



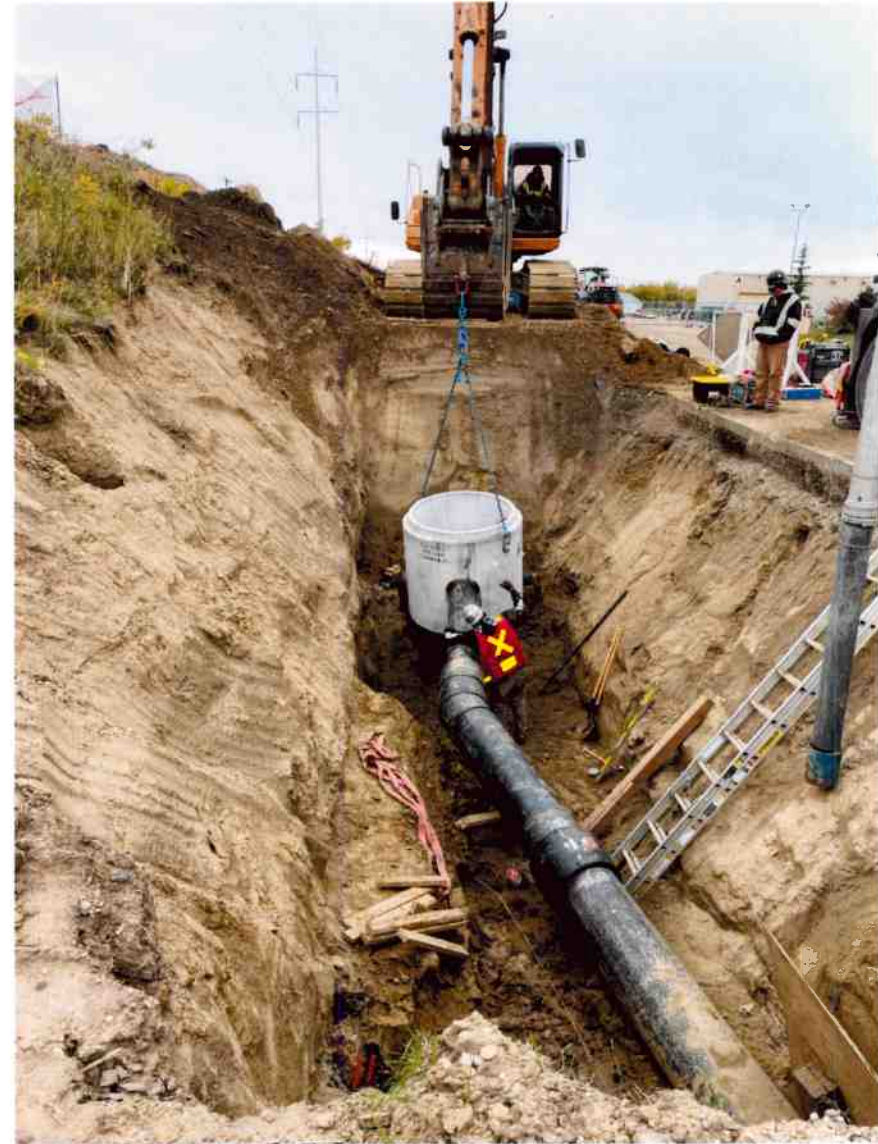
WATER AND WASTEWATER MASTER PLAN COUNTY WIDE

Governance and Priorities Committee
June 2, 2026



Agenda

- Recap
 - Plan Intent, Alignment and Process
- Progress & Outcomes Thus Far
- Next Steps
- Conclusion



Recap – Plan Intent



01

What it is

- A non-statutory planning document that will highlight areas with existing water and wastewater servicing.
- A long-term vision of where Parkland County could provide water and wastewater servicing in the future.

The last infrastructure Master Plan to complete!

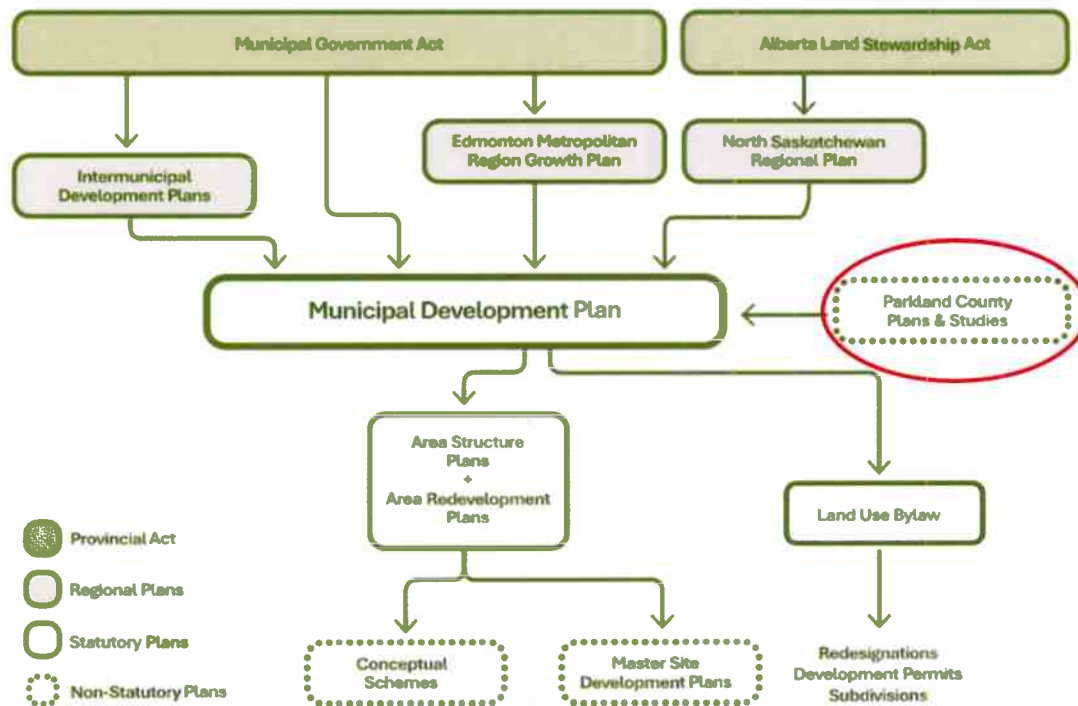


02

What it isn't

A plan to address day-to-day operational considerations, a life-cycle plan for existing infrastructure, or a prioritized 25-Year Capital Plan.

