

Rural Community Food and Physical Activity Environment

Rainier Audit Results Maps 2013-2016



The information contained in this report can be used to drive decisions about land use and siting for new resources, to secure funding to improve the community food system, parks and recreation resources, and transportation planning. It can also be used by community members to seek out locally available and affordable, healthy food and physical activity options.

This report was generated by Liana Harden and Jenny Rudolph, (Columbia County Extension Family and Community Health), in partnership with the GROW HKC project campus team: Winfield, T., John, D., and Gunter, K.

GROW Healthy Kids & Communities Background Information

GROW HKC partners with rural people, organizations, and communities to generate local options to support weight healthy lifestyles – healthy eating and physical activity every day - for all children and families.

GROW engages people in the communities we serve in assessing the conditions that most affect them where they live, learn, work and play. We do this to identify what changes will best support weight healthy behaviors for children and families and improve food and physical activity resources in the community.

HEAL MAPPS, one of the GROW programs, helped residents to tell their story of life in the community, their personal experiences or encounters with food and physical activity resources as either supporting or hindering weight healthy choices and habits.

People's lived experiences are very important for understanding how and why healthy habits develop.

In order to have the most complete picture of the food and physical activity environment, we need to know about all of the available resources: who makes food and physical activity available, what types of food and physical activity are available, where are they located, and is there a cost?

The Rural Community Food and Physical Activity Environment Audit is a participatory survey of all of the food and physical activity resources in the community. The auditors use camera-enabled GPS units and photomapping methods to document and survey resource availability and location. These surveys were done twice: first in 2013 and then again in 2016.

OSU faculty integrate community data with other geographic information systems (GIS) data to provide a visual report of the relationship between the location and types of food and physical activity assets and where most people live in the community.

GPS-Assisted Observational Survey Tool

GROW HKC

Community Food Environment Audit

Please use the provided Garmin (GPS) unit, in conjunction with this survey, to map, photograph, and log information about all the food environment and resources in your community. If you do not have access to a Garmin unit, you may use any other GPS mapping device, such as a QStarz or GPS app on your smartphone, along with a camera. For each photograph that you take, please take care not to include people in your photographs.

Specifically, you will map, photograph and log information about all possible food resources in your community. Once you complete the audit of your sector, please check off all of the food resource categories that you encountered in your sector.

- A. Grocery Stores
- B. Convenience Stores
- C. Roadside or Dockside Retailers
- D. Restaurants
- E. Vending Machines (in public spaces)
- F. Food Banks and Food Pantries
 - Food Assistance Programs, including:
 - G. Meals on Wheels
 - H. Gleaners
 - I. Free Meal Sites
 - J. Summer Meal Service Programs
- K. Farm Stands / U-Pick Operations
- L. Farmers Markets
- M. Community Gardens
- N. Hunting, Fishing and Foraging Supports
- O. Home-Based Food Retailers
- P. Other Community Food Resources

A. Grocery Stores

Name of Store: _____

A *grocery store* is a retailer where people buy most of their food for meals and snacks.

Photographs and Logs: Please photograph and log (with the Garmin unit) each grocery store you come across in your sector.

Take a photo of the front of the grocery store. Take a single photo, if you can capture the entire store and the sign with the store's name in a single shot. If you need to take more than one photo to capture the entire store and the sign, take the shot looking straight ahead, and as needed, 1-2 shot(s) looking to the left and to the right. Record your photo code(s), below.

- looking straight ahead DSC _____ .JPG
- looking to the left (as needed) DSC _____ .JPG
- looking to the right (as needed) DSC _____ .JPG

Take additional photographs that describe the access to this store. Examples of photographs to take are listed below. For each feature that is present, please take no more than one photo.

- Bike rack at the store DSC _____ .JPG
- Bus stop adjacent to the store DSC _____ .JPG
- Parking at the store. Also, note the type of parking, below. DSC _____ .JPG
 - Streetside
 - Parking lot
- Handicapped parking spaces at the store DSC _____ .JPG
- Ramps / curb cuts that promote handicap accessibility DSC _____ .JPG
- Evidence of walking access to the store
 - Sidewalk leading to store DSC _____ .JPG
 - Crosswalks DSC _____ .JPG
- Sign or poster that states the store hours DSC _____ .JPG
- Sign or poster that states that the store takes SNAP, EBT or Oregon Trail DSC _____ .JPG
- Sign or poster that states that the retailer is a WIC-authorized vendor DSC _____ .JPG
- Other access feature (Describe: _____) DSC _____ .JPG

Food Retailer Description: Please categorize this food retailer, by answering the questions below to the best of your knowledge.

Is a membership required to shop in this store (e.g., Bi-Mart, Costco, Sam's Club)?
 Yes No I don't know

Can you purchase products in bulk in this store?

Community Audit activities yield rich attribute data that can be associated with resource photos and tracks. Community members collect this information while mapping by using a survey that integrates two research-based measures: the rural active living assessment and the community food security assessment. OSU researchers included additional items known to be influential in the rural food and physical activity systems, such as hunting, fishing, and foraging supports.

Rurality and Weight Health

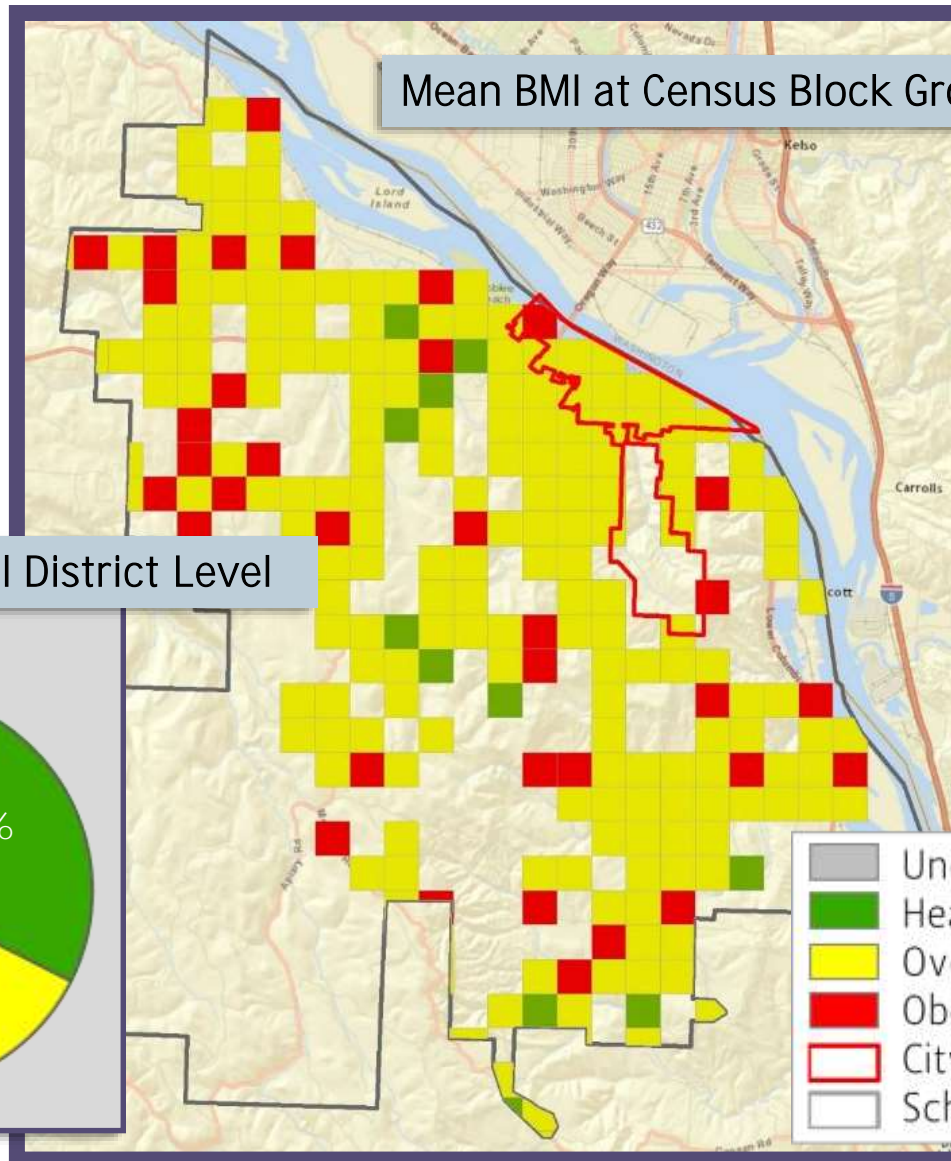


Many risk factors have been associated with childhood obesity, including rural residency

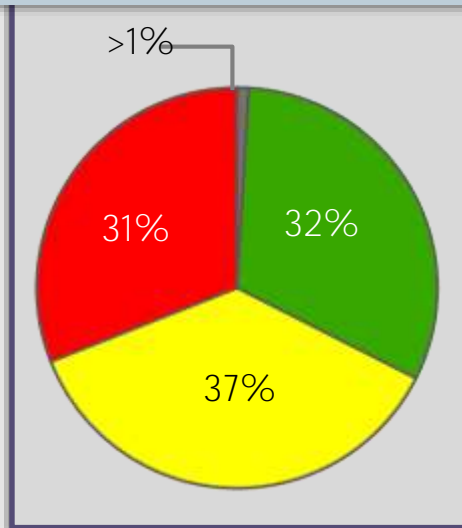
- Overweight/obesity prevalence is higher among children living in rural (36%) compared to urban (30%) areas
- Weight health and habits carry over into adulthood
- Rural communities face unique environmental challenges that can impact residents' healthy eating and physical activity lifestyle patterns
- Environmental strategies found to prevent obesity have focused on more urban areas

Rainier Community - Adult Weight Health (BMI)

Visualizing weight health in Rainier was enabled by the *Oregon Environmental Public Health Tracking Program



Mean % BMI at School District Level



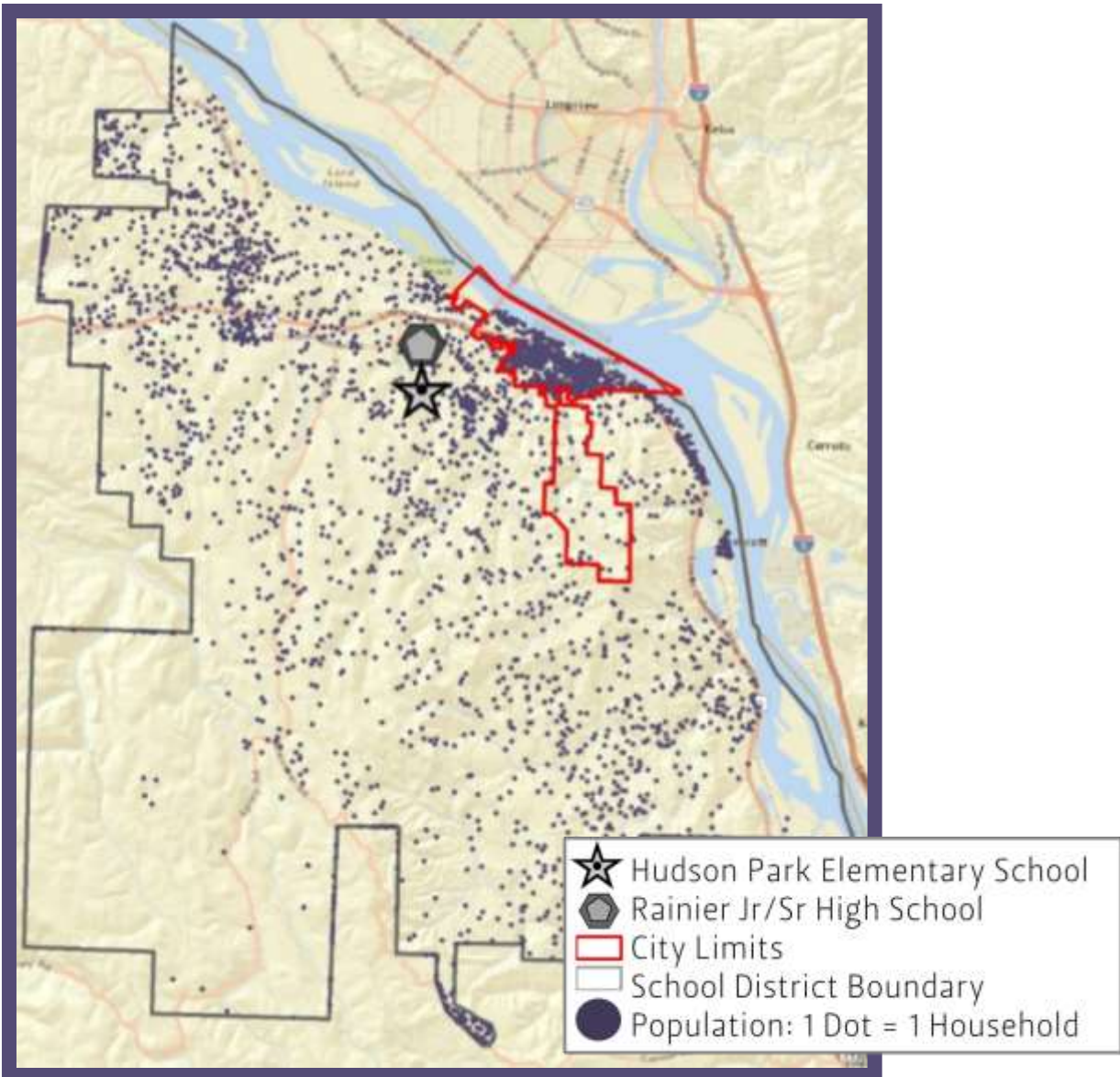
*2014 DMV records used to calculate BMI reliably illustrate the BMI distribution despite underestimation

