



The Path to Wisconn Valley

submitted to
The Village of Mount Pleasant and Racine County

January 13, 2020



The Inspiration

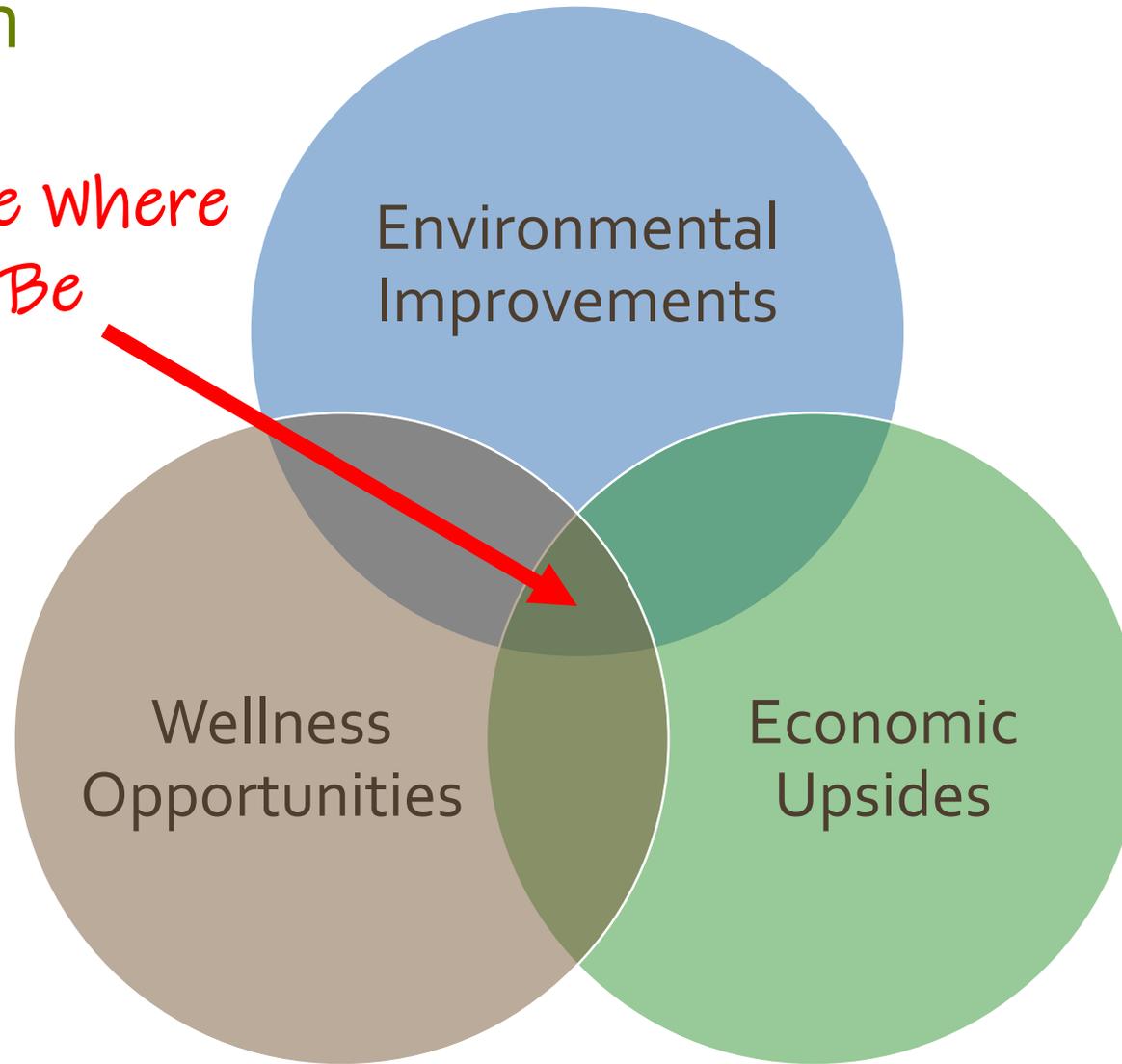


The Restored North Branch of the Pike River



The Vision

*Creating a Place Where
People Want to Be*



EPA's "Triple Benefit"



