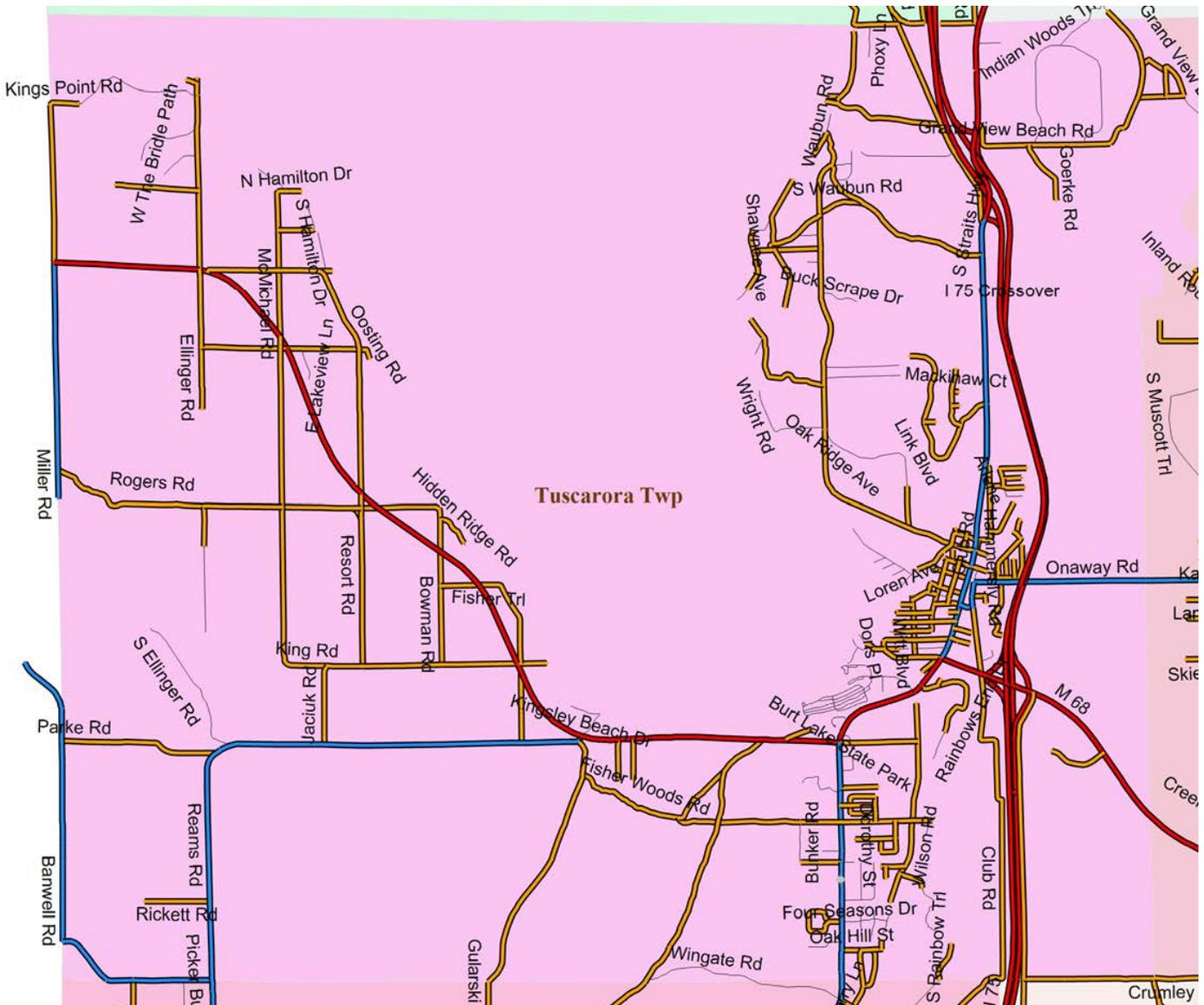


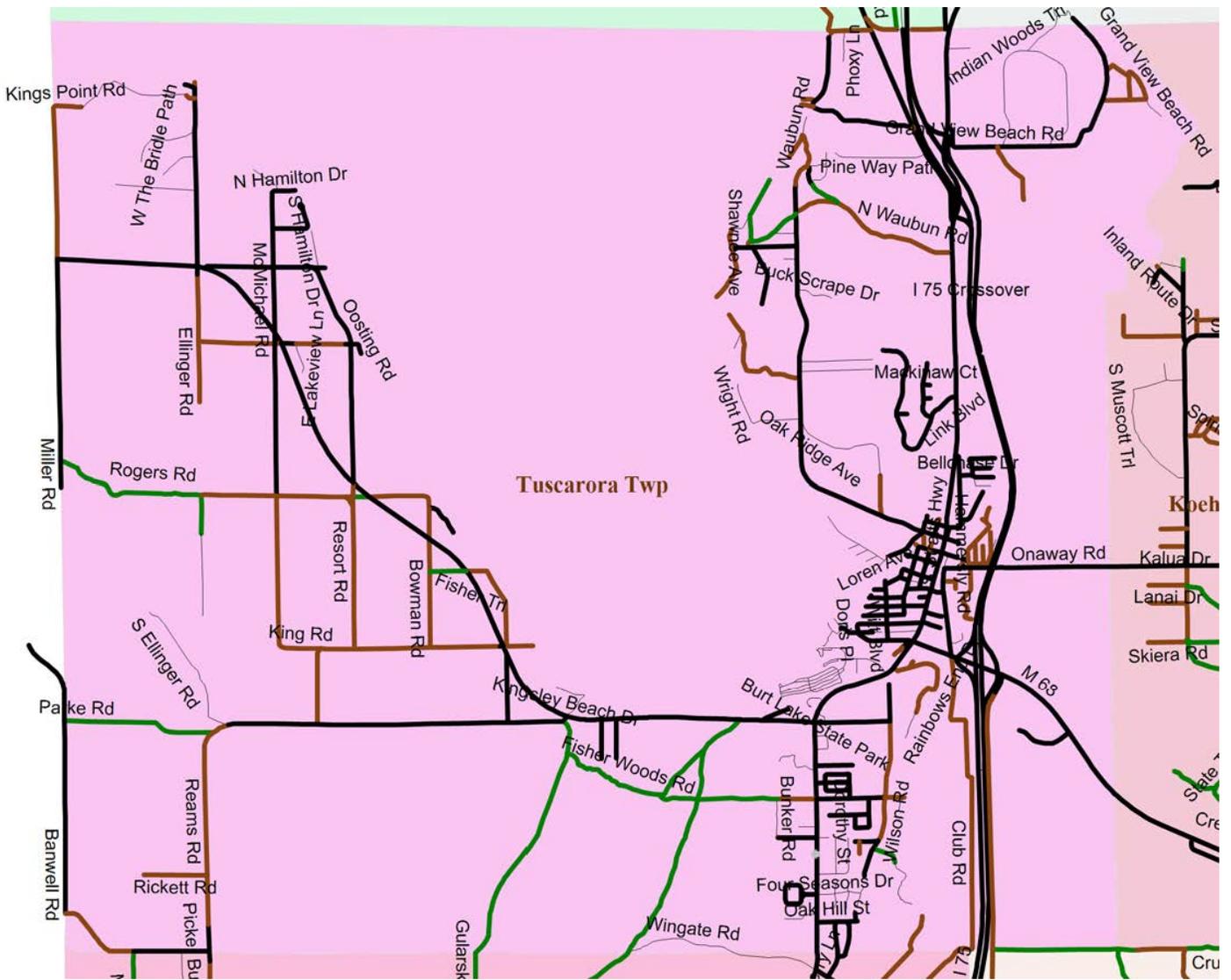
Cheboygan County Road Commission
Tuscarora Township Local Road Ratings Report for 2019

The goal of the Road Commission is to use Asset Management Strategies when planning projects for the roads under the jurisdiction of the Cheboygan County Road Commission. Asset management, as defined by Public Act 199 of 2007, is an “ongoing process of maintaining, upgrading and operating physical assets cost-effectively, based on a continuous physical inventory and condition assessment. Using asset management will allow the Road Commission and Township to invest the available road funds in a manner that will provide the greatest return.



