	25	2.58%	25

G. MAUT and Implications for Systems Modeling

In the second year, MAUT data provided SBPRD and the AYI with prioritized factors and their indicators. The top two factors were *nutrition* and *social interaction*. A third factor (transportation) was rated high by both groups as well. These data were derived from 17 participants representing AYI and SBPRD. It was suggested that future planning for creating and sustaining a healthy community would require additional elements. These included linking the MAUT findings to the emerging systems model for managing the project in the near term. In addition, it was recommended that the SBPRD and AYI focus on a sequential process that starts with **positive policy formulation** which guides **professional practices** and leads to observable and measureable **behavioral outcomes**.

The MAUT process is just one of several efforts that are vital to the construction and management of a healthy community system. The next steps will entail creating focused approaches to address the prioritized factors of *nutrition* and *social interaction* for the targeted youth population (10-14 years).

These efforts should include the following:

1. Review current South Bend, Indiana policies and the internal policies of SBPRD that currently influence the two factors and their indicators.
2. Analyze current policies to determine if there is a **punitive policy** context to those that may have direct influence youth behavior.
3. Utilize, modify, or create SBPRD internal policies that will directly affect professional practices, facility operations, and other features that create a positive (versus punitive) climate.
4. Develop staff consensus on selected policies to guide professional practices.
5. Determine specific practices that support the adopted positive policies.
6. Train staff at selected study sites, facilities on how to implement the new policies.
7. Monitor and evaluate the implementation process.
8. Obtain data from staff and participants (as approved) to determine if behavioral change is emerging for the targeted youth population.

In addition to the MAUT process and **positive policy adoption**, the SBPRD management team should work with the HCRG consultants (specifically Drs. Kim and Compton) in creating a Beta Site specific **Stella 9.1 Systems Model**. Creation of the Stella 9.1 Systems Model entails the following:

1. Brief training session on the utilization of the SB beta site system.
2. Design of the core modules using Stella software.
3. Writing the codebook and inputting data for each data point.
4. Reviewing the alpha systems model with SBPRD management staff and validating the functions.
5. Revising the systems model to accurately reflect the relationships of policies, practices and other factors on youth behavioral outcomes (balanced nutrition regimen, social interaction, physical activity).
6. Validate and modify the systems modeling by examining data collected from the selected sites and facilities, upon the SBPRD approval. Interval One (30 day intervals) data analysis and systems modeling:
 - a. Review of alpha systems model by SBPRD staff and GPRED consultants and modifications as necessary.
 - b. Interval Two-data analysis and systems modeling
 - c. Quarterly report using Stella systems model to illustrate trends

7. SBPRD management staff advances new or modified policies and professional practices to accelerate behavioral gains among target youth.

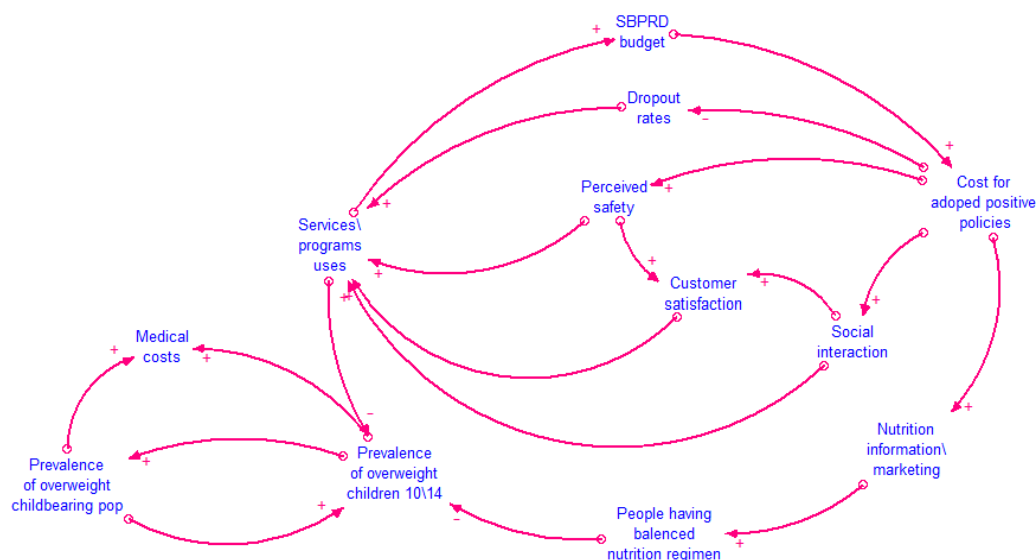
Systems Modeling and Utilization

This health disparity has a direct burden on health care costs, and is exponentially amplifying. Although the solution of this acute threat seems to be simple, we cannot even identify where the origin of this issue comes from. This may be because: (1) there are a number of factors involved in the system, (2) factors in the system are both influencing and being influenced by each other and by factors in other systems, and (3) the impacts of influences vary over time. To even begin to address the interrelationships of issues such as obesity, communities must try to identify how these variables impact one another (both directly and indirectly). One simple solution to this is through STELLA modeling. System dynamic modeling provides a better understanding of our systems and how they relate to the developing healthy community.

As one of the most comprehensive computer modeling systems, **STELLA 9.1®** allows us to visually depict functional relationships between different behaviors, examine projected outcomes of healthy communities and, most importantly, communicate the intertwined dynamics of these behavioral changes with others. **Figure 2** illustrates a *causal loop diagram* of possible efforts in South Bend. The diagram is anchored by the adoption and implementation of positive policies. The focus is on increasing youth's nutrition regimen and their social interaction. It is postulated that if a portion of the SBPRD were dedicated to adopting positive policies that more overweight youth would change their nutrition habits. As well, youth would be encouraged to participate in programs and services that are ability appropriate.

The key to sustaining involvement is positive social interaction, customer satisfaction, trained staff, and asset environments that are welcoming, nurturing, and informative. As these youth perceive high levels of safety, encounter other youth who are likewise positive, they are guided to develop lasting friendships. The result of this system in operation is that program utilization goes up, dropout rates are reduced, and the capacities (physical, social, intellectual, etc.) of each participant are increased, leading to informed decision making.

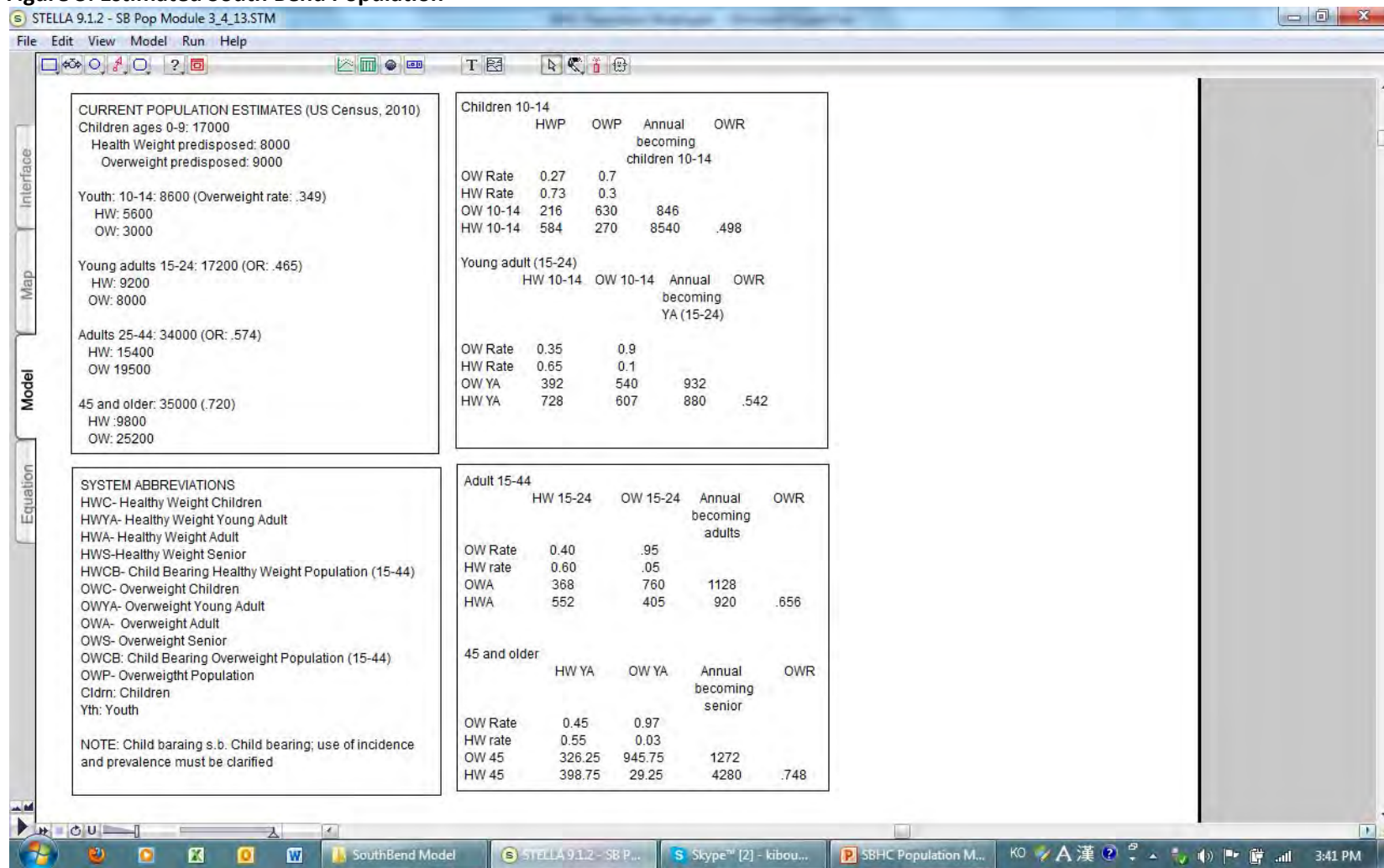
Figure 2: Causal Loop Diagram



Population Estimates and Distribution

Figure 3 illustrates the estimated population of South Bend based on the 2010 US Census. These data are vitally important to estimate changes in the prevalence of obesity over the life course. It should be noted that in the absence of precise data on 10-14 year old youth, there is a need to use federal, state, and local data to refine the population that will be impacted by chronic illnesses over the course of their life.