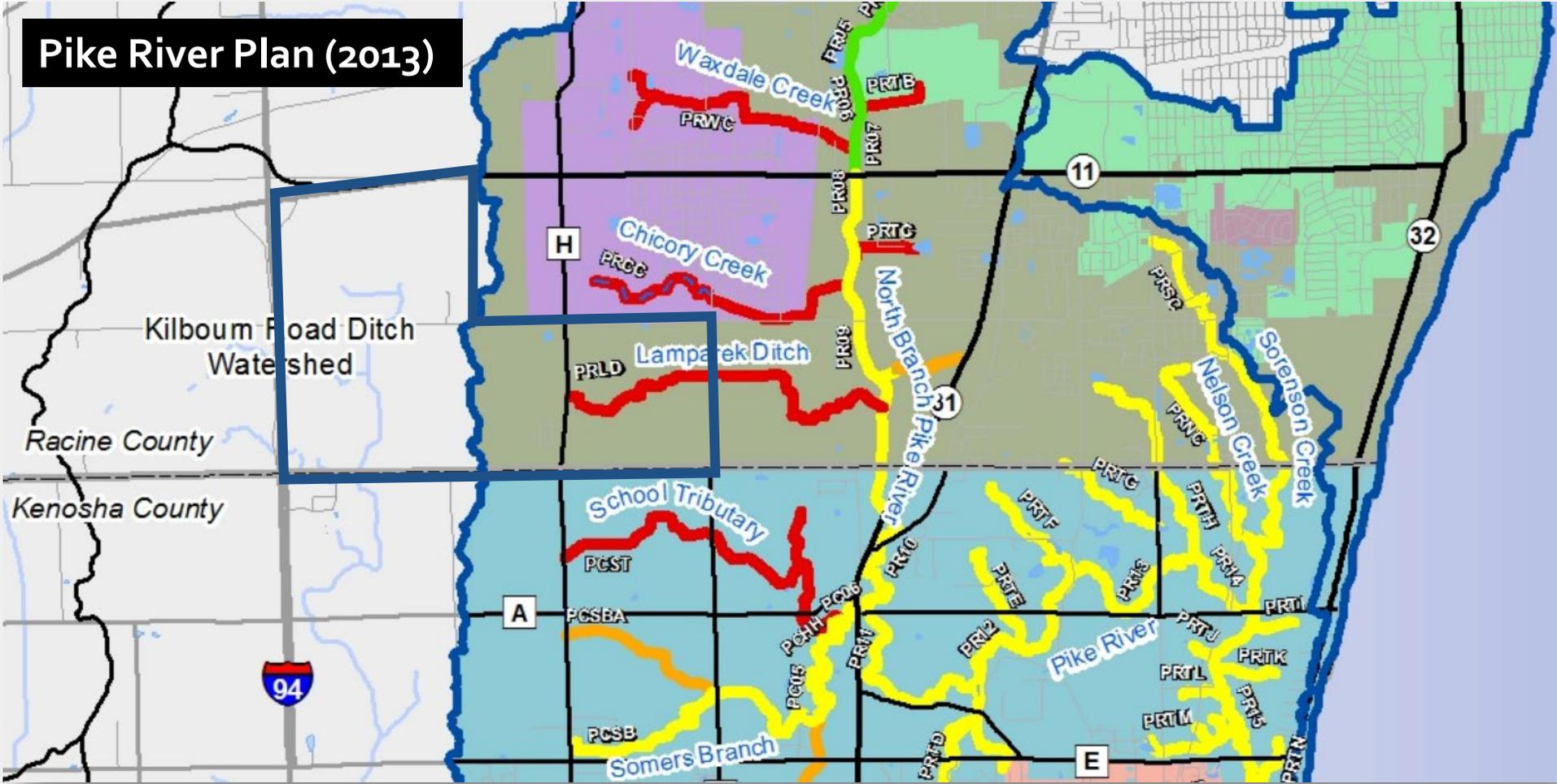


The Need

Restore one of the MOST polluted Pike River tributaries



Lamparek Ditch Issues: "Critical" Condition



Lamparek Ditch Issues: Water Quality

HIGHEST
turbidity

exceeded criteria
50% of the time

TOTAL SUSPENDED SOLIDS

POOR
width to depth ratio

FAIR
habitat rating

FAIR
bank erosion & channel condition

100% of the time
TP and Ortho-phosphate
exceeded criteria

source: *Pike River Water Quality Monitoring Report* (City of Racine, Kinzleman, 2014)



Lamparek Ditch Issues: Water Quality

dissolved oxygen
exceeded criteria 29
out of 85 times

E.coli

exceeded criteria
70 out of 85 times

E.coli Geomean Criterion
exceeded the DNR's
recommended value
100% of the time

Very Poor

Fish and Macroinvertebrate (MI)
Community Assessments

POOR

macroinvertebrate community rating

Excessive Road Salt
Lamparek had significantly
higher specific conductivity
levels than downstream

source: *Pike River Water Quality Monitoring Report* (City of Racine, Kinzleman, 2014)

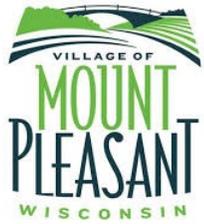


Lamparek Ditch Issues: Physical Condition

“Narrow riparian buffers likely contribute to the high degree of erosion observed, as well as nutrient and sediment loading. Undercut banks are collapsing upstream of the sampling location, further increasing sediment loads.”

source: Pike River Water Quality Monitoring Report (City of Racine, Kinzleman, 2014)

