# Demand Analysis Menu of Factors

ST. CROIX COUNTY
Bicycle and Pedestrian PLAN

## Background

An assessment of demand (both existing and potential) for bicycle and pedestrian travel within the county was be performed as part of this project. This analysis indicates the areas with the greatest need for facilities and will help prioritize network segments for implementation. Based on input from the Advisory Team, the Project Team developed two demand analysis maps:

1. The first estimates transportation-oriented demand (based on factors such as where people live and work.) and most closely reflects the preferences of the "Interested but Concerned" portion of the population.
2. The second analysis estimates potential tourism demand (based on factors that might attract people that come from outside of St. Croix County to bike or walk long distances). This analysis has been shaped to reflect the preferences of avid road cyclists.

## Demand Analysis #1

**(Transportation-oriented / Interested but Concerned-oriented)**

This is the more conventional of the two analyses and is similar to analyses that the Project Team has performed for communities across the country. Based on experience, these factors and weightings produce logical results that align with expectations of demand from these groups.

| Factor | Weighting (maximum points out of 100) |
|---|---|
| **Population density** | 40 pts |
| **Employment density** (or location of major employers) | 20 pts |
| **Schools** (elementary, middle, high) | 20 pts |
| **Major trails** (including the programmed Loop Trail and popular trails within major parks) | 10 pts |
| **Major parks** (county, state, Corps of Engineers) | 5 pts |
| **Tourist destinations** (wineries, artisan foods, you-pick farms, museums, etc.) | 5 pts |

## Demand Analysis #2

**(Tourism-oriented / avid cyclist-oriented)**

This is a unique type of analysis intended to identify opportunities for strengthening the tourism-oriented aspect of bicycling in St. Croix County. While sources exist (such as Strava) to identify where these types of users are **currently** riding, this analysis seeks to identify where people would **want** to ride if conditions were conducive. The Wisconsin State Bikeways Study identifies traffic stress, services (lodging, restaurants, grocery stores, bicycle repair shops), and amenities (forested areas, lakes, rivers, scenic vistas, historic landmarks) as important attracting factors for multi-day touring cyclists. Similar factors, as well as others, can be used in St. Croix County.

The following factors and weighting have been identified for this analysis.

| Factor | Weighting (maximum points out of 100) |
|---|---|
| **Low-stress rural roads** | 35 pts |
| **Destinations** (small communities, "pit stop" locations, rural taverns or restaurants, etc.) | 25 pts |
| **Barrier crossings** (bridges over rivers, freeways, railroads, etc. that have limited crossing opportunities) | 20 pts |
| **Scenery** (park land, forests, waterfowl production areas, public hunting grounds, prairie habitat, etc.) | 20 pts |
| **Areas to avoid** (mining sites, recycling facilities, truck routes, concentrated animal feeding operations, manure storage sites, etc.) | - 20 pts |

### Low-stress Rural Roads

Regardless of experience, most avid cyclists prefer roads with lower levels of motor vehicle traffic. The traffic stress analysis performed for this project can be used to identify ideal roads (from a traffic perspective) for road cycling, so that connections to these areas can be improved. For purposes of this analysis, low-stress rural roads with less than 50 cars per day that are at least 0.5 miles in length were selected.

### Barrier Crossings

Rivers, railroads, and freeways are all barriers to transportation, including for biking and walking. Locations at which these barriers can be crossed (for example, a trail bridge over the St. Croix River or a non-interchange crossing of I-94) are very important for biking and walking and constitute high-demand. They are effectively locations through which biking and walking traffic must funnel to cross the barrier. Providing appropriate access to and from these crossings is of utmost importance.

### Destinations

This factor includes small communities, such as those with populations between 500 and 2,000 (or more or less), which are often attractive destinations for avid cyclists because they typically have places to rest, regroup, get a snack and water, and use the restroom.

This factor also includes locations of destinations that may be attractive either as final destinations or as "pit stop" locations along a person's route. This includes places such as wineries, breweries, organic farms, museums, historic sites, rural restaurants and taverns, major parks, and gas stations. The locations of these destinations largely originated from input provided via the project WikiMap.

### Scenery

Forested areas and preserved lands afford scenic value along roads. Although cyclists may not stop at these locations, they may choose routes that allow them to ride past these areas due to the scenery they afford. This factor is composed of:

- Water bodies (lakes, ponds, and rivers)
- County, state, and federal park land
- Forested areas
- Waterfowl production areas
- Public hunting grounds
- Prairie habitat
- Wetlands

### Areas to Avoid

In addition to attractors for avid cyclists, there are several detractors or areas which most people would try to avoid when choosing a route, whether due to odors, debris in the air, or associated truck traffic. For this analysis, these include:

- Mining sites
- Recycling facilities
- Truck routes
- Industrial farms
- Manure storage sites

## Analysis Results

The results of both analyses show a high level of demand in the western half of the County, as well as an east-west corridor parallel to the Interstate and stretching from Roberts to Woodville. Demand Analysis #1 shows more concentrated demands surrounding cities and villages, as well as areas of moderate demand in the more populous towns. Demand Analysis #2 shows demand distributed along corridors, including from Willow River State Park to Star Prairie, the Lift Bridge to Somerset, and Hudson to Hersey. It also shows pockets of demand in the northeastern portion of the County.