Figure 3: Estimated South Bend Population



Elements of the South Bend Comprehensive Systems Model

Figure 4 illustrates the factors that will be monitored in ongoing surveillance of the impact of policy changes, asset changes, affordance additions, or modifications. This model has a codebook that is written and operational. Further, the entire process can be viewed in the “Interface Mode” where modeling is simulated to illustrate specific outcomes.

Figure 5 illustrates the potential impact on the incidence and prevalence of being overweight. In this figure, it is estimated that if there were to be a change in policies and practices in selected sites, there would be a change over time of obesogenic behaviors. These changes in behavior are a product of an intervention that would be undertaken by SBPRD in selected venues, programs or services. The data suggest that over a period of 30 years the effects of the intervention would lead to a healthier population of youth, adults, and seniors in the future. These data allow SBPRD to calculate the reduction in health care costs that would continue to escalate if the current 10-14 year old youth cohort remains on the current pathway.

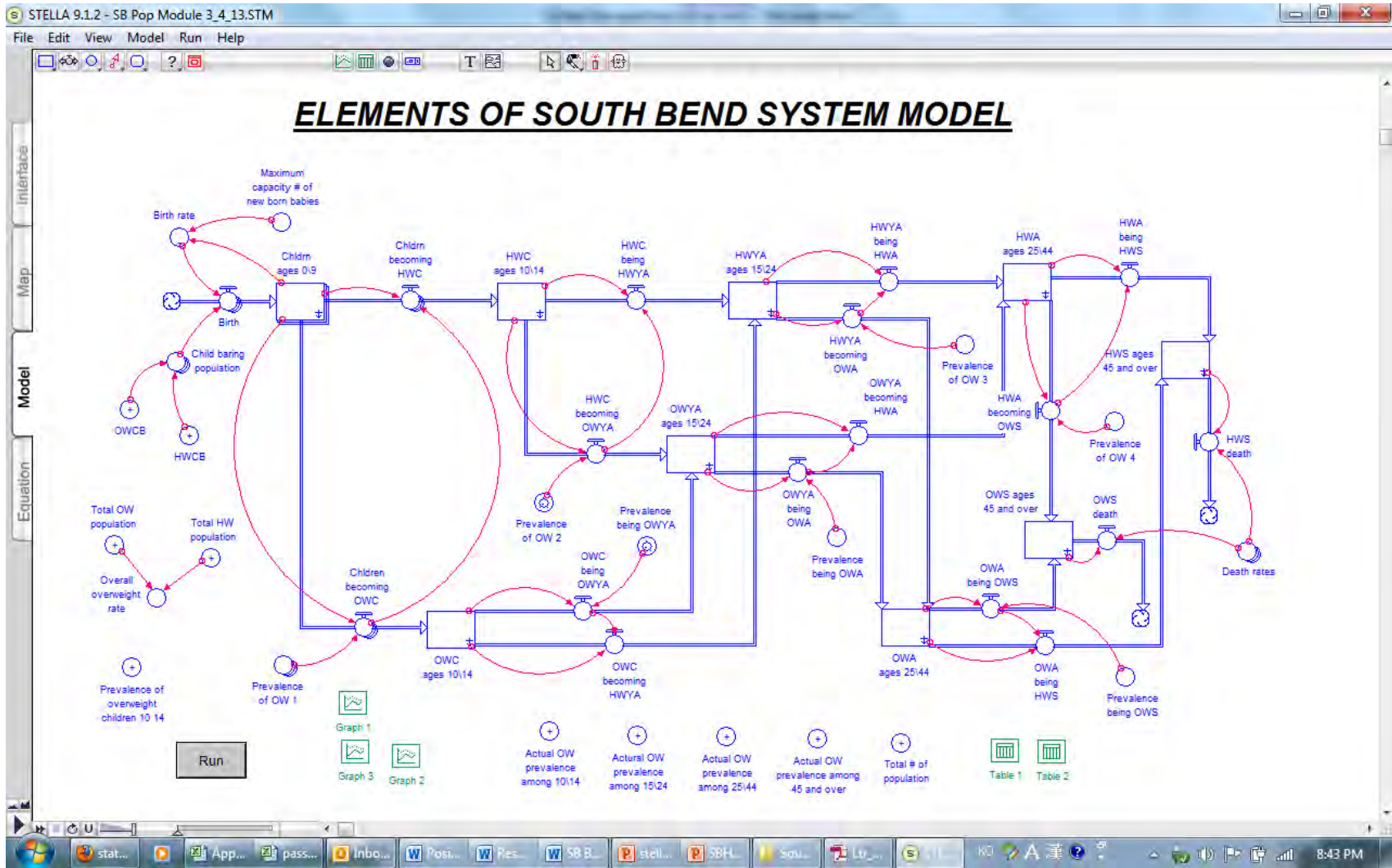
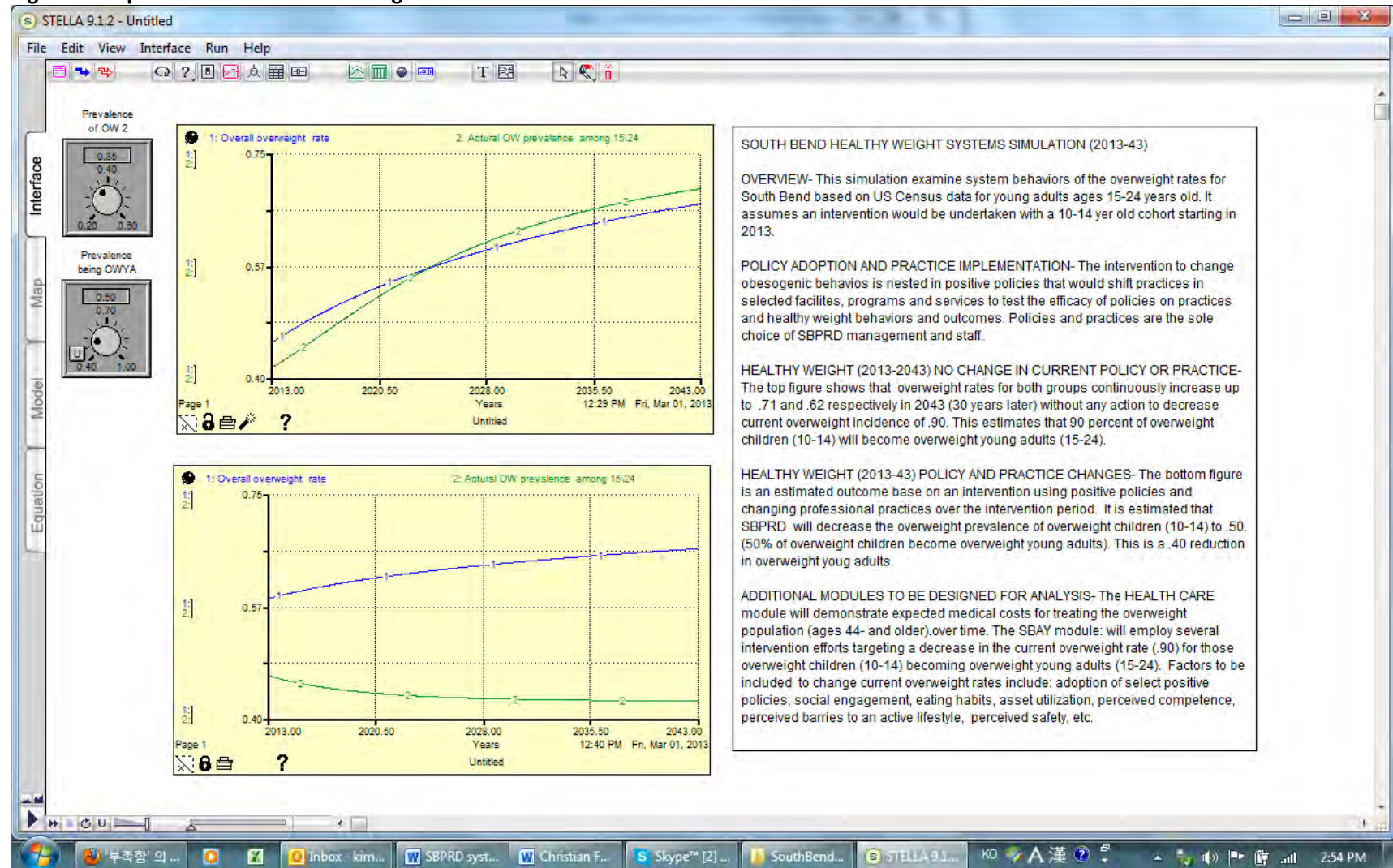


Figure 5: Impact of Factors on Overweight



H. Safety and Perception of Safety Analysis

Safety and/or the Perception of Safety

In South Bend, the findings from Year One and the MAUT analysis in Year Two indicate that safety and perception of safety are issues, especially in some parts of the City. Evidence-based research from criminology, social science, institutes of medicine, and public health recognizes the “perception of safety” as a growing barrier nationally to physical activity engagement specifically in parks and recreation activities. In Year Two, this process included conversations with the Police Department. A good relationship between the Departments helps minimize crime and perception of safety issues. The City can focus on methods for action that help to increase addressing ways to minimize opportunities for crime, along with handling media coverage containing messages that may exacerbate fears. The following section identifies general strategies to incorporate to address these issues.