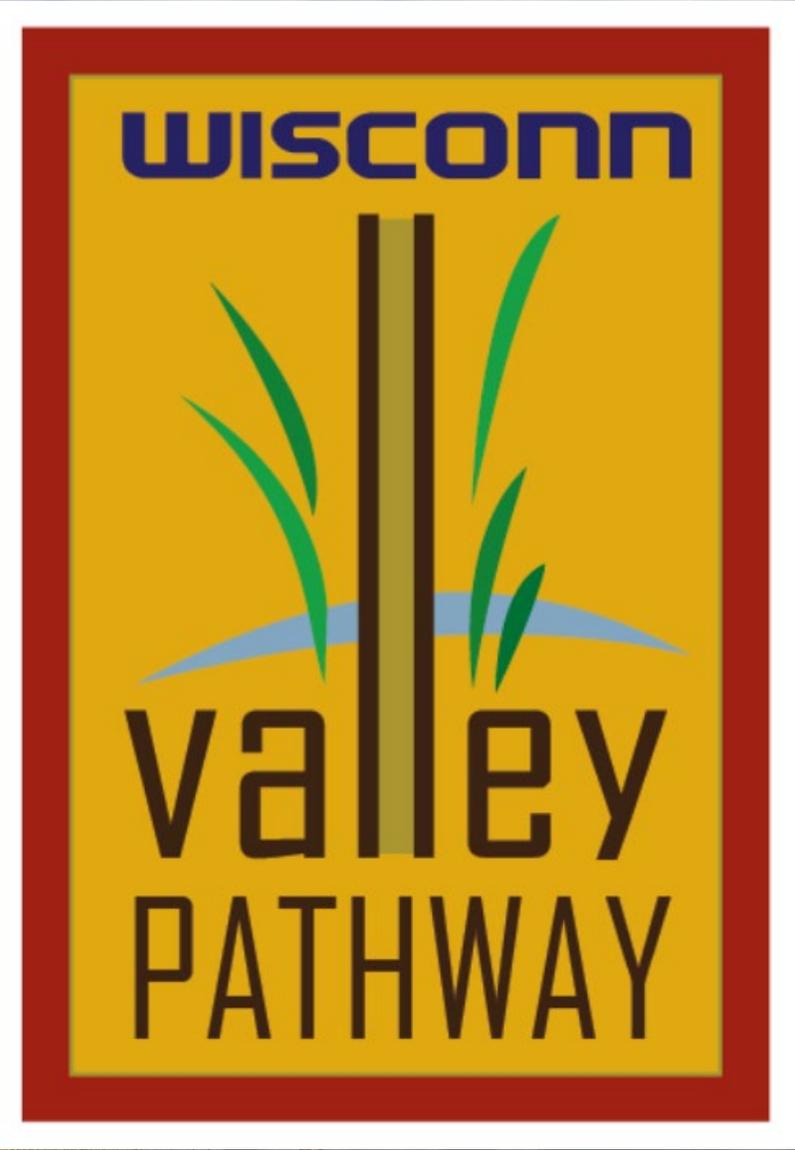




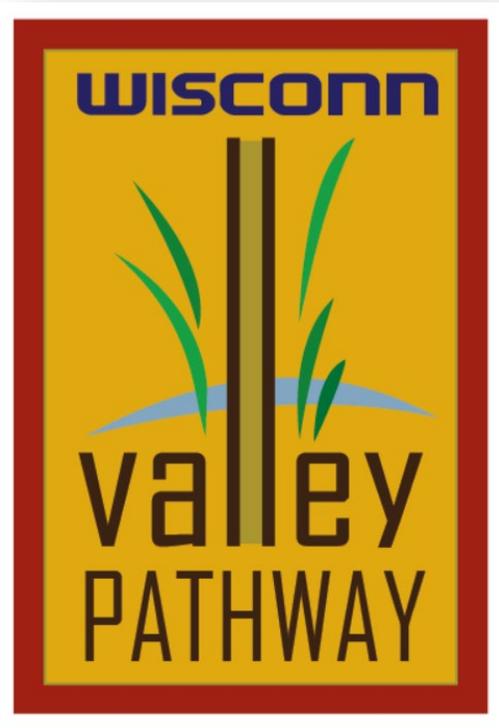
The Solution

A "win-win" water quality and wellness corridor





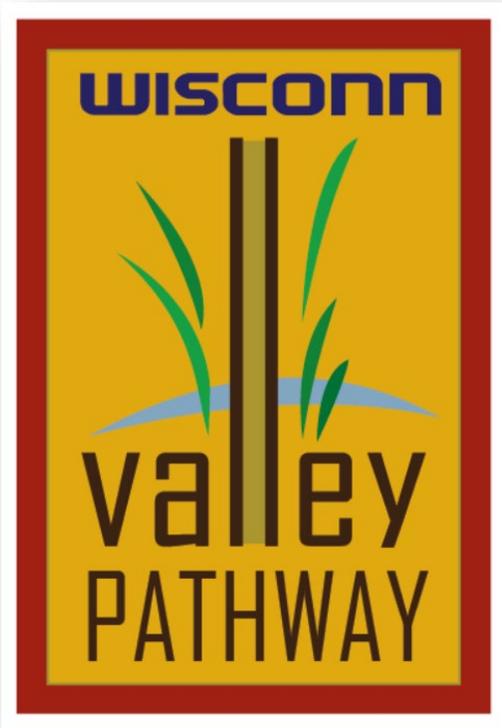
The Mission



Develop an **environmental corridor** to reduce storm water pollutant loading and connect Wisconn Valley with the **restored areas and paths** of the North Branch of the Pike River – creating a **unique sense of place while improving the value** of properties along the Lamparek Ditch.