Township Roads by Legal System

Red = State Highways – **Blue** = County Primary Roads – **Orange** = County Local Roads



Roads by Surface Type

Black = Pavement – Brown = Gravel – Green = Seasonal

PASER Road Rating System

All the local paved roads are rated each year using the PASER Road Rating system in the Township (seasonal roads are not included). PASER, or Pavement Surface Evaluation and Rating, is the rating system that is used in collecting data for RoadSoft. The roads are rated on a scale of 1 to 10 according to surface conditions of the pavement. The tables below show the rating and the suggested maintenance that would be required to preserve the road along with an estimated cost of repair.

PASER Rating and Treatments for Paved Roads

Road Rating	Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
9	No Maintenance necessary. Smooth Surface.	\$ 0
8	Minor Crack Sealing	\$ 600
7	General Crack Sealing and/or Minor Patching	\$ 3,200
6	Patching and Sealcoat	\$ 29,000
	Ultra-thin Asphalt Overlay	\$ 63,000
5	Asphalt Wedging	\$ 47,000
	Asphalt Wedging and Sealcoat	\$ 75,000
	Asphalt Wedging and Ultra-thin Asphalt Overlay	\$ 106,000
4	Asphalt Wedging and Overlay	\$ 142,000
3	Pulverize, gravel and pave	\$ 240,000
2	Reconstruction.	\$ 350,000
1	Reconstruction. Failed Road.	\$ 350,000

Gravel roads are rated using the Inventory-Based Rating System™ for Gravel Roads (IBR). The IBR system considers three characteristics of a road segment to determine a rating for the segment. Surface width, drainage adequacy and structural adequacy are all evaluated to determine the segment rating. From this evaluation a rating of 1 to 10 is calculated.

IBR Rating and Treatments for Gravel Roads

Road Rating	Existing Condition / Recommended Repair	Estimated Cost per Mile
10	No maintenance necessary. New Road	\$ 0
8 – 9	Good crown and drainage throughout. Adequate gravel for traffic. Maintain with grading and dust control.	\$ 500
6 - 7	Existing crown with drainage on 50% or more of roadway. Additional gravel needed in some areas along with ditching.	\$ 55,000
3 - 5	Little or no crown. Ditched on less than 50% of the road. Additional gravel needed on entire road along with ditching.	\$ 95,000
1 - 2	Failed road. Reconstruction.	\$ 250,000

