



Cypress County

WINTER MAINTENANCE OPERATIONS LEVEL OF SERVICE





Cypress County - Policy
**WINTER MAINTENANCE
OPERATIONS LEVEL OF SERVICE**

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Resolution: 2022/361

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Purpose

The purpose of the Winter Maintenance Operations Level of Service policy is to communicate the process and level of service for snow and ice removal for Cypress County. County roadways are divided into categories and subcategories based on priority levels as follows:

- **Level 1**
 - Hard Surfaced & Oiled Dust Abatement (greater than 800m) Roadways
 - Priority 1 Gravel

- **Level 2**
 - Hard Surfaced Residential Subdivisions
 - Hard Surfaced & Oiled Dust Abatement (greater than 800m) Roadways
 - Priority 2 Gravel

- **Level 3**
 - Hamlets
 - Recreational Trails

- **Level 4 – Fee for Service**
 - Plowing Residence Driveways (fees as per the Master Rates Bylaw)

This prioritization of roadways will accommodate the majority of traffic and emergency services. The goal of Cypress County is to remove snow and ice from our roadways as rapidly and efficiently as possible while keeping roads open and essential traffic flowing. Clean, dry pavement should not be expected following a storm.

The goal of Cypress County is to return road surfaces to safe winter driving conditions quickly by working within the limitations of this policy, limited resources, and weather conditions. With proper use of weather forecast technology, equipment, personnel, and de-icing materials this goal can be obtained. Patience and flexibility are required to adapt to a large variety of circumstances and conditions during a storm.

Considerations

Cypress County considers multiple factors while developing policies for winter maintenance operations. These factors include, but are not limited to the following:

- Public Safety
- Funding dollars
- Competent personnel
- Ability to maintain emergency services
- Environmental impacts
- Historic weather conditions and temperatures
- Protection of property
- Effective resource allocation

Policy Statement

The snow and ice control objectives of the County are to:

- Provide safe travelling conditions for motorists
- Provide cost effective snow and ice control services
- Reduce economic losses to the County and local businesses
- Assist emergency services transportation
- Provide safe, passable roads

Cypress County has a commitment to provide effective and efficient winter maintenance to its citizens. However, it must be realized that circumstances may delay and/or prevent the completion of this plan.

Some circumstances are:

- Unforeseen emergencies
- Parked or stalled vehicles that restrict operations
- Severe weather that crews will be called from duty, for their safety
- Inadequate equipment
- Mechanical failures
- Crew breaks
- Visibility for safe travel
- Lack of de-icing materials

Scope of Responsibility

Cypress County is responsible for snow and ice control on County roads within the County municipal boundary. Provincial highways within the Cypress County boundary are handled by Alberta Transportation controlled contractors. Cypress County does not remove snow and ice from private streets, sidewalks, parking lots, or driveways unless approved by Council.

Level of Service

It is the expectation of our citizens that we keep all County roads sufficiently passable during and following a winter storm. To accomplish this expectation, Cypress County will provide, to a reasonable extent, snow and ice maintenance services consistent with generally accepted standard practices. Each winter storm event is unique. Factors that will heavily influence when and what services are delivered include:

- Air and road temperatures
- Wind speed and direction
- Precipitation type
- Precipitation amount
- Traffic activity
- Availability of supplies
- Availability of personnel
- Availability of equipment

Winter maintenance activities are directed to achieving and maintaining relatively safe traffic movement on Cypress County roadways. Therefore, efforts are prioritized as outlined in the Level of Service List.

The maximum level of service is reached when Level 1 roadways are clear of snow and ice from shoulder of road to shoulder of road. The minimum level of service is for the Level 1 roadways to be cleared to a packed snow cover.

Implementation

The following policies and procedures outlined below will be in effect when weather conditions are forecasted to cause accumulations of snow, ice, frost, or sleet on Cypress County roadways. The County begins preparing for winter operations in late September. All winter operating equipment is serviced, installed and tested to ensure adequate service deliverance.

The County will apply best management practices in the applications of all maintenance products in order to protect the environment and reduce negative impacts on vulnerable areas. Spread rates for materials will be monitored and tracked.

Monitoring Winter Storm Events

Public Works Operations staff will coordinate winter maintenance activities as required. Prior to normal working hours, the Public Works will evaluate road conditions while communicating with operators in each area to gain event information and evaluate the maintenance activities required.

When Operations Begin

Based on the conditions communicated and observed, Public Works will make the necessary decision to begin maintenance operations. Public Works will decide when and where to begin winter maintenance operations and will communicate this decision and direction to the operators. The criterion for the decision is:

1. Hard Surface and Oiled Dust Abatement Roads (greater than 800m) - Within 24 hours after 5 cm of snow accumulation
2. Gravel Surface Roads - Within 24 hours after snow accumulation reaches a depth of 10 cm
3. Icy conditions which affect travel
4. Time of the event in relationship to traffic volume peak periods

Snow and ice maintenance operations are expensive and involve the use of limited materials, personnel, and equipment. During a winter storm event, snow maintenance becomes the operational priority above all other routine operations.

The use of weather reports and road temperatures from Government of Alberta provided Weather Sentry in conjunction with other resources, satellite storm tracking, and radio will be used concurrently with internal road condition reports to determine and adjust the appropriate storm response to ensure a high level of service is delivered.

Snow Maintenance

Employees assigned to snow maintenance are responsible for the completion of their assigned route and appropriate snow and ice maintenance based on weather or roadway conditions. Each operator assigned to a specific route is responsible for monitoring its condition and shall maintain communication with the Public Works Supervisors regarding progress and effectiveness of efforts. Foremen/ Supervisors are responsible to direct and coordinate work crews to complete winter maintenance operations in accordance with the established priority system.

When icy conditions develop on roadways and if conditions warrant, abrasives and/or melting agents may be applied to the road surfaces. At the direction of Council, residential subdivisions will be plowed only, and no sand or salt will be applied to road surfaces.

Snow will be plowed by snowplows and motor graders in a manner as to minimize traffic obstructions. Each road will require a minimum of two passes (one in each driving lane).

Level 1 – Hard Surfaced & Oiled Dust Abatement Roads (<800m), Level-1 Gravel Roadways

The designated routes, shown in the attached appendices, will always have precedence during and following a winter storm event. Crews will continue working on Level 1 roadways until the desired level of service is achieved. Once these roads are open operations will proceed to next level roadways.

Level 2 – Residential Subdivisions and Priority 2 Gravel Roadways

The designated routes, shown in the attached appendices, will be the second level during and following a winter storm event. Crews will continue working on Level 2 roadways until the desired level of service is achieved. Once these roads are open operations will proceed to next level roadways.

Level 3 – Hamlets and Recreational Trails

The designated routes, shown in the attached appendices, will be the third level during and following a winter storm event. Crews will continue working on Level 3 roadways until the desired level of service is achieved. Once these roads are open operations will proceed to the next level roadways.

Level 4 – Residential Driveways (Fee for Service)

Private residential driveways may be plowed upon request with a fee for service applied. Private driveways may only be plowed after all County roads are open and with the approval from the Public Works Supervisor.

Snow removal from approaches and driveways (including snow ridges or windrows that may have accumulated because of snow removal operations), are the responsibility of the landowner to clear. Snow cleared from approaches, driveways, and sidewalks must not be pushed across highways, deposited onto roadways, or deposited into ditches.

Personnel Responsibility

The Winter Maintenance policy used by Cypress County has been developed to establish communication channels through which winter maintenance policies can be converted into an effective and understood set of actions. The actions taken by maintenance crews are the result of the policies and procedures established by administration and approved by the Director of Public Works. The maintenance crews and operators are vital to successful implementation of the snow and ice maintenance plan.

Operators are responsible for:

- Providing a timely, effective service for their designated routes
- Maintaining equipment
- Documenting snow maintenance activities
- Maintaining a positive work environment

Foremen/Supervisors are responsible for:

- Coordination of services to ensure timely, effective coverage
- Coordinate with fleet maintenance to ensure proper equipment maintenance is complete
- Collecting and totaling de-icing quantities used
- Timely, courteous responses to complaints, requests, and inquiries
- Providing training opportunities for staff
- Maintaining a positive work environment

Administration is responsible for:

- Providing adequate resources for operations
- Creating training opportunities for supervisors and operators
- Maintaining de-icing material inventories
- Maintaining a positive work environment
- Timely, courteous responses to complaints, requests, and inquiries
- Promote and maintain public awareness and support for winter maintenance services

Equipment Preparation

All equipment utilized in snow maintenance operations are prepared and inspected for readiness and repairs prior and during the winter season by Fleet Maintenance to ensure efficient operations of winter maintenance.

Primary Snow Response Equipment:

- Tandem axle plow trucks
- Motor graders (with wings/ V-Plows)
- Small truck mount plow with sander
- Loaders
- Backhoes
- Skid steers
- Snow Blower

Levels of Service

During a winter storm event, passable roadways are critical for Emergency Response Units. Upon request, the Public Works department will aid as required. As a result of the urgency resulting from a winter storm event all other routine operations become secondary and winter maintenance operations will occur. Roads will be plowed, sand and or salt applied according to the established priorities as directed by the supervisor. The levels of service are established based on traffic volumes, public safety, and access to emergency facilities.

All roads within Cypress County are prioritized into groups for maintenance operations. These groups are displayed on the attached maps and are color coded for easy identification, a description of each is below.

Level 1 (RED)

These roadways are the highly travelled hard surface, oiled dust abatement and gravel roadways within Cypress County. These roads hold the majority of traffic volume and act as a link for emergency services. Level 1 roadways will be maintained for all snowstorms meeting the criteria outlined earlier.

Level 2 (ORANGE)

These roadways consist of residential subdivisions, Level 2 hard surface and oiled dust abatement, and Level 2 gravel roadways. These roadways carry primarily rural residential and agricultural traffic. These roads will likely connect to a provincial highway or a Cypress County hard surfaced roadway.

Level 3 (BLUE)

These roadways and trails are within the hamlet boundaries. Some roads may lead directly to a provincial highway or a Cypress County road of a higher level.

Level 4 Fee for Service (PINK)

These are private residential driveways require a fee for service as outlined in the Master Rates Bylaw.

Travel Restrictions and Road Closures

During certain winter storm events it may become necessary to close roadways to traffic. This action will only be taken if extreme weather conditions deem an area of the County unfit for safe travel.

Delay of Maintenance Operations

Winter maintenance of roadways is a very difficult task. The work is extremely rough on equipment and manpower. Delayed services may occur due to the following:

- Stuck vehicles on roadways
- Equipment breakdowns
- Manpower shortage due to sickness, injury, or lack of responsibility
- Manpower shortage due to the length of storm and personnel requiring rest
- Operator breaks
- Downed trees or power lines
- Other County emergencies
- Visibility

Post Event

Following a winter storm event, crews will begin to clean up and relocate snow from hamlets to the locations outlined on the maps if required. The extent of operations will depend heavily on the forecasted weather. Crews will attempt to remove as much snow and ice as reasonably possible, it is important to understand this does not always result in bare, dry pavement. As time permits, Fleet Maintenance will do an inspection of all maintenance equipment to ensure it is available for the next winter storm event.

Service Level Costs

As service levels change, so do costs and associated risks. Costs to deliver the current level of service include:

- Annual Operating budget Snow Plowing for Graders, Sanding and Truck Plowing
- Amortization of equipment and facilities
- Shop maintenance
- Sand, salt and prewet material purchasing and processing costs
- Administration cost
- Fuel
- Wear items
- Program adjustments

Amendment Dates & Descriptions:

Resolution No.

Review Dates & Outcomes:

Resolution No.