Where People Live Matters for Easy Access to Resources

Community Boundaries Include the Approximate School District Catchment Area (“School District Boundary”) for Two Schools and Rainier City Limits

Within the School District Boundary, Rainier has 8227 people living in 3524 households (2010 census) spatially dispersed in an area of about 250 sq. mi.

Easy access to locally available resources is determined by proximity, transportation mode, ability to drive, cost & household income, etc., which will vary among families.

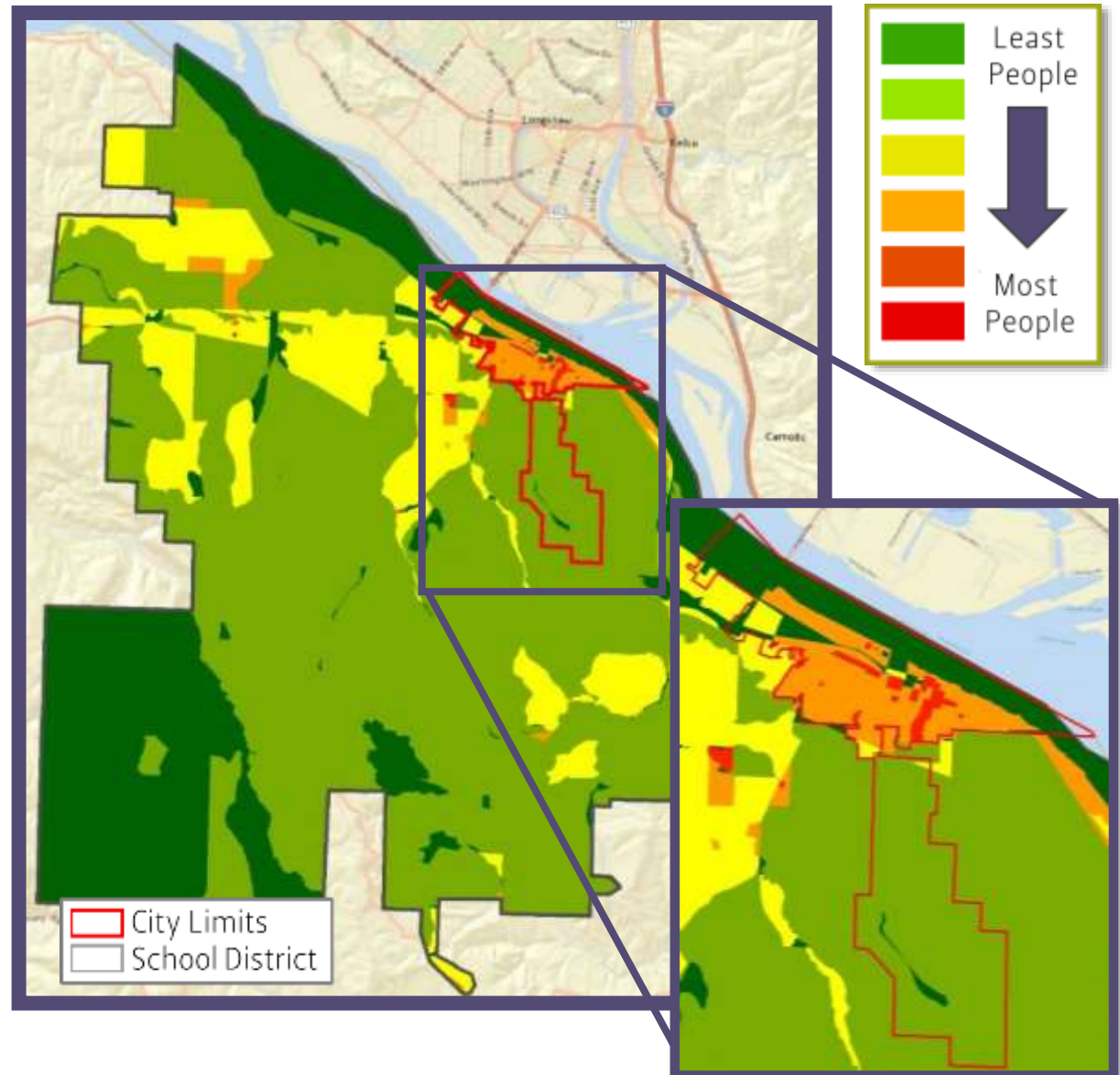


Using Maps to Show Where Most People Live...

Within audit boundaries, we calculated statistically significant clusters of population based on population density.

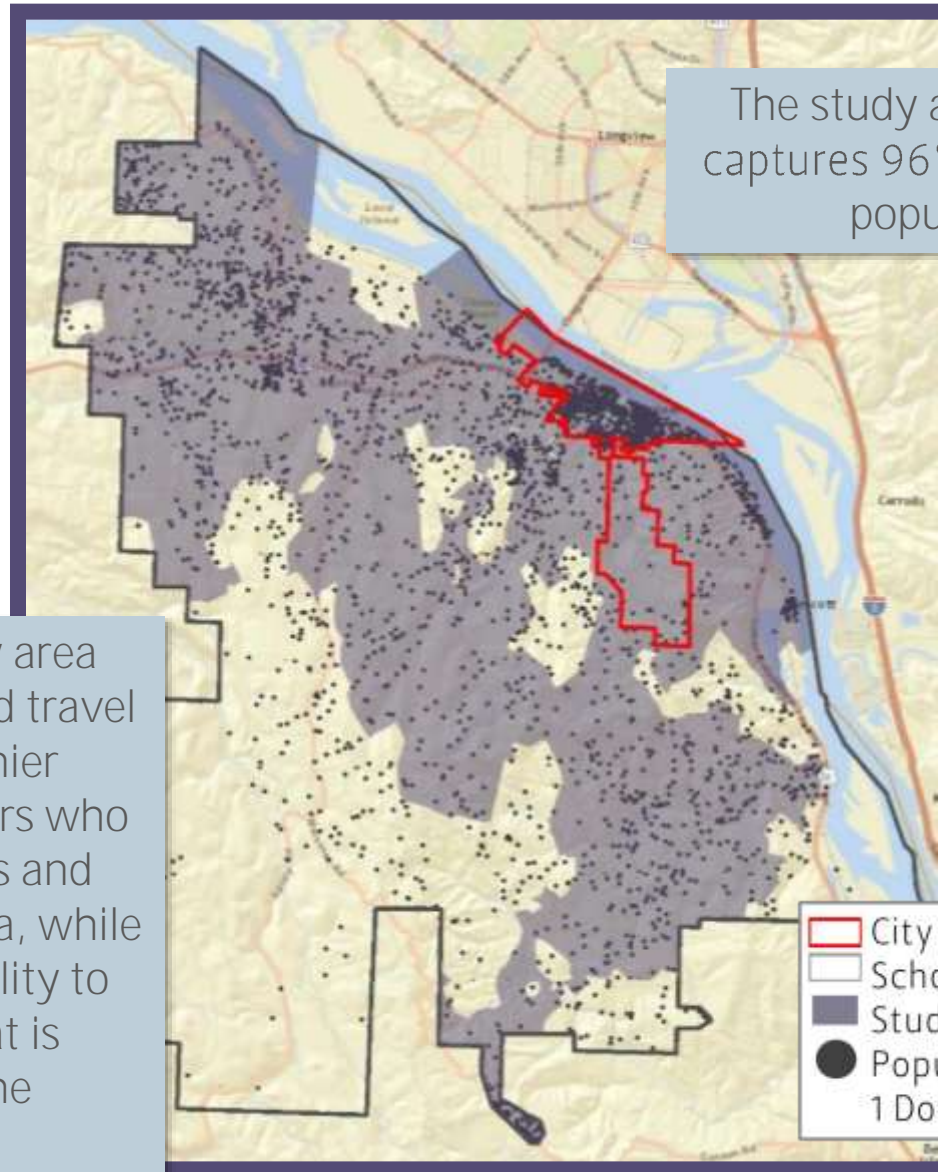
The geographic centers of these clusters were used to create network buffers, ranging in size from 2 to 5 miles, that captured 85% or more of the community population.

The yellow to red areas are the most highly populated; Rainier is sparsely populated (greens) throughout much of the boundary area.



Using Maps to Show Where Most People Live: Study Area

A “study area” was defined using the areas most densely populated, in order to determine the food and physical activity resources relevant to where most people live.



The study area (purple) captures 96% of Rainier's population

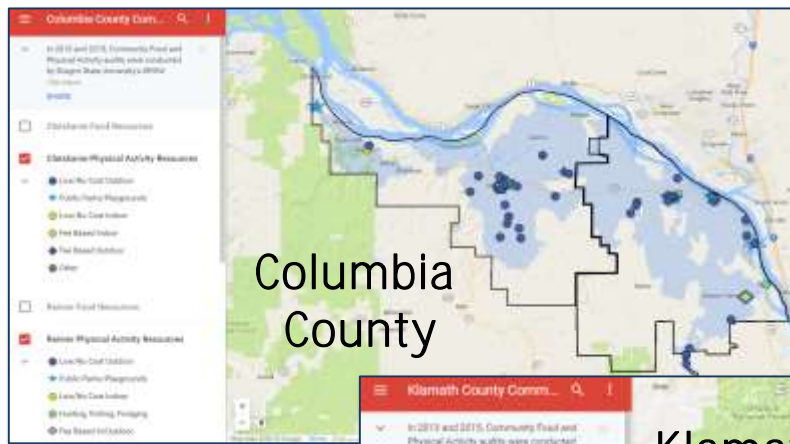
Defining the study area helped limit time and travel distance for Rainier community members who mapped resources and collected survey data, while not limiting the ability to capture data that is important to the community.

Resource Maps

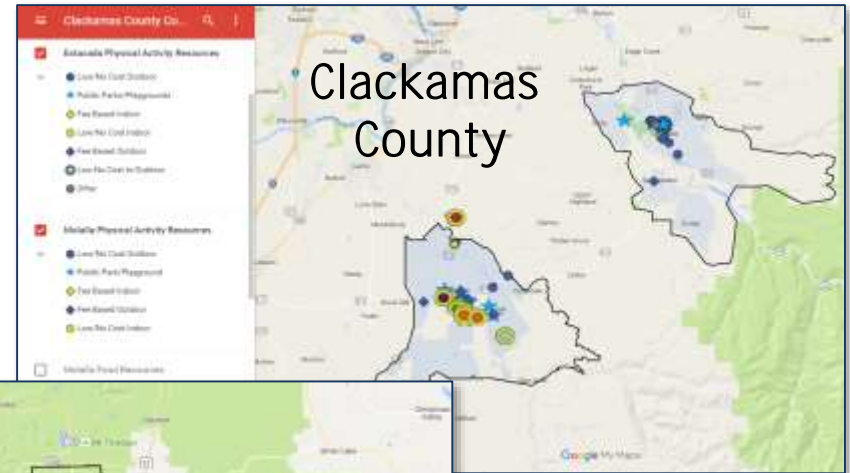
We collected information on resources in each community in 2014 and again in 2016 to assess any changes in resource availability and accessibility in our communities.

