

AIMSOIR

CONDITION ASSESSMENT Guidelines

Asset Class: WWC

Wastewater Collection

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Introduction

This is a supplementary document to the AIMS OIR spreadsheet tool. It is to be used as a guideline for the condition assessment of infrastructure. The document is based on the assessment categories developed by the Province of Nova Scotia and is adjusted to accommodate the requirements of the AIMS OIR spreadsheet tool.

Condition rates need to be captured in values from 1 to 5 with a general rating scheme as shown below.

Rating	Condition
1	Very good
2	Good
3	Fair
4	Poor
5	Very poor

Detail description of the ratings for each asset type (feature code) is described in detail in the tables below.

1. GRAVITY SEWER PIPE GPWW

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	GRAVITY SEWER PIPE		GPWW		
FEATURE CODE:	GRAVITY SEWER PIPE		GRVPSA, FTTESAN, GRVPCO		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Age</i>	< 15 years	≥ 15 and < 35 years	≥ 35 and < 55 years	≥ 55 and < 80 years	≥ 80 years
<i>Cracking and Joint Displacement (if no CCTV available, not applicable; leave blank)</i>	None	Minor, no infiltration evident	Minor, some seepage evident.	significant cracking and/or joint displacement. Significant infiltration	excessive cracking and/or joint displacement. Excessive infiltration. Pipe collapse imminent
<i>Pipe Material</i>	PVC		Concrete		Clay
<i>Blockage (if no CCTV available, not applicable; leave blank)</i>	None	<10% of diameter	10% to 20% of diameter	20% to 50% of diameter	Over 50% of diameter

2. MANHOLE - MHWW

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	MANHOLE		MHWW		
FEATURE CODE:	MANHOLE		MHCO/MHSA		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Material</i>	Concrete				Brick
<i>Age</i>	< 15 years	≥ 15 and < 35 years	≥ 35 and < 55 years	≥ 55 and < 80 years	≥ 80 years
<i>Appearance</i>	Excellent condition. No signs of concrete/brick damage, cover and frame look great. No leaking evident.	Good condition. No visual concrete/brick damage, minor signs of wear on cover and frame. No leaking evident.	Fair condition. Minor concrete/brick damage no gaps or expsed rebar, minor cracking on frame and cover. Evidence of leaking along walls or pipe penetrations.	Poor condition. Significant concrete/brick damage with cracks greater than 6mm. Cracks greater than 6mm or missing pieces from frame and cover. Significant leaks along walls or pipe penetrations.	Very poor - critical condition. Excessive concrete/brick damage, exposed rebar, frame and cover missing or not safe for use. Soil penetrating walls or pipe penetrations.

3. LIFT & PUMP STATION - LPS

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		LIFT & PUMP STATION		LPS	
FEATURE CODE:		LIFT & PUMP STATION		PMPS	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Pump Age	< 5 Years	≥ 5 and < 10 Years	≥ 10-15 Years	≥ 15 and < 20 Years	≥ 20 Years
Interior Wet Well Condition	Excellent condition. No signs of concrete damage, paint on piping and valves looks great. No leaking evident.	Good condition. No visual concrete damage, minor rusting on piping and valves. No leaking evident.	Fair condition. Minor concrete damage, some rusting of piping and valves. Minor leaking visible when pumps running	Poor condition. Significant concrete damage, significant rusting of piping and valves. Still operable. Significant leaking visible when pumps running	Very poor - critical condition. Excessive concrete damage, exposed rebar, major rusting of piping and valves inoperable. Excessive leaking visible when pumps running
Exterior Condition	Excellent condition. No signs of concrete damage, hatch, control panel enclosure and vent piping looks great	Good condition. No visual signs of concrete damage, hatch, control panel enclosure and vent piping looks good.	Fair condition. Minor concrete damage, hatch, control panel enclosure and vent piping still serviceable.	Poor condition. Significant concrete damage, hatch & control panel enclosure have broken or missing parts but is still operable. vent piping significantly deteriorated.	Very poor condition. Excessive concrete damage, hatch & control panel enclosure not lockable and hinges broken, vent piping excessively deteriorated
Unplanned Outages	0 per Year	1 per Year	2 per Year	3-5 per Year	>5 per Year