Appendix 1 –Level 1, 2, and 3 Hard Surface/Oil Dust Abatement

Winter Maintenance Routes

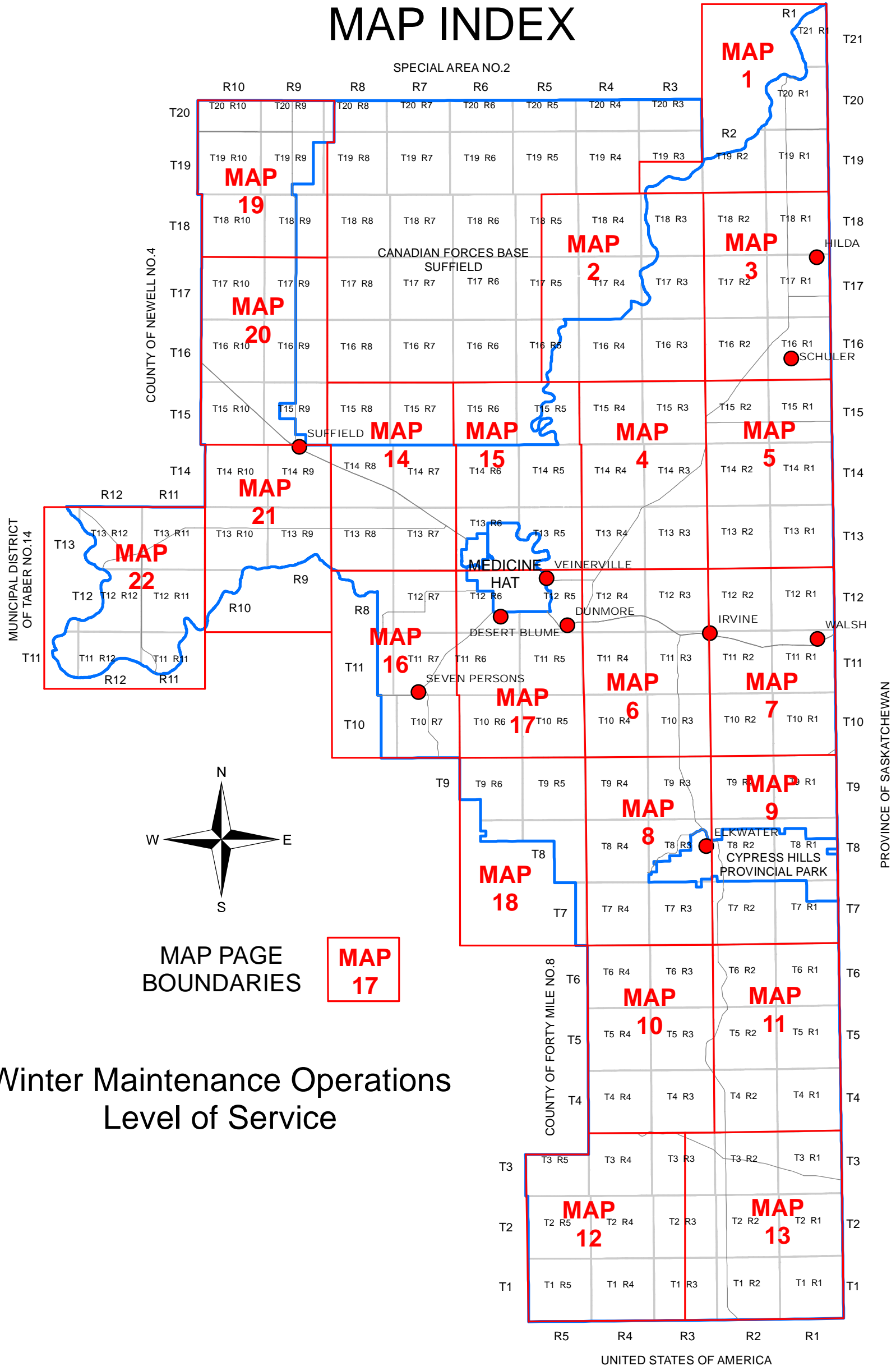
Truck 1	Truck 2	Truck 3	Truck 4	Truck 5	Truck 6
Twp Rd. 120 (Hwy 1-Hwy 3)	Eagle Butte Rd. Hwy 1 to Thelma Rd.	Black & White Trail County boundary to Twp Rd. 84	Box Springs Rd. County boundary to Twp Rd. 150	Rge. Rd. 43 Hwy 1 South to top of hill	Rge. Rd. 70 Hwy 523 to Twp Rd. 131
Rge. Rd. 55 County boundary to Twp Rd. 120	Josephburg Trail Eagle Butte Rd. to Twp Rd. 114	Twp Rd. 114 Eagle Butte to Black & White Tr.	Rge. Rd. 92 Hill south of Hwy 524	Rge. Rd. 40 Hwy 1 to Twp Rd. 114	Rge. Rd. 71 Hwy 523 to Twp Rd. 131
Rge. Rd. 60 County boundary to Twp Rd. 120	11418 Eagle Butte Rd. West of Eagle Butte Rd. – 1.6 km	11404 Rge. Rd. 52 North of Twp Rd. 114 – 100 m	Rge. Rd. 80 Hwy 1 to Twp Rd. 150	Rge. Rd. 30 North of Twp Rd. 120 – 800 m	Rge. Rd. 65 Twp Rd. 123 to Twp Rd. 125
Rge. Rd. 61A County boundary to Twp Rd. 120	11428 Josephburg Trail South of Josephburg Tr. – 100 m	Rge. Rd. 52 Twp Rd. 114 to Twp Rd. 112	Twp Rd. 202 Hwy 884 to Rge. Rd. 85	Bull Trail Hwy 1 to top of hill	Rge. Rd. 72 South of Hwy 523 – 400 m
Rge. Rd. 61 Twp Rd. 120 south – 900 m	3008 Twp Rd. 115A South of Irvine	12025 Black & White Tr. East of Black & White Tr – 200 m	Rge. Rd. 103 Hwy 544 to county boundary	Rge. Rd 21 South of Hwy 1 – 400 m	Rge. Rd. 74 South of Hwy 523 to Twp Rd. 120
Rge. Rd. 63 Twp Rd. 124 to Twp Rd. 114	Dunmore Hamlet	12013 Black & White Tr. East of Black & White Tr. – 400 m	Rge. Rd. 102 South of Hwy 544 – 400 m	12027 Rge. Rd 35 South of Hwy 1 Rge. Rd 35 – 300 m	12107 & 12029 Rge. Rd. 74 E of Rge. Rd. 74 – 800 m
Rge. Rd. 62 Twp Rd. 120 to Twp Rd. 114	Walsh Hamlet	6213 Twp Rd. 122 East of Hwy 3 – 500 m	Twp Rd. 132 West of county boundary – 900 m	Twp Rd. 132 Hwy 41 to Rge. Rd. 25	Twp Rd. 122 West of Hwy 523 to county boundary
Rge. Rd. 64 Twp Rd. 120 North – 250 m	Irvine Hamlet	6219 Hwy 3 East of Hwy 3 – 800 m	7125 Old TCH South of Old Trans Canada Hwy – 200 m	Rge. Rd. 43 Hwy 41 to Twp Rd. 144	12221 Hwy 523 East of Hwy 523 – 600 m
Rge. Rd. 60A North off Twp Rd. 120 & East		Twp Rd. 122 West of Hwy 3 – 800 m	Old TCH Rge. Rd. 70 to Rge. Rd. 71	Twp Rd. 150 East & West off Hwy 41 – 800 m	7215 Hwy 523 South of Hwy 523 – 100 m
12016 Rge. Rd. 61A Twp Rd. 120 to Rge. Rd. 61A		Twp Rd. 121A East of Hwy 3 – 800 m	Suffield Hamlet	Rge. Rd. 53 Hwy 41A to Rge. Rd. 52A	Twp Rd. 124 Hwy 523 to Rge. Rd. 74
Twp Rd. 121 East of Rge. Rd 55 – 800 m		6232 TwpRd. 121A North of Twp Rd. 121A – 200 m		Rge. Rd. 52A Twp Rd. 130 to Twp Rd. 132A	12410 Rge. Rd. 73 West of Rge. Rd. 73 – 500 m
12032 Rge. Rd. 55 W of Rge. Rd.55 – 200m		Twp Rd. 110A West off Hwy 887 – 1,400 m		Rge. Rd. 51 Hwy 41A to Twp Rd. 124	7228 Twp Rd. 124 North of Twp Rd. 124 – 156 m
12108 Rge. Rd. 55 West of Rge. Rd. 55 – 100 m		7228 Twp Rd. 110 Acreage North off Twp Rd. 110		12301 Rge. Rd. 51A Twp Rd. 124S to Twp Rd. 123 & East	12331 Rge. Rd. 72 East of Rge. Rd. 72 – 500 m
5519 South Bnd. Rd. South of county boundary – 200 m		Seven Persons Hamlet		12303 Hwy 41 East of Hwy 41 – 400 m	12323 Rge. Rd. 72 East of Rge. Rd. 72 – 300 m
12129 Rge. Rd. 60 East of Rge. Rd. 60 – 100 m				Twp Rd. 121A East of Hwy 41 North – 1.6 km	12320 Rge. Rd. 72 West of Rge. Rd. 72 – 1.6 km
1157 Rge. Rd. 53 East of Rge. Rd. 53 – 900 m				Veinerville, Hilda, Schuler Hamlets	12520 Rge. Rd. 70 West of Rge. Rd. 70 – 400 m
Desert Blume Hamlet					13029 Rge. Rd. 70 E of Rge. Rd. 70 – 600 m