We created publicly available resource maps for each community and offer them in this report as well as online via google maps. These can be found by visiting the community maps section of the GROW HKC project website:

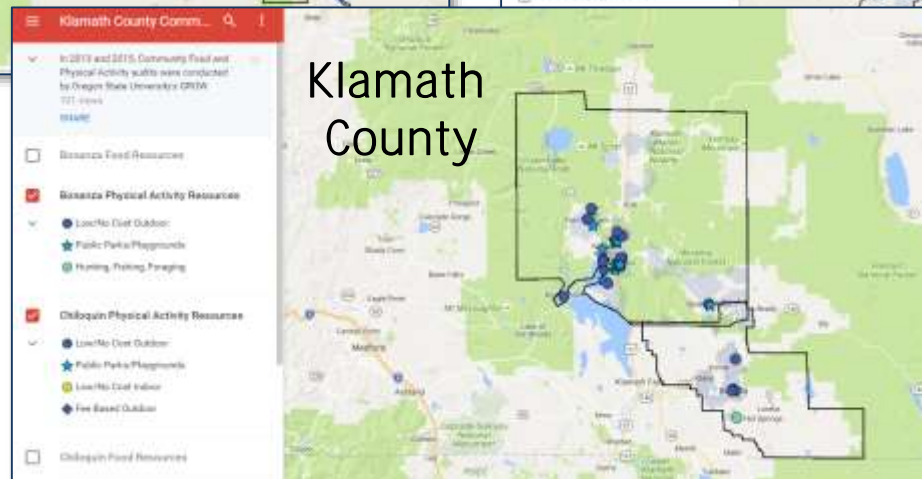
<http://extension.oregonstate.edu/growthkc/outputs/maps>



Columbia County



Clackamas County



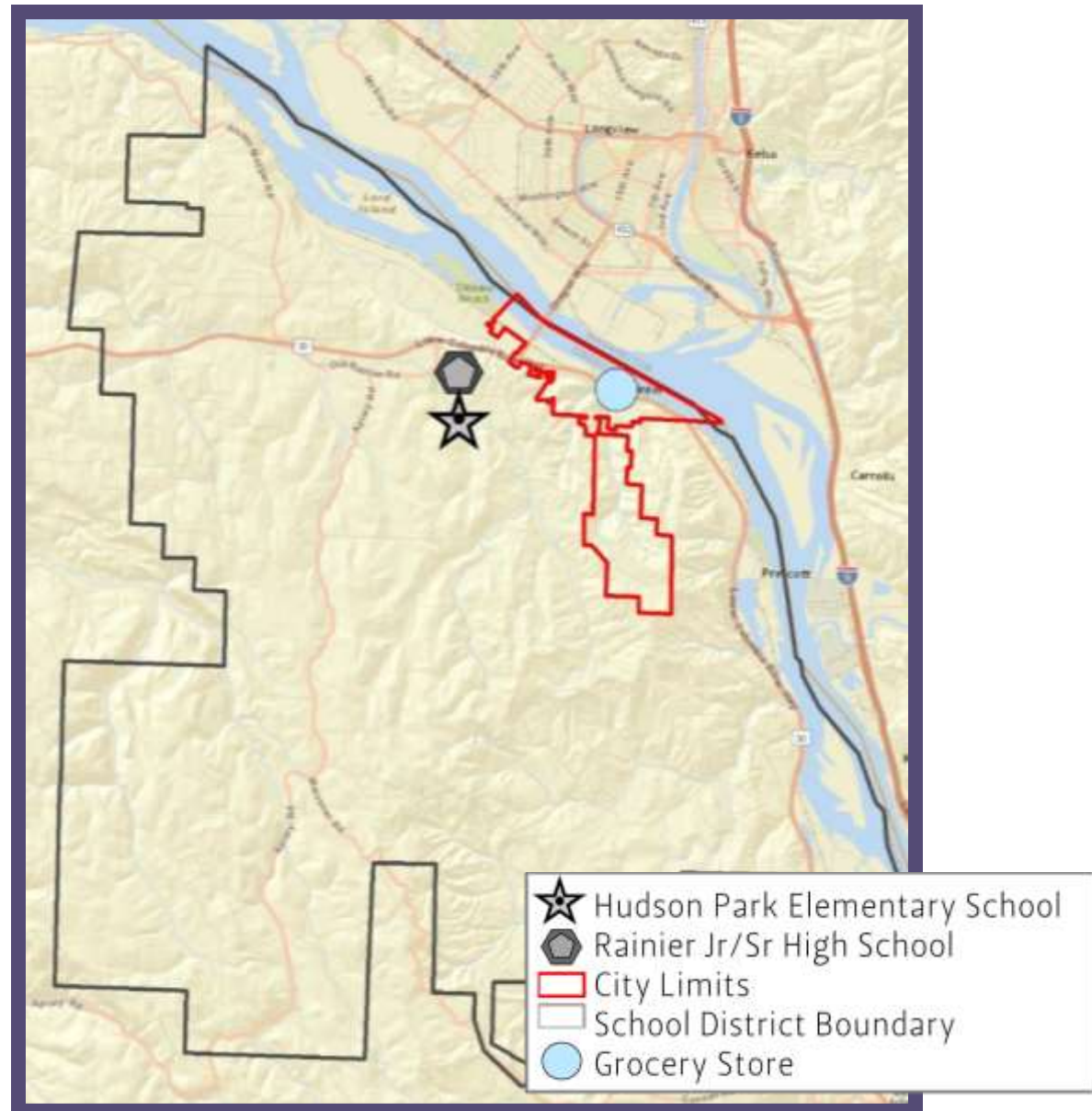
Klamath County

Grocery Store Locations

Rainier has a small bargain outlet style grocery store in town. However, it is still considered a food desert.

According to the Healthy Food Financing Initiative, a food desert is an area where a larger proportion of people have low or no access to a supermarket or grocery store.

Based on a measure of availability of healthy food options, the “Modified Retail Food Environmental Index,” Rainier scored “0” on scale ranging from 0 (no access to healthy food) to 100 (only access to healthy food)



Resources for Groceries Shown by Location



The J&R Grocery Liquidator is a “bargain outlet” type store located within city limits and it is one of two SNAP retailers in Rainier.

SNAP, or the Supplemental Nutrition Assistance Program, is a federal program that offers nutrition assistance to income eligible families and individuals.

Limited access to affordable fresh produce is a barrier to healthy eating for people living in Rainier.

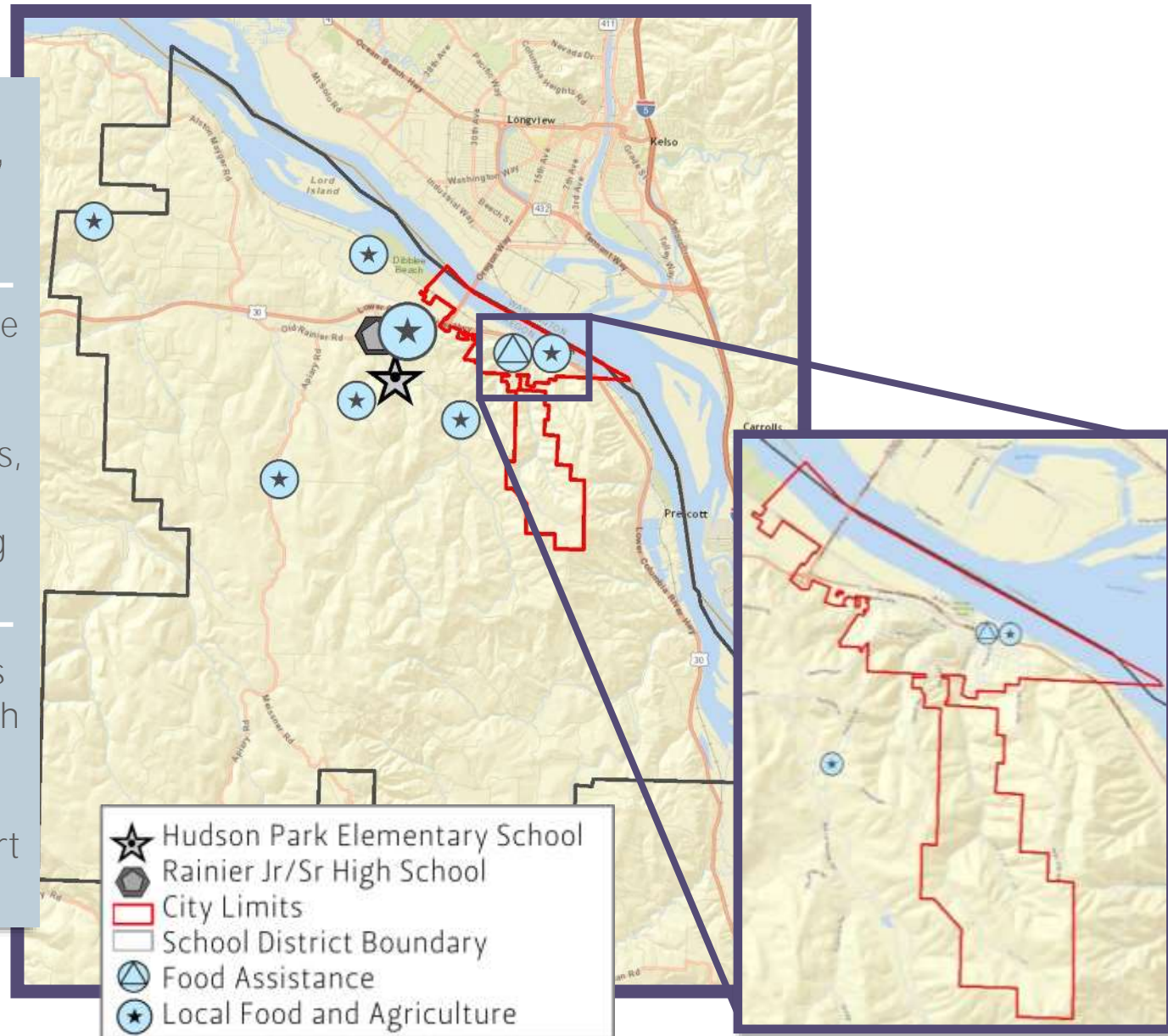
The closest supermarket or full service grocer is located 17 miles away, in Longview WA. Meaning, grocery access is car dependent, and some form of transportation is needed to shop for food.

Local Food, Agriculture, & Food Assistance

Rainier has a number of “Local Food, Agriculture, and Food Assistance” resources

Local Food and Agriculture includes farm stands, u-picks, home-based food retailers, farmer’s markets, and hunting/fishing/gleaning supports

Food Assistance includes food banks, summer lunch programs, community meals and other supplemental food support programs



Resources for Local Food, Agriculture & Food Assistance Shown by Location



There are eight local food/agriculture options that lie outside of Rainier city limits: six are home-based operations, selling things like fruit, eggs, and veggies; there's also the Rod and Gun club – a hunting support; and a school garden.