Recap – Plan Alignment

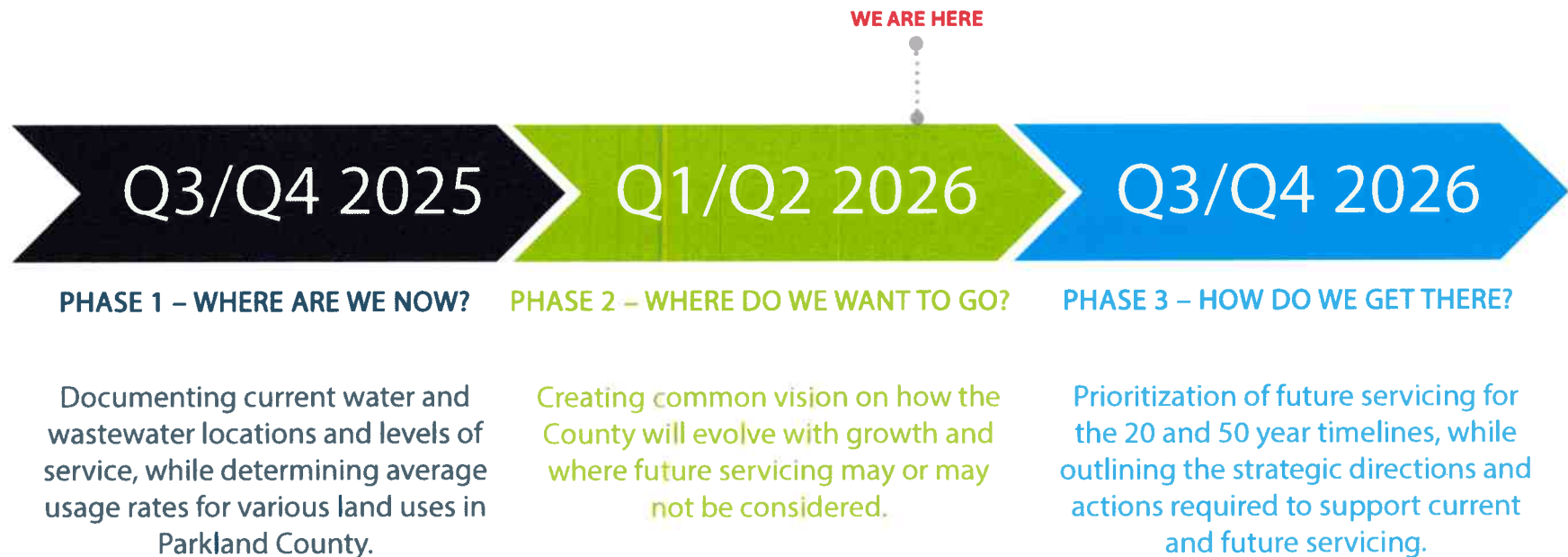


The Water and Wastewater Master Plan aligns with Parkland County's Plans including the Municipal Development Plan and the Land Use Bylaw.

The Water and Wastewater Master Plan will also inform new Area Structure Plans, existing Area Structure Plan revisions, Development Area Policies and other strategic level investments.

Recap – Plan Process

The Master Plan is being completed through a three phase approach over 2025 and 2026



PHASE 1

WHERE ARE WE NOW?





What we did

Existing Service Area Analysis

- Confirmed existing infrastructure.
- Reviewed historical usage volumes from 2020-2024.
 - Pumphouse volumes in vs. pumphouse volumes out.
 - Pumphouse volumes out vs. billing records.
- Compared actuals with Parkland County's Engineering Design Standards.



What we found

Design Standards vs. Actuals: Overestimation of Water Consumption Values

Residential Example

Big Lake

Design Standard	Actuals
130 dwellings	130 dwellings
3.0	2.7
300 L/p/d	230 L/p/d
2.0	1.8
234 m ³	145 m ³

↑ 38% decrease

Industrial/Commercial Example

Entwistle

Design Standard	Actuals
65 hectares	65 hectares
6000 L/ha/d	3500 L/ha/d
2.0	1.8
780 m ³	410 m ³

↑ 48% decrease

Dwellings / Area (quarter section of land)

Occupancy (people/dwelling)

Water demand (Liters/ person or ha /day)

Peaking Factor

Water demand – total (m³/year)

* Note – Values took into consideration “water loss” factors



PHASE 2

WHERE DO WE WANT TO GO?