The Goals



1. Reduce Storm Water Runoff Pollution
2. Increase Habitat for Native Species
3. Strengthen the Mount Pleasant Brand
4. Put the "Valley" in Wisconsin Valley
5. Show The World "Win-Win"



Lamparek Ditch Solutions: Recommendations

“The 2013 Pike River Watershed Plan determined this site is located in a critical area and recommends riparian area restoration”:

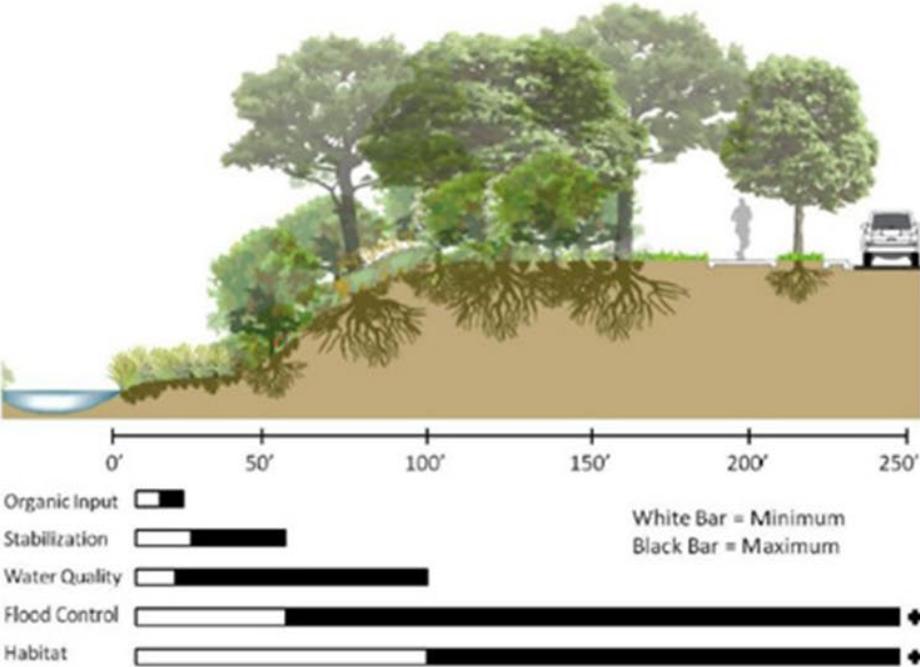
- 1. “Increase filter strips and riparian buffer to reduce sediment, nutrient and bacteria loading.”**
- 2. “Consider stream channel restoration to improve fish and macro-invertebrate habitat.”**