4. PRESSURE SEWER PIPE -PSP

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		PRESSURE SEWER PIPE		PSP	
FEATURE CODE:		PRESSURE SEWER PIPE		WWFCM	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Pipe Material	PVC, HDPE or Ductile Iron		Asbestos Concrete		Cast Iron
Age	<15 Years	≥ 15 and < 30 Years	≥ 30 and < 45 Years	≥ 45 and < 60 Years	≥ 60 Years
Number of Leaks per Year	0 Leaks per Year	1 leak per Year	2 leaks per Year	3-5 leaks per Year	> 5 leaks per Year

5. SEPTIC FIELD - SEP

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		SEPTIC FIELD		SEP	
FEATURE CODE:		SEPTIC FIELD		SEPT	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 10 Years	≥ 10 and < 15 Years	≥ 15 and < 20 Years	≥ 20 and < 25 Years	≥ 25 Years
Dispersal Bed	Looks excellent. No extra plant growth over or around bed, no foul odours detected		Looks fair. Some minor extra plant growth over or around bed, minor foul odours detected. No visual breakouts detected		Excessive plant growth over or around bed, significant foul odours detected. visual breakouts evident

6. TREATMENT FACILITY – TFWW (SEPTIC TANK – WWST)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		SEPTIC TANK		WWST	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	<10 Years	≥ 10 and < 15 Years	≥ 15 and < 20 Years	≥ 20 and < 25 Years	≥ 25 Years
Last Pump-Out	1 year		3 Years		5 Years
Septic Tank	Tank, baffles and access ports in excellent condition.	Good condition. No visual signs of damage to tank and baffles, access covers in good condition	Fair condition. Minor tank damage visible, loose or partially blocked baffles, access covers remain serviceable	Poor condition. Significant tank damage, access covers have broken or missing parts but are still operable. Missing or significantly plugged baffles	Very poor condition. Excessive tank damage, access covers not lockable and/or broken, complete blockages of baffles evident.

7. TREATMENT FACILITY – TFWW (CONVENTIONAL PUMP – WWCPMP)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		CONVENTIONAL PUMP		WWCPMP	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Motor Hours Run	<10,000 hours	≥ 10,000 and < 50,000 hours	≥ 50,000 and < 100,000 hours	≥ 100,000 and < 200,000 hours	≥ 200,000 hours
Vibration	No unusual vibration detectable	Minor vibration detected	Moderate vibration	Considerable vibration	Major vibration
Temperature	No unusual temperature detected	Minimal heat from casing using hand	Heat detected by hand	Heat detected by hand is uncomfortable to the touch	Heat too high to assess by hand
Leaking seals	No visible sign of leaking seals	Minor leaking seals	Moderate leaking seals	Considerable leaking seals	Major leaking seals
Unplanned Outages Avg # per Year	0 per Year	1-2 per Year	3-5 per Year	6-10 per Year	More than 10 per Year

8. TREATMENT FACILITY – TFWW (SUBMERSIBLE-WWSPMP)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	SUBMERSIBLE		WWSPMP		
	PUMP				
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Motor Hours Run</i>	< 10,000 hours	≥ 10,000 and < 50,000 hours	≥ 50,000 and < 100,000 hours	≥ 100,000 and < 200,000 hours	≥ 200,000 hours
<i>Vibration</i>	No unusual vibration detectable	Minor vibration detected	Moderate vibration	Considerable vibration	Major vibration
<i>Unplanned Outages Avg # per Year</i>	0 per Year	1-2 per Year	3-5 per Year	6-10 per Year	More than 10 per Year

9. TREATMENT FACILITY – TFWW (SBR TANK – WWSBRT)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	SBR TANK		WWSBRT		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Age of Tank</i>	< 1 year	≥ 1 and < 10 years	≥ 10 and < 20 years	≥ 20 and < 30 years	≥ 30 years
<i>Visible Condition of Tank</i>	Excellent Condition, do distress evident		Cracking <3mm, cracking less than 10% of surface		Cracking >3mm or cracking on greater than 10% of surface
<i>Inlet and Outlet Piping</i>	No leakage detected				Visible leakage