If people feel unsafe, they are less apt to use an area for physical activity. The concern and stigma of crime is threatening to the use of park and recreation areas, especially in more urban environments. Research has shown that the kind of experience park-goers receive is a psychological imperative for relaxation and happiness. It is a resource for physical activity – an important element in the reduction of obesity and sedentary behavior which can accelerate other numerous negative health conditions. Professionals in the provision of parks and recreation services need to understand that fear and perceptions of safety have several different meanings to individuals within the community.

Regardless of whether or not perceptions are accurate, they have the power to affect individual actions and motivations, because **“What is perceived as important is important.”** (Loukaitou-Sideris, Anastasia. *Is it Safe to Walk? 1 Neighborhood Safety and Security Considerations and Their Effects on Walking. Journal of Planning Literature* 2006 20: 219).

Taking a **Safety Inventory** of the community can help uncover areas of priority and action.

A Safety Inventory of a specific park or region may include evaluating:

- What are characteristics of the neighborhood and/or park?
- What are their relevant physical activity needs of the population?
- How do the characteristics of the physical setting reflect safety or lack of safety?
- Which groups are most afraid?
- What are they afraid of?
- How do fears constrain walking and physical activity?
- How do age, gender, and socio-demographics affect perception of fear?
- What are lists of perceived fears for each?
- What obstacles are identified that need to be addressed in order to overcome perceptions and create a sense of safety again?
- What indicators define safety?
- How are community and individual perception of safety the same or different?

It is evident from the literature that a collaborative effort is re-evolving to become aware of and take action surrounding the issue of safety. Community Based Participatory Research includes identifying community members along with local police departments, City Council officials, agency directors, local businesses, school administrators, urban planners, landscape designers, and youth to be “at the same table” and engaged in the process of addressing safety elements, park design, and crime reduction strategies to create results.

There were discussions regarding obtaining crime data by neighborhood for this assessment. However, Police representatives indicated that this would mostly denote that the primary crimes for ages 10-14 happen on or adjacent to school properties (again, that sensitive after school time period), which supports the concept that working with schools for transitioning safely after school is probably the most important strategy. Some specific national initiatives that may help improve public safety and perception of safety in South Bend include:

Crime Prevention Through Environmental Design (CPTED) Principles

- Creating by design the space for people (volunteers and visitors) to be close to trails, activity areas, restroom facilities, and the parking lot to maintain a feeling of safety.
- Utilizing materials such as stone work and split-rail fencing which provide territoriality and access control along with visibility and presence of space. A sidewalk's varying material adds to the transition of the utility of the area.
- Drawing people into the area (activation) by creating "a sense of ownership," a place for specific activities such as a donated rose garden or community garden, which encourages regular tending and volunteer participation.
- See <http://www.eprevco.com/policydocuments/Crime%20Prevention%20through%20Environmental%20Design.pdf>

Children Friendly Cities (CFC)

- A Child Friendly City is a local system of good governance committed to fulfilling children's rights.
- Involve the local community and youth of the community in design and planning places to play, access to play, and removing physical barriers to play and be physically active.
- See <http://childfriendlycities.org>

Community Policing Consortium Project (CPCP)

- Including active community adults and older adults who are no longer driving and who may live alone or in an active senior living center and local law enforcement to create community patrols on foot.
- See <http://www.policefoundation.org/docs/foundation.html>

Building Assets Reducing Risks (BARR) Program

- Collaborative efforts between schools and City staff including training, programming, and recognition of this "tipping scale" time of transitions in high-risk and academically challenging behaviors which occur during middle school transition to high school.
- See <http://www.search-institute.org/building-assets-reducing-risks>

Identifying the safety needs and perceptions from individuals and a community can help drive SBPRD and relevant alternative providers toward solutions. Growing evidence supports the belief that this will increase physical activity and the advancement of a healthier community. Addressing the real and perceived fears of community members will identify priorities for action and enable engaged community members to build and maintain collaborations so that the assets and affordances are used to their capacity.

III. Outcomes Summary and Action Plan for Year Three

The following pages provide an update to the Action Plan for Year Two, heading into Year Three.

First and foremost, it is important to celebrate how many of the desired goals and outcomes were accomplished through the collaborative efforts of the South Bend staff, AYI, and other community partners! All but three (3) of the twenty-four (24) suggested Action Items in Year Two were completed or addressed, for an evaluation of **88 percent completion** in one year. Many of these items will need ongoing attention, but the initial focus and efforts are to be commended.

Outstanding Year Two Action Items

On the Action Plan, these items are highlighted in bright yellow.

1. Educational Campaign: Changing perceptions of Overweight Youth

f. Change perception of overweight youth – realistic view of healthy BMI	i. Utilize and convey healthy youth BMI for this age group
--	--

To address this issue, initially staff, the AYI Steering Committee, and the HCRG attempted to implement the usage of an all ages BMI Chart that could be posted at various locations. The identified challenge is that, due to changes over time and the culture of South Bend, many parents simply do not recognize that their children are overweight. This was seen as potential way to allow for self-assessed non-judgmental way to educate parents about their child's weight range. It was not intended to point out specific individuals or to have staff tell the youth that they were overweight.

Nationally and in South Bend, this is a very sensitive issue. Some stakeholders emerged to protest that we may be placing too much emphasis on obesity and not enough on overall physical activity and active living. There were concerns that this may promote eating disorders or cause undue ostracizing.

The movement to post the AYI BMI charts was dropped. In other states and communities, this is also a strong issue, and the challenge in coming years remains how to sensitively address this cultural issue. Currently we still do not know how many youth are actually overweight or obese in South Bend, but the issue remains to be addressed in Year Three and the future.

2. Collect More Specific Information for South Bend: Youth Specific Information

a. Conduct a statistically-valid youth survey	i. Survey will be funded and conducted in Year Two
---	--

There is not currently specific information on youth in South Bend available. This Action Item was discussed with several potential solutions evaluated, including working with the schools, the SJ Public Health Department survey, and/or hiring a statistically-valid survey firm. The HCRG is now working with East Carolina University to draft a template for youth surveying that would involve schools. This will be further evaluated along with the other options in Year Three.

3. Increase Affordances – Partner with Community Gardens to Distribute Produce

f. Partner with community gardens to educate and distribute produce	i. Identify liaisons and outline programs
---	---

There have been ongoing discussions with Unity Gardens and other ideas, but to date there is no formal program in South Bend to do this Action. It should be considered for Action in 2013.

4. Year Three Additional Action Items

These Action Items are highlighted in light yellow for discussions and strategy development at the Year Three Implementation Meetings in April 2013.

a. Use MAUT indicators to address Positive Policy	i. Use Positive Policy language for most pertinent indicators
	ii. Review consensus on indicators relative to actual and suggested positive policies
b. Stella Modeling	i. Identify and improve Stella Modeling uses
c. Address Capital and Program Planning	i. Review CIP and program locations to improve LOS based on zip code info
	ii. Continue to add Alternative Providers
d. Implement Safety Inventory Practices	i. Train staff and work with PD so that if and when crime occurs, safety inventories are complete and incidents are remedied and communicated in a positive way – maybe using national practices.
e. Allocate Funding to move forward with AYI and Evaluation beyond Year Three	Identify funding and staff resources for 2014-2019 for work beyond HCRG involvement
f. Implement Ongoing Items in Action Plan and Additional Evaluation	i. Work with HCRG to evaluate and update Beta Test of Toolkit for Year Three and beyond

The full list of Action Items is included in **Appendix B**.

Appendix A: South Bend Active Youth Initiative MAUT Process

South Bend Parks and Recreation Department
MAUT Analysis of Factors and Indicators

A report of the
Active Youth Initiative (AYI)
Nominal Group Process

Submitted by

David M. Compton, MS, MPH, Ed.D
Kiboum Kim, PhD
October 30, 2012

Introduction

In the second year of the South Bend, Indiana project to address the obesity issue among youth of the community, the South Bend Parks and Recreation Department (SBPRD) focused its attention on policies that guide every day activities of the city and its citizens. Of particular importance was the identification of factors and indicators that would guide future policy development, revision, and adoption. The Healthy Communities Research Group (HCRG) of GPRED, SBPRD and the Active Youth Initiative (AYI) of South Bend met in late October, 2012 to address the need for developing consensus to guide policies that may positively influence youth, family and community behavior and lead to the reduction of obesogenic behaviors. Year one of the healthy communities project in South Bend as a beta site laid the groundwork for bringing representatives from the community together to form the AYI. This was a major step forward as representatives from health care, public health, schools, youth services, nutrition, law enforcement, parks and recreation, and other areas joined in a nominal group process to identify factors and indicators of policies aimed at creating a foundation for practice, and eventual behavior change. The results of this process is intended to guide actions of policy makers and professionals in their practice that leads to documented policy, environmental, systems and behavioral change in the immediate future. It is likely that this same process would need to be conducted with other stakeholders such as parents, elected officials who create or modify policy, as well as children, youth and those who represent the growing numbers of overweight, obese, or morbidly obese citizens.