Lamparek Ditch Solutions: Key Elements



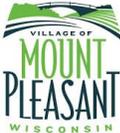
Recreational Trail



Riparian Buffers

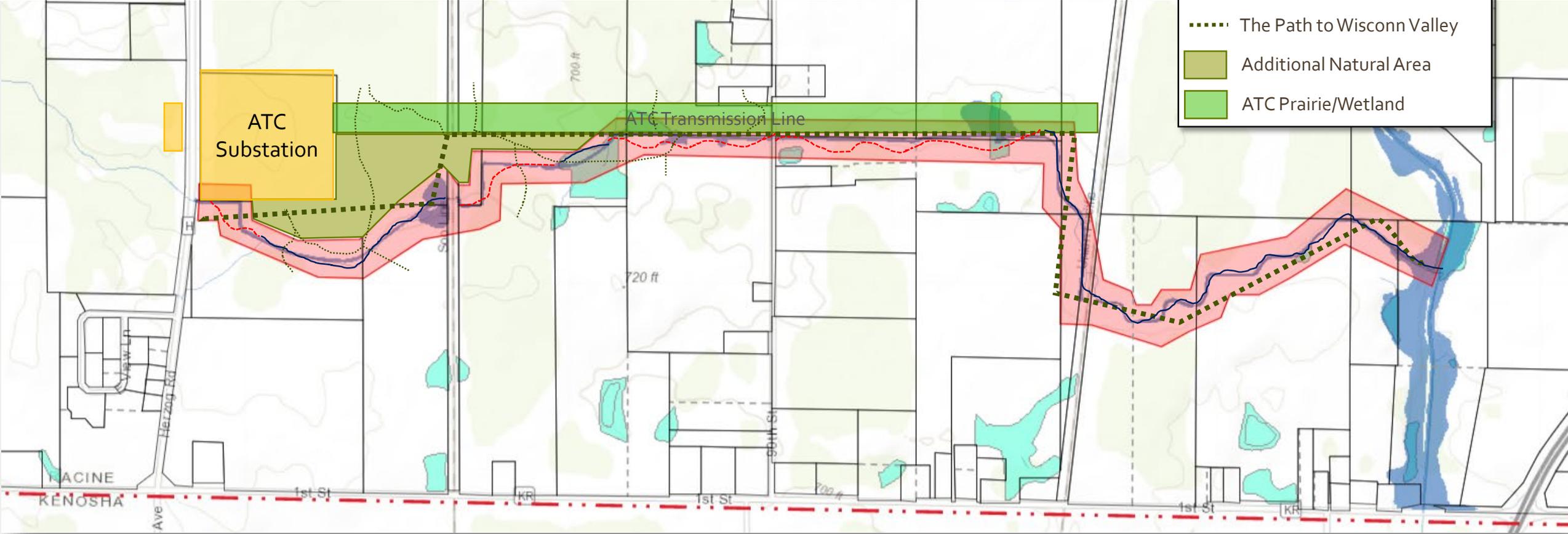


Restored Wetlands & Ponds



Lamparek Ditch Solutions: Summary

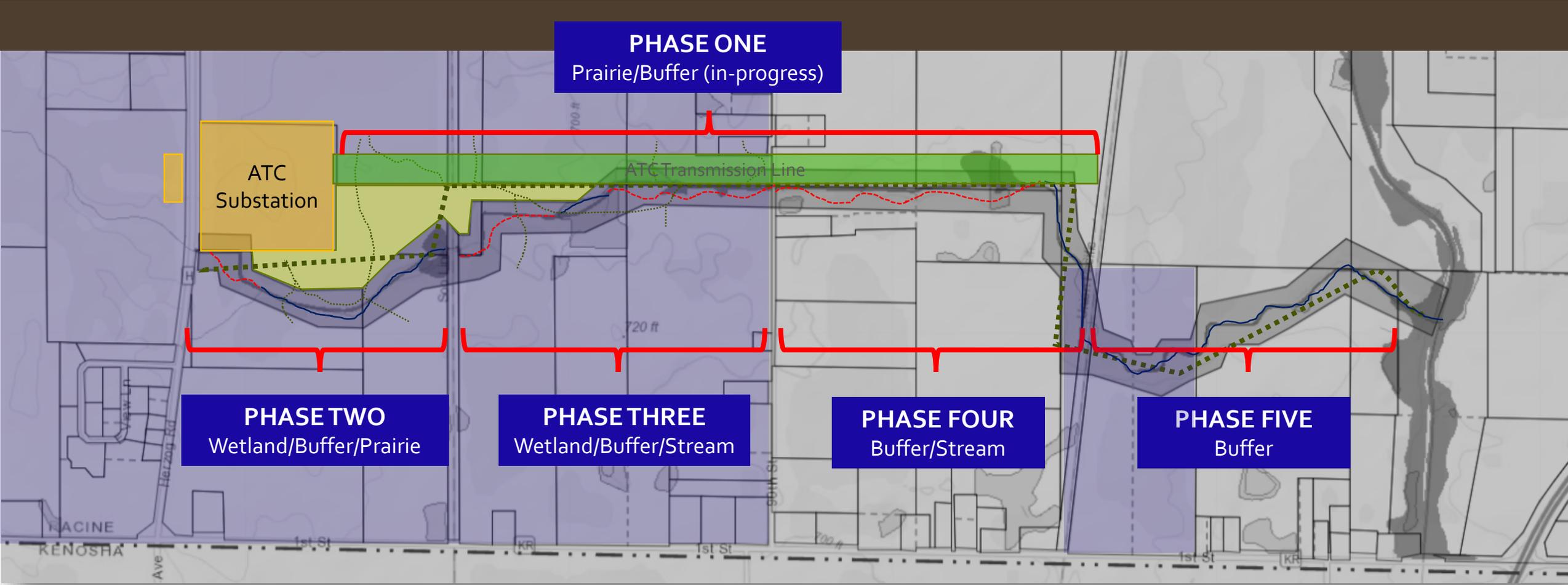
Programmatic View with 300ft Riparian Buffer and Multi-use Trail



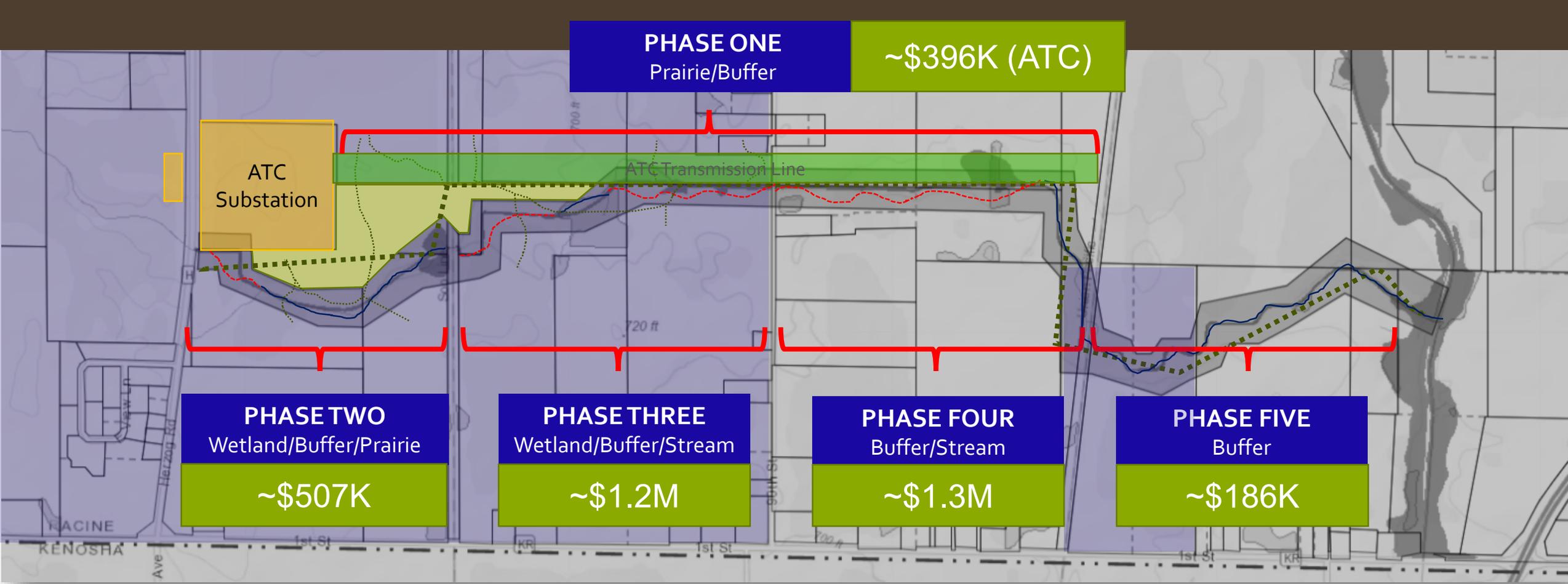
- Existing Wetlands
- 300 foot Riparian Restoration
- Existing Stream Channel
- Possible Re-meandering
- The Path to Wisconsin Valley
- Additional Natural Area
- ATC Prairie/Wetland



