

# Agenda Regular Council Meeting

Tuesday, May 20, 2025, 7:00 p.m. Council Chambers/Video Conference 10150 Bottom Wood Lake Road Lake Country, British Columbia V4V 2M1

			Pages
1.	Call to We ack squilx" to build commu	Order and Territorial Acknowledgement knowledge that we are conducting our business today on the unceded territory of /syilx (Okanagan) peoples. As a Council, we recognize the importance of doing our best d respectful relationships that contribute to stewarding the land and waters in the unity with integrity and consideration for future generations.	
2.	<b>Adopti</b> Recom THAT t	<b>on of Agenda</b> mendation he Regular Council Meeting Agenda of May 20, 2025 be adopted.	
3.	Adopti	on of Minutes	
	3.1	Parcel Tax Roll Review Panel Meeting Minutes of May 6, 2025	4
		Recommendation THAT Parcel Tax Roll Review Panel Meeting Minutes of May 6, 2025 be adopted.	
	3.2	Regular Council Meeting Minutes of May 6, 2025	6
		Recommendation THAT the Regular Council Meeting Minutes of May 6, 2025 be adopted.	
	3.3	Special Council Meeting Minutes of May 8, 2025	11
		Recommendation THAT the Special Council Meeting Minutes of May 8, 2025 be adopted.	
4.	Mayor's Report		
5.	Announcements May 31-June 6 is GoByBike Week. Log any active transportation during that week, whether it's to school, work, for exercise, recreation or doing errands around the community. You could win some great prizes! Stop by the Celebration station on Wednesday, June 4th from 7:30am- 9:30am at Swalwell Park. Register at gobybikebc.ca Lake Country Fire Department is hosting a FireSmart Open House on May 24th from 11am – 2pm at Station 71 (Winfield). Meet the local firefighters for a fun family day of emergency preparedness education.		

Next recycling depot pop-up is on Saturday May 24, from 10am-2pm. Attendees have an

opportunity to enter and win a backyard composter or a \$50 gift card to a local business. Your name will also be entered for the Grand Prize, an e-bike provided by Lake Country Cycle at the end of the season in October. We are sad to share the passing of well-loved community member Dave McClure on May 8th 2025. A long time Oyama Community member, Dave was a firefighter, farmer, orchardist, small boat builder, and lifelong adventurer, serving 10 years on the Agricultural Advisory Committee. His kindness, dedication, and adventurous spirit will be deeply missed. 6. Delegations 13 6.1 Central Okanagan Economic Development Commission (COEDC) Roadmap to Resiliency (COEDC Strategy 2025 - 2030) presented by Krista Mallory, Manager COEDC. 7. **Planning and Development Applications** Agricultural Land Reserve | ALR00195 | 12192 Oceola Road 29 7.1 To permit 79 temporary farm worker housing units within 17 trailers within the Agricultural Land Reserve. Recommendation THAT Non-adhering Residential Use application ALR00195 for property at 12192 Oceola Road, (PID 010-562-605) to allow temporary farm worker housing within 17 trailers be supported; AND THAT Non-adhering Residential Use application ALR00195 be forwarded to the Agricultural Land Commission. 8. **Departmental Reports** 60 8.1 The 2025 ParticipACTION Community Challenge Lake Country to participate in the 2025 ParticipACTION Community Challenge. For information. 63 8.2 Liquid Waste Management Plan Stage 3 Report Adoption Recommendation THAT the Liquid Waste Management Plan Stage 3 Report (Attachment A to the report to Council dated May 20, 2025) be adopted. 187 8.3 Council Committee Update – Agricultural Advisory Committee (AAC) Recommendation THAT the Agricultural Advisory Committee Terms of Reference dated 2012 be repealed; AND THAT the Agricultural Advisory Committee Terms of Reference attached to the Report to Council dated May 20, 2025 be adopted. 8.4 Wildlife and Vector Attractant Bylaw No. 1280, 2025 193 To consider a Wildlife and Vector Attractant Bylaw and associated penalties. Recommendation THAT Wildlife and Vector Attractant Bylaw No. 1280, 2025 be read a first, second and third time; AND THAT BNE and MTI Amendment (Wildlife and Vector) Bylaw 1281, 2025 be read a first, second and third time.

# 9. Bylaws for Adoption and Readings Following a Public Hearing

- 10. Rise and Report from In Camera
- 11. Council Committees
- 12. External Committees and Boards

	12.1	Okanagan Basin Water Board Report of May 6, 2025	203
13.	Strategic	Priorities	204

- 14. Report from Councillors
- 15. Adjournment

posted May 15, 2025 Reyna Seabrook, Corporate Officer



# Minutes

# **Parcel Tax Review Panel**

May 6, 2025, 4:00 p.m. Council Chambers/Video Conference 10150 Bottom Wood Lake Road Lake Country, British Columbia V4V 2M1

Council Present:	Mayor Blair Ireland
	Councillor Heather Irvine
	Councillor Michael Lewis
	Councillor Todd McKenzie, electronically
	Councillor Bib Patel
	Councillor Cara Reed
Staff Present:	Trevor James, CFO, Director of Finance & Administration
	Paul Gipps, Chief Administrative Officer
	Reyna Seabrook, Director of Corporate Services
	Richard Wagner, Manager of Finance
	Makayla Ablitt, Legislative Technical Clerk

# 1. Call to Order

We acknowledge that we are conducting our business today on the unceded territory of squilx"/syilx (Okanagan) peoples. As a Council, we recognize the importance of doing our best to build respectful relationships that contribute to stewarding the land and waters in the community with integrity and consideration for future generations.

The Chief Financial Officer called the meeting to order at 4:03 p.m.

# 2. Appointment of Chair

Councillor Reed was appointed as Chair by consensus of the Panel.

# 3. Statement from the Chair

Councillor Reed read the statement.

## 4. Confirmation of Parcel Tax Roll

## 4.1 2025 Parcel Tax Roll Review Panel

To authenticate the 2025 Parcel Tax Roll

# 2025-05-106 It was moved and seconded

THAT the Parcel Tax Roll as presented by the Collector and considered by the Parcel Tax Roll Review Panel on May 6, 2025 be confirmed and authenticated;

AND THAT the said Parcel Tax Roll be certified by members of the Panel in accordance with Section 206 of the Community Charter.

Carried.

# 5. Adjournment

The Chair adjourned the meeting at 4:12 p.m.

Chair, Cara Reed

Corporate Officer, Reyna Seabrook



# **Minutes**

# **Regular Council Meeting**

May 6, 2025, 7:00 p.m. Council Chambers/Video Conference 10150 Bottom Wood Lake Road Lake Country, British Columbia V4V 2M1

Council Present:	Mayor Blair Ireland
	Councillor Tricia Brett
	Councillor Heather Irvine
	Councillor Michael Lewis
	Councillor Todd McKenzie, electronically
	Councillor Bib Patel
	Councillor Cara Reed

Staff Present: Paul Gipps, Chief Administrative Officer Jeremy Frick, Director of Planning & Development Trevor James, Chief Financial Officer Darren Lee, Fire Chief Matthew Salmon, Director of Infrastructure & Development Engineering Brad Savoury, Director of Legal Services and Risk Management Reyna Seabrook, Director of Corporate Services Matt Vader, Director of Parks, Recreation & Culture Scott Unser, Public Works Manager Brian Zurek, Manager of Long Range Planning Makayla Ablitt, Legislative & FOI Coordinator Travis Tonn, Support Analyst Philippa Harding, Manager of Corporate Services

# 1. Call to Order and Territorial Acknowledgement

We acknowledge that we are conducting our business today on the unceded territory of squilx"/syilx (Okanagan) peoples. As a Council, we recognize the importance of doing our best to build respectful relationships that contribute to stewarding the land and waters in the community with integrity and consideration for future generations.

The Mayor called the meeting to order at 7:00 p.m.

## 2. Adoption of Agenda

# 2025-05-107 It was moved and seconded

THAT the Regular Council Meeting Agenda of May 6, 2025 be adopted.

Carried.

# 3. Adoption of Minutes

# 3.1 Regular Council Meeting Minutes of April 15, 2025

# 2025-05-108 It was moved and seconded

THAT the Regular Council Meeting Minutes of April 15, 2025 be adopted.

Carried.

# 4. Mayor's Report

## 5. Announcements

May 5, 2025 is Red Dress day to honor Missing and Murdered Indigenous Women in Canada.

This time of year is a good time to review your Household emergency plan and make sure your Grab 'n Go kit is well organized with all the essentials.

Go By Bike Week is coming up at the end of the month, so now is the time to get your wheels tuned up and plan to participate May 31-June 6

We are very sad to share the news of the April 28<sup>th</sup> passing of Glenn Dolman, who was a dedicated hockey coach and board member with the Winfield Minor Hockey Association, and well known throughout the Lake Country community.

Friday, May 2 was an important milestone for the District—30 years of growth, achievements, and community spirit in Lake Country!

Communications put together a video highlighting some of the moments that shaped our community, featuring reflections from our past and present mayors. Watch, reminisce, and take pride in everything the community has accomplished in the past 30 years!

Mayor Ireland thanked Staff for the Lake Country Bike Park grand opening on May 2, 2025.

# 6. Delegations

# 6.1 2024 Audit and Financial Statements | Mario Piroddi, BDO

Review of the 2024 Financial Statements

## 2025-05-109 It was moved and seconded

THAT the District of Lake Country's 2024 draft Financial Statements be approved.

Carried.

# 7. Planning and Development Applications

# 7.1 Zoning Amendment Bylaw 1271, 2025 and Zoning Amendment Bylaw 1272, 2025 | Z0000246 and Z0000254 | 15490 Carrs Landing Road and Lot 2 EPP83942 Carrs Landing Road

To rezone two parcels from RR1 - Rural Residential to RR2 - Rural Residential

#### 2025-05-110 It was moved and seconded

THAT Rezoning application Z0000246 Bylaw 1251, 2025 (Attachment A to the Report to Council dated May 6, 2025) for the property at 15490 Carrs Landing Rd (PID: 030-634-002) not be read;

AND THAT Rezoning Application Z0000254 Bylaw 1252, 2025 (Attachment B to the Report to Council dated May 6, 2025) Lot 2 Carrs Landing Rd. (PID: 030-634-989) not be read.

#### Carried.

**OPPOSED:** Councillor Lewis

## 7.2 Multi-family Residential Development | DP001072 |9751 & 9819 Bottom Wood Lake Road

Multiple-Unit Development Permit

## 2025-05-111 It was moved and seconded

THAT Development Permit DP001072 (Attachment A in the Report to Council dated May 6, 2025) for the properties at 9751 & 9819 Bottom Wood Lake Road, legally described as Lot 44 District Lot 118, Osoyoos Division, Yale District, Plan 457 Except Plans 20108, 36673, and 39429 (9751 Bottom Wood Lake Road; PID: 011-168-196); and Lot 2 Sections 10 and 11, Township 20, Osoyoos Division, Yale District, Plan 4169 (9819 Bottom Wood Lake Road; PID: 003-448-991), to allow for a multi-family residential development be approved.

Carried.

## 8. Departmental Reports

## 8.1 2025 Tax Rates Bylaw 1275, 2025

Distribution of proposed tax rates for each property class.

## 2025-05-112 It was moved and seconded

THAT Tax Rates Bylaw 1275, 2025 with tax multipliers calculated so that the tax multipliers for Assessment Class 05 & 06 be set at 4.93:1 & 2.46:1 respectively (Attachment 3) be read a first, second, and third time.

Carried.

## 8.2 AAP-2025 Kelowna-Lake Country Boundary Adjustment Results

To approve the results of the Alternative Approval Process

## 2025-05-113 It was moved and seconded

THAT the Certification of Results dated April 23, 2025 for the Alternative Approval Process (AAP) for a proposed boundary adjustment that would transfer 5 properties from the City of Kelowna to the District of Lake Country as shown on Attachment A to the Report to Council dated May 6, 2025, be approved.

Carried.

- 9. Bylaws for Adoption and Readings Following a Public Hearing
- 10. Rise and Report from In Camera
  - **10.1** Council Remuneration Task Force Member Appointment

#### 2025-04-028 It was moved and seconded

THAT Donna Kirsch, Bob McCoubrey, and Charlene Undseth be appointed to the Council Remuneration Task Force in accordance with the Council Remuneration Task Force Policy 154.

Carried.

- 11. Council Committees
  - 11.1 Agricultural Advisory Committee DRAFT Meeting Minutes of April 14, 2025
- 12. External Committees and Boards
  - 12.1 Board of Education Meeting Highlights of April 23, 2025
  - 12.2 Regional District of Central Okanagan Board Report of April 17, 2025

#### **13.** Strategic Priorities

#### 14. Report from Councillors

Councillor McKenzie thanked Staff for the opportunity to attend virtually. He is in Peace River where wildfires have already started, and he warned the Lake Country community to be careful and be prepared. Councillor McKenzie enjoyed meeting with fellow Councillors and organizations at the Southern Interior Local Government Association (SILGA) convention last week.

Councillor Irvine echoed comments regarding SILGA where she was able to engage in a lot of learning.

Councillor Brett echoed comments regarding SILGA, and thanked the Community for the opportunity to attend. She learned a lot from seminars and conversations with other communities. She reminded Lake Country residents about the Community Centre Feasibility Study and how important their input is.

Councillor Patel thanked the community for the opportunity to attend SILGA. He was able to speak with BC Hydro regarding power outages and learned about future projects to place powerlines underground. He wished Lake Country and Mayor Ireland a happy belated birthday. Councillor Patel attended the Lake Country Bike Park grand opening, and gave kudos to the staff that put it together.

Councillor Reed announced the successful grant application for road safety signage along Carrs Landing Road in collaboration with the District, and looks forward to road safety awareness week at the beginning of June. She thanked staff for the early line painting on roads, and those who contributed to this year's successful Financial audit. She announced the Carr's Landing Community hopes to organize a meeting in June with Paul Gipps, CAO to discuss the Carr's Landing Water Strategy. Councillor Reed acknowledged the influential people who have paved the way for Lake Country since 1995. She paid respects to several powerful women of Lake Country who have inspired her.

Councillor Lewis echoed comments about SILGA, noting it is a very worthwhile convention. He reminded the community FireSmart bins are out and ready to be used. Councillor Lewis

attended the Lake Country Bike Park grand opening last weekend and recognized what an amazing asset it is to the Lake Country community.

Mayor Ireland enjoyed the conversations and learning at SILGA, it is a great opportunity to improve what is being done in Lake Country, and to see what other communities are doing. He recognized how great Oliver is doing in their community with inclusiveness. Mayor Ireland discussed the economic value the Lake Country Bike Park brings to Lake Country. At SILGA he met people from Kamloops and Penticton who have already visited Lake Country to ride. Lastly, Mayor Ireland reemphasized the importance of Red Dress Day, May 5, 2025.

# 15. Adjournment

The Mayor adjourned the meeting at 9:08 p.m.

Mayor, Blair Ireland

Corporate Officer, Reyna Seabrook



# Minutes

# **Special Council Meeting**

May 8, 2025, 5:00 p.m. Council Chambers/Video Conference 10150 Bottom Wood Lake Road Lake Country, British Columbia V4V 2M1

Council Present:	Mayor Blair Ireland Councillor Heather Irvine Councillor Michael Lewis, electronically Councillor Bib Patel, electronically
Council Absent:	Councillor Tricia Brett Councillor Todd McKenzie Councillor Cara Reed
Staff Present:	Paul Gipps, Chief Administrative Officer Trevor James, Chief Financial Officer Reyna Seabrook, Director of Corporate Services Richard Wagner, Manager of Finance Makayla Ablitt, Legislative & FOI Coordinator

# 1. Call to Order

We acknowledge that we are conducting our business today on the unceded territory of squilx"/syilx (Okanagan) peoples. As a Council, we recognize the importance of doing our best to build respectful relationships that contribute to stewarding the land and waters in the community with integrity and consideration for future generations.

The Mayor called the meeting to order at 5:00 p.m.

# 2. Adoption of Agenda

# 2025-05-029 It was moved and seconded

THAT the Special Council Meeting Agenda of May 8, 2025 be adopted.

Carried.

# 3. Bylaws for Adoption and Readings Following a Public Hearing

3.1 2025 Tax Rates Bylaw 1275, 2025

Read a 1st, 2nd, 3rd time May 6, 2025.

# 2025-05-030 It was moved and seconded

THAT 2025 Tax Rates Bylaw 1275, 2025 be adopted.

Carried.

# 4. Adjournment

The Mayor adjourned the meeting at 5:02 p.m.

Mayor, Blair Ireland

Corporate Officer, Reyna Seabrook



# Roadmap to Resiliency

# COEDC Strategy 2025-2030

District of Lake Country May 20, 2025



Aprogram of the Regional District of Central Okanagan

# Regional Model



# **Recognized Best Practice**

- Highly integrated regional economy
- Economies of scale
- Impact on national and global stage



# Strategic Plan to Workplan





# In Action



# Business Retention and Enhancement

- Site visits & 11 support
- Agriculture support
- Manufacturing sector programming
- Referrals

# **Workforce Development**

- Connector program
- Okanagan Young Professionals Collective
- Workforce profile and strategy



# In Action



# **Investment Attraction**

- OKGopartnership
- Digital and in-person marketing
- Trade and Invest BC
- Global Affairs Canada, Invest in Canada

# Coordination, Communication, and Facilitation

- Economic data: portal, profile, presentations
- Business resources
- Advisory committee
- Economic development partners



# **Deloitte.**



# Roadmap to Resiliency

COEDC Strategy 20252030

# Project Overview



# How did we get here?

# Backgro

Background Review

Background documentsreviewed from all Central Okanagan communities to understand policy context and economic positioning.



# **Competitive Assessment**

Analysis of trends and economic forecasts and comparisons of the Central Okanagan economy to similar regions and major cities in Canada.



# Strategic Directions

The outcome of the background work is**four strategic directions** to leverage regional strengths, enhance partnerships, and anticipate future economic trends.



# Community Engagement

Community engagement included a **business survey, workforce survey** and **interviews** with representatives of major industries and institutions.



Advisory Committee Workshops

Two**workshop sessions** with the COEDC Advisory Committee.

# Strategic Directions



Strategic directions provide an overall framework for operational actions, potential key performance indicators (KPIs), and COEDC's recommended role.



Drive Economic Resilience



Promote Innovation



Build a Skilled Workforce



Grow Export-Focused Industries



COEDC Strategy 2025 to 2030 is in alignment with projected resources outlined in COEDC's Syear financial plan, as well as grant and partnership funding opportunities.

The scope and breadth of the lan is adaptable to changing regional needs, available resources, and external economic conditions (such as USA trade barriers).



# Drive Economic Resilience

Support businesses in adapting to a changing landscape.

# ACTIONS

Focus investment initiatives on attracting innovative businesses to bolster existing sectors and address local challenges.

- 2 Develop educational resources and tailored adaptation strategies to address challenges and promote resilience.
- 3 Establish a network of resilience champions to mentor businesses in enhancing their resilience.

by engaging with the innovation ecosystem.

SUPPORT

SUPPORT

**KPI'S** 

EVENTS (INVESTMENT ATTRACTION, WORKSHOPS ETC), site visits, redevelopment & analytics

# COEDC ROLE

LEAD

LEAD &

**SUPPORT** 

Support resiliency and diversification initiatives

# Build a Skilled Workforce

Foster a skilled regional workforce by focusing on talent development, attraction, and retention.

# **ACTIONS**

Conduct a labour market study to gather critical intelligence on workforce gaps.

LEAD

LEAD

COEDC ROLE

Develop targeted talent attraction initiatives based on identified needs.

Continue to partner with post-secondary institutions to support program development that aligns with regional industry needs.

**SUPPORT** 

Support regional and municipal housing initiatives by providing a link to regional workforce intelligence and associated housing needs.

SUPPORT

# **KPI'S**

Partner & grant funding, events, presentations, labour market strategy completion

# Promote Innovation

Promote innovation to boost labor productivity and resource efficiency.

# ACTIONS

Enhance existing business outreach programming by providing technology adoption tools and resources.

- Showcase regional innovations through storytelling.
- 3 Facilitate industry and cross-industry roundtables to share innovation best practices.

Support post-secondary in connecting faculties

with industry to foster research and innovation

addressing community needs.

LEAD & SUPPORT

COEDC ROLE

LEAD

LEAD

SUPPORT

# KPI'S

4

Events, site visits, presentations, digital analytics (website, social media, newsletters)

# Grow Export-Focus ed Industries

Strengthen export base by attracting highvalue companies, supporting market expansion, and building regional supply chains.

# ACTIONS

Concentrate investment attraction initiatives on export-oriented sectors with growth potential that align with federal/provincial targets.

2 Conduct a regional supply chain study to enhance export industry integration with the regional economy.

LEAD

Maintain high level of regional business intelligence by actively engaging with exportoriented industries.

LEAD & SUPPORT

**SUPPORT** 

4 Support businesses with export development by connecting to Federal and Provincial resources.

# KPI'S

Export-focused events, site visits, presentations, supply chain study completion

LEAD



# Resources



Krista Mallory Manager | Central Okanagan Economic Development Commission 250-469-6182 <u>kmallory@investkelowna.com</u>

# LOOKING FOR:

- General information?
- Statistics?
- Quarterly Economic Indicators?
- Industry-specific profiles?
- Export advice?

- Local government connections?
- Workforce sourcing?
- Housing prices?
- Business development assistance?







То:	Mayor and Council	Meeting Date: May 20, 2025
From:	Paul Gipps, CAO	Meeting Type: Regular Council Meeting
Prepared by: Department:	Jason Tran, Planner Planning and Development	
Title: Description:	e: Agricultural Land Reserve   ALR00195   12192 Oceola Road cription: To permit 79 temporary farm worker housing units within 17 trailers within the Agricultura Reserve.	

# RECOMMENDATION

THAT Non-adhering Residential Use application ALR00195 for property at 12192 Oceola Road, (PID 010-562-605) to allow temporary farm worker housing within 17 trailers be supported; AND THAT Non-adhering Residential Use application ALR00195 be forwarded to the Agricultural Land Commission.

# **EXECUTIVE SUMMARY**

The subject property is zoned A1—Agriculture and is located within the Agricultural Land Reserve (ALR). The property fronts on Oceola Road, and is currently being used as a fruit orchard. The application (Attachment A) proposes 17 temporary trailers to provide accommodation for 79 temporary farm workers. The proposed location is at the southeast of the property (Attachment C).

The applicant owns eight properties within Lake Country, comprising approximately 43 hectares of land. A professional agrologist (Attachment B) has determined 12192 Oceola Road to be the most suitable location within the applicants Lake Country farm unit for the proposed farm worker accommodation site. The proposed site plan estimated that approximately 200 orchard trees would be removed to accommodate the 17 trailers.

The proposal is consistent with the District's Official Community Plan (OCP), the secondary use of the Zoning Bylaw A1 - Agriculture 1 and Provincial legislation, including the *Agricultural Land Commission Act*.

The application went twice before the Agricultural Advisory Committee (AAC) with staff support at the March 10 and April 14, 2025 meetings. The AAC was not able to provide a recommendation to Council regarding the application.

Staff support this non-adhering residential use application and recommend that it be forwarded to the Agricultural Land Commission for adjudication.

## BACKGROUND

Application Information			
Application Type	ALC Non-adhering Residential	Application Date:	Feb 6, 2025
	Use for Temporary Farm		
	Worker Housing		
Applicant:	Greenspark Consulting Ltd	Owner:	Khela Orchards Ltd
Application DescriptionTo permit 79 temporary farm worker housing units within 17 trailers within		thin 17 trailers within the	
	Agriculture Land Reserve		

Property Information: General			
Folio/Roll #:	02827.000		
Legal Description	Lot 1 Section 22 Osoyoos Div Of Yale Land	District Plan Kap4291 Township 20	
PID	010-562-605		
Civic Address:	12192 Oceola Rd		
	Property Information: Land Use		
OCP Designation:	Agricultural		
Zoning Designation:	A1 – Agriculture 1		
Land Use Contract	n/a		
ALR:	Yes		
Parcel Size:	7.89 ha/ 19.53 ac		
<b>Development Permit Areas:</b>	Natural Environment and Drainage Hazard		
Adjacent Land Summary:	Zoning:	Use:	
North:	A1 – Agriculture 1	Agriculture	
East:	A1 – Agriculture 1, RM4 – Low Density	Agriculture, Multiple Dwelling	
	Multiple Housing, P2 – Administration,	Housing, Religious Assemblies	
	Public Service and Assembly		
South:	A1 – Agriculture 1	Agriculture	
West:	A1 – Agriculture 1	Agriculture	

Property Information: Infrastructure and Development Engineering			
Road Network	oad Network Oceola Road – Major Collector		
Driveway Access Driveway access permit required at time of Building Permit application			
	2 existing accesses from Oceola Road		
Water Supply: Municipal water, for domestic use, is available at the property line adj			
	Oceola Road.		
Sewer:	Municipal sewer is available at the property line along Oceola Road		
Drainage / Stormwater	Storm water system improvements may be required along the Oceola Road		
	frontage.		
Comments:	Infrastructure and Development Engineering is able to support this application if		
	the servicing requirements can be met.		

# ANALYSIS

As per section 20.1 of the *Agricultural Land Commission Act*, the owner has submitted a non-adhering residential use application (Attachment A) to the Agricultural Land Commission (ALC) to request permission to place 17 temporary trailers on the property for seasonal farm workers on the subject property. An application to the ALC, and ALC approval, are requirements to place the temporary trailers for the seasonal farm workers.

The applicant owns approximately 43 hectares (8 parcels) of agricultural land within the District of Lake Country. An agrologist's report (Attachment B) has been submitted in support of this application to remove low producing orchard trees from the south-east corner of the property to accommodate 79 seasonal farm workers (Attachments C and D). The proposal includes 17 trailers, consisting of 11 sleeping trailers, two washroom trailers, two kitchen trailers, one laundry and one rec trailer (Attachment E); a three metre wide landscape buffer (Attachment F) would surround the accommodation site. The applicant went beyond the requirement of the landscape buffer to screen and deter agricultural spray onto the proposed site (no buffer required; 3.0m buffer proposed).

The property has farm status from BC Assessment.

The ALC policy L-26 (Attachment G) for Non-Adhering Residential Use in the ALR, applies to seasonal accommodation facilities for temporary farm workers. If Council decides to forward this application to the ALC, then the ALC would review the application in detail in accordance with ALC legislation and Policy L-26.

#### 3

#### Official Community Plan

The property is within the OCP Agricultural designation and is within the ALR.

The property falls within the District's Natural Environment Development Permit Areas (DPA); however, a Development Permit would not be required as it corresponds to the following OCP exemption (s.21.9.a):

A Development Permit will not be required if the development consists of the following:

a. Land is no longer considered environmentally sensitive due to the loss of environmental features, functions and conditions as a result of a previously approved development.

The property falls within the District's Drainage Development Permit Areas (DPA); however, a Development Permit would not be required as it corresponds to the following OCP exemption (s.21.3.5.e.):

A Development Permit will not be required if the development consists of the following:

e. For property that is within the ALR and/or zoned for agricultural use, activities limited to those indicated as normal farm practices as defined in the Farm Practices Protection (Right to Farm) Act where the subject area has been previously altered for agricultural purposes.

District staff support the proposed seasonal accommodation proposal as it is consistent with the OCP's Agricultural goal (s.14.1.1): Protect and enhance the agricultural sector within the District of Lake Country.

#### Zoning Bylaw

The property is an A1 – Agriculture Zone; seasonal accommodation for farm help is permitted as a Secondary Use on land, which is classified as a "farm" as per the *Assessment Act*; this property has farm status.

Further to that, the building plan complies with the following seasonal accommodation facilities regulation in the zoning bylaw:

Section 15.1.5(d) seasonal accommodation facilities to satisfy demand for seasonal farm help on parcels classified as "farm" for assessment purposes. Seasonal accommodations:

- must include no more than  $15m^2$  (150 ft<sup>2</sup>) of private space per sleeping unit
- must include shared cooking and washroom facilities
- must not be placed on a permanent foundation
- may be built to a ratio of up to 10 sleeping units per hectare of farmland

The applicant submitted Trailer Plans (Attachment E) to demonstrate the layout of facilities to be provided. A landscape plan (Attachment F) with a native or drought-tolerant planting list. The Attachment D shows the proposed setbacks on a plan, and it complied with the A1 zone.

District staff support the proposed seasonal accommodation proposal as it complies with the zoning regulations in the A1 – Agriculture 1 zone.

DEVELOPMENT REGULATIONS				
CRITERIA	A1 Zone	PROPOSAL		
Site Coverage	35%	3.48%		
Height	9.5 metres or 2 ½ storeys	1 storeys		
Density	10 sleeping units per hectare of farmland	79 (7.89 ha)		
Min. Front Yard (East)	6.0 metres	6.0 metres		
Min. Side Yard (North)	3.0 metres	5.0 metres		
Min. Side Yard (South)	3.0 metres	8.0 metres		
Min. Rear Yard (West)	10.0 metres	10.0 metres +		

Landscaping	A1 Zone	PROPOSAL
Front	Level 1: no specific guidelines for the	3.0 metres vegetative buffer and a chain
FIUIIL	design of the landscape buffer	link fence
Sidos	Level 1: no specific guidelines for the	3.0 metres vegetative buffer and a chain
Sides	design of the landscape buffer	link fence
Deer	Level 1: no specific guidelines for the	3.0 metres vegetative buffer and a chain
Rear	design of the landscape buffer	link fence

# Agricultural Advisory Committee (AAC)

Staff presented the application to the AAC on March 10, 2025 where the AAC made a motion to defer the application until the next meeting subject to the applicant providing the following information for review:

- 1. A map of all properties, within Lake Country, farmed by the applicant.
- 2. Analysis of all properties owned by the applicant in Lake Country to indicate that the subject property is the best location for temporary farm workers housing.
- 3. Confirmation of the number of farm laborers needed for the applicant's properties in Lake Country.
- 4. A revised site plan including a buffering plan and planting list for the temporary farm workers housing.

At the following AAC meeting held on April 14, 2025, staff presented the updated application with the additional information provided by the applicant. The AAC members discussed the application, with some members in support of the proposal and other members not in favour as they did not believe the application met the requirements set forth in the AAC Terms of Reference. The Committee put forward a motion of support for consideration; the motion failed with a tie vote. The AAC did not put any further motions forward for consideration.

# Servicing Considerations

Municipal sewer and water run along Oceola Road. A water service for the Temporary Farm Worker Housing would be necessary; the water would be for domestic use only. The District distribution system does not currently have adequate capacity to supply agricultural water to properties in this area. A connection to the municipal sewer system would be required.

Storm water is currently managed adjacent to Oceola Road using an open ditch. At the time of building permit application, the developer may be required to provide improvements to the storm water system.