Appendix 2 – Level of Service Road Maps



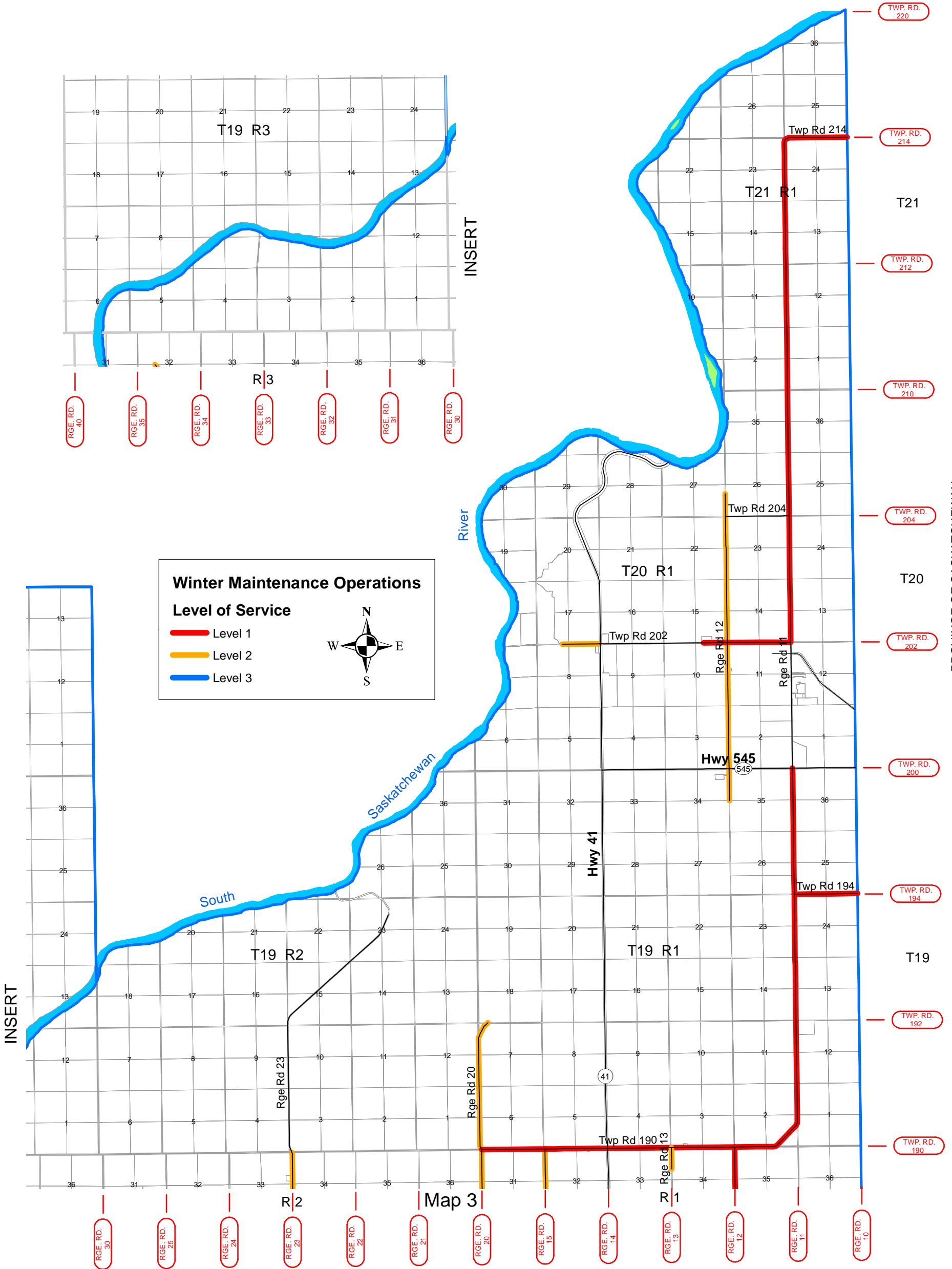
Winter
Maintenance Opera

MAP INDEX

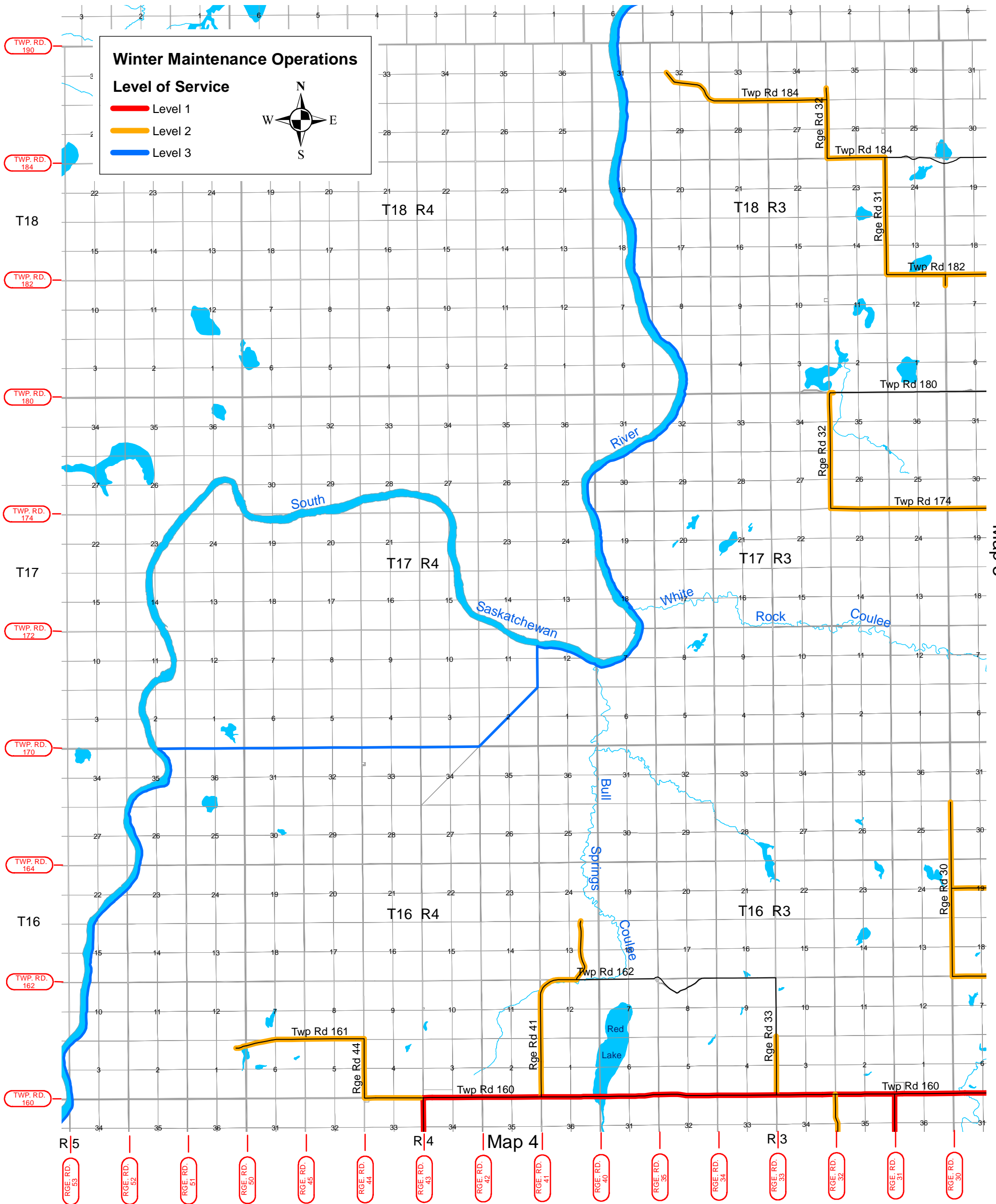


Winter Maintenance Operations Level of Service

MAP 1



MAP 2

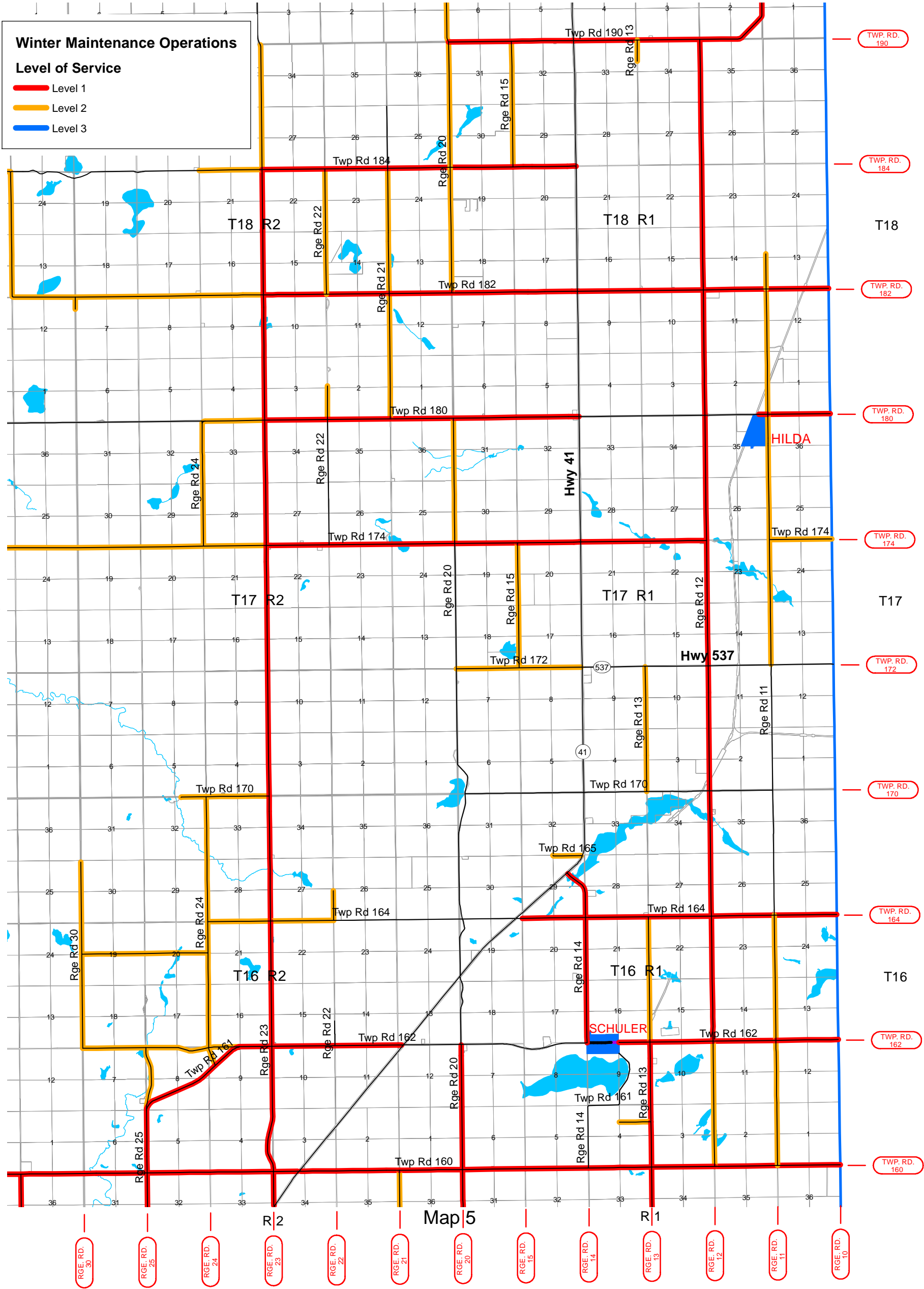


Winter Maintenance Operations

Level of Service

- Level 1
- Level 2
- Level 3

Map 2



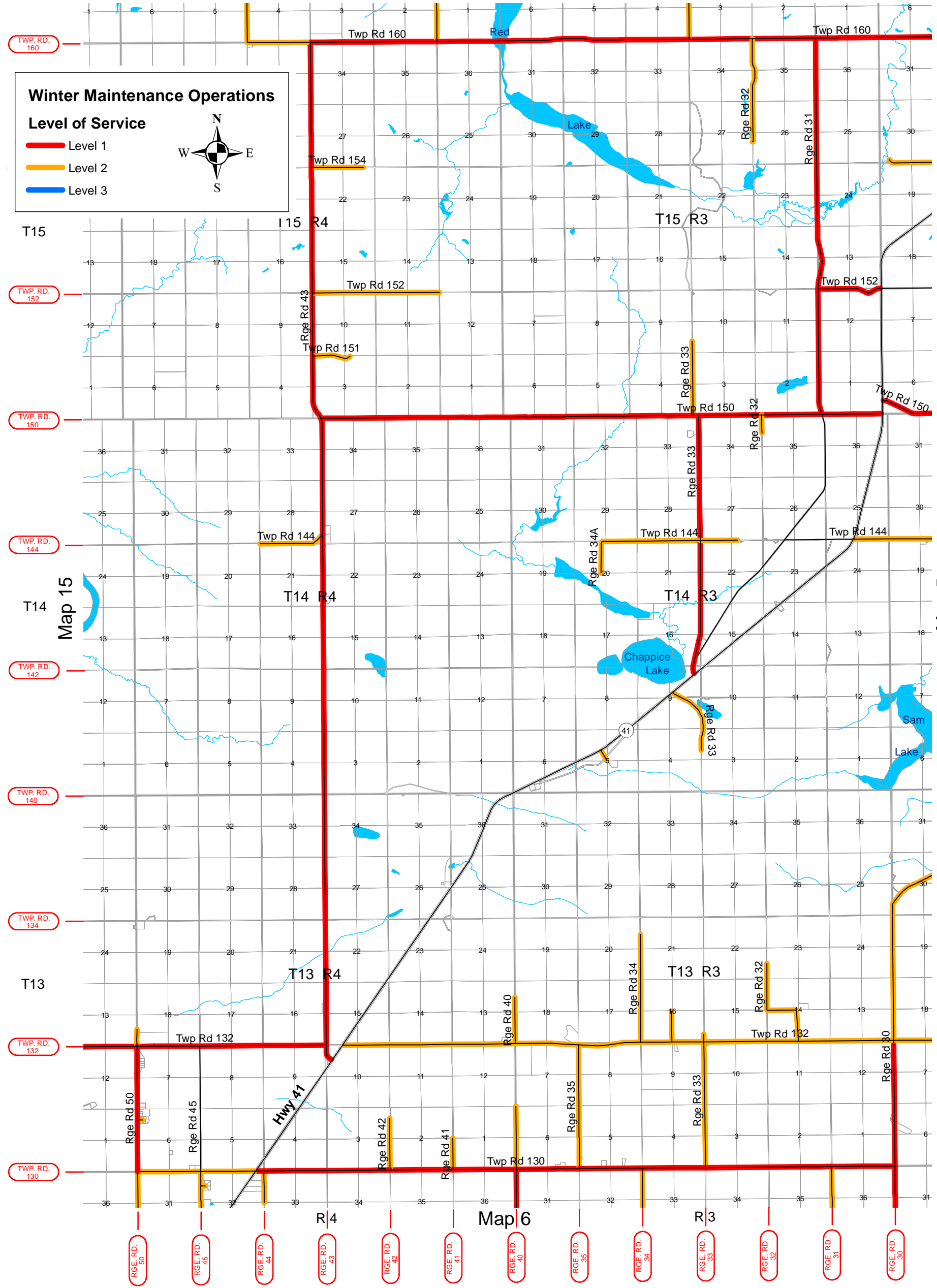
PROVINCE OF SASKATCHEWAN

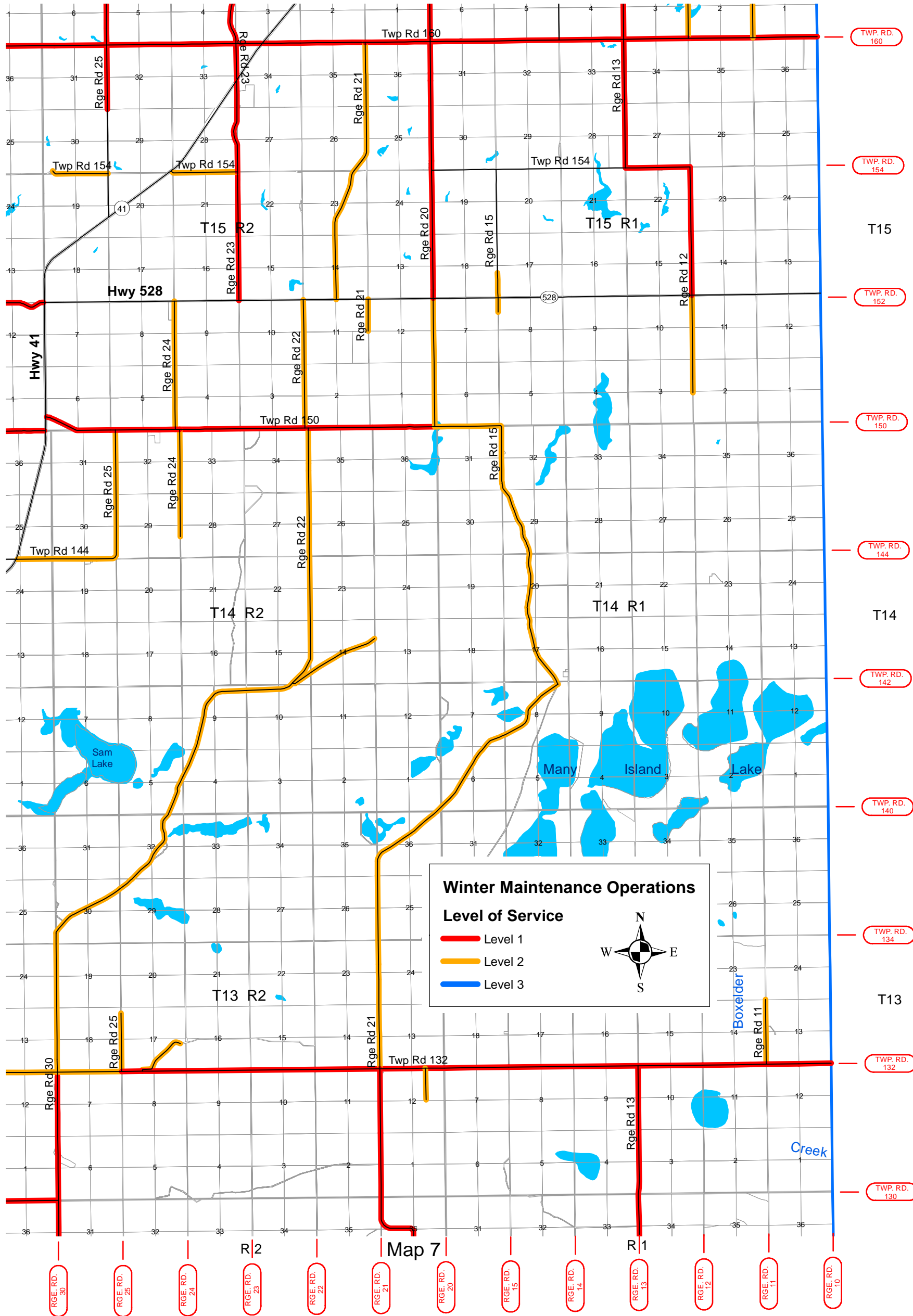
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- RGE. RD. 20
- RGE. RD. 15
- RGE. RD. 14
- RGE. RD. 13
- RGE. RD. 12
- RGE. RD. 11
- RGE. RD. 10