Tuscarora Township Paved Local Road Ratings

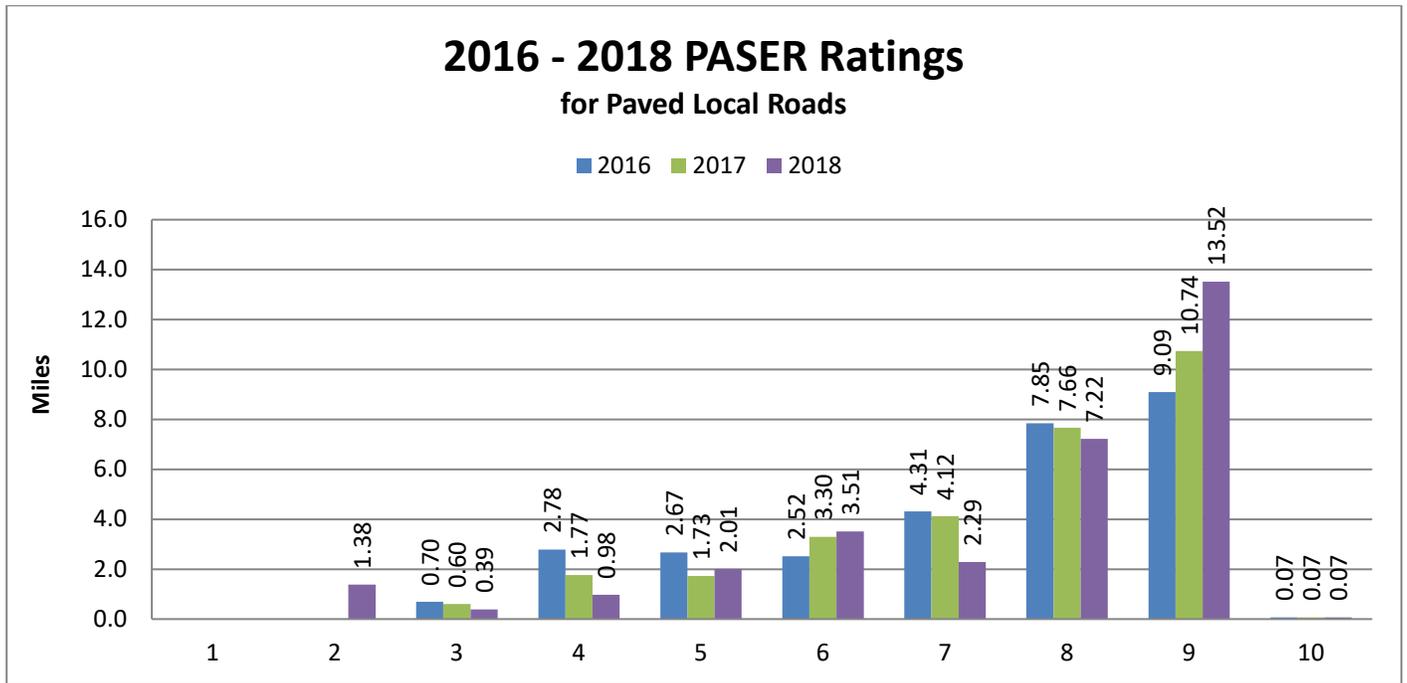
Current Road Ratings

PASER Rating	Road Name	Limits	Length (miles)
10			
9	Eagles Nest Road	Straits Highway to Sturgeon Bay Drive.	1.38
8	Barbara Avenue Barbara Avenue Burt Court Mackinac Court	Witt Blvd. to Dorothy Avenue. Dorothy Avenue to end of public road. Link Blvd. to end of road. Link Boulevard to end of road.	0.19 0.12 0.04 0.04
7	Burchfield Avenue Fisher Woods Road Mack Avenue Ottaws Trail Poplar Street South Avenue Witt Boulevard	Witt Blvd. to Straits Highway. Eastway Road to Wilson Road Witt Blvd. to end of road. Nabanois Trail then west to end of road. Holden Avenue to South Avenue. Burt Lake to Witt Blvd. Holden Avenue to end of the road at the Indian River.	0.23 0.22 0.10 0.03 0.06 0.13 0.24
6	Arthur Street Doris Place Fisher Woods Road Oakhill Street Poplar Street River Street South Avenue The Pike Wilson Road Wood Hollow	Constance Avenue to Poplar Street. Barbara Avenue to Burchfield Avenue. South Straits Highway to Eastway Road. Straits Highway then east to end of road. South Avenue to Floyd Street. Straits Highway then easterly to end of road. Straits Highway to Poplar Street. Witt Blvd. to Straits Highway. Constance Avenue to Poplar Street. Fisher Woods Road to end of road. Link Blvd. to end of road.	0.06 0.05 0.22 0.27 0.23 0.10 0.16 0.23 0.07 0.55 0.07
5	Arthur Hills Street Berry Lane Burchfield Avenue Daily Road Floyd Street Hemlock Street Juno Street King Road Link Boulevard Mona Street Oak Glen Street Rotter Road Spruce Street Vola Road Waterway Street Wilson Road Witt Boulevard	Mona Street to Louise Drive. Oakhill Street to Township Line. Dorris Avenue to Witt Blvd. Township Line to Oak Hill Street. Poplar Street to Straits Highway. Spruce Street to Straits Highway. Floyd Street to River Street M-68 to Fisher Trail. Link Place to end of road. Dorothy Street to Arthur Hills Street. Witt Blvd. to end of road. M-68 Lakeview Lane. Hemlock Street to end of road. Wilson Road to end of road. Straits Highway to the end of road. W Wilson Road north to end of road. Oakhill Street then north to end of pavement. Barbara Avenue to Holden Avenue.	0.09 0.20 0.19 0.27 0.16 0.13 0.28 0.02 1.07 0.09 0.07 0.10 0.03 0.15 0.13 0.31 0.05 0.17