Taken together, these two analyses support the Draft Study Network—especially the primary loop connecting Houlton, North Hudson, Hudson, River Falls, Roberts, New Richmond, and Somerset and the east-west corridor linking Roberts, Hammond, Baldwin, and Woodville.

# ST. CROIX COUNTY
# Bicycle and Pedestrian PLAN

## Existing and Planned Bicycle and Pedestrian Facilities

- Existing Trail
- Planned Trail
- Paved Shoulder

## Demand Analysis #1

Highest Demand

Lowest Demand

This demand analysis was designed to estimate demand for walking and biking for transportation and general recreation purposes amongst the general population, especially people that are concerned about interacting with motor vehicle traffic.

Factors that were used in this analysis include population density, employment density, location of schools, location of major trails and parks, and locations of tourist destinations (such as wineries, you-pick farms, etc.).

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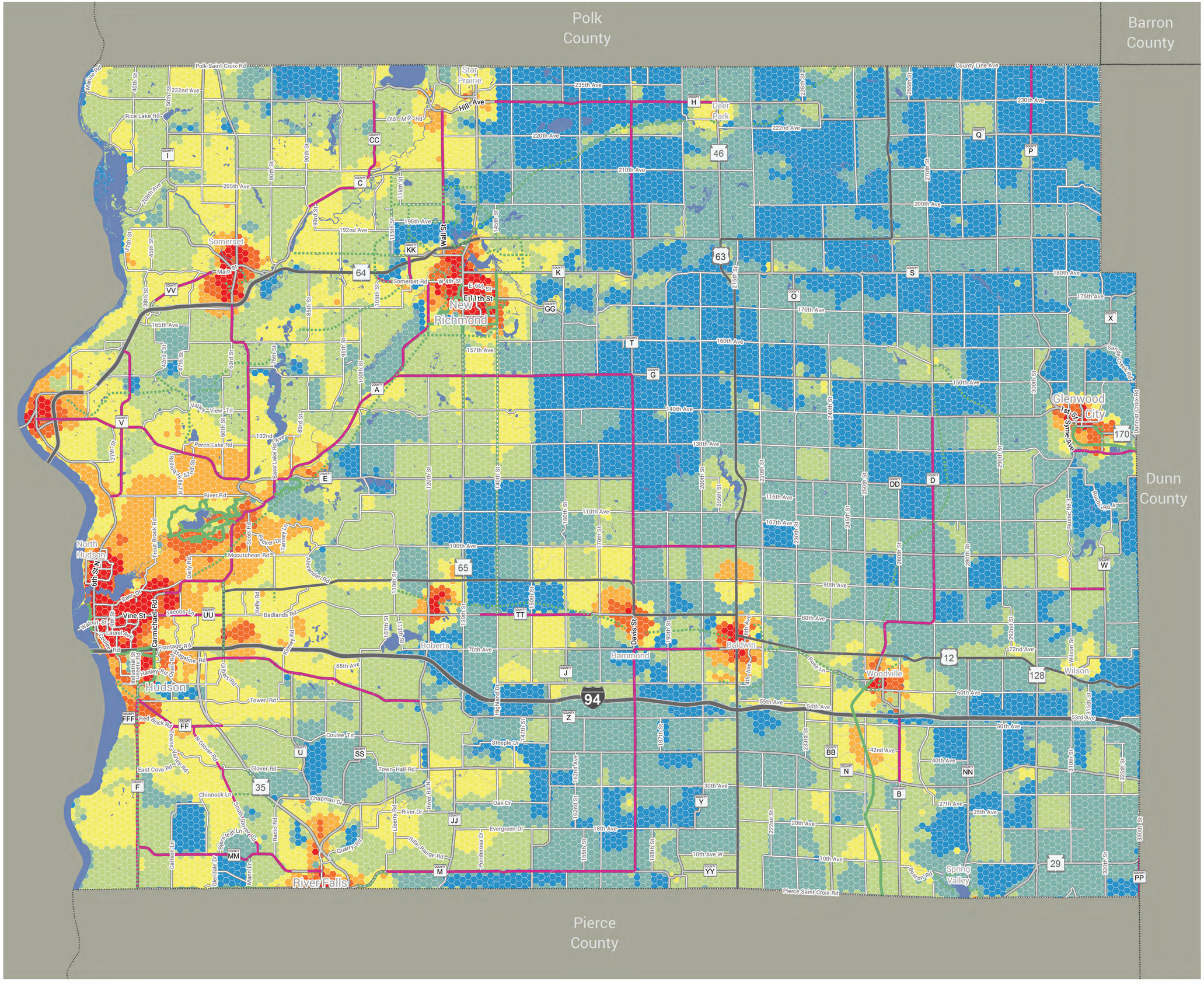
TooleDesignGroup

Novemeber 24, 2015



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## Demand Analysis #2

Highest Demand

Lowest Demand

This demand analysis was designed to estimate demand amongst avid bicyclists and identify opportunities for strengthening the tourism-oriented aspect of bicycling in St. Croix County.

Factors that were used in this analysis include access to low-stress rural roads, crossings of barriers such as rivers and freeways, scenic areas, and "pit stop" and rest area destinations. This analysis also factored in areas to avoid, such as areas with high levels of truck traffic, manur storage sites, and industrial farms.

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