Lamparek Ditch Solutions: The Phases



Lamparek Ditch Solutions: Phase Estimates



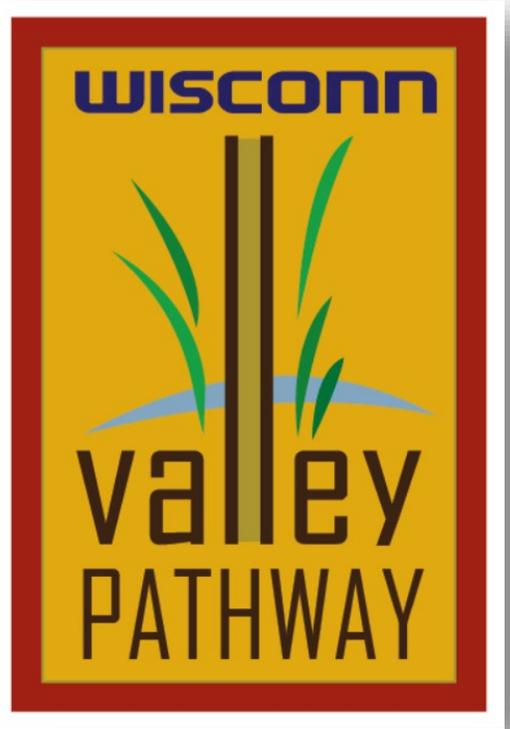
* Phase Two thru Five includes three years of maintenance



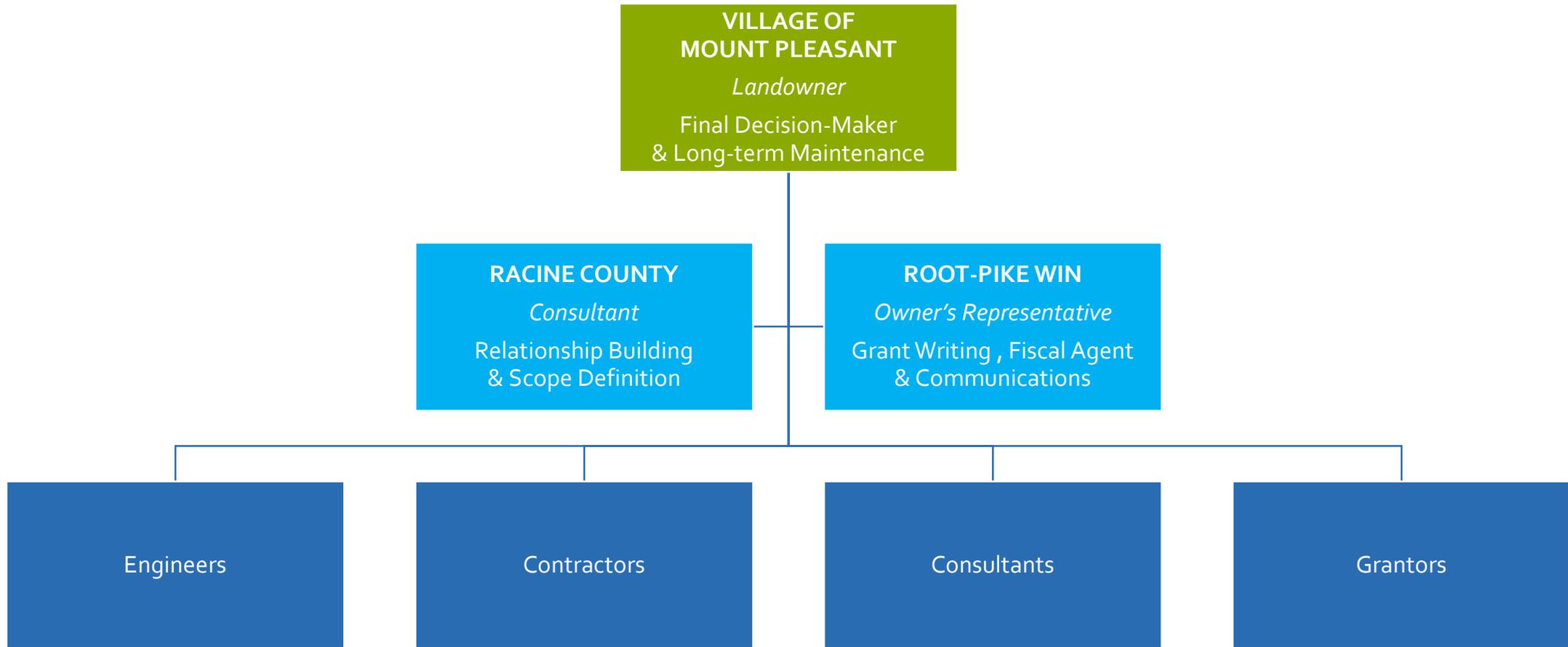
Lamparek Ditch Solutions: Preliminary Estimate