Acknowledgements

A special thank is extended to Dianna Damask, a public health intern who worked with the GPRED staff on this policy analysis and formulation. Dianna worked collaboratively with Dr. Compton and provided extensive drafts of materials used in this report.

Methodology

Nominal group technique

The Multi-Attribute Utility Technique (MAUT), a nominal group technique used for decision making regarding the seminal question: “What factors and indicators are most important in developing, re-creating, or changing present policies that lead to reduce obesity among youth age 8-14 years of age?”

Study participants

The MAUT was conducted with 17 members of the AYI including 8 staff of the SBPRD and 9 other AYI members representing various sectors of the community (health care, public health, nutrition, schools, law enforcement, etc.). The meeting was held at the SBPRD offices in the conference room. The process required two hours of participant’s time during the afternoon of October 30, 2012.

Data collection procedures

An intensive literature review was performed by the GPRED Healthy Communities Research Group over the past three years including a focused effort in the past 6-9 months by Dianna Damask, public health intern at GPRED to identify critical factors and indicators relevant to policies contributing to the reduction of the prevalence of overweight and obesity issue among youth age 8-14 years. As a result of this process, five factors and corresponding indicators were deduced from the literature reviews and input of experts. These factors include: 1) Nutrition regimen; 2) Social interaction; 3) Transportation services; 4) Physical activity; and 5) Safety. In addition, five indicators corresponding to each factor were identified as shown in **Table 1**.

Table 1: Factors and Indicators Contributing to Healthy Communities

Nutrition regimen: A balanced intake of food that is comprised of various solids, liquids, fresh and prepared foods that provide the necessary daily nutrients for an active lifestyle and is culturally relevant.	
Availability of healthy food	Support and provide incentives for farmers’ markets and grocery stores serving fresh food and healthy food.
Information, education, and training	Increase programming and communication campaigns for healthy cooking, gardening and recipe testing, along with messaging about healthy eating consequences
Healthy food/drink options	Limited to healthy food/drink at public P&R venues or related agencies that are relevant.
Collaboration with local restaurants	Affinity programs that adds points on a score card when one chooses a healthy menu, which may be redeemed at the P&R.
Community gardens	Increasing number of community gardens at several places in the service area and land them at a lower cost.
Social interaction: Positive social relations with peers, adults in various settings. Engaging in social discourse. Developing and maintaining friendships with others.	
Efforts to prevent bullying and hazing	Establish programs, campaigns, etc. for those who are ostracized or socially isolated, and those who engage in bullying behaviors.

Non-competitive organized activity options	Encourage more youth to participate in non-competitive activities to increase retention in programs/activities.
Establish practices of social inclusiveness	Emphasize the virtue of friendships, teamwork, and a sense of belonging in the every program
Positive social environment	Create positive atmosphere where all youth are welcomed, valorized, and respected. Establish a strong policy strictly prohibiting bullying or hazing behaviors.
Relevancy of programs/services	Offering programs, services, and activities based on customer identified needs, and appropriateness (e.g.) age, gender, religious preference, cultural norms, etc.
Transportation services: Various modes of transportation of individuals or groups including vehicles offered by public, private, or family members. Primarily used for getting youth to and from a program, event or activity.	
Accessibility, availability, and interconnectivity of public transportation	Transportation in communities is multi-modal and requires close access, available when most needed, synchronized with programs, services, and operating hours, and account for interconnectivity across the community at large.
Cost of services	Collaboration with schools, local businesses, and other agencies when utilizing public modes of transportation to & from P&R facilities and programs
Convenience	Synchronization with P & R programs, events, services, activities of P&R
Consumer knowledge of public transportation services	Information and training strategies to increase the level of awareness of public transportation to and from P&R facilities, programs, events, services, activities
Utilization rates	Monitor utilization rates by type of customer, location, mode of transportation, frequency, time/day, etc.
Physical activity: The array of opportunities in a community that require physical skills and capacities (e.g. balance, strength, flexibility, etc.) and often specific venues in which to engage during free or discretionary time.	
Quality of natural and built assets	Increase the number of amenities, invest more financial resources for maintenance.
Varied physical demands of programs/services	Utilize analysis to examine the level of required physical skills in programs, events, activities, sport types by age, gender, etc. to sustained engagement across the lifespan
Availability of assets/programs	Using GIS to document the location and operating hours/days of all natural and built assets; likewise do the same with all programs, services, activities, events by age, program type, etc.

Application of evidence based standards, practices by staff	Using national, state, and other physical fitness standards seek to increase the physical capacity of each individual in community. Review and implement evidence based practices to increase physical capacity (aerobic, strength, flexibility, balance, etc.).
Marketing and promotion of increased physical capacity	Utilize varying modes of increasing physical activity through collaboration, partnerships, sponsorships, campaigns to increase awareness of the vital role in personal and public health.
Safety: Provision of programs, activities, events, places, spaces (indoors or outdoors) that are not likely to cause avoidable harm, personal injury, or perceived threat of same.	
Crime rate at or near assets/programs	Collaborate with law enforcement to reduce crimes in areas managed by P & R. Install surveillance cameras. Hire police or security officers, CPTED principles, or positive activation.
Parent/children perception of safety level	Make streetlights brighter, more people on trails, add speed bumps near P&R buildings and pedestrian walkways, etc.
Prevention practices of direct and affiliated service providers	Staff training for accident/injury free environment and safety education for participants.
Safety inspection & risk management	Conduct frequent and regular inspections to assure safe operations at facilities (built or natural) and in programs/events/services.
Staff supervision & surveillance efforts	Establish standards for supervision & surveillance at all sponsored programs, events, activities as well as managed assets.

The MAUT was used to evaluate the importance of these five factors and corresponding indicators (Chapman, 1999; Zachry, Woodie, & Skrepnek, 2002). In the MAUT session, the facilitator asked participants to assign a rating in percentage (%) of the importance of each factor (the sum of the percentages for the five factors equaling 100%). The data collected from participants on each of the five factors were entered into an Excel® template designed to calculate mean scores, standard deviations, as well as line graphs. In addition, z-scores and box plots of their percentages as rated by each participant were calculated in order to identify extreme responses compared to the corresponding mean. The results of this analysis were presented to the participants for each factor separately, data analyzed within 3-7 minutes and reported to the group using a projector and screen for all to see. A short discussion was initiated among the study participants based on the participant ratings. If there was consensus on the mean ratings representing how important each of these factors would be, then the facilitator confirmed agreement with the participants and moved to the next factor. If there were ratings that were clearly different from the mean, participants were encouraged to provide comments on their ratings. Following a brief period of comments, participants were asked to perform a second round of ratings. These data were analyzed using the same procedures as indicated previously and a final rating for all five factors tabulated.

Following the ratings of all factors, the participants were requested to review and rate the five indicators of each corresponding factor. The procedure used in rating the factors was employed for rating each of the corresponding indicators.