- TWP. RD. 190
- TWP. RD. 184
- TWP. RD. 182
- TWP. RD. 180
- TWP. RD. 174
- TWP. RD. 172
- TWP. RD. 170
- TWP. RD. 164
- TWP. RD. 162
- TWP. RD. 160

MAP 4

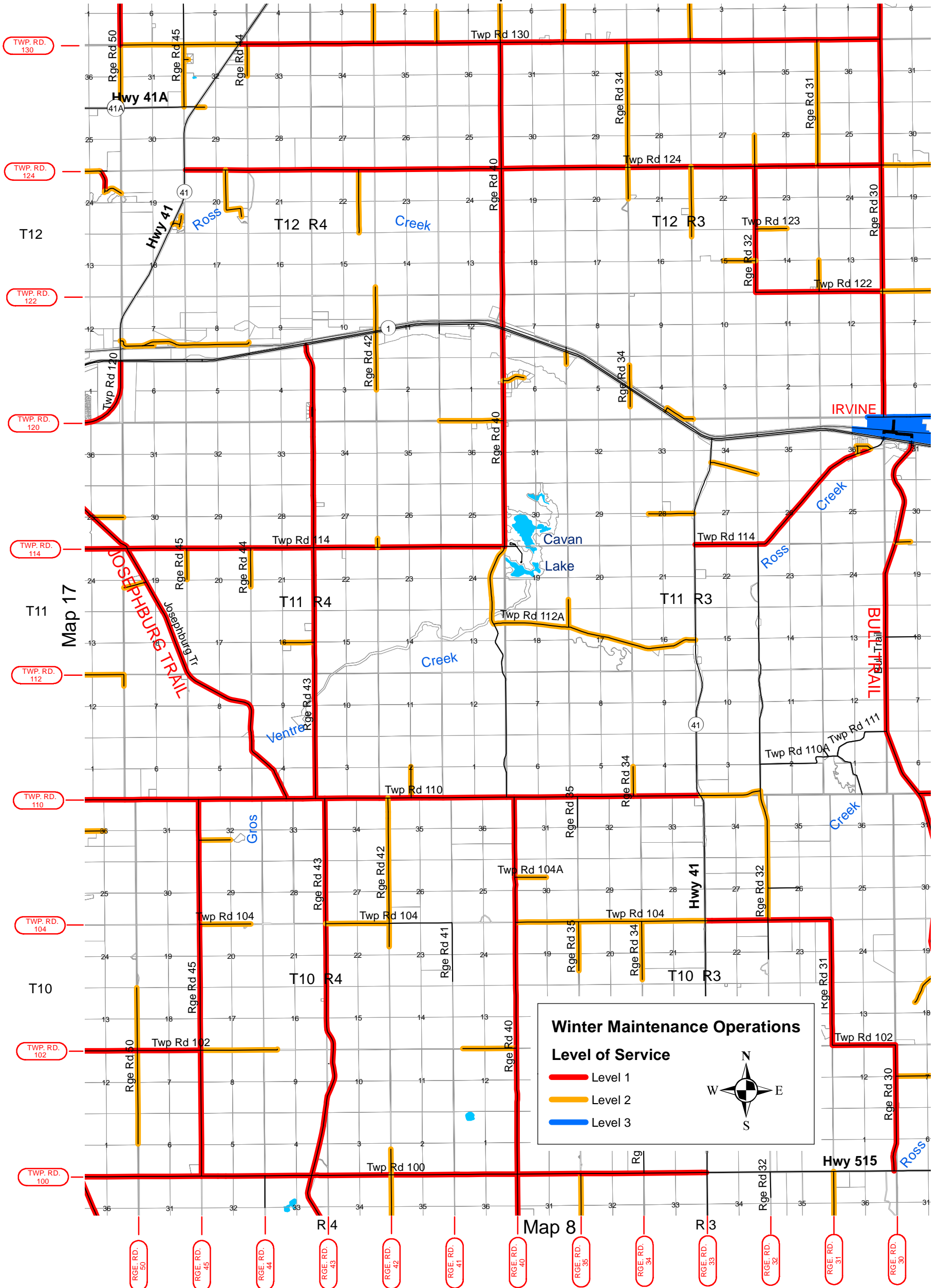
Map 2

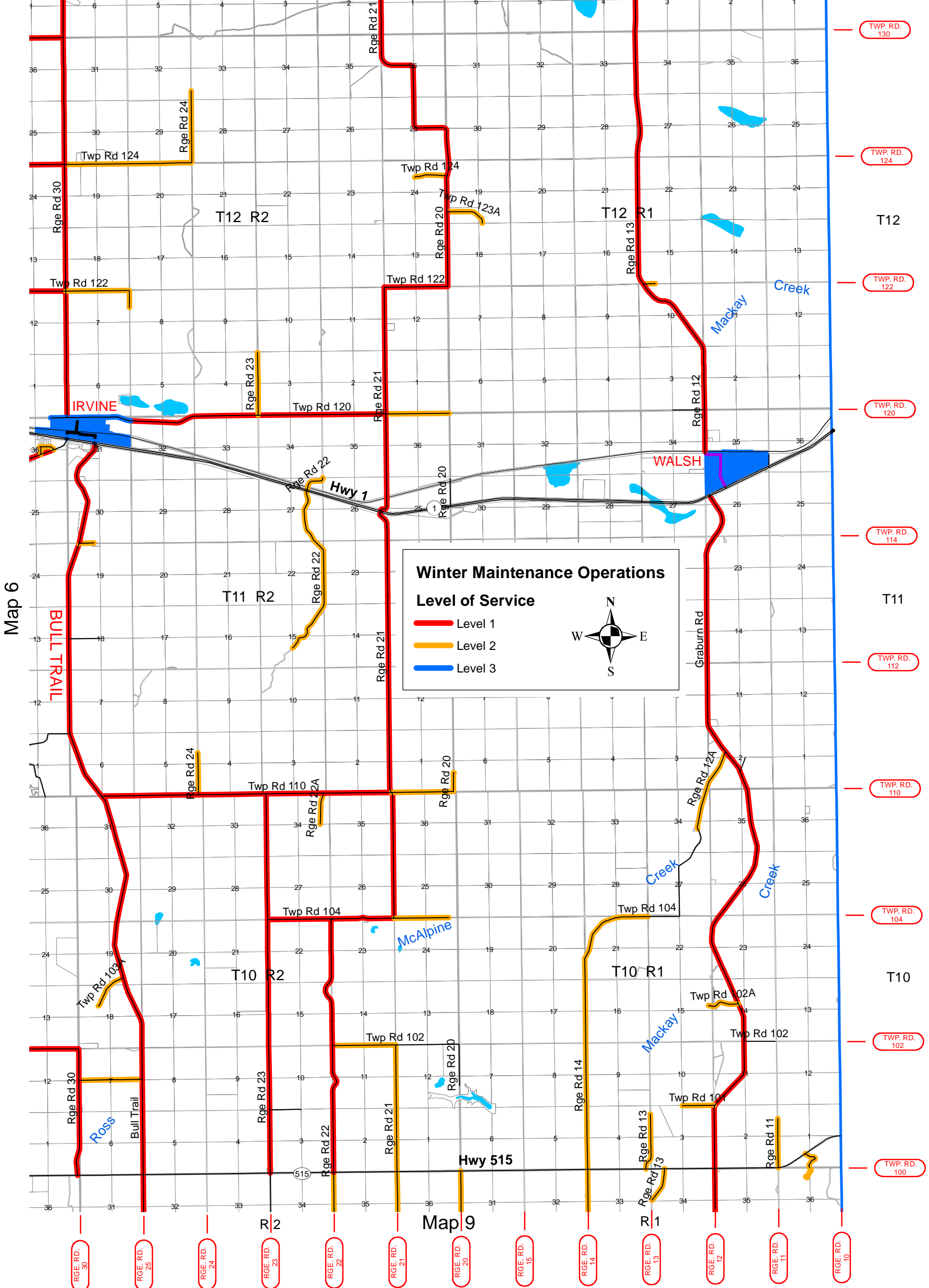




MAP 6

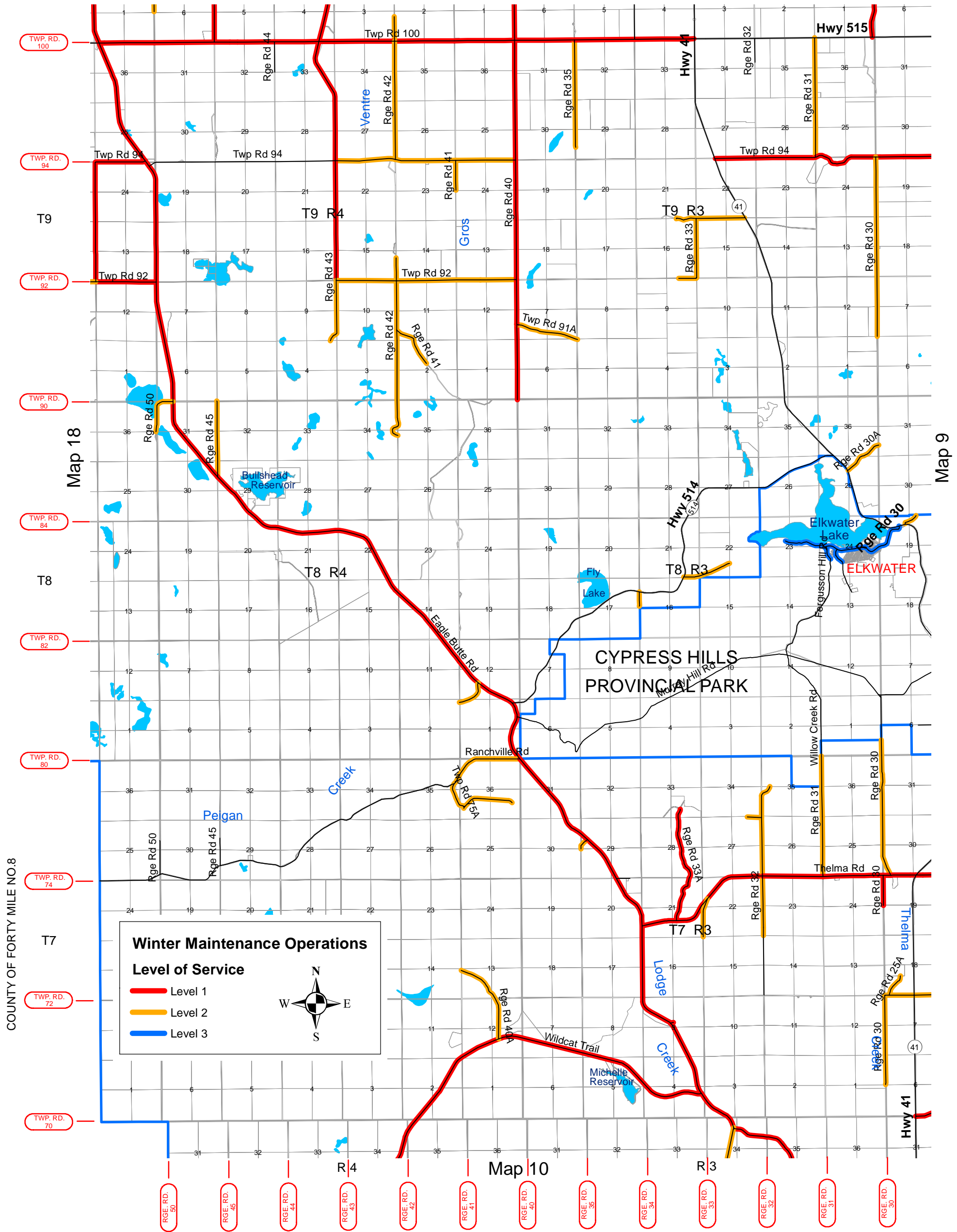
Map 4





MAP 8

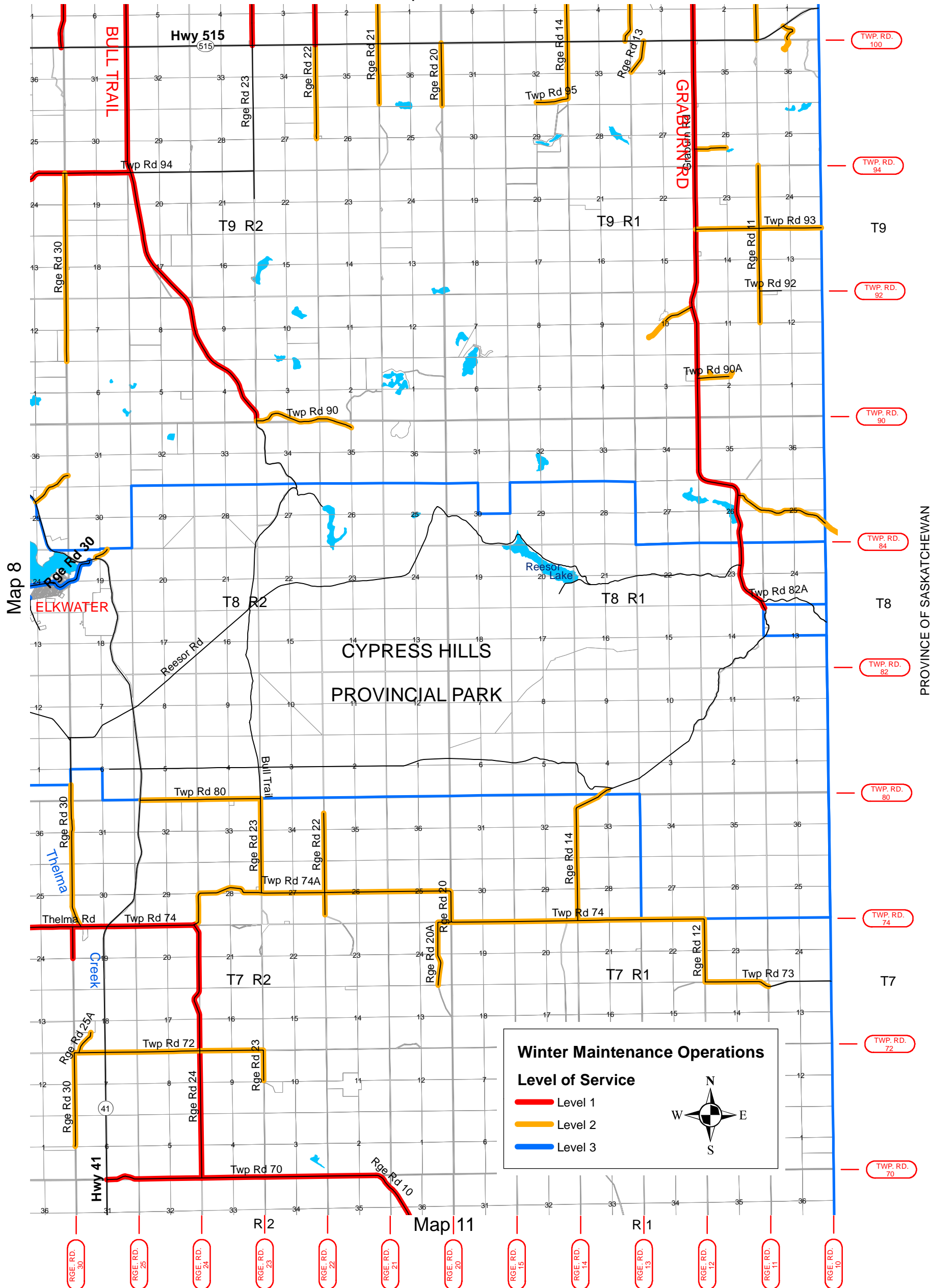
Map 6



Map 9

Map 10