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
status	in-progress	planning	planning	planning	partially complete
SCOPE OF WORK	ATC ROW	CTH H to CPRR	CPRR to 90th	90th to UPRR	UPRR to Pike
Wetland Acres	10	10	5	5	5
Upland Acres	40	15	15	20	10
total	50	25	20	25	15
Stream Re-meander (feet)	0	300	1200	1200	0
total	0	300	1200	1200	0
DESIGN COST ESTIMATE					
Design (assumes 20% of Const.)	\$50,000	\$49,000	\$116,000	\$121,000	\$15,000
total	\$50,000	\$49,000	\$116,000	\$121,000	\$15,000
Construction - Wetland (\$15k/ac)	50,000	50,000	75,000	25,000	25,000
Construction - Prairie (\$5k/ac)	200,000	75,000	100,000	100,000	50,000
Construction - Stream Rehabilitation	-	-	-	-	-
subtotal	250,000	245,000	380,000	605,000	75,000
Contingency (5%)	-	12,250	29,000	30,250	3,750
THREE YEAR MAINTENANCE					
Maintenance - Wetland (\$3600/ac/3yrs)	36,000	36,000	18,000	18,000	18,000
Maintenance - Prairie (\$3000/ac/3yrs)	60,000	45,000	30,000	30,000	18,000
Maintenance - Stream (\$2000/ft/3yrs)	-	-	-	-	-
subtotal	96,000	78,000	90,000	96,000	36,000
total	96,000	78,000	90,000	96,000	36,000
TOTAL RESTORATION BUDGET	\$396,000	\$372,000	\$786,000	\$822,000	\$126,000
TRAIL SYSTEM					
Paved Trail (\$50 per ft w/10 ft W total)	-	135,000	160,000	170,000	60,000
Railroad Crossing (cost per)	-	-	300,000	300,000	-
total	-	135,000	460,000	470,000	60,000
TOTAL PROGRAM BUDGET	\$396,000	\$507,000	\$1,246,000	\$1,292,000	\$186,000

35 acres wetland re-creation
 100 acres prairie / uplands
 2,700 feet stream rehabilitation
 10,500 feet multi-purpose paths
 \$3.2M total program cost



The Structure



We Have a Great Start...





The Outcomes

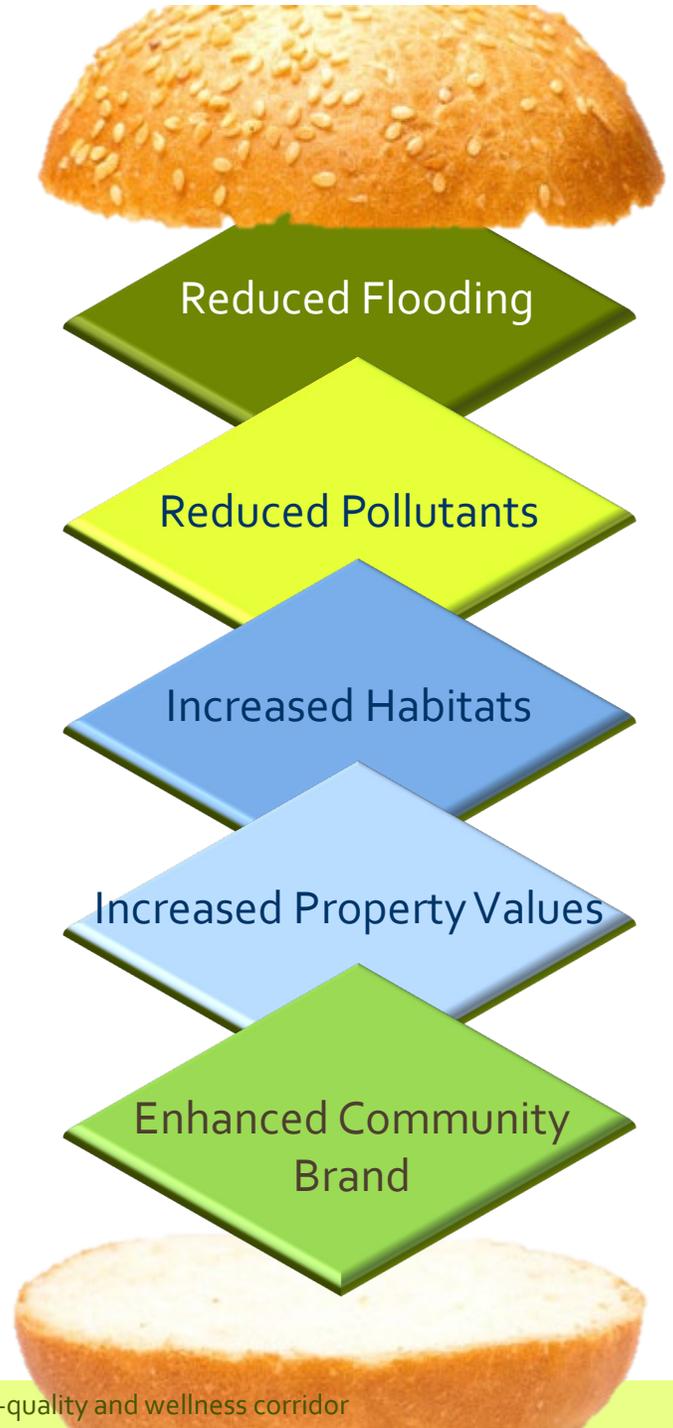
A community development with rare triple benefits