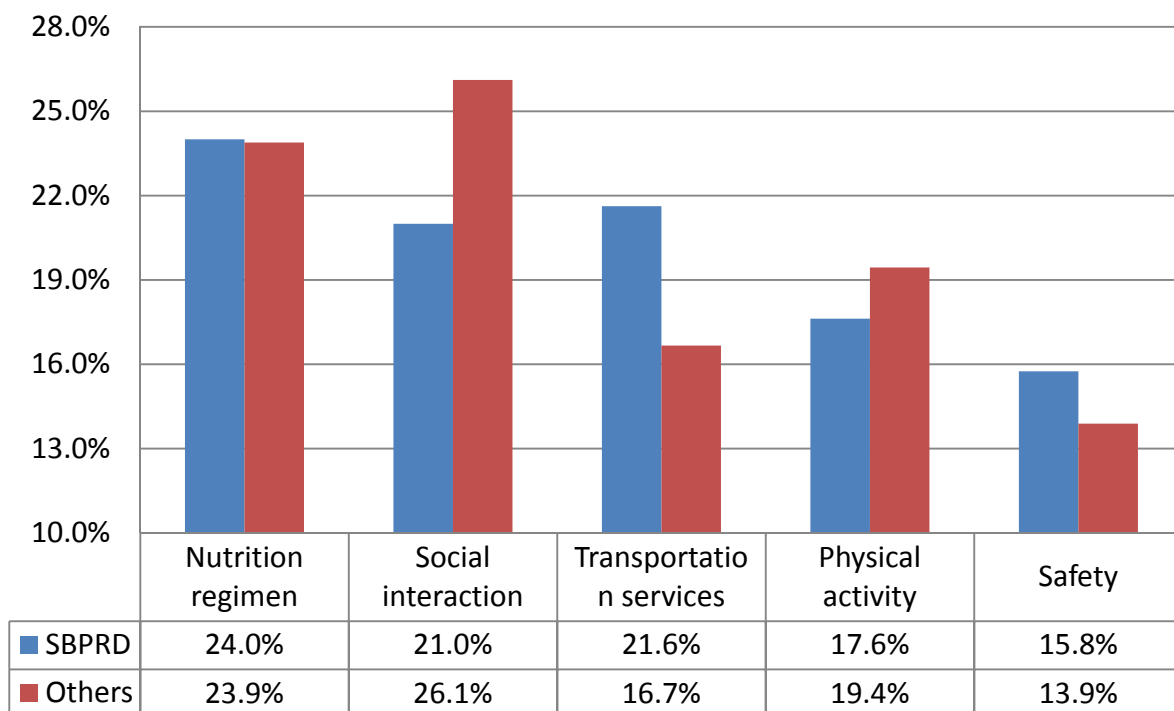
Data analysis

The analysis was conducted using two methods. First, the data collected from two groups of AYI members, comprised of SBPRD and other members of the AYI, were separately calculated to determine arithmetic mean scores and rank order. In addition, a Mann-Whitney U-test was performed to examine if there was a significant mean difference in the perception of importance between the two groups (Siegel & Castellan, 1988). The second method of analysis was conducted using the combined data of all 17 participants. The mean scores and rank order were calculated to identify the relative importance of each factor and indicator which could conceivably guide policy formulation and adoption to target specific behavioral outcomes or benchmarks in the effort to reduce the prevalence of child obesity in South Bend.

Results

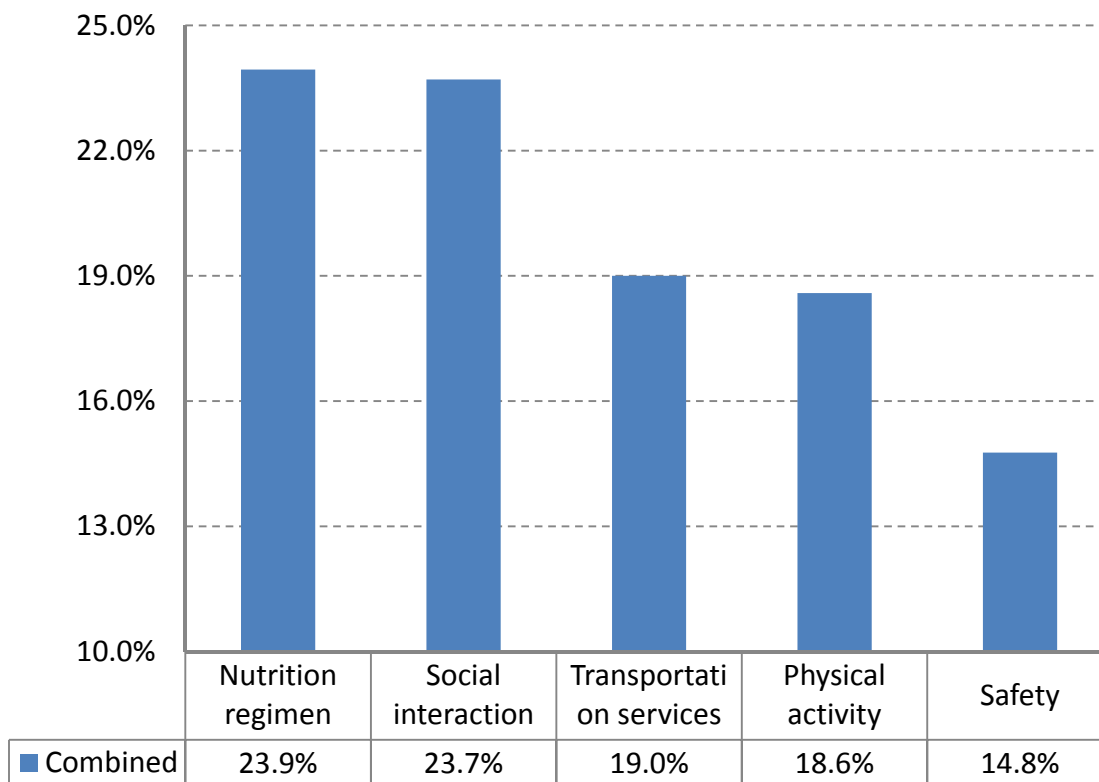
The MAUT data collected from two groups of participants including SBPRD and AYI were separately analyzed and interpreted. Results of MAUT analysis revealed that there was a major discrepancy in perceived importance between two participant groups. As shown in **Figure 6**, SBPRD rated “nutrition regimen” (Mean=24.0%, SD=7.31), as the most critical factor followed “transportation services” (Mean=21.6%, SD=12.95). On the other hand, AYI emphasized the policies relevant to “social interaction” (Mean=26.1%, SD=10.24) and “nutrition regimen” (Mean=23.9%, SD=6.51). Interestingly, both groups indicated “safety” as the least important factor (SBPRD: 15.8%; Other AYI: 13.9%).

Figure 6: Mean coefficients of each factor rated by two groups of AYI members



The data were then combined (SBPRD & AYI) and analyzed as one group. Results indicated that the group of 17 AYI members stressed more on the first two factors (Nutrition and Social interaction) than the other three factors as seen in **Figure 7**.

Figure 7: Mean Coefficients of Each Factor Rated by 17 AYI Members



Next, utility coefficients of the 25 indicators corresponding to the five factors were examined. These utility coefficients were calculated by multiplying the coefficient score of each indicator by the mean coefficient score of the corresponding factor, and then multiplying by 100. For each group, the arithmetic mean scores and rank orders of indicators were calculated as well as for the combined group. Table 2 shows the result of the calculations for the indicators of each factor.

Nutrition regimen:

Results of MAUT analysis revealed a similar pattern in rating between two groups of participants. Both SBPRD and AYI members rated “Education” as the most critical indicator (SBPRD: \bar{X} =24.24, SD=8.21; AYI: \bar{X} =27.8, SD=7.55) followed “Availability of healthy food” and “Healthy food options”. In addition, both groups considered that “Collaboration” was the least important indicator (SBPRD: \bar{X} =7.6%, SD=6.5; AYI: \bar{X} =10.6%, SD=8.82). The interpretation for the result of total group was not quite different from that of the previous.

Social Interaction:

Among AYI members, SBPRD seemed to highly emphasize the policies relevant to “Social environment” and “Social inclusiveness” while AYI focused more on the policies of “Relevancy of programs” and “Activity options.” Overall, the combined group of AYI members believed that it was required to apply policies for improving social environment and providing relevant programs for enhancing social interaction among children and youth in the community.

Transportation services:

Both groups of participants highly valued on the accessibility of the transportation services as well as affordable cost for the use of the transportation services. In addition, both groups of AYI members underestimated the importance of knowledge and utilization of the services.

Physical activity:

There was a discrepancy between two groups of participants. SBPRD indicated policies enhancing the quality of assets as the most important indicator. On the other hand, AYI provided more weight on the activity programs. However, the weights for the other indicators were relatively similar between two groups.

Safety:

Both SBPRD and AYI groups believed that implementing policies that encourage perceived safety by consumers would be the most important. In addition, both groups also emphasized the importance of staff’s efforts securing the safety environments (Staff supervision and efforts).

Table 2: Mean coefficients of indicators corresponding five factors

Factor: Nutrition regimen					
	Availability of healthy food	Education	Healthy food options	Collaboration	Comm. Gardens
SBPRD	23.1%	24.4%	23.9%	7.6%	21.0%
AYI	23.3%	27.8%	20.0%	10.6%	18.3%
Combined	23.2%	26.2%	21.8%	9.2%	19.6%

Factor: Social interaction					
	Prevention efforts	Activity options	Social inclusiveness	Social environment	Relevancy of programs
SBPRD	17.5%	14.1%	21.1%	27.6%	19.6%
AYI	16.1%	21.1%	17.2%	20.0%	25.6%
Combined	16.8%	17.8%	19.1%	23.6%	22.8%

Factor: Transportation services					
	Accessibility	Cost	Convenience	Customer knowledge	Utilization
SBPRD	28.8%	25.4%	16.4%	14.1%	15.4%
AYI	27.4%	23.7%	17.2%	17.2%	14.4%
Combined	28.1%	24.5%	16.8%	15.8%	14.9%

Factor: Physical activity					
	Asset quality	Service demands	Availability of programs	Evidence based practices	Marketing & Promotion
SBPRD	25.2%	17.0%	21.2%	13.3%	23.2%
AYI	20.6%	17.4%	24.2%	14.6%	23.2%
Combined	22.7%	17.3%	22.8%	14.0%	23.2%

Factor: Safety					
	Crime rate	Safety perception	Prevention practices	Inspection & management	Staff supervision & efforts
SBPRD	17.6%	25.9%	18.8%	13.0%	24.8%
AYI	22.8%	25.0%	17.0%	16.1%	19.1%
Combined	20.4%	25.4%	17.8%	14.6%	21.8%

In addition, a Mann-Whitney U-test (non-parametric statistic) was performed to statistically examine if there was a significant mean difference in the perception of importance in each of indicators between the two groups (Siegel & Castellan, 1988). As shown in **Table 3**, result showed that significant difference was observed in the comparisons on the indicator of “Positive social environment” ($U=12.00$, $p=.02$). This result indicated that SBPRD weighted significantly higher on the importance of social environment than AYI. The mean differences in the other indicators were not statistically significant.