- ★ Hudson Park Elementary School
- ⬢ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- ⊙ Food Assistance
- ★ Local Food and Agriculture

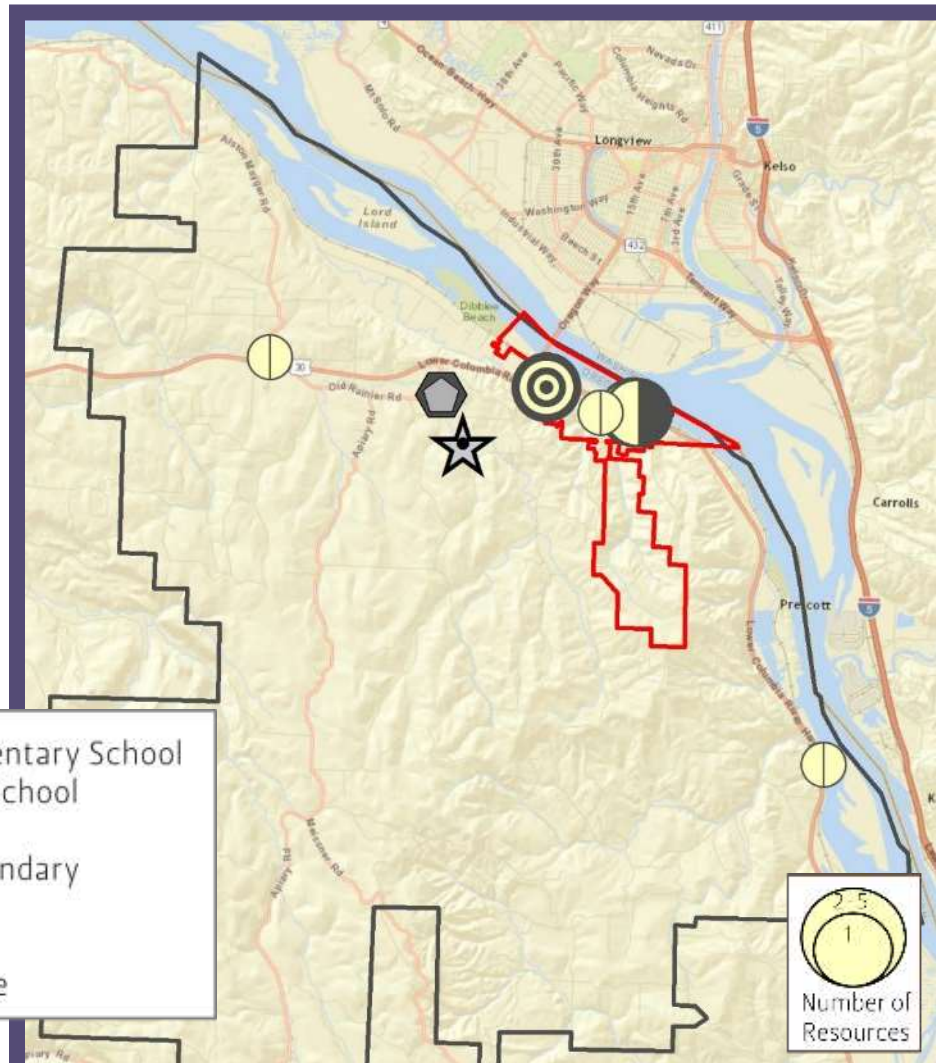
Resources for Local Food, Agriculture & Food Assistance Shown by Location



Rainer has a community garden and a food bank/pantry both at the same location (HOPE) within city limits. HOPE not only offers emergency food assistance, but also offers a variety of programs that assist community members in supplementing their food supplies.

- ★ Hudson Park Elementary School
- ⬠ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- ⬠ Food Assistance
- ★ Local Food and Agriculture

Change in Resources for Convenience Stores and Fast Food

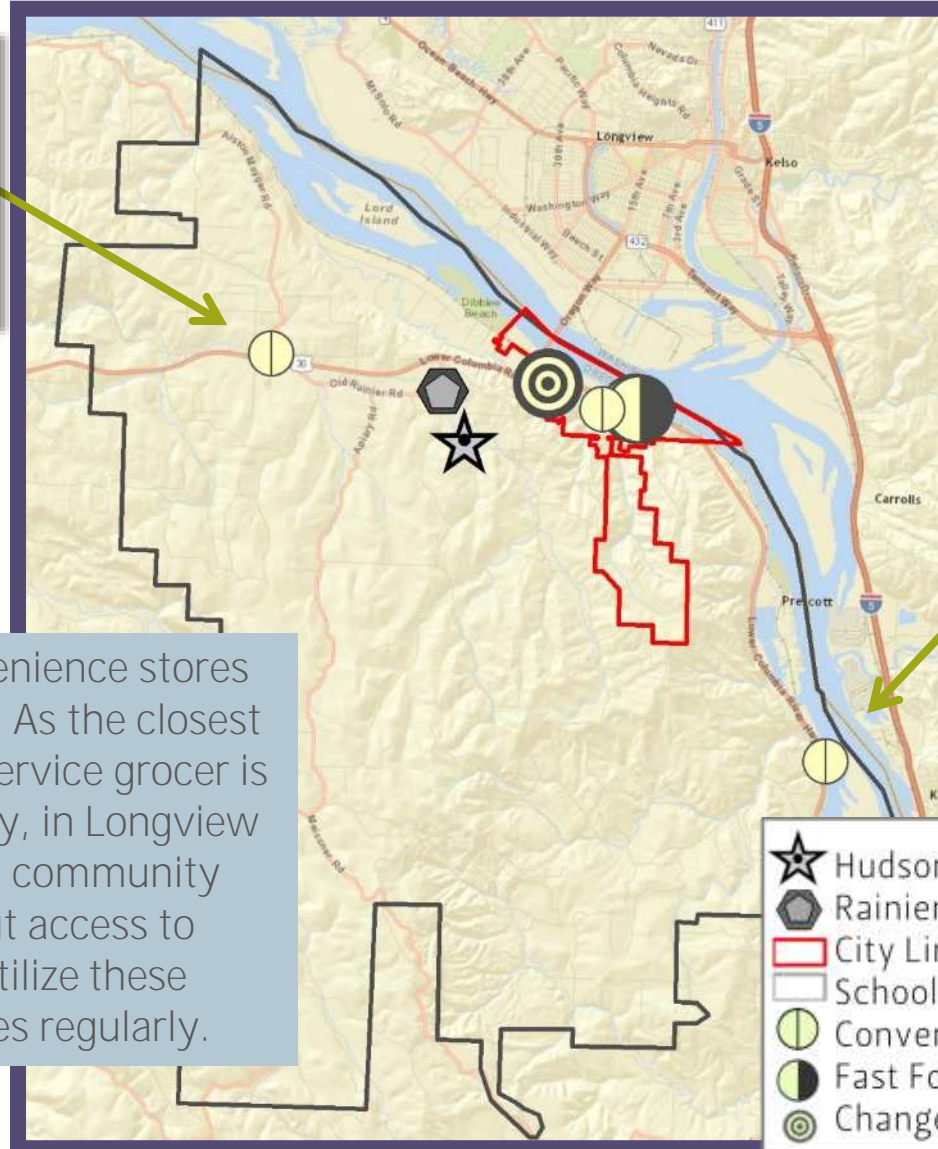


Rainier has four convenience stores as well as four fast food establishments. Both a new fast food establishment and a new convenience store were added since the original audit.

For our purposes here, fast food is considered any place that sells prepared foods or drinks and does not have seating, or if it does have seating, then it also has a drive through.

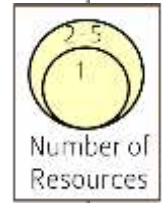
Rainier's "Modified Retail Food Environmental Index" score was 0. A lower score indicating a higher number of places that don't typically have healthy food and lower numbers of places that would typically have healthy food options

Resources for Convenience Stores and Fast Food Shown by Location



There are two convenience stores outside of city limits. As the closest supermarket or full service grocer is located 17 miles away, in Longview WA, it is likely that community members without access to transportation utilize these convenience stores regularly.

- ★ Hudson Park Elementary School
- ⬡ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- Convenience Store
- ◐ Fast Food
- ◎ Change in Resource



Resources for Convenience Stores and Fast Food Shown by Location

The Chevron located in city limits is the second SNAP authorized retailer in Rainier

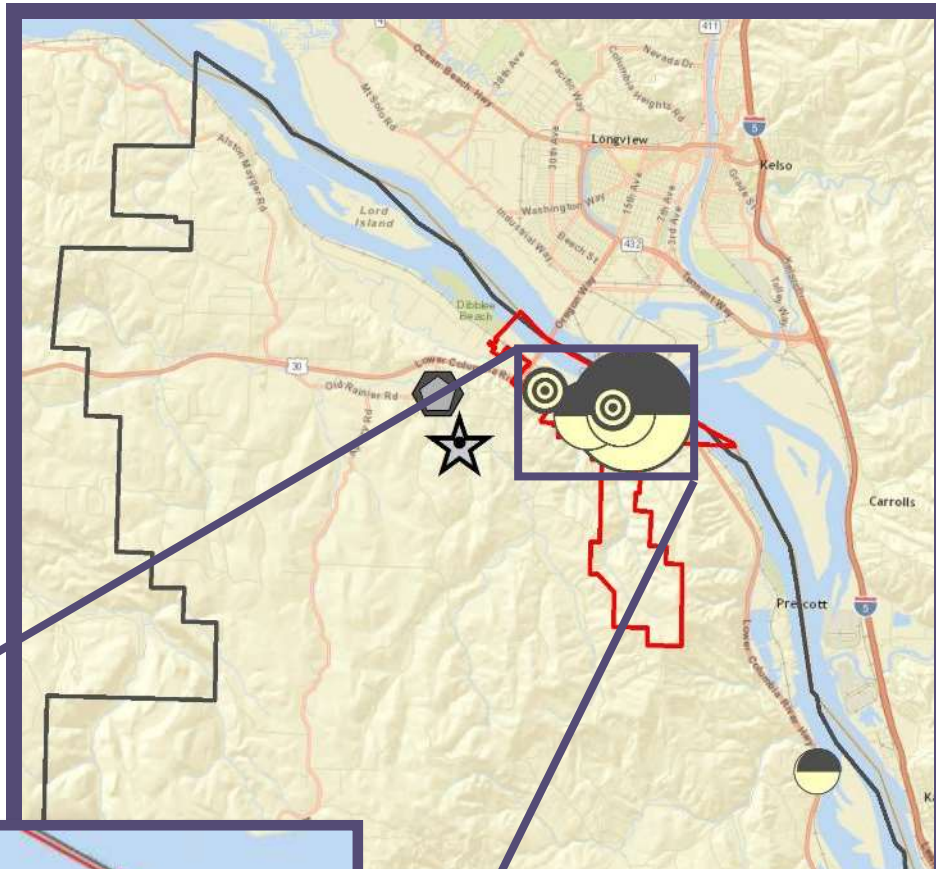
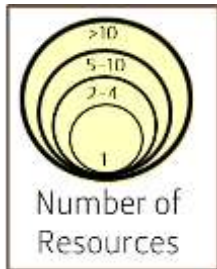
SNAP, or the Supplemental Nutrition Assistance Program, is a federal program that offers nutrition assistance to income eligible families and individuals

Limited access to affordable fresh produce is a barrier to healthy eating for people living in Rainier

The closest supermarket or full service grocer is located 17 miles away, in Longview WA. Making it likely that community members without access to transportation utilize these convenience stores regularly

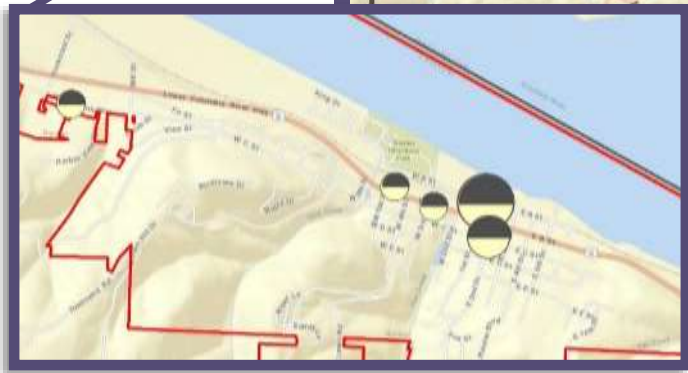


Change in Resources for Cafés, Delis, and Restaurants



Rainier has 14 Café, Deli, Restaurant type eating establishments – all but one located within city limits