The property currently has two accesses from Oceola Road. The District is unlikely to permit the farm worker housing to utilize the existing access at the Southeast corner of the property as shown on the plan. There is another existing access at the Northwest corner of the property that is better suited for this proposed use. Access will need to be addressed at the time of building permit.

At the time of building permit application, a Works and Services application would also be necessary. Requirements for the works and services would be as outlined in the District of Lake Country Subdivision and Development Servicing Bylaw 1121, 2020. While the property is not currently adequately serviced, the Infrastructure and Development Engineering Department is able to support this application if the servicing requirements outlined herein are met.

# FINANCIAL IMPLICATIONS

 $\boxtimes$  None  $\square$  Budget Previously Approved  $\square$  Other (see below)

# COMMUNICATION

• This application was referred to internal departments and comments were provided and shared with the applicant.

## **ALTERNATE RECOMMENDATION(S)**

- THAT Non-adhering Residential Use application ALR00195 for property at 12192 Oceola Road, (PID 010-562-605) to allow temporary farm worker housing within 17 trailers not be supported; AND THAT Non-adhering Residential Use application ALR00195 be forwarded to the Agricultural Land Commission.
- THAT Non-adhering Residential Use application ALR00195 for property at 12192 Oceola Road, (PID 010-562-605) to allow temporary farm worker housing within 17 trailers not be supported; AND THAT Non-adhering Residential Use application ALR00195 not be forwarded to the Agricultural Land Commission.
- 3. THAT Non-adhering Residential Use application ALR00195 for property at 12192 Oceola Road, (PID 010-562-605) to allow 79 temporary farm worker housing units within 17 trailers be deferred pending receipt of additional information identified by Council.

Respectfully Submitted, Jason Tran, Planner

# **Report Approval Details**

Document Title:	Agricultural Land Reserve - ALR00195 - 12192 Oceola Road -		
	Council Report.docx		
Attachments:	- Attachment A - ALR00195 - ALC Application.pdf		
	- Attachment B - ALR00195 - Agrologist Report.pdf		
	- Attachment C - ALR00195 - Farm Unit, Location and Site Plan.pdf		
	- Attachment D - ALR00195 - Setbacks Plan.pdf		
	- Attachment E - ALR00195 - Trailer Plans.pdf		
	- Attachment F - ALR00195 - Landscape Plan.pdf		
	- Attachment G - ALR00195 - ALC Policy L-26.pdf		
Final Approval Date:	Apr 29, 2025		

This report and all of its attachments were approved and signed as outlined below:

Carie Liefke, Manager of Current Planning - Apr 25, 2025 - 3:06 PM

Steven Gubbels, Development Engineering Manager - Apr 25, 2025 - 3:12 PM

Jeremy Frick, Director of Development Approvals - Apr 28, 2025 - 6:16 AM

Reyna Seabrook, Director of Corporate Services - Apr 28, 2025 - 10:53 AM

Paul Gipps, Chief Administrative Officer - Apr 29, 2025 - 8:24 AM

Makayla Ablitt, Legislative & FOI Coordinator - Apr 29, 2025 - 9:33 AM

Attachment A-ALR00195-ALC Application

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# **Provincial Agricultural Land Commission - Applicant Submission**

Application ID:	103573
Application Type:	Non-Adhering Residential Use within the ALR
Status:	Submitted to L/FNG
Name:	Khela et al.
Local/First Nation Government:	District of Lake Country

# 1. Parcel(s) Under Application

Parcel #1

Parcel Type	Fee Simple			
Legal Description	LOT 1 SECTION 22 TOWNS	HIP 20 OSOYOOS	DIVISION YALE DIS	TRICT PLAN 4291
Approx. Map Area	7.88 ha			
PID	010-562-605			
Purchase Date	Apr 29, 2019			
Farm Classification	Yes			
Civic Address	12192 OCEOLA RD LAKE COUNTRY V4V 1H1			
Certificate Of Title	khelaoceola.pdf			
Land Owner(s)	Organization	Phone	Email	Corporate Summary
Hardeep Khela	Not Applicable	6043156157	Khela@northernc herries.com	Not Applicable
Manjinder Khela	Not Applicable	6043156157	Khela@northernc herries.com	Not Applicable

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# 2. Other Owned Parcels

Do any of the land owners added Yes previously own or lease other parcels that might inform this application process?

Describe the other parcelsRefer to attached land owner statement for Northern Cherries in uploadedincluding their location, who ownsattachments.or leases them, and their use.Cherries in uploaded

# 3. Primary Contact

Туре	Third-Party Agent
First Name	Carl
Last Name	Withler
Organization (If Applicable)	Greenspark Consulting Ltd
Phone	2508702127
Email	cwithler@gmail.com

# 4. Government

Local or First Nation Government: District of Lake Country

# 5. Land Use

# Land Use of Parcel(s) under Application

Describe all agriculture that currently takes place on the parcel(s).	High quality cherry production.
Describe all agricultural improvements made to the parcel(s).	The property is in full cherry production and fenced to deter deer damaage. there is a small machine shed on the eastern edge of the property.
Describe all other uses that currently take place on the parcel(s).

#### Land Use of Adjacent Parcels

	Main Land Use Type	Specific Activity
North	Transportation / Utilities	Oceola Road
East	Transportation / Utilities	Oceola Road
South	Agricultural / Farm	orchard
West	Agricultural / Farm	orchard/ground crops

None

### 6. Proposal

Is your proposal for a principal residence with a total floor area greater than 500 m²?	No
Is your proposal to retain an existing residence while building a new residence?	No
Is your proposal for an additional residence?	No
Is your proposal for temporary foreign worker housing?	Yes
Do you need to import any fill to construct or conduct the proposed non-adhering residential use?	No
What is the purpose of the proposal?	We are a vertically integrated, high quality cherry production, packing and shipping family that continues to purchase land parcels, bring them into production and produce great cherries. We now bring in 400-500 SAWP workers annually and have built several TFWH camps in Kelowna. To reduce travel time for our workers and reduce fuel costs in transport we wish to build a camp in Lake Country to accommodate our continued need

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We could not pick, pack and ship cherries without these workers. They are

the reason we are able to continue on with our business.

for seasonal workers.

Is your proposal necessary for

farm use? If so, please explain

residence(s) and the approximate

area (m<sup>2</sup>) required for that

infrastructure

what the temporary foreign workers will be doing on the farm. How many temporary foreign 79 per DLC guidance document. workers will be housed by the proposal? Will the temporary foreign worker Yes housing be designed to move from one place to another? What is the size (in hectares) of 290 the farm operation that the temporary foreign workers will be supporting? Will the proposed residence(s) be There is no residence on this property. clustered with existing residential structures? Please explain. Will the proposed residence(s) be Yes located within a 60 m setback from the front lot line? Please explain. Where on the parcel will the This location was chosen as it is directly against Oceola Road and only proposal be situated and is there removes about 20 trees from production. Any other location the property an agricultural rationale for the requires road development, the removal of more trees and are upslope proposed location? causing erosion concerns and worker safety risk. Describe any infrastructure Refer to site plan appended to this application for all proposed required to support the proposed building/site development.

Attachment A-ALR00195-ALC Application Generated Feb 18, 2025 02:35:39 -08:00

Proposal Map / Site Plan	Oceola Worker Camp Draft.pdf
Detailed Building Plans	Oceola Worker Camp Draft.pdf
Existing Residence	No Data

Proposed Residence	Total Floor Area	Description
#1	1060m <sup>2</sup>	17 trailers to feed, clean and sleep workers.

# 7. Optional Documents

Туре	Description	File Name
Other files that are related	Northern Cherries land holdings	Northernlandholdings.xlsx
Other files that are related	SAWP approval letter	TFW Certificate - Expiring 9 Nov 2027.pdf

## Agrologist's Report Prepared for the District of Lake Country (DLC) March 25, 2025

This report is prepared at the request of DLC staff following a DLC Agricultural Advisory Committee (AAC) meeting held March 10, 2025 where AAC members wished confirmation that the site selection for Temporary Farm Worker Housing (TFWH) proposed at 12192 Oceola Road in Lake Country was rational and resonable. In order to do this the agent for the Khela family was asked to compare the pro's and con's of a number of Northern Cherry (Khela Family) owned properties in Lake Country.

In order to provide some context to the size and scope of Northern Cherries operations this family run, vertically integrated farm unit is the second largest cherry producer and packer in the valley and in Canada. At this time the farm unit is comprised of 26 farmed properties producing cherries from Kelowna to Tappen with centralized packing and shipping in the northern end of Kelowna City jurisdiction (Glenmore Road). Being at the north end of Kelowna's jurisdiction allows Northern Cherries to harvest, pack and ship from Kelowna properties (15 parcels) and DLC properties (8 parcels) and have direct access to Kelowna airport for shipment to markets domestically and abroad.

In the DLC the Minister's Standard for bylaw development has not been brought to force, but is used as a guiding document and is used in the development of TFWH applications and approvals. Important in this application is that this farming entity meets the requirements for farm classification, is a "farm unit" either alone or by the total parcels owned and farmed, meets the space requirements/worker and takes advantage of the social and environmental amenties provided by DLC.

As requested, a parcel by parcel review of the eight properties owned, or leased by Northern Cherry was completed to confirm the benefits of the proposed location at 12192 Oceola Road. To complete this review an estimated TFWH 'footrpint" was taken from the site plan drawings and then applied to each potential parcel. This 'footprint" was estimated at 0.73 acres and using a cherry tree density of 375 trees/acre comes to 274 trees potentially removed. Using this calculation, as well as other considerations ( land ownership, sewer access, recreational access, road access and social amenties) as parcel by parcel review was completed. The following comments apply to each parcel.



10950 Bond Road

This site would require complete removal of trees to clean the required space losing 275 trees. Added, it is not serviced by municipal sewer and does not allow easy access to recreation and social amenities to workers.



Unaddressed Bond Road property

This site would require significant tree removal (greater than 275), is not serviced and is not near social amenities.



12018 Okanagan Center Road

This site would require full tree removal of 275 trees as well as improved (further tree removal) access to allow bus access. Municipal sewer is not to site and it is distanced from social and recreational amenities. Northern cherry also leases the property to the east and it is not considered suitable as it is leased.



11666 Okanagan Center East Road

This site would require full tree removal of 275 trees and is not serviced by municipal sewer. It is not proximate to recreational and social amenities.



11770 Okanagan Center Road East

This site requires full tree removal of 275 trees and it not serviced by municipal sewer.



12192 Oceola Road

This site requires the least number of trees removed 181 (.66X275) and is serviced by municipal sewer and proximate to amenities like beaches, parks and services (banking, food and restaurants) Added, this site has already been disturbed and allows for off street access with engineering permitting in place.



Lot 18, Broadwater Road

Properties owned by Norther Cherry in the Oyama area were not considered suitable as no sewer is available and workers would be isolated from the social amenities thus requiring further, and more frequent transport.

After thoroughly reviewing all of Khela's land holdings and assessing Northern Cherry's business operations and recent expansion, it is evident that there is an ongoing need to import, accommodate, and provide care for workers responsible for planting, pruning, and harvesting cherries. This farm unit (Northern Cherry) meets the requirements set out in the inister's bylaw standard and has proposed a site (12192 Oceola Road) that takes advantage of the social and environmental amenities of DLC. This site also requires the least amount of production loss (trees) and where trees are lost, they are weaker and less productive.

For these reasons, I am very supportive of the proposed TFWH location at 12192 Oceola Road in the District of Lake Country.

Respectfully submitted,

Carl Withler P.Ag. (#695)

Map 1: Farm Unit Properties within Lake Country



12192 Oceola Road & highlighted cyan properties are farmed by the applicant Lake Country farm unit.



Map 2: Subject Property Location

Map 3: Proposed Site Plan



Acres 19.53 (7.9 Hectares)

79 Worker Housing (10 People per Hectare) Allowable: 79 Workers x 150 ft2 = 11,850 ft2 Actual: 17 Trailers x 56' x 12' = 11,424 ft2

Area of Interest: 0.68 Acres

Estimated Trees removed: 200

-<del>1</del>3.00 m \_\_\_\_\_\_3.00 m \_\_\_\_\_\_2.00 m PLAN KAP4291 -≁2.00 m ≁----<u>≁</u>3.00 m PID: 010-562-605 **Property Line** Orchard Zoning: A1 O n He 6 0 ¥9 0000 6. Orchard 6 1 #12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 6 RD דשלד 3.00 m . С #11 Neighboring Lot: 11937 BARTELL I Zoning: A1 3.00 m 000 Property Line 0\$ Oceola Rd

# Attachment D: Setbacks Plan





#### Attachment E - ALR00195 - Trailer Plans



ttachment E - ALR00195 -Trailer Plan



# Attachment G: ALC Policy L-26

ALC		POLICY L-26
	Non-Adhering Residential Use	
Agricultural Land	APPLICATIONS FOR HOUSING IN THE ALR	
Commission		Amended June 2024
		Adopted April 2020

On February 22, 2019 the ALCA was amended by the Provincial Government to directly address principal residences and requiring that the Agricultural Land Commission (the "Commission") not grant permission for additional residences unless it is necessary for a farm use as explained in the Minister of Agriculture's <u>February 23, 2019 news release</u>.

This policy outlines general guidelines for the Commission's consideration of non-adhering residential use applications which request residential uses in excess of those residential uses permitted by the Agricultural Land Commission Act (the "ALCA") or its regulations. This includes applications for temporary farm worker housing, and other housing for farm labour, as well as applications to construct or alter a principal residence which will exceed 500m<sup>2</sup> in total floor area.

For more information on the kinds of factors the ALC may consider when deciding on applications, please see the "<u>What the Commission Considers</u>" page on the ALC's website.

#### **Principal Decision-Making Considerations:**

#### 1.0 Additional Residences

Section 20.1 of the ALCA provides that unless permitted by the Commission or the regulations, an owner of agricultural land who constructs, alters or uses a residential structure on the land may have no more than one residence per parcel. The Agricultural Land Reserve Use Regulation (the "ALR Use Regulation") may permit an additional residence if certain conditions are met. If an owner wishes to construct an additional residence not permitted by the ALR Use Regulation, the owner must make a Non-Adhering Residential Use ("NARU") application to the Commission for permission.

Section 25(1.1)(b) of the ALCA states that the Commission must not grant permission for an additional residence unless the additional residence is necessary for a farm use. The Commission may consider the number of residences currently on the property, and the contribution of those their occupants to the farm operation when considering whether an additional residence is necessary to support the farm operation.

#### 2.0 Housing for temporary farm workers under a federal agricultural worker program

In considering whether a non-adhering residential use is necessary for a farm use, the Commission will assess the scale and intensity of the farm operation. As such, the Commission's determination of a NARU application for temporary farm worker housing ("TFWH") as part of a federal agricultural worker program will be based on the agricultural operation's need. In addition to the information outlined below in Section 4.0 'Housing to reflect agricultural activity', applicants can provide other documentation associated with a federal agricultural worker program application (e.g. previous or current Labour Market Impact Assessment "LMIA").

The Commission prefers that temporary housing for farm workers, including foreign workers, should be in an existing building, or a residential structure constructed or manufactured to be moved from one place to another, and installed on a temporary foundation with no basement.

On April 26, 2019, the Commission delegated decision-making authority to the Chief Executive Officer ("CEO") to streamline the process of NARU applications for TFWH registered in a federal agricultural worker program that meets specific criteria outlined in CEO Delegated Decision-Making Criterion 15. If the application does not meet the criteria (including because the applicant cannot or prefers not to meet all the requirements), then the application will be referred to the Commission for a decision.

The circumstances in which the CEO's delegated decision-making authority applies are as follows:

CEO Delegated Decision-Making Criterion 15:

Based on an assessment of the intensity and scale of the farm operation, non-adhering residential use applications for temporary farm worker housing (TFWH) for workers registered in a federal temporary worker program that comply with the following criteria:

- i. The parcel where the TFWH is to be located is classified as 'farm' under the BC Assessment Act;
- ii. The minimum size of the farm operation\* on which the TFWH can be located is 4 ha;
- iii. The maximum number of workers requested in each application for a farm operation\* is limited to no more than:
  - a. 130 workers for greenhouse, mushroom, tree fruit, and berry/vegetable production
  - b. 40 workers for all other commodities
- iv. The workers are housed in a temporary residential structure designed to be moved from one place to another;
- v. Siting and placement of the TFWH minimizes the residential impacts on agricultural land taking into consideration topography, agricultural capability, access, and encourages the clustering of residential structures;
- vi. The registration of a restrictive covenant stating that the TFWH will only be used by temporary farm workers and that the owner will remove the TFWH and restore the land to agricultural use if the TFWH is vacant for two consecutive years; and
- vii. The receipt of an ILOC sufficient to remove the TFWH provided to the ALC upon approval of the NARU.

\*Clarification: farm operation means an area of land used for a farm operation consisting of one or more contiguous or non-contiguous lots, that may be owned, rented or leased, which forms and is managed as a single farm.

#### 3.0 Principal Residences Larger than 500 m<sup>2</sup>

Section 25(1.1)(b) of the ALCA (the requirement that an additional residence must be necessary for a farm use) does not apply to a NARU application for a principal residence larger than 500 m<sup>2</sup>. This means that the Commission has discretion to permit a larger principal residence even if it is not necessary for a farm use.

However, the necessity for farm use of the proposed principal residence is still a relevant factor in the Commission's determination of whether a size over 500 m<sup>2</sup> should be allowed. The Commission will generally consider whether the requested increase in total floor area would be supportive of the current farming operation and necessary for farm use. The Commission may also consider unique or extenuating circumstances that do not negatively impact the agricultural use of the property. An applicant should provide evidence of such circumstances if it wants them to be considered by the Commission.

#### 4.0 Housing to reflect agricultural activity

In considering whether a non-adhering residential use is necessary for a farm use, the Commission will assess the scale and intensity of the farm operation. Where an applicant can demonstrate that the scale and intensity of the farm operation has exceeded the labour capacity of the owner/residents, the Commission may determine that an additional residence would be necessary to support the farm operation.

The Commission may not be supportive of housing proposals which "intend" to expand or intensify the farm operation unless it considers there to be a satisfactory mechanism to ensure that expansion is undertaken after the new housing is constructed.

NARU applications must include an appropriate level of information to aid the Commission in its determination of whether the proposed use is consistent with the purposes of the ALCA set out at section 6 and, if applicable, that an additional residence is necessary for a farm use. The following are examples of the information that may be submitted with an application:

- i. Size (ha) of the current farming operation (including leased lands)
- ii. Type(s) and amount of commodity(ies) produced on the property
- iii. Description and number of current farm labourers with details of roles and responsibilities
- iv. Rationale for additional farm labour requirements based on the applicant's agricultural operation or commodity(ies)
- v. Proposed number of farm workers to reside in the additional residence or principal residence >500 m<sup>2</sup>
- vi. Proposed length of occupancy of farm workers (e.g. seasonal, temporary, yearround)
  - a. Include date ranges, if applicable
  - b. Include expected work hours (part-time or full-time)

- vii. Details of the proposed residence
  - a. Size of residence and total residential footprint
  - b. Foundation type
  - c. Site map
  - d. Associated infrastructure requirements
- viii. Farm plan or farm business plan (support future expansion, if applicable)
- ix. Professional reports (e.g. report by a professional agrologist, geotechnical report)
- x. Farm succession plan, if applicable
- xi. Expense receipts demonstrating equipment, start-up, or infrastructure costs
- xii. Lease agreements for other properties associated with the farm operation
- xiii. Farm quota records

#### 5.0 Limiting housing's physical impact on the productive parcel

The type of non-adhering residential structure should reflect the agricultural use of the property. Preference will be provided to residential uses which utilize existing structures and/or residences that are sized appropriately and located in an area which minimizes negative impacts to the agricultural land or can easily be removed from the property, such as a manufactured home.

The total residential footprint, meaning the portion of a property used for the principal residence, additional residence(s), and the accessory residential facilities (e.g. yard, driveway, servicing, etc.), should maintain a viable agricultural remainder and should not unnecessarily infringe upon the productive farming area of the property. Unless a more restrictive local government bylaw is in place, the following parameters, consistent with the Minister's Bylaw Standards, will inform the Commission's consideration of the appropriate total residential footprint:

- a) **Principal Residence**: The total residential footprint for a principal residence should not be more than 2,000 m<sup>2</sup>.
- b) **Additional Residence**: The total residential footprint for an additional residence should not be more than 1,000 m<sup>2</sup>.
- c) Temporary Farm Worker Housing: The total residential footprint for each permitted temporary farm worker housing space should not be more than 35 m<sup>2</sup> per worker.
- d) **Siting**: The setback from the front lot line to the rear or opposite side of the total residential footprint should not be more than 60 metres. Lots narrower than 33 metres are exempted from the 60 metre maximum setback guideline (for the total residential footprint) from the front lot line, however, the footprint should fill the front of the lot to a maximum of 2,000 m<sup>2</sup>.

- e) The following exceptional circumstances may also apply to the siting of residential footprints and may be considered by the Commission:
  - i) **Existing Footprints**: The clustering of a residence with other existing nonagricultural uses on the property to limit the fragmentation of ALR land and avoid the restriction of agricultural activities.
  - ii) Commodity-Specific Needs: The strategic placement of a residence to benefit or optimize the agricultural operation (e.g. monitoring of livestock on a large property).
  - iii) **Topographic Features**: Siting of a residence as appropriate to reduce the use of potentially productive farming land for residential purposes (e.g. sited on a non-farmable area of the property).

If the Commission approves a NARU application to place or construct an additional residence, to construct or alter a principal residence, or to reside in a residence while constructing another residence, its permission may be granted with limits or conditions. Examples of conditions may include:

- a) Siting of the residence in accordance with specified criteria
- b) A requirement that farm help must be contributing to the farm operation as described within the application
- c) Registration of a restrictive covenant requiring the removal or "decommissioning" of the additional residence should the residence not be used for the purpose of farm labour requirements or should the residence be unoccupied for a certain length of time
- d) The posting of a financial security in the form of an Irrevocable Letter of Credit in the amount of \$50,000 or as otherwise determined to ensure "decommissioning" of a residence being used during construction of another residence. Without limiting other potential repercussions to the applicant or property owner, the Commission may access some or all of the financial security upon a failure to comply with any or all aspects of the conditions of permission ordered by the Commission
- e) Consolidation with neighbouring parcel(s) and/or restrictions on the future residential use of other parcels included within the farm operation.

**"decommission"** pursuant to Commission Resolution No. 113N/2024 requires the removal of:

- (a) all kitchen facilities including cabinets, counter tops, sinks and associated plumbing;
- (b) all kitchen appliances (including stoves, fan hoods, microwaves, hotplates, etc);
- (c) all 220 volt electrical connections for the kitchen and/or gas piping;
- (d) all laundry facilities and associated plumbing; and
- (e) all bathroom fixtures including toilets, bathtub/shower facilities and associated plumbing.

#### 6.0 Building a New Principal Residence While Occupying an Existing Residence

It is the Commission's preference that the original principal residence be removed prior to the construction of a new principal residence, so that the new principal residence can be constructed in the same location as the original residence, thus minimizing the impact on the land base. However, the Commission recognizes that in some circumstances this may not be feasible. Applicants seeking to continue living in the existing residence while constructing a new residence should explain why they are required to do so, or why the new principal residence cannot be constructed in the same location as the existing principal residence.

On October 23, 2019, the Commission delegated its decision-making authority to the CEO to streamline the process of NARU applications which propose to build a new residence while occupying an existing residence, when the proposal meets the criteria outlined in CEO Delegated Decision-Making Criterion 17. If the application does not meet the criteria (including because the applicant cannot or prefers not to meet all the requirements), then the application will be referred to the Commission for a decision.

If an application is required and approved, the Commission may require conditions such as a covenant, siting, removal or decommissioning of the original residence. See Section 5.0 'Limiting housing's physical impact on the productive parcel' above for the definition of "decommission".

The circumstances in which the CEO's delegated decision-making authority applies are as follows:

#### CEO Delegated Decision-Making Criterion 17:

Non-Adhering Residential Use applications for building a new principal residence while occupying an existing residence that complies with the following criteria:

- i. At the time of the application there is only one residence on the parcel;
- ii. Siting\* of the new principal residence has a maximum 60 metre setback from the front lot line to the rear or opposite side of the total residential footprint, with the total residential footprint being a maximum of 2,000 m<sup>2</sup>. Lots narrower than 33 metres are exempted from the 60 metre maximum setback (for the total residential footprint) from the front lot line; however, the footprint must fill the front of the lot to a maximum of 2,000 m<sup>2</sup>; and,
- iii. Receipt/confirmation of the following within 30 days of the date of a decision to approve is issued:
  - a. registration of a restrictive covenant requiring the removal of the original residence;
  - a signed affidavit committing to removal of the original residence; and,

c. an ILOC sufficient to ensure removal of the original residence within 60 days of completion of the new principal residence.

\* The following exceptional circumstances may also be considered with respect to the siting of the new principal residence:

- a. <u>Clustering with Existing Residential Structures</u>: The clustering of the new principal residence with other existing non-agricultural uses on the parcel to limit the fragmentation of ALR land and avoid the restriction of agricultural activities.
- b. <u>Commodity-Specific Needs</u>: The strategic placement of the new principal residence to benefit or optimize the agricultural operation (e.g. monitoring of livestock on a large parcel).
- c. <u>Topographic Features</u>: Siting of the new principal residence as appropriate to reduce the use of potentially productive farming land for residential purposes (e.g. sited on a non-farmable area of the parcel).

#### Role of the Local Government:

Local governments must review NARU applications and either provide comments and recommendations for the Commission's consideration or, in some cases, authorize the application to proceed to the Commission: ALCA, ss. 25(3), 34(4)-(5). For applications in relation to settlement lands, the First Nation Government must authorize the application to proceed to the Commission: ALCA, s. 25(3.1).

An absence of local zoning bylaws does not relieve a landowner of complying with the restrictions in the ALCA and ALR Use Regulation.

Local government bylaws can be more restrictive of residential use of the ALR than the ALCA: ALCA, s. 46(6). The ALR Use Regulation identifies certain designated farm uses and permitted non-farm uses that local governments must not prohibit, but places no limitation on local government powers to prohibit or otherwise restrict residential uses of ALR land.



# **Report to Council**

**District of Lake Country** 

То:	Mayor and Council	Meeting Date:	May 20, 2025
From:	Paul Gipps, CAO	Meeting Type:	Regular Council Meeting
Prepared by: Department:	Lauren Sanbrooks, Grant Fundir Finance & Administration	ng Specialist	
Title:	The 2025 ParticipACTION Comm	unity Challenge	
Description:	Lake Country to participate in the 2025 ParticipACTION Community Challenge.		

#### RECOMMENDATION

For Information.

#### **EXECUTIVE SUMMARY**

The ParticipACTION Community Challenge is a national initiative encouraging Canadians to get active throughout June, with communities competing for the title of Canada's Most Active Community and a \$100,000 grand prize. This year, Lake Country will participate by promoting inclusive physical activity events and encouraging local clubs and organizations to register and track their activities. The District will develop promotional materials to support community engagement and participation. This initiative supports Lake Country's ongoing commitment to active, healthy living and inclusive access to recreation.

#### DISCUSSION

The ParticipACTION Community Challenge, presented by Novo Nordisk, is a nationwide initiative aimed at promoting physical activity and sport participation across Canada throughout the month of June. From June 1 to 30, municipalities and community organizations are encouraged to host and register physical activity programs, initiatives, and events, tracking community participation through the official ParticipACTION Challenge platform. Participating communities will compete for the title of Canada's Most Active Community, along with a grand prize of \$100,000 to be reinvested into local sport and physical activity opportunities. Additional prizes will be awarded to the most active community in each province and territory.

This year, Lake Country will be participating in the ParticipACTION Community Challenge. To maximize community engagement, the District will actively encourage local clubs, organizations, and community groups to participate by registering and tracking their physical activity events throughout June. In support of this effort, the District will be developing promotional materials and resources to raise awareness, support event planning, and assist groups in logging their activities on the ParticipACTION platform. These efforts are designed to get the whole community involved and boost Lake Country's chances of being named Canada's Most Active Community.

The primary objective of the ParticipACTION Community Challenge is to get more Canadians moving—regardless of the intensity or format of the activity. Everything from workplace stretch breaks and fitness classes to recreational games and sports practices can contribute toward a community's overall participation score. This initiative aligns with the District of Lake Country's strategic priority to create and support opportunities for healthy, active, and inclusive community. By participating in this national challenge, the District continues to foster physical wellness and connectivity within the community.

#### **The ParticipACTION Community Challenge - Grant**

In April this year, the District was awarded the ParticipACTION Community Challenge grant. Funded in part by the Government of Canada's Community Sport for All Initiative, the ParticipACTION Community Challenge presented by Novo Nordisk grants support community organizations in removing barriers and increasing physical activity and sport participation and retention for equity-denied groups. The funding will enhance the District's Street Hockey Program by enabling the purchase of essential equipment, helping to reduce financial barriers and ensure all children can take part.

#### Applicable legislation, bylaws and policies

#### Official Community Plan 2018-2038

Objective 10.1.10 Increase physical activity levels amongst Lake Country residents. Policy 10.1.11a. Seek to ensure suitable community recreation programs are available for all residents.

Objective 10.5 Healthy Communities Residents, employees and visitors value being in a healthy, complete and safe community.

#### **FINANCIAL IMPLICATIONS**

 $oxed{intermat}$  None  $oxed{intermat}$  Budget Previously Approved  $oxed{intermat}$  Other (see below)

#### COMMUNICATION

This application was referred to internal departments.

Respectfully Submitted. Lauren Sanbrooks, Grant Funding Specialist

#### **Report Approval Details**

Document Title:	ParticipACTION Community Challenge.docx
Attachments:	
Final Approval Date:	May 14, 2025

This report and all of its attachments were approved and signed as outlined below:

#### Trevor James, CFO, Director of Finance & Administration - May 9, 2025 - 2:35 PM

#### Reyna Seabrook, Director of Corporate Services - May 12, 2025 - 9:44 AM

Paul Gipps, Chief Administrative Officer - May 12, 2025 - 9:51 AM

Makayla Ablitt, Legislative & FOI Coordinator - May 14, 2025 - 9:24 AM



# **Report to Council**

**District of Lake Country** 

То:	Mayor and Council	Meeting Date: May 20, 2025	
From:	Paul Gipps, CAO	Meeting Type: Regular Council Meeting	
Prepared by: Department:	Kiel Wilkie, Capital Project Manager Infrastructure & Development Engineering	ţ	
Title: Description: Approval	Liquid Waste Management Plan Stage 3 Re An overview of the stage 3 report, seeking	uid Waste Management Plan Stage 3 Report Adoption overview of the stage 3 report, seeking adoption to send to the Ministry of Environment for	

#### RECOMMENDATION

THAT the Liquid Waste Management Plan Stage 3 Report (Attachment A to the report to Council dated May 20, 2025) be adopted.