10. TREATMENT FACILITY TFWW (FILTER FEED TANK -WWFFT)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	FILTER FEED TANK		WWFFT		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Years of Service</i>	< 1 year	≥ 1 and < 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 years
<i>Feed line leakage</i>	No detectable leakage	Minor detectable leakage	Moderate detectable leakage	Considerable detectable leakage	Heavy detectable leakage
<i>Feed Pump Noise</i>	No unusual noises detected	Slight whine/rattle detected	Moderate whine/rattle detected, easily heard over pump noise	Loud whine/rattle	Disturbingly loud vibrations during operation
<i>Unplanned Outages Avg # per Year</i>	0 per Year	1 per Year	2 per Year	3 per Year	More than 3 per Year

11. TREATMENT FACILITY -TFWW (LAGOON – WWLAG)

ASSET CLASS: WASTEWATER COLLECTION		WWC			
SUBTYPE: TREATMENT FACILITY		TFWW			
FEATURE CODE: LAGOON		WWLAG			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	<5 Years	≥ 5 and < 10 Years	≥ 10 and < 20 Years	≥ 20 and < 30 Years	≥ 30 Years
Vegetation / Clearing	Clear access to pond. No overgrown paths or equipment	Vegetation beginning to encroach on access to the pond site	Moderate vegetation growth. Access to site starting to become restricted	Significant vegetation growth which impedes access to the pond site	Access to pond site not possible.
Liner	No recorded leaks		1 leak detected per year		>1 leak detected per year
Garbage Accumulation	None		Minor debris in pond, no blockage of inlet or outlet		Significant debris causing blockage of inlet and outlet.
Sludge Accumulation	> 80% remaining volume capacity	60% to 80% of remaining volume capacity	40% to 60% of remaining volume capacity	20% to 40% remaining volume capacity	<20% remaining volume capacity
Water Level Issues	None		Overflow events 1 per year		Overflow events >1 per year
Damaged Fencing or Concrete	No observed damage to perimeter fencing or concrete	Minor damage to fencing or concrete. Structure remains in good working order.	Moderate damage to fencing or concrete. Structure performance is degraded but functional.	Considerable damage to fencing or concrete. Structural performance compromised. Fencing can be moved by hand.	Areas of fencing missing or collapsed. Posts broken or detached from foundation.

12. TREATMENT FACILITY TFWW (SCREEN CHAMBER WWSCRC)

ASSET CLASS: WASTEWATER COLLECTION		WWC			
SUBTYPE: TREATMENT FACILITY		TFWW			
FEATURE CODE: SCREEN CHAMBER		WWSCRC			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Years of Service	< 1 year	≥ 1 and < 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 years
Screen	Intact		Minor breakage, still functioning		Significant breakage, screening not working
Visible Condition of Tank	Excellent Condition, do distress evident		Cracking <3mm, cracking less than 10% of surface		Cracking >3mm or cracking on greater than 10% of surface
Unplanned Outages Avg # per Year	0 per Year	1 per Year	2 per Year	3 per Year	More than 3 per Year

13. TREATMENT FACILITY – TFWW (BAR SCREEN CHAMBER – WWBSC)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	BAR SCREEN CHAMBER	WWBSC			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 15 Years	≥ 15 and < 30 Years	≥ 30 and < 45 Years	≥ 45 and < 60 Years	≥ 60 Years
Avg # per Year	0/year	1/year	2/year	3/year	More than 3/year
Screen	Intact		Minor breakage, still functioning		Significant breakage, screening not working
Visible Condition of Tank	Excellent Condition, do distress evident		Cracking <3mm, cracking less than 10% of surface		Cracking >3mm or cracking on greater than 10% of surface
Years of Service	< 1 year	≥ 1 and < 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 years

14. TREATMENT FACILITY - TFW (FLOW METER – WWFLME)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	FLOW METER	WWFLME			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Years of Service	< 1 year	≥ 1 and < 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 years
Years since last calibration	< 1 year	1 < 2 years	2 < 3 years	3 < 4 years	> 4 years
Unplanned Outages Avg # per Year	0 per Year	1 per Year	2 per Year	3 per Year	More than 3 per Year