Table 3: Statistical Comparisons Between SBPRD and AYI Participants

Indicators	Criteria	Sig.
Nutrition regimen	Availability of healthy food	.732
	Information, education and training	.406
	Healthy food/drink options	.359
	Collaboration with local restaurants	.557
	Community gardens	.653
Social interaction	Efforts to prevent bullying and hazing	.764
	Non-competitive organized activity options	.088
	Establish practices of social inclusiveness	.258
	Positive social environment	.019*
	Relevancy of programs/services	.138
Transportation services	Accessibility of public transportation	.697
	Cost of services	.591
	Convenience	.961
	Consumer knowledge of public transportation services	.392
	Utilization rates	.658

Physical activity	Quality of natural and built assets	.384
	Varied physical demands of programs/services	.806
	Availability of assets/programs	.213
	Application of evidence based standards, practices by staff	.622
	Marketing and promotion of increased physical capacity	.807
Safety	Crime rate at or near assets/programs	.131
	Parent/children perception of safety level	.961
	Prevention practices of direct and affiliated service providers	.731
	Safety inspection & risk management	.253
	Staff supervision & surveillance efforts	.358

Finally, utility coefficients (group means) for each indicator were also calculated and ranked them in order to identify which indicators are deemed to be more important. As seen in **Figure 8**, arithmetic means and rank orders were derived within each group (SBPRD, AYI, and combined group). Result indicated that SBPRD considered: 1) enhancing accessibility of transportation services, 2) delivering educational programs on nutrition, 3) constricting positive social environment, 4) providing healthy foods and drink options, and 5) creating healthy food available as the five most important indicators (Coefficients equal to 5.50 and higher). On the other hand, AYI emphasized: 1) preventing an incidence of bullying and hazing, 2) suggesting non-competitive activity options, 3) offering an opportunity of community gardens, 4) delivering educational programs on nutrition, and 5) securing a close collaboration with local restaurants (ranked 1-5, coefficient > 4.75). Interestingly, both groups dismissed the importance of such indicator as “Prevalence practices of service providers,” “Safety inspection and risk management,” and “Application of evidence based standards and practices by staff” (all with mean of 3.00 and less). Despite a general consistency, deviations in the importance of the criteria between two groups were evident. For example, AYI emphasize the efforts on preventing an incidence of bullying and hazing (Rank 1), providing non-competitive activity options (Rank 2), and collaborating with local restaurants (Rank 5), while SBPRD considered them as an low impact (Rank , 15, 20, and 25, respectively).

Figure 8: MAUT Tree: Utility coefficients and ranking of indicators contributing to a reduction of the prevalence of child obesity; SBPRD (n=9); AYI (n=8)

Policies Preventing Obesogenic Behaviors											
Group	Factors	Indicators	Utilities			SBPRD		OAYI		Combined	
	Utilities		SBPRD	OAYI	Combined	Coefficient	Rank	Coefficient	Rank	Coefficient	Rank
SBPRD	Nutrition regimen	Availability of healthy food	23.13%	23.33%	23.24%	5.55%	5	5.57%	14	5.44%	3
		Education	24.38%	27.78%	26.18%	5.85%	2	6.64%	4	6.13%	1
		Healthy food options	23.88%	20.00%	21.82%	5.73%	4	4.78%	11	5.11%	6
		Collaboration	7.63%	10.56%	9.18%	1.83%	25	2.52%	5	2.15%	24
OAYI		Comm. Gardens	21.00%	18.33%	19.59%	5.04%	7	4.38%	3	4.59%	7
		Prevention efforts	17.50%	16.11%	16.76%	3.68%	15	4.21%	1	3.72%	14
		Activity options	14.13%	21.11%	17.82%	2.97%	20	5.51%	2	3.95%	12
		Social inclusiveness	21.13%	17.22%	19.06%	4.44%	9	4.50%	9	4.23%	9
Combined		Social environment	27.63%	20.00%	23.59%	5.80%	3	5.22%	10	5.23%	2
		Relevancy of programs	19.63%	25.56%	22.76%	4.12%	10	6.67%	15	5.05%	4
		Accessibility	28.75%	27.44%	28.06%	6.22%	1	4.57%	7	4.70%	5
		Cost	25.38%	23.67%	24.47%	5.49%	6	3.94%	13	4.10%	8
SBPRD	Social interaction	Convenience	16.38%	17.22%	16.82%	3.54%	16	2.87%	19	2.82%	18
		Customer knowledge	14.13%	17.22%	15.76%	3.05%	18	2.87%	20	2.64%	20
		Utilization	15.38%	14.44%	14.88%	3.32%	17	2.41%	23	2.49%	21
		Asset quality	25.18%	20.56%	22.73%	4.44%	8	4.00%	12	4.55%	13
OAYI	Transportation services	Service demands	17.03%	17.44%	17.25%	3.00%	19	3.39%	17	3.45%	17
		Availability of programs	21.24%	24.22%	22.82%	3.74%	14	4.71%	6	4.56%	11
		Evidence based practices	13.35%	14.56%	13.99%	2.35%	23	2.83%	21	2.80%	23
		Marketing & Promotion	23.20%	23.22%	23.21%	4.09%	11	4.52%	8	4.64%	10
Combined		Crime rate	17.63%	22.78%	20.35%	2.78%	22	3.16%	18	3.59%	19
		Safety perception	25.88%	25.00%	25.41%	4.08%	12	3.47%	16	4.48%	15
		Prevention practices	18.75%	17.00%	17.82%	2.95%	21	2.36%	24	3.15%	22
		Inspection & management	13.00%	16.11%	14.65%	2.05%	24	2.24%	25	2.58%	25
SBPRD	Physical activity	Staff supervision & efforts	24.75%	19.11%	21.76%	3.90%	13	2.65%	22	3.84%	16
		Safety	15.75%	13.89%	17.65%						

Policy Relevance

The focus of the MAUT process was to determine which factors and indicators would best serve to reexamine current policies in South Bend, those that needed modification or those that might be advanced to address the needs of youth, families, and professionals seeking to reverse the prevalence of obesity. Of particular importance was reaching consensus on these factors and indicators to assure that priorities were established for SBPRD and the AYI in order to strategically move forward in creating a systems approach to planning, professional practices, management, impact evaluation, and sustainability of policies, programs, and services.

Current policies that may have direct or indirect effect on youth were documented by SBPRD staff in year one of the Healthy Communities Beta site project. **Table 4** provides a list of identified policies according to the statutes in place as of 2010. In addition, the factors and indicators derived from the AYI meeting on October 30, 2012 are linked to each policy. In the table the Healthy Communities Research Group (HCRG) staff list whether the particular policy is either “Primary” or “Secondary” in its potential to affect obesogenic behaviors among youth in South Bend. The assignment of a rating does not reflect input from the SBPRD staff or AYI members. Consequently, there may be differing opinions as to the effect of current policies on youth. It should be noted that the absence of a rating (Primary or Secondary) implies no relevance in effecting obesogenic behaviors among youth in South Bend (see **Table 4**).

It should be noted that few current policies appear to be those which would be considered “positive” policies (Robert and Zeckhauser, 2010; Foster, Sherman et al, 2008; Yanez & Muzzy, 2005). It is suggested that policies which focus on positive behaviors and/or incentivize best practices by participants, professional staff, and agencies could replace those statutes, policies, laws, and practices that are negative or punitive context and application. As an example, Chapter 14, Section 14.1 Specific public safety, restricts the use of skates and skateboard use in the city. A positive policy approach would designate areas for skating and skateboarding. Furthermore, it would engage youth who are the end user and their parents in crafting the policy. This approach uses a bottom up approach with the end user fully engaged in the policy process instead of a top down approach which is often exclusionary and punitive. It also creates an opportunity to yoke this policy with a youth advisory council who advise policy makers on their needs, desires, and actions necessary to accelerate and sustain active living among youth. The evidence is clear that many youth who engage in these specific activities are not engaged in competitive youth sports. Alternative forms of physical activity are essential to addressing the obesity issue in South Bend as well as other communities.

Discussion

The findings of this study suggest that the focus of policy review, adoption, and implementation in South Bend should be guided by the following:

1. Collaboration among and between the SBPRD and the AYI is clearly an example of unity of focus in the community on the public health issues related to obesogenic behaviors among children and youth of the service area.
2. The findings from the MAUT session with AYI members was an excellent extension of findings in year one of the Healthy Communities Project. The collective efforts of the community on reducing obesogenic behaviors among its youth are pioneering and a national model for community planning.

3. It appears that there is consensus among AYI members that the immediate focus on policy analysis should be placed on two factors (nutrition regimen and social interaction). In addition, physical activity, especially policies that address marketing and promotion of the health benefits of physical activity, availability of tiered programs that offer opportunities to all skill levels, and improved asset quality.
4. Current policies adopted by South Bend that appear to influence or impact increases in active living are, for the most part, negative or punitive in content and tone. They appear to restrict rather than afford youth the opportunity to seek and engage in activities that would be beneficial to their health and the well-being of the community. It appears possible to reexamine current policies by engaging all stakeholders in a process that would tilt the policy table toward positive policies that lead to behavior change and the reduction of sedentary, isolating, and/or confrontational behaviors.