COUNTY OF FORTY MILE NO. 8



PROVINCE OF SASKATCHEWAN

Map 8

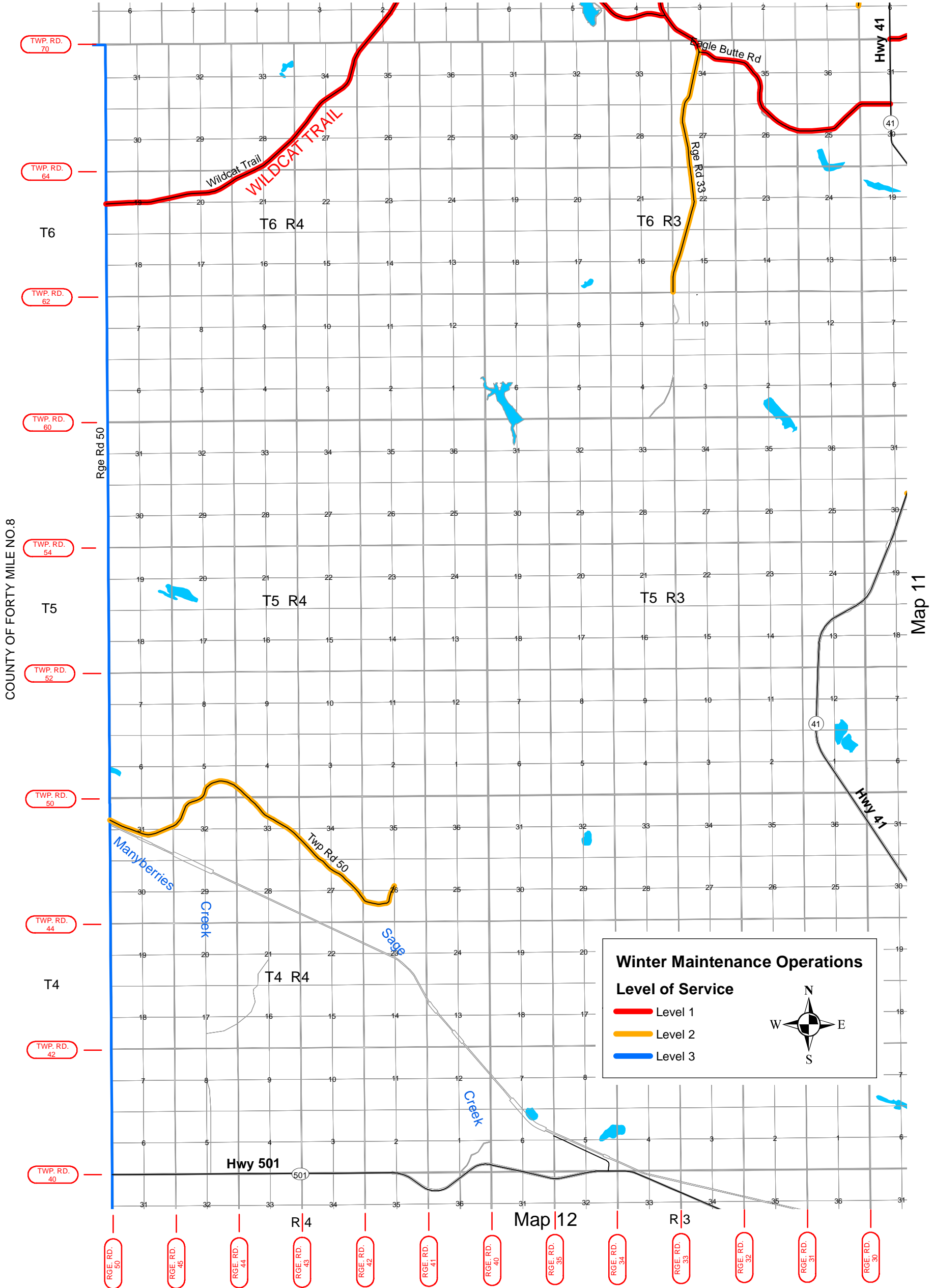
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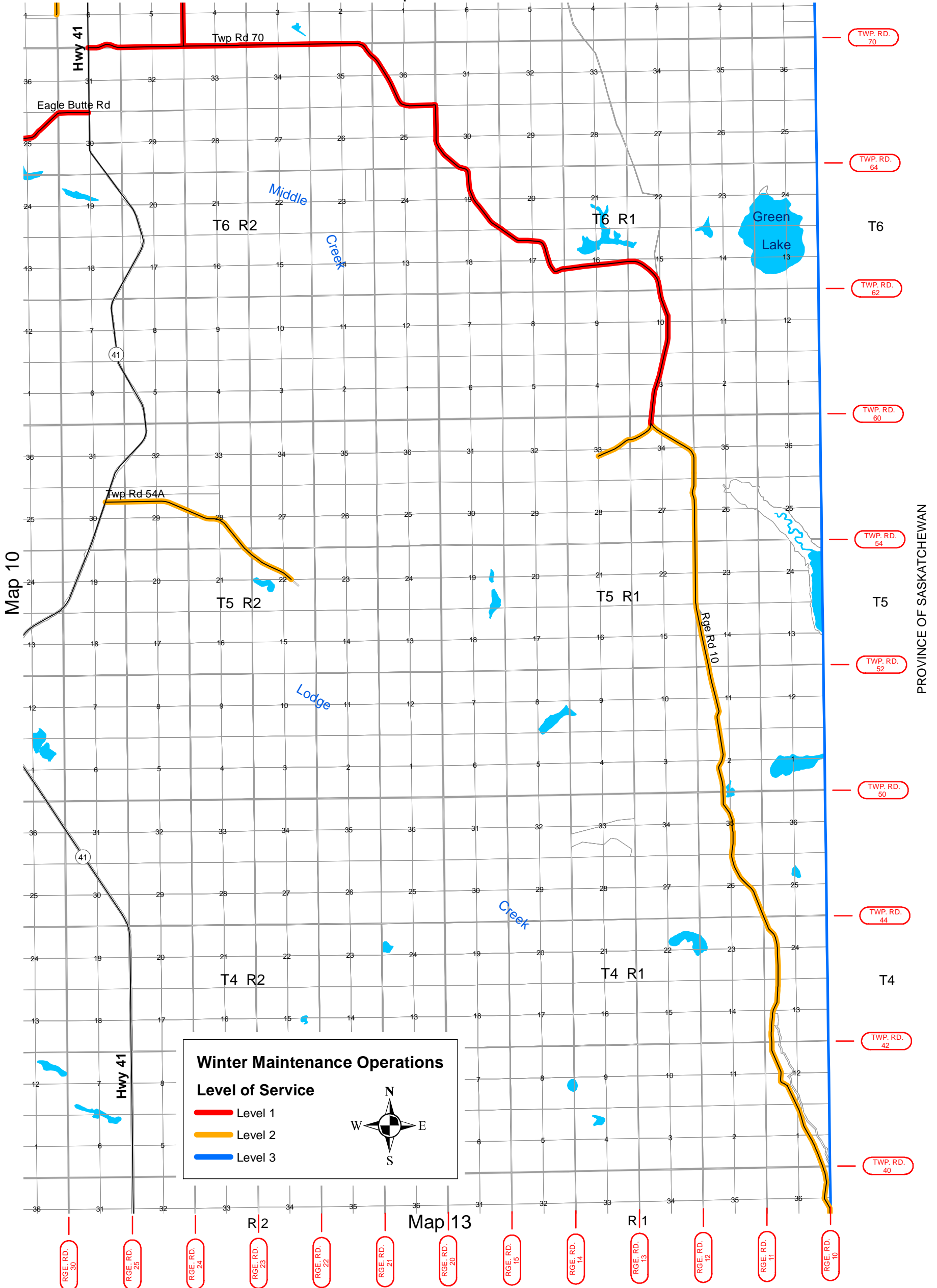
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TWP. RD. 100, TWP. RD. 94, T9, TWP. RD. 92, TWP. RD. 90, TWP. RD. 84, T8, TWP. RD. 82, TWP. RD. 80, TWP. RD. 74, T7, TWP. RD. 72, TWP. RD. 70