15. TREATMENT FACILITY – TFWW (BUILDING – WWTFBLD)

ASSET CLASS:	WASTEWATER COLLECTION		WWC			
SUBTYPE:	TREATMENT FACILITY		TFWW			
FEATURE CODE:	BUILDING		WWTFBLD			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	
Exterior Building Condition	Great condition. No delamination's (Siding, Roof, Foundation, Doors and Windows in pristine condition).	Good condition. No visual delamination (Siding, Roof, Foundation, Doors and Windows showing minimal wear).	Fair condition. Minor delamination's (Siding, Roof, Foundation, Doors and Windows need adjustment).	Poor condition. Some visual delamination's (Siding, Roof, Foundation, Doors and Windows not working).	Very Poor -Critical condition. Excessive delamination's (Siding, Roof leaking, Foundation, Doors and Windows broken). Unsafe.	
Interior Building Condition	Great condition. No delamination's (Walls , Ceiling and Floors in pristine condition).	Good condition. No visual delamination (Walls , Ceiling and Floors showing minimal wear).	Fair condition. Minor delamination's (Repainting needed, light bulbs need replaced and windows or doors need adjustment).	Poor condition. Some visual delamination's (Windows or doors inoperable, paint peeling and electrical components not working).	Very Poor -Critical condition. Excessive delamination's (Windows broken and doors unlockable). Unsafe.	

16. TREATMENT FACILITY – TFWW (OFFICE FURNITURE AND SUPPLIES - WWOFS)

ASSET CLASS:	WASTEWATER COLLECTION		WWC			
SUBTYPE:	TREATMENT FACILITY		TFWW			
FEATURE CODE:	OFFICE FURNITURE AND SUPPLIES		WWOFS			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	
Age	< 5 years	≥ 5 and < 7 years	≥ 7 and < 9 years	≥ 9 and < 11 years	≥ 11 years	
Amount	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time.	Never	

17. TREATMENT FACILITY – TFWW (COMPUTER – WWCOMP)

ASSET CLASS:	WASTEWATER COLLECTION		WWC			
SUBTYPE:	TREATMENT FACILITY		TFWW			
FEATURE CODE:	COMPUTER		WWCOMP			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	
Age	< 1 years	≥ 1 and < 2 years	≥ 2 and < 3 years	≥ 3 and < 4 years	≥ 5 years	
Amount	According to manufacturer's recommendations	75% of the time	50 % of the time	25% of the time.	Never	

18. TREATMENT FACILITY - TFWW (GENERATOR - WWTFGEN)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	GENERATOR	WWTFGEN			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Number of Exercises</i>	12 + per year	8 - 11 per year	4 - 7 per year	1 -3 per year	0 per year
<i>Unplanned Outages Avg # per Year</i>	0 per Year	1 - 2 per year	3 - 5 per year	6 - 10 per year	> 10 per year
<i>Maintenance required</i>	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time.	Never

19. TREATMENT FACILITY – TFWW (INTAKE STRUCTURES & VALVES – WWISV)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	INTAKE STRUCTURES AND VALVES		WWISV		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Screen and Piping Condition</i>	Screen is intact and piping in good shape		Screen showing signs of deterioration.		Screen severely damaged/ deteriorated/ missing
<i>Isolation Valve - Was valve operable last time used</i>	Yes		Unknown		No
<i>Unplanned Outages Avg # per Year</i>	0 per Year	1-2 per Year	3-5 per Year	6-10 per Year	More than 10 per Year

20. TREATMENT FACILITY- TFWW (LAB EQUIPMENT – WWLAB)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	LAB EQUIPMENT		WWLAB		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Age</i>	< 3 years	≥ 3 and < 6 years	≥ 6 and < 8 years	≥ 8 and < 10 years	≥ 10 years
<i>Maintenance required</i>	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time.	Never