Recommendations for Future Actions and Studies

Policy formulation in South Bend would benefit from the following:

1. Additional MAUT groups should be conducted to determine if the same ratings are derived from other stakeholder groups such as parents, youth, policy makers, etc.
2. A thorough review of current policies and their formal/informal policies employed by AYI service agencies and SBPRD should be undertaken. The purpose of this effort would be to determine where policy and practice clearly are compatible, or incompatible. This would allow for modification or revision of current policy. Again, any recommendations should include stakeholders from across the community but lead by the AYI.
3. Under the leadership of AYI and in collaboration with the SBPRD, new policies and practices should be explored by the collection of agencies and their representatives to increase the effectiveness and efficiency of current efforts to reach the targeted youth population in South Bend.
4. Conducting periodic (quarterly or semi-annual) meetings to examine existing policies and practices. The intent is to understand what is working and what is not. Policies are the framework for practice. Practice is the platform for behavior and environmental change.

Conclusions

The City of South Bend and its AYI are clearly taking bold and determined actions to address the youth obesity issue. From the first year of the project, it has been evident that the leadership of the community is concerned and intends to plan for the future of its children and youth. Examining policies that guide practices and subsequently youth behaviors is of paramount importance. It is clear that if no change to policies and practices are undertaken, the probability of creating and sustaining a “healthy community” are diminished. The *alpha* of community planning is to examine and retrofit longstanding policies that directly or indirectly affect obesogenic behaviors of youth. While a long and arduous process, the results could reduce health care costs, elevate human capacity for learning, occupational options, and contribute to the creation and sustainment of a healthy community.

References

- Chapman, G. (1999). A multi-attribute model of prostate cancer patient's preference for health states. *Quality of Life Research*, 8(3), 171-180.
- Foster, G., Sherman, S., Borradaile, K., Grundy, K., Vander Veur, S., Nachmani, J., Karpyn, A., Kumanyika, S. & Shults, J. (2008). A Policy-Based School Intervention to Prevent Overweight and Obesity. *Pediatrics*, 121, e794-e802.
- Hillsdon, M., Panter, J., Foster, C. & Jones, C. (2007). Equitable access to exercise facilities, *Am J Prev Med*, 32(6), 506–508.
- Robert, C. & Zeckhauser, R. (2010). The methodology of positive policy analysis. *RWP10-041. Harvard Kennedy School*. John F. Kennedy School of Government, 1-38.
- Siegel, S. & Castellan, N. J. 1988. *Nonparametric Statistics for the Behavioural Sciences*. New York: McGraw-Hill.
- Yañez, E. & Muzzy, W. (October, 2005). *Healthy parks, healthy communities: Addressing health disparities and park inequities through public financing of parks, playgrounds, and other physical activity settings (Policy Brief)*. Washington, D.C. The Trust for Public Lands, 1-8.
- Zachry, I., Woodie, M., & Skrepnek, G. (2002). Applying multi-attribute utility technology to the formulary evaluation process. *Formulary*, 37(4), 199.

Table 4: 2011 City of South Bend Laws and Ordinances Affecting 10-14 Year Old Youth

Source: South Bend Parks and Recreation Department <http://library.municode.com/index.aspx?clientId=13974&stateId=14&stateName=Indiana>

Ordinance	Brief description	Implications for youth	Relevant Factors (designated as Primary, Secondary or Not Relevant if blank)	Relevant Indicators (designated as Primary, Secondary or Not Relevant if blank)	Interpretive Information
Chapter 2	Administration				
2.51	Area Planning Commission	Existing and planned parks, trails, recreation facilities, commercial facilities, and neighborhoods are affected by this commission; Policies may affect youth access to physical activity opportunities within areas with high concentrations of youth.	Primary=3,4 Secondary=1,2,5	Primary=3,4 Secondary=1,2,5	Oversees the city planning department
2.59	South Bend Advisory Commission on Black Males	This advisory commission's studies and activities impact youth opportunities and lifestyles of young black males.	Primary=1,2,4 Secondary=3,5	Primary=3,4 Secondary=1,2,5	Does monitor youth activities and offers some youth mentoring and life skills.
2.71	Areas of Impact	Under certain criteria, portions of the city of South Bend may be designated Areas of Impact by the Department of Public Works and be developed using special Community Block Grant Funds.	Primary=1,3,5 Secondary=4	Primary=3,4 Secondary=1,2,5	Areas of Impact may receive special attention that applies to youth housing, access to resources and programs.
2.137	Authorization of the Board of Park Commissioners	Authorizes the Board of Parks commission and the formation of a Park and Recreation Department under Indiana Code IC 36-10-4, pursuant to IC 36-10-4-1(a).	Primary=2,4 Secondary=1,3,5	Primary=3,4 Secondary=1,2,5	Oversees the parks and recreation department.
2.55	Mayor's Citizen's Traffic Commission	Maintains plan for major streets in the city; creates traffic routes for youth to safely get from their home to park, recreation, sport and outdoor facilities across the city.	Primary=3 Secondary=2,4,5	Primary=3,4 Secondary=1,2,5	Safe routes to school as well as parks and recreation assets.

Table 4- cont.					
13-1	Loitering Codes		Policy that can be used by Officers to break up loitering for various reasons on public property or throughways.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5
2-166	Special Events Funds		A special events fund is established to be used to receive monies and to pay expenses related to the operation of special events sponsored or organized by the City.	Primary=2,4 Secondary=1,3	Primary=3,4 Secondary=1,2,5
2-170.6	Recreation Department non-reverting fund		A special non-reverting fund is established to be used to receive monies from fee for service programs and activities and to pay expenses related to the operation of recreation programming by the Agency.	Primary=2,4, Secondary=1	Primary=3,4 Secondary=1,2,5
Chapter 14	Specific Public Safety Regulations				
14.1	Roller Skates and Skateboards		The articles restrict use of skateboards and roller skates in the city.	Primary=2,4,5 Secondary=	Primary=3,4 Secondary=1,2,5
14.7	Youth Curfew		Establishes a curfew violation for a child less than fifteen (15) years of age to be in a public place after 11:00 p.m. or before 5:00 a.m. on any day.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5
14.50 -14.60	Regulations for Special Events on Residentially Zoned Areas		Establishes city procedures for street fairs, special activities on a large scale in the neighborhoods and residential areas.	Primary=2,4 Secondary=1,3,5	Primary=3,4 Secondary=1,2,5
Chapter 19 Article 3	Public Parks		Municipal code specifically set up for public parks in the city of South Bend.		

Table 4- cont.					
19.39	Protection of plant life on park property		Requires that horticultural projects for youth will have to be formally approved in writing by the Board of Park Commissioners.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 This could affect interpretive or naturalist programming as well as community gardening efforts.
19.4	Prohibited acts		Dumping of litter, rubbish, refuse, spitting, pollution of waters, or discharging certain substances into drains and sewers.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.41	Advertising forbidden		No person, without written permission from the Board, shall distribute or display any flag, banner, sign, or other matter for advertising purposes within any park or park-street.	Primary= Secondary=2,5	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.42	Disorderly conduct		Establishes and determines acts and behaviors that are prohibited by ordinance on park property.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.43	Gambling		Exclusion of gambling materials and practices on park property.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.44	Explosives, Firearms and missiles		Exclusion of knives, weapons, firearms, explosives, thrown or fired projectiles from park property.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.45	Aviation		All types of aviation are forbidden on park lands. Except for life-saving emergency landings.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.
19.46	Camping		Establishes restrictions on camping on municipal held lands.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts.

Table 4- cont.					
19.47	Park Entrance fees; permits		Code granting the right to charge for services or access and to restrict non-paying public from for-pay operations on public property.	Primary= Secondary=1,2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.48	Meetings, exhibitions, parades, racing, etc.		Prevents the erecting of structures, the holding of performances or meetings or activities of a public nature without the approval of the Board of Park Commissioners.	Primary=2,5 Secondary=4	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.49	Picnics and outings		All persons conducting organized picnics or outings shall obtain all necessary use permits.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.50	Peddling, sales, photographs, etc.: Concession contracts		Rules against the selling of merchandise or services on park property without previous explicit approval and permitting.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.51	Protection of Animals		Code for the protection of wildlife and to forbid the selling or abuse of animals on park property	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.52	Fires, discarding smoking materials, etc.		Restrictions on fire-building and rules against discarding cigarette butts, matches and cigars on the ground.	Primary=5 Secondary=	Primary=3,4 Secondary=1,2,5 Youth activities would have to avoid any such acts
19.53	Boating		Rules defining permitted boat access and boating procedures.	Primary=5 Secondary= 2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.54	Fishing, Protection of Fish		Rules restricting and defining the accepted fishing practices on park property.	Primary= Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.55	Bathing		Rules restricting and defining the permitted bathing practices or behavior on recognized beach areas within park property.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.