Phase 2 - Methodology

Guiding Principles & Technical Considerations

Statutory Plans

- MDP
- LUB

Non-Statutory Plans

Technical Feasibility

Commission Policies & Requirements

- WILD
- CRPWSC
- EPCOR
- ARROW

Stakeholder Engagement

- Residents
- Businesses
- Developers

Alignment

leads to



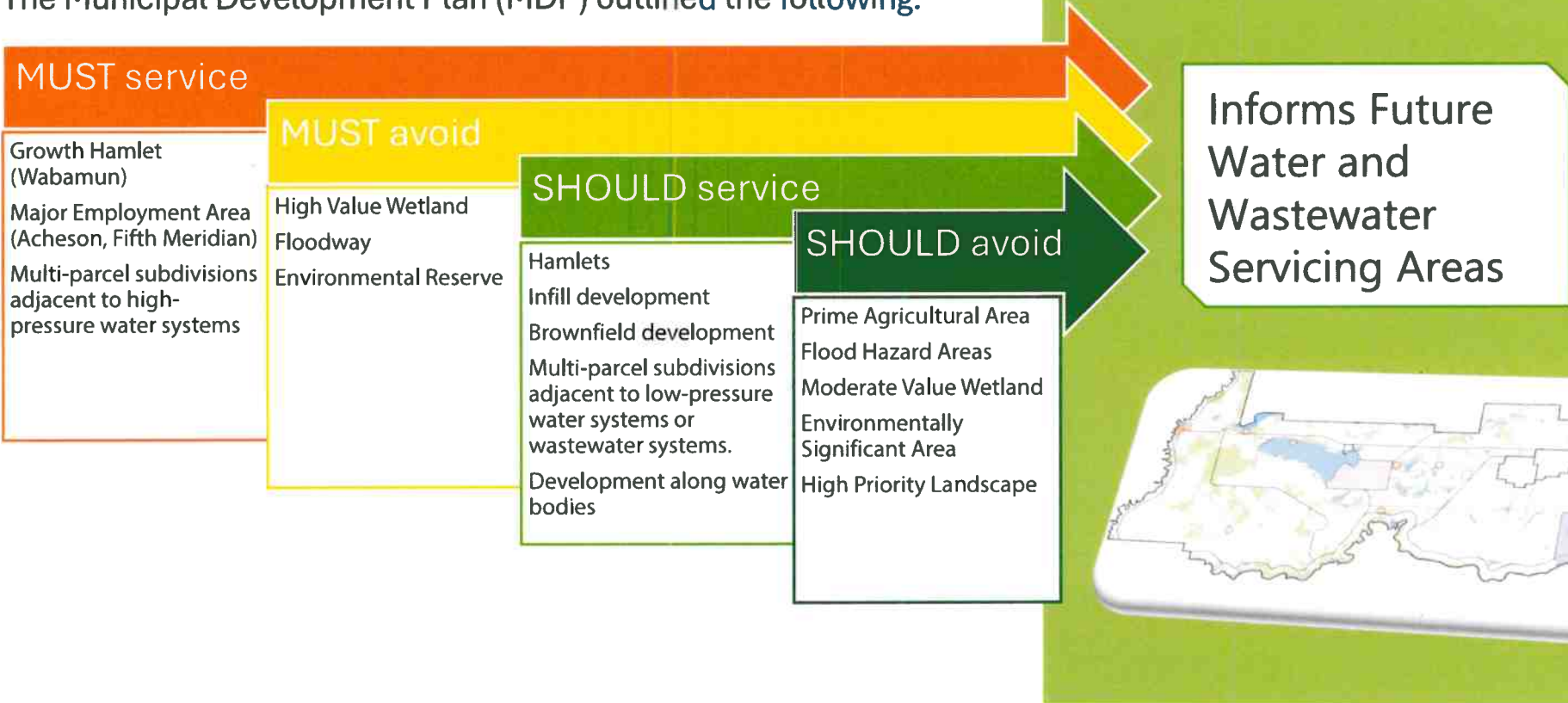
Potential Service Areas & Demands

- Short to medium term (0-20 years)
- Long term (20-50 years)

Potential Service Areas

Guiding Principles

The Municipal Development Plan (MDP) outlined the following:



Technical Feasibility

- Distance to existing service areas & regional commission lines
- Existing infrastructure capacity → Assessment of major infrastructure (reservoirs, pump stations, lagoons etc.)
- Densities → Eg. County residential multi-parcel subdivisions
- Commission allocations → Eg. WILD 470,000m³/yr capacity (~2,000 lots)
- Estimated water consumption and wastewater generation → Residential and Industrial



Commission Meetings

Parkland County held meetings with each commission to discuss the following:

- Verify details of current agreements and infrastructure.
- Outline plans for short- and long-term growth of County.
- Review available capacity within commission system for growth.
- Collect information on anticipated upgrades of commission systems.

- WILD
- CRPWSC
- EPCOR
- ARROW



Key Findings - WILD



Each new point of connection to WILD waterline **must be** to a reservoir. Direct connections are **not** permitted to the WILD line.



Members are responsible for building and maintaining distribution network (incl. reservoir & pumphouse).



Parkland's capacity to connect to WILD limited by 20-year allocations – we have assumed an increase to allocation in the 50-year horizon.



WILD is developing a Common Connection Strategy with policies targeted at identified priority service areas.

➤ WILD

➤ CRPWSC

➤ EPCOR

➤ ARROW



Key Findings - CRPWSC



Each new point of connection **must be** to a reservoir. Direct connections are **not** permitted to the CRPWSC line. Existing historical direct connections are “grandfathered” in.



Some capacity restrictions may exist for Parkland County's future expansion areas – CRPWSC will model based on Parkland County's proposed 5 & 25-year projections.



CRPWSC has no plans to pursue network expansion. Any expansion would be funded and constructed by Parkland County and then transferred to the CRPWSC.



CRPWSC is planning on developing a Master Plan in 2026. There is opportunity to have Parkland's Master Plan incorporated.

➤ WILD

➤ CRPWSC

➤ EPCOR

➤ ARROW



Key Findings - EPCOR



Planned upgrades to EPCOR's water system would provide enough capacity for Parkland's projected water demands.



EPCOR is in the process of developing a sewer trunk master plan – Parkland's flows could be considered.