21. TREATMENT FACILITY - TFWW (PRESEDIMENTATION TANK WWPTNK)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		PRESEDIMENTATION TANK		WWPTNK	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 15 years	≥ 15 and < 30 years	≥ 30 and < 45 years	≥ 45 and < 60 years	≥ 60 years
Exterior Coating	No chipping or visible thin spots in exterior coating	Minor chipping or thin areas	Moderate chipping and thin area	Considerable chipping and thin areas	Major areas of chipped or thin exterior coating
Panel Sealant/Caulking	No leaks have been detected/ caulking has no peeling or lifting from paneling, no fading/ no visible rust	Minor leaks detected/ caulking has minor peeling or lifting from paneling, minor fading/ no visible rust	Moderate leak caulking has moderate peeling or lifting from paneling, moderate fading/ Some visible rust	considerable leaking/ caulking has considerable peeling or lifting from paneling, considerable fading/ considerable visible rust	Major leaking/ caulking has significant peeling or lifting from paneling, extreme fading, major rust (complete sealant failure)
Concrete Ringwall	No cracks or visible structural damage to exposed concrete	Minor cracking or visible damage	Moderate cracking or visible damage	Considerable cracking and visible damage	Major cracking and visible damage to concrete

22. TREATMENT FACILITY – TFWW (STREAMING CURRENT MONITOR – WWSCM)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		STREAMING CURRENT MONITOR		WWSCM	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 4 years	≥ 4 and < 8 years	≥ 8 and < 11 years	≥ 11 and < 15 years	≥ 15 years
Maintenance required	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time.	Never

23. TREATMENT FACILITY - TFWW (TELEMETRY – WWTLEM)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		TELEMETRY		WWTLEM	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 and < 20 years	≥ 20 years
Parts available	Yes				No

24. TREATMENT FACILITY - TFWW (AIR COMPRESSOR – WWTFAC)

ASSET CLASS:	WASTEWATER COLLECTION	WWC			
SUBTYPE:	TREATMENT FACILITY	TFWW			
FEATURE CODE:	AIR COMPRESSOR	WWTFAC			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 4 years	≥ 4 and < 8 years	≥ 8 and < 12 years	≥ 12 and < 15 years	≥ 15 years
Amount	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time	Never

25. TREATMENT FACILITY – TFWW (GASOLINE DRIVEN TRASH PUMP – WWGDTP)

ASSET CLASS:	WASTEWATER COLLECTION	WWC			
SUBTYPE:	TREATMENT FACILITY	TFWW			
FEATURE CODE:	GASOLINE DRIVEN TRASH PUMP	WWGDTP			
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Years in Service	1-2 years	≥ 2 and < 4 years	≥ 4 and < 6 years	≥ 6 and < 8 years	≥ 8 years
Leaking seals	No visible sign of leaking seals	Minor leaking seals	Moderate leaking seals	Considerable leaking seals	Major leaking seals
Engine Startup	Starts quickly/runs smoothly		Moderately hard to start engine/runs a little rough		Hard to start/engine quits while in use

26. TREATMENT FACILITY – TFWW (DAF TANK OR AIR SATURATION VESSEL – WWDAFT)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	DAF TANK OR AIR SATURATION VESSEL		WWDAFT		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 4 years	≥ 4 and < 8 years	≥ 8 and < 12 years	≥ 12 and < 15 years	≥ 15 years
Corrosion	None Evident, paint shows no discoloration or chipping	Paint chipped, peeling or missing and rust showing on >10% of tank or piping	Paint chipped, peeling or missing and rust showing on >25% of tank or piping		Paint chipped, peeling or missing and rust showing on >50% of tank or piping
Leaks	No leaks evident		Potential intermittent leakage from any seal or connection. Pooling is not evident. Public works reports intermittent leakage.		Leakage from any seal or connection ongoing. Leakage causing pooling.
Amount	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time	Never

27. TREATMENT FACILITY - TFWW (DAF SKIMMER- - WWDAFS)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	DAF SKIMMER		WWDAFS		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 4 years	≥ 4 and < 8 years	≥ 8 and < 12 years	≥ 12 and < 15 years	≥ 15 years
Paddles	Paddles are all intact and not corroded	A single paddle is corroded or damaged by chipping	Greater than 1 paddle is corroded or damaged by chipping	Paddles are corroded or damaged, no greater than one is missing	Greater than 1 paddle is missing
Drive Chain and sprockets	Drive chain runs consistently and smoothly. No sign of wear on chain	Drive chain runs consistently and smoothly. Visual signs of wear on chain are rounded or inconsistent edges, surface defects on several links)	Drive chain skips less than once per cycle, no missing teeth on sprocket. Visual signs of wear on chain are rounded or inconsistent edges, surface defects on greater than 50% of links)	Drive chain skips less than once per cycle, one or more teeth missing from sprocket. Visual signs of wear on chain are rounded or inconsistent edges, surface defects on greater than 75% of links)	Drive chain skips on sprockets greater than once per cycle, one or more teeth missing from sprocket. Visual signs of wear on chain are rounded or inconsistent edges, surface defects on all links)
Amount	According to manufacturers recommendations	75% of the time	50 % of the time	25% of the time	Never