#### **EXECUTIVE SUMMARY**

The Provincial Liquid Waste Management Plan (LWMP) is essentially a formal agreement between the Province and local government based on a three-stage report process that specifies how a community will manage its liquid waste long-term. The primary objectives of the Provincial LWMP process is to ensure the protection of public health, the environment, and to ensure effective public consultation.

The primary benefits to the local government of having a Provincially approved LWMP include:

- Streamlined Regulatory Approval: When it comes time to implement projects contained within the LWMP, the regulatory approval process is much less cumbersome.
- Simplified Borrowing: Borrowing for identified projects does not require larger community approval.
- Increased Likelihood of Obtaining Grant Funding: Grant funding is much more likely when an approved plan is in place.

The District's Liquid Waste Management Plan is in the final stage of the three-stage process. In the summer of 2023, the District received endorsement from the Ministry of Environment (MOE) for the Stage 1 & 2 report and authorization to proceed to Stage 3 of the LWMP process.

Stage 3 primarily involves the MOE seeking clarification on items from the Stage 1 & 2 process and requesting a more comprehensive analysis on areas they believe lack depth. During stage 3, the MOE has requested the following:

- Finalize the District's treatment and disposal plan for plant effluent, incorporating a reclaimed water reuse strategy.
- Provide more information and clarification on the District's retrofit sewer plans and environmental impact work for an Okanagan Lake discharge.
- Update cost estimates.
- Engage with both local Indigenous partners and community stakeholders.

The District and its consultants have made significant efforts to address these items, with plans and actions documented in the Stage 3 report. This report has been reviewed by the file manager at the Province, who recommended seeking Council endorsement before submitting the report for final approval.

#### **DISCUSSION/ANALYSIS**

The District attempts to update their LWMP dates back over 10 years. In the early 2010s, significant effort was made by staff to update the District's 1998 LWMP to facilitate plant improvements, community growth, and establish a long-term effluent disposal system. Due to Provincial reluctance to allow the District to use a groundwater well to draw down the aquifer and increase the disposal field's capacity, the process stalled. Efforts were rejuvenated in 2020 when the disposal fields experienced infiltration issues, expediting the WWTP Phase 4 project, including the addition of a filter on the effluent.

The District completed the Stage 1 & 2 LWMP report process from 2021 to 2023. Stages 1 & 2 focused largely on the required improvements to the collection and wastewater treatment plant, and the clean water return to the environment. The plan also addressed the District biosolids plan and stormwater management. There was also a significant public consultation aspect to the Stage 1 & 2 reports, and the District received an award for these efforts with its "What Happens After You Flush" campaign.

The Stage 1 & 2 reports emphasized the District installing its own treated water outfall into Okanagan Lake as a longterm community disposal option. The Stage 3 report keeps this option open but acknowledges the challenges of implementing this solution and discusses the potential to consider options like sending future excess wastewater to the Kelowna Wastewater Treatment Plant for processing.

Reclaimed water reuse was a major focus of the Stage 3 report. The District developed a three-phase reclaimed water strategy, focusing on using a groundwater well near the disposal fields for stream augmentation and eventually making pressurized irrigation water available to some users in the lower flats area that doesn't have access to the public pressurized irrigation water. There is also the possibility of using the groundwater well for a larger future twinned irrigation system, but this requires acceptance from the larger farming community due to many regulatory challenges in using reclaimed water, particularly on direct food-to-mouth crops.

Another aspect of the Stage 3 report was conducting additional financial analysis modeling. This work projected the sewer rates required to fund daily operation, maintenance, renewal, and improvement costs. The financial analysis, and community feedback, also recommended transitioning away from using parcel taxes to fund the sewer system, and use utility billing as the primary revenue collection process. In March 2025, Council adopted a bylaw endorsing this transition with a modest rate increase.

#### **FINANCIAL IMPLICATIONS**

 $\Box$  None  $\Box$  Budget Previously Approved  $\boxtimes$  Other (see below)

Approving the plan itself does not have budget implications, but there is a financial strategy contained within the plan. In March of 2025 Council adopted a modest rate increase over the next four years to help support the plans implementation.

#### **COMMUNICATION & CONSULTATION**

The District has been proactive in consulting the community throughout the LWMP process. During the Stage 1 and 2 report, the District undertook an extensive consultation effort to inform the community and gather feedback, which was recognized with an award for these efforts. These efforts were expanded recently during the stage 3 report with information in the citizen bulletin, utility billing mailouts, and social media posts.

However, the primary aspect of community consultation that was lacking in the Stage 1&2 report was the reclaimed water reuse strategy. In response, the District conducted a public engagement session with the Lake Country Farmers Institute (LCFI) and hosted multiple online session for other local governments and provincial agencies.

The LCFI informed staff that the use of reclaimed water is not permitted by grocers for direct food-to-mouth crops, and raised concerns about the long-term impacts on soils where reclaimed water is applied. The third phase of the

reclaimed water reuse strategy was the primary concern as many of these crop types would be impacted. Therefore, the LWMP Stage 3 report was carefully re-written to address these concerns by stating that the third phase of the reclaimed water reuse strategy would not occur without acceptance from the farming community. During the redraft, the LCFI submitted an email to Council requesting that the reclaimed water strategy be removed from the report. After the draft was released, District staff received an email from LCFI thanking for their efforts in considering the LCFI's comments in the wording of the report. It is not currently known if the LCFI now supports the stage 3 report as it stands.

District staff also met with the Water Service Advisory Committee to review the reclaimed water reuse strategy. The committee passed the following resolution which was considered in redrafting the stage 3 report: It was moved and seconded

THAT the Water Services Advisory Committee supports the development of a reclaimed water reuse strategy, provided that it's implementation does not negatively impact the agricultural community's ability to sell it's product or have long-term impact on agricultural farm land.

#### Carried.

Additionally, staff met with representatives from the Okanagan Indian Band (OKIB) to review the reclaimed water reuse strategy. The OKIB generally supports the implementation of reclaimed water reuse and efforts to reduce the volumes of treated effluent entering local water bodies. Their primary concern for the stream augmentation phase of the reclaimed water reuse strategy was the potential impact on fish's endocrine disruptors due to pharmaceuticals found in treated wastewater. Staff are continuing to work through an environmental impact study to understand if this is expected to be an issue.

Overall, the District is committed to addressing community concerns, ensuring thorough environmental impact studies, and maintaining open communication with all stakeholders.

#### **ALTERNATE RECOMMENDATION(S)**

- That the following comments and edits be incorporated into the Liquid Waste Management Plan Stage 3 Report (Attachment A), and brought back to Council at a subsequent regular council meeting.
- 2. That the report not be supported and the project file closed.

Respectfully Submitted. Kiel Wilkie, Capital Project Manager

#### **Report Approval Details**

Document Title:	Liquid Waste Management Plan- Stage 3 Report Adoption .docx
Attachments:	- Attachment A - Liquid Waste Management Plan Stage 3 Report .pdf
Final Approval Date:	May 14, 2025

This report and all of its attachments were approved and signed as outlined below:

#### Reyna Seabrook, Director of Corporate Services - May 8, 2025 - 3:25 PM

Matthew Salmon, Infrastructure & Development Engineering Director - May 8, 2025 - 3:39 PM

Paul Gipps, Chief Administrative Officer - May 9, 2025 - 9:21 AM

Makayla Ablitt, Legislative & FOI Coordinator - May 14, 2025 - 9:22 AM

# DISTRICT OF LAKE COUNTRY LIQUID WASTE MANAGEMENT PLAN STAGE 3 REPORT

April 2, 2025

SYSTEMS

#### **PREPARED FOR:**

DISTRICT OF LAKE COUNTRY 10150 Bottom Wood Lake Road Lake Country, BC V4V 2M1

#### **ATTENTION:**

Kiel Wilke, Utilities Manager

#### **PREPARED BY**:

URBAN SYSTEMS LTD. 312-645 Fort Steet Victoria, BC V8W 1G2 Contact: Ehren Lee, P.Eng., Senior Consultant E: <u>elee@urbansystems.ca</u>| T: 778-678-3157

#### **DATE:** APRIL 2, 2025

#### FILE:

1577.0110.01

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#### **STAGE 3 REPORT CONTEXT**

This Stage 3 Report, part of the District of Lake Country's (the District) Liquid Waste Management Plan (LWMP) process, is best read in conjunction with their Stage 1-2 Report. The 2022 Stage 1-2 Report details the District's preferred approach and priority projects for managing liquid waste. It received Council endorsement in September 2023, prompting the commissioning of the Stage 3 work (council endorsement expected in Spring 2025).

As per the Province, LWMPs have two objectives: (1) "protect public health and the environment", and (2) "adequately consult the public." The Stage 3 Report achieves those objectives by (1) including the District's 20-year plan to fund and implement the priority liquid waste management initiatives from the Stage 1-2 Report and (2) summarizing the District's consultation efforts.

Expanding the District's service with major collection system improvements, wastewater treatment plant upgrades, and development of reclaimed water services requires a financial plan with scheduled investments. Sections 2.2 and 2.3 detail the timing of such investments for the priority liquid waste management initiatives which also summarized below. Many of these initiatives exceed the LWMP requirements and demonstrate the District's leadership and participation in areas of resource recovery, asset management, water conservation, and watershed security.

The District is committed to the responsible disposal of liquid waste, prioritizing environmental protection and public health. The most pressing issue to the District is securing a long-term effluent disposal solution. To address this, the District is working to maximize its current surface-to-ground disposal capacity, develop a reclaimed water use strategy that is acceptable to the agricultural community, and establish a long-term agreement with the City of Kelowna to accommodate additional wastewater. Only if the Kelowna option becomes unviable would the District reconsider exploring its own outfall to Okanagan Lake. It should be noted that when this report discusses discharging treated wastewater to Okanagan Lake, it may refer to City of Kelowna's discharge location.

#### **MINISTRY RESPONSE TO STAGE 1-2 REPORT**

The District's LWMP aims to exceed the objectives outlined in *the Interim Guidelines for Preparing Liquid Waste Management Plans* (Ministry of Environment and Parks, July 2011). Additionally, the BC Ministry of Environment and Parks (ENV) outlined further recommendations in its August 10, 2023, correspondence (see Appendix I), which the District has addressed in this Stage 3 report and its appended documents. The Summary Table below cross-references the numbered action items from ENV's correspondence and the location where this report addresses them.

ENV	Action Item Focus	Reference in
Correspondence		Document
Action Item		
Item 1 (Bullet 1)	Groundwater galleries	Main Report Section
	maintenance	2.2, Appendix B
Item 1 (Bullet 2)	Reclaimed Water Strategy	Appendix A
Item 2	Watershed rehabilitation and	Section 2.1, Section
	limiting discharge to	2.2, Appendix F,
	Okanagan Lake	Appendix H
Item 3	Retrofitting the collection	Section 2.1, Section
	system – cost and	2.2, Section 2.3,
	environmental benefit	Appendix B
Item 4	S.M.A.R.T. goals related to	Section 2.0, Section 2.1
	non-point pollution plan	
Item 5	Class C/B estimates,	Section 2.2, Appendix
	operation and maintenance	C, Appendix G
	costs, and cost consultation.	
Item 6	Engagement with	Appendix E
	Indigenous Nations	
Item 7	Public Consultation	Section 2.4, Section
		2.5, Appendix D

Summary Table: ENV Correspondence Action Items

ENV sent subsequent correspondence (see Appendix I) on April 23, 2024, with further recommendations that the Stage 3 report include a comprehensive evaluation of reclaimed water use options with the expectation that such an evaluation would

- identify associated costs and timelines, potentially aligning with the development of the outfall conveyance route, and
- identify investments in retrofitting and expanding sewer service.

This Stage 3 report addresses this request, particularly in Appendix A.

#### STAGE 3 REPORT FORMAT

This Stage 3 Report is divided into two major sections:

#### Part One – Implementation Report

Includes investment guidelines, actionable steps, and metrics for measuring progress when implementing the District's priority initiatives:

- Biosolids Disposal continued partnerships with OgoGrow and the Regional District of Central Okanagan \$0.2 M
- Stormwater Management comprehensive district-wide approach with investments in localised, often nature-based treatment \$2.1 M
- Liquid Waste Collection expand centralized collection, educational resources, and septic system management \$9.1 M
- Sewer Retrofit connect new customers as per the Official Community Plan \$42.7 M
- Treatment Upgrades and Future Disposal Lines maintain and maximize in-ground disposal and utilize an Okanagan Lake Outfall \$30.6 M
- Reuse Systems phased development of system driven by customer potential and grant funding \$1.5 M
- Watershed Rehabilitation focus source-water protection initiatives in vulnerable areas supported by wildfire resiliency and water conservation efforts approximately \$200k/year.

#### Part Two - Appendices

Include supporting documents further detailing the following subjects:

- A: Reclaimed Water Feasibility & Service Development
- B: Retrofit Sewer Expansion Areas
- C: Cost Estimate Classes
- D: Public Engagement Summary
- E: Indigenous Consultations Update
- F: Watershed Resiliency
- G: LWMP Financial Analysis
- H: Response to BC ENV Comments on the DLC Okanagan Lake Proposed Outfall EIS
- I: Ministry of Environment and Parks Responses to Stage 1-2 Report
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Liquid Waste Management Plans (LWMPs) empower local governments, via Operational Certificates (OCs), to oversee the collection, treatment, and environmentally responsible return of wastewater. The overarching goal of an LWMP is to do so while navigating a complex landscape encompassing public, political, social, environmental, and financial considerations. The District of Lake Country (the District) is collaboratively engaging interest groups to craft a LWMP that identifies local challenges and devises well-considered solutions to enhance liquid waste management. While the existing infrastructure works efficiently at current flow rates, there is potential to improve local services by focusing on sustainability practices, adopting modern environmental management, meeting current and future customer needs, and implementing cost-effective, long-term solutions.

Every good management plan has a short-list of drivers: the prompts that initiated the planning process and culminated into a preferred direction. For the District, the three main drivers are:

- The existing wastewater treatment plant has reached its maximum capacity, necessitating upgrades to accommodate future growth, which requires authorization from BC ENV (the term often used for the operational and statutory staff of the BC Ministry of Environment and Parks).
- Plant flows are nearing capacity of in-ground disposal, mandating the exploration of safe and reliable alternatives for returning water to the environment.
- A periodic update, required approximately every 10 years, was requested by the Province.



The guiding aim of Lake Country's LWMP is to **borrow water wisely and return it safely**. This aim revolves around three key objectives:



Lake Country delivers on this aim and its objectives with sustained investments in highquality return water, ongoing lake health monitoring, a commitment to water reclamation, advocacy for water conservation, and improved stormwater management to mitigate nonpoint source impacts on lake health. The 2025 LWMP will further deliver on this objective.

Lake Country's Council adopted Stage 1 – 2 Report for the current LWMP was approved by BC ENV and the District was directed to move to Stage 3 in October 2023. The Stage 3 Report positions the District to adopt the implementation plan herein, which includes programs, strategies, activities, projects and milestone-targets. Funding and timelines are fundamental to implementation.

The Stage 3 report includes two major sections: the Implementation Report and the supporting documents (appendices).

- The Stage 3 Implementation Report is designed for a public audience and provides clear guidelines to support staff. It consolidates the necessary actions and metrics for measuring progress in one comprehensive document.
- The supporting documents for the Stage 3 Report (appendices), mainly intended for BC ENV, other service partners, and providing background info for readers looking to familiarize themselves with core concepts. The Stage 3 report is best understood with the Stage 1-2 report at hand. The Appendices list includes:
  - A: Reclaimed Water Feasibility & Service Development
  - B: Retrofit Sewer Expansion Areas



- C: Cost Estimate Classes
- D: Public Engagement Summary
- E: Indigenous Consultations Update
- F: Watershed Resiliency
- G: LWMP Financial Analysis

Lake Country expects to receive Council endorsement for the implementation of this plan in 2025.





## 2.0 SUMMARY OF PREFERRED DIRECTION

No.

The completed Stage 1 - 2 Report details the *preferred direction* which encompasses the path forward for managing liquid waste. Stage 3 transforms the preferred direction into concrete steps that are specific, measurable, fundable, relevant and timebound. This preferred direction provides concrete definitions for the fundamental investments in liquid waste management for the District over the next two decades. Funding generational projects like wastewater treatment plant upgrades, expanding services to include reclaimed water, and major collection system improvements requires a thorough financial plan, as outlined herein.

This LWMP is poised to continue the community's longstanding commitment to surpassing minimum requirements in the effective management of liquid waste, prioritizing public health, and environmental well-being. After thorough consideration of the feedback from committees and the public over the past three years, the approved and committed approach includes:

- Complete the Phase 4 (commissioned) and 5 upgrades to the wastewater treatment plant, ensuring its readiness for over two decades of growth and compliance with regulations regarding redundancy and the return of treated water to the environment.
- Create a flexible and adaptive cleaned water return program that includes disposal toground, an Okanagan Lake Outfall (as detailed in the Stage 1-2 Report and the supporting environmental impact study), continued partnership with City of Kelowna, better managing supply and demand via reclaimed water, and monitoring conditions at the preferred return point location. Specific to the possibility of a District-owned Okanagan Lake Outfall, Appendix H details the latest monitoring/modelling recommendations in response to the Province's response letter to the environmental impact study and Stage 1-2 Report. As recommended, additional sampling will be contingent on whether the District pursues their own outfall in the future.
- The District will place early emphasis on ensuring sustainable ground infiltration and building a reclaimed water program for customers within the District that can be accepted by customers that want to use this source. An Okanagan Lake outfall is included as part of the Phase 5 upgrades proposed at the WWTP, but may not be necessary if the District can reach an agreement with Kelowna for a long-term disposal option.
- Take preliminary, concrete steps to reclaim treated wastewater through stream flow augmentation in Middle Vernon Creek via a blending with groundwater. Thereafter, pursue irrigation on designated properties including parks and agricultural land where there will be no negative impact on product marketability or long-term negative effects on agricultural land. Appendix A includes figures illustrating the proposed areas.



Environmental impact studies and community buy-in for the reclaimed water sites will be required prior to implementation.

- Extend the centralized wastewater collection system, incrementally, to areas delineated within the urban containment boundary of the Official Community Plan and as illustrated in this report, involving necessary pipe and lift station upgrades to accommodate customers within that boundary.
- Continue the biosolids program, accompanied by a renewed regional agreement and a focus on collaboration to address the supply and demand imbalance for OgoGrow.
- Expand stormwater management and shift to *integrated* stormwater management: the emphasis on integrated features includes source control(s) and new infrastructure to enhance water quality before it reaches major streams, wetlands, and Wood, Kalamalka, or Okanagan Lakes.

Council's support has enabled financial planning and funding analysis over the last year to bring this plan to fruition. Principles for liquid waste funding are detailed in later sections of this report. With a set direction and funding framework, the focus now moves to the steps and milestones needed to implement the plan effectively.

## 2.1 LIQUID WASTE QUALITY SUMMARY OBJECTIVES

Liquid waste management has a primary environmental aim: to protect public health and the environment. The water quality objectives below provide an overview of the desired outcomes from implementing Lake Country's Stage 3 report.

- Manage the collection system and treat wastewater as per the terms and stipulations of the Environmental Impact Study (EIS) results via the District's draft Operational Certificate, which includes Plant parameters. Resulting initiatives and environmental benefits are as follows:
  - Reduction of septic field failures and expanding the centralized wastewater system to replace septic fields prevents contaminants from seeping into groundwater and nearby water bodies, significantly improving water quality and reducing public health risks. While led by regional services, the District aims to complement these efforts with local programs.
  - Increased collection system capacity and modernization by way of expanding the system's capacity and upgrading lift stations ensures efficient wastewater collection and treatment, preventing system overflows and ensuring treated water meets environmental standards.
  - Phase 4 Upgrades are considered complete. Phase 5 Upgrades are substantial in their objective to safeguard water quality, by way of including the following treatment works:
    - o Ultraviolet disinfection (water quality)
    - o Primary clarifier 2 (redundancy and capacity)
    - o Primary clarifier 3 (redundancy and capacity)



- o Dissolved Air Flotation (capacity and water quality)
- Equalization storage (capacity)
- A pipeline outfall (capacity and water quality)

Biological nutrient reactor 4 (redundancy, water quality, and capacity)
 The Phase 5 Upgrades were outlined in greater detail in the approved Stage 1 – 2
 Report. The status and scope of the phase 5 upgrades remain contingent on the negotiations with the City of Kelowna.

- 2. Return cleaned water to the environment:
  - Strive to maximize the return via ground infiltration, up to 2,000 cubic meters per day, recognizing various indicators in and around the facility,
  - Actively pursue water reuse strategies, targeting an increase in reused volumes over time to reduce the amount directed to Okanagan Lake. This initiative also aims to mitigate drought and flow risks associated with intensive summer irrigation in Lake Country. According to the reclaimed water estimates provided, the potential for reuse at various sites could range from 10% to 50% of plant flows during the summer months by 2040.
  - To safely return all remaining flows up to 6,000 cubic meters per day to Okanagan Lake (although determinedly less than the maximum projected) as part of a robust water quality monitoring program that meets the OC objectives above and benefits from expanded parameters set out by the Okanagan Lake collaborative.
  - Meeting the water quality parameters of the Operational Certificate as outlined in Table 3 in Appendix A among other standards submitted under separate cover.
- 3. **Pursue water quality improvements via non-point sources** to safeguard our lakes and streams:
  - Building a non-point source plan to mitigate the effects of harmful runoff originating from fertilized landscaping especially along shoreline areas, high intensity agricultural properties, and failing septic systems, by restoring wetlands and better managing riparian areas, and by participating in lake-use and recreation programs to minimize the effects from wake erosion and other activities. There is no specific measure for this non-point source plan, but the District is implementing an integrated stormwater management plan for partial coverage of this aim. Other initiatives will require collaboration with various stakeholders.

## 2.2 EXPENDITURE SUMMARY: OVERALL PLAN INVESTMENTS

**Table 1** details the preferred direction and outlines key activities, outcomes, and investment areas for each major topic. Most costs are stated in 2022 dollars (consistent with the Stage 1-2 report). District staff and Urban agreed that 2022 dollars remain suitable for financial planning purposes in 2025 due to the stabilizing of construction price escalation since the end of 2022. Price fluctuations due to inflation have been considered up to 2025 dollars, and



the financial analysis includes future assumed inflation amounts from 2025 to 2028 to calculate rate increases that maintain financial sustainability (see Financial Analysis in Appendix G).

For projects beyond the short term, a Class C or D designation is more appropriate, as uncertainties in scope and future conditions necessitate larger contingencies of 35-50%. Professional engineers and expert cost estimators agree that larger contingencies are necessary for projects with scopes that are not yet final or fully complete (see breakdown of Cost Estimates in Appendix C).

The success of the plan will depend on staff and council annually evaluating and committing funds to deliver the components of the plan. Herein, the District has a robust financial implementation plan intended to adapt to changing cost estimates and inflation, over time. As with many master plans, the cost figures below will require regular updates to stay in line with actual price conditions.



#### Table 1 - Key Activities, Outcomes, and Investment Areas

PLAN INVESTMENT DESCRIPTION Component	COST				
Biosolids					
<ul> <li>Create and sign a medium to long-term agreement with the owner-operators of the OgoGrow program for continued receipt of biosolids from Lake Country's plant; this agreement may be done concurrently to confirm Lake Country's continued receipt of regional trucked waste. Costs estimated at \$0.1M over 20 years to support financial and operational analysis.</li> <li>Continue to partner with RDCO on developing cost effective and environmentally friendly bio-solids solutions. Specifically, contribute a small share of the funds for this investment area into regular program updates (about every 5 years) that restore the balance of supply and demand for reuse of OgoGrow, including confirming the role of Lake Country and its lands or residents in making that so. Costs estimated at \$0.1M over 20 years. This can take the form of land identification, marketing, and exploring alternative uses.</li> </ul>	\$0.2 M				
Stormwater					
<ul> <li>Phase 1 of the transition from drainage plans to the integrated stormwater management plan (ISMP) was completed in 2023. The ISMP Phase 1 work included a GIS dashboard to graphically organize many information types including flow paths, storm infrastructure, and water quality monitoring data at specialized locations throughout the District. Phase 2 of the ISMP work is expected to be finalized in 2025.</li> <li>Develop a non-point source pollution plan and select source control programs for lake and stream health outside of what is not readily addressed in the integrated stormwater plan (above) \$1.0M.</li> <li>Invest in new stormwater treatment works including natural and engineered areas that enhance water quality at various streams and stormwater outfalls to safeguard lake health \$1.0M.</li> <li>Schedule M of Bylaw 1121 was updated in 2021 and adopted in 2024. No further updates are currently planned. Update education resources given the local interest by the public to do the right thing once it becomes known and clear to them. Costs estimated at \$0.1M over 20 years.</li> </ul>	\$2.1 M				
Collection System					
• Continue with expansion of the centralized system as outlined in the Official Community Plan and the Sanitary Sewer Plan through upgrades at key utility works such as lift stations, force mains, and trunks (led by the District's utility).	\$9.1 M				



PLAN INVESTMENT DESCRIPTION Component	COST
<ul> <li>Offer education resources to residents and businesses that encourage proper disposal of emerging contaminants of concern, typically away from the sanitary sewer system (in-kind).</li> <li>Continue to evolve septic system management practices and employ new tools to promote and/or warrant property owners to fulfill their responsibilities as owners and operators of their on-site wastewater treatment facilities. Costs estimated at \$0.1M over 20 years.</li> </ul>	
Sewer Retrofit	
<ul> <li>Continue with expansion of the centralized system as outlined in the Official Community Plan through retrofit areas (led largely through specific area service charges and offset in part through grants, if successful) including the force main extension to the Oyama isthmus.</li> <li>Continue planning to connect new customers from sewer retrofit areas upon successful commissioning of Phase 5 of the plant upgrade.</li> </ul>	\$42.7 M
Treatment Upgrades and Future Disposal Line(s)	
<ul> <li>Phase 4 (completed mid-LWMP) and Phase 5 upgrades. Costs estimated at \$20.1M (excluding an Okanagan Lake outfall or similar long-term effluent disposal option referenced below).</li> <li>Initiate the permitting, design, and installation of a pipe that conveys highly treated return water from the wastewater treatment plant to an Okanagan Lake outfall for all flows not reclaimed by future reuse customers or not returned to ground. Costs projected at \$9.8 M</li> <li>Part of the project for an Okanagan Lake outfall line (or more generally a long-term effluent disposal option as mentioned in Appendix G) is to establish a monitoring program that meets and exceeds provincial requirements for water quality monitoring so that Lake Country has ample time and data to support for additional treatment upgrades in the future, if warranted. Costs estimated at \$0.6M, likely spent in years 1-10. Refer to Appendix H for the latest monitoring/modelling recommendations.</li> <li>Maintain the in-ground capacity at 2,000 m3/day so that returning clean water to ground remains a reliable method for returning cleaned water to the environment. The District allocates approximately \$50,000 per year for maintenance (excluded from the cost column in this table).</li> <li>Study the cost-benefit of a public sani-dump. Costs estimated at &lt; \$0.1M.</li> <li>Continue with the regional septage receiving service and amend that service as needs arise through funding of that specific program.</li> <li>Continue with annual financial contributions to the Okanagan, Kalamalka, and Wood Lake Collaborative Monitoring program and support future costs associated with studying emerging substances of concern.</li> </ul>	\$30.6 M



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#### PLAN Component

#### INVESTMENT DESCRIPTION

#### Reuse Systems (System Set Up and Feasibility)

- Initiate program design for a water reclamation system. Include EIS and surveys/engagement with potential customers. Three phases of system development to include preliminary design for future infrastructure to extend reclaimed water from groundwater wells adjacent to the plant and later, from the pressurized Middle Vernon Creek outfall line to select properties in Phases 1, 2 and possibly 3 (maps included later in the report).
- Advance to preliminary and detailed design engineering for Phases 1 and 2 (perhaps parts of 3) including regulatory approvals, hydrogeological designs, and all other non-capital works outlined in the Reclaimed Water Implementation Plan (Appendix A). Though not listed here, capital works are expected at about \$20M or more, however the District will be applying for grants to fund and construct the works. The District's capital share of any approved grants will come from either borrowing or utility reserves. We estimate that tie-ins to the groundwater system and release to Middle Vernon Creek is approximately \$500,000 which relies on reuse of some existing infrastructure. This estimate should be redone through conceptual design.
- The priority for water reuse and reclamation is to enhance stream flows in Middle Vernon Creek, thereby addressing some of the release orders from Beaver Lake imposed on the District. Later, expanding the reclaimed water supply to agricultural and park lands should not occur until there is a clear need for the reclaimed water source and a thorough understanding of its impacts on agricultural lands. Given the capital cost outlay for this plan over the first five years (up to 2029), District staff ought to tie feasibility of expanded systems to the award of senior government grants.

#### Watershed Rehabilitation

- In accordance with the Province's response to the Stage 1 and 2 report, the District is implementing watershed rehabilitation efforts in response to the EIS recommendations which included:
  - Continuing to pursue water rehabilitation programs within the District and its upstream watershed,
  - Working with other jurisdictions to:
    - Improve watershed resilience,
    - Map source water vulnerability through the watersheds to identify zones of high risk where conservation/rehabilitation provide the best protection,
    - Reduce wildfire risk throughout the Okanagan watersheds particularly in riparian areas and around infrastructure,
    - Increase climate change preparedness in urban areas, and



\$200k

\$1.5M

COST

- 19 -

STAGE 3 LWMP REPORT

PLAN Compon	INVESTMENT DESCRIPTION ENT	COST
<ul> <li>The initi recordent rec</li></ul>	• Encourage water conservation. District is participating in, commissioning, and/or leading several atives, programs, studies, and plans that align with the EIS ommendations including the North Abeerdeen Watershed Resilience a, road rehabilitation efforts in the Beaver Lake and Oyama Lake ersheds, the Kalamalka and Wood Lake technical working group, the eshore Integrated Management Planning, the Okanagan Lake consibility Plan, the 2023 Wood Lake Condition Assessment study, the 8 Zebra and Quagga Mussels Risk Assessment Mapping study, the ver Lake Chain & Vernon Creek Water Management Plan, a non-point rce stormwater pollution plan, and a district-wide Water Conservation b. Refer to Appendix F for more.	
	Total	\$86.4M

## 2.3 EXPENDITURE SCHEDULE: IMPLEMENTATION

Investment areas outline the total spending projected over the 20-year horizon of the liquid waste management plan (see the Financial Analysis in Appendix G for more detailed information). The sequence and scheduling among the individual expenditures creates a more actionable plan for implementation.

In our experience supporting the implementation of other LWMPs in BC, detailed planning and measuring results as they transpire often leads to sustained effort over the long run.

The outline of this plan below will enable staff, stakeholders, regulators, and future leaders to participate in these initiatives even if they were not a part of the original (2021-2025) planning process.