The Vision



The Stormwater Sandwich

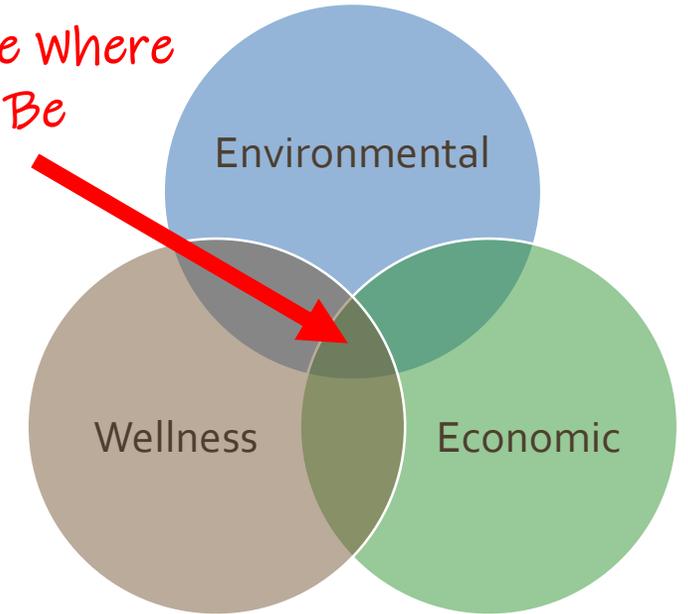


The Benefits

Environmental

- Reduced storm water pollutants: P, N, TSS and E.coli (ROI)
- Reduced storm water volume and velocity (ROI)
- Increased groundwater recharge potential (ROI)
- Increased Fish and Macroinvertebrate Biotic Index scores (ROI)
- More diverse and resilient native species (ROO and ROI)

Creating a Place Where People Want to Be



The Benefits

Economic

- Enhanced land values adjacent to this environmental corridor (ROI)
- Reduced infrastructure costs related to erosion, flooding and future TMDLs (ROI & ROO)
- Mount Pleasant & Racine County's brand is strengthened a clean water community (ROO)

Creating a Place Where People Want to Be



Economic ROI

“Watershed restoration can avert billions of dollars in potential water quality damages, grow tourism revenues in local communities, increase housing values, provide inherent quality of life improvements, supply well-paying jobs, and facilitate long-term growth.”

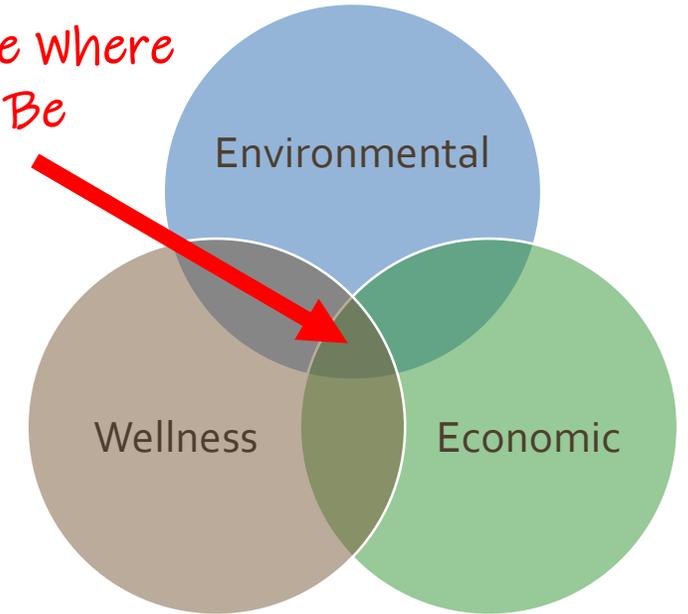
- Economic Benefits of Watershed Restoration, By Josh Hurd, Wildlands CPR, 2009)

The Benefits

Wellness

- More passive and active space for employees, neighbors and visitors creating healthier lifestyles (ROO)
- More diverse walking, running, biking, cross-country skiing and fishing opportunities (ROO)
- Increased connectivity to the existing Mount Pleasant & Kenosha County trail systems (ROO)
- Greater sense of place as a destination to live, work and play (ROO)

Creating a Place Where People Want to Be



The Story

Can the Wisconn Valley development make the watershed better than it was before?



We Can Show the World “Win-Win”.



Wisconsin
Valley

Pike
River