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# HEALTH IMPACT ASSESSMENT: COTTONWOOD RIVERFRONT TRAILS AND RECREATION MASTER PLAN

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Yavapai County Community Health Services



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## Executive Summary

### Background

In 2016, the City of Cottonwood completed a Riverfront Trails and Recreation Master Plan (CRTRMP) as a result of a River Recreation Planning Grant from The Nature Conservancy. The project identifies future pathways and trails throughout Cottonwood and regional destinations and hopes to “serve as a blueprint for the development of a high quality, interconnected, multimodal, regional trail system in Cottonwood, Arizona. The system is envisioned to serve a diverse range of users, providing safe and well-maintained linkages to important natural, cultural and civic destinations and other points of interest within and outside of the city” (Norris Design, 2016, p. 6, <http://cottonwoodaz.gov/DocumentCenter/View/1748/Verde-River-Recreation-and-Trails-Plan-PDF>).

The final report recommended nine action priorities that included: a connection between Riverfront Park to the Verde River, connection between Riverfront Park to Old Town Cottonwood and creating connections to community assets (Norris Design, 2016). The proposed designs developed by the Norris Design Group show exciting potential for increasing access to area parks and trails in the Riverfront Complex and the greater Cottonwood area.

The Riverfront Recreation Masterplan was broad in scope and its recommendations provided an encouraging blueprint for a comprehensive approach to outdoor experiences in the community. After meeting with stakeholders, it was determined by Yavapai County Community Health Services (YCCHS) that a Health Impact Assessment (HIA) is needed and likely to be useful for the future implementation of the Cottonwood Riverfront Trails and Recreation Master Plan. YCCHS was awarded a grant from the CDC through ADHS to conduct an HIA.

In addition, the recently conducted Yavapai County Community Health Assessment (CHA) had several prominent findings that our health education team was interested in exploring further through the HIA. The finding that stood out to the HIA Team from the CHA was the declining mental health of County residents from previous years.

### Pathways

The HIA Team determined pathways to address potential health determinants. These pathways were utilized to guide the assessment and recommendation phases. The pathways that were developed are:

1. Access to Recreation
  2. Recreation Opportunities
  3. Recreation Awareness and Usage
  4. Funding Efficiency
  5. Access to Healthy Food
-

## 6. Neighborhood and Commerce Connection

### Assessment

After meeting with stakeholders in Cottonwood and the surrounding areas, the HIA team decided a community survey would be the most useful tool in engaging public opinion and obtaining a broader picture of the present needs of the area. The survey consisted of 13 questions related to health, recreational use, desires for recreational growth in the community, and demographics.

### Key Findings

Yavapai County Community Health Assessment key findings-

- **Strength:** The region has expansive parklands that provide ample opportunities for free or low-cost outdoor recreation and physical activity. Most Yavapai County residents report the outdoors as their primary focus of physical activity.
- **Alarming health trends:** Yavapai County residents overwhelmingly report an increased need for mental health services across the county.
- **Existing social determinants of poor health:** Yavapai County residents have relatively low access to and options for public transportation to support access to medical care, jobs, and social connection” (Pinnacle Prevention, 2017, p. 65, [http://www.yavapai.us/Portals/39/2017YavapaiCHA\\_Final.pdf](http://www.yavapai.us/Portals/39/2017YavapaiCHA_Final.pdf)).

Cottonwood Riverfront Trails and Recreation Master Plan (CRTRMP) Health Impact Assessment  
Key findings-

- Residents in the Cottonwood area feel that their mental and physical health is improved after participating in outdoor recreation.
  - A large percentage of residents surveyed would appreciate and/or support improvements to the Riverfront Recreation area.
  - Improvement of the trails network was the overwhelmingly number one desire of survey participants. Including increase of trails, trail connectivity and clearly defined trails and signage.
  - Not only do survey respondents desire improvements to the recreation area, residents surveyed realize a financial investment implemented by local jurisdictions to improve recreation areas.
  - Many residents in the Cottonwood area are unaware that Riverfront Park facilities exist or where they are located.
  - A re-prioritization of the CRTRMP recommendations would address the most pressing barriers to access of recreation.
-

## Recommendations

Given the feedback obtained and assessed through the HIA process it would be the recommendation of the HIA team to re-prioritize the recommendations of the CRTRMP to address the most significant and most surmountable barriers to usage of the Riverfront park facilities before significant investment begins.

*Priority 1:* Utilize low-cost, low-hanging fruit to bring awareness to the park facilities. A social media campaign or radio broadcast could introduce community members to the Riverfront Park who are currently unaware of the recreational opportunities. Consistent naming and branding of the park would also be an important aspect of this outreach.

*Priority 2:* Secure funding for trails development. While surveys showed strong support for a tax to fund the implementation of the CRTRMP, it is possible that a tax or fee is not necessary if grant opportunities are explored and matching funds are considered within the city budget.

*Priority 3:* Many survey respondents indicated that safety concerns and lack of enforcement of existing laws and codes limited their usage of Riverfront Park Facilities regardless of their current usage. Therefore, dog leash ordinance enforcement and increased police presence could help in this regard. Lighting in parking areas and trailheads should also be prioritized.

*Priority 4:* Respondents shared that signage of existing trails and/or facilities is lacking. Signage on trails and the entrance to Riverfront Park at 10<sup>th</sup> street should be prioritized.

*Priority 5:* Trail expansion and connectivity was a prevailing improvement that respondents desired. Therefore, establishing connections to develop a network of trails would increase access, usage and the health of residents. The phasing schedule as laid out in CRTRMP would be a logical and appropriate approach to the trail network. Please refer to Figure 9 for information regarding this priority.

*Priority 6:* Develop a comprehensive citywide Parks and Recreation Master Plan including a baseline health assessment of the community.

*Priority 7:* The Cottonwood City Council should consider a Health in All Policies resolution or ordinance to inform projects and programs in the future. “A Health in All Policies requires that decision-making bodies and their staff consider health, alongside other important factors such as fiscal or environmental impact, when making decisions that affect the community. This approach acknowledges that the social determinants of health — those conditions in the environments in which people are born, live, learn, work, play, and age – have a profound effect on how healthy we will be over the course of our lives (ChangeLab Solutions, 2015, p. 1).”

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## Conclusion

Implementation of the Cottonwood Riverfront Trails and Recreation Master Plan with the revised priorities laid out in the Recommendations portion of this document, would increase usage of the Riverfront Park facilities and therefore increase opportunities for healthy behavior. The implementation of the CRTRMP would increase the overall mental and physical health of the community.

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## Introduction

### Health Impact Assessments-

The goal of any Health Impact Assessment (HIA) is to assess a proposed project or plan and determine the potential health benefits and risks for the community impacted. An HIA can be a valuable tool to analyze a project using the lens of health. HIAs are conducted using an evidence-based approach. This includes a six-tiered process of: screening, scoping, appraisal, developing recommendations, reporting, and monitoring/evaluating.

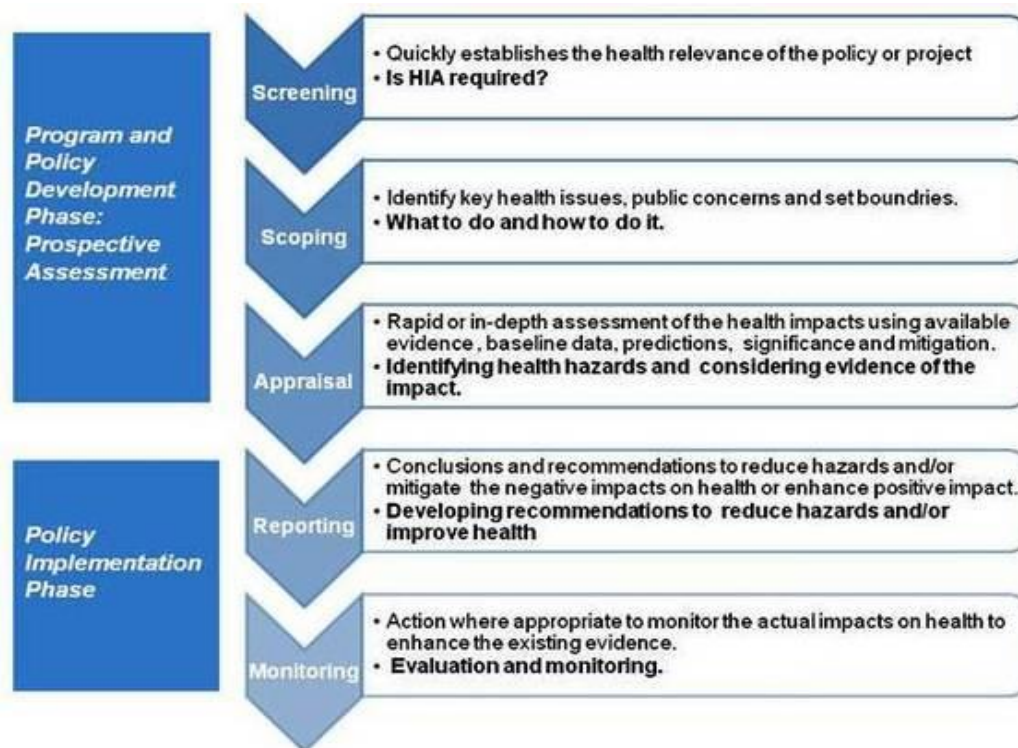


FIGURE 1- THE HIA PROCESS EXPLAINED SOURCE: THE TRANSPORTATION PUBLIC HEALTH LINK [WWW.TPHLINK.COM/HEALTH-IMPACT-ASSESSMENT.HTML](http://WWW.TPHLINK.COM/HEALTH-IMPACT-ASSESSMENT.HTML)

### The Relationship Between “opportunities for outdoor recreation” and “physical and mental health”-

According to the Centers for Disease Control and Prevention-

Parks and trails can improve health in several ways including:

- Increased physical activity- walkable access to appropriate sites motivates people to participate in physical activity and to do so more frequently;
- Improved mental health- parks can serve as a venue for stress reduction;

- Environmental benefits- parks can reduce air and water pollution, protect hazard areas (e.g., flood plains, unstable slopes) from inappropriate development, and mitigate urban heat islands;
- Community interaction- parks can provide meeting places for neighbors;
- Reduce injury- parks and trails can provide safe spaces for people to play and exercise, away from busy streets and commercial zones.

People who are exposed to the greenest environments also have the lowest levels of health inequities among low-income households. Physical environments, like parks and trails that promote good health might be important to reduce socioeconomic health inequities.