MAP 10

Map 8



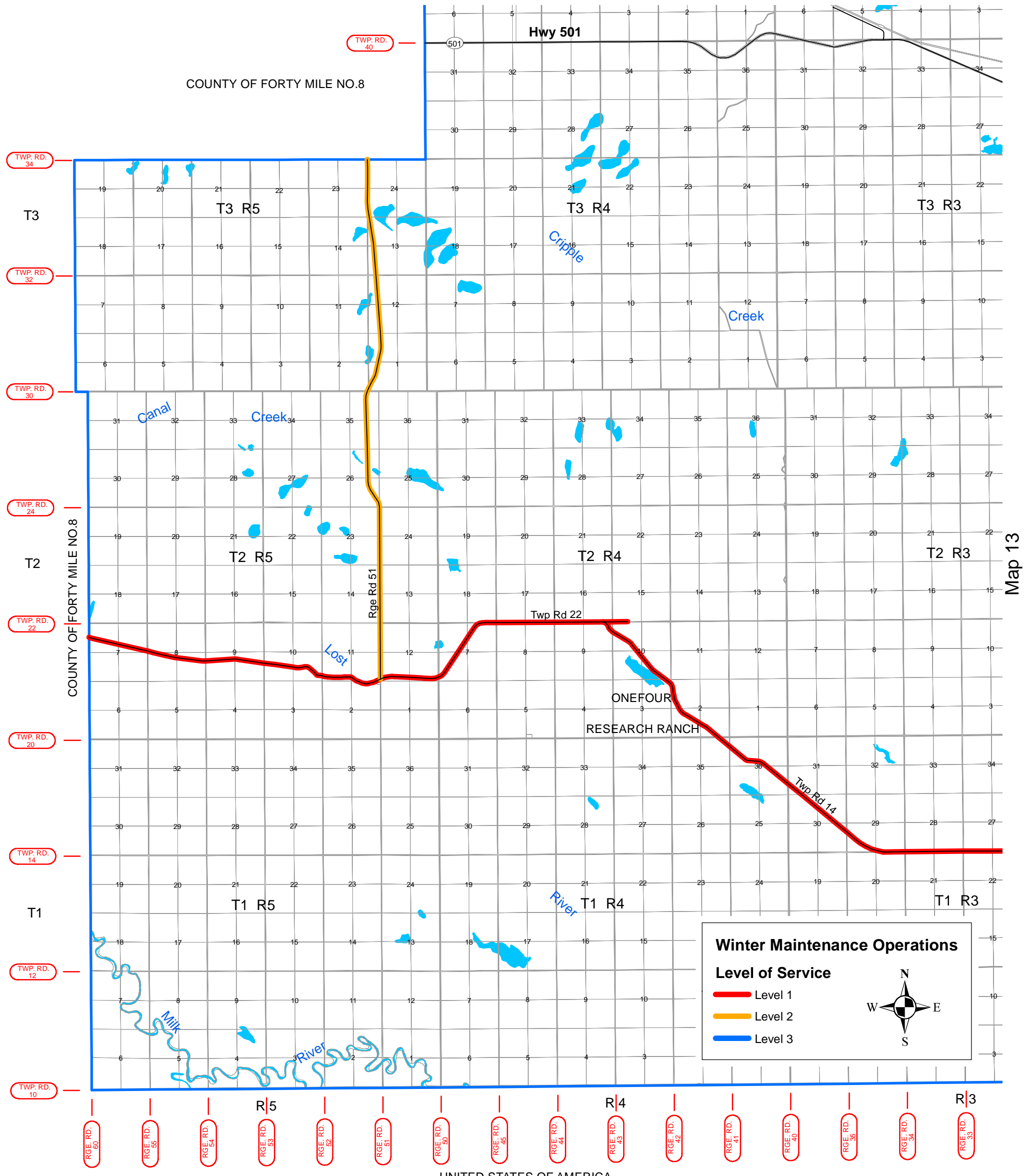


PROVINCE OF SASKATCHEWAN

MAP 12

Map 10

COUNTY OF FORTY MILE NO.8



Map 13

Winter Maintenance Operations

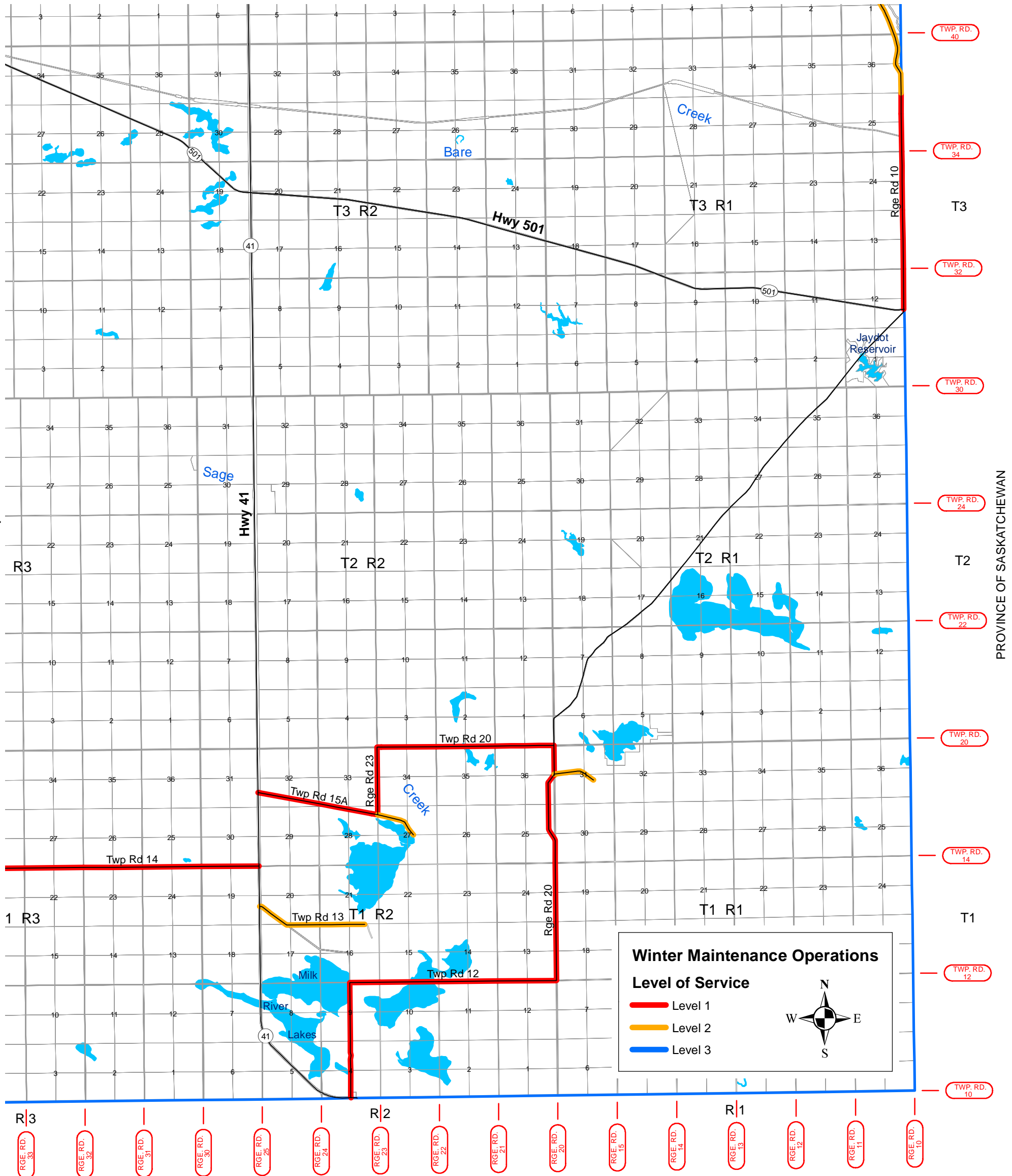
Level of Service

- Level 1
- Level 2
- Level 3

MAP 13

Map 11

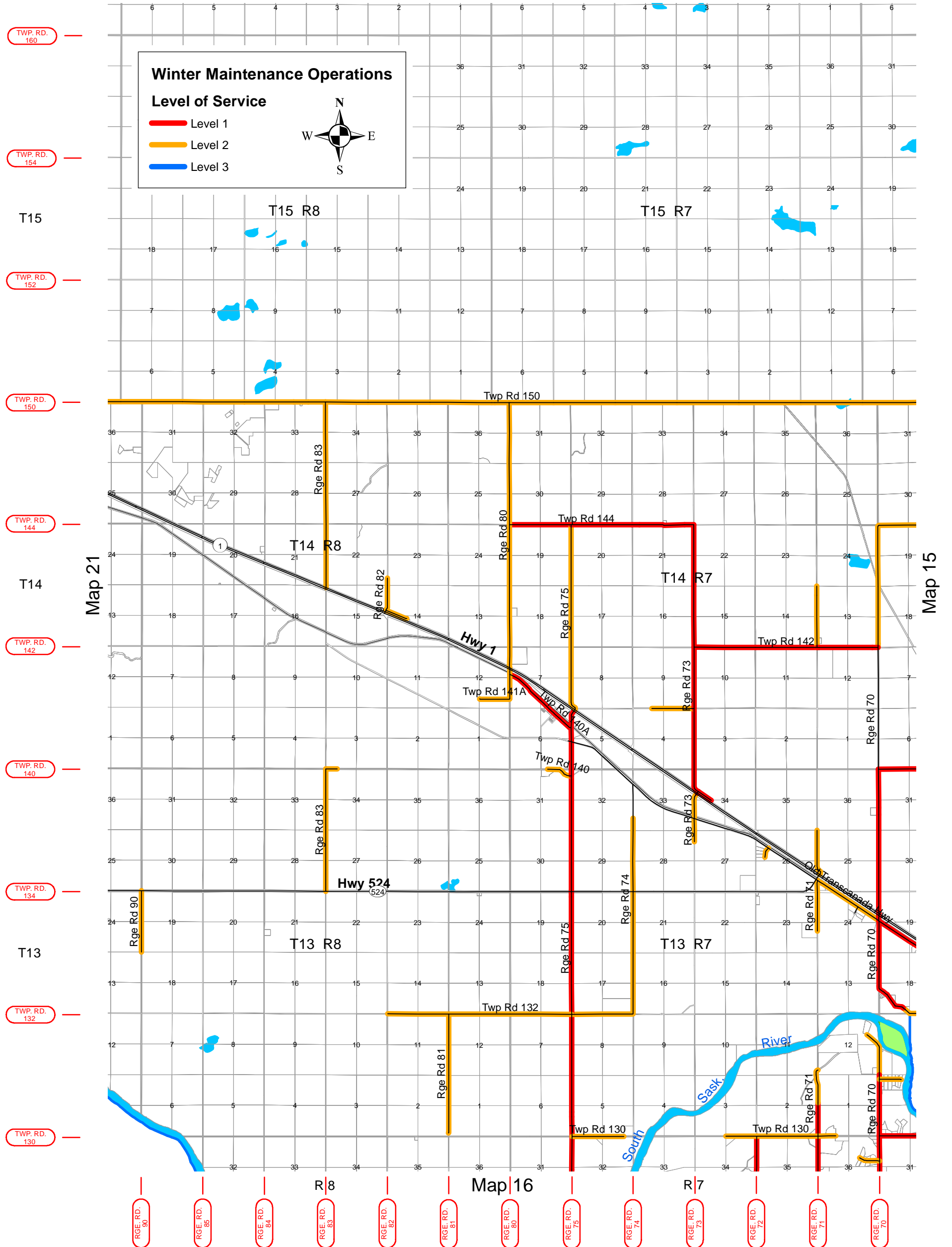
Map 12



UNITED STATES OF AMERICA

PROVINCE OF SASKATCHEWAN


MAP 14



Winter Maintenance Operations

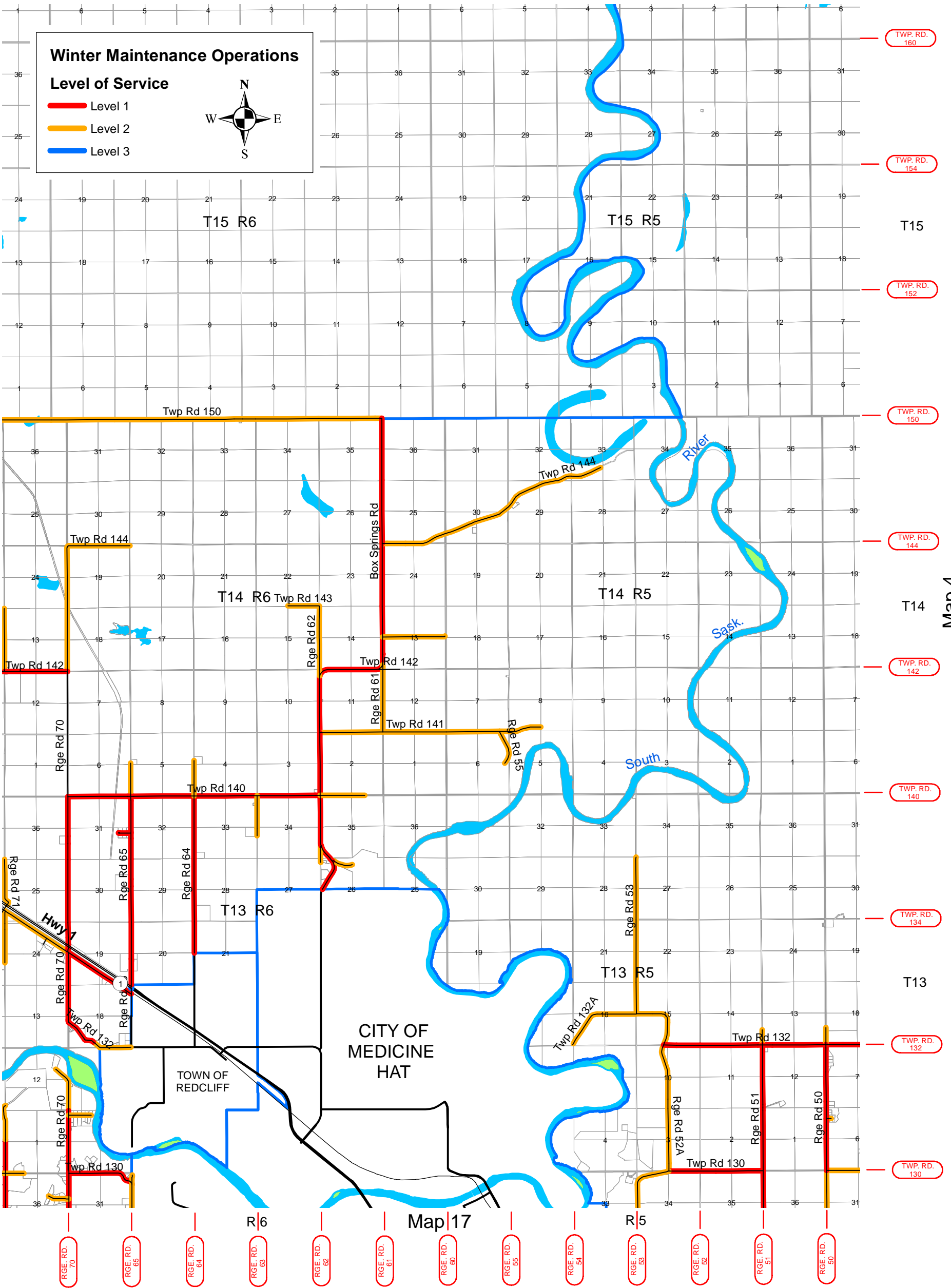
Level of Service

- Level 1 (Red line)
- Level 2 (Yellow line)
- Level 3 (Blue line)