Open to considering a Memorandum of Understanding for supplying water. The agreement would include EPCOR, CRPWSC and the County.

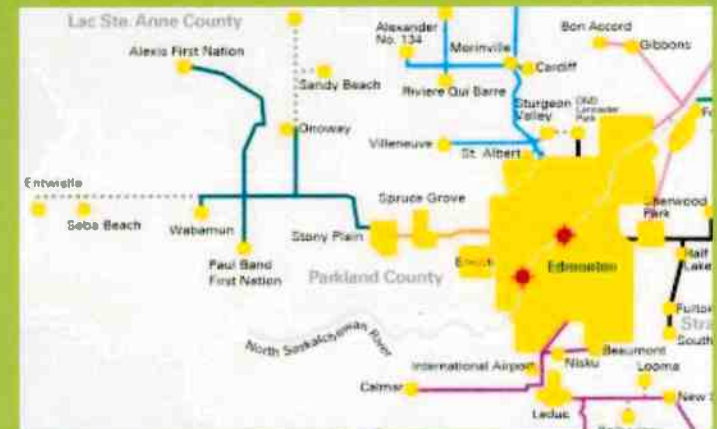


➤ WILD

➤ CRPWSC

➤ EPCOR

➤ ARROW



Key Findings - ARROW



ARROW's system has capacity for 25-years based on their recent assessment.



New connections must be sub-trunk with minimum service area of 16 hectares.



ARROW has no plans to pursue network expansion. Upgrades to the existing system would be considered if demands require.

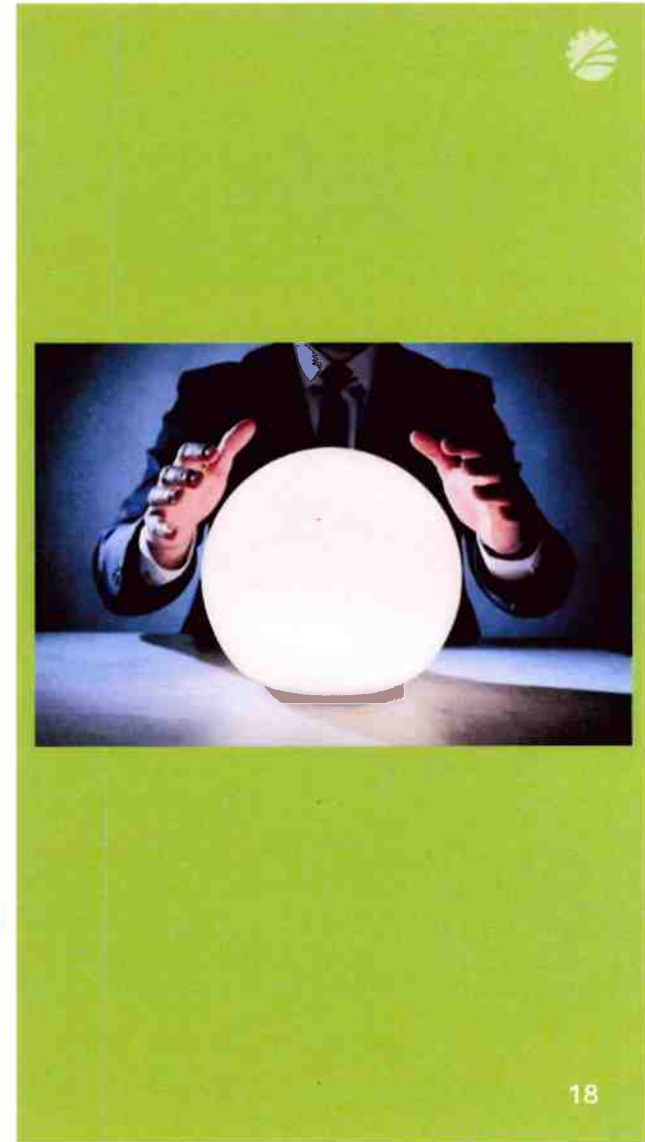


- WILD
- CRPWSC
- EPCOR
- **ARROW**



Future Servicing

- Future servicing options are currently being explored and refined.
- Option assessment considers:
 - Commission servicing vs. Parkland County servicing
 - Type of servicing (service extension, new systems or private systems)
 - Level of service (trickle feed, low-pressure or full servicing)
- Preliminary draft servicing plans are shown on the following slides.