*“HIAs provide decision-makers an opportunity to minimize health risks and enhance health benefits, allowing for informed decisions related to agriculture, transportation, housing, education, land use and energy.”*

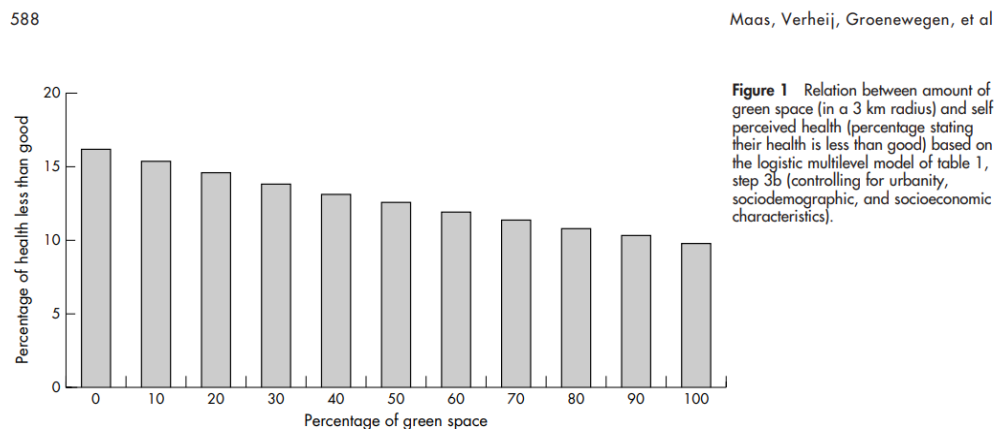
*CDC, 2013*

Even though parks can be important health-promoting components of communities, they can also create community concerns. In some places, parks can be viewed as a place for crime or illegal activity; there may be concerns about injuries at the park or by people traveling to the park; or there may be competing development interests. All these issues are important to consider and can be informed by an HIA (Center for Disease Control and Prevention, 2013).

Many studies have provided supporting evidence that opportunities for outdoor recreation can increase various physical and mental health outcomes for residents who can access those resources. (Sonja A Wilhelm Stanis, Winter 2009).

- A study of more than 500 older adults from 56 neighborhoods in Portland, Ore., found that “adults with more recreational facilities and open green space area were significantly more likely to report higher levels of walking. One study examined total park area within a community and found that the percentage of total park area within neighborhoods was a significant predictor of increased physical activity levels among children. For each one percent increase in park area, there was a 1.4 percent increase in physical activity levels” (Robert Wood Johnson Foundation, 2010, p. 4).
  - A study done in California aimed to assess how proximity to parks and recreational resources affects the development of childhood obesity. The study concluded that “children with better access to parks and recreational resources are less likely to experience significant increases in attained BMI” (Jennifer Wolcha, 2011, p. Abstract).
-

- A 2006 study conducted in the Netherlands sought to “investigate the strength of the relation between the amount of green space in people’s living environment and their perceived general health” (Jolanda Maas, 2006, p. 587). After reaching over 250,000 residents, the study concluded “the relation between green space and health is considerable. In areas where 90% of the environment around the home is green, only 10.2% of the residents feel unhealthy, as compared with areas in which 10% of the environment is green, where 15.5% of the residents feel unhealthy. The relation is equally strong for the 1 km and the 3 km radius. (Jolanda Maas, 2006, p. 589)”.
- “Physical activity was related to significant reductions in depression in five separate studies (‘meta-reviews’) during the 1990s that concentrated on the re-analysis of data from groups of earlier individual studies. The reductions occurred for subjects who were classified as non-depressed, clinically depressed, or mentally ill (Landers, 1997)”. (California State Parks, 2005, p. 19)
- “Mentally recalling outdoor recreation activities increases positive moods which are linked to improved self-esteem, lowered depression and reduced suicide rates (Tarrant et al., 1994)”. (California State Parks, 2005, p. 19)



**FIGURE 2- FROM THE 2006 DUTCH STUDY: GREEN SPACE, URBANITY, AND HEALTH: HOW STRONG IS THE RELATION? (JOLANDA MAAS, 2006, P. 589)**

Public health education efforts are looking beyond simply encouraging people to be physically active. By assessing simple solutions to build possibilities for physical activity, public health efforts can be geared toward policies and environments that can impact health outcomes (Godbey, 2009).

## Background

### Elements of a Healthy Community-

The Arizona-based Vitalyst Health Foundation declared 2017 “The Year of Health Communities”. Vitalyst used the year to spread the word about social determinates of health.

In alignment with the Live Well Arizona Initiative, it is recognized that ‘a healthy community is one where people have the opportunity to make healthy choices in environments that are safe, free from violence, and designed to promote health. Factors that influence health range from early childhood education to quality housing and jobs and include many other areas of community development, such as financial inclusion, access to health clinics and healthy food, sustainable energy, and transportation’. As outlined in Figure 1, where we live, work, play, pray and learn determines our health and well-being. This fact shifts the public health focus from treating disease and sickness toward prevention and collaboration to improve the quality of life for all residents (Pinnacle Prevention, 2018, p. 3).



FIGURE 3- ELEMENTS OF A HEALTHY COMMUNITY SOURCE: VITALYSTHEALTH.ORG

The message that was shared in “The Year of Healthy Communities” and the “Elements of Healthy Community” wheel (Figure 3) now serve as a beacon for the health policy work at YCCHS. The “upstream” thinking influenced the design and execution of this HIA.

## Verde Valley Demographics

Cottonwood is a city in Arizona located in Yavapai County surrounded by the unincorporated area of Verde Village. Figure 4 shows Cottonwood's location within the State of Arizona

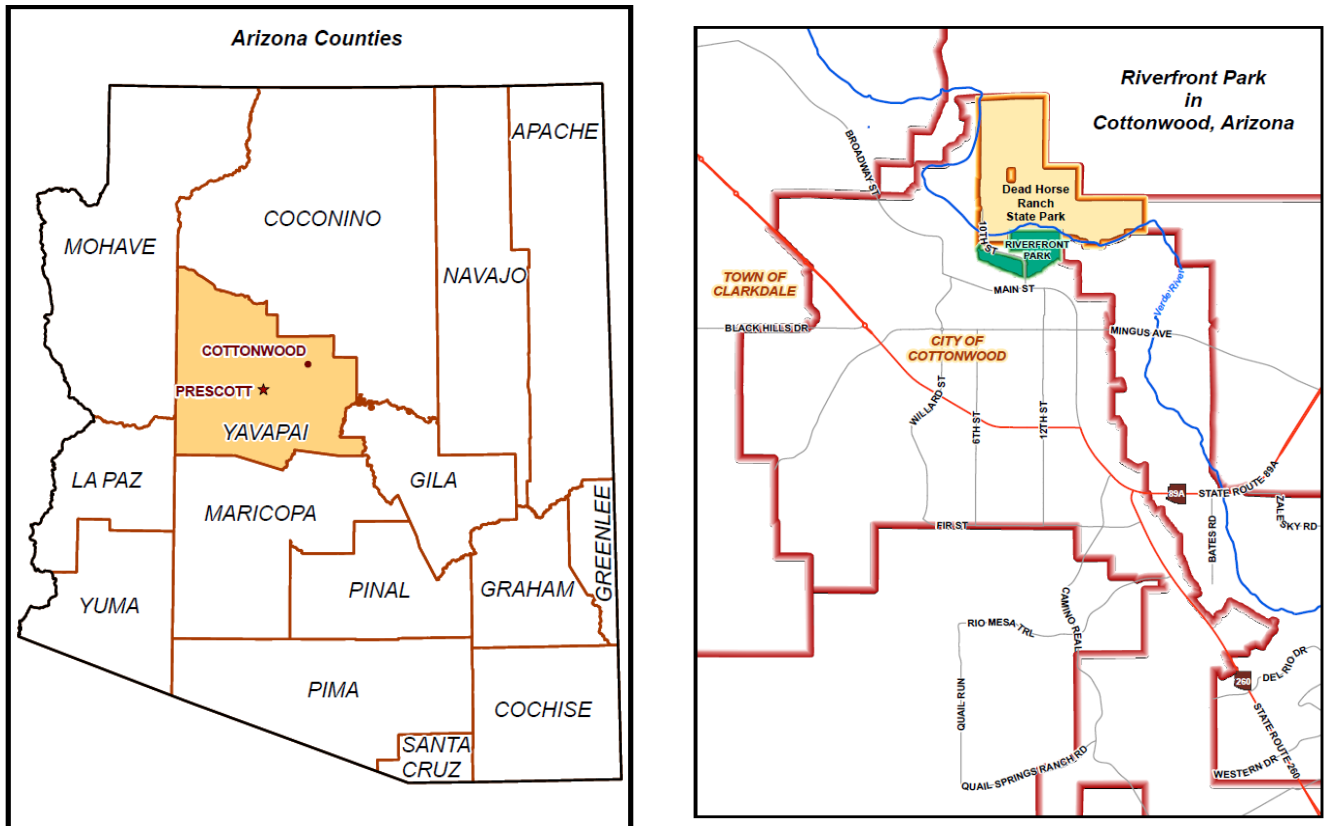


FIGURE 4- ILLUSTRATES MAPS OF COTTONWOOD ARIZONA IN RELATION TO THE STATE AND RIVERFRONT PARK IN RELATION TO THE CITY OF COTTONWOOD. (YAVAPAI COUNTY GIS)

The following are important statistics related to Yavapai County and the City of Cottonwood:

- The total population of Yavapai County is 228,168 (United States Census Bureau, 2017).
- In Yavapai County the median household income \$46,638. Compared to the national median of \$55,322 (United States Census Bureau, 2017).
- The percentage of people living in poverty is roughly 13.3% (United States Census Bureau, 2017).
- Cottonwood is the largest of the incorporated communities with 12,023 residents (United States Census Bureau, 2017).
- The median household income for residents in Cottonwood is \$33,371 and citizens of Cottonwood suffer from poverty at a rate of 21.5% (United States Census Bureau, 2017).

### Races in Cottonwood

White alone	70.1%	(8,379)
Hispanic	22.8%	(2,722)
Two or more races	3.4%	(404)
Black alone	1.8%	(214)
American Indian alone	1.2%	(144)
Asian alone	2%	(27)

(city-data.com, 2018)

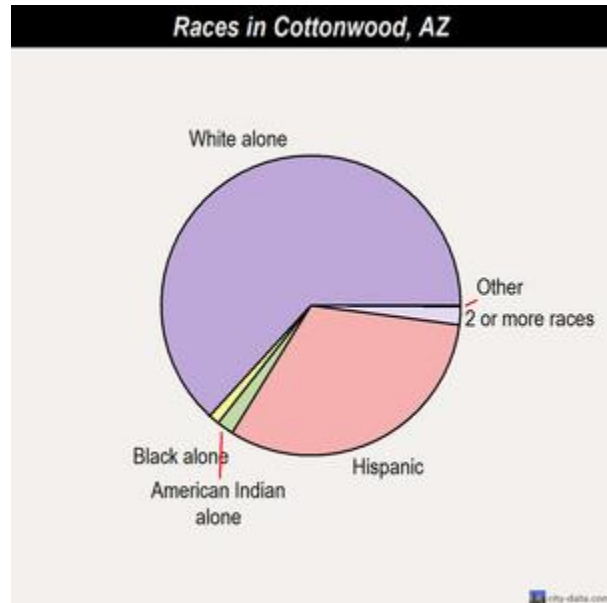


FIGURE 5- (RIGHT) RACES IN COTTONWOOD, AZ  
SOURCE: CITY-DATA.COM

The 2016 Cottonwood Riverfront Trails and Recreation Master Plan described Cottonwood in the following way:

The City of Cottonwood is part of an interconnected and inter-dependent region that includes the immediately surrounding communities of the Verde Valley region and Yavapai County. At each level there are unique issues that tie the region together through common interests. Parks, open space and trails, in many cases, act as the connection between the various communities within the Verde Valley region” (Norris Design, 2016, p. 12).