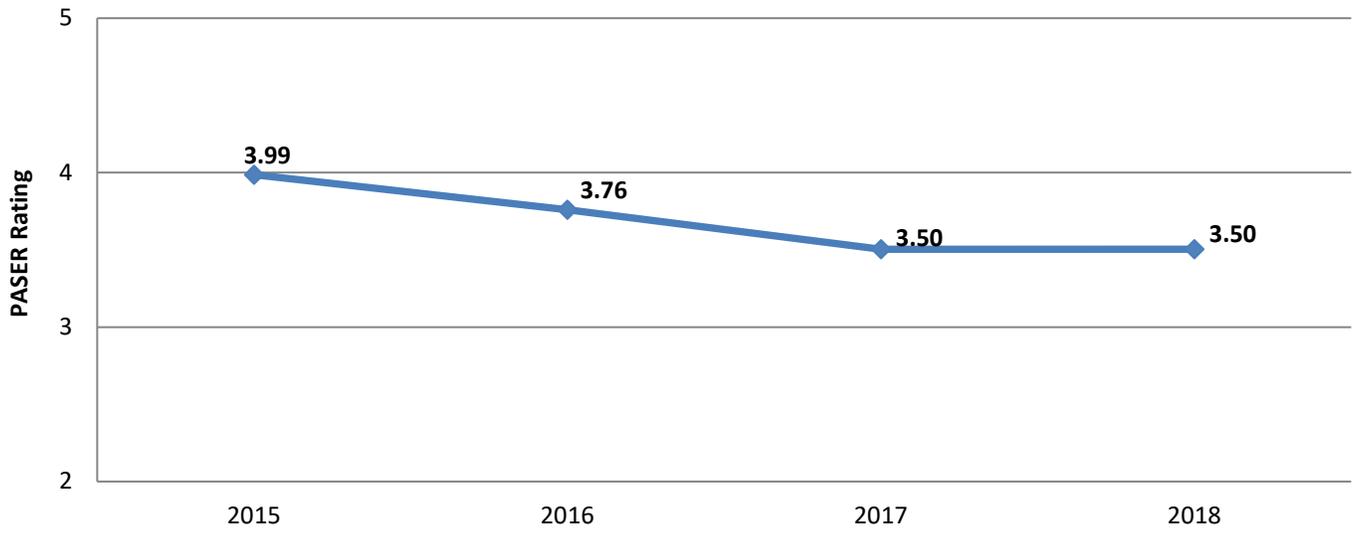
4	Apple Blossom Street	Gratiot St. to end of the road.	0.25
	Brudy Road	M-68 then south to the end of pavement.	0.12
	Club Road	Prospect Street to Hemlock Street.	0.11
	Commerce Blvd.	M-68 to end of the road.	0.37
	Dorothy Street	Mona Street to Louise Drive.	0.09
	Dorothy Avenue	Barbara Avenue to end of pavement.	0.09
	Holden Avenue	Poplar Street to end of road.	0.27
	Louise Drive	Arthur Hills Street to end of road.	0.25
	Mack Avenue	Poplar Street to Witt Street.	0.10
	The Pike	Witt Blvd. to Constance Avenue.	0.10
	Tuscarora Circle	Straits Highway to Straits Highway.	0.51
3	Arthur Hills Street	Louise Drive to Fisher Woods Road.	0.11
	Barbara Avenue	M-68 to Witt Blvd.	0.16
	Bosserman Court	Straits Highway to end or road.	0.24
	Constance Avenue	The Pike to Arthur Street.	0.06
	Eastway Drive	Fisher Woods Road to Maplewood Road.	0.17
	Ellinger Road	M-68 to end of pavement.	1.21
	Elmwood Road	Westway Road to Eastway Road.	0.17
	Fisher Trail	Parke Road to M-68.	0.50
	Hidden Ridge Road	Bowman Road to end of road.	0.23
	Lake Street	Straits Highway to end of road.	0.22
	Link Boulevard	Straits Highway Link Place.	0.22
	Link Place	Link Boulevard to end of road.	0.37
	Mack Avenue	Poplar Street to Witt Blvd.	0.06
	Maplewood Road	Westway Road to Eastwood Road.	0.17
	Pembroke Road	Straits Highway to Eastwood Road.	0.21