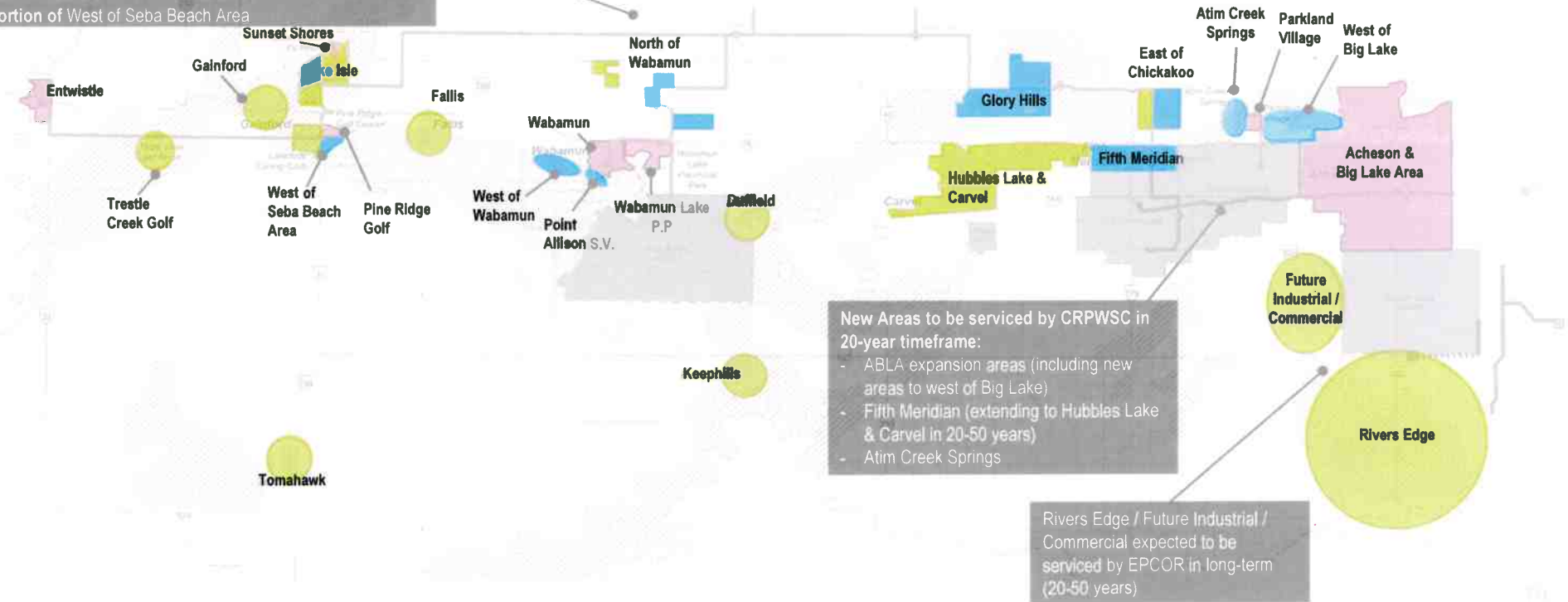
Water Servicing

Short- and Long-Term Servicing Plan

- New Areas to be serviced by WILD within 20-year timeframe:**
- Portion of East of Chickakoo
 - Glory Hills
 - West of Wabamun and a Portion of North of Wabamun
 - Point Allison (S.V.)
 - Portion of Lake Isle / Sunset Shores
 - Portion of West of Seba Beach Area

Servicing Timeframe

- Existing water services
- Potential short-medium term servicing (<20 years)
- Potential long-term servicing (20-50 years)



- New Areas to be serviced by CRPWSC in 20-year timeframe:**
- ABLA expansion areas (including new areas to west of Big Lake)
 - Fifth Meridian (extending to Hubbles Lake & Carvel in 20-50 years)
 - Atim Creek Springs

Rivers Edge / Future Industrial / Commercial expected to be serviced by EPCOR in long-term (20-50 years)