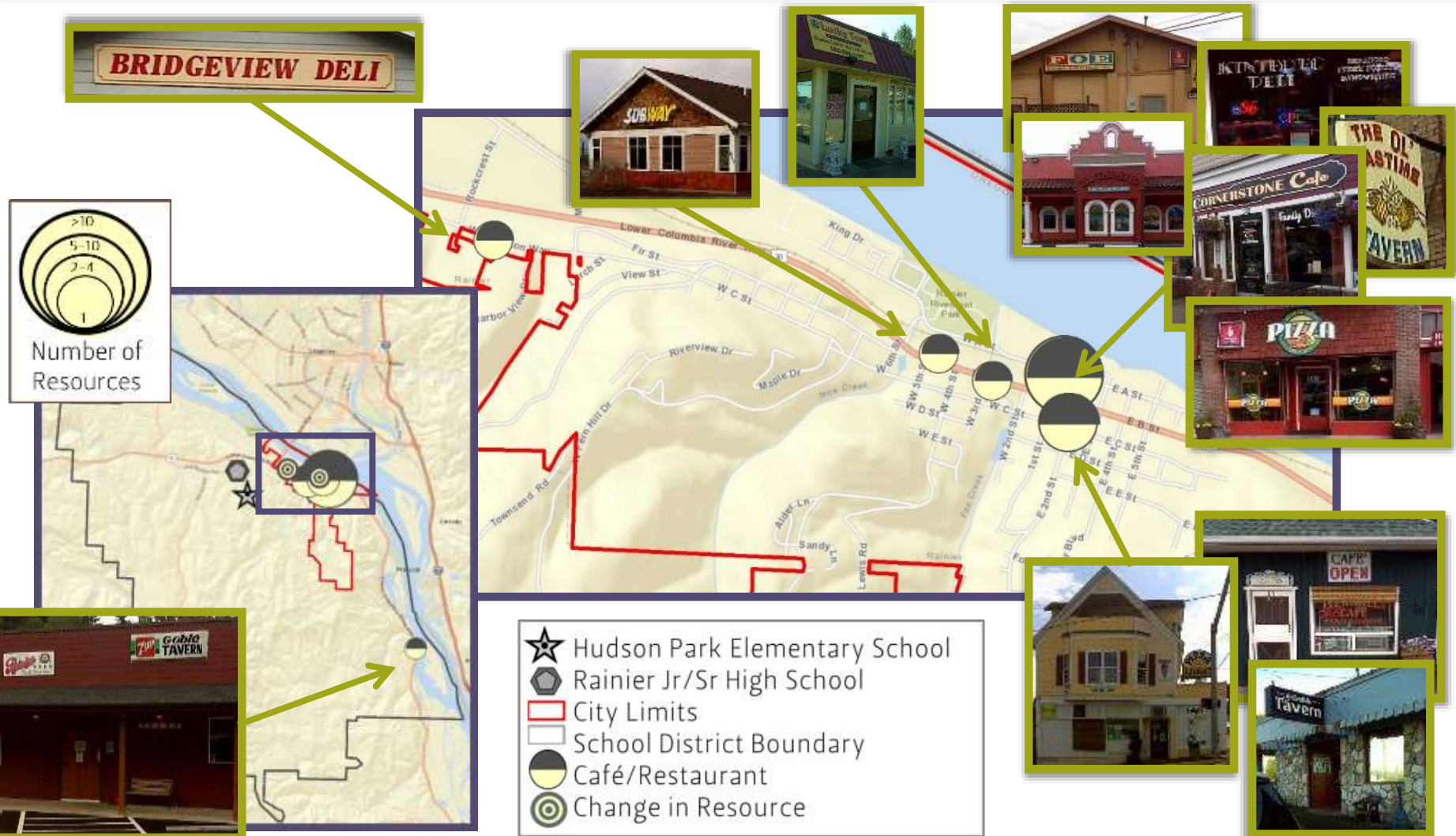
There are eleven Sit-down Restaurants with table service and three Deli/Sandwich Shop – two of these are new to the community since the original audit.



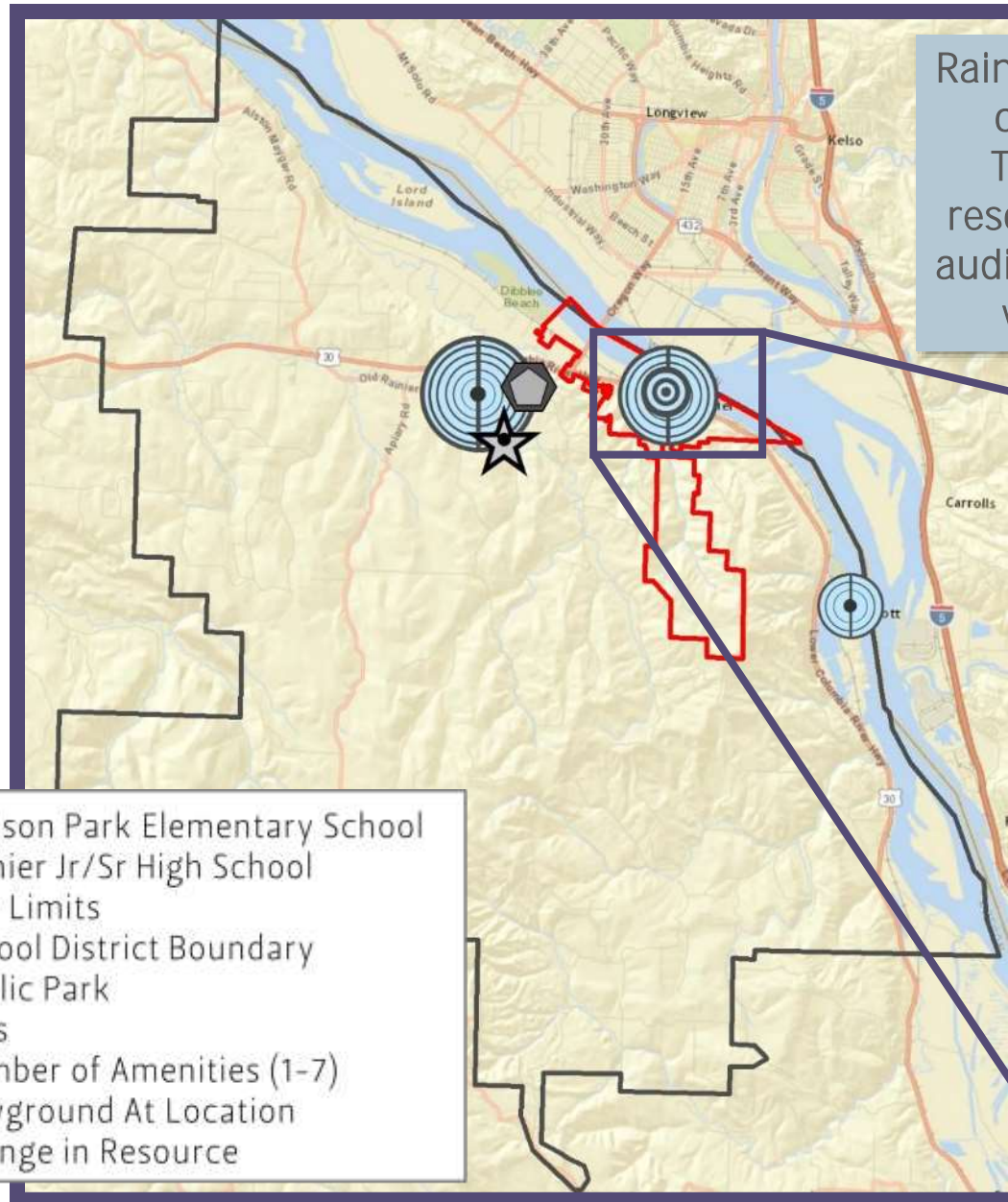
- ★ Hudson Park Elementary School
- ⬡ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- Café/Restaurant
- ◎ Change in Resource

Resources for Cafés, Delis, & Restaurants Shown by Location

Rainier's dining establishments offer pub/tavern style, Mexican, pizza, deli, and Chinese dining options.