### Riverfront Trails and Recreation Master Plan

In 2016 The City of Cottonwood completed a Riverfront Trails and Recreation Master Plan as a result of a River Recreation Planning Grant from The Nature Conservancy. The project identifies future pathways and trails throughout Cottonwood and regional destinations and hopes to “serve as a blueprint for the development of a high quality, interconnected, multimodal, regional trail system in Cottonwood, Arizona. The system is envisioned to serve a diverse range of users, providing safe and well-maintained linkages to important natural, cultural and civic destinations and other points of interest within and outside of the city” (Norris Design, 2016, p. 6). The final report recommended nine action priorities that included: a connection between Riverfront Park to the Verde River, connection between Riverfront Park to Old Town Cottonwood and creating connections to community assets (Norris Design, 2016).

The proposed designs developed by the Norris Design Group show exciting potential for increasing access to area parks and trails in the Riverfront Complex and the greater Cottonwood area. Figures 6 through 8 show different phases and designs of the CRTRMP.



FIGURE 6- PROPOSED TRAIL/TRAILHEAD FOCUS AREAS ENTRANCE TO RIVERFRONT PARK AT 10TH STREET (NORRIS DESIGN)



FIGURE 7- PROPOSED PEDESTRIAN GATEWAY TRAILHEAD (NORRIS DESIGN)

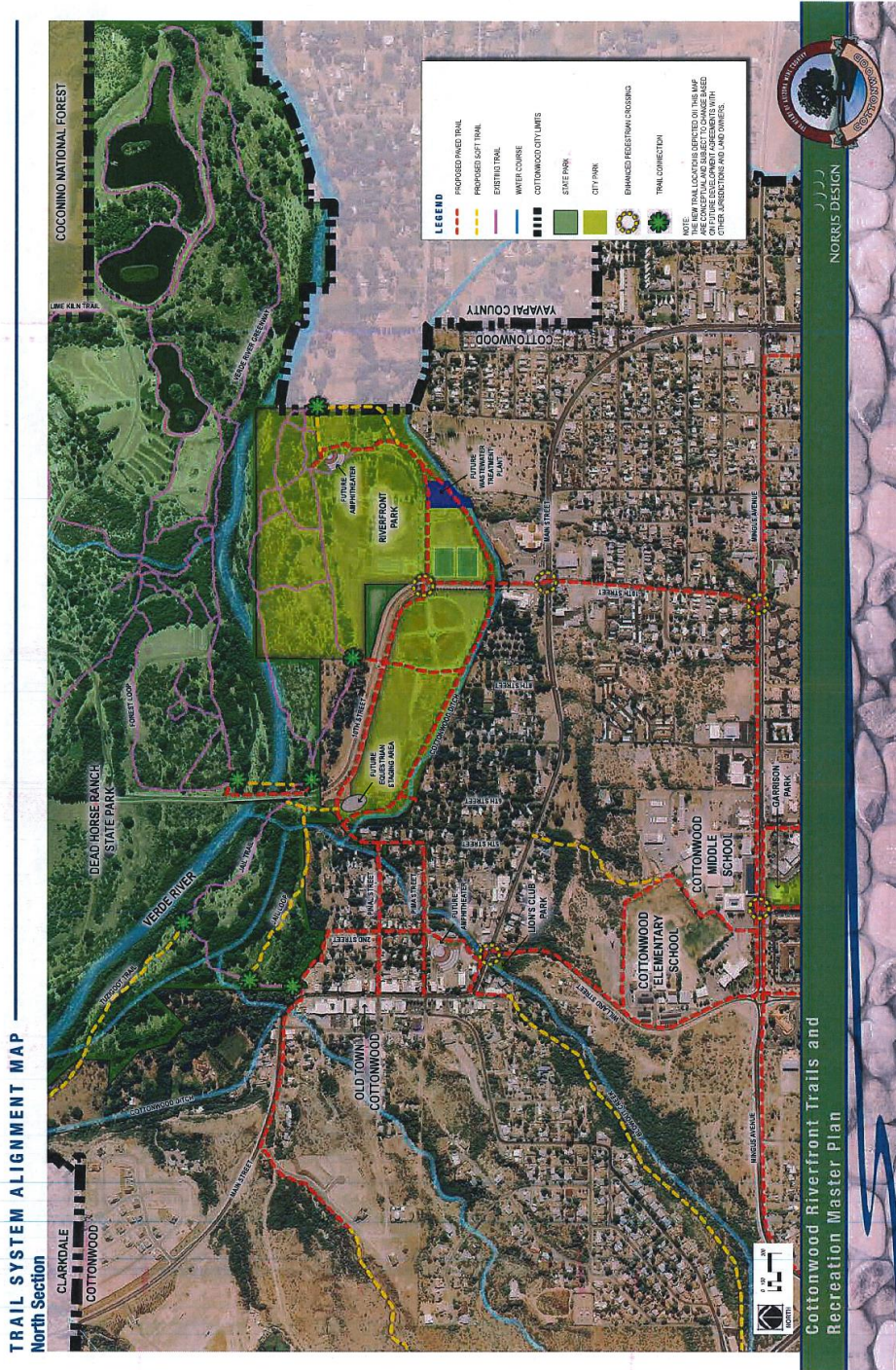


FIGURE 8- PROPOSED TRAILS SYSTEM ALIGNMENT MAP (NORTH SECTION) NORRIS DESIGN

## Screening

The Riverfront Recreation Masterplan was broad in scope and its recommendations provided a viable blueprint for a re-envisioned approach to outdoor experiences in the community. After meeting with stakeholders it was determined by Yavapai County Community Health Services (YCCHS) that a Health Impact Assessment is needed and likely to be useful for the future implementation of the Cottonwood Riverfront Trails and Recreation Master Plan. YCCHS was awarded a grant from the CDC through ADHS to conduct an HIA.

In examining the Community Engagement approach to the Cottonwood Riverfront Trails and Recreation Master Plan (CRTRMP) it was also determined by stakeholders that an alternate approach, one that includes strategic in-person and paper survey distribution might obtain a greater sample of community input.

While Riverfront Park, trails and the CRTRMP study focused on the impact to the City of Cottonwood. The HIA team chose to look a little wider to the unincorporated areas that neighbor the city boundary. The unincorporated community known as the “Verde Villages” has a population larger than the incorporated boundary of Cottonwood itself and residents most likely are regular users of city parks and services (Cottonwood Chamber of Commerce, 2018).

The recently conducted Yavapai County Community Health Assessment had several prominent findings that our health education team was interested in exploring further through the HIA. Including:

- “The percentage of adults in Yavapai County who report partaking in no leisure-time physical activity is 21.3%. This indicator represents the percentage of adults over eighteen who reported having no leisure-time physical activity in the years 2006-2012. The Healthy People 2020 goal is 32.6%. (Pinnacle Prevention, 2017, p. 30)”. Overall the Yavapai County percentage is significantly lower than the national standard, an encouraging attribute for Yavapai County residents.
  - “Fair or poor health was reported by 17.7% of adults in Yavapai County (worse when compared to peer counties). This indicator represents the percentage of adults who reported fair or poor health in 2006-2012. Self-assessed health status is a good predictor of morbidity and mortality. The median of all US states is 16.5% Source: CDC’s CHSI” (Pinnacle Prevention, 2017, p. 19)
  - “The percentage of the population in Yavapai County who live within half a mile of a city or town park (not including state parks) is 30% (moderate when compared to peer counties). This indicator represents the percentage of the population who lived within half a mile of a city or town park in 2010. Safe and accessible parks can increase physical
-

activity levels. The median of all US states is 14%. Source: CDC's CHSI. (Pinnacle Prevention, 2017, p. 36)"

The Community Health Assessment also found:

- “A need for activities and programs that are low cost, family friendly, and geared toward youth and teens (Pinnacle Prevention, 2017, p. 57).” “Community members stated they would like to see more after-school programs, recreation leagues, parks, trails, and outdoor and indoor facilities available for children and teenagers (Pinnacle Prevention, 2017, p. 57).”
- “Key informants identified a wealth of natural resources that promote health and well-being within Yavapai County, including clean air, clean water, large parks and open spaces, an extensive trail system, and a climate conducive to year-round outdoor recreation activities. There are unlimited opportunities for community members to stay active through hiking, biking, kayaking, swimming, and organized recreational leagues for both children and adults. These natural resources help contribute to mental and physical well-being among members of the community (Pinnacle Prevention, 2017, p. 60).”
- “The 2017 CHA for Yavapai County set out to gain a more comprehensive picture of health issues and needs facing Yavapai County residents. Through a systematic analysis of secondary data and primary quantitative and qualitative research through community engagement, the following key findings were identified across all or most sources of data:

Strength: The region has expansive parklands that provide ample opportunities for free or low-cost outdoor recreation and physical activity. Most Yavapai County residents report the outdoors as where they seek out physical activity.

Alarming health trends: Yavapai County residents overwhelmingly report an increased need for mental health services across the county.

Existing social determinants of poor health: Yavapai County residents have relatively low access to and options for public transportation to support access to medical care, jobs, and social connection (Pinnacle Prevention, 2017, p. 65).

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## Scoping

The goal of the scoping phase is to identify specific questions and concerns to be addressed for future recreational improvements to Riverfront Park and the Cottonwood area trails. The following objectives were identified:

- Review determinants of health
- Identify potential health impacts
- Identify stakeholders
- Construct a logical framework for the health impacts
- Prepare a pathway diagram

Scoping highlights the key issues presented in this HIA. Scoping requires developing goals with stakeholders, identifying primary health issues, selecting an assessment process, identifying the study area, and engaging the community.

## Goals

The HIA Team agreed to the following goals to guide the HIA Process:

- Engage stakeholders during each step of the process
- Identify potential public health outcomes impacted by the Riverfront Trails and Recreation Master Plan
- Seek community input about health outcomes
- Develop recommendations to inform key decision making processes
- Increase awareness of HIAs as a tool for illustrating health outcomes in community development

## Decision Timeline

The Health Impact Assessment will illustrate the health impacts to area residents of the development of Riverfront Park Recreation and Trails. Phase I, illustrated in Figure 9 of the CRMTRP is scheduled to begin in the Winter of 2019 with the assistance of two grants from Arizona State Parks. Upon completion of the HIA of the RMTRP, a full report with recommendations will be provided to the City of Cottonwood Council, Parks and Recreation Department Staff and the City of Cottonwood Parks and Recreation Commission in the Winter of 2019.

