

Likelihood Indicator	Asset Condition Categories					
	Structure	Pumps and Motors	Internal Electrical and Communications	Pipe Work and Valves	Power	Force Main
Current Physical Condition	<ul style="list-style-type: none"> •are there cracks on the walls and floor? •are the walls and floors corroded? •is the HVAC in good physical condition? •is there groundwater seepage? •are there repeated maintenance issues? 	<ul style="list-style-type: none"> •is there visible corrosion on the pumps and motors? •can the pump be rebuilt or is it near the end of its life? •are there repeated maintenance issues? 	<ul style="list-style-type: none"> •is the electrical in good physical condition (control cabinets and MCC/starters)? •are there repeated maintenance issues? 	<ul style="list-style-type: none"> •are the pipes and fittings severely corroded or patched? •are the valves and gates within the station and the outfall (if present) operable? •are the gates and valves in good physical condition (corrosion, pitting, seal face material, gate material)? •is the potable water piping and backflow preventer corroded? •are there repeated maintenance issues? 	<ul style="list-style-type: none"> •is the power in good physical condition (Customer service termination enclosure, Main disconnects, subpanels, LV transformer)? •are there repeated maintenance issues? 	<ul style="list-style-type: none"> •have there been any leaks or breaks in the past? •is the force main older than 25 or 50 or 75 years? •is the force main material AC, PVC, CI, Steel, Concrete, HDPE or Unknown?
Fitness For Purpose	<ul style="list-style-type: none"> •can the dry well flood due to the wet well? •is the size of the wet well appropriate? •is the physical access to the wet well and dry well appropriate? •can the floor hatches open and close with ease? •can new equipment be accommodated? •is the HVAC system adequate? (avoids extreme temperatures and appropriate air changes) 	<ul style="list-style-type: none"> •when operational, do the pumps and motors consistently deliver the design flow rate? •is there appropriate pump redundancy? •is the type of pump appropriate (centrifugal, vortex, submersible)? •if applicable, is there a water supply for the pumps? 	<ul style="list-style-type: none"> •is the wet well level measurement appropriately designed (flygt ball, ultrasonic, dp cell, etc.)? •is the illumination level for lighting appropriate? •is the generator damper open and close logic appropriate? •is the RTU or modem >10 years old? •is the level sensor/transmitter > 10 years old? •is the communication with SCADA appropriate? 	<ul style="list-style-type: none"> •is there a force main shut off valve? •is there a flow meter present and is it accurate? •is the pipe configuration appropriate for design purposes? •are the check valve configurations appropriate? (horizontal or vertical valve and type of valve) 	<ul style="list-style-type: none"> •is a standby generator needed and present? •can the City's portable generator power the station? •are the conductors from the metering cabinet to the station the proper size? •does the transformers load current (Amps) match the capacity of the conductors? •is a main breaker present? •is the grounding system appropriate? •is the utility service appropriate (600V/3PH)? •is the utility service consistent with the City of Winnipeg electrical design guide? 	<ul style="list-style-type: none"> •is the force main compatible with the pumps and motors?
Maintainability and Operability		<ul style="list-style-type: none"> •is there enough space for operation and maintenance activities to be completed safely? •do the pumps have to be lifted up and over process piping during removal? •is there a direct lift spot to remove pumps? •are all the pumps the same model? •are spare parts available from a supplier within 6-8 weeks? 		<ul style="list-style-type: none"> •is there enough space for operation and maintenance activities to be completed safely? •is there sufficient access to exercise valves? •do isolation valves exist? 		
Demand Condition		<ul style="list-style-type: none"> •has the capacity been reached? 		<ul style="list-style-type: none"> •has the capacity been reached? 	<ul style="list-style-type: none"> •has the capacity been reached? 	<ul style="list-style-type: none"> •has the capacity been reached?
Susceptibility to 3rd Party & Environmental Damage	<ul style="list-style-type: none"> •if needed, are there bollards or a fence surrounding the structure and transformer? •is there a history of vandalism? •can vehicle traffic accidents occur? •is there lighting available during the evenings? •is there a security system? 					<ul style="list-style-type: none"> •is the force main attached to a bridge? •is the force main near other underground utilities? •is the force main under a river crossing; if so, is the location of the pipe an issue?
Safety Condition	<ul style="list-style-type: none"> •do the ladder rungs/steps have appropriate spacing and alignment? •are the ladder rungs/steps corroded? •is a hand rail for stairs present? •is the station adequate to complete assisted hoist rescue? •are the drawings and operation and maintenance manuals representative of the lift station? •are there extraordinary arc flash hazards? •are the cabinets marked with appropriate arc flash warnings? •are the floor hatches safe (guard rail, type of material)? •is the outdoor lighting sufficient? •is there interior emergency egress lighting? •are there safety issues due to the pipe configuration? 					