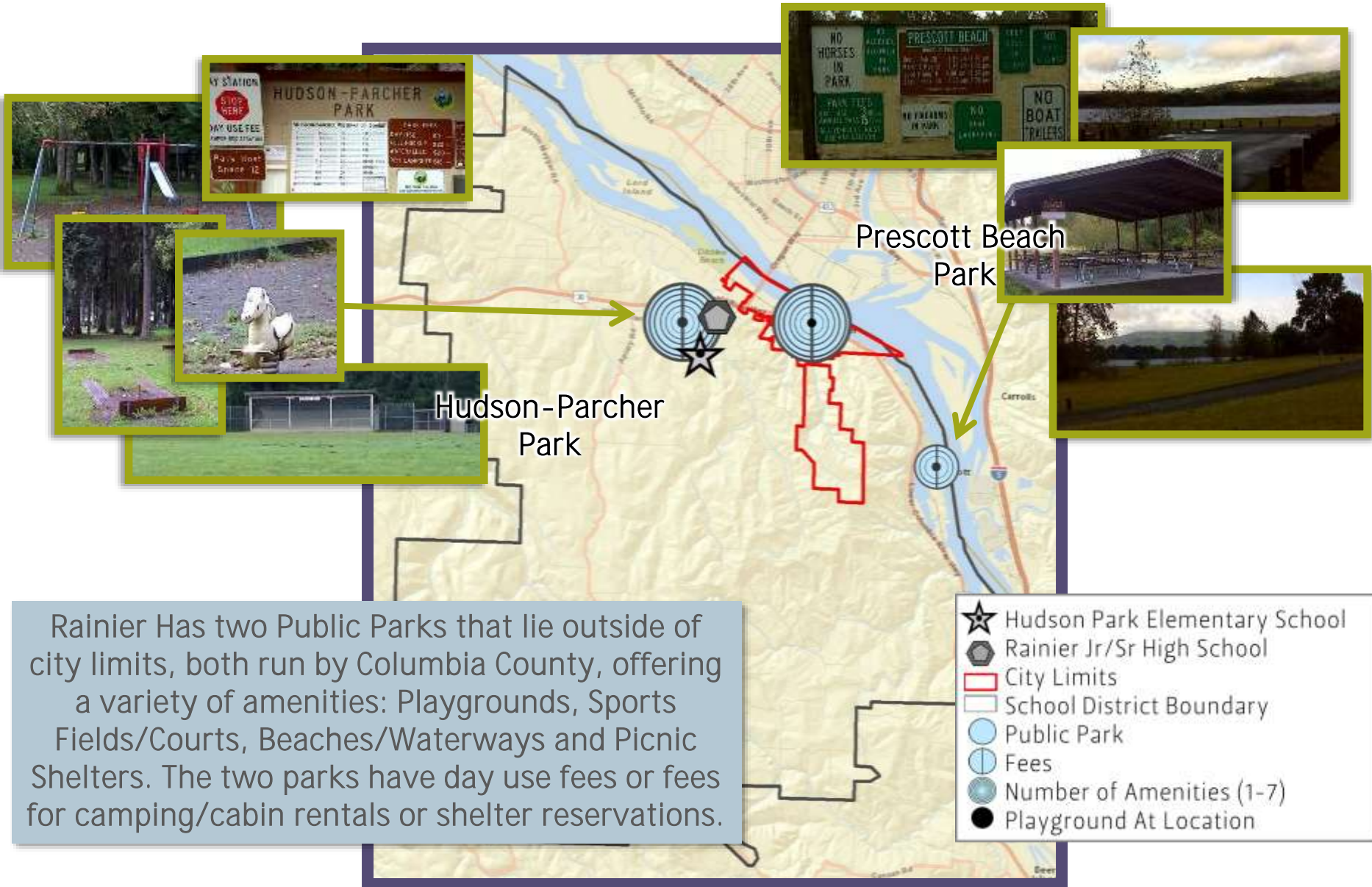
Change in Resources for Public Parks



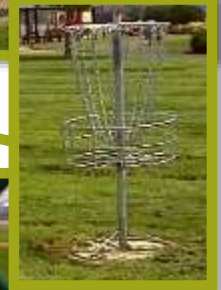
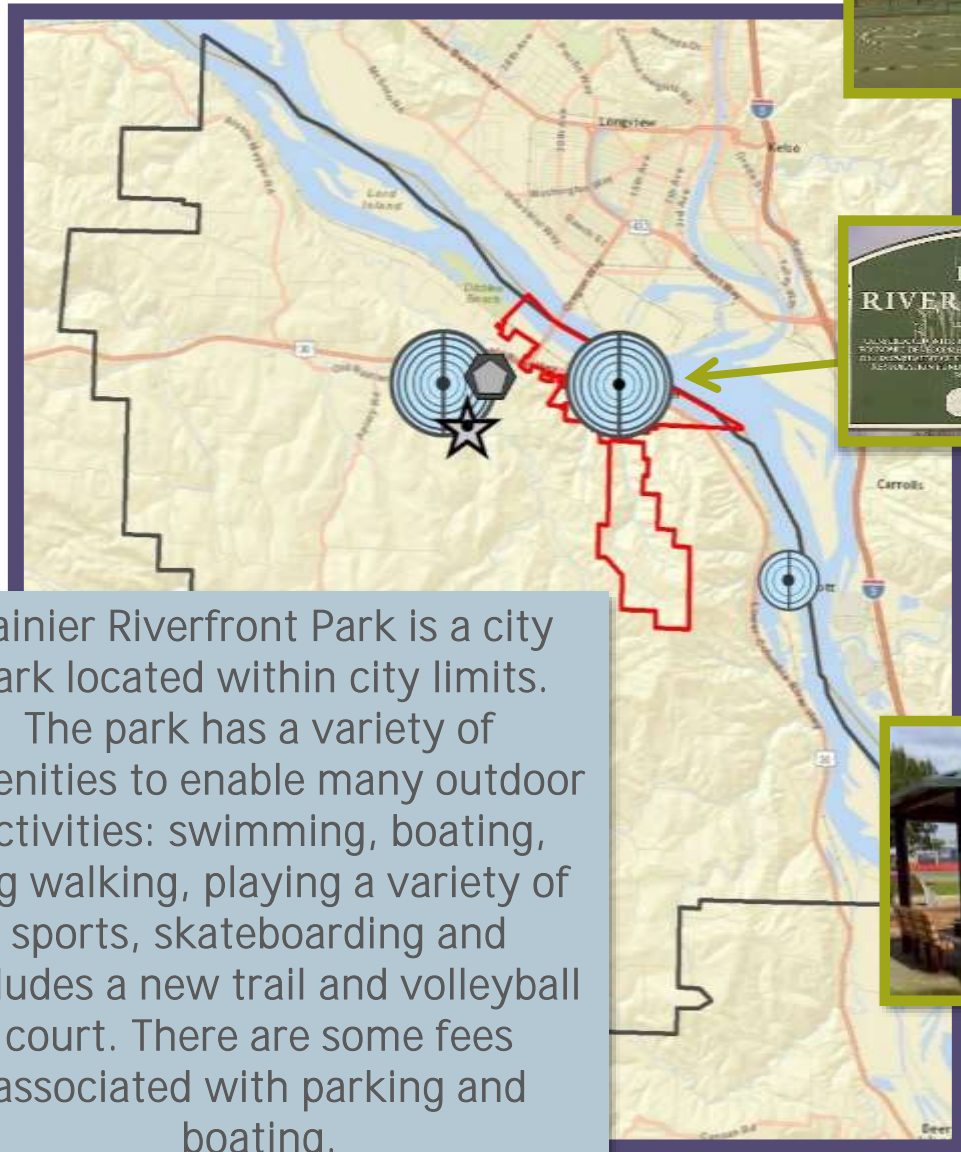
Rainier has three Public Parks, all but one lying outside of city limits. There were two changes in this resource category since the original audit: a new trail and volleyball court were added at Riverfront Park



Resources and Amenities for Public Parks Shown by Location



Resources and Amenities for Public Parks Shown by Location

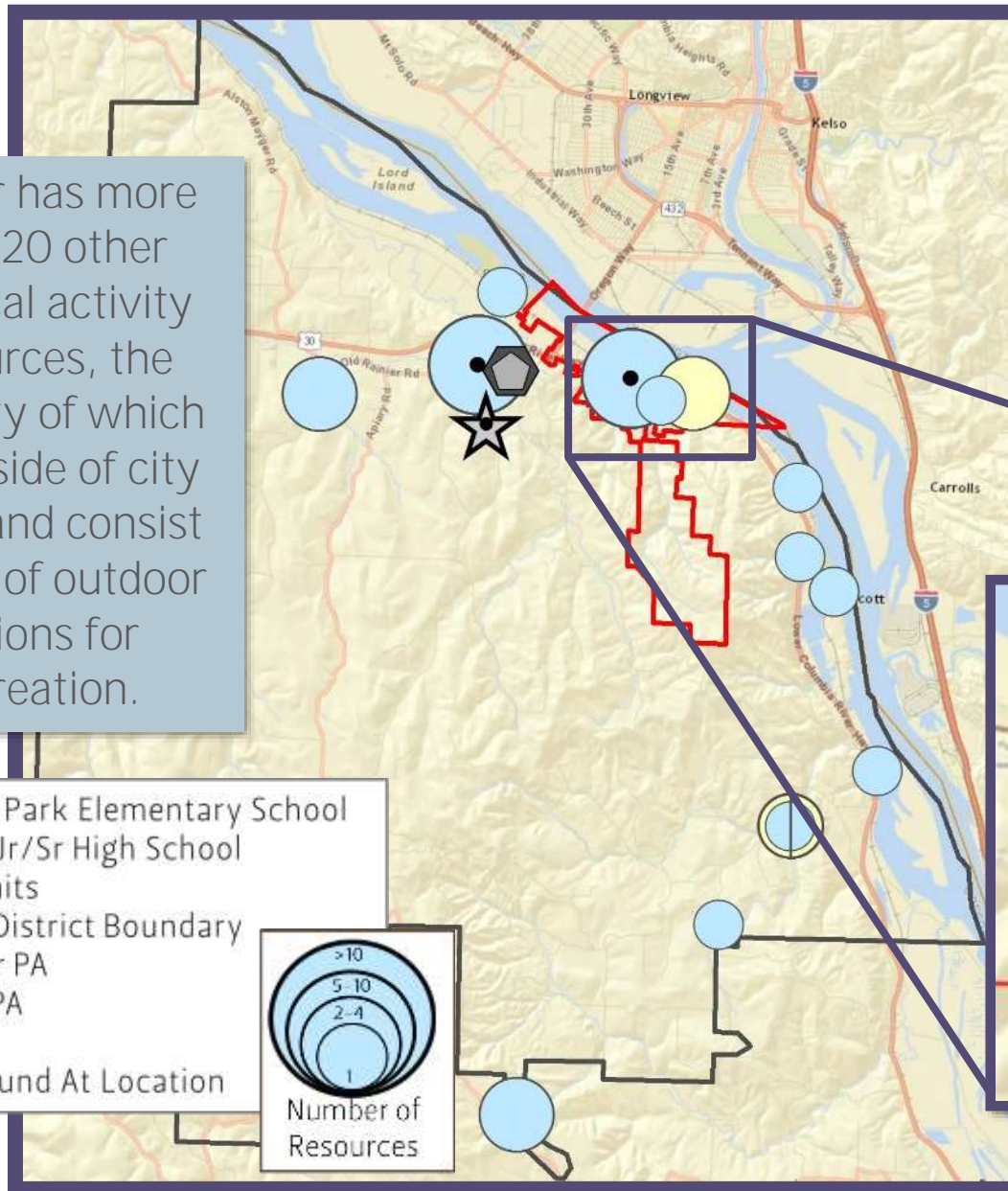


Rainier Riverfront Park is a city park located within city limits. The park has a variety of amenities to enable many outdoor activities: swimming, boating, dog walking, playing a variety of sports, skateboarding and includes a new trail and volleyball court. There are some fees associated with parking and boating.

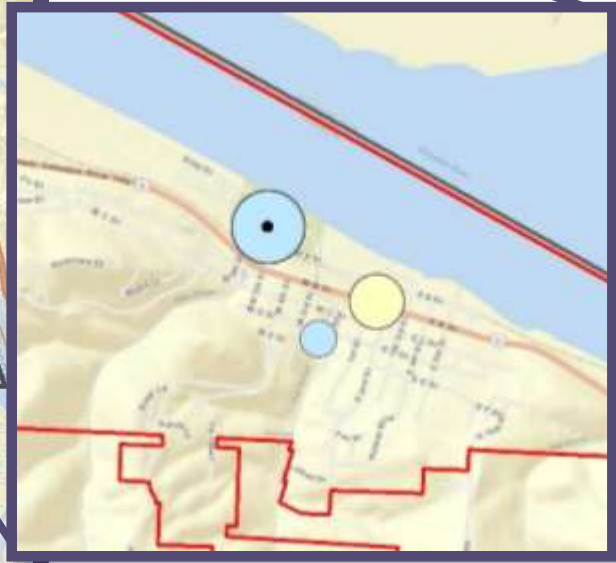
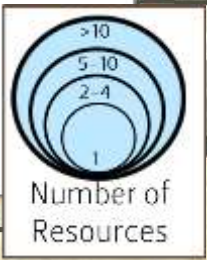
- ★ Hudson Park Elementary School
- ⬢ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- Public Park
- Fees
- Number of Amenities (1-7)
- Playground At Location

Other Physical Activity Resources

Rainier has more than 20 other physical activity resources, the majority of which lie outside of city limits and consist largely of outdoor options for recreation.



- ★ Hudson Park Elementary School
- ⬡ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- Outdoor PA
- Indoor PA
- ⊘ Fees
- Playground At Location



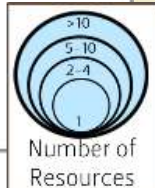
Resources for Other PA Shown by Location

Includes Amenities at public parks that have already been shown

Resources consist largely of trails or logging roads on private timber land – which may be closed due to fire danger or logging activities – and beaches located on the Columbia river. PA options at these resources include Swimming, Hiking, Boating, Fishing, and Horseback Riding. *PA=Physical Activity



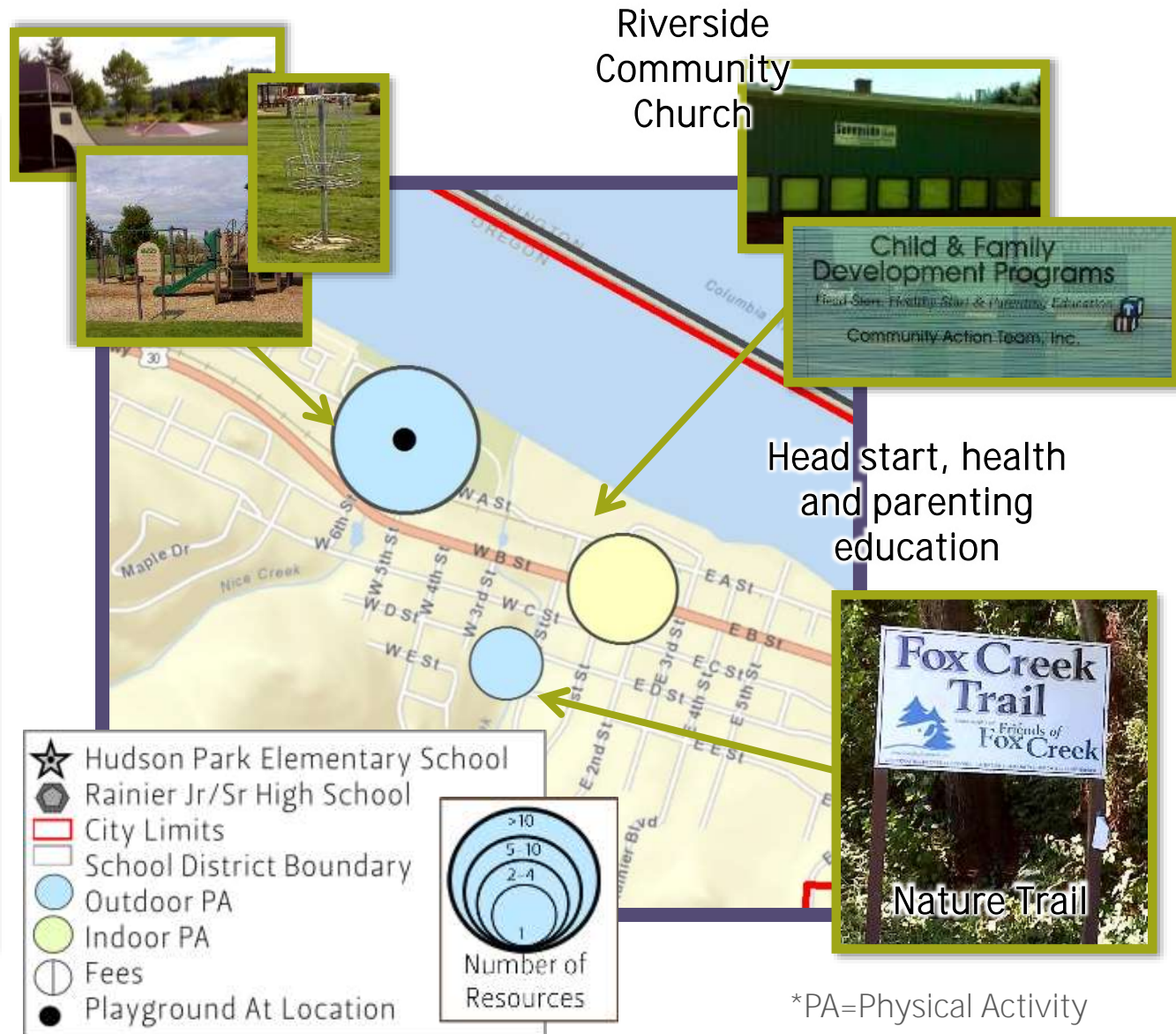
- ★ Hudson Park Elementary School
- ⬡ Rainier Jr/Sr High School
- ▭ City Limits
- ▭ School District Boundary
- Outdoor PA
- Indoor PA
- Fees
- Playground At Location