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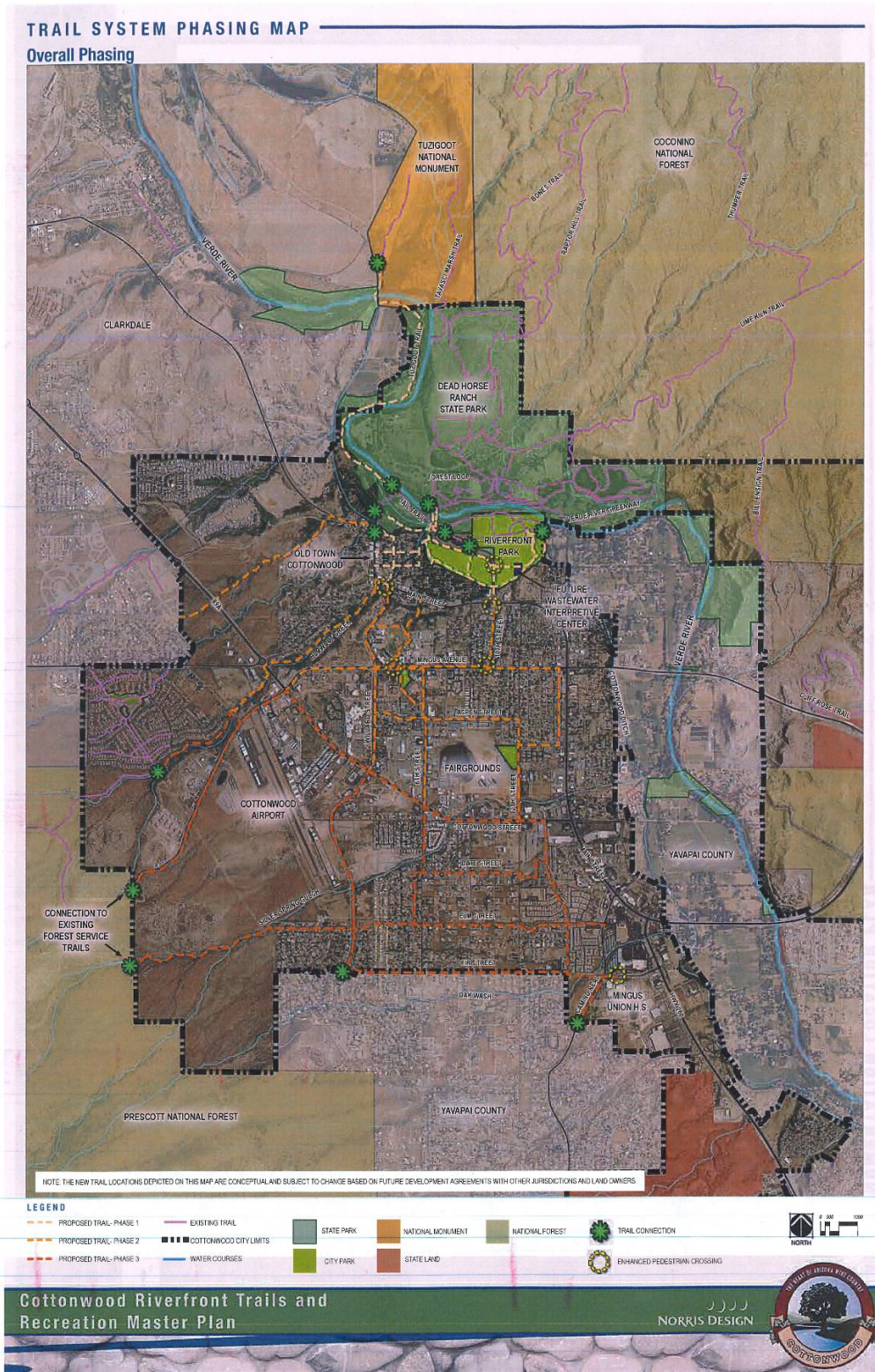


FIGURE 9- PROPOSED TRAIL SYSTEM PHASING MAP (NORRIS DESIGN)

## Pathway Diagram

The HIA Team developed a pathway diagram to help illustrate potential health determinants. A pathway diagram can be defined as, “a map of the casual pathway by which health effects might occur. In general, this approach describes effects directly related to the proposal and traces them to health determinants and finally to health outcomes.” (NIH.gov, 2011)

The Pathway Diagram is as follows:

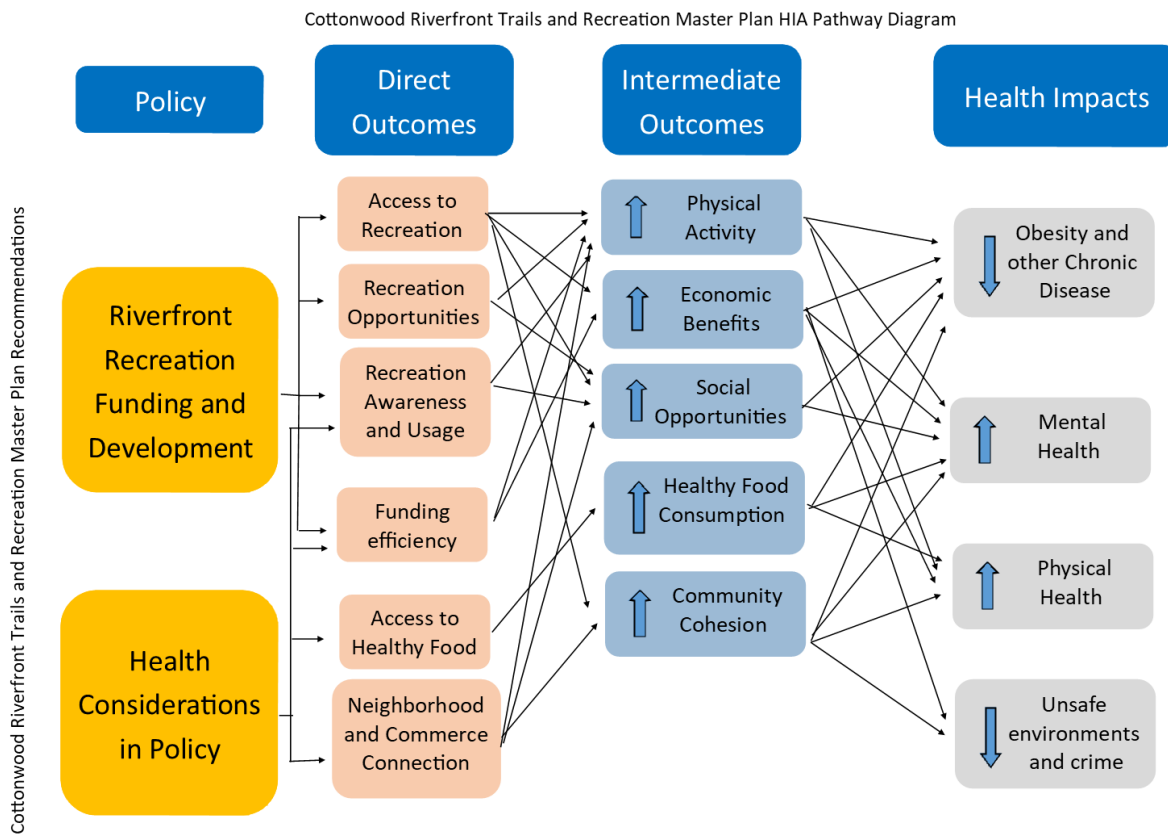


FIGURE 10- PATHWAY DIAGRAM OF THE CRTRMP HIA

## Pathway Diagram Description

Pathway Diagram Description		
PATHWAY	DETERMINANT	DESCRIPTION
1. Access to Recreation	Physical Environment - <i>Destinations Connected by Sidewalks and Trails</i>	<ul style="list-style-type: none"> <li>• This could result in more people walking instead of driving to destinations within Cottonwood and help reduce the occurrence of chronic disease.</li> <li>• It could also provide opportunities for residents and tourists to access natural resources.</li> <li>• Making it easier to travel by bicycle and foot may help to revitalize or further stimulate Old Town Cottonwood.</li> <li>• Residents have better access to recreation, therefore increasing physical activity.</li> <li>• Residents become more connected, reducing social isolation and increasing mental health.</li> </ul>
2. Recreation Opportunities	Physical Environment- <i>Opportunities to be physically active</i> Individual Behaviors - <i>People participate in recreation</i>	<ul style="list-style-type: none"> <li>• More trails and options for physical activity, increasing physical health and decreasing obesity and other chronic disease.</li> <li>• Opportunity for social and community cohesion, increasing mental health and decreasing crime.</li> </ul>
3. Recreation Awareness and Usage	Social/Economic Environment – <i>Improved marketing and advertising</i> Individual Behaviors - <i>Increase in knowledge of recreation options</i> <i>More people can access community/social opportunities</i>	<ul style="list-style-type: none"> <li>• More people walking and bicycling could increase the levels of physical activity, resulting in lower rates of obesity related chronic disease. Exercise is also associated with elevations in mood and better mental health.</li> <li>• Increase in awareness among local residents and outside visitors.</li> <li>• Less social isolation, less mental disease related to social isolation (depression, substance abuse).</li> </ul>
4. Funding Efficiency	Social/Economic Environment- <i>Funding community desires</i>	<ul style="list-style-type: none"> <li>• Community support for local government and recreation initiatives.</li> </ul>
5. Access to Healthy Food	Physical Environment- <i>Better access to healthy food</i>	<ul style="list-style-type: none"> <li>• Connectivity to the community garden</li> <li>• Rural areas may have better access to healthy foods resulting in fewer food</li> </ul>

		deserts.
6. Neighborhood and Commerce Connection	Social/Economic Environment – <i>Connectivity between commerce and recreation</i>	<ul style="list-style-type: none"> <li>• Local businesses do better, more employment, higher incomes.</li> <li>• Connection with recreation, community and commerce leads to increased tourism and cohesion of residents.</li> <li>• More buy in from residents; safe environment and less crime.</li> </ul>

### Scoping Research Questions

After completing the Pathway Diagram, the HIA team constructed research questions pertaining to the impact of health related to the development of the Riverfront Park area.

#### Pathway 1- Access to Recreation

- What are current limitations to activity at Riverfront Park that would be addressed by the implementation of the Master Plan?
- Would implementation of the Master Plan have a positive impact on physical and mental health for current and potential users of Riverfront Park?
- What barriers do residents feel limit their participation in recreation in the Riverfront Park area?

#### Pathway 2- Recreation Opportunities

- What opportunities are residents interested in participating more in?
- What would make Riverfront Park a destination for tourists and residents?

#### Pathway 3- Recreation Awareness and Usage

- Who uses Riverfront Park?
- Are residents aware of the opportunities available at Riverfront Park?

#### Pathway 4- Funding Efficiency

- Are residents willing to support funding for Riverfront Park? What does that funding look like?

#### Pathway 5- Access to Healthy Food

- Are residents aware of the community garden, local commerce and native plants?

#### Pathway 6- Neighborhood and Commerce Connection

- Do residents and tourists feel safe in the Riverfront Park area?
- Does mental and physical health improve with the usage of Riverfront Park?