Please see the Expenditure Schedule, **Figure 1** on the following page



STAGE 3 LWMP REPORT

Contingency project

#### Figure 1 Liquid Waste Management Expenditure Schedule





in the body of the report for the cumulative

## 2.3.1 SCHEDULE: IMPLEMENTATION OF THE OPERATIONAL CERTIFICATE

It is important to note that the Operational Certificate (OC), which provides authority to handle, treat, and return wastewater at Lake Country's centralized plant is poised for submission to BC ENV after the submission of the LWMP Stage 3 Report, as discussed with BC ENV staff. The shared goal is to complete the requested additional work for the OC amendment in alignment with the Stage 3 Report approval. This work will be completed in 2025 and includes:

- Environment Impact Study for reclaimed water stream augmentation
- Clarification on the Environment Impact Study for an Okanagan Outfall
- Potential additional Effluent Characteristics Sampling

The OC may require updates in the interim prior to the next comprehensive LWMP update (approximately 10 years from now), based on the following two criteria:

- If the proposed works in this Plan, particularly at the wastewater treatment plant are changed, and
- If the proposed operation of the plant can not meet the objectives of the Plan and/or the target parameters set in the EIS

If changes to the OC are prepared or submitted, these should be assessed in part with the whole of the objectives outlined in this LWMP (Stage 1-2, and 3).

## 2.4 COST-RECOVERY OVERVIEW

Input and feedback received during the Stage 1-2 engagement with the public and stakeholders revealed local interest to advance water quality without significant impact to ratepayers. In particular, the commentary from the public centered on three financial aspects:

- Mixed views on whether to **pursue lowest cost capital plan** or to spend more to **create reuse systems**,
- A rising demand from property owners to **retrofit other neighbourhoods** and expand the core area further where funding for retrofits is to come exclusively from the benefitting properties and/or grants, and
- Some elevated concerns around **growth** and how developers will **share the costs** of new works and capacity.

Though less emphatic, there remains a strong local sentiment to ensure that regional septic receiving and treatment is to be funded by the regional users of that system. Lake Country's principles for cost-sharing in that program ought to remain through the life of the plan to ensure that local utility payers do not unduly fund a regional service.



In general, there was an understanding that the costs of liquid waste management were expected to rise incrementally as new works and upgraded facilities were constructed and operated. There were clear expectations that staff would revisit the methods for costrecovery and propose a plan that would deliver on the LWMP and keep costs steady, rising incrementally as needed. Sudden, large-scale utility rate or tax changes across the community were not desired.

During Winter 2023/24 and Winter 2024/25, Staff and the consulting team engaged Lake Country Council to build on the Stage 1-2 input (above) and develop financial principles for implementation. Those principles brought to Council include:

PRINCIPLE	WHAT THIS MEANS					
Sewer service is self funding.	<ul> <li>Sewer service should be self-funding, where it does not receive funding from other services.</li> <li>Achieve full cost recovery by those directly benefiting from the service.</li> <li>Paid by those predominantly benefiting from the community sewer system.</li> </ul>					
Growth pays for growth.	<ul> <li>Development pays for improvements and future works required to service development.</li> <li>The portion of projects required for growth are allocated to growth.</li> <li>Costs are generally recovered through Development Cost Charges, but infrastructure is also built by developers, or paid for directly up front by developers.</li> </ul>					
Sewer Retrofit through Local Service Areas & Grants	<ul> <li>Sewer retrofit of existing neighbourhoods will be considered through a Local Service Area process; areas include:</li> <li>Oyama existing neighbourhoods (Cornwall, Isthmus area)</li> <li>Winfield un-serviced areas (Bond, KelVern, Winview, Pretty, Mountview)</li> <li>The area that benefits pays for the sewer extension.</li> <li>Paid for through local service area process.</li> <li>Sewer retrofit projects will depend on grants to proceed.</li> <li>Timing for these Local Service Area projects is after the WWTP upgrades and a long-term effluent disposal option is secured.</li> </ul>					
Septage facility is funded as a regional service.	<ul> <li>Septage facility is self funded as a Regional service and is not subsidized by the Lake Country Sewer Utility.</li> <li>Full cost recovery funded by the District of Lake Country charging the Regional District which covers costs by charging septage haulers, and haulers charge users to cover tipping charges.</li> </ul>					
Stormwater funded with mobility:	• Stormwater operations, maintenance and capital projects will not draw on sewer revenues.					

#### Table 2 - Financial Principles for Implementation



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PRINCIPLE	WHAT THIS MEANS
	<ul> <li>Most stormwater components are ditches along roadways and drainage associated with curb &amp; gutter usually along sidewalks.</li> <li>Stormwater is considered as part of the mobility (transportation) network.</li> <li>Separate from the LWMP and sewer function.</li> <li>Projects identified through Storm Water Master planning process are funded under General Revenue and Transportation Parcel Tax.</li> </ul>

There is a strong link between the principles above and the feedback from stakeholders and the public. These principles were then applied to a financial model and long-term cash flow analysis, summarized in greater detail in Appendix G. The modelling considered several factors, many of which are common to all small-to-medium sized communities in BC who aim to build out their sanitary network, accommodate growth, meet regulatory expectations for redundancy, broaden their services and manage liquid waste and the environment. All these considerations are informing the cost-recovery strategy described below, which is followed by brief observations from the modelling and analysis, and then some summary conclusions.

## COST RECOVERY STRATEGY FOR IMPLEMENTING THE LWMP

Effective implementation of the LWMP is contingent upon a feasible cost-recovery plan of which the initiatives will be subject to council approval via bylaw amendments. Lake Country's approach to funding the works include the following key concepts and requirements:

### For Sewer Utility Customers

- Total fees increase slightly after replacing the revenues generated by the Sewer Parcel Tax and Environmental Levy with revenues generated by User Fees.
- The transition to rely less on parcel taxes and more so on user fees occurred at the start of 2025. After this shift, the District is generating revenue only through the User Fees.
- As a result of shifting from taxes to fees above, the total contributions from sewer utility customers is proposed to increase slightly:
  - Today: \$600 including \$250 fees and \$350 in parcel taxes
  - In 2025, utility fees will rise to approximately \$640, increasing to \$720 by 2028. Alternatively, by 2027, utility fees may reach \$700, with no additional parcel taxes. A reduced multifamily rate is also being considered, along with the potential for a future variable rate based on wastewater discharge, encouraging water conservation and environmental protection efforts.
- Subject to Council consideration and approval, those parcels connected to the three small, community wastewater systems (Amry, Nuyens, and Marshall) also owned and operated by Lake Country will be subject to cost-recovery charges specific to their utility.



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• Rates will rise as necessary throughout the course of the 20-year implementation plan to address planned and unplanned occurrences such as further cost escalations, asset renewal, and staffing needs, among others.

### Properties Not Connected to the Sewer Utility

- Overall, the general taxpayer will ultimately contribute less for broader liquid waste management needs and services so that Lake Country can fulfill its objective to fund sewer operations by those who benefit directly from the sewer utility i.e., utility ratepayers.
- Any developed property not on the sewer utility must remain responsible for their private, individual septic system maintenance.
- Any properties poised to connect to the utility will contribute towards the Local Service Area (LSA) charges, where applicable, as they are designed and implemented through construction. This only applies to retrofit properties within an LSA.

### Other Core Funding and Cost-Recovery Methods

- Development Cost Charges will be reviewed and updated regularly and increases to sewer DCCs were proposed in 2024. The aim with this endeavour is to fund capacity increases to the system primarily almost solely- through fees and charges paid for by developers at the time of development and any senior government grant funds that aim to support housing by mitigating cost impacts from system expansion. In order to address the costs allocated to new growth the Sewer DCC rates increase significantly.
- Senior Government Grants are a significant part of liquid waste management upgrades and core to the feasibility for any small to medium sized community in BC to achieve regulatory expectations placed on them. The level of grant funding incorporated into this cost-recovery plan include:

### Sewer Expansion Retrofits

Senior Government Grants est. @ 66%	\$ 20,950,710.00
Okanagan Basin Water Board est. @ 16% from the Sewage Facilities Assistance Grant	\$ 5,078,960.00
	\$ 26,029,670.00
WWTP Upgrades	
Phase 5: Senior Government Grants est. @ 66%	\$ 14,041,500.00
Reclaimed Water System	
Grant Type TBD (for capital costs)	TBD ~ \$20M+



The actual grant amount received is not known until any grant announcements (if, when) are confirmed at the time they are applied for. Please note that the total project costs are higher than the amounts listed above, which intend to show the grant portion only.

## CASH FLOW ANALYSIS AND MODEL OBSERVATIONS

The financial analysis underscores the cost-recovery strategy with key points:

- There is no financial capacity to fund all works under the LWMP and certainly not at one time. Rather, major projects must be sequenced to optimize local funds and staff capacity. Timing of projects may need adjustments due to funding, grants, cost increases, or other issues.
- Shifting a significant portion of cost-recovery to the utility mitigates the risk of wastewater projects being deprioritized against other local priorities.
- Development cost charges (DCCs) must rise in line with benefits from expanding system capacity. Updates are ongoing.
- Sewer retrofits heavily rely on grants and should be financed collectively rather than on a neighborhood basis. Grants are essential for feasibility.
- Maintaining a reserve fund between \$0 to \$2M is achievable but challenging without extending upgrade timelines. Given the sewer utility's replacement value, the suggested reserve range is the lower end.
- Borrowing for Phase 4 upgrades to the WWTP received public support and continues to impact cash flow analysis. Debt servicing was factored into the financial models.

The cash flow observations underpin the following cost-recovery conclusions and recommendations.

## **COST RECOVERY AND LWMP IMPLEMENTATION PLAN - SUMMARY**

The public and stakeholders in Lake Country expressed a desire to improve water quality while minimizing costs for ratepayers. Feedback highlighted debates over prioritizing lowest cost versus investing more in reuse systems, requests to expand retrofit programs funded by benefiting properties or grants, and concerns about growth and developer contributions. Principles were developed to ensure self-funding sewer services, growth funding development-related improvements, and regional funding for septage facilities. Stormwater management was separated from sewer funding and linked to mobility, while a financial model emphasized phased implementation and increased user fees. The cost-recovery plan aims for a feasible transition replacing parcel taxes with utility fees, equitable contributions from property owners, and reliance on development cost charges and government grants for expansion and upgrades. However, it also requires the District to lead the implementation effectively and achieve key milestones, namely:

• To be successful in securing grant monies for sewer retrofits, an Okanagan Lake outfall pipeline, and treatment upgrades



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- To facilitate a successful process to establish local services area across the whole retrofit area
- To confirm customer willingness and service affordability for water reuse and reclamation
- To adapt to fluctuating costs of service delivery each year to keep the utilities capable of maintaining and tending to reserves and escalation
- To engage Council and the development community to allocate the costs of growth through updated DCCs in the short-term, and periodically throughout the 20-year plan implementation.

Overall, Lake Country's cost-recovery and financial plan is relatively robust and shows high potential for success. The key milestones above require dedicated effort and results and if effectively managed, will position Lake Country to implement the whole of the LWMP as intended.

## 2.5 PUBLIC ENGAGEMENT FINDINGS

The 2025 Lake Country LWMP was formulated based on extensive public engagement detailed in the Stage 1-2 Report. This process garnered recognition from the Union of BC Municipalities and other civic peers for its thoroughness and inclusivity, earning Lake Country an Honourable Mention in the 2022 Community Excellence Award. The feedback received from stakeholders has been constructive and supportive of the proposed direction. Yet, the public's support for the plan is partially contingent upon continued effort by Lake Country to realize successful outcomes in several key areas.

Firstly, there is a strong expectation from the public to ensure that the water returned to Okanagan Lake meets regulatory standards, emphasizing compliance and diligent monitoring. Secondly, there are varying community perspectives on whether to prioritize minimal expenditure on the entire plan or to invest more in establishing reuse systems. Thirdly, there's a growing demand, particularly from homeowners, to extend the sewer system to additional neighbourhoods and expand the core network further.

Moreover, there are sustained concerns from some residents and businesses regarding urban expansion and the equitable distribution of development costs among ratepayers. Additionally, there is a vocal desire among locals for improved stormwater management, especially to enhance the quality of water bodies like Wood, Okanagan, and Vernon Creek. Lastly, while there's some interest in exploring potential partnerships with public utilities to delegate treatment responsibilities, it's not a significant aspect of the overall sentiment.





Figure 2 Community Mail-Out

The implementation plan carefully considers this feedback and acknowledges the need for further study on key aspects such as water reuse and stormwater management. While expectations are high, there's a delicate balance to be struck between affordability, intention, and effectiveness.

Moving into Stage 3, the focus shifted towards gauging public support for the proposed plan and determining the desired level of involvement during implementation. To discern the public sentiment for these two topics, District Staff set

out for a commensurate level of engagement with the public. To do so, activities in this stage included publishing reports, presenting financial principles to the Council, conducting mail-outs (e.g., community flyer in Figure 2) to households summarizing the plan and its cost implications, updating the district website with a page for public input, and presenting the final draft report to the Council.

### Findings from Stage 3 activities include:

Public support and involvement are very important during the implementation phase. District staff commit to ongoing public engagement and reporting, ensuring that the community remains informed and involved throughout the process.

Efforts were made to reinforce public awareness of items that remain unchanged in the Stage 1–2 process through community mailouts, online platforms, and billing inserts. More recent engagement efforts focused on informing the public and gathering feedback on the District's reclaimed water reuse strategy.

While many community members recognized the value of implementing reclaimed water reuse, there was significant apprehension from the agricultural sector. There may be opportunities to service parkland and un-serviced properties that do not grow direct food to mouth crops. However, agricultural producers who currently receive irrigation water from the District and grow direct to mouth crops have indicated that using reclaimed water is not an option due to their vendor requirements.

Additionally, there was extensive discussion and feedback about the long-term impacts of reclaimed water use on agricultural land and the need for a better understanding of these effects before implementation. Refer to Appendix A for more information on the District's Reclaimed Water strategy and Appendix D for a summary of the public engagement sessions.

## INDIGENOUS COMMUNITIES UPDATE

Lake Country's liquid waste management plan, outlined in the Stage 1-2 Report, emphasizes ongoing relationship building with the Okanagan Indian Band (OKIB) to



protect the watershed and explore partnership opportunities. The District and OKIB met on June 5, 2024, and February 25, 2025 and discussed the benefits of implementing reclaimed water uses, such as water supply protection and environmental conservation, and the challenges, such as public perception, crop value, and the potential presence of pharmaceuticals. Both parties agreed that changes in perception regarding reclaimed water use will be needed.

Efforts in Stage 3 and beyond focus on deepening this collaboration. Activities include formal communications, community engagements, and discussing shared interests such as wastewater servicing and water quality monitoring. Trust and respect are paramount, with a focus on initiatives like water reuse, monitoring, and stormwater quality. Lake Country commits to continued consultation with OKIB beyond Stage 3, aiming for a strong, long-term partnership. Gratitude is expressed for OKIB and Ministry participation in consultation efforts, highlighting the shared desire for collaboration. Refer to Appendix E for additional information.

## 2.6 PRIORITY STUDIES FOR THE 20-YEAR IMPLEMENTATION PLAN

While implementing the LWMP, the District plans to undertake additional studies to address management challenges related to biosolids, stormwater, collection, reuse, partnerships and finance, and treatment upgrades. Table 3 below summarizes the planned studies and initiatives as currently prioritized.

	Table	3 -	Priority	Studies	for	20	Year	Implementation	Plan
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PLAN	COMPONENT	INVESTMENT DESCRIPTION	PRIORITY
Bios	olids		
•	Prepare for and biosolids receip partnership. <b>Explore alterna</b>	d negotiate to sign a long-term agreement for continued ot and disposal//re-use services with the Kelowna-led ate disposal locations with RDCO.	Medium
Stor	mwater		
٠	Given the one-E local governme non-point source especially throu	Basin mentality and reality of the Okanagan, engage other ents to explore a framework to contribute to and mitigate ce pollution planning and select source control programs ugh stormwater management.	High
•	Update stormw owners to do th While this study expect and reco	water education resources to support the public and property he right thing once it becomes known and clear to them. ly may be part of the non-point source framework above, we ommend that there be local customizations as needed. The	Medium



District's stormwater bylaw and stormwater design guidelines were updated in 2021 and adopted in 2024.

#### Collection System

- Engage with RDCO to identify local objectives for enhanced education Medium resources to residents and businesses that encourage proper disposal of emerging contaminants of concern, typically away from the sanitary sewer system (in-kind).
- Support local and regional programs to improve septic management and maintenance practices so that property owners fulfill their responsibilities as operators of their on-site wastewater treatment facilities. Costs estimated at \$0.1M over 20 years, for education, regulations, regional contributions, etc.
- Complete a hydrogeological study (or similar) to evaluate and prioritize the expansion of the collection system (for sewer retrofits) for those areas beyond the ones already identified herein. A future phase of retrofits ought to be considered once demonstrable progress has been accomplished on the neighbourhoods already selected, or as part of the next OCP update, and certainly prior to the initiation of the next LWMP.

#### Water Reuse (Program Design – Note Appendix E)

- Initiate program design and service establishment for a water reclamation system. Include EIS and surveys plus engagement with potential customers regarding irrigation areas and groundwater withdrawal for stream flow augmentation in the EIS. Three areas of system development must include preliminary design for future infrastructure to extend reclaimed water from groundwater wells adjacent the plant for stream flow augmentation and later, from the pressurized Middle Vernon Creek outfall line to select farm or park-based properties.
- Study the hydrogeological and regulatory feasibility of groundwater High extraction in the areas surrounding the in-ground infiltration facilities to act as interim storage for water reuse. This study is partially to verify water quality for the stream flow augmentation project, but more so, to assess the feasibility of a wellfield to offer in-ground reservoir capacity to meet seasonal irrigation demands. The impacts to groundwater-interflow and impacts to stream flows during critical spawning periods of Middle Vernon Creek is important.

#### Plan Implementation: Partnerships and Finance

 While not a study per se, the District should optimize its resources and capacity to respond to senior government grant applications and/or negotiations with public funders to ensure that liquid waste initiatives are well supported in Lake Country. The reliance on public funds to deliver the LWMP are noteworthy and require direct efforts. Staff experience with recent



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applications and the demands they place on already-tight internal capacity is part of the driver for this recommendation.

•	Continue to engage with OKIB and other indigenous communities in the	High
	area to explore partnerships to implement key services and works in the	
	LWMP.	

## Treatment Upgrades

•	Study the cost-benefit of a public sani-dump and consider how to interconnect this facility with pending Phase 5 upgrades.	Low- Medium
•	Review and amend the District's contributions and requirements of the Okanagan Lake Collaborative Monitoring program including consideration to assessing the trends of emerging substances of concern.	High



## **3.0 STAGE 3 CLOSURE AND PLAN CONCLUSIONS**

Lake Country's Liquid Waste Management Plan (LWMP) outlines a strategic approach to managing wastewater and ensuring environmental sustainability over the next two decades. The plan is driven by three key prompts: the wastewater treatment plant has reached capacity, current water disposal methods are insufficient, and a provincial update is required. The overall goal is to "borrow water wisely and return it safely," emphasizing sustainable water reclamation, stormwater management, public health, and the protection of local water bodies.

Stages 1 and 2 of the plan have been completed, with Stage 3 focusing on implementation. This stage includes specific programs, projects, and funding strategies that align with the long-term vision for improved wastewater management. The plan emphasizes upgrading the existing wastewater treatment plant to accommodate future growth and comply with regulations. Additionally, it introduces a reclaimed water program, which involves the indirect reuse of treated water for irrigation and stream flow augmentation. The program will later expand to include farmlands and parks, pending further design, environmental studies, community acceptance, and approvals. This program will gradually reduce reliance on traditional disposal methods and enhance environmental conservation.

The plan also includes infrastructure upgrades, such as extending the centralized collection system to protect the environment and reduce reliance on septic, and enhancing stormwater management. These upgrades are essential to support Lake Country's growing population while safeguarding its natural water resources. The LWMP aims to manage liquid waste responsibly by using modern environmental practices and technology.

A significant aspect of the plan is its funding strategy. The plan recommends optimizing utility fees to cover the majority of the associated costs, ensuring that beneficiaries of the sewer system contribute proportionately. Development cost charges (DCCs) will be increased to fund system expansions, with a focus on minimizing the impact on the existing community. Furthermore, senior government grants will play a crucial role in financing large-scale projects, making the LWMP financially viable for a small community like Lake Country.

Council support and community feedback have been integral to shaping the plan. The sequencing of major projects, such as wastewater treatment upgrades and the reclaimed water system, will be carefully planned to optimize local funds and staff capacity. While



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there may be adjustments due to funding availability and project costs, the plan prioritizes long-term environmental sustainability and resilient infrastructure.

Furthermore, the Stage 3 Report addresses the Province's feedback in their response letter to the Stage 1-2 Report and EIS dated August 10, 2023. As such, the LWMP is positioned to exceed regulatory requirements, address provincial recommendations, improve public health, and protect the environment. Particularly, this report aims to satisfy the provincial requirements of protecting public health and the environment and adequately consulting the public, along with the recommendations of advancing reconciliation by considering Indigenous interests and building relationships and leading and participating in connected one water initiatives of conservation, adaptation, mitigation, and asset management.

Overall, Lake Country's LWMP demonstrates a proactive and responsible approach to liquid waste management, focusing on innovation, sustainability, and community well-being. The plan's successful implementation will depend on careful financial planning, community involvement, and adherence to the outlined milestones.





# <u>APPENDIX A - RECLAIMED</u> <u>WATER FEASIBILITY &</u> <u>SERVICE DEVELOPMENT</u>

LWMP STAGE 3 IMPLEMENTATION |



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## PURPOSE

Lake Country's *preferred direction* for liquid waste management includes a three-pronged approach to returning clean water to the environment. It comprises continuing ground discharge in accordance with the capacities of existing facilities and sites in operation. Next, it entails partial reuse for agricultural lands and flow augmentation in strategic areas, and then later, an outfall and return line to Okanagan Lake that makes up for what is not reused or returned via the ground.

This document identifies the approach, milestones, and desired outcomes for the major phases of a service development plan for reclaimed water. Today, there is no water reuse in Lake Country. Within five years of plan adoption, Lake Country aims for reclaimed water to become a partial and reliable fixture in Lake Country's water management services.

## **RECLAIMED WATER: BC CONTEXT**

Reclaimed water use is an established practice in BC, with several communities, including Vernon and Penticton, using reclaimed water for irrigation, source replenishing, and some industrial applications. The Municipal Wastewater Regulation (MWR) and the supporting Reclaimed Water Guideline (RWG) stipulate the classifications, acceptable uses and requirements for reclaimed water. The following definitions are fundamental when discussing reclaimed water and its potential uses:

- **Beneficial:** "Advantageous or helpful in enhancing or protecting the environment, increasing conservation of natural resources, or improving biological or physical processes without any negative impact on human health or the environment." Per the RWG.
- **Reclaimed Water:** "Municipal wastewater that is (a) treated by a wastewater facility, and (b) suitable for reuse in accordance with this regulation." Per the MWR

Finding suitable uses for reclaimed water within Lake Country has the potential to create various environmental and economic benefits. Reclaimed water can be used for agricultural and landscape irrigation, offsetting the high volumes of potable water otherwise required for these applications, which could be advantageous during summer shortages. Reclaimed water can also replenish freshwater resources (e.g. via groundwater infiltration) or be used to supplement streams experiencing critically low flow volumes. Ultimately, reclaimed water use can bolster a community's sustainability practices, reducing the environmental impacts associated with extracting fresh water from natural sources.

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## **RECLAIMED WATER USE CLASSIFICATIONS**

To comply with the Environmental Management Act, any reclaimed water use in BC must be authorized under one of the following regulatory instruments:

- An approved LWMP;
- Registration under the MWR;
- A permit or;
- A temporary approval.

Written notice must be sent to the local health authority 60 days prior to registration. If reclaimed water use is authorized by an approved LWMP, notification may not be required but is still recommended.

The MWR defines four distinct reuse classifications for reclaimed water: indirect potable use, and greater, moderate and lower exposure potentials. Each classification has distinct treatment and monitoring requirements, as well as acceptable uses, which are summarized in Table 1 and

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Table 2 below. The acceptable uses listed in Table 1 and Table 2 refer only to MWR standards and do not account for other standards, such as those set by grocers or by other provinces or countries where BC food products may be exported. Any standards that could negatively impact the marketability of a crop must be addressed before applying reclaimed water to food crops.

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SUBJECT: Watershed Resiliency

#### Table 1. Reclaimed Use Water Categories

	Indirect Potable Use	Greater Exposure Potential	Moderate Exposure Potential	Lower Exposure Potential
General Description	Most stringent classification and requires an enhanced EIS. Consultation with impacted parties is required (e.g. other ministries/agencies, local government, residents, landowners, businesses).	High level of treatment required. For uses where public exposure is likely and that could present a risk to the environment.	For uses where public contact is unlikely, there is no risk to the environment and users are notified of the associated risks.	For commercial, industrial and limited agricultural applications where public access is restricted and there is no risk to the environment.
Typical Applications	<ul> <li>Replenishment of potable water source</li> <li>Food crops</li> <li>Urban reuse</li> </ul>	<ul> <li>Irrigation (certain food and forage crops, greenhouses, silviculture)</li> <li>Toilet flushing, decorative water features</li> <li>Landscape watering (golf courses, cemeteries, lawns, parks)</li> <li>Frost protection and crop cooling</li> </ul>	<ul> <li>Irrigation (certain commercially processed crops, pasture, nurseries, silviculture)</li> <li>Certain construction and industrial applications</li> <li>Orchard/vineyard drip irrigation where water does not directly contact the crop</li> </ul>	<ul> <li>Industrial (process water, soil compaction, dust control, aggregate washing, concrete production)</li> <li>Irrigation (pasture, fodder, nurseries, silviculture)</li> <li>Orchard/vineyard drip irrigation where water does not directly contact the crop</li> </ul>

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			Spring frost     protection	• Spring Frost Protection	
Prohibited Uses			<ul> <li>Landscape watering</li> <li>Crop cooling</li> <li>Autumn frost protection</li> </ul>	<ul> <li>Landscape watering</li> <li>Crop cooling</li> <li>Autumn frost protection</li> </ul>	
Additional Requirements (Classification- Specific)		<ul> <li>One or more methods must be in place for virus removal (e.g. coagulation and filtration)</li> </ul>	<ul> <li>Crops that come into contact with reclaimed water must undergo chemical or physical processing (e.g. canning, fermentation)</li> </ul>		
Additional Requirements (General)	<ul> <li>Reclaimed water may not be used for irrigation or impounded within 30m of a well or in-ground reservoir for domestic supply.</li> <li>Windblown spray must not leave the authorized property.</li> <li>There must be no surface runoff.</li> <li>Unless otherwise authorized, reclaimed water must be disinfected with a minimum total chlorine residual of 0.5 mg/L at point of use.</li> </ul>				
Agriculture Requirements	<ul> <li>Irrigation cannot occur within 3 days of crop harvest.</li> <li>Crop cooling cannot occur within 30 days of harvest for crops likely to be eaten raw.</li> <li>Root crops may not be irrigated if they are likely to be eaten raw.</li> </ul>				

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		Irrigation must not occur with	in 60m of where food is	handled or consumed.	
Lives Require	tock ements	• For irrigated livestock grazing to graze within 3 days (unless t	fields: milking animals a the meat is inspected).	re not to graze within 6 days, oth	her livestock is not

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#### Table 2. Municipal Effluent Quality and Monitoring Requirements for Reclaimed Water

Parameters		Indirect Potable Use	Greater Exposure Potential	Moderate Exposure Potential	Lower Exposure Potential
nН	Effluent Quality	Site Specific	6.5 to 9	6.5 to 9	6.5 to 9
	Monitoring Requirements	Site Specific	Weekly	Weekly	Weekly
	Effluent Quality	BOD₅ 5 mg/L TSS < 5 mg/L	10 mg/L	25 mg/L	45 mg/L
	Monitoring Requirements	Weekly	Weekly	Weekly	Weekly
Turbidity	Effluent Quality	Maximum: 1 NTU	Average: 2 NTU Maximum: 5 NTU	n/a	n/a
	Monitoring Requirements	Continuous Monitoring	Continuous Monitoring	n/a	n/a
Fecal Coliform	Effluent Quality	Median < 1 CFU or < 2.2 MPN Maximum: 14 CFU	Median < 1 CFU or < 2.2 MPN Maximum: 14 CFU	Median: 100 CFU Maximum: 400 CFU	Median: 200 CFU Maximum: 1000 CFU <i>If worker contact is</i> <i>likely:</i> Maximum: 14 CFU
(/100mL)	Monitoring Requirements	Daily*	Daily*	Weekly	Weekly If worker contact is likely: Daily

\*Discharger may switch to weekly testing after demonstrating 60 days of compliance with fecal coliform limits.

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For reference and comparison, the current effluent quality criteria and future projected effluent quality parameters for the Lake Country WWTP as defined in the 2023 EIS are summarized in Table 3 below. The current effluent quality criteria apply to discharge to ground via infiltration basins, and the future criteria corresponds to the requirements to discharge to Okanagan Lake.

Effluent Quality Parameter	Current	Expected Future
CBOD5	≤ 10 mg/L	≤ 10 mg/L
TSS	≤ 20 mg/L	≤ 10 mg/L
Orthophosphate	≤ 1.5 mg/L (maximum daily) ≤ 0.15 mg/L (annual average)	N/A
Total Phosphorus	N/A	≤ 0.25 mg/L (annual average) ≤ 2.0 mg/L (daily maximum) Level to strive for: background Okanagan Lake
Soluble Nitrogen	≤ 10.0 mg/L (maximum daily concentration) and ≤ 6.0 mg/L (maximum annual average)	N/A
Total Nitrogen	N/A	≤ 6.0 (annual average) ≤ 10 (daily maximum)
Fecal Coliforms	No Requirement	≤ 50 counts/100 mL

Table 3. Lake Country WWTP Effluent Quality Requirements

The future effluent standards satisfy the MWR requirements for the moderate and low exposure potential classifications. To satisfy the requirements for the greater exposure potential classification, fecal coliforms must be reduced from 50 CFU to an average of 1 CFU per 100mL. It is unclear from either the MWR or RWG how the parameter requirements apply to reclaimed water collected from an aquifer hydrologically connected to infiltration basins.