28. TREATMENT FACILITY – TFWW (ELECTRIC MOTOR (PUMPS EXCLUDED) – WWELECM)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	ELECTRIC MOTOR (PUMPS EXCLUDED)		WWELECM		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Motor Hours Run</i>	< 10,000 hours	≥ 10,000 and < 50,000 hours	≥ 50,000 and < 100,000 hours	≥ 100,000 and < 200,000 hours	≥ 200,000 hours
<i>Vibration</i>	No unusual vibration detectable	Minor vibration detected	Moderate vibration	Considerable vibration	Major vibration
<i>Temperature</i>	No unusual temperature detected	Minimal heat from casing using hand	Heat detected by hand	Heat detected by hand is uncomfortable to the touch	Heat too high to assess by hand
<i>Unplanned Outages Avg # per Year</i>	0 per Year	1-2 per Year	3-5 per Year	6-10 per Year	More than 10 per Year

29. TREATMENT FACILITY – TFWW (OXIDATION DITCH - WWOXDI)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	OXIDATION DITCH		WWOXDI		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Liner Material</i>	Impermeable membrane		Concrete or Asphalt		
<i>Stairs, Handrails, Walkways</i>	No observed damage or rust. Height meets current code.	Minor damage and/or rust to 10% of surface. Structure remains in good working order.	Moderate damage and/or rust to 25% of surface. Structure performance is degraded but functional.	Considerable damage and/or rust to 25-50% of surface. Structural performance compromised. Can be easily moved by hand.	Areas of stairs, handrails or walkways missing or collapsed, and/or rust to >50% of surface. Posts broken or detached from foundation. Height not to current code.

30. TREATMENT FACILITY – TFWW (PADDLE AERATORS (MINUS MOTORS) WWPADAE)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	PADDLE AERATORS (MINUS MOTORS)		WWPADAE		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Age</i>	< 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 and < 20 years	≥ 20 years
<i>Paddles</i>	Paddles are all intact and not corroded	A single paddle is corroded or damaged by chipping	Greater than 1 paddle is corroded or damaged by chipping	Paddles are corroded or damaged, no greater than one is missing	Greater than 1 paddle is missing

31. TREATMENT FACILITY- -TFWW (CLARIFIER – WWCLAR)

ASSET CLASS:	WASTEWATER COLLECTION		WWC		
SUBTYPE:	TREATMENT FACILITY		TFWW		
FEATURE CODE:	CLARIFIER		WWCLAR		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
<i>Age</i>	< 15 years	≥ 15 and < 30 years	≥ 30 and < 45 years	≥ 45 and < 60 years	≥60 years
<i>Baffle and Weir</i>	Baffle and weir are level, showing consistent flow at all points.		Baffle and weir are slightly off level, or minor algae growth or trash in effluent weir, causing minor inconsistencies in flow.		Baffle and weir are significantly off level, or major algae growth or trash in effluent weir, causing flow short circuiting.
<i>Skimmer Paddles</i>	Paddles are all intact and not corroded		paddle is corroded or damaged by chipping		Paddle is non functional
<i>Stairs, Handrails, Walkways</i>	No observed damage or rust. Height meets current code.	Minor damage and/or rust to 10% of surface. Structure remains in good working order.	Moderate damage and/or rust to 25% of surface. Structure performance is degraded but functional.	Considerable damage and/or rust to 25-50% of surface. Structural performance compromised. Can be easily moved by hand.	Areas of stairs, handrails or walkways missing or collapsed, and/or rust to >50% of surface. Posts broken or detached from foundation. Height not to current code.

