

# **CAPITAL & ENGINEERING SERVICES**

TO: Council

DATE: February 21, 2023

DIVISION: All

**FILE:** 5000-625

APPLICATION: N/A

**SUBJECT:** Council Initiatives – Groundwater Issues in Elbow Valley West

### EXECUTIVE SUMMARY:

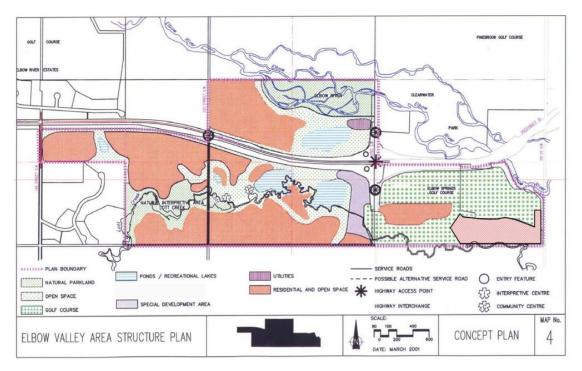
At the December 14, 2022 Council meeting, Administration was directed to prepare a report to review drainage and groundwater issues in the Elbow Valley West area, with the report to be presented to Council for consideration by the end of Q1 2023.

### **ADMINISTRATION RECOMMENDATION:**

Administration recommends approval in accordance with Option #1.

## BACKGROUND:

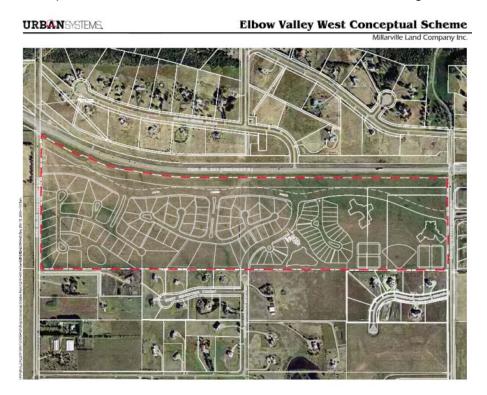
The Elbow Valley West lands were subject to the policies and guidelines contained within the Elbow Valley Area Structure Plan (ASP) which was originally adopted by Council in 1991 and subsequently revised in 1994 and on June 17, 1997, under Bylaw C-4762-97. The Elbow Valley ASP encompasses ±531 hectares (±1,311 acres) of land along Highway 8 between 101st Street SW and Range Road 32 (165th Street SW).



Byron Riemann, Executive Director Operations



The Elbow Valley West community was approved through a Concept Scheme approved in March of 2004 and is located roughly 5 km west of the City of Calgary and is depicted below. The Elbow Valley West lands are bounded by Highway 8 to the north, Range Road 31 to the east, the existing acreage development of West Meadows Estates to the south, and Range Road 32 to the west.



Other important timelines for the Elbow Valley West Development:

- Land Use granted in April of 2006.
- Subdivision approval in June of 2006.
- Stormwater plan required Alberta Environment approvals.
- Subdivision servicing commenced in 2007 and were completed in 2008.
- County issued Construction Completion Certificates for the infrastructure in July of 2009.
- County issued Final Acceptance Certificates in January of 2018.

#### Surface Water Drainage:

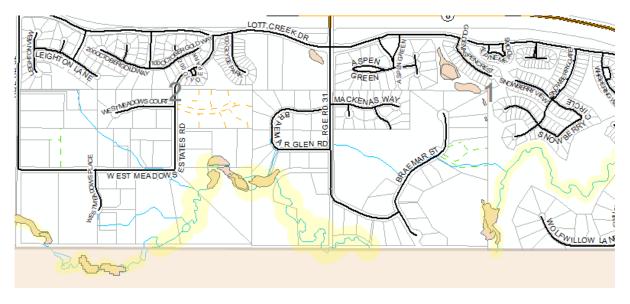
As required by Development the following parameters were designed for surface water drainage in the development.

- Design met standards of the day (Alberta Environment Guidelines).
- System essentially collects drainage in two retention facilities, a Stormwater Wet Pond and two smaller Dry Ponds, prior to release offsite.
- At the time of approval, no volume control requirements applied to the design of developments and their stormwater retention systems.
- Original design had an approved dry pond north of West Meadows Estates discharged south.
- Wet pond that discharges to the east and eventually Range Road 31.



# **Dry/Wet Pond System**





County Investment to reroute surface water from original designed alignment:

- In 2012, the County advanced a capital project to redirect flows from this dry pond to the West Meadows Road ditch, thereby restricting releases to the downstream community raising concerns.
- Capital cost for the project was \$170,000.





### Subsurface Groundwater:

- Development approvals do not normally include requirements for ongoing hydro-geological monitoring.
- County Servicing Standards require the identification of near surface water tables to set limits for servicing requirements and building foundation types.
- The County does not have any further information related to subsurface groundwater in the area.
- Potential evaluation of Groundwater in the area could be completed through a Desktop level study that would evaluate local information and conditions or through a Field investigation that would gather information through the installation of monitoring wells. Administration has not developed any potential costings for the two types of studies.

## **BUDGET IMPLICATIONS:**

None.

## **OPTIONS:**

- Option # 1: THAT the Groundwater Issues in Elbow Valley West report be received as information.
- Option # 2: THAT Council provide alternative direction.

Respectfully submitted,

Concurrence,

"Byron Riemann"

"Dorian Wandzura "

Executive Director Operations

Chief Administrative Officer



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# ATTACHMENTS

ATTACHMENT 'A' – Elbow Valley West Presentation