## RECLAIMED WATER SERVICE DEVELOPMENT: APPLICATIONS FOR THE DISTRICT

In BC, reclaimed water can become part of a community's plan to beneficially reuse the material produced through wastewater. The RWG includes reclaimed water use on forage crops, stream augmentation (more stringent than forage crops), and habitat development and enhancement (less stringent than stream augmentation). Following these guidelines, the District is planning a phased approach to reclaim water by (1) augmenting low flow
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conditions in Middle Vernon Creek and working with ENV to explore habitat enhancement opportunities, (2) supplying irrigation demands, along Beaver Lake Road, and (3) supplying irrigation demands, among other uses, for forage crops and parks in the Winfield West Bench (refer to **Error! Reference source not found.**). Some of the lots outlined in Figure 1 are not currently serviced by the District's potable water system, which presents an opportunity to provide a reliable water supply and eventually support environmental flows through Middle Vernon Creek. Beyond farms, other lands may be considered, including parks and extensive publicly owned lands that draw from potable or groundwater supplies to irrigate.



Figure 1: Phase 1 (MVC augmentation in dark blue, potential irrigation benefits for creek-adjacent properties in yellow), Phase 2 (green), Phase 3 (light blue), the Wastewater Treatment Plant (red dot)

Developing a reclaimed water service is not as simple as turning on the tap. An important step for any community in their journey to implement reclaimed water, is to want it. Therefore, engagement with the community to see where there is greatest interest to inform a reclaimed water service with customers and recurring demands is necessary. The variety

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of crop types in Lake Country make it challenging to implement a community-wide plan supported by the public. The District's staff looked closely at land uses, potable water supplies, and high-potential stream flow opportunities to identify the three focus areas for further development in Figure 1.

### Description of Irrigation Areas & Phases

The District is considering a phased approach to servicing three demand areas with reclaimed water. It should be noted that all three proposed phases rely on a groundwater extraction well located adjacent to the District's Wastewater Treatment Plant. This well would provide a blend of groundwater and treated effluent that has filtered through the ground. These phases are as follows:

- 1) Middle Vernon Creek flow augmentation, which may benefit adjacent agricultural land that relies on Middle Vernon Creek for irrigation. While the District is not supplying irrigation water directly to these properties, increased creek flows may support those with surface-influenced wells or private intakes. This phase also enhances environmental flow challenges in Middle Vernon Creek, as during the summer Middle Vernon Creek often runs dry. Hereafter referred to as Phase 1 (short-term timeframe).
- 2) Extension of the Bottom Wood Lake Road irrigation line through Konschuh Road, Meadow Road, Lodge Road, and Woodsdale Road via the Rail Trail. Properties adjacent to this infrastructure are not currently served by the District and those who opt in would benefit from a reliable pressurized irrigation water supply. There is also opportunity to provide this water to adjacent park, turf parks and playfields. Hereafter referred to as Phase 2 (5-10-year timeframe).
- 3) Twinning the Winfield West Bench's distribution system with a dedicated irrigation main. For operational efficiency and water conservation, the District's water master plan and water conservation plan includes implementing an irrigation system in select areas where practical and feasible. There may be an opportunity to pump water from the groundwater extraction well into this irrigation system. However, this aspect of the reclaimed water reuse strategy requires significant community engagement and careful consideration, as improper implementation could negatively impact the agricultural community. The current intent for this twinned main is to supply both potable flows from the water treatment plant (WTP), and irrigation water from separately installed watermains. Hereafter referred to as Phase 3 (10+ year timeframe).

These phases are preliminary and will change as needed to achieve regulatory approval, receive stakeholder support, and scale to match funding availability. **Error! Reference source not found.** depicts these phases and their areas in relation to the Wastewater Treatment Plant.

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### Selection Process: Three Phases for Reclaimed Water Service Development

The Liquid Waste Management Plan Stage 1 - 2 Report suggested that areas near the wastewater treatment plant, or near the return line discharging cleaned water to Okanagan Lake, are suitable candidates for the potential customer base for reclaimed water. The wastewater treatment plant is located to the southeast of Phase 2 and the proposed return line passes to the south along Beaver Lake Road. Farms situated near these areas provide an opportunity for reclamation so long as customers emerge who can accept the water.

The Stage 3 Report expanded on this concept and we expect that augmenting flows in Middle Vernon Creek could be a feasible and beneficial Phase 1 of reclaimed water use in the District. This is due to the District's increasing reliance on the community's freshwater supply to meet environmental flow requirements during summer's low-flow period. Additionally, the District has an existing, although never used, outfall from the WWTP well to MVC that could be utilized. Adjacent properties along MVC could consider using this additional supply to MVC as a source for irrigation, therefore these properties have been included in Phase 1. Phases 2 and 3 have significant irrigation demands for crops, nurseries, and recreational land uses. However, Phase 3 also faces considerable challenges regarding agricultural acceptance and will not be implemented until those hurdles are overcome.

Once a core infrastructure network is established, the District will work with Council to develop criteria and/or economic features to expand the system to service interested customers. Other communities who have reclaimed water systems caution that it is important to carefully weigh expansion areas given the cost – both capital and operational – to increase the extent of non-potable water.

### PROJECTED MAGNITUDE OF IRRIGATION DEMANDS

### Irrigation Water Demand Model

Urban worked with RHF Systems Ltd. (RHF) and the Okanagan Basin Water Board (OBWB) to assess current and future irrigation needs. Together, they created the "Irrigation Water Demand Model" to compile historic and current irrigation demands and forecast future demands. The historic demands were based on data from 1997 (cool/wet), 2003 (hot/dry), and 2017 (RHF's most recent data). RHF modelled the future demands in the three phases by selecting three climate scenarios from generation 5 of the Coupled Model Intercomparison Project (CMIP5).

- 1. ACCESSI-0 representative concentration pathway 8.5
- 2. CanESM2 rcp 8.5
- 3. CNRM-CM5 rcp 4.5

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The number at the end of each scenario name refers to the representative concentration pathways (RCP) of the CMIP5 models. These refer to the expected radiative forcing and/or level of emissions over the course of the next century. CMIP5 considered four RCP scenarios: 2.6, 4.5, 6.0, and 8.5 which range from a future reduction in greenhouse gas emissions to an increase in greenhouse gas emissions by the century's end. RHF's irrigation demand projection included two scenarios with CMIP5's highest emissions scenario.

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### Demand Estimate Summary

Table 4 presents a summary of irrigation demand data by juxtaposing the 2017 values (the most recent of the three years considered by RHF), the average from three historical years, and the average from three projected future scenarios.

	Tree Fruit	Vegetables & Other Fruit	Nursery	Forage	Recreational	Sum				
Phase 1										
Area (ha)	2.5	1.3	0.2	11.9	2.3	18.1				
2017 Demand (m³/year)	17,600	5,002	1,854	108,779	22,849	156,084				
Historical Demand (m³/year)	15,006	3,994	1,609	94,531	20,630	135,770				
2040 Demand (m³/year)	15,046	3,870	1,640	96,575	21,070	138,202				
		Р	hase 2		•					
Area (ha)	3.2	1.7	0.3	15.2	2.9	23.2				
2017 Demand (m³/year)	22,493	6,392	2,370	139,025	29,202	199,483				
Historical Demand (m³/year)	19,179	5,105	2,056	120,816	26,366	173,521				
2040 Demand (m³/year)	19,229	4,947	2,097	123,428	26,929	176,629				
		Ρ	hase 3							
Area (ha)	123.9	15.7	0.0	56.2	1.7	197.5				
2017 Demand (m³/year)	1,027,700	91,324	0	561,604	14,224	1,694,851				
Historical Demand (m³/year)	893,229	76,901	0	497,283	12,957	1,480,369				
2040 Demand (m³/year)	936,479	78,842	0	525,292	13,545	1,554,159				

#### Table 4: Lake Country Irrigation Demands by Crop Type and Irrigation Area

\* The estimates above include several assumptions regarding crop, soils, root depths, and irrigation types, all of which are subject to change and must be examined further as the system design enters more detailed phases.

\*\* For the preliminary demand estimates, the analysis excluded the "Tree Fruit" and "Vegetables & Other Fruit" land-uses in keeping with the Stage 1–2 Report recommendation that non-food-to-mouth irrigation demands are more likely reclaimed water candidates, at least at the onset and while BC regulations and grocers' standards remain as they are.

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The demand estimates in Table 4 above are generally optimistic and reveal the high-end potential demand for reclaimed volumes. These values encompass all parcels in Phases 1, 2, and 3, though all parcels may not be equally suited or likely to use reclaimed flows. Urban excluded the "Tree Fruit" and "Vegetables & Other Fruit" land-uses in keeping with the Stage 1 – 2 Report recommendation that non-food-to-mouth irrigation demands are more likely reclaimed water candidates. The prevalence of food-to-mouth crops in the Phase 3 area limits the feasibility of delivering reclaimed water to the whole area. The District expects Phase 2, with a larger proportion of forage, may be more feasible, but there is also the challenge of understanding the long-terms impacts on agricultural land, and the need to understand this before implementation can occur.

The regulations of grocers limit the candidacy of reclaimed water on food-to-mouth crops. During engagement discussions in 2025, members of the agricultural community and Lake Country Farmers Institute (LCFI) emphasized the infeasibility of such uses of reclaimed water which was later affirmed in discussions with the Ministry of Agriculture and Food. From LCFI's perspective, even if the District can supply reclaimed water that meets future provincial and federal regulations, it is insufficient so long as the regulations of grocers prevent farmers from using reclaimed water (see the "Agriculture Requirements" in Table 1). The agricultural community also expressed concern over the impacts to soils receiving reclaimed water (heavy metals accumulation) and are concerned regulations may change without scientific support. Despite their concerns on food-to-mouth applications, there was expressed interest in working with the Province and the District to promote reclaimed uses in non-food-to-mouth applications that do not impact agriculture.

Where Table 4 summarizes the non-food-to-mouth irrigation demands, Table 5 below demonstrates the potential to service those demands with reclaimed water by summarized the treated effluent volumes for the whole year and the agricultural season (assumed May 1 – October 1). These treated volumes were adapted from Table 21 in the Stage 1-2 Report.

Table 5 also includes an estimate of the expected flow augmentation in MVC. Recently, the District was mandated by provincial authorities to supply at least 150 L/s to MVC during the 2023 spawning season. The flow rate needed for augmentation will be less than 150 L/s unless the creek is completely dry and the District decides against releasing water from the upper watershed that the community relies upon, in favour of withdrawing from the groundwater well. Use of the well is primarily to augment summer flows when the creek runs dry, and to augment flows during the Kokanee spawning season. As a preliminary estimate, Urban assumed continuous flow augmentation of 25 L/s for six weeks, which is roughly the current fish spawning window overlap with the agricultural season, and up to eight weeks in 2040. If spawning durations become longer than six weeks, or if the channel runs dry at other points in the summer, the reclaimed volume useful for augmentation could increase.

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	Treated	Volume	Potential Irrigation Demand				
	During		MVC Flow	Non-Food	Non-Food	Non-Food	
		Irrigation	Augmentation			Irrigation	
		Season	in Phase 1			in Phase 3	
Current	712,000	295,000	90,720	116,770	149,238	510,240	
(m³)							
2040	1,724,000	715,000	120,960	119,286	152,454	538,837	
Production							
(m³)							

Table 5: Lake Country Treated Water Production vs Non-Food Irrigation Demand

• Initial estimates in the Stage 1-2 report probably overstated the land needed for a high reclaimed water usage ratio compared to plant production. The irrigation demand model has refined these preliminary estimates.

• 2040 treated volumes available for reclaimed uses will be less than reported here if the District partners with the City of Kelowna.

• Annual Treated Volumes for current and 2040 based on "Maximum Month Flow" from Table 4 of Stage 1-2 Report.

Although useful for preliminary estimates, meeting the non-food-to-mouth irrigation demands in

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Table 5 is not currently feasible (e.g., turning on the whole proposed reclaimed water system in 2025). The Table 5 values simply convey a sense of scale for how reclaimed use fits into the three-part return water plan.

Next steps in realizing a reclaimed water system includes assessing the impacts of crop type, crop turnover, soil type, and slope among others including customer willingness and rate economics. That technical work ought to be initiated upon completion of the LWMP so that estimates, parcels, and irrigation types or levels become increasingly more reliable as data and design accuracy improves. These utility considerations should be paired with environmental studies to assess the regulatory feasibility and risk mitigation needs to achieve core aspects of the reclaimed water plan. Ultimately, the 2040 treated volume estimate exceeds all but the most optimistic of irrigation demand projections, meaning that in-ground disposal, an Okanagan Lake outfall, and/or inter-municipal agreements are essential. Additionally, there is no agricultural demand in winter that can use reclaimed water, so a separate year-round disposal option is essential.

Whereas there is regulatory feasibility and water sustainability needs to drive it, reclaimed water implementation will take significant effort and commensurate resources.

### **RECLAIMED WATER - IMPLEMENTATION**

### Engineering a New Service: Patience and Intention

Ten plus years may appear like a drawn-out timeline, but it is not when you consider how many tasks need to be completed in sequence with little schedule float to draw on. Realistically, accomplishing everything properly will require incremental efforts each year for several years. It is important to note several factors that substantially affect overall implementation timelines:

- Funding and construction timing for the Phase 4 (commissioned) and Phase 5 upgrades to the wastewater treatment plant, which ensures cleaned water meets requirements for both an Okanagan Lake outfall and crop reuse (groundwater withdrawal may not require Phase 5 upgrades to be complete, as determined in a pending EIS).
- The direction and support of Council and agricultural community to validate water reuse as part of the local integrated water strategy.
- Towards the end of ten years, the timing and completeness of retrofit and expansion initiatives to address underperforming septic fields, support growth and housing, and ensure reliable reclaimed water supplies for the long run.
- The instance of a water shortage or future government mandate for reuse which would accelerate local efforts to commission a fulsome reclaimed water system.

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Implementation for reclaimed water will require appreciating the long game (patience) while showing urgency and commitment (intention) to the planning, design, approvals, and construction process.

### **RECLAIMED WATER – ACTION PLAN**

A work plan outline offers the major categories or steps of implementation from start to finish. The quest to develop reclaimed water systems is complicated and requires adaptation along the way. The outline will help successfully position the District with an essential checklist for concluding studies. Given the sustainability of any service, particularly one with an atypical supply story, it is imperative to begin with market potential, then service design and governance. Until reclaimed water is obligatory, the system itself is an act of engineering but initiating the service is an economic one that is dependent on the regulations of grocers, and the provincial and federal governments.

### Step 1: Service Establishment (Years 1-3)

This step will cover all the preparatory work, ensuring that the foundational studies, environmental impact analyses, and engineering evaluations are complete before moving into construction.

- 1. Pre-Service Establishment Assessments (Year 1-2)
  - Supply-Demand Projections and Stakeholder Consultation: Assess customer demands, refine potential reclaimed water use phases, and fine tune stream flow augmentation. Include economic viability studies and funding options within this. Engage indigenous communities, the local council, and potential reclaimed water users (e.g., farms and parks) to gather input and address concerns
  - Environmental Impact Studies (EIS) and Regulatory Screening: Conduct studies for both stream augmentation and irrigation, focusing on ecological impacts, risks, hydrogeological assessments, and mitigation strategies for reclaimed water use Phases 1 and 2. Develop a governance plan that covers local bylaws, service oversight, and regulatory pathways, ensuring alignment with District-specific criteria, while simultaneously implementing customer engagement, formal service planning, and drafting the Service Establishment Bylaw.
  - Engineering Assessments: Advance preliminary engineering designs, focusing on required upgrades to the wastewater treatment plant (WWTP), storage solutions, and distribution infrastructure. Completing a full fledge reclaimed water system is inherently tied to the design of the Phase 5 WWTP upgrades including an Okanagan Lake outfall line. The motive to reuse

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cleaned water must be mirrored in motivation to complete plant upgrades. If the District is to add reclaimed water system to a single, grantable project, then these engineering assessments must also include conceptual designs for reclaimed water lines.

 Service Governance Plan: Develop a governance plan that covers local bylaws, service performance, and regulatory needs, ensuring alignment with Districtspecific criteria, while simultaneously clarifying District responsibilities and customer considerations, formal service planning, and drafting the Service Establishment Bylaw.

### 2. Preliminary Engineering Report (Year 2-3)

- System Design: Develop a conceptual design for the reclaimed water system for irrigation purposes, focusing on storage, conveyance, and pump stations. Begin planning irrigation systems for reclaimed water use Phases 1 and 2, or alternative areas based on the results of analysis above. Keep in mind that many of the routes identified for a reclaimed water system are likely to overlap with other infrastructure renewal needs in the District, whether roads, stormwater, or sanitary upgrades, which presents cost-synergies and design complications.
- Stream Flow Augmentation Plan (Year 2): Finalize the augmentation system for Middle Vernon Creek, including groundwater extraction and balancing seasonal demands, and linking this system to the Middle Vernon Creek augmentation options assessed under separate cover including a partial bypass and a control structure on Duck Lake.

### Step 2: Detailed Design and Approvals (Years 3+)

During this step, detailed designs will be prepared, and construction activities can begin for both the reclaimed water system and stream flow augmentation works.

- 1. Engineering & Construction Plan (Year 3-4): Complete the detailed design for Phase 1 of the reclaimed water system including stream flow augmentation, if not already completed.
- 2. Financial Planning & Budgeting (Year 3-5): Secure financing through district budgets, government grants, and other inter-municipal funding opportunities if presented. Develop a pricing structure for reclaimed water irrigation that ensures long-term cost recovery while promoting the use of reclaimed water.
- 3. Permitting & Regulatory Approvals (Year 4-5): Secure final permits and develop construction plan.

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### Step 3: Construction & Operation (Year 5 to 10+)

With foundational work completed, initial construction can begin with the goal of having partial system operation by year five and incremental expansion beyond year eight when the plant upgrades are fully complete, an Okanagan Lake outfall line is selected or constructed if needed, and sufficient reclaimed water customers sign on to the service. The success of step 3 depends on agricultural acceptance and the regulations that influence that acceptance.

Operation of a reclaimed water system has many characteristics of a pressurized water distribution system, with several nuances. Though too many to list here, consider several operational factors that are sure to affect various practices and procedures of the district:

- 1. Continually test water quality throughout the reclaimed water system and engage with customers on the benefits and challenges for using the water.
- 2. Monitor and evaluate the performance against expected outcomes, ensuring compliance with all regulatory requirements.
- 3. Establish operational teams and finalize maintenance procedures, including winterization and backflow prevention among many other safety and performance standards for the system.

The schedule is not fixed but does benefit from early engagement activities and concept reviews. Water shortages, droughts, and environmental flow risks can emerge suddenly and are expected to become more frequent in the face of an uncertain climate future. Early planning to be ready to engage and act in preparation for such conditions is important. Prior to commissioning a reclaimed water system, the District needs to complete other major infrastructure projects which provides time to develop a sound plan before significant funding is dedicated or contracts are signed. Without the additional risks of climate uncertainty, the District already understands that projected treated volumes will require additional disposal infrastructure – of which reclaimed water, appropriately planned for and designed, provides a beneficial reuse response rather than strictly disposal.

Starting with confirming the extent of consumer interest, the environmental feasibility and preliminary engineering assessments will complete Step 1 of the District's reclaimed water implementation plan. Step 2 will transition to detailed engineering, budgeting, and securing regulatory approvals. Step 3 will transition to operations and maintenance activities including monitoring water quality and general performance against monitoring requirements, finalizing the O&M program, and preparing for long-term stewardship of the reclaimed water system asset. Given the significant challenges involved—including upgrading the treatment plant to meet higher reclaimed water quality standards, securing

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community buy-in, and navigating complex regulatory requirements—a timeline of more than 10 years is a realistic expectation for implementing all three stages.

# <u>APPENDIX B - RETROFIT</u> <u>Sewer expansion</u> <u>Areas</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC



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### PURPOSE

Lake Country's *preferred direction* for liquid waste management aligns with the Official Community Plan, which calls for implementing sewer retrofits in several distinct locations.

Though many favor rapid sanitary retrofits and immediate service commencement, extending sanitary sewers is both time-consuming and costly, and the Wastewater Treatment Plant must still maintain sufficient capacity for current and future customers. Treatment capacity expansion must also include constructing and commissioning a longterm effluent disposal option., as in-ground capacities are inadequate for the flows from these homes. The timing for sewer retrofit areas is a core component of the LWMP Implementation Plan.

This document revisits the background to the selection process of the identified neighbourhoods, discusses the financing approach, confirms the preferred schedule, and outlines the implementation steps to complete the work over the next decade.

A small section at the end of this memo outlines Lake Country's aim to support regional initiatives, educating property owners about in-ground, private septic systems. Continued participation in the program helps to reduce any environmental risks posed by homes not yet connected to the community sewer system.

## BACKGROUND FOR SEWER RETROFITS AND COLLECTION SYSTEM EXPANSION

Since incorporation, Lake Country's sewer collection system has expanded to reduce the cumulative effects of potentially underperforming septic systems and safeguard lake health. The historic pattern of incrementally and strategically expanding the community system carries over into the LWMP. Where, when, and why to expand is a complicated topic. The Stage 1-2 report summarizes past studies and decisions by Lake Country about the approach and selected areas for retrofit.

Through two LWMP processes and multiple OCPs, Lake Country residents have expressed their opinions via surveys, public meetings, and write-in commentary. With public support mainly in favour, past reporting also employed a Kepner-Tregoe analysis to evaluate 11 neighbourhoods based on the following criteria:

- Proximity to existing sewer (indicating cost feasibility)
- Number of new connections (reflecting the pace of progress)
- Estimated cost (correlated with the number of connections, assessing cost feasibility)
- Environmental concerns (known, stated, or implied)
- Health concerns (known, stated, or implied)
- Desire by residents for service (indicating implementation and financing feasibility)
- Neighbourhood age (indicating risk to environmental and health concerns)
- Potential for developer cost-offsets (indicating cost feasibility)

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• Alignment with the urban containment boundary and consideration to limits of expanding infrastructure into agricultural land conservation areas

The detailed deliberations resulted in the definition of sewer area boundaries and the adoption of several policies of the Official Community Plan. With formal Council approval, these policies collectively guided the expansion schedule outlined in Tables 3 and 4 of the Stage 1-2 LWMP Report. The neighbourhoods prioritized based on the criteria from past analyses include Mountain, Bond, Pretty Road North, Pretty Road South, KelVern, Winview, and parts of Oyama. There is some opportunity to expand from these areas as development brings sewer closer to un-serviced areas, but this report shall focus on the areas identified.

A historic study, which utilized a combination of hydrogeological modelling and surface water sampling, concluded that extending the wastewater system to these areas is imperative to reduce nutrient loading in downgradient surface waters, including Vernon Creek and Wood Lake, a fish-bearing stream. Excerpts from this study can be found in the Stage 1-2 LWMP Report.

Figure 1 illustrates the identified neighbourhoods' location and proximity to the core sanitary sewer system. It is important to note that the identified expansion areas are all included in Lake Country's Urban Containment Boundary, a specific zone that stems from the Official Community Plan. The next update to the OCP is an opportunity to consider other retrofit areas further. However, expanding beyond the proposed areas from the 2017 OCP and the LWMP should only be considered once the current slate is complete, or it makes sense to do so. The District of Lake Country should complete additional hydrogeological and prioritization-based studies before the next OCP update.

The total units from the eight prioritized neighbourhoods are estimated at 700 units, likely brought online to the system over several years. That number may rise based on the recent legislation of the Provincial Government to permit higher densities on single family lots through small unit housing in the same areas. As service becomes available to these areas, the District has the authority to require properties to connect under existing bylaws. The District would look to mandate connection once treatment capacity becomes available.

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SUBJECT: Retrofit Sewer Expansion Areas



Figure 1: Retrofit Areas

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The locations of the retrofit areas show strong visual alignment with the list of factors considered in the 2017 analysis.

### **LWMP IMPLEMENTATION PLAN – INFRASTRUCTURE PROJECTS**

Several construction projects frame the effort to extend and connect the neighbourhoods mentioned above. The local service area (LSA) will fund the extension projects utilizing a taxation method whereby granted authorities enable the extension of sewer services. Table 1: Summary of Construction Projects provides a summary of the proposed LSA projects.

Table 1: Summary of Construction Projects

PROJECT NAME AND CLASS C COST ESTIMATE (2023 DOLLARS)	FUNDING SOURCE(S)
Mountain Road \$1.992M	LSA amounts are grant eligible, by senior government ( 66%) and OBWB (16%) leaving ~18% for local taxation
Bond Road \$4.651M	LSA amounts are grant eligible, by senior government ( 66%) and OBWB (16%) leaving ~18% for local taxation
Pretty Road North \$2.873M	LSA amounts are grant eligible, by senior government ( 66%) and OBWB (16%) leaving ~18% for local taxation
Pretty Road South \$5.769M	LSA amounts are grant eligible, by senior government ( 66%) and OBWB (16%) leaving ~18% for local taxation
KelVern and Winview \$5.540M	LSA amounts are grant eligible, by senior government ( 66%) and OBWB (16%) leaving ~18% for local taxation
Trunk Sewer Extension to Oyama Isthmus \$11.7M	50% DCC and 50% LSA, where 66% and 16% of the LSA amounts are grant eligible, by senior government and OBWB respectively
Oyama \$10.152M	50% DCC and 50% LSA, where 66% and 16% of the LSA amounts are grant eligible, by senior government and OBWB respectively

Based on these projects and funding sources, the summary financial implementation plan for sewer retrofits includes two fundamentals that affect overall feasibility:

- All projects are grant eligible based on what is known today, with 66% and 16% covered by senior government and OBWB respectively.
- The two Oyama projects enable further growth and development already known and projected, meaning those two projects are DCC eligible. The remainder of the funds (50%) are to be funded by LSA.

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The process and impacts to pay for LSA are outlined in the following section.

### LWMP IMPLEMENTATION PLAN – LOCAL AREA RETROFITS

The LWMP implementation plan identifies the timing for the local service area for sewer retrofits. Initiating the service extension is not currently feasible given the Plant's capacity challenges. For multiple reasons, the LSA approach is the appropriate method to enact the authority to levy the service and the appropriate cost-recovery method. This approach has been proposed in concept to the District Council several times with encouragement to keep moving forward. Lake Country's successful history with LSA furthers the basis for pursuing this method.

District staff would lead the process, including designing the infrastructure and coordinating the construction process. Before that begins, the District and its Council would support service establishment by following the general task list outlined below in

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Table 2: Local Service Area Establishment Task List. It is important to note that District staff would also author grant applications on behalf of the benefitting residents. The service would not proceed without significant senior government grants as the cost to extend sewer retrofits is quite cost-prohibitive without grants. As noted above, the LWMP financial plan cites 66% senior government grant funding plus 16% grants from OBWB.

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SUBJECT: Retrofit Sewer Expansion Areas

Table 2: Local Service Area Establishment Task List

TAS	K LISTING
1)	Identify Services and Define Boundaries: Determine the District services to be provided per area and confirm the boundaries within electronic mapping software.
2)	<b>Estimate Costs and Funding:</b> Provide an estimate of the service's costs, clarify if borrowing is required, and identify the form of local service tax and the portion covered by general property tax.
3)	<b>Prepare and Circulate Petition:</b> Prepare a report to Council requesting authorization of the official petition, and if authorized, circulate the petition to the benefitting property owners.
4)	<b>Determine Sufficiency of Petition:</b> Ensure at least 50% of the owners sign the petition and that the signatories represent at least 50% of the assessed value of land and improvements.
5)	<b>Prepare and Adopt Bylaws:</b> Prepare bylaws to establish the new local service, authorize borrowing if needed, and amend the Financial Plan to include estimated costs.
6)	Public Consultation and Inspector Approval: Conduct a public consultation process and obtain Inspector approval for the LSA establishment/borrowing bylaw.
7)	Finalize Borrowing Arrangements: Finalize borrowing arrangements and adopt the Financial Plan amendment bylaw.
8)	Impose Parcel Tax and Operating Costs: Prepare and authenticate the parcel tax roll, and impose the parcel tax and operating costs as a municipal fee.

The timeline for local service area implementation for sewer retrofits is to begin formal proceedings upon completion of a long-term effluent disposal option. Given the capacity constraints at the plant today, including the pending flows from already approved developments, the LSA process cannot proceed until the capacity has been constructed and commissioned.

Given the schedule, with adequate funding and support the design of sewer retrofits could start in 2032, with construction commencing in 2034.

## LWMP IMPLEMENTATION PLAN – MUNICIPAL SUPPORT TO REGIONAL SEPTIC SYSTEM MANAGEMENT

Septic systems are generally found in rural areas and, therefore, are more often a function of the Regional District. In and around Lake Country, the Regional District of Central Okanagan provides education and awareness services in support of property owners, properly maintaining their systems. Part of those services include links and additional

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materials that connect property owners with Interior Health, who has authority to administer septic system installations and tend to reported failures.

The District of Lake Country, by regional requisition to the Regional District, will continue to support the work of the regional service. In addition, Lake Country will update residents seeking more information via website updates, including additional resources and education materials. The updates to the website occurred in 2024 to include these resources. Staff will also continue to direct the public to contact registered onsite wastewater professionals and/or Interior Health when issues arise at private systems.

Similarly, the District will continue to modernize and enforce its local regulations to design and inspect septic systems properly during development. Significant planning and land use regulatory updates are occurring in Lake Country, similar to other municipalities in BC, and engineering staff will be opportunistic and reasonable as to how to introduce further measures to require property owners and developers to move forward responsibly with their septic systems. Lake Country is committed to ensuring that local regulations encourage homeowners to properly maintain their system and require them to update it if it fails to meet modern standards at the time of development, and thereby show Lake Country's commitment to borrow water wisely and return it safely.

## <u>APPENDIX C –</u> <u>COST ESTIMATE CLASSES</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC



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SUBJECT:	Cost Estimating Fundamentals: Applicati				

### PURPOSE

Lake Country's *preferred direction* for liquid waste management is detailed in the Stage 1-2 Report, which includes various projects and programs over a 20-year period, including any projectable cost estimates. BC ENV staff's letter accepting the Stage 1-2 Report and outlining guidance for Stage 3 reporting suggests that cost estimates should be more precise in Stage 3.

## COST ESTIMATE SCIENCE BY ENGINEERS ON CONSTRUCTION PROJECTS

Lake Country's cost estimates in the Stage 1-2 report are appropriate for a planning-level assignment such as a liquid waste management plan. Factors that affect the degree of precision in a cost estimation relate to:

- The further along the design process is, the more reliable the cost estimates become, which often aligns with the proposed timing of the works. For example, a project scheduled for 2030 will not have detailed cost estimates in 2025 because the conditions for those projects are subject to some change over a five or more-year period, e.g., road widths, pipe locations, adjacent developments, and regulations.
- How complex the project is and the unknown or uncertain risks inherent in any project need further assessment that is too expensive to conduct across many projects. For some assignments, such as a professional service study or a simple pipe extension, the complexity is low, and forecasts for detailed cost estimates are relatively simple, assuming the project timing is not far off. However, new outfall lines, wastewater treatment plant expansions, and lift station upgrades represent advanced, complex projects. In these instances, the precision of cost estimates rises once the design has advanced enough to reduce unknowns. As a planning-level document, many uncertainties remain for significant capital projects in this LWMP and cost estimates at higher classes are warranted.
- Stable pricing in construction has become challenging due to recent inflation and cost increases from 2022 to 2025. Obtaining precise cost estimates for the next 20 years is impractical and increasingly inaccurate over time. Providing detailed cost estimates is hard to justify because they can quickly become outdated.