32. TREATMENT FACILITY – TFWW (SLUDGE DRYING BEDS – WWSDDB)

ASSET CLASS:		WASTEWATER COLLECTION		WWC		
SUBTYPE:		TREATMENT FACILITY		TFWW		
FEATURE CODE:		SLUDGE DRYING BEDS		WWSDDB		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	
Age	< 15 years	≥ 15 and < 30 years	≥ 30 and < 45 years	≥ 45 and < 60 years	≥ 60 years	
Condition	Excellent condition. No signs of concrete sidewall damage, paint on piping and valves looks great. No leaking evident.	Good condition. No visual concrete sidewall damage, minor rusting on piping and valves. No leaking evident.	Fair condition. Minor concrete sidewall damage, some rusting of piping and valves. Reports of minor leaking visible when loading sludge to beds	Poor condition. Significant concrete sidewall damage, significant rusting of piping and valves. Still operable. Reports of significant leaking visible when loading sludge to beds	Very poor - critical condition. Excessive concrete sidewall damage, exposed rebar, major rusting of piping and valves inoperable. Reports of excessive leaking visible when loading sludge to beds	

33. TREATMENT FACILITY – TFWW (BLOWER – WWBLWR)

ASSET CLASS:		WASTEWATER COLLECTION		WWC		
SUBTYPE:		TREATMENT FACILITY		TFWW		
FEATURE CODE:		BLOWER		WWBLWR		
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5	
Motor Hours Run	< 10,000 hours	≥ 10,000 and < 50,000 hours	≥ 50,000 and < 100,000 hours	≥ 100,000 and < 200,000 hours	≥ 200,000 hours	
Vibration	No unusual vibration detectable	Minor vibration detected	Moderate vibration	Considerable vibration	Major vibration	
Temperature	No unusual temperature detected	Minimal heat from casing using hand	Heat detected by hand	Heat detected by hand is uncomfortable to the touch	Heat too high to assess by hand	
Unplanned Outages Avg # per Year	0 per Year	1-2 per Year	3-5 per Year	6-10 per Year	More than 10 per Year	

34. TREATMENT FACILITY – TFWW (CHLORINE CONTACT CHAMBER – WWCLCC)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		CHLORINE CONTACT CHAMBER		WWCLCC	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Age	< 15 years	≥ 15 and < 35 years	≥ 35 and < 55 years	≥ 55 and < 80 years	≥ 80 years
Appearance	Excellent condition. No signs of concrete/brick damage, cover and frame look great. No leaking evident.	Good condition. No visual concrete/brick damage, minor signs of wear on cover and frame. No leaking evident.	Fair condition. Minor concrete/brick damage no gaps or exposed rebar, minor cracking on frame and cover. Evidence of leaking along walls or pipe penetrations.	Poor condition. Significant concrete/brick damage with cracks greater than 6mm. Cracks greater than 6mm or missing pieces from frame and cover. Significant leaks along walls or pipe penetrations.	Very poor - critical condition. Excessive concrete/brick damage, exposed rebar, frame and cover missing or not safe for use. Soil penetrating walls or pipe penetrations.

35. TREATMENT FACILITY – TFWW (CHEMICAL FEED SYSTEM – WWCCSYS)

ASSET CLASS:		WASTEWATER COLLECTION		WWC	
SUBTYPE:		TREATMENT FACILITY		TFWW	
FEATURE CODE:		CHEMICAL FEED SYSTEM		WWCCSYS	
Distress Mode	Rating 1	Rating 2	Rating 3	Rating 4	Rating 5
Years of Service	< 1 year	≥ 1 and < 5 years	≥ 5 and < 10 years	≥ 10 and < 15 years	≥ 15 years
Feed line leakage	No detectable leakage	Minor detectable leakage	Moderate detectable leakage	Considerable detectable leakage	Heavy detectable leakage
Feed Pump Noise	No unusual noises detected	Slight whine/rattle detected	Moderate whine/rattle detected, easily heard over pump noise	Loud whine/rattle	Disturbingly loud vibrations during operation
Unplanned Outages Avg # per Year	0 per Year	1 per Year	2 per Year	3 per Year	More than 3 per Year