Water Servicing

20-year Commission & Parkland County Servicing Plan

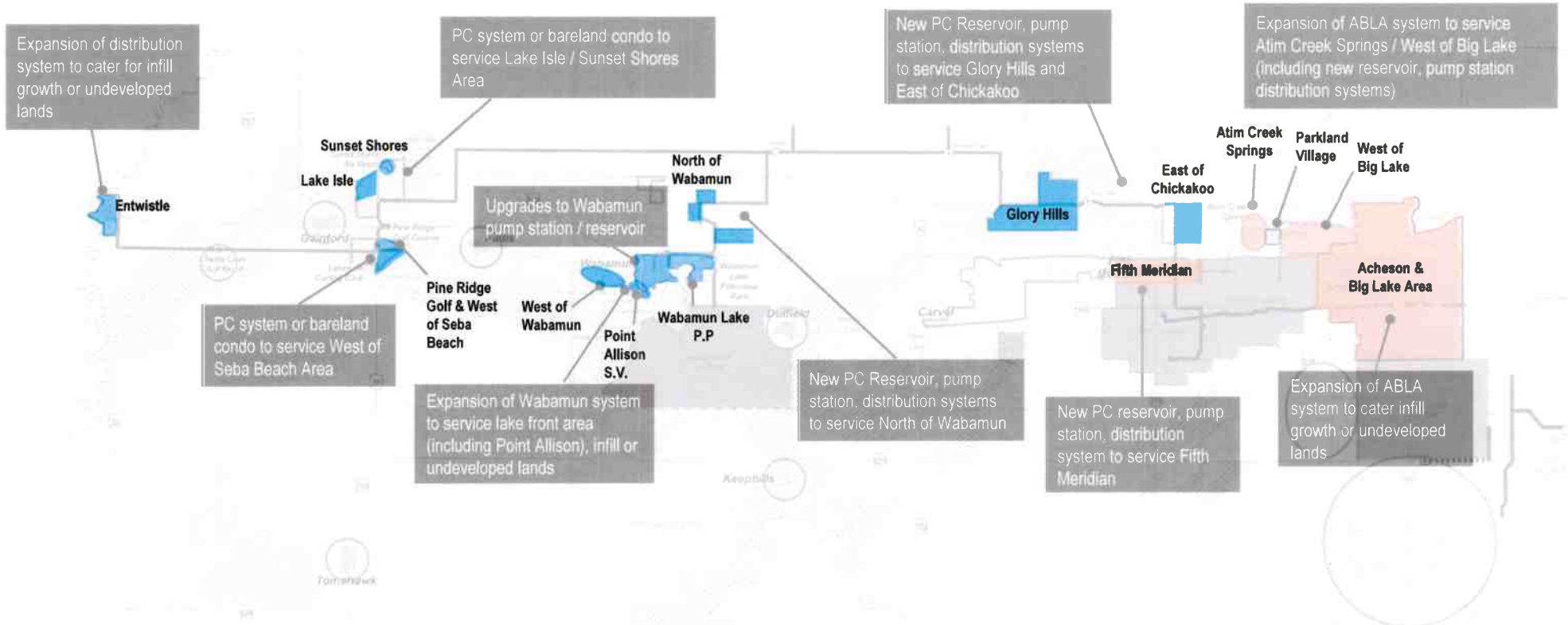
20-year

Commission

Servicing

WILD Serviced

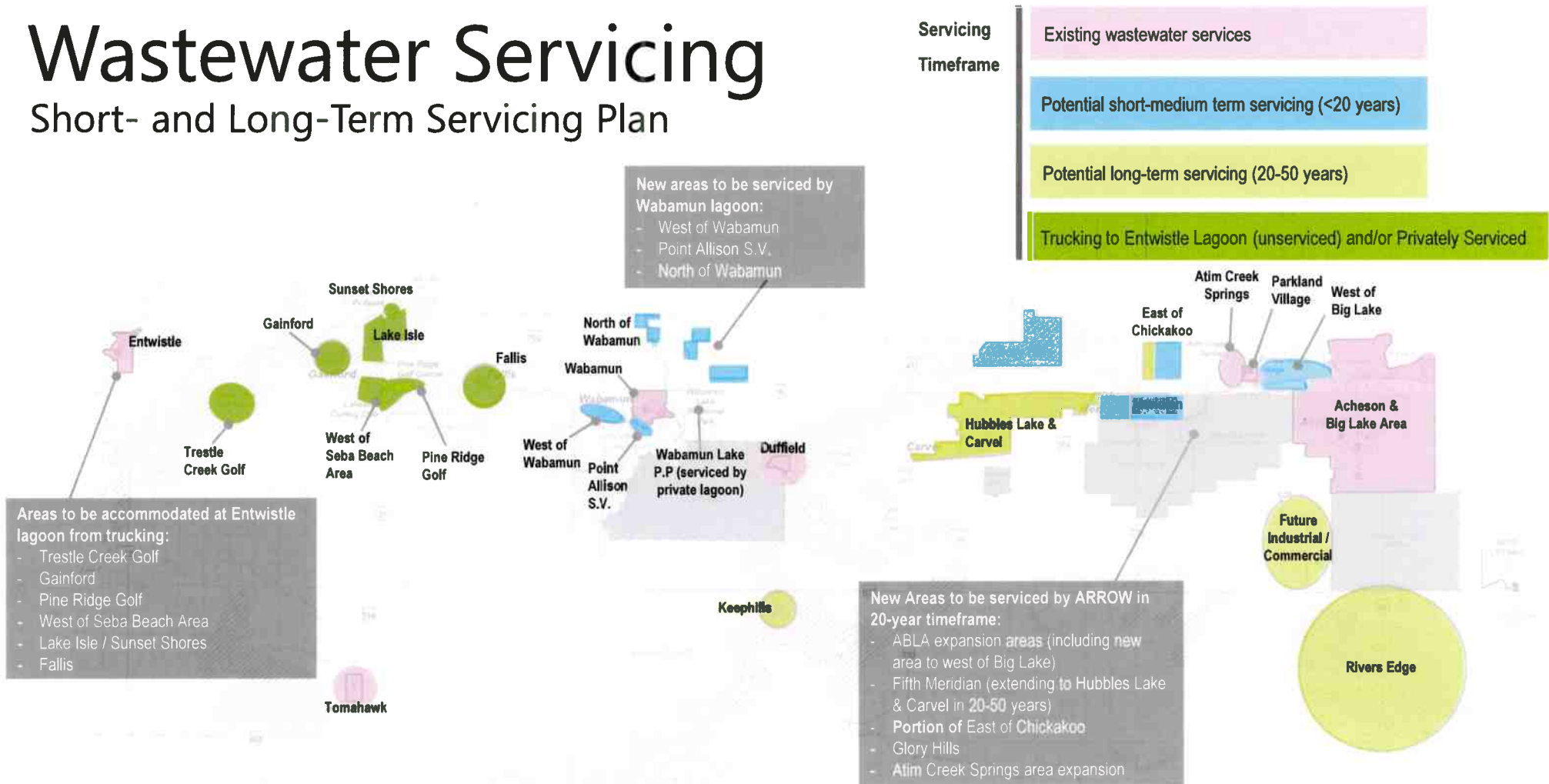
CRPWSC Serviced



-Servicing options could include trickle feed vs full-serviced.

Wastewater Servicing

Short- and Long-Term Servicing Plan



Wastewater Servicing

20-year Commission & Parkland County Servicing Plan

20-year Servicing

- ARROW Serviced
- Parkland County Serviced

Entwistle lagoon to accommodate trucking from surrounding areas
Upgrades to lift station expected
Lagoon on the cusp of upgrades depending on truck haul volumes

Entwistle

Upgrade to lagoon, main lift station and forcemain

Wabamun

Expansion of Wabamun system to service lake front (including Point Allison) and northern areas

Duffield

Continues to be serviced by local lagoon

New collection system, lift station, forcemain to ARROW OR low-pressure connection, to service Glory Hills and East of Chickakoo.

Glory Hills

Fifth Meridian

To be serviced by existing and proposed lift stations / forcemains to existing ARROW line, new collection network

Atim Creek Springs

Parkland Village

West of Big Lake

Expansion of ABLA system to service West of Big Lake (new lift station / collection system OR low-pressure connection)

Acheson & Big Lake Area

Expansion of ABLA system to cater for infill growth or undeveloped land
Upgrades to sewer, lift stations and forcemain

Continue to be serviced by local lagoon

Tomahawk

-Servicing options could include low-pressure vs full-serviced

Public Engagement

Goals

- Understand how water & wastewater is accessed.
- Seasonal vs year-round occupancy & household sizes.
- Identify major issues, needs, and opportunities.