## Health Impact Assessment in Relation to Health Issues of Cottonwood

Several health concerns were addressed through Yavapai County's Community Health Assessment (CHA) completed in 2016. The HIA Team adopted the top three of these health concerns from the CHA potentially impacted by the implementation of the CRTRMP. The health concerns are listed as follows:

- Perception of overall health relatively low compared to actual physical health
- Participation in physical activity and leisure activities reported as low
- Mental health of residents reported as an issue

## Stakeholder Engagement

The City of Cottonwood is the primary stakeholder because all improvements of the plan are in Cottonwood and the plan was prepared for City Staff. YCCHS met with the City of Cottonwood Parks & Recreation staff to introduce the topic and get further input. A presentation and discussion to the Cottonwood Parks & Recreation Commission followed the meeting with the Parks and Recreation Staff.

Further meetings were held with Spectrum Healthcare, a behavioral health clinic with a location in Cottonwood, and the Verde Front, a multi-jurisdictional group focused around sustainability of the Verde River, to explain the project, discuss how Public Health can be involved in making decisions with community planning, and assist with economic development.

The HIA has led to a new partnership between Yavapai County Community Health Services and the Verde Front, public officials from all parts of the county with association to the Verde River; its recreational development, sustainability, protection and promotion.

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## Assessment

The Assessment process focused on developing a survey to address the Cottonwood Riverfront Trails and Recreation Master Plan, the health of the community, and a needs assessment of the Riverfront Recreation Area.

### Community Survey

After meeting with stakeholders in Cottonwood and the surrounding areas, the HIA team decided a community survey would be the most useful tool in engaging public opinion and obtaining a broader picture of the present needs of the area. The survey consisted of 13 questions related to health, recreational use, desires for recreational growth in the community, and demographics.

The City of Cottonwood requested a question regarding a monetary support of the expansion of the recreational area. Question #9 addresses this request by asking if the survey respondent would support a tax or tax increase to expand recreational opportunities.

To increase survey participation, the HIA Team surveyed at sites around the City of Cottonwood. Figure 11 illustrates the locations surveys were completed.

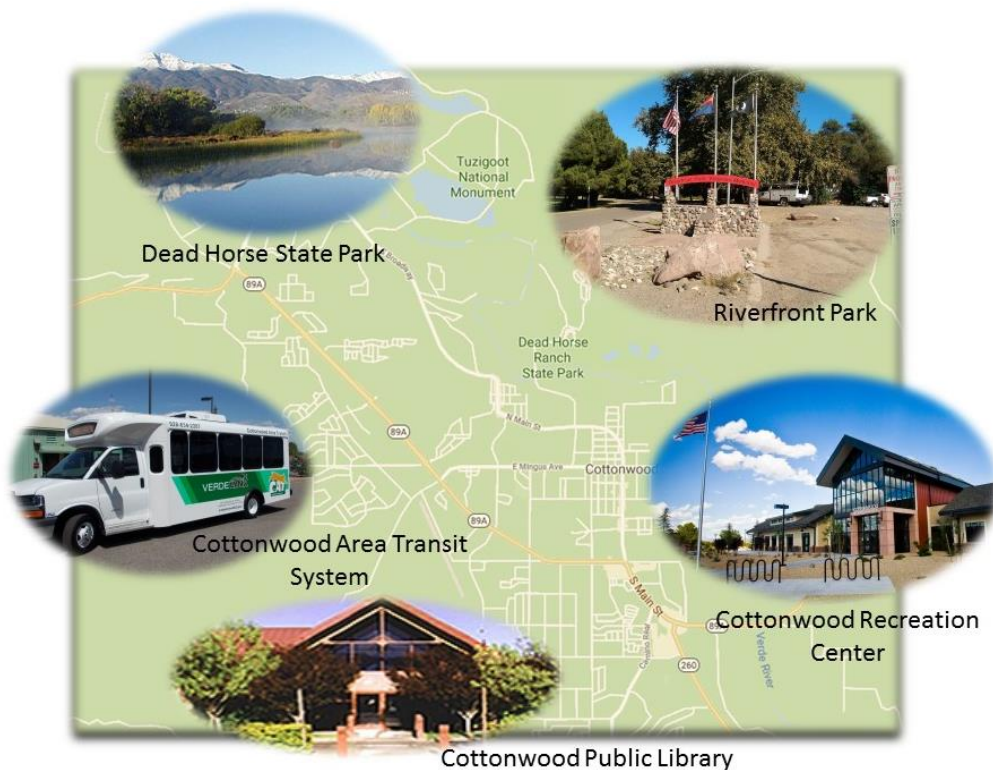


FIGURE 11: ILLUSTRATES DIFFERENT SURVEY LOCATIONS CONDUCTED AROUND THE CITY OF COTTONWOOD. LOCATIONS INCLUDED: DEAD HORSE STATE PARK, RIVERFRONT PARK (DOG PARK, CHILDREN'S PARK, SOFTBALL LEAGUE NIGHT, DISC GOLF AND SKATE PARK), COTTONWOOD AREA TRANSIT SYSTEM, COTTONWOOD RECREATION CENTER, COTTONWOOD PUBLIC LIBRARY, COTTONWOOD SENIOR CENTER, GARRISON PARK

To expand community outreach, a hard copy of the survey was included in the Cottonwood water utility bill reaching all residents on Cottonwood water. An electronic version link was distributed on [www.surveymonkey.com](http://www.surveymonkey.com) via social media and email. Lastly, a Public Service Announcement was printed in both local newspapers.

A total of 374 surveys were completed and returned. Of the surveys completed, 69% were completed by residents 55 or older. According to the Census Bureau, in 2016 the estimated population of residents 55 or older bracket was 40%. Of the survey respondents, 286 were Cottonwood or Verde Village residents and an additional 60 were from the Verde Valley including: Jerome, Clarkdale, Cornville, Camp Verde, Lake Montezuma, and Sedona.

**Cottonwood Riverfront Trails and Recreation Master Plan  
Health Impact Assessment Survey**

This survey may also be found online at  
<https://www.surveymonkey.com/r/CottonwoodRiverfront>

1.) How often do you use riverfront trails and/or Riverfront Park and/or adjacent fields and/or recreation facilities?

A.  One or more times per week      B.  Once a month      C.  A few times per year  
D.  It has been over a year since I have used Riverfront Park trails and recreation facilities  
E.  I have never been to Riverfront Park trails or Riverfront recreation facilities

If you answered A, B, C or D for Question 1, please continue onto question 2. If you answered E, please go to question 5.

2.) Which Riverfront facilities have you utilized in the last year? (Check all that apply)

Trails       Playground       Disc golf course       Skate park  
 Ball fields       Open spaces       Social gathering       Hang gliding/landing zone  
 Ramadas       Volleyball courts       Community garden       Horse shoe pits  
 Dog park       Access to the Verde River for kayaking, fishing, swimming, etc.  
 Other \_\_\_\_\_

3.) Do you agree or disagree with the following statement: After I use the facilities within Riverfront Recreation Area I notice an improvement in the way I feel physically.

Strongly Agree     Agree     Undecided     Disagree     Strongly Disagree

4.) Do you agree or disagree with the following statement: After I use facilities within the Riverfront Recreation Area I experience an improvement to my mental well-being including effects on my stress level, mood, depression, and/or anxiety?

Strongly Agree     Agree     Undecided     Disagree     Strongly Disagree

5.) Can you identify a reason or reasons why you have not used Riverfront Park facilities? (check all that apply)

Unaware they existed     Transportation     Previous unpleasant experience  
 Busy/ No time     Physically unable or limited     Not sure  
 Other \_\_\_\_\_

6.) If you could make one improvement to the Riverfront Recreation/Trails area to better meet your needs, what would you expand or add?  
\_\_\_\_\_

7.) Through a grant, the City of Cottonwood funded a master plan for the Riverfront Trails and Recreation area. The completed plan suggested: expanded trail access, parking, signage, and connectivity of the existing trails to and around the Riverfront trails. Would you support the implementation of this plan?

Strongly Support     Support     Undecided     Oppose     Strongly Oppose

8.) Why would you support or oppose the implementation of the Riverfront Trails and Recreation Master Plan? (check all that apply)

Increase access to recreation     Good for the community     Improve physical health  
 Improve mental health     Potential economic benefit     I need to know more  
 Not a good use of funds     I would not use it anyway     Not a high priority  
 Preservation of open-space for wildlife  
 Other: \_\_\_\_\_

9. Would you support a tax or tax increase to support these expanded recreation opportunities?

Strongly Support     Support     Undecided     Oppose     Strongly Oppose

10. How do you perceive your overall health?

Excellent     Good     Average     Below Average     Poor

11. What is your age?

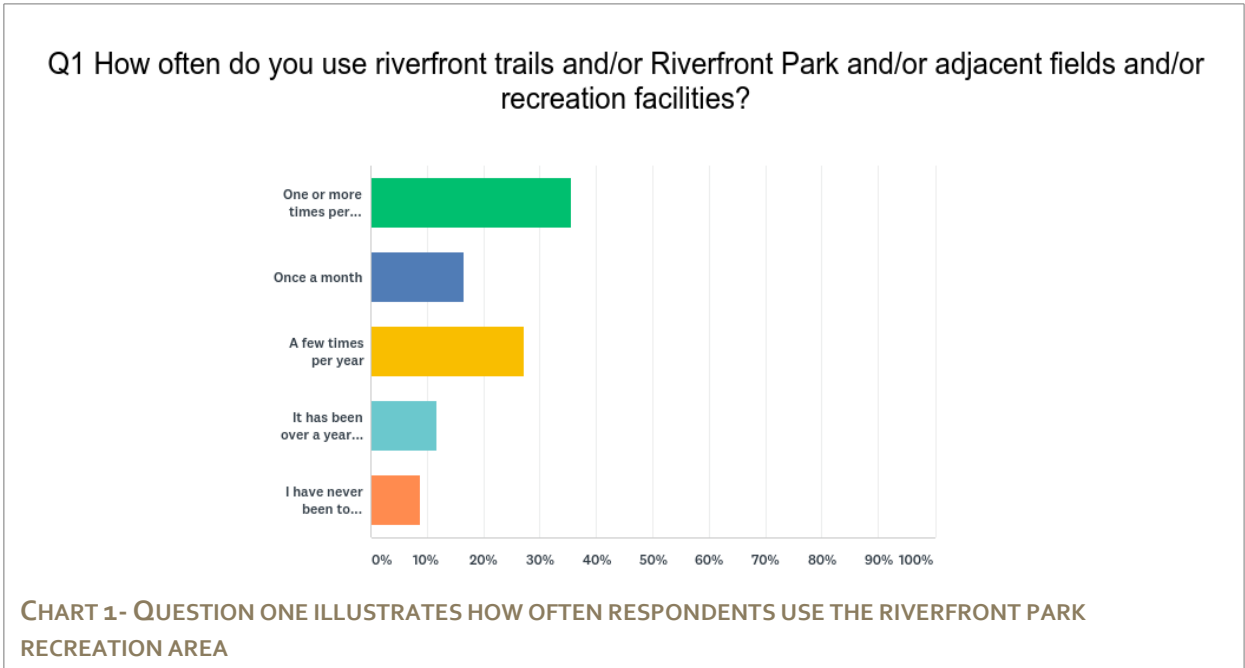
17 or younger     18 to 24     25 to 34     35 to 44  
 45 to 54     55 to 64     65 to 74     75 or older