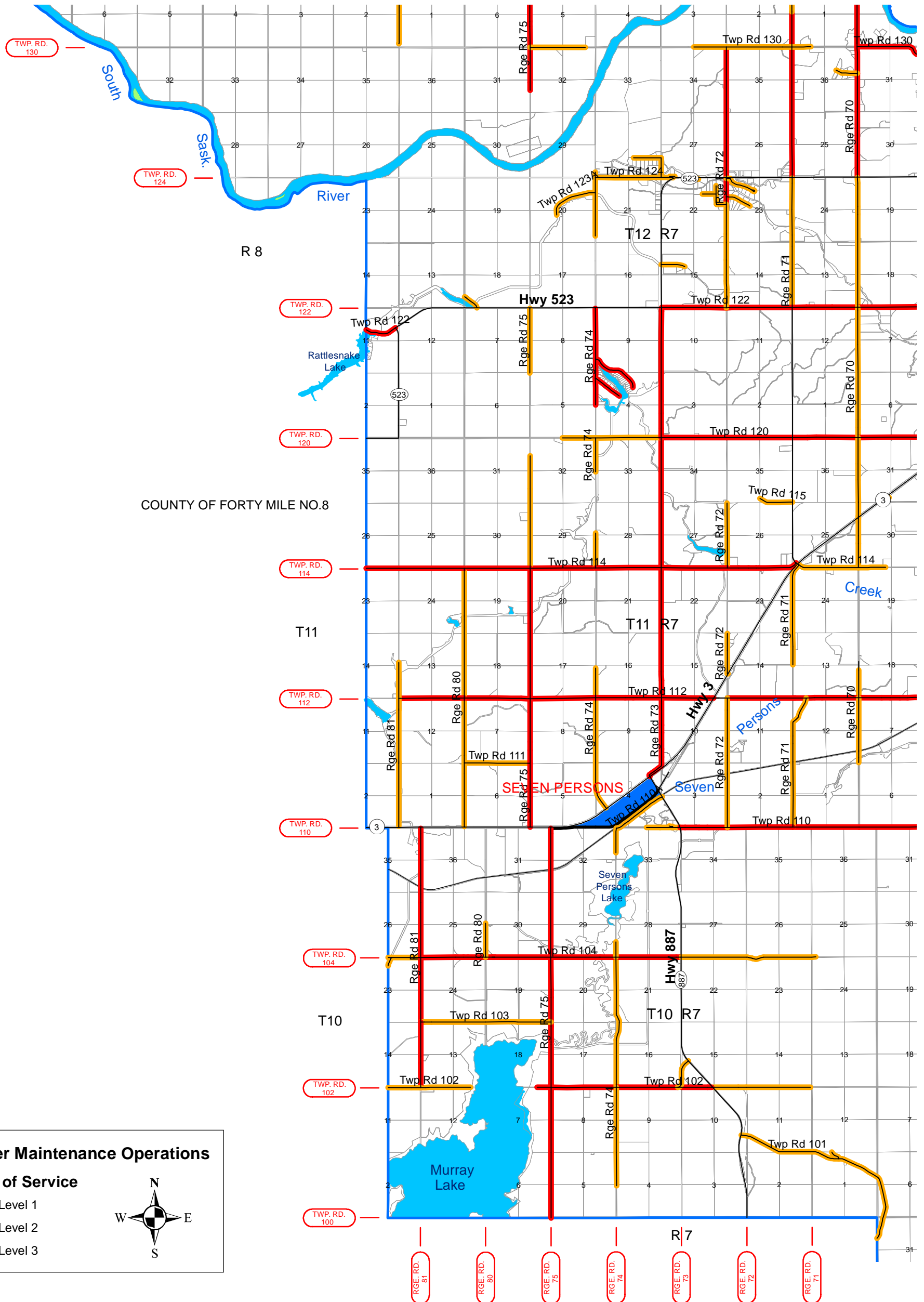
Map 14

Map 4

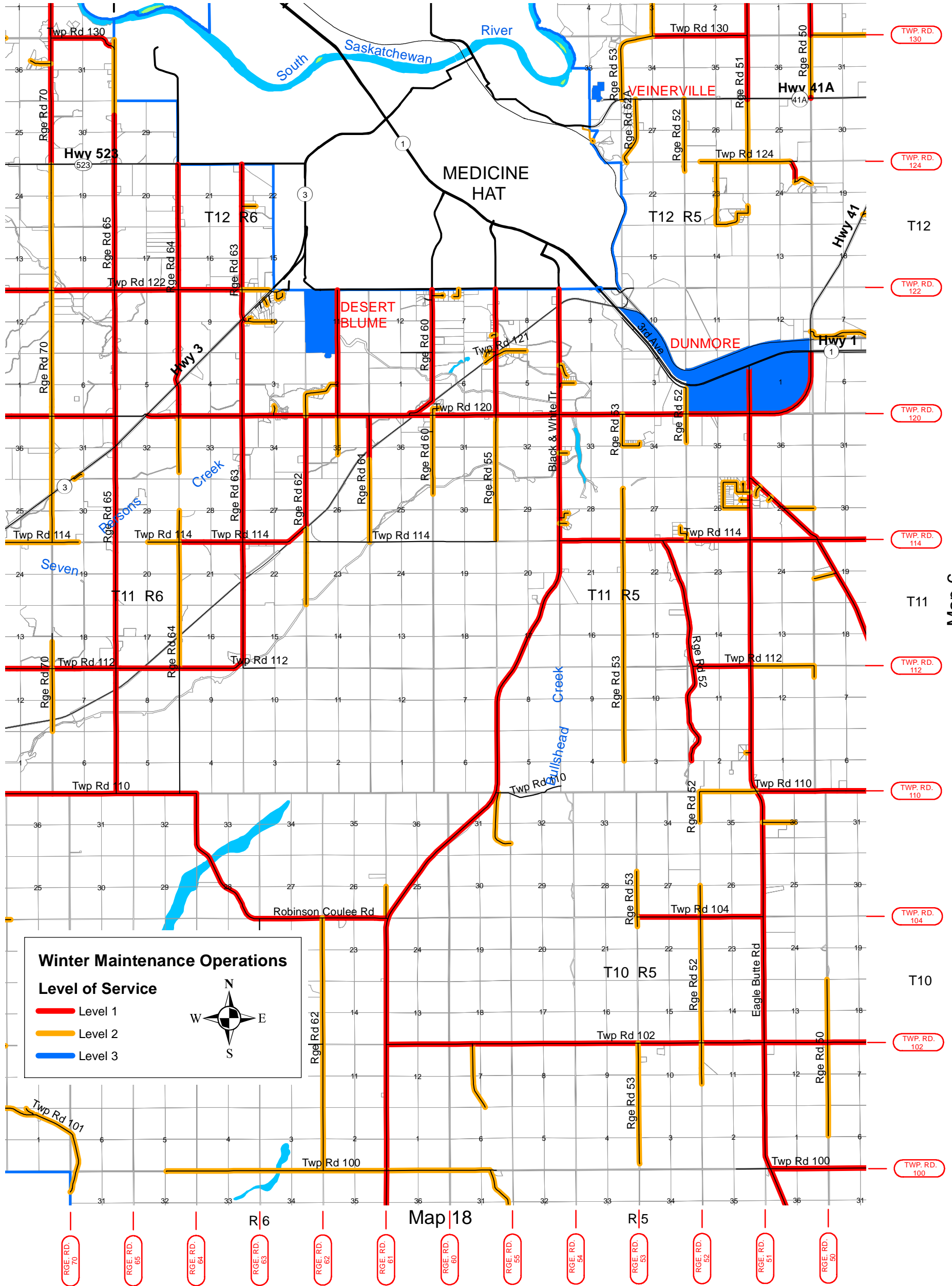


MAP 16

Map 14



Map 15



Map 16

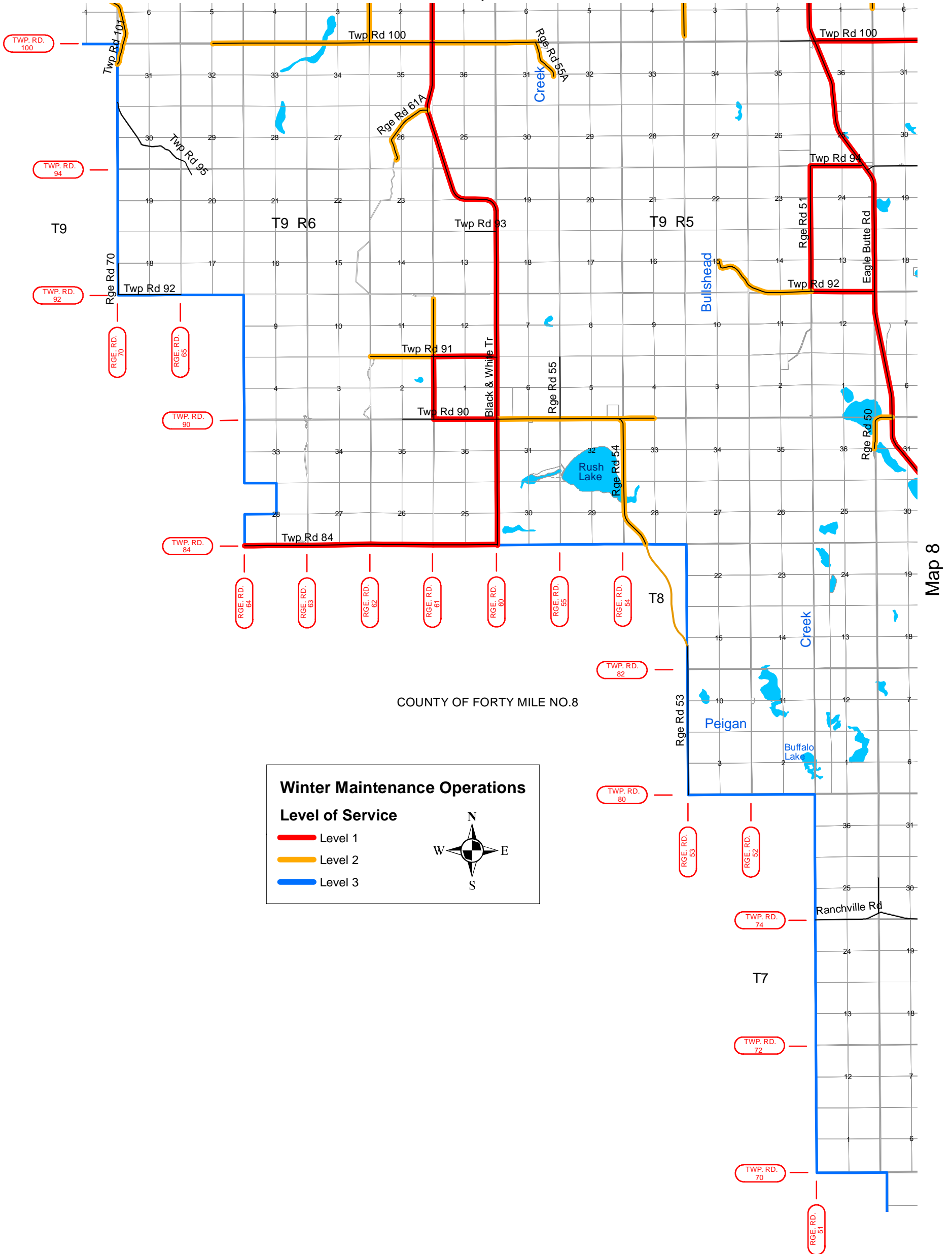
Map 6

Map 18

- RGE. RD. 70
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- RGE. RD. 64
- RGE. RD. 63
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- RGE. RD. 60
- RGE. RD. 55
- RGE. RD. 54
- RGE. RD. 53
- RGE. RD. 52
- RGE. RD. 51
- RGE. RD. 50