Method

- Gathered feedback from residents, developers, business owners and other members of public.
- Survey with 19 questions + interactive map.
- Open from Feb 25 to Mar 18, 2026

Outcome: Total of 163 responses received



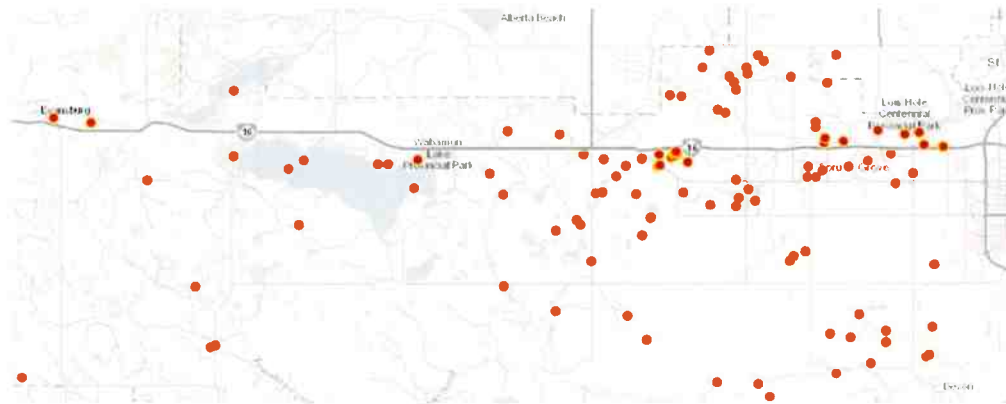
Key Feedback - Water

Demographics - 86% Residents, 9% Business Owners, 4% Seasonal Residents, 1% Multiple Roles

Current Water Servicing - 56% Private Wells, 22% Cisterns, 14% Municipal Service, 4% Private Connections, 4% Other or Unsure

66% are satisfied/very satisfied, 22% are neutral, 12% are dissatisfied/very dissatisfied

Concerns: Quality or availability (42%), Cost (32%), Env. Impacts (25%), No concerns (24%), System reliability (21%)



Phase 2 – Remaining items

- Continue refining potential servicing areas based on:
 - Stakeholder engagement feedback
 - Commission meeting outcomes
 - Feedback from today (Mayor + Council)
- Determining which private communal utility systems could be considered and identifying viable implementation mechanisms such as:
 - Bareland Condominiums (like Sunset, Pineridge, Trestle Creek)
 - Cooperatives
- Costing and potential funding options (local improvement, capital project, grant funded, privately funded etc.)
- Determining trigger points for when proposed service areas are financially viable.



Private Communal Utility Systems:
A shared infrastructure for water or sewage treatment that is owned operated and maintained by a private entity rather than a public authority.

3.6.5 Private Communal Utility Systems

- a. Private on-site water and wastewater systems must comply with:
 - i. all relevant provincial legislation and regulations (e.g. Alberta Health Act, Private Septic Regulations, Alberta Environment);
 - ii. all relevant Alberta Building Code regulations; and
 - iii. all applicable County standards, bylaws, procedures, policies including this Municipal Development Plan and the County Land Use Bylaw.
- b. Development should provide full or partial **Private Communal Utility Systems** to service multi-parcel subdivisions in:
 - i. areas near built-up areas, including hamlets;
 - ii. areas with an identified high susceptibility of groundwater contamination or a high water table;
 - iii. areas within 100 metres of a Crown-claimable **Water Body**;
 - iv. intensive multi-parcel developments where municipal water and wastewater systems are not available; and
 - v. areas deemed unsafe or not suitable for on-site water or sanitary systems for reasons of safety, natural systems health, or other considerations.
- c. Infrastructure associated with communal systems must be located on commonly held property.
- d. Development of communal systems must submit for County review a plan for capital replacements, major rehabilitation, maintenance, and construction. It must also complete a fiscal impact assessment that considers life-cycle costs of maintaining the infrastructure required to service the subdivision or development.

PHASE 3

HOW DO WE GET THERE?





Next Steps

- Phase 3 will outline strategic direction and actions required to support current and future servicing.
- The Master Plan report is expected to be completed in Fall 2026.
- Final GPC presentation will be scheduled after report completion.

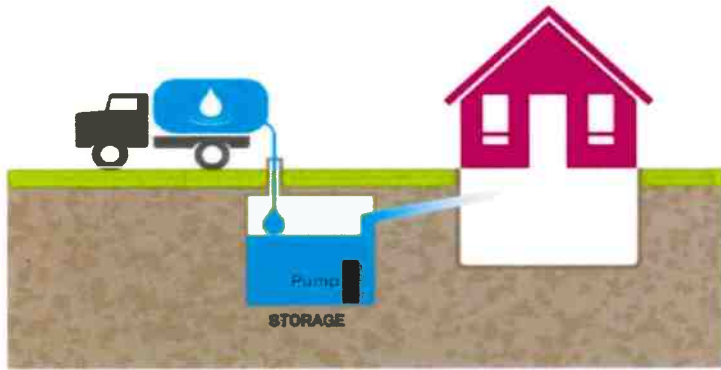


Questions?