12. What is your residential zip code? \_\_\_\_\_

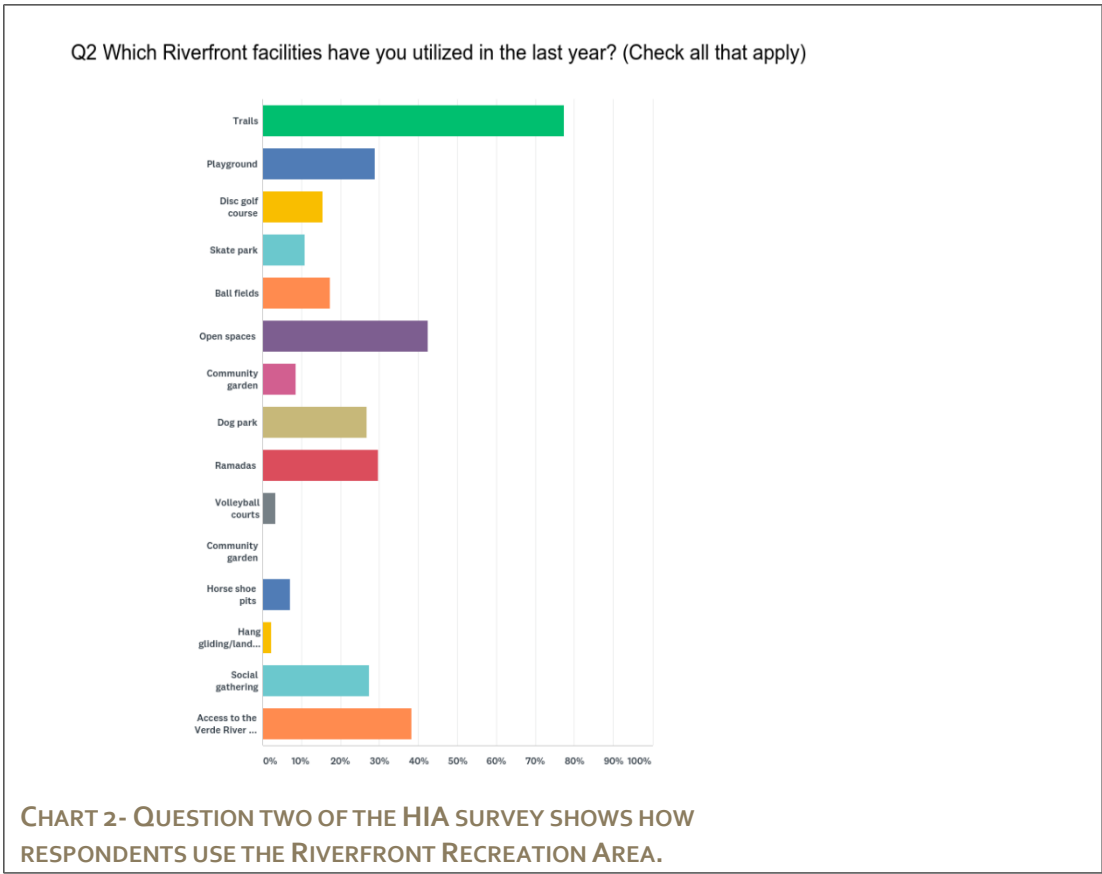
13. Is there anything you would like to share about the Riverfront trails and recreation facilities in regards to the impact on your physical health and mental well-being?  
\_\_\_\_\_  
\_\_\_\_\_

**FIGURE 12- ILLUSTRATES THE HARD COPY OF THE ASSESSMENT USED FOR THE HIA PROCESS.**

Data from the survey has been compiled and results are provided as follows:



Question one results show often respondents use the Riverfront Park Area. The data shows that all groups are represented in the survey results.



Question two results show that many respondents use the Riverfront area for 1. Trails, 2. Open spaces and 3. Access to the Verde River.

**Q3: Do you agree or disagree with the following statement: After I use the facilities within Riverfront Recreation Area I notice an improvement in the way I feel physically.**

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	TOTAL	WEIGHTED AVERAGE
Respondents	37.54%	49.83%	9.90%	2.05%	0.68%	293	4.22
	110	146	29	6	2		

**TABLE 1- QUESTION THREE OF THE HIA SURVEY SHOWS HOW RESPONDENTS FEEL PHYSICALLY AFTER USING THE RIVERFRONT RECREATION AREA.**

Question three results indicate that 87.37% feel an improvement in the way they feel physically after using the Riverfront Recreation Area.

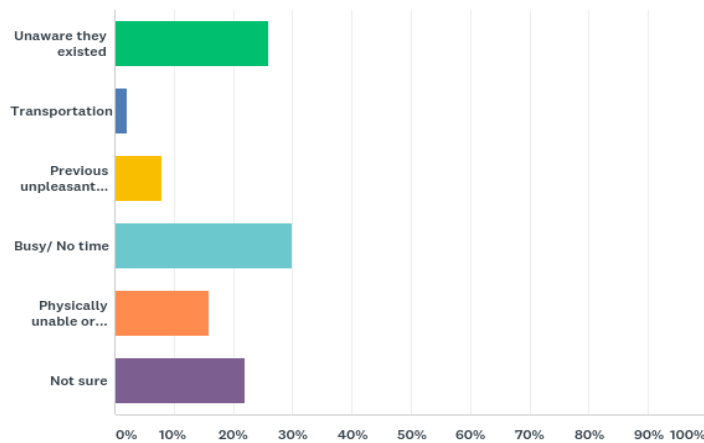
**Q4: Do you agree or disagree with the following statement: After I use facilities within the Riverfront Recreation Area I experience an improvement to my mental well-being including effects on my stress level, mood, depression, and/or anxiety?**

	STRONGLY AGREE	AGREE	UNDECIDED	DISAGREE	STRONGLY DISAGREE	TOTAL	WEIGHTED AVERAGE
Respondents	41.92% 122	47.77% 139	7.22% 21	2.06% 6	1.03% 3	291	4.27

**TABLE 2- QUESTION FOUR OF THE HIA SURVEY SHOWS HOW RESPONDENTS FEEL MENTALLY AFTER USING THE RIVERFRONT RECREATION AREA.**

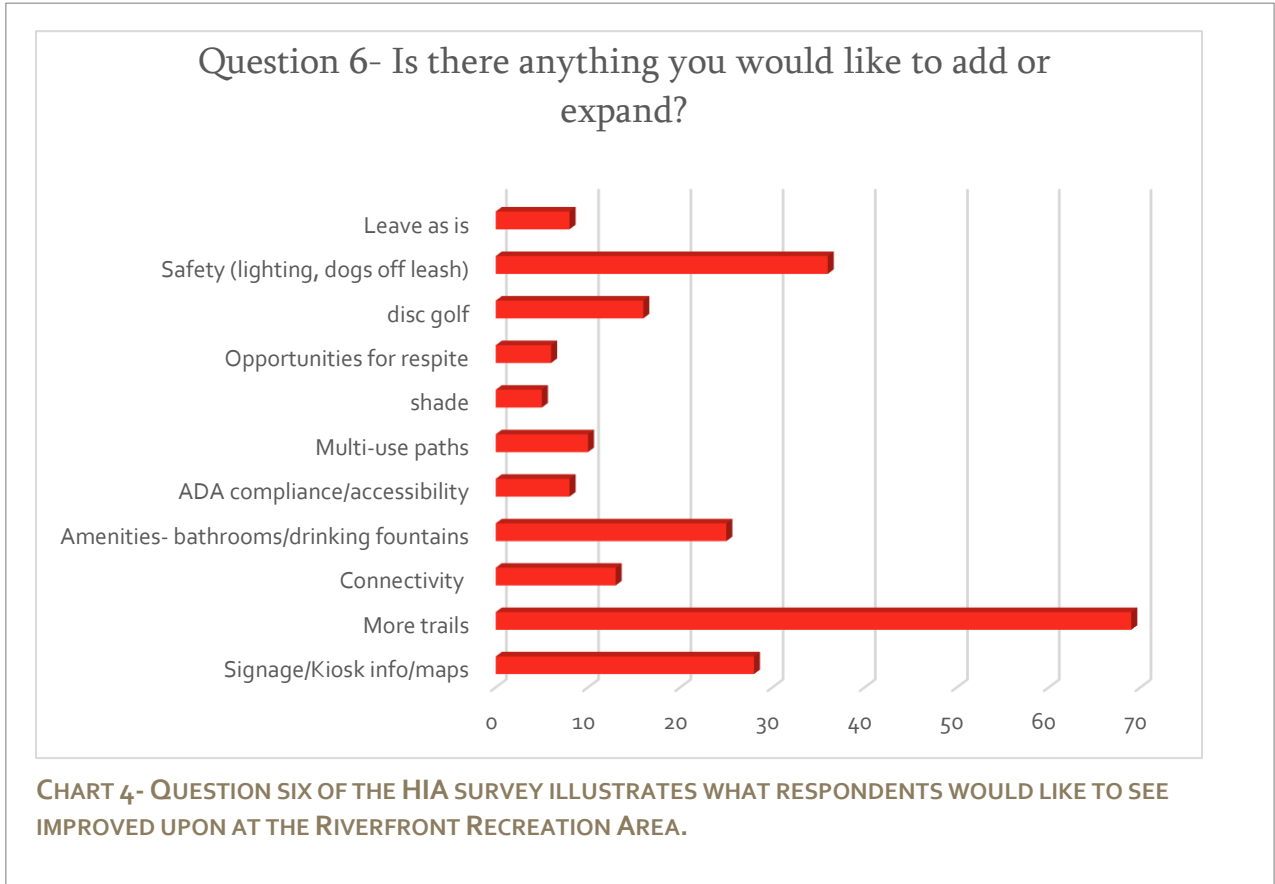
Question four results indicate that 89.69% of respondents feel an improvement in the way they feel mentally after using the Riverfront Recreation Area.

**Q5 Can you identify a reason or reasons why you have not used Riverfront Park facilities? (check all that apply)**



**CHART 3- QUESTION FIVE OF THE HIA SURVEY ILLUSTRATES WHY RESPONDENTS HAVE NOT USED THE RIVERFRONT RECREATION AREA.**

Question five addresses reasons Riverfront Park facilities are not used. The number one answer was 'busy/no time' at close to 30% followed by 'unaware they existed' around 26%.



Question six asked for improvements to the Riverfront Park Area. An overwhelming number of respondents said ‘more trails’ around 68% followed by ‘safety’ at approximately 35%.