Table 4- cont.					
19.56	Subsurface Aquatic Activity		No scuba, snorkeling, or other subsurface activity permitted except by special permit.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.57	Toy Aviation, kite flying, model boating, automobile, or airplanes		All such activities are forbidden except in specially designated areas maintained and designed for this purpose.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.58	Games		No person shall throw, cast, catch, kick, or strike any basketball; swing or make use of any golf club; hit or putt golf balls, tennis balls, footballs, basketballs, croquet balls, or other objects; or engage in any sport, game, or competition except in designated areas.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.59, 19.60	Animals at large and Horses		No horse riding except by Board authorization. Persons in charge of animals will not let them run unleashed, drink or swim in the pools or be a nuisance.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.75	Curfew		It shall be unlawful for any person to remain in any park, golf course, playground, picnic area, swimming area, pavilion, or other property after 11 p.m. local time without permit.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property.
19.79	Park and park program rule enforcement		The Board of Park Commissioners is authorized to adopt rules and regulations for the conduct of patrons, participants, spectators, and volunteers for any property or program.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5 Youth activities would have to be in compliance with such activities on public park property. It is important to examine each policy and determine if it might be converted to a "positive" policy.

Table 4- cont.						
Chapter 20	Vehicles and Traffic					
20.31 through 20.50	Bicycle Regulations		Various rules for bicycles, including parking, right of way, and limits on trick-riding.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5	Bicycling is a key form of transportation for youth in South Bend.
Chapter 21	Zoning		All the requirements for the built environment of the city			
21-02.01 through 21-02.12	Residential Zoning and Development rules		Zoning and Development requirements for single and multi-family buildings and neighborhoods including development incentives and requirements for sub-divisions.	Primary=1,3 Secondary=2,4,5	Primary=3,4 Secondary=1,2,5	These codes define the neighborhood forms, including requirements for open space, access to greenways near homes.
21-07	General Regulations		Defines the requirements for landscaping, lighting, signage, and parking.	Primary=5 Secondary=2,4	Primary=3,4 Secondary=1,2,5	Implications for type of signage, its location and message such as those which are aimed at "prohibiting," "restricting," and "warning" instead of positive signage encouraging adherent actions.
21-14	Subdivisions		The requirements for land-use and development in the creation of a residential sub-division in the city.	Primary=5 Secondary=1,2,3,4	Primary=3,4 Secondary=1,2,5	All five factors and indicators are impacted yet only safety is usually of prime interest. Of particular importance are policies that encourage or require food sources, community gardens, etc. That increases access and consumption of fresh foods.

**Code of MAUT
factors** (1=Nutrition
regimen; 2=Social
interaction; 3=
Transportation
services; 4=Physical
activity; 5= Safety

**Code of MAUT
indicators** (Nutrition
regimen=
1a,1b,1c,1d,1e);
Social interaction=
2a,2b,2c,2d,2e;
Transportation
services=
3a,3b,3c,3d,3e;Physic
al
activity=4a,4b,4c,4d,
4e;
Safety=5a.5b.5c.5d.5
e

Appendix B: SBPRD AYI Action Plan Year Two to Year Three

THIS PAGE INTENTIONALLY LEFT BLANK

SBPRD - Active Youth Initiative (AYI) Action Plan for Year Two into Year Three 2012 - 2013

To Increase Active Living among 10 -14 Year Olds - Actions That Will Be Initiated

Yellow highlight = incomplete in Year Two

Light Yellow = New Focus for Year Three

Year Two Action	Measures/Outcomes	Responsibility	Status - 4/13
1. Conduct an Educational Campaign to Change Culture and Perceptions			
a. Initiate and utilize SBPRD Active Youth Initiative (AYI)	i. Initiative has purpose and is communicated	Marketing/ all staff w/ HCRG	Complete
b. Get parents involved and educated	i. Create activities for youth with the families	SPRPD and partners	complete and ongoing
	ii. Education outreach efforts through AYI and partners	All partners	complete and ongoing
c. Ongoing organized work with partners	i. Assign staff AYI Liaison and Outreach Coordinator	SBPRD Director	complete and ongoing
	ii. Compile and manage master list of all orgs working with this age group	South Bend AYI Outreach Coordinator -Partnership organizations.	complete and ongoing
	iii. Offer to collaborate for purpose – umbrella lead agency	South Bend Parks AYI team	Complete
	iv. Reciprocal listings of programs and missions	South Bend AYI Outreach Coordinator -Partnership organizations.	complete and ongoing
	v. Training of registration/programmers on availability	South Bend Parks Office Manager - Reciprocal partnership organizations	complete and ongoing
	vi. Quarterly meeting to discuss potential alliances	South Bend AYI Outreach Coordinator -Partnership organizations.	happening monthly
	vii. Request specific liaisons from partnering agencies (police, schools, partners)	South Bend AYI Outreach Coordinator -Partnership organizations. Specifically R.O.C.	complete and ongoing
d. Realistic/positive/media /communications campaign	i. Either a completely new campaign would be launched with a new expense or existing outlets and tools would be used.	Parks Marketing/all staff/partnership agencies	Possible grant research for a larger campaign as a possibility
e. Utilize national tactics - Let's Move – active families / www.livewell.org / other cities	i. Self-education on these initiatives is a critical part of the quarterly meetings and ongoing trends analysis	South Bend AYI Outreach Coordinator -Partnership organizations.	complete and ongoing
f. Change perception of overweight youth – realistic view of healthy BMI	i. Utilize and convey healthy youth BMI for this age	South Bend AYI Outreach Coordinator/ park programmer	TBD - BMI is controversial
g. Implement and communicate Safe City concepts	i. Identify and find partners to implement Safe City concepts	All City Departments and entities (current administration support?)	updates and discussions held - ongoing
h. Prescription to Play program with physicians/hospitals	i. Create program and implement outreach to medical staff	Through Partnership organizations. Having the programs and providers	in pilot mode
i. Provide guidelines for Food availability	i. create policy guidelines for internal food availability for all affordances and support improved	Park Administration Team	basic pol+D12icy draft

2. Collect more South Bend specific data

a. Conduct a statistically-valid youth survey	i. survey will be funded and conducted in Year Two	TBD w HCRG and staff	TBD - still need
b. Get crime data by census tract/neighborhood	i. make contact and get data	South Bend Project Coordinator from South Bend Police	Determined to not be necessary
c. Set-up financials to collect youth program data separately	i. identify better templates and tracking	SBPRD Park Fiscal w HCRG	Complete
d. Create and manage full partner/collaborators/other providers lists	i. same as Task 1.C.ii	South Bend AYI Outreach Coordinator -Partnership	complete and ongoing
e. Conduct intercepts surveying of youth at drop-in locations to estimate age group usage	i. Design, deployment, and analysis of useful surveys	Park Programmers and HCRG	TBD - survey design/administration might



Action	Measures/Outcomes	Responsibility	Status - 4/13
3. Increase Affordances – opportunities to participate			
a. More Targeted educational programs for youth	i. Facilitate availability of more targeted programs for youth	SBPRD and partners	complete and ongoing
b. Work with partners to offer more programs at more locations	i. Increase available opportunities and awareness	Park & Recreation Director - with partnership organizations	complete and ongoing
c. Teach goal setting/identification of healthy weight/healthy nutrition	i. Incorporate in current programming and Consider new programming	SBPRD & AYI	complete and ongoing
d. Incorporate Activity for Life concepts	i. Identify outline and integration of concepts	SBPRD & AYI	complete and ongoing
e. Promote active families – programs and events for families	i. Education that reaches the family including activities that family as a unit can be involved in.	Parks Recreation Department, all partner organizations	complete and ongoing
f. Partner with community gardens to educate and distribute produce	i. Identify liaisons and outline programs	Partners and SBPRD	grant application but incomplete
g. Ongoing management of Affordances data set	i. For Parks program and include expansion to include other providers in community	Project Coordinator and HCRG	updated and annually
4. Identify key asset (built environment) improvements by Census Tract/Neighborhood			
a. Meet with key stakeholders	i. Meet with stakeholders such as planning, bike groups, trail groups, walkers, parents) to identify known connectivity trouble areas for sidewalks/crossings and trails	AYI Coordinator, Steering Committee, with HCRG support	complete and ongoing
b. Use census tract level for LOS analysis	i. Detail where are deficiencies in specific assets most	staff and HCRG	used zip codes - complete and annually
g. Ongoing management of Assets data set	i. annually review data set and add new components when identified	AYI Project Coordinator w/ HCRG	complete and ongoing
5. YEAR THREE - Move Forward with testing, validation, evaluation, modeling, and monitoring of AYI and the SMT			
a. Use MAUT indicators to address Positive Policy	i. use Positive Policy language for most pertinent indicators	SBPRD, AYI, and HCRG	2013
	ii. Review consensus on indicators relative to actual and suggested positive policies	SBPRD, AYI, and HCRG	2013
b. Stella Modeling	i. Identify and improve Stella Modeling uses	SBPRD, AYI, and HCRG	2013
c. Address Capital and Program Planning	i. Review CIP and program locations to improve LOS based on zip code info	SBPRD, AYI, and HCRG	2013
	ii. Continue to add Alternative Providers	SBPRD, AYI, and HCRG	2013
d. Implement Safety Inventory Practices	i. Train staff and work with PD so that if and when crime occurs, safety inventories are complete and incidents are remedied and communicated in a positive way - maybe using national practices.	SBPRD & PD	2013
e. Allocate Funding to move forward with AYI and Evaluation beyond Year Three	Identify funding and staff resources for 2014-2019 for work beyond HCRG involvement	SBPRD, AYI, and HCRG	2013
f. Implement Ongoing Items in Action Plan and Additional Evaluation	i. Work with HCRG to evaluate and update Beta Test of Toolkit for Year Three and beyond	SBPRD, AYI, and HCRG	complete and ongoing