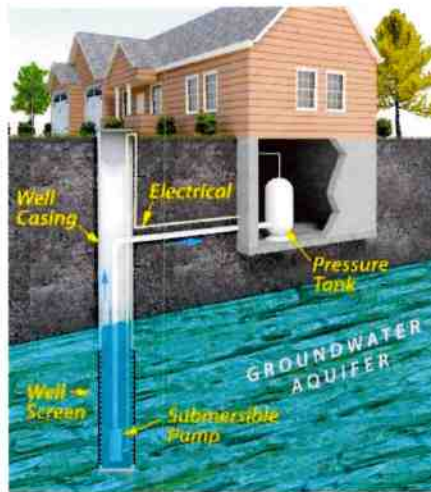


Optional Supplemental Slides

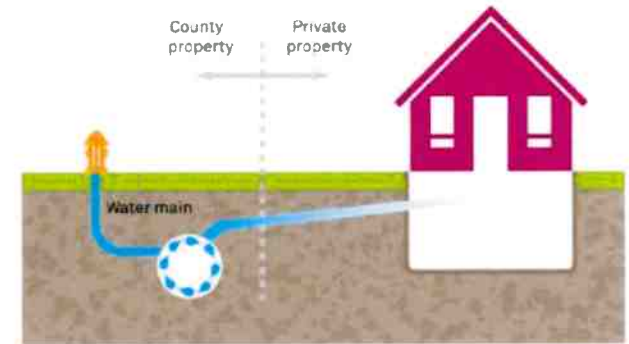
Water Servicing Schemes



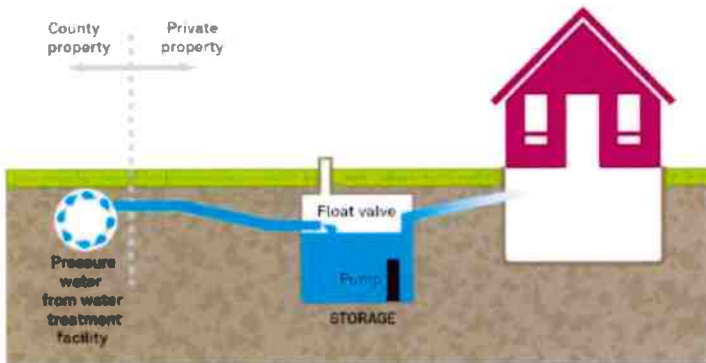
Trucked- In Water



Well Water

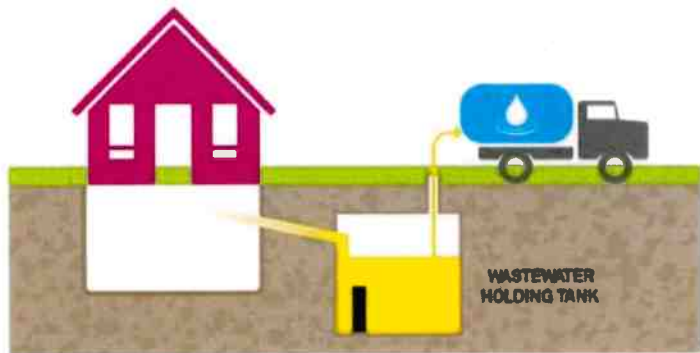


Full-Pressure Piped Water Distribution

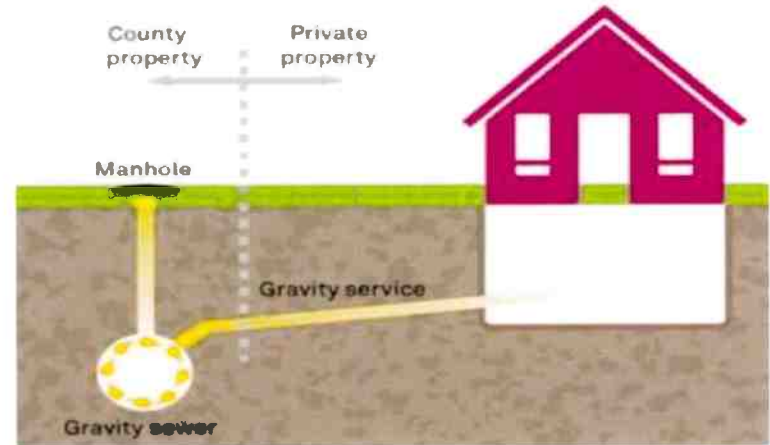


Trickle Fill Water Distribution

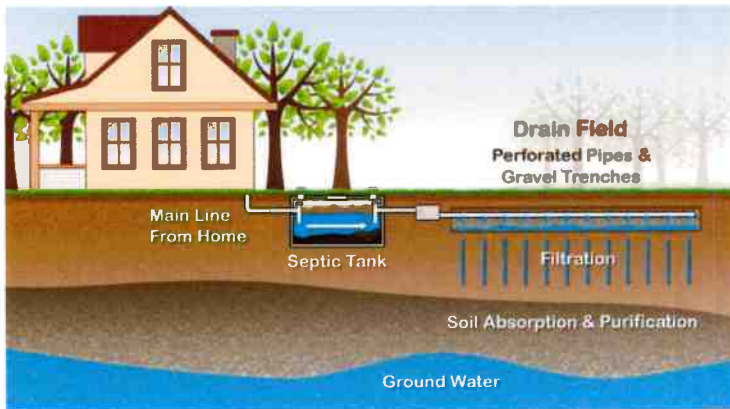
Wastewater Servicing Schemes



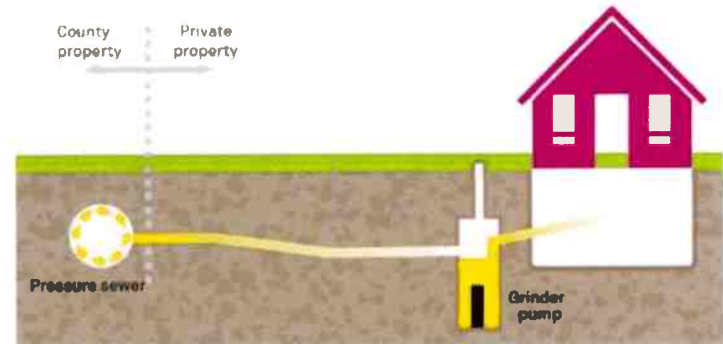
Trucked- Out Sewage



Gravity Pipe System



Septic Field System



Low-Pressure System

Commission vs. Parkland County Infrastructure