	Plymouth Beach Road	Eagle's Nest Road to Margaret Drive.	0.77
	Poplar Street	Floyd Street to River Street	0.18
	Prospect Street	End of road to Spruce Street.	0.27
	Prospect Street	Straits Highway the southeasterly to end of road.	0.08
	E/W Resort Road	McMichael Road to end of road.	0.33
Shawnee Avenue	Frontenac Avenue then south to end of road.	0.39	
Springwell Road	McMichael Road to the end of road.	0.48	
Westway Road	Maplewood Road to Elmwood Road.	0.12	
W Wilson Road	Straits Highway to Wilson Road.	0.50	
2	Argonaut Trail	M-68 then 0.30 miles northeasterly.	0.30
	Arlene Avenue	Bellchase Drive to Lori Drive.	0.11
	Bellchase Drive	Gratiot Road to end of the road.	0.22
	Bunker Road	Straits Highway then 0.25 miles west.	0.25
	Chippewa Beach Road	Spruce Street to end of pavement.	2.83
	Club Road	M-68 to Martha Street.	0.40
	Cressy Street	South Straits Highway to end of road.	0.12
	Diane Drive	Arlene Drive to end of road.	0.11
	Ellinger Road	M-68 then south to the end of pavement.	0.05
	Forest Trail	M-68 to end of Road.	0.27
	Frontenac Avenue	Wahbee Avenue to Chippewa Beach Drive.	0.82
	Grandview Beach Road	South Straits Highway to Township Line	1.79
	Gratiot Street	Hemlock Street to South Straits Highway	0.49
	Hemlock Street	Straits Highway to Gratiot Street.	0.14
	Hamilton Road	McMichael Road to the end of pavement.	0.10