The less confirmed the project elements, the higher the contingency and the lower the cost estimate class. The accuracy of a cost estimate does not necessarily correlate with the local level of commitment. It is possible to provide a Class D cost estimate for a project planned 10+ years into the future, while still being sincere and fully delivering on that project.

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SUBJECT:	Cost Estimating Fundamentals: Applicati	on to Sta	age 3 Report		

Figure 1 below is a BC Ministry of Transportation and Transit (MOTT) cost estimate guide dated December 2020. Many of the projects listed in Lake Country's 20-year LWMP implementation plan remain in the preliminary or concept design stage (Class 4), warranting 30 to 50% contingencies.

Estimate Class	Purpose of Estimate	Project Phase/ Milestone	Accuracy Range Percentage
5	Option Screening	Planning Study	-50 to +100
4	<b>Treasury Board Stage 1 Submittal</b> Preliminary budget approval	Preliminary or Concept <sup>1</sup> Design	-30 to +50
3	<b>Treasury Board Stage 2 Submittal</b> Baseline budget approval	Detailed Design <sup>2</sup>	-20 to +30
2	Pre-tender Estimate – affordability check	Tender or RFP <sup>3</sup>	-15 to +20
1	Control Budget	Construction or Award⁴	-10 to +15

<sup>1</sup> Concept design applies to design-build procurement

<sup>2</sup> Includes completed functional design

<sup>3</sup> RFP applies to design-build procurement

<sup>4</sup> Control budget adjusted to reflect awarded contract value

#### Figure 1: BC MOTT Cost Estimate Class Breakdown, 2020

While the table in Figure 1 above uses Estimate Class 1 through 5, a common convention is Class A through D cost estimates as referenced in ENV's response letter dated August 10, 2023 (see Appendix I). Figure 2 below uses the latter and shows the cost estimate class recommendations in the Guide to Cost Probability by the Canadian Construction Association (CCA), dated November 2012. Though similar to the BC MOTT example, the CCA table highlights the role of complexity and degree of design completion in selecting the appropriate cost estimate. On the basis of project phase, Class A generally correlates to Estimate Class 1, Class B to Estimate Class 2-3, Class C to Estimate Class 3-4, and Class D to Estimate Class 4. Anything less exact than Class D (concept sketch design) would be a planning-level options screening exercise, as in Estimate Class 5 from BC MOTT.

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CURIECT	Cost Estimating Fundamentals, Application to Stans 2 Depart							

SUBJECT: Cost Estimating Fundamentals: Application to Stage 3 Report



#### Figure 2: Canadian Construction Association – Guide to Cost Probability, 2012

It is important to restate that the level of design – and their cost estimate - completed is not a proxy for the level of local commitment to the project. Most design assignments remain preliminary until they are proposed to start, even if there is the unwavering intention to complete the project. It is best to stay at the preliminary or concept design stage (with 20-30% contingencies) until construction is imminent, as early completed designs can become outdated and incur unnecessary costs due to changing conditions.

Lastly, it is our professional experience, too, that for LWMP purposes, most estimates should be Class D. While the District is committed to refining cost estimates as their projects progress, only projects near construction may warrant Class C or Class B. An increase in project cost in the 2025 Stage 3 Report does not mean the project becomes unfeasible. Like most other projects delivered by Lake Country, the project funding will align with the proposed schedule, where utility rates or taxes will fluctuate to cover the actual costs.

# <u>APPENDIX D – PUBLIC</u> <u>ENGAGEMENT SUMMARY</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC



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SUBJECT: Public Engagement Summary

### PURPOSE AND PROCESS RECAP

Lake Country's *preferred direction* for liquid waste management is based primarily on the results from the first two stages of the project which involved significant public engagement as detailed in the Stage 1-2 Report. In fact, Lake Country was signalled out by the Union of BC Municipalities and many of its civic peers for the extensive efforts to invite, listen, inform, and engage with residents and won Honourable Mention, 2022 Community Excellence Award. We invite the reader to revisit the engagement summary from the Stage 1-2 Report at <u>www.lakecountry.bc.ca</u>, searching for *Let's Talk Poop* to scan the materials and activities completed so far.

Feedback from the process has been constructive and supportive towards the preferred direction, in that the path forward is duly framed by the input of many stakeholders to date. Public sentiments can be summarized into six key messages, which frame the implementation:

- Strong public expectations to ensure the return water to Okanagan Lake meets or exceeds regulatory standards, including compliance and diligent monitoring.
- Diverse community perspectives exist regarding whether to prioritize minimal expenditure on the whole plan or invest more in establishing reuse systems. If reuse systems were safe, supported by local farmers and grocers, and their costs were offset by grants, there would be even greater support for reclaimed water.
- Growing demand and consistent support from homeowners to extend the sewer system to additional neighbourhoods and further expand the core network.
- Sustained apprehensions by some residents and businesses regarding urban expansion and the equitable distribution of development costs among all rate payers.
- Vocal desire by many locals for improved stormwater management, particularly aimed at enhancing the quality of water bodies such as Wood, Okanagan, and Vernon Creek.
- Some interest, albeit not significant, in exploring potential partnerships with public utilities, where Lake Country delegates its treatment responsibilities to another agency or community. Service partnerships are generally supported so long as local control and autonomy for service levels and growth capacity remain secure.

The implementation plan respects the feedback to date and incorporates the need to continue to study key aspects like water reuse and stormwater management because although expectations were high, there is still a need to thread a needle and find just the right services to balance affordability, intention, and effectiveness.

With a strong engagement process behind us, the needs for Stage 3 really zeroed in on two key parts, framed into two questions:

• How supportive are you (the public) of the proposed plan to pay for the Liquid Waste Management Plan?

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• What information or involvement would you like to have while the Plan is implemented?

The activities in Stage 3 are outlined below.

### STAGE 3 LWMP PUBLIC ENGAGEMENT ACTIVITIES & INSIGHTS

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Table 1 outlines the steps taken in Stage 3 to further engage with the public and finalize the LWMP for implementation.

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SUBJECT: Public Engagement Summary

Table 1: Engagement Process Table

ACTIVITY	TIMING	EFFORT AND OUTCOME
Publish Stage 1-2 Report to District Website	Fall 2023 (post Ministry acceptance)	Website traffic sustained levels similar to 2022 when reports were first published. Some minor follow up and commentary from the public was received and addressed.
Present to Council: LWMP Cost- Recovery and Financial Principles	November 2023	Urban Systems and District Staff presented the Stage 3 Process Update with financial principles for Council discussion and direction. Upon receiving the direction from Council, the project team continued to complete the financial plan.
LWMP Public Mail- Out/Flyer	February 2024	Summarize the LWMP process to date and outline the cost implications including impacts per property (on average) for public reception and commentary. Copies sent to every household in the District (excerpts enclosed).
Update District Website	February / March 2024	Invite for the public to offer public input based on the cost-recovery and financial plan as well as share their thoughts for the implementation needs and public involvement.
Evaluate Reclaimed Water Scenarios	Summer 2024	Develop opportunities across three phases of reclaimed water development, which are highly dependent support from the Province and local farmers.
Additional Public Engagement	Winter 2025	General updates, mailouts, and discussion with specific attention to phased reclaimed water reuse strategy.
Present Stage 3 Report and Financial Plan to Council	Spring 2025	Publish the Final Draft Stage 3 Report and prepare a summary presentation for Council. Prepare and implement financial plan to fund LWMP activities. (Spring 2025)
Update website to include Final Draft Stage 3 Report and submit to Ministry	Spring 2025	Any significant findings from the public are included in the enclosed. With this milestone, Staff intend to initiate implementation.

Findings from the activities in Stage 3 are included below:

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SUBJECT: Public Engagement Summary

### STAGE 3 LWMP: ACTIVITIES TO SUPPORT IMPLEMENTATION

While the public engagement process for Stage 3 – and the entire plan process – is largely complete, District Staff are committed to keeping the public informed through implementation. To do so, staff will continue to prepare annual reports as part of their regular reporting process for Council and the Ministry. As part of local service planning and execution, Lake Country staff will re-engage with the public or key stakeholders, such as with sewer retrofits, integrated stormwater management, and as they have already done with water reuse (summarized below).

Every five years, the district will publish a progress report for public review and information and submit the document to the Ministry for further discussion, if warranted.

### WINTER 2025 PUBLIC ENGAGEMENT FINDINGS

The District completed additional engagement activities in Winter 2025 with a focus on the reclaimed water use plan detailed in Appendix A. Emphasis was not placed on an Okanagan Lake outfall due to the District's preference to form a partnership with the City of Kelowna, and past engagement already covering this topic.

### Lake Country Farmer's Institute (LCFI) – January 25, 2025

The key messages from LCFI members questions and comments included:

- LCFI members advised that even if the District provides reclaimed water that is treated to provincial and federal guidelines, reclaimed use is unacceptable for use on food-to-mouth crops if buyers maintain their current regulations and auditing process in which they need to prove potability. For now, use of reclaimed water would be limited due to washing equipment on food-to-mouth operations.
- LCFI members expressed concern regarding soil pollution and heavy metal loading on agricultural lands with reclaimed water use. When relaying discussions with researchers at the University of British Columbia Okanagan, members reported a knowledge gap on soil pollution in agricultural land with reclaimed water use and suggested other reclaimed uses in the region, such as golf courses and cattle ranches, may help bridge this data gap. Members want scientific research in support of reclaimed use to lead the way rather than policy.
- Further to the proposed reclaimed water phases and soil pollution, if forage areas are designated to receive reclaimed water, that may limit the land's use from changing to a food-to-mouth crop in the future.
- LCFI members want to work with the District to find uses for reclaimed water, but it mustn't have impacts on agricultural users.

### Intergovernmental Session – February 5, 2025

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The District hosted conversations to discuss the LWMP with representatives from the City of Kelowna, the Regional District of Central Okanagan, the Okanagan Basin Water Board, the BC Ministry of Agriculture and Food, the BC Ministry of Water Land and Resource Stewardship, the Department of Fisheries and Oceans Canada, Okanagan Basin Water Board, Interior Health and other stakeholders. The key feedback included:

- The Ministry of Agriculture and Food applauded the District for engaging the farming community and affirmed the infeasibility of reclaimed water use on food-to-mouth crops given current CanadaGAP and GlobalGAP food safety program measures. Measures of these types are unlikely to change before grocers and consumers adopt the message of reclaimed water, which is not expected in the near to medium term.
- The Ministry of Agriculture and Food expects more flexibility on forage crops but noted the possibility that current land-use as forage does not denote forage-only land-use in the future.
- A technical definition of when treated effluent returned to the environment transitions from reclaimed water to groundwater would aid local governments in developing reclaimed water uses. Particularly relevant in instances of mixing such as with the District's reclaimed water strategy.

### Ministry of Environment and Parks and Ministry of Water, Lands, and Resource Stewardship and – February 6, 2025

The key feedback from this follow-up session included:

- The two Ministry's expressed interest in the possible benefit of stream flow augmentation in Middle Vernon Creek with reclaimed water. However, moving from *interest to permitting* will require frequent monitoring of the extracted water that indicates a benefit to the receiving water body.
- An authorized discharge is likely required for reclaimed water which will be the case if groundwater from the extraction well is under the influence of effluent as measured by the selected suite of parameters. The reclaimed source must meet the requirements of the municipal wastewater regulation (supported by an environmental impact study) prior to discharge in MVC.
- The District will develop a terms of reference for the Province's feedback and consider the various reclaimed use options with the Ministry's. Namely, the stream augmentation and/or habitat development and enhancement.

### Okanagan Indian Band – February 25, 2025

Refer to Appendix E for a consultation summary.

### Water Services Advisory Committee – February 21, 2025

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SUBJECT:	Public Engagement Summary				

On February 21, 2025, staff met with the District's Water Service Advisory Committee to provide an update on the status of the District's Liquid Waste Management Plan (LWMP) process and to outline where additional information can be accessed.

During the meeting, the committee discussed the reclaimed water use strategy, and the group passed the following resolution:

"THAT the Water Services Advisory Committee supports the development of a reclaimed water reuse strategy, provided that it's implementation does not negatively impact the agricultural community's ability to sell it's product or have long-term impact on agricultural farm land."

### Let's Talk Lake Country - Ongoing

The District has regularly updated the Let's Talk Lake Country forum throughout the LWMP process. The public provided significant feedback during Stage 1-2 and an update on Stage 3 activities was made available to the public in winter 2025.

### CLOSURE

Though LWMP plan process are a significant undertaking, the District remarks on the activities, local effort, and constructive outcomes of this plan as something worth application by others, either in Lake Country or elsewhere.

## <u>APPENDIX E – INDIGENOUS</u> <u>CONSULTATIONS UPDATE</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC



DATE: March 26, 2025 SUBJECT: Indigenous Consultations Update FILE: 1577.0110.01

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## PURPOSE AND PROCESS RECAP

Lake Country's *preferred direction* for liquid waste management came together as part of the Stage 1-2 Report process and includes various projects and programs that contribute to a healthier watershed. The first two stages of the project involved considerable effort by District Staff and Council to deepen and broaden the relationships with the Okanagan Indian Band, the designated community by other area First Nations to be Lake Country's primary partner in the LWMP. Efforts and outcomes from the Stage 1-2 relationship building efforts were detailed and submitted to the Province in 2022.

## STAGE 3 UPDATE AND ONGOING PROCESS EFFORTS

District Staff continue to build the relationship with OKIB so that implementation can build on the partnership, of shared interest to both parties. For example, relationships can build on the sewer and water servicing to the Duck Lake IR 7 which acts as the *foundation* for continuing to work together. But there is no *ceiling* on the possibilities for environmental and water stewardship in the region between both communities.

Lake Country continues to strengthen its relationship with the two communities and, since the Stage 1-2 report submitted 1.5 years ago, has focused on these activities:

- **a)** Extend invitations from the District's Mayor & Council to OKIB Chief and Council to meet and build relationships. Include the LWMP onto that agenda when possible.
- b) Initiate formal//semi-formal communications between senior leadership e.g., the District's CAO to the Band Administrator, to discuss ongoing community strategies or initiatives of shared-interest, such as the LWMP.
- c) Continue with Community-to-Community engagements which adds some formality but significant benefit to creating the conditions to work together.
- **d)** Invite OKIB staff (from Project staff at the District) to discuss the LWMP, the preferred direction, and to seek out interest in working together through implementation.
- e) Identify shared interests (e.g., wastewater servicing to IR Duck Lake, or, water quality monitoring partnership) and proposing to meet hoping that the LWMP discussions can be a next step from the discussion.
- f) Continue to work through NationConnect and look to refer to a letter outlining the LWMP to OKIB and other indigenous communities about the status of the plan. As discussed below, the two groups organized a meeting in winter 2025 using NationConnect.

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SUBJECT:	Indigenous Consultations Update				

- **g)** Consider a funding or partnership offer and formally present that initiative to OKIB where a relationship already exists.
- **h)** Looking for opportunities and extending offers to OKIB for traditional welcomes when Lake Country invites guests to participate on significant community endeavours in the traditional territory.
- i) Add the LWMP discussion or other environmental topics to any established projects between the two communities, such as the Indigenous Cultural Centre, under development in Lake Country.

### **RECENT CONSULTATION**

On February 25, 2025, the District visited OKIB to provide an update on the status of the LWMP, particularly the reclaimed water reuse strategy. The District summarized the three reclaimed water implementation phases as discussed in Appendix A. However District staff also clarified that their priorities are to maximize disposal to ground, secondly develop reclaimed uses, and thirdly send the remainder to an Okanagan Lake outfall (preferably via Kelowna). The District's preference is to connect to an outfall via the City of Kelowna, with whom negotiations are ongoing. For connecting to Kelowna, IR7 would use the same lift station as the District.

Further to the proposed MVC stream augmentation, the first phase of the reclaimed water reuse strategy, the District confirmed that water quality remains a major focus of the environmental impact study being conducted as part of the District's Beaver Lake Chain and Vernon Creek Water Management Plan.

### CLOSURE

A working relationship with OKIB can not be forced, and municipal staff honor this principle. The effort requires building trust, respect, and a demonstrated track record of listening. Lake Country Staff and Council continue to navigate the opportunities to strengthen ties between the two communities. Of all the opportunities to work together to date, the opportunity to partner on water reuse approaches, water quality monitoring, and local stormwater quality exhibits appear to have the most merit. Opportunities for OKIB staff or members to be involved in carrying out environmental stewardship duties at cost to Lake Country are a point of particular importance. While nothing is confirmed at this time, the potential opportunities warrant further consideration.

Lake Country Staff and Council will continue to consult with OKIB on implementation well beyond the limits of the Stage 3 process.
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SUBJECT:	Indigenous Consultations Update				

Lake Country Staff is grateful for the efforts by OKIB staff and Ministry Staff to participate and support the consultation efforts to date. The collaborative desire to build a partnership remains strong.

# <u>APPENDIX F – WATERSHED</u> <u>RESILIENCY</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC



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SUBJECT:	Watershed Resiliency Initiatives	Summary			

#### PURPOSE

To summarize the District of Lake Country's (the District) work that aligns with the EIS recommendations regarding watershed rehabilitation and the Province's request that the District implement such recommendations. The EIS recommended that the District:

- "Continue to pursue water rehabilitation programs within the District and its upstream watershed
- Work with other jurisdictions to:
  - o Improve watershed resilience,
  - Map source water vulnerability through the watersheds to identify zones of high risk where conservation/rehabilitation provide the best protection,
  - Reduce wildfire risk throughout the Okanagan watersheds particularly in riparian areas and around infrastructure,
  - o Increase climate change preparedness in urban areas, and
  - o Encourage water conservation."

#### WATERSHED PROGRAMS AND PARTNERSHIPS

Regarding watershed rehabilitation and resiliency, Lake Country partners with neighbouring jurisdictions on various watershed initiatives and has undertaken several other programs and studies local to the District. These initiatives include:

• North Aberdeen Plateau Watershed Resilience Plan

A collaborative effort by OKIB, the District, and RDNO with support from the University of Victoria's POLIS Project on Ecological Governance, MoF, and WLRS. The objective is to develop a comprehensive watershed sustainability plan to protect water security and cultural heritage for future generations in the North Aberdeen Plateau Watershed which includes both the Beaver Lake and Oyama Lake Watersheds. This plan has three components:

• A watershed resilience plan

<sup>&</sup>lt;sup>1</sup> Larratt Aquatic Consulting, District of Lake Country Okanagan Lake Cleaned-Water Return Outfall Receiving Environment Environmental Impact Study Summary Report, 2023

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SUBJECT:	Watershed Resiliency Initiatives Summa	γ			

- Watershed protection efforts (such as the road rehabilitation initiative discussed later)
- A wildfire resilience plan

MoF is also partnering with BC Wildfire Services (BCWS) in a multi-year \$15 million project to support wildfire resiliency planning. This is in collaboration OKIB, and local and provincial agencies.

While the watershed sustainability plan is developed, various parties (Tolko Industries, OKIB, and the District) are currently finalizing a terms of reference (TOR) document to guide watershed activities in the interim.

#### • Rehabilitation of non-status roads in vulnerable areas of the community watershed

The Ministry of Forests (MoF) leads this program, supported by the District, with the objective of improving drainage and long-term management of non-status roads high-risk areas to source water quality. The program has rehabilitated four sites with drainage directly above the District's drinking water intakes, three within the Beaver Lake Watershed and one within the Oyama Lake Watershed. Plans are in place to rehabilitate two more sites in the community watershed subject to MoF funding and commitment (awaiting announcement).

• The Kalamalka Lake (and Wood Lake) Technical Working Group

The District is working with neighbouring jurisdictions, provincial agencies, and other parties (i.e. Tolko Industries, Oceola Fish and Game Club) to facilitate collaborative planning for (1) managing water quality and quantity in the Kalamalka Lake Watershed and (2) supporting local government in fulfilling obligations under the Drinking Water Protection Act. These efforts involve

- Implementing a watershed protection plan
- Identifying risks to drinking water and developing actions to mitigate these risks
- Providing recommendations to watershed users, senior government entities, and other stakeholders on objectives, strategies, policies, and land use legislation to protect water quality and quantity

Currently the TOR and Plan is under review by the OKIB Council and upon approval the technical working group will formally begin meeting.

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#### • Foreshore Integrated Management Planning (FIMP)

The FIMP initiative is lead by Living Lakes Canada and establishes a survey method to assess lake foreshore health, with a focus on habitats for at-risk aquatic species in the Columbia basin. Evaluating foreshore conditions helps quantify freshwater biodiversity impacts for the purpose of guiding sustainable lake management. Living Lakes Canada's FIMP work also assesses whether current management practices effectively mitigate development impacts, acting as a practical conservation tool.

A cultural assessment for sensitive areas of Wood and Kalamalka Lakes is underway with OKIB and Living Lakes Canada. This will be followed by an RFP for an ecological assessment in 2025, with OKIB collaborating on tasks like drone footage and data collection alongside the selected consultant.

#### • Okanagan Lake Responsibility Plan

The District collaborated with ONA on this plan with the objective of developing collaborative Syilx and non-Syilx decision-making processes that protect water, ecosystems, and land against environmental threats, while supporting sustainable habitat and climate resilience. The plan seeks to foster stronger Syilx and non-Syilx relationships and influence regional environmental policies for long-term change in land-use planning and ecosystem protection.

The most recent stage of this initiative in 2022-2024 was the Development and Implementation of the siwłk<sup>w</sup> (water) Responsibility Action Plan. This included the November 2024 signing of the Memorandum of Understanding which details the commitments of participating governing bodies to the siwłk<sup>w</sup> plan.<sup>2</sup>

• <u>Wood Lake Study – A review of Historical Conditions, Current Trends, and</u> <u>Recommendations for Sustainable Future</u>

The District, with additional funding by OBWB, retained Larratt Aquatic Consulting (LAC 2023) to undertake a study to assess Wood Lake's condition in comparison to historical periods and recommend sustainable management approaches. LAC 2023 identified declining water quality, increasing nutrients, and the impacts of urban and agricultural development. The recommended actions to improve lake health include riparian restoration, educational programs, and invasive species management.

• Zebra and Quagga Mussels Risk Assessment Mapping

<sup>&</sup>lt;sup>2</sup> ONA 2024 – https://syilx.org/projects/k%C9%ACusxnitk%CA%B7-okanagan-lake-responsibility-planning-initiative/

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The District retained LAC in 2024 to map and determine the vulnerability of various lakes and water intakes to invasive mussels. It follows OBWB's recommendations and uses parameters such as calcium, pH, dissolved oxygen, temperature, and salinity to assess the viability of an area to host the invasive species in question. Upland lakes were found to be "not at risk" due to low calcium levels, while Okanagan and Kalamalka lakes were deemed "at risk" due to higher calcium concentrations favorable for mussel growth.

#### • Beaver Lake Chain & Vernon Creek Water Management Plan

This plan outlines sustainable infrastructure strategies for managing drought risk in Beaver Lake, managing agricultural and other demands, and supporting both the Province's and the Districts objectives to supply environmental flow needs (EFNs) in Middle Vernon Creek (MVC) to preserve Kokanee habitat. In Winter 2025, the District is hosting consultation and engagement sessions with OKIB, neighbouring jurisdictions, provincial agencies, OBWB, and other interested parties. These sessions will update local and provincial parties on the infrastructure solutions identified in the current phase (2024-2025), as listed below:

- Groundwater withdrawal adjacent to the WWTP for flow augmentation
- A control structure on Duck Lake
- Partial bypass of Duck Lake from Upper Vernon Creek to Middle Vernon Creek

For the next phase of the work, the District commissioned feasibility studies for each infrastructure option to (1) advance preliminary engineering designs supported by environmental assessments and (2) identify actionable steps in the regulatory pathway for each project. Scheduled for completion by late Fall 2025.

#### • Water Conservation Plan

The District's 2024 Water Conservation Plan provides strategic direction for water conservation within the District, aiming to reduce water consumption while ensuring adequate water supply and safeguarding against drought. It projects an annual reduction in water consumption of 355 ML and aims to increase water supply by 1,766 ML, with an additional 6,500 ML of storage capacity through various initiatives. The plan details demand-side strategies (e.g., variable rate structures, leak detection) and supply-side strategies (e.g., removing Beaver Lake obstruction, water management plan) for implementation within the next 3-5 years, with further exploration of alternatives over the next decade.

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#### CLOSURE

Lake Country continues to develop and participate in watershed stewardship initiatives and is grateful to their partners and the leaders of other interjurisdictional efforts. We trust the District's approach to such initiatives addresses the Province's intent in their Stage 1 and 2 report feedback.

## <u>APPENDIX G – LWMP</u> <u>FINANCIAL ANALYSIS MEMO</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC





- DATE: February 13, 2025
  - TO: Kiel Wilke, Utilities Manager
  - CC: Ehren Lee, Urban Systems
- FROM: Joel Short, Urban Systems
- FILE: 1577.0122.01
- SUBJECT: Liquid Waste Management Plan Financial Analysis

## **1.0 INTRODUCTION**

This memo sets out the results of a financial analysis on the District of Lake Country sewer system for the Liquid Waste Management Plan in the following sections:

- Finance Principles
- Background information
- Assumptions
- Results
- Conclusions

## 2.0 FINANCE PRINCIPLES

This section sets out the broad financing principles that guide the analysis. The five main guiding principles and relevant points are set out below:

- 1. Sewer service is self funding:
  - Sewer service should be self-funding it should not receive funding from other services.
  - Achieve full cost recovery by those directly benefiting from the service.
  - Paid by those predominantly benefiting from the community sewer system.
- 2. Growth pays for growth:
  - Development pays for improvements and future works required to service development.
  - The portion of projects required for growth are allocated to growth.
  - Costs are generally recovered through Development Cost Charges, but infrastructure is also built by developers, or paid for directly up front by developers.
- 3. Sewer Retrofit through Local Service Areas:
  - Sewer retrofit of existing neighbourhoods will be considered through a Local Service Area process; areas include:
    - o Oyama existing neighbourhoods (Cornwall, Isthmus area)
    - Winfield un-serviced areas (Bond, Kelvern, Winview, Pretty, Mountview)
  - The area that benefits pays for the sewer extension.

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- Paid for through local service area process.
- Sewer retrofit projects will depend on grants to proceed.
- Timing for these Local Service Area projects is after the WWTP upgrades and a long-term effluent disposal option is secured.

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- 4. Septage facility is funded as a regional service:
  - Septage facility is self funded as a Regional service, and is not subsidized by the Lake Country Sewer Utility.
  - Full cost recovery funded by the District of Lake Country charging the Regional District which covers costs by charging septage haulers, and haulers charge users to cover tipping charges.
- 5. Stormwater funded with mobility:
  - Stormwater operations, maintenance and capital projects will not draw on sewer revenues.
  - Most stormwater components are ditches along roadways and drainage associated with curb & gutter usually along sidewalks.
  - Stormwater is considered as part of the mobility network.
  - Separate from the LWMP and sewer function.
  - Projects identified through Storm Water Master planning process are funded under General Revenue and Transportation Parcel Tax.

## **3.0 BACKGROUND INFORMATION**

This memo is based on background information drawn from the following:

- District of Lake Country Liquid Waste Management Plan Stage 1 / 2 Report Final Draft August 2022.
- District of Lake Country Development Cost Charge Bylaw Background Report March 2016, along with coordination with current update to DCC bylaw.
- District Of Lake Country Financial Plans, Financial Statements and Annual Reports 2020, 2021, 2022, 2023
- District of Lake Country Sanitary Sewer Regulation and Rate Bylaw 1176, 2022 Consolidated Version.
- District of Lake Country Sewer Service Parcel Tax Bylaw 98-224 Consolidated Version.
- Lake Country Sewer Service Parcel Tax Amendment Bylaw 918, 2015.
- District of Lake Country Wastewater Management Plan Parcel Tax Bylaw 98-182.
- Information provided by the District of Lake Country Finance Department including details on the Sewer revenues and expenditures and numbers of users who pay user fees and parcels that pay parcel taxes.

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• Information provided by the District of Lake Country Engineering on estimates of timing for capital projects and current system parcels and users.

Currently the Liquid Waste Management system in Lake Country is funded through the following main sources:

- Sewer Parcel Tax
  - Originally established to pay for the initial Sewage Treatment System debt that retires in 2024.
  - Applies to about 3,400 parcels that are connected or could be connected to the Sewage Treatment System.
  - o Currently set at \$275 per year per parcel.
- Environmental Levy
  - Originally established to ensure that all parcels in Lake Country help pay for the benefit of a community Sewage Treatment System.
  - o Applies to all parcels ~6,300 in Lake Country.
  - o Currently set at \$75 per year per parcel.
- User Fees
  - Established to pay for ongoing costs of the Sewage Treatment System.
  - User fees apply only to those connected to the Sewage Treatment System.
  - \$250 per year single detached dwellings or multi family units; \$100 for secondary suites; commercial units pay based on the usage.
  - About 3480 homes pay \$250 per year, and about 370 secondary suites pay the extra \$100 per unit. About 58 Commercial and Industrial properties pay based on usage that includes an excess discharge fee.

## 4.0 ASSUMPTIONS

This memo is based on discussions with District Staff regarding assumptions and details. A number of key assumptions for the analysis are as follows:

• Grants of 66% are assumed for the large projects including long-term effluent disposal and the phase 5 upgrades. For the phase 4 upgrades which have been completed and was not grant funded, the annual debt servicing costs are used in the model. It is understood that phase 5 upgrades and funding assumptions are subject to change, depending on negotiations with City of Kelowna.

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## • Borrowing is required for all major projects including Phase 4 upgrades, long-term effluent disposal option, and Phase 5 upgrades construction.

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- Borrowed funds are through the Municipal Finance Authority over 20 years at 5%. Note that the current MFA rate is about 4.5%.
- Assumed \$200,000 for asset renewal starting in 2024 for 5 years until 2029 when it increases to \$350,000 for 3 years, then increasing to \$500,000 per year in 2032.
- Aim to have User Fee revenues replace the \$350 Parcel Taxes, with 2024 as the last year the Parcel Taxes are paid. Part of the logic is that debt payments for Phase 1 end in 2024.
- Apply a \$275 fee to parcels that could readily connect to sewer but are not connected, similar to the water system non-connected fee, and what they are currently paying.
- The analysis is conducted as a constant 2024 dollar analysis. Inflation has been accounted for in the modeled scenarios from 2025 to 2028.
- Operations and maintenance costs are based on costs for 2022, from Sewer Utility Fund data run November 29, 2023, with increases over time to account for expansions in the system as noted below.
- Wage related increases are 2% per year to account for increasing qualification levels over time. This is in addition to inflationary increases.
- Administration costs increase at 2% per year, to account for costs that rise slightly faster than inflation.
- Connections costs remain constant.
- Collection system and lift station operations and maintenance contracted services and materials/supplies to double over 20 years as District system size is expected to double. This results in a rate of 3.5% increase per year.
- Sewer Lift station utilities costs double over 20 years relative to system flow. This results in a rate of 3.5% increase per year.
- Oyama sewage treatment plant increase at 2% per year, to account for costs that rise slightly faster than inflation, but this cost is eliminated after the sewer retrofit occurs in 2034, since the plant will no longer be required.
- Wastewater Treatment plant operations contracted services and materials and supplies to double over 20 years as plant size could double. This results in a rate of 3.5% increase per year.
- Wastewater Treatment plant Utilities increases double over 20 years relative to system flow. This results in a rate of 3.5% increase per year.