Resources for Other PA Shown by Location

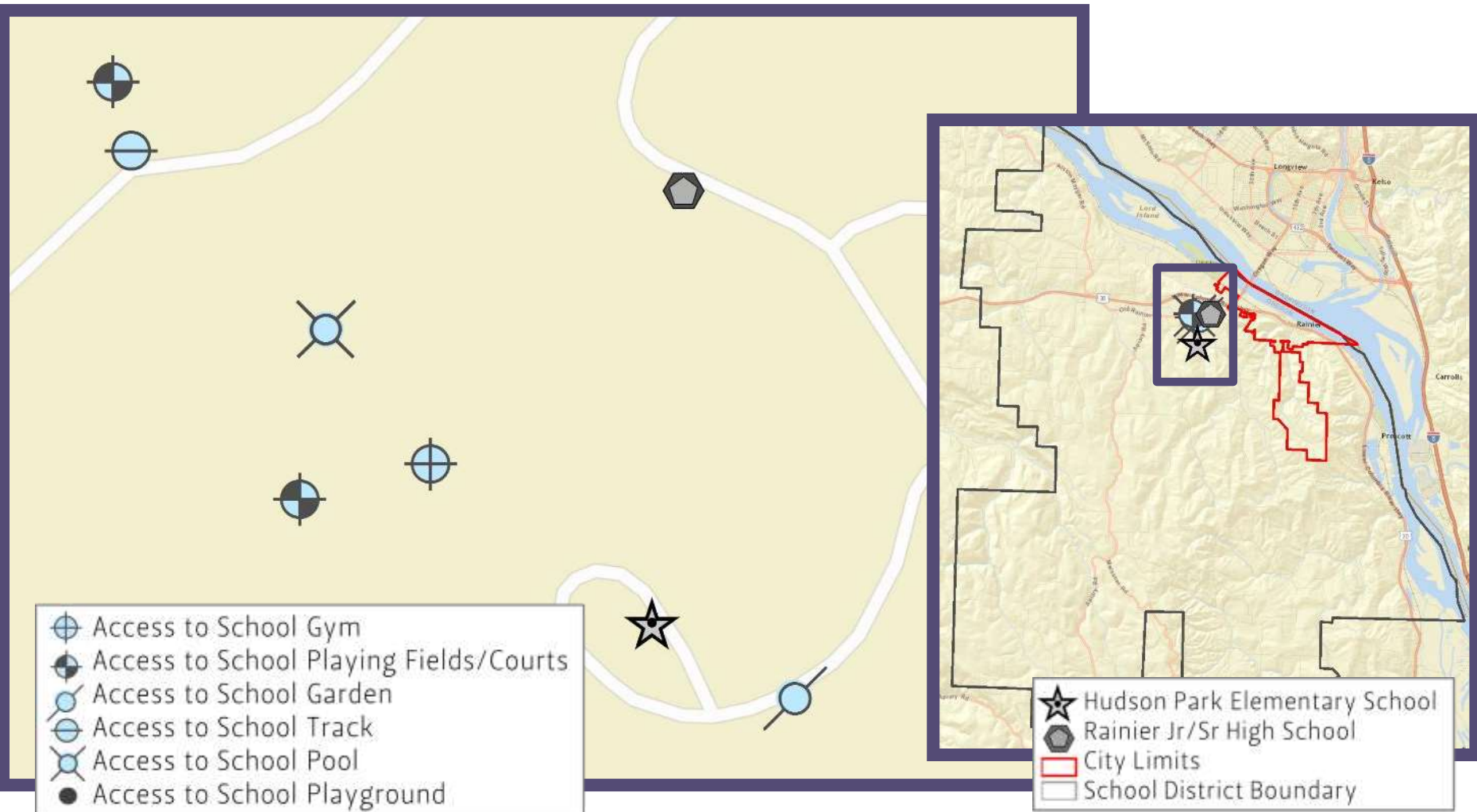
Includes Amenities at public parks that have already been shown

Within city limits there are two indoor physical activity or healthy education options. One is the community owned recreation center that offers classes to the public for a fee and the other is the education programs offered by the Child and Family Development program. Rainier also has a free outdoor option not previously mentioned: the Fox Creek Nature Trail as well as those located at River Front Park (see *Public Parks Map*)



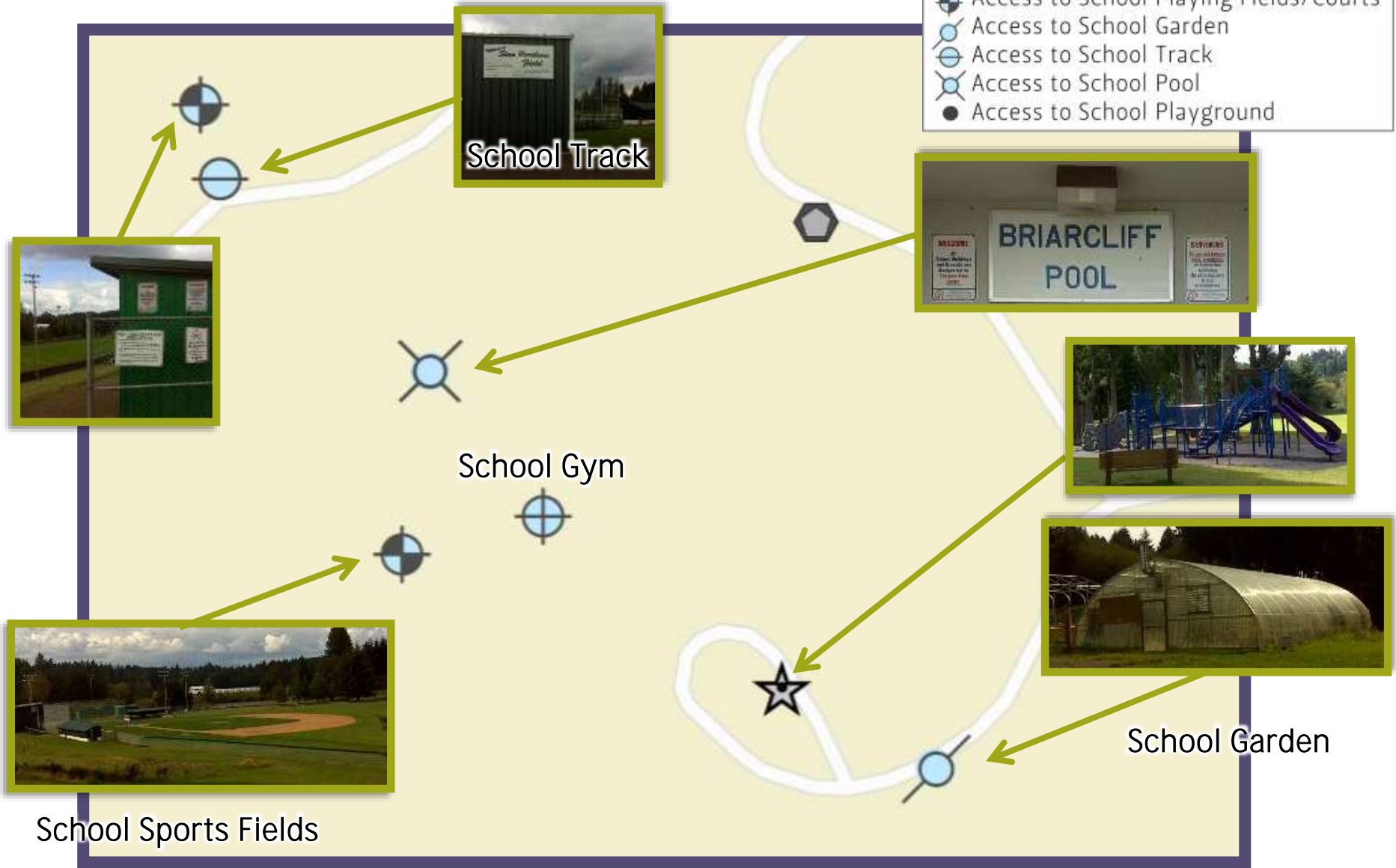
School Physical Activity Resources

The School District allows public access to Gyms, the Swimming Pool, Garden, the Track, Playgrounds, and various Sports/Playing Fields and Courts



School Physical Activity Resources

- ⊕ Access to School Gym
- ⊖ Access to School Playing Fields/Courts
- ⊙ Access to School Garden
- ⊕ Access to School Track
- ⊗ Access to School Pool
- Access to School Playground



School Track



School Gym



School Garden

School Sports Fields

Ease of Access to Resources

- Spatial accessibility is relative: if you have a car and gas money, your spatial access to resources is potentially only limited by how much time you want to spend in the car. As our goal is to include all potential community members, not just those with a means of transportation, we analyzed the proportion of community members who have “Easy Access” to resources.
- We described Easy Access as being located within a ¼ mile distance to a resource category.
- While Rainier does have some food and physical activity (PA) resources located close-in, the bulk of the PA and Local Food resources are located outside of city limits.
- Resources have been aggregated into 6 categories: ○ Low/No Cost Outdoor PA, ○ Low/No Cost Indoor PA, ○ Fee-Based Outdoor PA, ○ Fee-Based Indoor PA, ○ Local Agriculture, Grocery and Food Assistance, ○ Fast Food/Convenience Store and Restaurant