	Juno Street	Oakley Street to Floyd Street.	0.05
	Kings Point Resort Road	Ellinger Road then westerly to end of road.	0.06
	Lori Lane	Arlene Avenue to end of road.	0.17
	McMichael Road	Rogers Road to Hamilton Road.	2.00
	Oakley Avenue	Poplar Street to Straits Highway.	0.16
	Oosting Road	Resort Road to the end of pavement.	0.11
	Plymouth Beach Drive	Margaret Drive to end of road.	0.52
	Prospect Street	Spruce Street to Straits Highway.	0.14
	Resort Road (N/S)	M-68 to Resort Road (E/W).	1.47
	E/W Resort Road	M-68 to McMichael Road.	0.50
	Sherwood Drive	M-68 to end of road.	0.27
	Spruce Street	Prospect Street to Hemlock Street.	0.07
1	Gatewood Avenue	Prospect Street to Hemlock Street.	0.07

2018 Average PASER Rating for Paved Local Roads 3.50
2017 Average 3.50
2016 Average 3.76



Average PASER Rating for Paved Local Roads



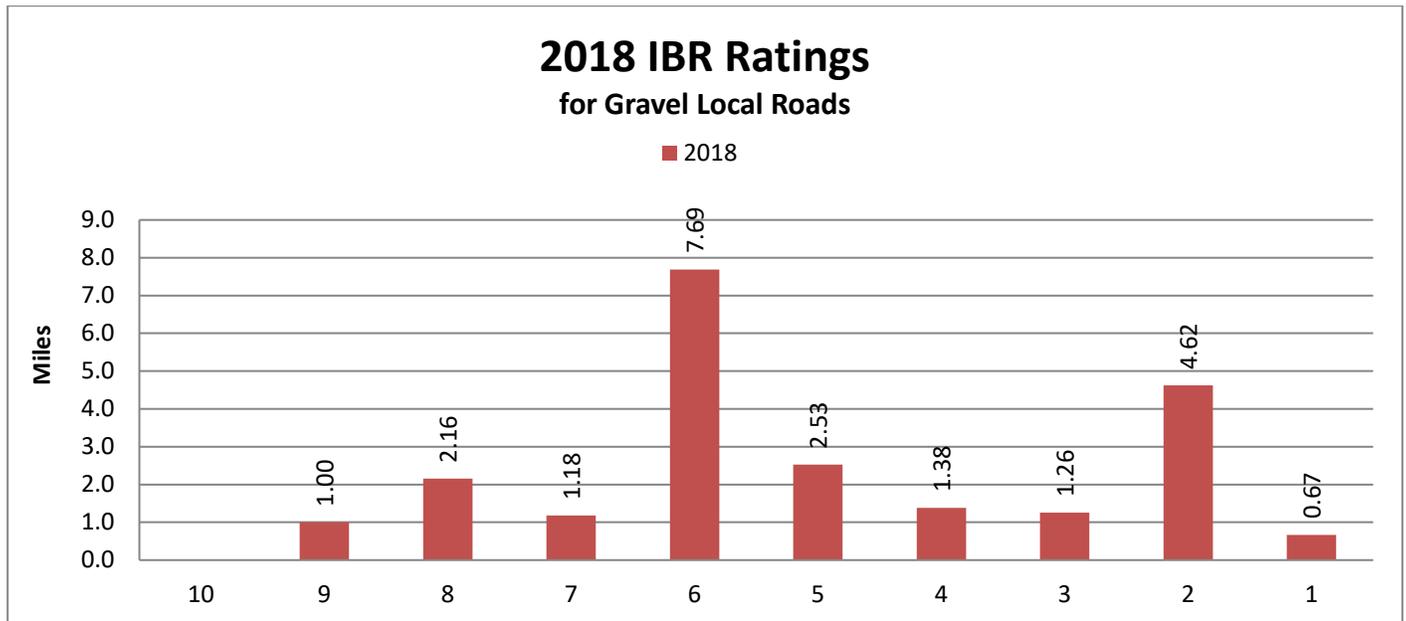
Tuscarora Township Gravel Local Road Ratings