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• Operations and Maintenance cost for the Septage handling portions of the facility are assumed to be covered through the agreement with the RDCO to cover these costs.

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- There are some capital expenditures that are shared between the septage facility and the community sewage facility and the portions of these shared costs that are allocated to the sewage facility are included in the sewage cost recovery analysis. The portions allocated to the septage facility are assumed to be covered through the agreement with the RDCO to cover these costs.
- Existing connections and units are based on 2024 and 2025 information from staff, as follows:

Environmental Levy	6282
Parcel Tax	3400
Parcels connected to sewer	3150
Parcels that have access but are not connected	250
User Fee Residential	3481
User Fee Suite	373
User Fee Commercial (non-residential)	58

- Future growth and development units are based on discussions with staff and a growth rate of approximately 3.1% which is consistent with the Official Community Plan High growth rate scenario. With staff we assumed 4000 residential equivalent units of growth with 67% assumed to be multi family units and 33% single detached units. We also assumed that 20% of new single detached units will have secondary suites, which will be in addition to the 4000 units. Growth is assumed to occur evenly over the 20 years. This rate may be lower than growth projected in the most recent housing needs report, but this analysis uses somewhat conservative projections to avoid having a revenue shortfall in the future.
- The resulting annual growth is as follows:
  - o 66 Single detached units per year
  - o 13 Secondary suites per year
  - o 134 Multi family units per year
  - o 1.2 ICI (Industrial, Commercial, and Institutional) new properties
- Retrofit units (largely single detached dwellings on individual parcels) will be added to the system starting in 2034, over 5 years, for a total 757 units or about 151 units per year.

We recognize that these figures are constantly changing, but for this high level analysis we will use these figures.

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• Capital projects timing and costs are based on the figures set out in the background reports, and based on discussion with staff.

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• The costs and timing as set out in the financial analysis are summarized in the Table 4.1 below. The table shows the total amounts of the project costs, without including the anticipated grants.

Project Name	Cost Recovery Note	2024	2025		2026	2027	2028	2029		2030		2031	2032	2033
Phase 4 Upgrades	80% DCC - growth related	\$ 674,148	\$ 674,148	\$	674,148	\$ 674,148	\$ 674,148	\$ 674,148	\$	674,148	\$	674,148	\$ 674,148	\$ 674,148
Turtle Bay Sewer Realignment - Construction	Not DCC - paid by existing users						\$ 250,000							
Lodge Road Force Main Twinning Partial	80% DCC - growth related			\$1,	100,000									
Lodge Road Force Main Twinning Partial	80% DCC - growth related												\$ 900,000	
	\$1,000,000 allocated to Septage,													
WWTP and Septage Improvements	Remainder is 80% DCC					\$ 3,750,000								
McCarthy Lift Station and Gravity sewer	80% DCC - growth related					\$ 1,500,000								
Seymour Lift Station and Force Main	80% DCC - growth related								\$ 4	4,000,000				
Lodge Road and Jensen Road Gravity Sewer	80% DCC - growth related													\$ 1,215,000
WWTP Phase 5 upgrades	80% DCC - growth related										\$2	1,275,000		
Sludge Bin Enclosure	50% septage, 50% existing users								\$	500,000				

Table 4.1 Capital projects

• The chart below shows total amounts of capital costs in each year without including the anticipated grants. The large spike in 2031 is for the Phase 5 upgrades. The size of the spikes indicates the importance of obtaining grants to reduce the costs to the District, and the need to borrow for the projects in order to spread out the costs over time. The chart does not include



the planned retrofit costs, which will likely be paid with grants and by the properties in the Local Service Area.

• For DCC benefit allocation and funding sources, a broad assumption is that 20% of the growth related project costs are allocated to the existing population and therefore need to be paid from the fees collected; and 80% of the costs are allocated to growth and need to be paid for by DCCs. Approximately 20% of the projected sewer growth comes from existing properties. These include properties that currently have access to the sewer system but are not yet connected, as well as those that will be connected through retrofit sewer projects. We recognize that this will vary from project to project, with some allocated 100% to growth and others having a lower

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> allocation to growth, but for this high level analysis we will assume 20% allocated to existing, and 80% to growth. Equipment replacements are not paid for through DCCs and are not allocated to growth at all.

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- Lake Country Business Park is not included in the current analysis as it is still in the early stages of development. The project is anticipated to be self-funded through Development Cost Charges (DCCs) and local service area parcel taxes.
- Retrofit sewer has the following assumptions:
  - o \$20.825 million cost for Winfield area retrofit.
  - o \$10.152 million cost for Oyama area retrofit.
  - o \$11.685 million cost for Oyama trunk sewer.
  - o 66% Federal/Provincial Grant.
  - o 16% Okanagan Basin Water Board Grant.
  - 50% of cost for Oyama Trunk line and Oyama retrofit areas allocated to growth and paid for through DCCs since providing sewer to Oyama will serve growth in the area. Note that the existing DCC bylaw identifies that 50% of the Oyama Lift station and Forcemain is allocated to new growth.
  - o Retrofit starts in 10 years, in 2034.
  - o Undertaken as a Local Service Area.
  - All capital costs are paid for by the properties receiving the service, inside the Local Service Area; the broader District does not cover part of the costs of the Local Service Area.
- The sewer DCCs are currently being updated, and this financial analysis model uses a simplified calculation of the DCCs that has been coordinated with the Sewer DCC updates. The DCCs used will likely not be exactly the same as in the actual DCC update, but they will be within the range of accuracy useful for the LWMP financial analysis.
- The District plans for a larger Reclaimed Irrigation Water system in certain areas of the community by 2038. Currently the estimated cost is about \$20 million, but due to the number of unknowns and the timing 14 years in the future, the financial model only addresses this project in a general way. The model shows how the District can be in a positive position for the sewer capital reserve fund to help this option proceed. It is anticipated that this project would be paid for from a combination of water and sewer reserves, plus grant funding.

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## 5.0 RESULTS

Applying the assumptions presented in Section 4, the financial model indicates that the District needs to collect \$2.4 million per year, increasing to \$2.9 million by 2029 and \$3.2 million by 2030. While multiple scenarios were analyzed, including variations of several factors, this memorandum focuses on the three scenarios that align with the financial principles and meet the required revenue targets.

- Scenario 1: 4-Year Smoothed Rates are gradually increased over 4 years.
- Scenario 2: Accelerated rates are increased at once in 2025, then subsequent minor inflationary adjustments.
- Scenario 3: 4-Year Smoothed with Multifamily Rate at 80% This calculates the rates assuming multifamily properties are charged at 80% of the detached residential base rate.
- For all three scenarios we assume inflation at 3% for 2025 and 2% for years 2026 to 2028.

#### 5.1 FEES AND TAXES

In basic terms the analysis shows that the Sewer Parcel Tax, and the Environmental Levy can be replaced with a User Fee with a moderate increase in annual costs to the users, keeping projects on schedule. The current system of charging a Sewer Parcel Tax, an Environmental Levy, and a User Fee can be replaced with a single User Fee, and the total amount charged will need to increase depending on the scenario. The tables below illustrate the shift under the three different scenarios.

#### Scenario 1: 4-Year Smoothed

Type of Charge	Existing	2025	2026	2027	2028
Environmental Levy	\$75	\$0	\$0	\$0	\$0
Sewer Parcel Tax	\$275	\$0	\$0	\$0	\$0
User Fee for					
<ul> <li>Detached Residential</li> </ul>	\$250	\$640	\$670	\$700	\$720
<ul> <li>Multi Family (Stratified)</li> </ul>	Ψ200	\$0 TO	\$070	\$700	Ψ720
<ul> <li>Commercial</li> </ul>					
Total	\$600	\$640	\$670	\$700	\$720

Secondary Suite User Fee	\$100	\$115	\$120	\$130	\$140
Multi family Non-Stratified User Fee	\$250	\$320	\$470	\$630	\$720
Commercial Excess Discharge Fee	\$250	\$260	\$270	\$280	\$290

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Non-connected User Fee         \$0         \$275         \$290         \$295         \$300						
	Non-connected User Fee	\$O	\$275	\$290	\$295	\$300

Scenario 1 shows the rates gradually increasing over 4 years from 2025 to 2028 through a combination of increases required to generate enough revenue and increases due to inflation. **Scenario 2: Accelerated** 

Type of Charge	Existing	2025	2026	2027	2028
Environmental Levy	\$75	\$0	\$O	\$0	\$0
Sewer Parcel Tax	\$275	\$0	\$0	\$0	\$0
User Fee for • Detached Residential • Multi Family (Stratified) • Commercial	\$250	\$700	\$705	\$710	\$715
Total	\$600	\$700	\$705	\$710	\$715

Secondary Suite User Fee	\$100	\$115	\$120	\$130	\$140
Multi family Non-Stratified User	\$250	\$350	\$495	\$640	\$715
Fee	Ψ200				
Commercial Excess Discharge Fee	\$250	\$280	\$280	\$285	\$285
Non-connected User Fee	\$0	\$275	\$290	\$295	\$300

Scenario 2 shows an immediate increase in rates in 2025 required to generate enough revenues, and then gradual increases in rates beyond 2025 dues to inflation.

#### Scenario 3: 4-Year Smoothed with Multifamily Rate at 80%

Type of Charge	Existing	2025	2026	2027	2028
Environmental Levy	\$75	\$0	\$0	\$0	\$0
Sewer Parcel Tax	\$275	\$0	\$0	\$0	\$0
User Fee for					
<ul> <li>Detached Residential</li> </ul>	\$250	\$665	\$720	\$760	\$790
• Commercial					
Total	\$600	\$665	\$720	\$760	\$790

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Multi family (Stratified) User Fee	\$250	\$530	\$575	\$610	\$635
Total for Multi Family (Stratified)	\$600	\$530	\$575	\$610	\$635

Secondary Suite User Fee	\$100	\$115	\$120	\$130	\$140
Multi family Non-Stratified User Fee	\$250	\$265	\$405	\$550	\$635
Commercial Excess Discharge Fee	\$250	\$265	\$290	\$305	\$320
Non-connected User Fee	\$0	\$275	\$290	\$295	\$300

Scenario 3 shows the rates gradually increasing over 4 years from 2025 to 2028 through a combination of increases required to generate enough revenue and increases due to inflation. With the multi family units paying only 80% in scenario 3, the rates for detached residential and commercial need to increase compared to Scenario 1 to compensate for the reduced revenue from multi family.

A number of specific factors were addressed in the scenarios:

- Secondary suites The existing charges for secondary suites are based on charges that are 40% of the user fees, however if we retained the secondary suites at 40% of the new user fees, the rates for suites would increase dramatically from, for example 40% of \$250 = \$100 to 40% of \$700 = \$280. Rather than have secondary suites increase from \$100 to \$280, we will have the secondary suites increase by a percentage similar to the increase in total sewer charges. For example, if the total charge increases from \$600 to \$700, this is an increase of about 17%, so the secondary suite charge would increase from \$100 to \$117, rather than to \$280.
- Non-stratified multifamily Non-stratified multifamily properties, such as apartment buildings, pay a single parcel tax and user fees based on the number of units. For example, currently a ten-unit apartment building pays one \$75 Environmental Levy and one \$275 Sewer parcel tax and ten \$250 user fees (\$2,500) for a total of \$2,850 annually in sewer charges. On the other hand, a ten-unit stratified apartment building would pay the environmental Levy, sewer parcel tax and user fee for each unit or a total of \$600 per unit or \$6,000. If we switch directly to all user fees at, for example, \$700 per unit, the 10 unit non-stratified would jump from \$2,850 to \$7,000 annually. To mitigate that jump we propose to gradually phase in the increase for non-stratified properties for all scenarios.
- Commercial excess discharge fee Commercial users (including industrial and institutional) pay
  a user fees and excess consumption fee based on Q1 water consumption. For example, if their
  Q1 water consumption is 5x larger than a standard residential household, they are charged 1x
  user fee and 4x excess consumption fees for that year. Currently the excess consumption fee is
  based off the user fee of \$250. If the user fee increases from \$250 to \$700, it disproportionately

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impacts this user group. The District has 58 ICI sewer accounts, and among those, 238 excess discharge fees were charged. Based on a review of data by District staff, it was determined that we should charge the 238 excess discharge fees at 40% of the user fee, as this reflects the operational cost of processing the additional sewage, for all scenarios.

The District should revaluate the costs and the financial plan within the next five years to determine if any further rate adjustments are warranted.

In all Scenarios a charge of \$275 per year is proposed for the approximately 250 parcels that have access to sewer but are not connected, similar to the water system non-connected fee. The rates shown have been increased by inflation.

For lots that currently do not pay the Sewer parcel tax, but do pay the Environmental Levy (even though they are not connected to Sewer), those lots would no longer pay the \$75, so their annual costs decrease by \$75. These parcels that are currently not connected and don't have direct access to the District community sewer system, and only pay the \$75 Environmental Levy, will no longer pay any charges related to District sewer.

The resulting User Fees can sustain the Sewer Capital Works Reserve Fund, while paying for costs, including the following:

- Operations & Maintenance costs of about \$1.7 million per year.
- The portion of capital cost allocated to the existing sewer users.
- The total capital costs which amount to about \$34.5 million between 2026 and 2033, with about \$14 million coming from grants, \$1.25 million from the septage agreement, about \$15 million from DCCs, and about \$4.2 million from rates.
- Existing debt service payments which include about \$77,000 per year for WWTP Stage 3 and about \$674,000 per year for Stage 4 upgrades.
- Lake Country pays for the sewage portion of capital projects that are shared between the Lake Country sewage facility and septage facility service provided to the Regional District.
- The \$200,000 for asset renewal starting in 2024 for 5 years until 2029 when it increases to \$350,000 for 3 years, then increasing to \$500,000 per year in 2032.
- The financial model projects the annual required revenue to support the current plan which ranges from about:
  - o \$2.4 million in 2025;
  - o \$2.9 million in 2028; and
  - o \$3.2 million by 2030.

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#### 5.2 SEWER CAPITAL WORKS RESERVE FUND

The balance in the sewer capital works reserve fund is an indication of the sustainability of the sewer finances over the years. Revenues go into this fund and expenditures come out of it for the capital projects required. If the reserve fund goes negative, then the District needs to increase rates to keep it healthy. At the proposed rates, the sewer capital works reserve fund balance generally stays between \$250,000 and \$2 million providing flexibility to address issues over the 10 years from 2024 to 2033. The fund aims to have a healthy balance of about \$4 million in 2035.

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The model projects over 20 years to the year 2044 and it shows the sewer capital works reserve fund increasing to about \$19 million, but that is because the last major capital project identified is in 2034 and after that the reserve fund simply collects money without having to spend anything on capital projects. Of course, by the time we get closer to 2034 the District will identify more major capital projects that need to be constructed, which will continue to draw down on the reserve fund before it gets to \$19 million. One of those projects is the potential Reclaimed Irrigation Water facilities with a cost of about \$20 million. Having the reserve fund moving in positive direction helps position the District for such capital expenditures in the future.

The charts below show the projected Sewer Capital Reserve Fund deposits for Scenarios 1, 2 and 3, withdrawals and balance during the period where we are projecting capital expenditures, until 2035. The chart shows a relatively steady amount of withdrawals from the fund compared to the spikes in the chart showing capital cost per year, because the annual impact on the reserve fund is reduced by obtaining grants, and spreading out costs over time through borrowing for major projects.

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Scenario 2 - Accelerated – rates are increased at once in 2025.



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The charts for all three scenarios are similar and show the reserve fund balance remains positive with a dip in 2027 when there are significant expenditures. After 2027 the reserve fund builds to just over \$4 million by 2035.

Scenario 2 with the immediate rate increase shows a healthier reserve fund in the early years from 2025 to 2028. Scenarios 1 and 3 that more gradually phase in the rate increase sees the reserve fund stay at a lower level until the full rates are implemented, after which the fund begins to build to healthier levels.

#### 5.3 PROJECT TIMING

The timing of projects can have a measurable impact on the finances. The anticipated timing for various projects is set out in Table 4.1. In general, if we build the projects sooner than set out in the table, the reserve fund balance will be lower and may even go negative. If the District builds projects sooner, or in a more compressed timeline with more projects in fewer years, the reserve fund does not have enough time to collect the money needed to pay for the projects. Conversely, if the District delays projects or spreads out the timing, that generally improves the balance in the reserve fund. In addition, as growth occurs the District has more units to pay the user fees, so waiting a couple of years allows for more units to pay fees resulting in more revenues each year. Of course, if the District delays projects too much then the community needs to wait longer for projects which might result in reduced levels

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of service or other issues. In some cases, it might not be possible to delay projects because of the potential negative impacts.

The timing of projects represents a balance between the need for the projects and the funds available to build the projects. The analysis shows that the project timing set out in Table 4.1 results in a balance, with projects built in a timely manner and sustainable finances for the sewer system.

#### 5.4 DEVELOPMENT COST CHARGES

In order to address the costs allocated to new growth the Sewer DCC rates need to increase significantly. The model projects that the Sewer DCCs for a single detached dwelling needs to increase from the existing rates. Since many of the projects are required primarily to serve growth, the model allocates much of the project costs to new growth (typically 80% to new growth / 20% to existing, project dependant). This is consistent with the philosophy that growth should pay for growth.

## 6.0 CONCLUSIONS

Conclusions that can be drawn from the results are as follows:

- Lake Country can sustainably finance the Liquid Waste Management System by applying the finance principles set out in this memo, which include:
  - o Sewer service is self funding from its users.
  - o Growth pays for growth.
  - o Sewer Retrofit through Local Service Areas and Senior Government Support.
  - Septage facility is funded as a regional service.
  - o Stormwater funded with mobility.
- Lake Country can consider replacing the revenues generated by the Sewer Parcel Tax and Environmental Levy with revenues generated by User Fees. The current Sewer Parcel Taxes could be replaced by User Fees in 2025 with a moderate increase.
- Parcels that can readily connect but are not connected could pay a charge of \$275 per year (adjusted to inflation). Parcels that are not connected or do not have the ability to connect will no longer pay a charge for sewer.
- The cost for users will increase moderately. Currently residential users pay \$600 per year through a combination of Environmental Levy, Sewer Parcel Tax, and Sewer User Fees. After eliminating the Environmental Levy and the Sewer Parcel Tax, users directly benefiting from the sewer system will pay somewhat more in total annual charges as a User Fee. Properties that

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are not connected to sewer and cannot readily connect will not pay the Environmental Levy or any other charges related to sewer..

- Depending on the scenario, residential users could see an increase in gradual steps over 4 years from \$600 to \$720 per year. If the increase occurs in one step, the rates would go from \$600 to \$700 in 2025. If multi family is reduced to pay 80% of detached residential, then the multi family rate stays lower increasing from \$600 to \$635 over 4 years, but the detached residential rate needs to gradually increase more from \$600 to \$790 over 4 years.
- Lake Country will need to take advantage of grants to reduce the costs to the District, and will need to use borrowing to spread out the costs of large projects over time.
- The District can sustainably construct the required projects by following the timing set out in Table 4.1, which generally has most projects constructed over a nine year period from 2025 to 2033.
- Sewer DCCs will need to increase. Lake Country should continue to update the Sewer DCCs to reflect the new costs, the allocation of those costs to growth, and the sewer area growth projections.
- The District will need to regularly review rates as capital programs evolve and to ensure that cost assumptions keep pace with inflation.

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# <u>APPENDIX H - RESPONSE TO</u> <u>BC ENV COMMENTS ON THE</u> <u>DLC OKANAGAN LAKE</u> <u>PROPOSED OUTFALL EIS</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC





**Response Memo for 2<sup>nd</sup> year of sampling** Kiel Wilke Utilities Manager – District of Lake Country Cc: Joanne Quarmby and Ehren Lee

Dec 13, 2024

This memo serves as part one of a two-part response to the latest round of BC ENV comments on the DLC Okanagan Lake Proposed Outfall EIS. The goal of this memo is to address the question of additional year(s) of sampling.

Jamie Self

Senior Aquatic Biologist, R.P. Bio



arrat Heather Larratt,

Principal Aquatic Biologist R.P. Bio.



Larratt Aquatic Consulting Ltd. 105-2081 McDougall Rd. West Kelowna B.C. V1Z 4A2



## Background

#### Overview

LAC, in partnership with Urban Systems, developed an Environmental Impact Study (EIS) for a proposed but as yet theoretical return water discharge to the north basin of Okanagan Lake by the District of Lake Country (DLC). This study, part of a broader update to DLC's liquid waste management plan (LWMP), addressed the multiple vectors of concern that such an outfall could present ranging from direct effects on plants, algae, and invertebrates within the receiving environment to broader changes in nutrient status for the north basin. The conclusion of this study is summarized below.

The ENV long-term monitoring data and 2021 field data indicate that an outfall at the proposed location would not overwhelm the assimilative capacity of Okanagan Lake, given phosphorus concentrations in the north basin that were far below their historic averages as of 2020. The proposed DLC outfall is not expected to alter the water quality objective exceedance behaviour and would rank as a relatively small source of nutrients compared to large natural sources, watershed disturbance, wildfires, urban stormwater, and existing larger outfalls.

#### Timeline

Date	Event	Report Rev #
June 2020	1 <sup>st</sup> TOR Established	
Feb 2, 2021	Extensive TOR revision by D. Einarson (ENV)	
Aug 2020 to Nov 2021	LAC performs agreed upon field work program	
Dec 2021	Draft of EIS submitted for Review	1
Feb 28, 2022	T. Gray (ENV) provides comments on EIS draft	
June 2022	LAC provides revised draft of EIS	2
Jan 16, 2023	T Gray (ENV) provides comments on revised EIS	
	draft	
Jan 21, 2023	Meeting between ENV, DLC, Urban Systems, and	
	LAC to review progress on LWMP	
April 2023	LAC provides updated EIS report for final draft	3
	review to DLC and Urban Systems	
May 2023	LAC finalizes the EIS report	Final
Nov 29, 2024	LAC, Urban Systems, and DLC meet to discuss	
	new requests from ENV	



### Response to New ENV Feedback

## Question 1: Did LAC put forward the recommendation of a second year of monitoring to augment the 2020 EIS field work?

Through recent (2024) correspondence, ENV has indicated interest in an additional year of monitoring to be conducted at the proposed outfall site. There appears to be some possible misunderstanding about this original source of this idea.

In the EIS, LAC has prescribed two detailed sampling program designs for DLC should it continue to pursue the Okanagan Lake outfall. These can be found in Section 9.2 of the EIS report.

- 1) Participate in the Okanagan Lake Collaborative Monitoring Program. DLC joining this program seems appropriate and would allow for increased sampling of the north basin based on increased availability of funds.
- 2) An independent sampling program designed to meet the requirements of the MWR.

During the 2<sup>nd</sup> round of review (response dated Jan 16, 2023), T. Gray of ENV made the following comment:

Repeating elements of the EIS sampling program over another year and assessing for all parameters for which there is a WQO would provide an improved estimate for water quality inter-annual variability and reduce uncertainty at the proposed outfall location.

Tim clarified his thoughts later in his response:

The recommended monthly sampling frequency proposed in the EIS for at the proposed outfall, IDZ and 1 km downstream locations may not be sufficient to detect potential changes in water quality and the plankton community with the additional nutrient loading from the proposed outfall.

...

Furthermore, if further refinement of the findings in the EIS study is needed, repeating the sampling program over another year for assessment against the WQOs could be done to reduce uncertainty about water quality at the proposed outfall location.

LAC acknowledged this comment in our supplemental response dated Feb 23, 2023:

- DLC could implement the expected monitoring program in advance of outfall construction.
- The program would harmonize methodologically with the Okanagan Lake Collaborative Monitoring Program (OCMP) to ensure all WQO's are addressed.
- Any monitoring program would need approval from DLC staff and council

Implementing a second year of monitoring was therefore not recommended in the EIS prepared by LAC.



## Question 2: What are the pro's and con's of adding an additional year of monitoring?

Since the first year of monitoring occurred during flood-influenced years, it may not be typical. The massive White Rock Lake wildfire also occurred during the sampling program; this fire will likely affect north basin water quality for several years post-fire. However, a "typical year" is more elusive than ever in recent decades. Climate-driven variables including flood, wildfire impact, increased intense storms and extreme temperatures limit the value of all targeted short-term monitoring. Further, introduction of invasive mussels will impact water chemistry and disrupt food chains, reducing the predictive value of historic data.

Using long-term data sets, such as the 50-year ENV dataset from 0500730, is vital to detecting and interpreting change. Adding a second year of monitoring would be unlikely to reduce risks inherent in EIS modelling meaningfully. Perennial monitoring with consistent methodology that aligns with other monitoring elsewhere (i.e. OCMP) is essential to clarifying outcomes for the DLC LWMP.

## Question 3: What would DLC joining the Okanagan Collaborative Monitoring Plan (OCMP) provide?

This is a moderate cost program that gradually accumulates growing season data, long-term. It monitors the parameters for which there are Okanagan specific water quality objectives (WQOs) to detect change with consistent methodologies. The program design was developed in partnership between ENV and the municipalities that engage in continuous release of treated effluent into Okanagan Lake (Kelowna, RDCO, and Summerland) with the specific goal of meeting their discharge monitoring requirements. In LAC's opinion, joining the OCMP would increase certainty on Okanagan Lake long-term biochemical behaviour and improve estimates of potential impact.

At four sites within Okanagan Lake, OCMP collects:

- Total Nitrogen (1,5,10m and 20,32,45m composites)
- Total Phosphorus (1,5,10m and 20,32,45m composites)
- Nitrogen to Phosphorus Ratio (1,5,10m and 20,32,45m composites)
- Chlorophyll-a (1, 5, 10 m composite)
- Phytoplankton taxonomy (1, 5, 10 m composite)
- Phytoplankton biovolume (1, 5, 10 m composite)
- Zooplankton taxonomy (0-45 m vertical plankton net pull)
- Zooplankton biomass (0-45 m vertical plankton net pull)



### **Summary Conclusion**

The current request by ENV to evaluate a second year of study is based upon a suggestion made in the 2<sup>nd</sup> round of EIS review by ENV staff biologist Tim Gray. LAC evaluated this request at the time and felt that instead of repeating another intensive one-off sampling program, DLC should be considered for inclusion into the OCMP. A long-term sustainable program that integrates with existing monitoring programs to provide data targeted at the specific Okanagan Lake WQOs would ultimately be of more value in reducing uncertainty surrounding water quality values at the potential outfall.



Dec 13, 2024

This memo serves as part two of a two-part response to the latest round of BC ENV comments on the DLC Okanagan Lake Proposed Outfall EIS. The goal of this memo is to address the question of additional modelling of the effluent plume.

Jamie Self

Senior Aquatic Biologist, R.P. Bio



Heather Larratt,

Principal Aquatic Biologist R.P. Bio.



Larratt Aquatic Consulting Ltd. 105-2081 McDougall Rd. West Kelowna B.C. V1Z 4A2



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The ENV long-term monitoring data and 2021 field data indicate that an outfall at the proposed location would not overwhelm the assimilative capacity of Okanagan Lake, given phosphorus concentrations in the north basin that were far below their historic averages as of 2020. The proposed DLC outfall is not expected to alter the water quality objective exceedance behaviour and would rank as a relatively small source of nutrients compared to large natural sources, watershed disturbance, wildfires, urban stormwater, and existing larger outfalls.

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	new requests from ENV	



### Response to New ENV Feedback

#### Expand scope of modelled results

ENV expressed interest in expanding the range of scenarios that were modelled for in the EIS. The original modelling focused on producing a dilution curve and then applying that curve to average concentrations in the existing effluent data. These results indicated that:

the modelled concentrations of nitrogen species, phosphorus, and chloride were at or below the average concentrations in Okanagan Lake indicating that the plume should reach equilibrium with the surrounding water within the IDZ (Table 14).

	Table 14: Modelled concentrations of effluent constituents at edge of IDZ								
Parameter		Effluent Concentration during 2020		Modelled Concentration @ Edge of IDZ	Effluent Requirement	Aquatic Life Chronic Guideline	Okanagan Lake Objective	Okanagan Lake Concentration At 60m	
		Mean	SD						
Total Ammonia	mg/L as N	0.481	0.384	0.002 - 0.02	1.18*	1.18	-	0.02	
Unionized Ammonia	mg/L as N	0.0027	0.0035	0.00001 - 0.00027	1.25	-	-	-	
Nitrate	mg/L as N	1.68	0.35	0.008 - 0.07	-	3	-	0.07	
TN	mg/L as N	3.84	0.58	0.019 - 0.16	6	-	0.230	0.250	
TP	mg/L as P	0.281	0.064	0.001 - 0.012	0.25	-	0.008	0.009	
Chloride	mg/L	114	7.2	0.553 - 4.75	-	-	-	5.3	

Note: Modelled concentrations lower than the Okanagan Lake average indicate that the plume is expected to have reached equilibrium with the surrounding water by the edge of the IDZ

\* Calculated using BC ENV ammonia table for average Okanagan Lake conditions at 60 m: pH = 8.0, Temp

ENV expressed interest in applying the model results to the prospective effluent target criteria as well as the existing average data. The goal of this would be to evaluate if the plume would meet guidelines and objectives at the edge of the IDZ in the full range of scenarios covered by the Operational Certificate (OC).

Comparing the dilution model developed in the EIS against the full range of scenarios is given in Table 1. These reveal that for most of the scenarios, the guidelines or objectives could be met at the edge of the IDZ. TP under normal operating conditions would meet the objective at the edge of the IDZ with the 95<sup>th</sup> percentile showing that the vast majority of the data is close to the mean and therefore would meet the objective. However, occasional outliers were observed up to the 2 mg/L daily discharge maximum. Under these rare conditions, the plume would exceed the objective at the edge of the IDZ. This does not present a risk to aquatic life because this guideline relates only to the influence of TP on phytoplankton growth. New modelling conducted for this memo revealed that achieving the objective at the edge of IDZ for TP under these rare conditions is unlikely to be possible. A very large 100 port diffuser assembly (50 m long) did increase dilution significantly but still achieved a minimum dilution ratio of 150:1 compared to the 250:1 that would be required for 2 mg/L TP to be brought below the 0.008 mg/L TP objective (Table 2).