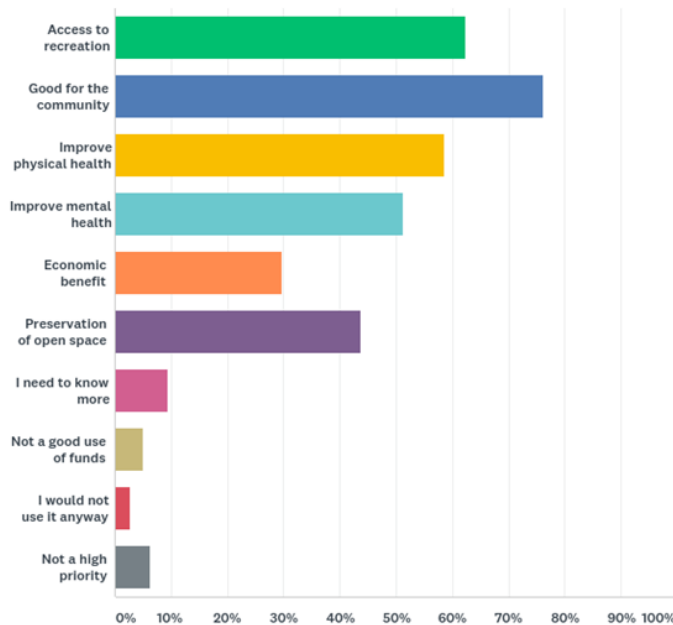
**Q7:** Through a grant, the City of Cottonwood funded a master plan for the Riverfront Trails and Recreation area. The completed plan suggested: expanded trail access, parking, signage, and connectivity of the existing trails to and around the Riverfront trails. Would you support the implementation of this plan?

	STRONGLY SUPPORT	SUPPORT	UNDECIDED	OPPOSE	STRONGLY OPPOSE	TOTAL	WEIGHTED AVERAGE
Respondents	47.49% 170	36.87% 132	10.61% 38	3.35% 12	1.68% 6	358	4.25

**TABLE 3: QUESTION SEVEN OF THE HIA SURVEY SHOWS RESPONDENTS SUPPORT OF THE IMPLEMENTATION OF THE CRTRMP PLAN.**

Question seven asked respondents of their support of the plan, 84.36% of respondents were in favor of implementing the CRTRMP.

**Q8 Why would you support or oppose the implementation of the Riverfront Trails and Recreation Master Plan? (Check all that apply)**



**CHART 5- QUESTION EIGHT OF THE HIA SURVEY SHOWS WHY RESPONDENTS WOULD OR WOULD NOT SUPPORT THE IMPLEMENTATION OF THE PLAN.**

Question eight asked respondents why they would support or oppose the plan. Most of the respondents support the implementation of the plan with the number one reason is it’s ‘good for the community’.

**Q9: Would you support a tax or tax increase to support these expanded recreation opportunities?**

	STRONGLY SUPPORT	SUPPORT	UNDECIDED	OPPOSE	STRONGLY OPPOSE	TOTAL	WEIGHTED AVERAGE
Respondents	11.61%	33.43%	24.93%	13.31%	16.71%	353	3.77
	41	118	88	47	59		

**TABLE 4- QUESTION NINE OF THE HIA SURVEY SHOWS SUPPORT OF THE PLAN OF RESPONDENTS FINANCIALLY.**

Question nine asked respondents whether they support or oppose a tax to expand recreation opportunities. Overall, 45.04% support a tax, 30.02% oppose a tax and 24.93% are undecided. The City of Cottonwood requested that this question be included in the survey.

**Q10: How do you perceive your overall health?**

	EXCELLENT	GOOD	AVERAGE	BELOW AVERAGE	POOR	TOTAL	WEIGHTED AVERAGE
Respondents	23.14% 81	55.14% 193	17.43% 61	3.43% 12	0.86% 3	350	3.96

**TABLE 5- QUESTION TEN OF THE HIA SURVEY ASKS RESPONDENTS OF THEIR OVERALL PERCEIVED HEALTH.**

Question ten asked respondents about how they perceive their overall health, over 78% of respondents reported good or excellent health.

Question thirteen was an open-ended question about additional comments on how the Riverfront trails and recreation facilities impact physical and mental well-being. The following are some responses:

- “The Riverfront Recreation Facility is good for both physical and mental well being for both me and my two dogs! Thank you!!”
- “Safe places to walk in the community are always a plus. Walking every day keeps you mentally alert and physically healthy.”
- “It has definitely helped my physical health. It keeps me active.”
- “Having access to 'mother nature' enhances one both spiritually, physically, and mentally”
- “Days that include physical activity in natural areas clearly enhance the quality of life for my spouse and me.”
- “This beautiful area, along with the adjacent state park, is a key element in keeping me physically fit and mentally healthy.”
- “I wish I had known earlier in life that physical activity was so, so, so important to good physical and mental health later in life as one ages.”
- “Riverfront park trails are poorly marked. I think I would go more often if I knew where to go and that would be good for my mental and physical health!”
- “The disc golf course has helped immensely with my physical and mental health”
- “The disc golf course has given me opportunity to be able to do physical exercise and also enjoy the beauty of the outdoors”
- “Having access to recreational areas is essential to one's individual mental and physical health, as well as the health of the community.”
- “Anything to support the facilities. Is in her 90s and uses the Rec center to stay healthy. Didn't know about Riverfront area facilities at all.”
- “Open access makes me feel serene and healthy. A nice release. It's amazing to see animals and birds on the 2 and a half mile course.”
- “My 68-year-old father plays disc golf 4 times a week and I attribute his good health and positive mental state directly to it. It is a great outlet for the community.”
- “Getting outdoors is beneficial for good health, fresh air, body movement and to be or not to be social. “Gets you out to nature to the river and birding areas. I thank the Parks & Rec Dept. for ALL they provide for ALL of us and more. Happy Camper :)”
- “A walk near water is absolutely good for my health with an obvious mental health bonus.”
- “This beautiful area, along with the adjacent state park, is a key element in keeping me physically fit and mentally healthy.”

“I commend what has been done so far with improvements to the area around the river, but more can be done. We are growing as a city, as a state, and we need more opportunities to enjoy being outside in this wonderful climate. Children need increased access to the outdoors for a healthy community.”

“We are fortunate to live in an area with beautiful surroundings and a moderate, year-round climate- translate to more outdoor time and a healthy lifestyle. Focus on developing un-intrusive avenues for the community to enjoy their resources and stop inviting and saying 'yes' to these large housing developments which are destroying much of the now-open area and adding more people to destroy the natural beauty.”

“In most of the times I've spent there, I've been with friends. I have happy memories of being together with them. I also enjoy seeing families interact there. It's a healthy, positive place.”

“Mental well-being declines when you have to hike quickly away from homeless people sleeping in sleeping bags along the jail trail..”

Chart six illustrates a correlation between respondent’s perception of health and respondent’s use of the Riverfront Recreation Area. The higher the respondent’s overall perceived health, the more they use the Riverfront Recreation Area.

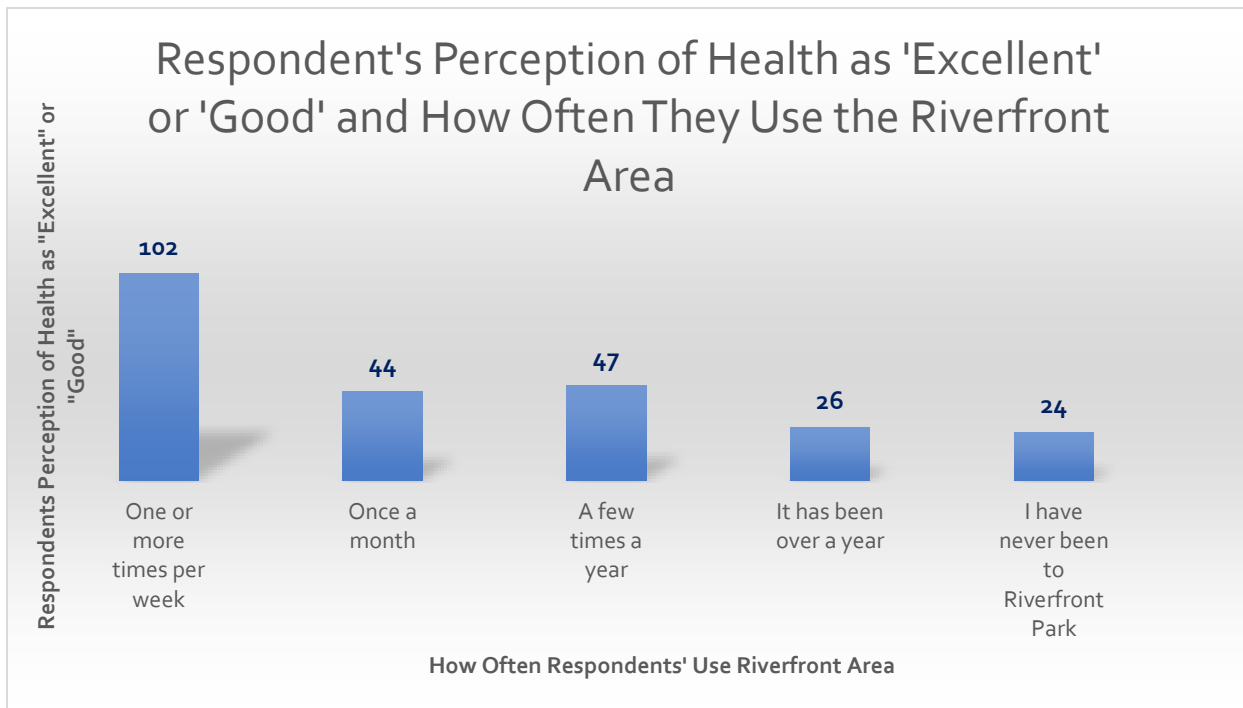


CHART 6- RESPONDENT’S PERCEPTION OF HEALTH AS ‘EXCELLENT’ OR ‘GOOD’ AND HOW OFTEN THEY USE THE RIVERFRONT AREA.

Chart seven illustrates respondents who do not use the Riverfront Area but still support the plan and for what reasons they support the plan.