Current Road Ratings

IBR Rating	Road Name	Limits	Length (miles)
10			
9	McMichael Road	King Road to Rogers Road.	1.00
8	Jaciuk Road King Road Resort Road	Parke Road to King Road. Bowman Road to M-68. Fisher Trail to end of road. Ellinger Road to Shortcut Road.	0.50 0.49 0.15 1.02
7	Miller Road	M-68 to end or road.	1.18
6	Burdy Road Ellinger Road Fisher Trail Hammersly Road Inuery Trail King Road Nabanois Trail Oak Ridge Road Rogers Road Wahbee Avenue Waubun Road	End of pavement then south to Township Line. South end of road to Rotter Road. King Road to M-68. Inueary Trail to Nababois Trail. Nabanois Trail to the end of road. McMichael Road to Bowman Road. Onaway Road to Mingo Trail. Chippewa Beach Road north to the end of road. Ellinger Road to Bowman Road. Frontenac Avenue then north to end of road. Chippewa Beach Road to Straits Highway.	1.68 0.39 0.67 0.14 0.33 0.98 0.39 0.26 1.53 0.13 1.19
5	Bowman Road Goerke Road Mac A Vista Drive	King Road to M-86 Grandview Beach Road then south to end of road. Chippewa Beach Road to McMillan Road.	0.70 0.41 0.76
5	Mingo Trail Shortcut Road Victor Drive Woods Trail	Nabanois Trail to end of road. Resort Road to Rogers Road. Onaway Road then south to end of road. Onaway Road to Ottaws Trail.	0.10 0.10 0.40 0.06
4	Chippewa Beach Road Ellinger Road Fisher Woods Road Ottaws Trail Wilson Road	End of pavement to end of road. End of pavement to Burt Lake. Straits Highway to Bunker Road. Nabanois Trail then west to end of road. Fisher Woods Road to W Wilson Road.	0.52 0.04 0.25 0.06 0.51
3	Ellinger Road Rotter Road Wahbee Avenue	Rotter Road to M-68. Ellinger Road to M-68. South of Frontenac Avenue.	0.45 0.54 0.27
2	Alden Trail Bowman Road Canal Street Club Road Eden Court Grace Beach Road S Grandview Beach Road Milton Road Pleasant Beach Court	Inuery Trail to end of road. M-68 to Rogers Road North and south of Irish Drive. M-68 then south to Township Line. Rainbows End Drive to end of road. Grandview Beach Road to S Grandview Beach Road. Grandview Beach Road to Grace Beach Road. Vola Road then south to end of road. Grace Beach Road to S Grandview Beach Road.	0.12 0.20 0.05 1.85 0.05 0.28 0.41 0.08 0.18

	Margaret Drive	Plymouth Beach Road to end of road.	0.04
	South Rainbow Trail	Township Line to end of road.	0.25
	Rainbows End Drive	Straits Highway to end of road.	0.67
	Rotter Road	Resort Road then west to pavement.	0.35
	Sturgeon Avenue	End of pavement to end of road.	0.09
1	Gatewood Avenue	Hemlock Street to end of road.	0.03
	Irish Drive	Club Road to Canal Street.	0.09
	Juno Street	River Street to the end of road.	0.04
	Linda Lane	Plymouth Beach Road to end of road.	0.04
	Rickett Road	Reams Road then west to end of road.	0.41
	River Street	Poplar Street to end.	0.03
	N River Street	River Street to end of road.	0.03

Average PASER Rating for Gravel Local Roads 5.00



Service Life of Treatments

Service life is the expected time that a treatment will last before needing complete reconstruction. In the table below, an expected service life for a particular treatment is listed. Before a treatment reaches the expected service life, preventative maintenance should be performed. Preventative maintenance will extend the expected service life of the pavement and treatment.

Service Life of Treatments for Paved Roads

Road Rating	Recommended Repair	Expected Service Life (years)
8	Minor Crack Sealing	5
7	General Crack Sealing and/or Minor Patching	5
6	Patching and Sealcoat	7
	Ultra-thin Asphalt Overlay	7 – 10
5	Asphalt Wedging	7
	Asphalt Wedging and Sealcoat	7 – 10
	Asphalt Wedging and Ultra-thin Asphalt Overlay	10
4	Asphalt Wedging and Overlay	12 – 15
3	Pulverize, gravel and pave	15 – 25
2	Reconstruction.	25 - 30
1	Reconstruction. Failed Road.	25 - 30

For example, if a road has a PASER rating of 6, a treatment of a ultra-thin asphalt overlay is recommended (see the Table titled PASER Ratings and Treatment on page 1). The expected service life for an ultra-thin asphalt overlay is 7-10 years. Preventative maintenance in the form of crack sealing may be required after 2 years.

Expected service life may be shorter if the road is on poor soils that are not addressed as part of the treatment. If a project is selected that is not the recommended treatment, the service life listed in the table above will be shorter and preventative maintenance will need to be performed sooner.

Service Life for a gravel road is difficult to predict. Gravel road conditions can change rapidly based on weather, grading and traffic effects on the roads.