Low/No Cost PA Resources

Community Centers
Public lands/Parks & Playgrounds
Sports Fields/Courts

Fee-Based PA Resources

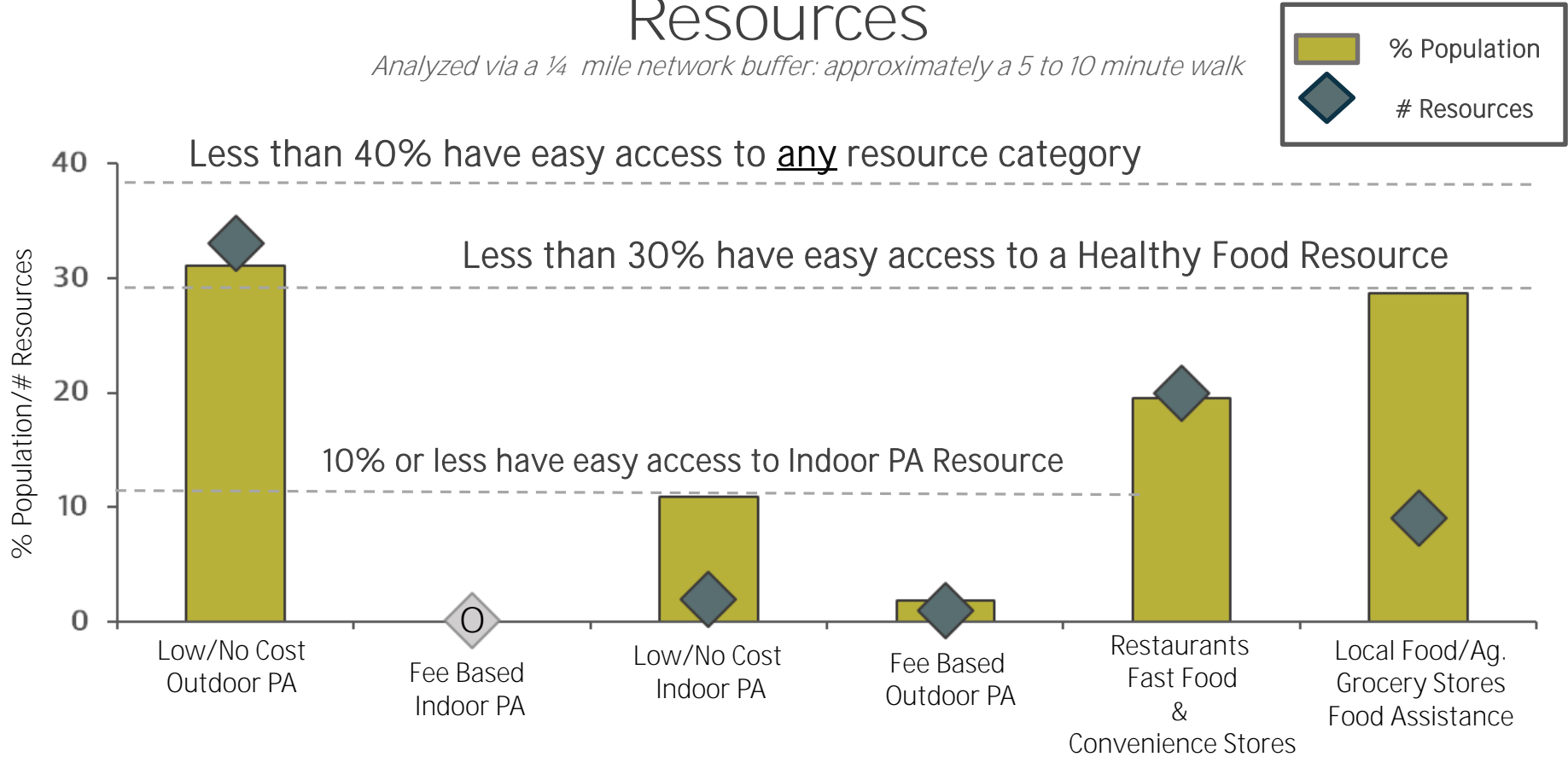
Golf Courses
Equestrian centers
Exercise/Fitness centers

Local Agriculture

Farm stands/U-picks
Farmer’s markets
Home-based sales (Eggs, Milk, Veggies)
Hunting/Fishing/Gleaning Supports

Ease of Access to Food and Physical Activity Resources

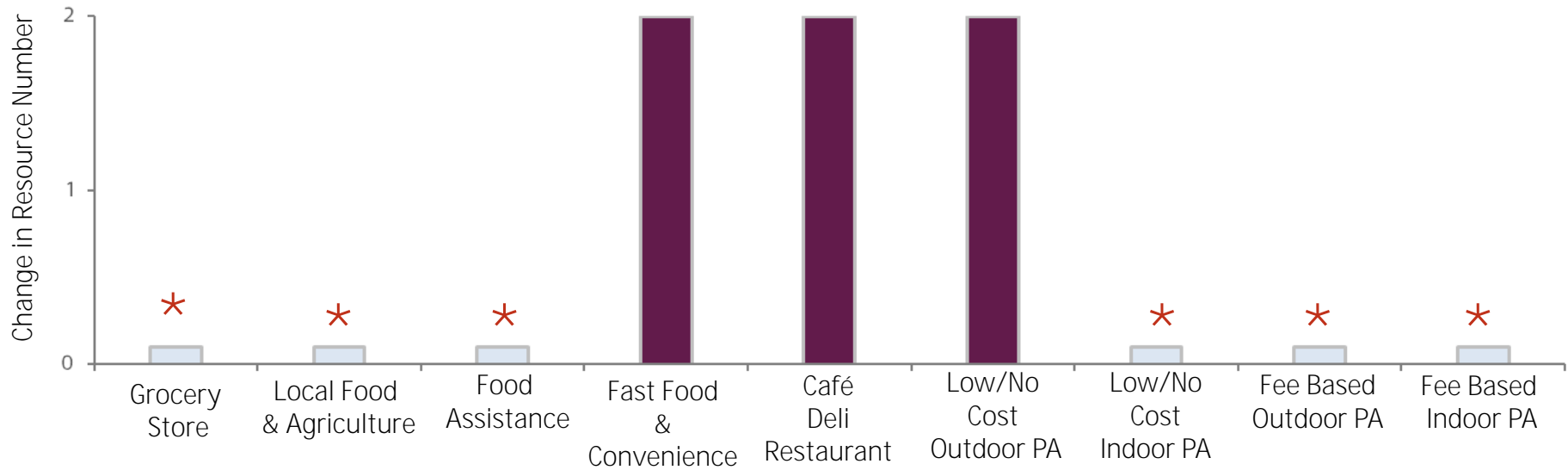
Analyzed via a ¼ mile network buffer: approximately a 5 to 10 minute walk



Rainier's ease of access to resources remained relatively stable with one nominal change: a 2% increase in access to resources in the Restaurant, Fast Food and Convenience Stores category. Less than 40% have easy access to the most healthy food sources, and only about 10% have access to Indoor PA resources. Even though two new resources were added in the Low/No Cost Outdoor PA category, they were added at a pre-existing resource (a public park), and as such offered no increase in spatial access.

PA=Physical Activity

Change in Number of Food and Physical Activity Resources



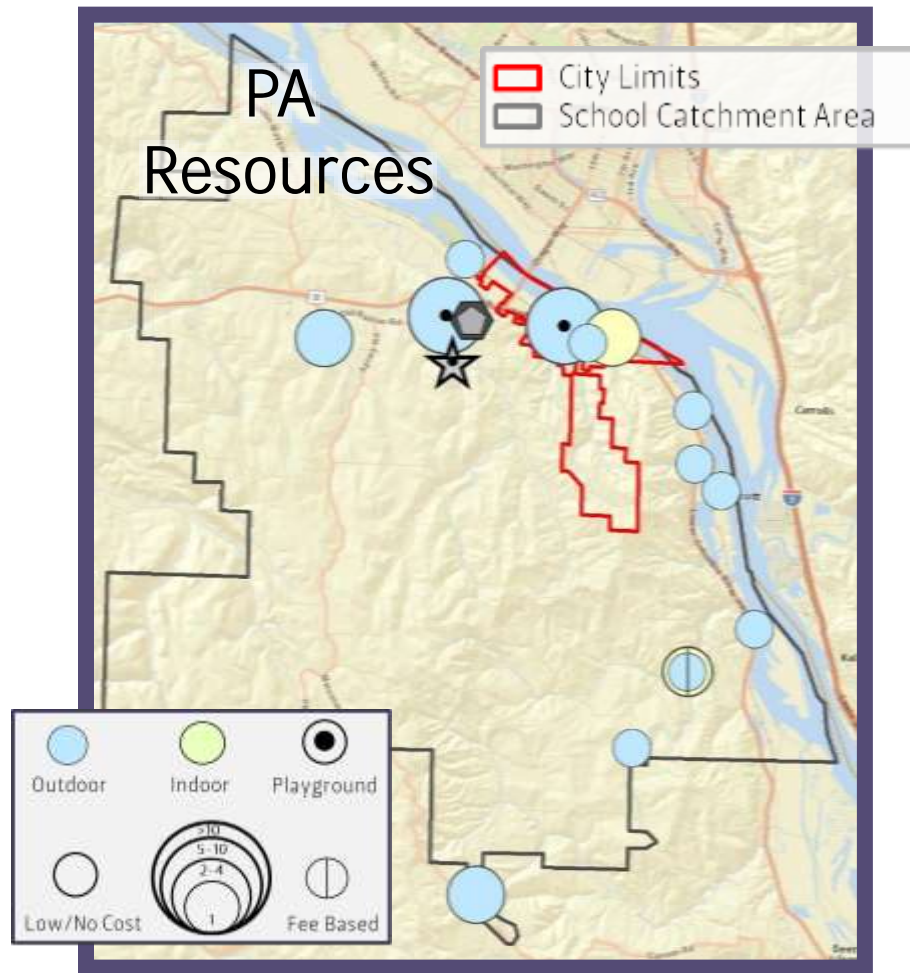
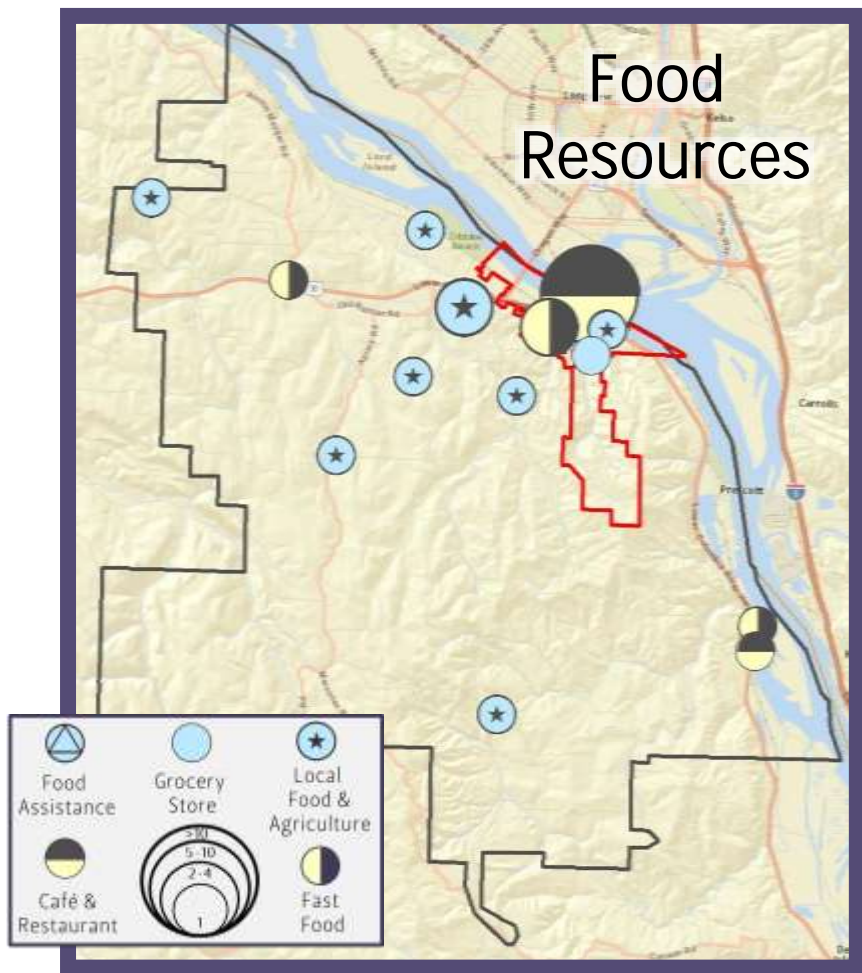
* = No Change

Overall, there were no changes in the raw number of resources for Grocery Stores, Local Food/Agriculture, or Food Assistance. However, Rainier did add food resources in the form of two Delis and two Convenience Stores. There were no changes in any PA category except Low/No Cost Outdoor PA (two resources added at River Front Park). In terms of audited resources, Rainier lost no resources between the original and current audit.

PA=Physical Activity

Conclusions

In rural communities, a lack of available resources and accessibility to existing resources may make developing and maintaining healthy dietary and activity habits difficult.



Resources are available, but mainly located within city limits, leaving those who live in more rural areas without easy access. Supports need to be affordable and accessible from where people live and work.