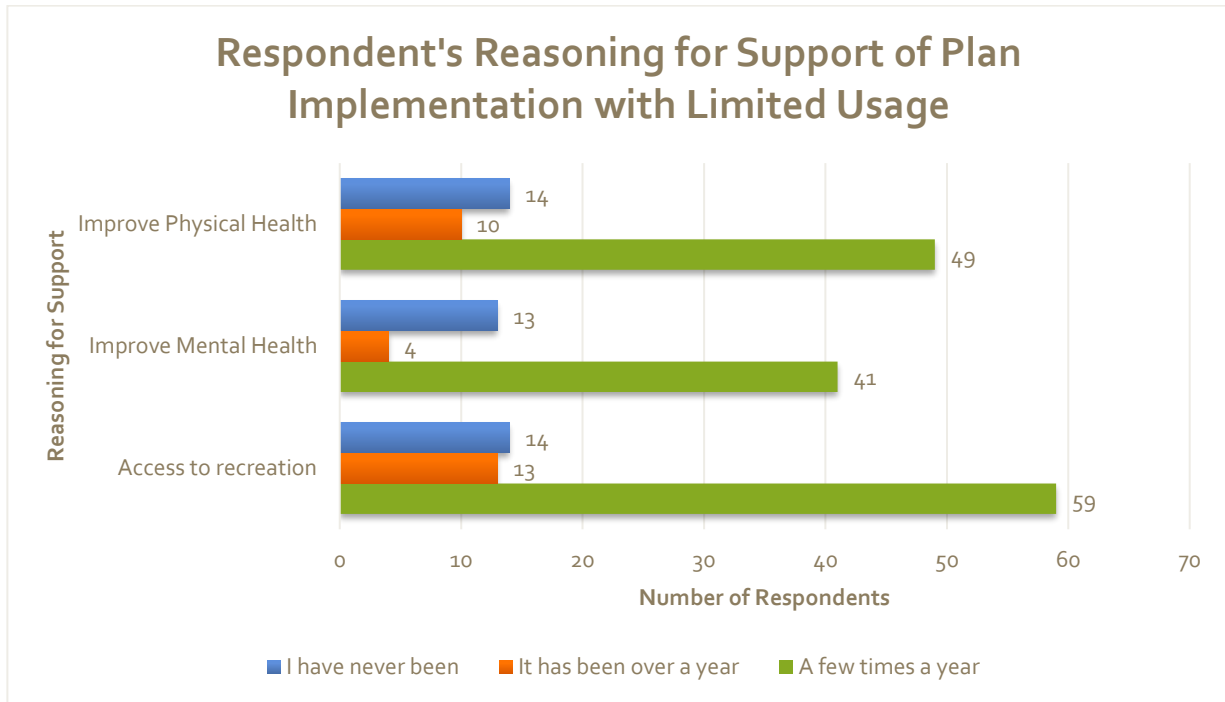


CHART 7- SHOWS RESPONDENT’S REASONING FOR SUPPORT OF PLAN IMPLEMENTATION WITH LIMITED USAGE.

Chart eight illustrates those who use the Riverfront Area are more supportive of implementation of the Riverfront Plan. It also shows that those who do not use the area are still in support of plan implementation over 50%.

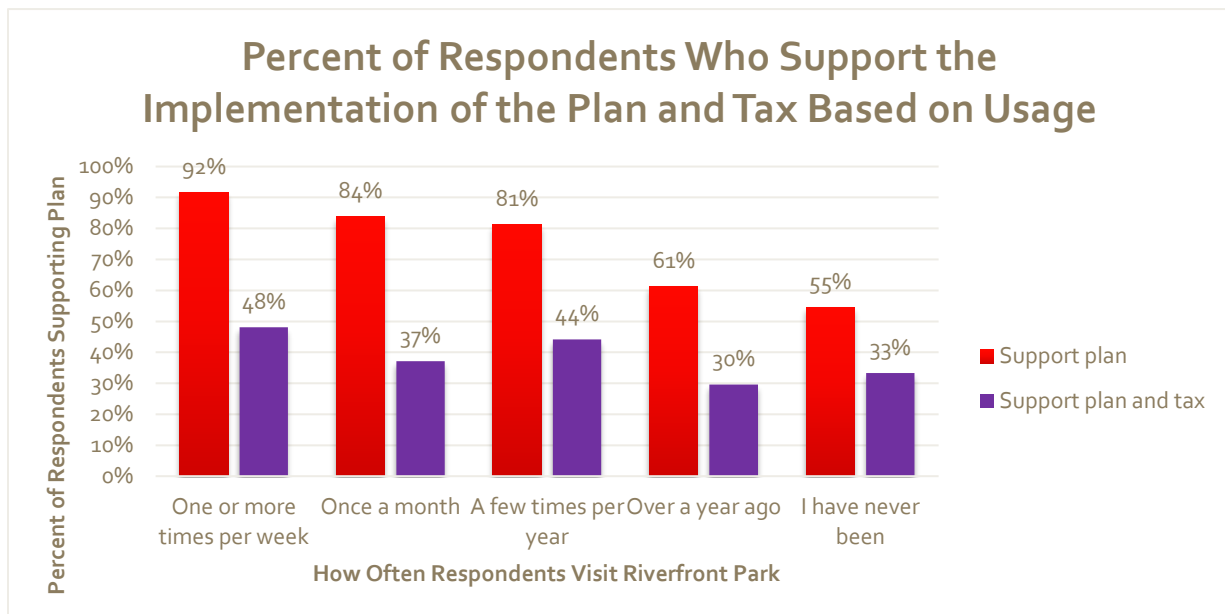


CHART 8- PERCENT OF RESPONDENTS WHO SUPPORT PLAN IMPLEMENTATION AND AN ADDITIONAL TAX BASED ON USAGE.

## Riverfront Project Update

Whilst the data collection, analysis and reporting for the HIA were taking place, the city of Cottonwood was proceeding with implementation of the CRTRMP. On June 13, 2018 the HIA team met with Cottonwood Parks and Recreation staff to discuss the latest updates on their progress. The following is a list of key updates-

- The project budget received a total of \$107,000 from Arizona State Parks, the Cottonwood Economic Development Council (CEDC) and the City of Cottonwood for implementation funds.
- The Parks and Recreation Department had established a trails committee as an off-shoot from their Parks and Recreation Commission.
- On June 2, 2018 a team of REI volunteers cut in a trail near a section of the irrigation ditch path. They also installed interpretative kiosks along the Jail Trail.
- Key improvements are slated for installation in Spring 2019 including a rough pavement trail along the Verde River irrigation ditch, and the building of the 5<sup>th</sup> street connection.

Areas of priority based on funding were identified as:

1. Significant signage at the entrance of the Riverfront Park complex at 10<sup>th</sup> and Main Street.
  2. Ramadas with solar lighting
  3. A trail head at 4<sup>th</sup> and Pinal Streets
  4. Trail work/maintenance
  5. Examining the feasibility of easement trails
-

## Recommendations

Given the feedback obtained and assessed through the HIA process it would be the recommendation of the HIA team to re-prioritize the recommendations of the CRTRMP to address the most significant and most surmountable barriers to usage of the Riverfront park facilities before significant investment begins.

*Priority 1:* Utilize low-cost, low-hanging fruit to bring awareness to the park facilities. A social media campaign or radio broadcast could introduce community members to the Riverfront Park who are currently unaware of the recreational opportunities. Consistent naming and branding of the park would also be an important aspect of this outreach.

*Priority 2:* Secure funding for trails development. While surveys showed strong support for a tax to fund the implementation of the CRTRMP, it is possible that a tax or fee is not necessary if grant opportunities are explored and matching funds are considered within the city budget.

*Priority 3:* Many survey respondents indicated that safety concerns and lack of enforcement of existing laws and codes limited their usage of Riverfront Park Facilities regardless of their current usage. Therefore, dog leash ordinance enforcement and increased police presence could help in this regard. Lighting in parking areas and trailheads should also be prioritized.

*Priority 4:* Respondents shared that signage of existing trails and/or facilities was lacking. Signage on trails and the entrance to Riverfront Park at 10<sup>th</sup> street should be prioritized.

*Priority 5:* Trail expansion and connectivity was a prevailing improvement that respondents desired. Therefore, establishing connections to develop a network of trails would increase access, usage and the health of residents. The phasing schedule as laid out in CRTRMP would be a logical and appropriate approach to the trail network. Please refer to Figure 9 for information regarding this priority.

*Priority 6:* Develop a comprehensive citywide Parks and Recreation Master Plan including a baseline health assessment of the community.

*Priority 7:* The Cottonwood City Council should consider a Health in All Policies resolution or ordinance to inform projects and programs in the future. “A Health in All Policies requires that decision-making bodies and their staff consider health, alongside other important factors such as fiscal or environmental impact, when making decisions that affect the community. This approach acknowledges that the social determinants of health — those conditions in the environments in which people are born, live, learn, work, play, and age – have a profound effect on how healthy we will be over the course of our lives (ChangeLab Solutions, 2015, p. 1).”

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## Reporting

The reporting step is how the information of the HIA is presented to stakeholders. This written report serves as one mode of presentation to involved parties. The reporting section demonstrates documentation of HIA steps, data collected and analyzed and supporting pieces of previous research.

As of the writing of this document, it is the intention of the HIA team to distribute the final report directly to the following organizations: City of Cottonwood Parks and Recreation Staff, City of Cottonwood Mayor and Council, Yavapai County Community Health Improvement Plan (CHIP), Spectrum Healthcare, Dead Horse Ranch State Park Management, the Verde Front, and the Verde Valley Senior Center staff.

A major change in the lead HIA staff has delayed/altered plans for our in-person presentations. It is the intention of the remaining HIA team to present the report's findings to the City of Cottonwood Parks and Recreation Commission, the Cottonwood City Council, the Verde Front Recreation Committee and any other community partner who may request.

## Monitoring/Evaluation

Evaluation is an important and critical step in the HIA process but it is often overlooked or not considered. It is essential to determine if the HIA influenced the community and the decision makers. There are three steps in the monitoring and evaluations phases: evaluation of the process, evaluation of the recommendations, and evaluation of the implementation.

### Evaluation of the Process

The purpose of this step is to determine what worked and what did not work throughout the HIA process. The purpose of this is to inform future HIA's of what could be improved upon or lessons learned.

### Strengths

A major strength in the process of formulating this HIA was the community survey. Including the stakeholders and their input helped to develop a comprehensive yet approachable survey that the public (largely) appreciated.

### Challenges

The breadth of the HIA team was rather small. While we did have community support, the surveying, analyzation, and report writing mostly fell on two individuals. Staff changes also contributed in the delay of completing the project.

Communication with stakeholders was also challenging. Development of the plan was taking place without the knowledge of the HIA team.

### Lessons Learned

After completion of the Cottonwood Riverfront Trails and Recreation Master Plan HIA, the HIA team discussed the following lessons learned:

- Create a core working group team of ideally five members with shared responsibilities for completion of the project. Include at least one Spanish speaker.
- Consider a shorter, condensed version for the in-the-field survey.
- Time the finalization of the report very closely to the acquisition of data. We found that changes of circumstances, funding and opportunities within the city would change the outcome of our findings even six months after we collected surveys. It is important to share the most relevant data possible.

### Evaluation of Recommendations/Monitoring of Implementation

The HIA team will continue to have a presence with the Cottonwood Parks and Recreation Staff and Commission to monitor progress in the implementation of the CRTRMP.

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YCCHS is also committed to supporting efforts to conduct baseline health assessments for the community to evaluate health outcomes.

YCCHS will also conduct another countywide Community Health Assessment in the year 2021/2022. The information gathered can inform the impact of increased recreation access to improved health outcomes.

## Conclusion

Implementation of the Cottonwood Riverfront Trails and Recreation Master Plan with the revised priorities laid out in the Recommendations portion of this document, would increase usage of the Riverfront Park facilities and therefore increase opportunities for healthy behavior. The implementation of the CRTRMP would increase the overall mental and physical health of the community.

The recommendations made by the HIA team are meant to assist decision makers in the City of Cottonwood. The recommendations were specifically related to the health of the community. Some of the recommendations may not necessarily be feasible without consent of local government. Funding is the biggest obstacle when considering recommendations.

Improvement of the Riverfront Park area and implementation of the CRTRMP would improve the health of the community. The recommendations support implantation of this plan.

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