MAP 18

Map 17



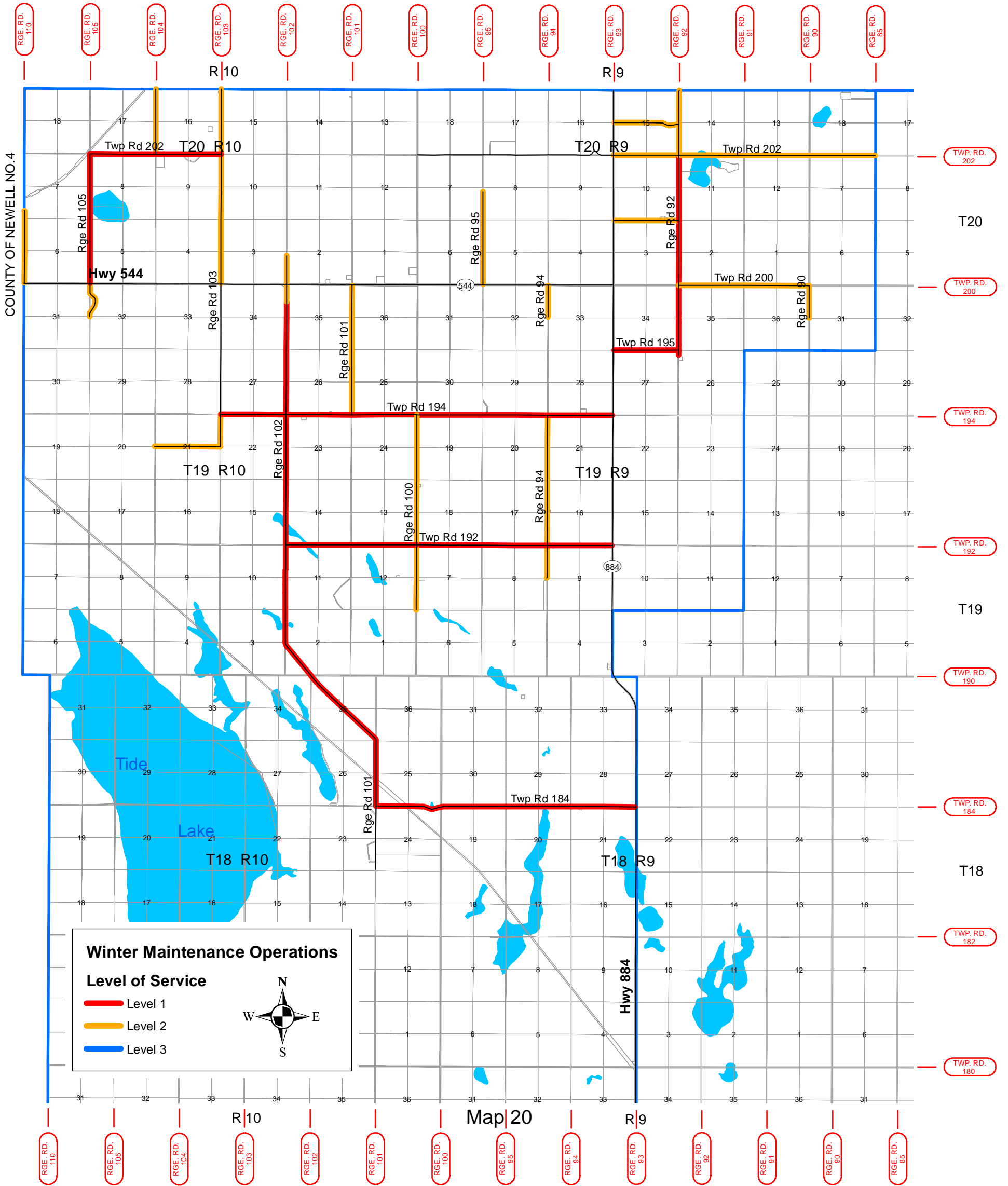
Winter Maintenance Operations

Level of Service

- Level 1
- Level 2
- Level 3

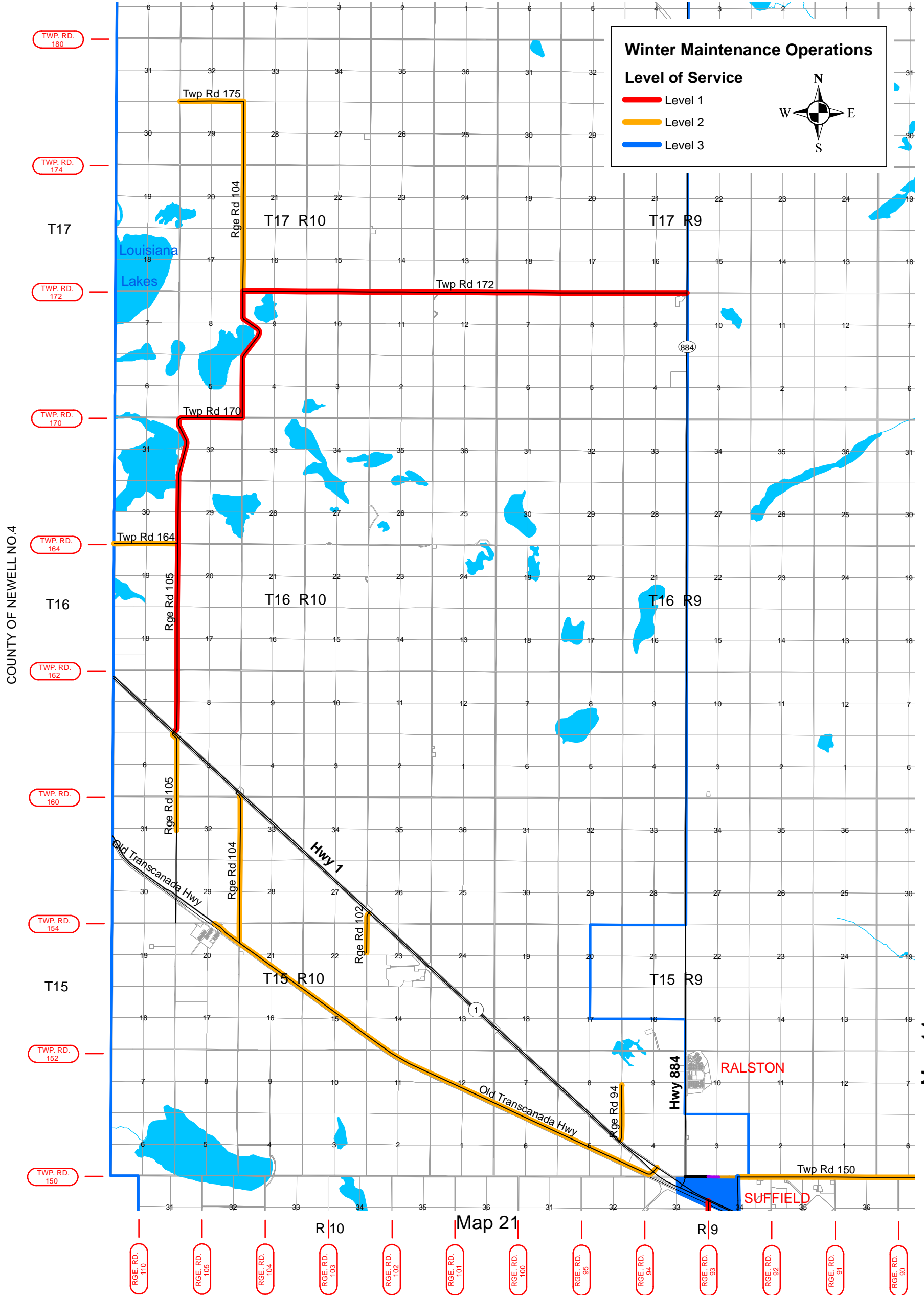
COUNTY OF FORTY MILE NO.8

Map 8



MAP 20

Map 19



Winter Maintenance Operations

Level of Service

- Level 1 (Red line)
- Level 2 (Yellow line)
- Level 3 (Blue line)

COUNTY OF NEWELL NO. 4

TWP. RD. 180
TWP. RD. 174
TWP. RD. 172
TWP. RD. 170
TWP. RD. 164
TWP. RD. 162
TWP. RD. 160
TWP. RD. 154
TWP. RD. 152
TWP. RD. 150

RGE. RD. 110
RGE. RD. 105
RGE. RD. 104
RGE. RD. 103
RGE. RD. 102
RGE. RD. 101
RGE. RD. 100
RGE. RD. 95
RGE. RD. 94
RGE. RD. 93
RGE. RD. 92
RGE. RD. 91
RGE. RD. 90

Map 14

Map 21

T17 R10
T17 R9
T16 R10
T16 R9
T15 R10
T15 R9

Louisiana Lakes

Hwy 884

Hwy 1

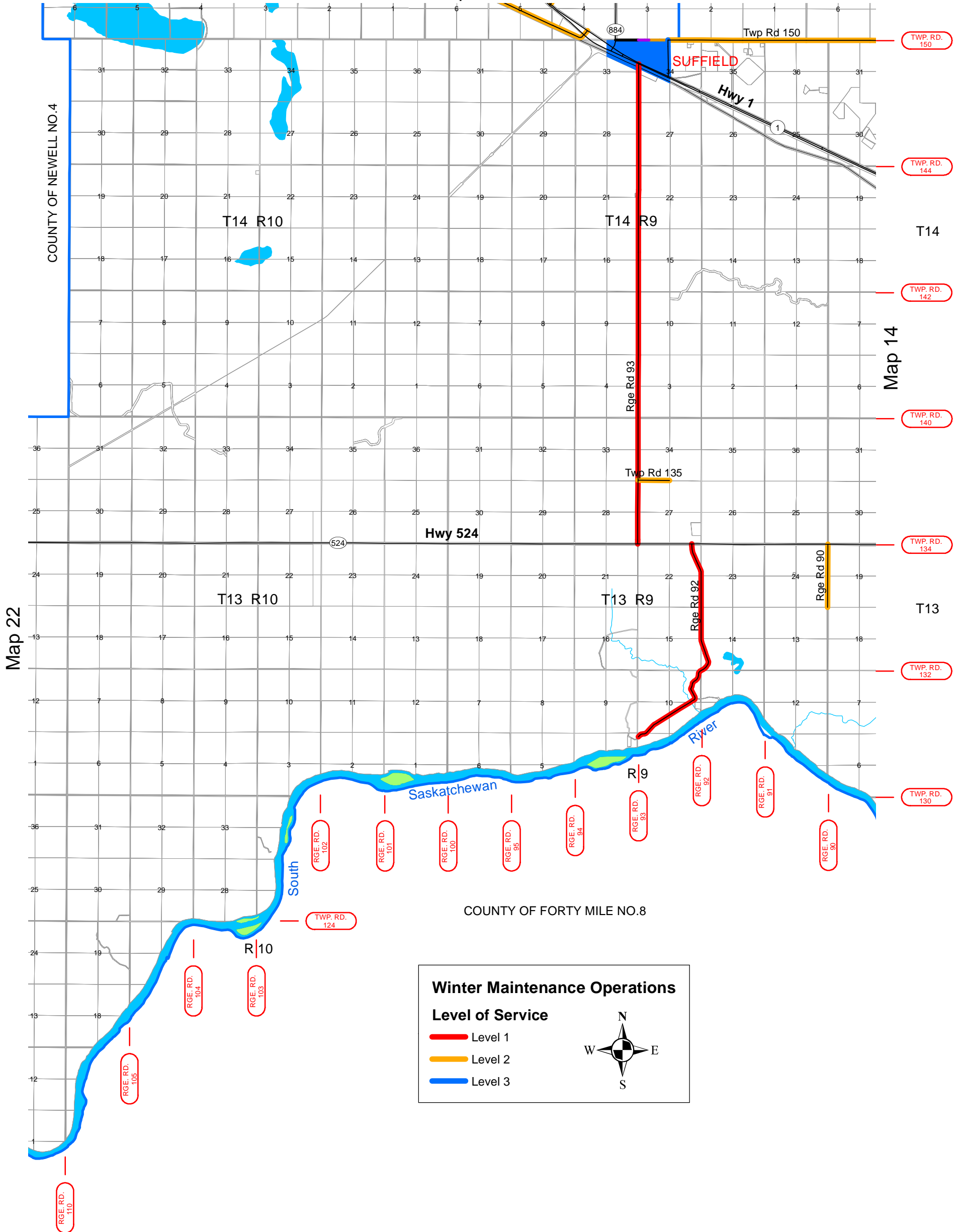
Old Transcanada Hwy

RALSTON

SUFFIELD

Twp Rd 175
Twp Rd 172
Twp Rd 170
Twp Rd 164
Twp Rd 162
Twp Rd 160
Twp Rd 154
Twp Rd 152
Twp Rd 150

Rge Rd 104
Rge Rd 105
Rge Rd 102
Rge Rd 94
Rge Rd 93
Rge Rd 92
Rge Rd 91
Rge Rd 90



MAP 22

COUNTY OF NEWELL NO.4