<sup>= 5.0 °</sup>C

	Effluent	Target		<b>Modelled Values</b>		<b>Dilution Ratio</b>	Distance
Parameter	Target	Туре	Guideline	@ edge of IDZ	Achieved or failed?	Required	(m)
CBOD <sub>5</sub>	10			0.049 - 0.417	Achieved		
TSS	10			0.049 - 0.417	Achieved		
ТР	0.25	annual avg	0.008	0.001 - 0.010	Achieved mostly	31.3	10
	2	daily max	0.008	0.01 - 0.083	Maximum of 2 mg/L would exceed obj at edge of IDZ	250.0	450
	0.395	95th Percentile of 2020 Effluent		0.002 - 0.016	Achieve mostly		
Ammonia	10	day max	1.18	0.049 - 0.417	Achieved	8.5	<10
	6	annual avg	1.18	0.029 - 0.25	Achieved	5.1	<10
NO3	10	day max	3	0.049 - 0.417	Achieved	3.3	<10
	6	annual avg	3	0.029 - 0.25	Achieved	2.0	<10
TN	6	annual avg	0.23	0.029 - 0.25	Okanagan Lake does not meet this objective currently	26.1	<10
	10	day max	0.23	0.049 - 0.417	Okanagan Lake does not meet this objective currently	43.5	10
Fecal coli / 100mL	4800	Geo-mean	200	23 – 200	Achieved	24	100
рН	6 to 9			pH value would meet objective without dilution, as reported in 2.1.2 of EIS			
Metals		Data were not available at the time of writing but DLC has added these parameters to its monitoring program					

#### Table 1: Modelled concentrations at edge of IDZ under full range of OC scenarios

#### Table 2: Comparison of new modelling for larger diffuser assembly to achieve TP objective

Season	Dilution Ratio @ 100m	Dist to 250:1 Dilution Ratio (m)	#Ports
Winter	282.4	60	50
Spring	128.5	450	50
Summer	135	135	50
Winter	396.5	35	100
Spring	153.9	325	100
Summer	157.5	300	100



### **Summary Conclusion**

The current request by ENV to evaluate additional modelling was performed. The full range of scenarios available under the potential OC were calculated. These results supported the original EIS conclusion that the plume would meet relevant objectives at the edge of the IDZ. The only parameter that did not meet the IDZ criteria was the daily maximum TP of 2 mg/L. Fortunately the historic TP data from the DLC treatment plant reveal that TP concentrations of this magnitude are very rare and upgrades to the WWTP as part of the LWMP process should further reduce the frequency of these extreme outliers. In addition, any releases of the higher TP concentrations would need to be limited, in order to also meet the annual average concentration requirement of 0.25 mg/L.

# <u>APPENDIX I – MINISTRY OF</u> <u>ENVIRONMENT AND PARKS</u> <u>RESPONSES TO STAGE 1-2</u> <u>REPORT</u>

LWMP STAGE 3 IMPLEMENTATION | DOLC




August 10, 2023

District of Lake Country LWMP Amendment Combined Stage 1 & 2 Report

His Worship Mayor Blair Ireland and Councillors District of Lake Country 10150 Bottom Wood Lake Road Lake Country, BC V4V 2M1

VIA EMAIL: mayorandcouncil@lakecountry.bc.ca

Dear Mayor and Council:

#### <u>Re: District of Lake Country: Liquid Waste Management Plan Amendment – Combined</u> <u>Stage 1 & 2 Report</u>

Thank you for submitting the District of Lake Country (District) Liquid Waste Management Plan Amendment – Stage 1 / 2 Report – Final Draft dated August 31, 2022 (the Report), and the associated District of Lake Country Okanagan Lake Cleaned-Water Return Outfall Receiving Environment Environmental Impact Study Summary Report dated May 2023 (the EIS).

As previously communicated, the two stated objectives for a Liquid Waste Management Plan (LWMP) are to protect public health and the environment and to adequately consult the public. Within LWMPs, local governments are encouraged to show leadership and innovation in water conservation, watershed security, resource recovery, energy conservation, climate change adaption and mitigate, and asset management.

In addition, the LWMP process is an opportunity to advance reconciliation with Indigenous Nations. The province has a duty to consult Indigenous Nations whenever a decision or activity could impact claimed or proven Aboriginal Rights and Title. Although the duty to consult rests with the province, local governments are expected to engage Indigenous Nations throughout the planning process to build relationships, understand potential impacts on Indigenous interests and consider modifying plans to avoid or mitigate those impacts, if needed. To be successful, the LWMP must show how Indigenous Nation interests were considered.

The Ministry has reviewed the submissions with respect to the "*Interim Guidelines for the Preparation of a Liquid Waste Management Plans*" (July 2011) and the standards outlined in the Municipal Wastewater Regulation, and have the following comments for consideration when preparing the Stage 3 Report:

1. The District is proposing "flexible/Adaptive return options" to ensure the safe return of cleaned water back to the environment. However, the Report does not provide sufficient detail on the investments needed to support flexibility such as maintaining the ground discharge works and investing in reclaimed water use. This was a comment included in previous communication on the draft Report.

As outlined in section 5.7 of the Interim Guidelines for Preparing a Liquid Waste Management Plan, proper development and evaluation of reclaimed water options should be done alongside planning of sewage conveyance facilities and disposal facilities. The planning of the conveyance route for the outfall should be done in conjunction with the planning and development of reclaimed water use.

In addition, the District is located in a water deficit area surrounded with agricultural lands. Reclaimed water use presents an opportunity to support agriculture, reduce potable water demand and reduce the volume of effluent that will be discharged to the Lake. Public consultation and Indigenous Engagement to date have shown support for the use of reclaimed water.

As such, please include the following in the Stage 3 Report:

- The cost and timeline for repairing the current groundwater galleries so they can continue to be used as part of the suite of discharge options.
- A comprehensive reclaimed water use options analysis to inform commitments to reclaimed water use with associated costs and timelines that can be implemented alongside the development of the outfall conveyance route and investments in expanding the conveyance infrastructure.
- 2. The EIS adequately fulfills the Terms of Reference with the understanding that additional analysis relating to emerging contaminants will be included in the Stage 3 Report and considered during the application process for the Operational Certificate. The EIS shows that several water quality objectives are not being met at the proposed discharge location and concludes that although the proposed discharge is not expected to alter the water quality objective exceedance behavior, the environmental context of the proposed discharge is concerning. Given this conclusion, we recommend that the District show meaningful commitments to limiting the quantity of effluent discharged to Okanagan Lake as part of the flexible approach and implementing the EIS recommendations with respect to watershed rehabilitation.

- 3. The commitments to expanding and retrofitting the collection system are the largest proposed expenditure in the Report at \$38.9 million. The source and breakdown of these costs is not presented. According to the Community Sewer Servicing Strategy and Infrastructure Needs and Cost Analysis (Urban Systems, 2020), the total estimated cost of sanitary collection system upgrades is \$5.9M. Section 3.1.2 and 3.1.3 discuss onsite systems but do not discuss the 700 properties proposed to be "retrofitted" and how they were selected. Given the potential benefit with respect to reduced phosphorous load to surface water, commitment to connecting onsite systems could be an important commitment to environment protection in the LWMP. Please provide additional information to support this investment in the collection system including a breakdown in costs and the expected environmental benefit.
- 4. The Report includes several commitments that show leadership in addressing non-point sources of pollution including a non-point source pollution plan, the integrated stormwater management plan, establishing stormwater quality monitoring, undertaking a public sanidump study and extending the collection system. The Ministry recommends that all commitments included in the Stage 3 Report be specific, measurable, achievable, relevant and timebound to help ensure their success.
- 5. The Report provides class C estimates and commits to further refining them to class B standards in the Stage 3 Report. Please ensure that the cost estimates include operation and maintenance costs in addition to capital costs. All costs must be presented as cost per household to ensure transparency during consultation.
- 6. Further information on how engagement with Indigenous Nations has shaped the recommendations is needed in the Stage 3 Report. Work done by the District to understand potential impact on Indigenous Interests and adapt the plan to mitigate those impacts will support the timely review of the Stage 3 Report.
- 7. Public consultation on Stage 3 must be designed to reach as many members of the public as possible to ensure community buy-in on the approach and understanding of the associated cost per household going forward. Consider a mail-out to residents outlining the commitments and costs in addition to the activities outlined in the Stage 3 scope of work and additional in-person townhalls to present the proposed outfall conveyance route and the results of the reclaimed water options analysis.

As soon as the Stage 3 process is initiated, please submit an application for an amendment to the District's Operational Certificate under the Environmental Management Act (see <u>Apply for a waste discharge authorization - Province of British Columbia (gov.bc.ca)</u>. This process will consider the terms and conditions for implementing the proposed Liquid Waste Management Plan commitments and ensure a timely review and decision by the Director in the event the Minister approves the Liquid Waste Management Plan.

If you have any questions regarding this letter, please contact Melanie Mamoser at 250-739-8328 or <u>melanie.mamoser@gov.bc.ca</u>.

Yours truly,

Liz Archibald Section Head, Community Liquid Waste Management Environmental Protection Division

Cc: Greg Buchholz, <u>gbuchholz@lakecountry.bc.ca</u> Ehren Lee, <u>elee@urbansystems.ca</u>



April 23, 2024

File: LWMP District of Lake Country

His Worship Mayor Blair Ireland and Councillors District of Lake Country 10150 Bottom Wood Lake Road Lake Country, BC V4V 2M1

VIA Email: <u>mayorandcouncil@lakecountry.bc.ca</u>

Dear Mayor and Council:

#### Re: The Role of Reclaimed Water in the District of Lake Country's Liquid Waste Management Plan

I am writing today to connect with the District of Lake Country and request an update on how the Stage 3 Report is progressing.

I also want to take this opportunity to provide additional context on the suggestions my staff have offered in our response to the Stage 1/2 Report last summer. When reviewing Liquid Waste Management Plan stage reports, our goal is to support local governments in developing a successful plan by pointing out where improvements can be made based on the provincial LWMP guidance and provincial priorities. To that end, we made some suggestions with respect to reclaimed water use as the importance of considering it may not be fully understood.

The province's overarching policy with respect to waste is to follow the 5R pollution prevention hierarchy (Reduce, Reuse, Recycle, Recover and Residuals Management) and to promote a circular economy. In alignment with these policies, the province encourages municipalities to look at their liquid waste as a resource instead of a waste.

Although the Environmental Impact Study concluded that a single discharge to Okanagan Lake would not have a measurable impact on the lake, it did highlight that there is cause for concern on the overall environmental health of the lake at this location. This has been confirmed by what we've been seeing in other reports as well. As such, it is imperative we all do our part to reduce the cumulative impacts on Okanagan Lake by limiting discharges. We were encouraged by the Stage 1/2 Report proposal for a hybrid approach to managing the municipal liquid waste that involves the use of reclaimed water. However, without meaningful commitments to exploring and implementing the opportunities for reclaimed water use in the Stage 3 Report, in practice, the approach will primarily rely on a discharge to Okanagan Lake.

The District is located in a water deficit area surrounded by agricultural land. Reclaimed water use presents an opportunity for climate change adaptation to support agriculture and reduce potable water demand. Public consultation and Indigenous Engagement to date have shown support for the use of reclaimed water.

This is why the ministry has strongly suggested that the Stage 3 Report include comprehensive evaluation of reclaimed water use options. This evaluation would inform commitments to reclaimed water use by identifying associated costs and timelines that can potentially be implemented alongside the development of the outfall conveyance route and investments in retrofitting and expanding sewer service. This is the right time to be thinking about reclaimed water use infrastructure and identifying potential users, both private and public.

In addition, reclaimed water use can improve the chances of a project receiving funding. All the infrastructure funding programs managed by the province are consistently oversubscribed leaving many funding applications unsuccessful. Successful projects are selected using a review process to compare project outcomes against program goals and provincial priorities. In recent years, a key provincial priority has been climate adaptation. As such, a project with a commitment to reclaimed water use has a better chance of securing grants.

At this time, I'm requesting that the District of Lake Country provide a brief update on the status of the Stage 3 Report development and estimated timelines as to when the draft will be submitted to my staff for review prior to final submission to the Minister. Additionally, please let me know if there is anything we can do to further support the District as you work to complete the Stage 3 Report.

Sincerely,

Gaina

Cassandra Caunce Director, Communities, IPM & AgriFood Authorizations Authorizations and Remediation Branch Environmental Protection Division

CC: Greg Buccholz, <u>gbuchholz@lakecountry.bc.ca</u> Ehren Lee, <u>elee@urbansystems.ca</u>



## **Report to Council**

**District of Lake Country** 

To:	Mayor and Council	Meeting Date: May 20, 2025
From:	Paul Gipps, CAO	Meeting Type: Regular Council Meeting
Prepared by:	Reyna Seabrook, Director of Corporate Services	
Department:	Corporate Services	
Title:	Council Committee Update – Agricultural Advisory Committee (AAC)	
Description:	To consider adopting updated Terms of Reference for the AAC	

#### RECOMMENDATION

THAT the Agricultural Advisory Committee Terms of Reference dated 2012 be repealed; AND THAT the Agricultural Advisory Committee Terms of Reference attached to the Report to Council dated May 20, 2025 be adopted.

#### **DISCUSSION/ANALYSIS**

Committees are appointed by Council to assist Council in dealing with a variety of topics. These groups are typically made up of community members or subject matter experts in a particular area. Committees provide recommendations and input from a perspective Council may not have considered. It is Council's role to determine how a committee will best serve Council and the community. Council is responsible for assigning tasks to committees that are aligned with guiding documents and strategic priorities.

Committee reviews have been undertaken in 2012, 2015, 2019 and 2023. Dring the 2023 review it was noted the AAC only had 3 members and was not meeting quorum or membership requirements. One of the outcomes of the 2023 review was an attempt to secure additional AAC members and a resolution (February 21, 2023) to forward a review of the AAC Terms of Reference (TOR) to a future strategy session.

The purpose of this report is for Council to consider updated TOR for the AAC.

Due to the lack of membership, Council passed resolutions in 2018 and 2019 waving the requirement for the AAC to meet quorum. In early 2023 the AAC membership consisted of only three people and in July 2023 three new members were appointed, which brought the committee in line with the minimum number of members required. Even with the additional new members, attendance from 2023 to 2025 averaged 3 committee members per meeting and 4 District staff to present applications, answer questions, and record minutes.

Despite efforts, recruiting members for the AAC has been a struggle for many years. Feedback from previous recruitment attempts indicated farmers do not have the time to participate in a committee that only reviews individual applications and they were more interested in providing input on high-level impactful changes that would assist the agricultural community holistically.

In order for the AAC to provide the best use of volunteer time, provide value to the agriculture community and provide valuable recommendations for Council, it is recommended the AACs role be adjusted to:

- 1. consider the agricultural community on a more holistic scale; and
- 2. establish a list of specific application types to be referred to the group.

The TOR have been amended to include additional, high-level topics within the Mandate, including agricultural promotion, awareness, education and a review of policies, strategies, bylaws and strategic documents related to agriculture. The additional topics support the committee's holistic consideration of agriculture and ensure agricultural input on policy documents.

The current TOR requires all land applications affecting agriculture and agri-business to be referred to the AAC. This can result in inefficient use of committee and staff time considering applications that don't require review. To ensure the type of applications and the details being considered are focused and appropriate, a list of specific application types to be referred and associated criteria to be considered has been set out and authority has been delegated to the Director of Development Approvals to determine which files are to be referred. This determination will be based on a list of established criteria. These amendments provide clear direction for both committee members and staff.

In consideration of the amount of volunteer and staff time required for in-person meetings, the TOR establish procedures for circulating applications via email. Where determined by the Director, applications will be circulated via email and each member will be required to respond with a pre-determined response, including: support, non-support, support subject to comments. A majority of members may request an in-person meeting to discuss the application. This process reduces the need for staff and volunteer time to meet as frequently.

The 2012 AAC TOR currently in effect, require 6 to 8 members with at least 4 actively farming and at least 2 with an interest in agricultural, economic development, sustainability or water service delivery or conservation. Quorum is identified as 4 members in the TOR. Quorum is an important governance tool used to ensure acceptable levels of members who have a stake in a group are present to ensure procedural fairness at the committee level, especially where recommendations to Council are provided. The membership requirements in the proposed TOR have been increased to 7 to 11 with at least 5 actively farming in Lake Country and 2 representatives that live in Lake Country with experience in agriculture, economic development, or agriculture, water service delivery or conservation. The increased number of members would result in a quorum of 4.

#### **ALTERNATE RECOMMENDATION(S)**

- THAT the Agricultural Advisory Committee Terms of Reference dated 2012 be repealed; AND THAT the Agricultural Advisory Committee Terms for Reference the attached to the Report to Council dated May 20, 2205 be amended as follows:
  - •

AND THAT the Agricultural Advisory Committee Terms of Reference be adopted as amended.

2. THAT the Agricultural Advisory Committee Terms for Reference for the attached to the Report to Council dated May 20, 2205 be referred back to staff for additional information as identified by Council.

Respectfully Submitted. Reyna Seabrook, Director of Corporate Services

#### **Report Approval Details**

Document Title:	Council Committee Update - Agricultural Advisory Committee (AAC)- RCM.docx
Attachments:	- AAC Terms of Reference-2025-Draft-V01.docx
Final Approval Date:	May 15, 2025

This report and all of its attachments were approved and signed as outlined below:

#### Carie Liefke, Manager of Current Planning - May 14, 2025 - 10:27 AM

Jeremy Frick, Director of Development Approvals - May 14, 2025 - 11:14 AM

Paul Gipps, Chief Administrative Officer - May 15, 2025 - 9:48 AM

Makayla Ablitt, Legislative & FOI Coordinator - May 15, 2025 - 9:58 AM



### Advisory Committee Terms of Reference

The **Agricultural Advisory Committee ("AAC")** is established in accordance with section 142 of the *Community Charter* to provide recommendations and advice to Council in accordance with these Terms of Reference (TOR).

#### 1. GOVERNANCE

1.1. Committee procedures are governed by Council Procedures Bylaw. Member conduct is governed by Council's Code of Conduct and Ethics Policy as amended from time to time.

#### 2. MANDATE

- 2.1. The AAC's role is to provide input or recommendations on the following agricultural related items which may be referred to the AAC by Council or at the discretion of the Director of Development Approvals ("Director") and includes their designate:
  - (a) Applications:
    - (i) to the Agricultural Land Commission (ALC) that are referred to the District;
    - (ii) to amend the Official Community Plan (OCP) or Zoning Bylaws related to agriculture;
    - (iii) for subdivisions related to agricultural zoned properties;
    - (iv) for an Agricultural Development Permit (DP);
    - (v) other than noted above, that are related to agriculture, as determined by the Director.
  - (b) Topics related to the promotion, awareness and education of agriculture, food security, agritourism or agriculture related economic development;
  - (c) Policies, strategies, or regulations within the scope of the OCP, Zoning Bylaw, District Master Plans or other District strategic documents.
- 2.2. When determining applications or items that may be referred to the AAC, the Director will consider:
  - (a) if the application aligns with the District's OCP policies or Zoning Bylaw;
  - (b) the scale of development proposal;
  - (c) if the proposed development is permanent or temporary in nature;
  - (d) the potential impact on agriculture.
- 2.3. When considering items, the AAC will only comment on the following, as applicable:
  - (a) contribution to regional agricultural economy;
  - (b) on-site farming operations;
  - (c) adjacent agricultural land or agricultural operations;
  - (d) for Agricultural DP applications, if the intent of the DP guidelines have been achieved.

#### 3. INPUT AND RECOMMENDATIONS

- 3.1. At the discretion of the Director, comments in response to applications under section 2.1 may be solicited via email or other electronic formats, wherein members will consider the application in accordance with section 2.3 and provide comment on the following:
  - (a) Support for application as proposed, and reasons

- (b) Non-support for application as proposed, and reasons;
- (c) Support for application subject to the following comments; or
- (d) Request to review application at a properly convened meeting.
- 3.2. Where an application has been circulated as per section 3.1, a majority of members may request, in writing, that a properly convened meeting be held to discuss the application, wherein a date and time will be scheduled for such a meeting.
- 3.3. Comments received in response to applications circulated under section 3.1 will be reviewed by Staff and included in a Report to Council where appropriate.
- 3.4. Consideration of items under section 2.1 (b) and (c) shall be done at a properly convened meeting.
- 3.5. Where a properly convened meeting is called, recommendations to Council shall be made by resolution.
- 3.6. Recommendations from the AAC to Council will be circulated to Council by including the AAC minutes on Council's Regular Council Meeting Agenda. Where Council desires to take action on an AAC recommendation, they may do so by proposing a motion in accordance with Council Procedures bylaw.
- 3.7. The AAC will present a summary of activities, goals and accomplishments once each year to Council.

#### 4. MEMBERSHIP

- 4.1. The Committee will consist of no less than seven (7) and no more than eleven (11) voting members from the following categories:
  - (a) at least 5 members that are actively farming within the District of Lake Country;
  - (b) at least 2 representatives that reside in the District of Lake Country with experience in farming or agriculture, agriculture economic development or sustainability or agriculture water service delivery or conservation.
- 4.2. At least 1 but not more than 2 members of Council as non-voting representative and 1 as an alternate.

#### 5. RESOURCES

5.1. A Council Representative, a Staff Liaison (if operational workload permits) and a Recording Secretary will be appointed. Duties and responsibilities of these positions are set out in the Council Procedures Bylaw.

#### 6. APPOINTMENT AND TERM

6.1. Voting members shall be appointed for 2- or 3-year term expiring June 30th. Members will have the option to continue for additional 3-year terms with Council approval. Council may appoint, reappoint or revoke appointment of a member at any time.

#### 7. CHAIRPERSON

7.1. At the first meeting of each year a Chair and Acting Chair, as required, will be appointed in accordance with the Council Procedures Bylaw. Council members shall not act as a Chairperson.

#### 8. AGENDAS AND MINUTES

- 8.1. The Chair and Staff Liaison shall jointly determine items to be included on the agenda which shall be submitted to the Recording Secretary 4 days prior to a scheduled meeting for preparation of an Agenda.
- 8.2. Notice of a meeting including the date, time and location of the meeting, shall be posted in the Posting Places, delivered to each Member and made available to the public, no later than 3 days prior to the meeting.
- 8.3. Minutes will record business decisions only in accordance with the Council Procedures Bylaw.

#### 9. MEETINGS AND QUORUM

- 9.1. The Committee shall meet as required.
- 9.2. A quorum, being a majority of the membership, is required to conduct business. A vacancy does not invalidate the committee so long as the number of members is not below quorum.
- 9.3. If no quorum is present within 30 minutes after the time appointed for the meeting, the names of the members present shall be recorded and the meeting shall stand adjourned.
- 9.4. Each voting member has one vote on each matter. A majority decides every matter.

#### **10. REMUNERATION AND EXPENSES**

- 10.1. Members serve without remuneration.
- 10.2. Requests for funding, resources, expenses or special initiatives with associated costs must be preapproved by the CAO, Council resolution or Chief Financial Officer.

ADOPTED this x day of x x by resolution No. xxxx-xx-xxx

Mayor

Corporate Officer



## **Report to Council**

**District of Lake Country** 

To:	Mayor and Council	Meeting Date: May 20, 2025
From:	Paul Gipps, CAO	Meeting Type: Regular Council Meeting
Prepared by: Department:	Philippa Harding, Manager of Corporate Corporate Services	Administration
Title:	Wildlife and Vector Attractant Bylaw No.	1280, 2025
Description:	To consider a Wildlife and Vector Attracta	ant Bylaw and associated penalties.

#### RECOMMENDATION

THAT Wildlife and Vector Attractant Bylaw No. 1280, 2025 be read a first, second and third time; AND THAT BNE and MTI Amendment (Wildlife and Vector) Bylaw 1281, 2025 be read a first, second and third time.

#### **DISCUSSION/ANALYSIS**

At the July 20, 2021 Regular Council Meeting Council passed a motion directing staff to research and report back on implementing a wildlife and vector bylaw. On January 16, 2024 Council reconfirmed this motion and requested the wildlife and vector information be brought forward to a Strategy Session. Council received a <u>presentation</u> at the April 16, 2024 Strategy Session.

Staff reviewed and brought forward a number of bylaws from other municipalities that covered a wide variety of topics and options ranging from bees to horses. Also included in the review was the WildSafe BC <u>"Wildlife</u> <u>Attractant Bylaw Toolkit (2022)</u>" which is focused on mitigating bear-human interactions and does not include vectors. These sample bylaws and the toolkit assisted Council in narrowing down the scope of a bylaw for Lake Country. Staff also noted that Kelowna and the Regional District of Central Okanagan have included "managing attractants" in their Solid Waste Bylaw as opposed to a separate wildlife and vector bylaw. This was a recommendation of the Regional Solid Waste Technical Advisory Committee.

The City of Armstrong Wildlife and Vector Bylaw was noted by Council in the 2021 discussion in that it may be an easily transferable bylaw to suit the District's needs. In the Armstrong bylaw the "Managing Attractants" section is the same as the "Managing Attractants" section in the WildSafe BC Toolkit. Along with the WildSafe BC Managing Attractants, Armstrong also included vectors and an additional section prohibiting fallen fruit from remaining on the ground for more than three days.

During the 2024 strategy session Council reviewed prohibitions in existing District bylaws. This included the Parks Bylaw, Animal & Poultry Bylaw, Solid Waste Bylaw, Highways Bylaw and Nuisance Bylaw. Council determined that the example bylaw best suited for the District of Lake Country needs was the Vancouver Wildlife Feeding Regulation Bylaw.

When adding a regulatory bylaw with the potential of a fine, the District must also amend the Bylaw Notice Enforcement and Municipal Ticket Information Bylaws. This amending bylaw will include new schedules that lay out the penalties for the infractions contained in the Wildlife and Vector Bylaw. The Bylaw Notice Enforcement Bylaw No. 760 designates the bylaw contraventions that may be dealt with by Bylaw Notice, establishes the amount of the penalty and the period for payment or dispute of the Notice. The bylaw establishes that the District participates in a Bylaw Notice Dispute Adjudication System to resolve disputes in relation to Bylaw Notices and the legislation establishes a maximum penalty amount of \$500. The dispute resolution system is a more cost-effective administrative system for enforcing minor bylaw contraventions.

The Municipal Ticket Information Bylaw No. 753 enables prosecution by the District of minor to medium contraventions of the District bylaws. The bylaw establishes which offences are subject to municipal ticketing, who can issue the ticket and what penalties may be imposed. The current maximum penalty under the *Community Charter Bylaw Enforcement Ticket Regulation* is \$3000 or \$1,000 for young persons. In the case of a continuing offence, the maximum fine may be imposed for each day the offence continues.

In determining fine amounts, staff used comparisons from seven other municipalities. The comparisons included the sample municipalities that Council viewed at the strategy session in 2024. As mentioned, some municipalities have very robust detailed Wildlife and Vector Bylaws while others limited it to one section in their Solid Waste Bylaw. The sample provided a greater scope of penalties to draw from and showed a variety of amounts that are currently being used which enabled staff to determine penalties suitable for the District. A Comparison Table is attached for Council's information.

While the proposed bylaws implement fines and penalties, enforcement of District bylaws is governed by Bylaw Enforcement and Building Compliance Policy 187 that states the primary objective of enforcing bylaws shall be to obtain voluntary compliance through education, information and effective enforcement based on consistency, education and fairness. Enforcement of bylaw contravention is primarily initiated on a complaint basis except as otherwise set out in the policy. Staff do not anticipate any additional enforcement action although the bylaw will provide an opportunity for education and residents, and, where appropriate, penalties can be issued.

#### FINANCIAL IMPLICATIONS

 $\boxtimes$  None

#### COMMUNICATION

Staff will work with the Communications team to provide community information on the new bylaw and associated penalties.

#### **ALTERNATE RECOMMENDATION(S)**

1. THAT the Wildlife and Vector Attractant Bylaw No. 1280, 2025 be referred back to staff for amendments as identified by Council.

Respectfully Submitted. Philippa Harding, Manager of Corporate Administration

#### **Report Approval Details**

Document Title:	Wildlife and Vector Attractant Bylaw No. 1280, 2025.docx
Attachments:	<ul> <li>Fine Comparable Table.pdf</li> <li>Wildlife and Vector Attractant Bylaw No. 1280, 2025.pdf</li> <li>BNE and MTI Amendment (Wildlife Vector) Bylaw 1281, 2025.pdf</li> </ul>
Final Approval Date:	May 14, 2025

This report and all of its attachments were approved and signed as outlined below:

Reyna Seabrook, Director of Corporate Services - May 9, 2025 - 10:00 AM

Greg Price, Manager of Building and Bylaw Services - May 13, 2025 - 12:38 PM

Jeremy Frick, Director of Development Approvals - May 14, 2025 - 8:07 AM

Paul Gipps, Chief Administrative Officer - May 14, 2025 - 9:56 AM

Makayla Ablitt, Legislative & FOI Coordinator - May 14, 2025 - 10:55 AM

#### WILDLIFE & VECTOR BYLAW FINE COMPARISONS TABLE

Designated contravention	ARMSTRONG	VERNON	COLDSTREAM	KELOWNA	RDCO
Feed or attempt to feed Wildlife or Vectors	\$100.00	\$375.00	\$450.00	\$150.00	XX
Provide, leave or place an Animal Attractant on any property, in a manner that attracts or could attract Wildlife or Vectors	\$100.00	\$375.00	\$450.00	\$150.00	\$500.00
Cause, permit or allow the accumulation, storage or collection of an Animal Attractant on any property, in a manner that attracts or could attract Wildlife or Vectors	\$100.00	\$100.00	\$450.00	XX	\$500.00
Cause, permit or allow a nuisance to be created by the presence of accumulation of an Animal Attractant on any property	\$100.00	\$100.00	\$450.00	XX	\$500.00
Cause, permit or allow a nuisance to be created by the presence of Wildlife or Vectors on a property	\$100.00	ХХ	ХХ	XX	ХХ
Allow any outdoor refrigerator, freezer, storage container, device or apparatus that contains Animal Attractants to be located or equipped so that it is accessible to Wildlife or Vectors	\$100.00	ХХ	\$150.00	ХХ	ХХ
Cause, permit or allow the accumulation of any garbage or compost on a property in a manner that attracts, or could attract, or may be accessible to Wildlife or Vectors	\$100.00	XX	\$150.00	ХХ	XX
Any building or improvement to provide food, shelter, or breeding conditions that could attract Wildlife or Vectors	\$100.00	ХХ	ХХ	ХХ	XX
Any brush, trees, weeds or other growths to provide food, shelter, or breeding conditions that could attract Wildlife or Vectors	\$100.00	XX	XX	ХХ	XX
Any water, whether moving or standing, to provide food, shelter, or breeding conditions that could attract Wildlife or Vectors	XX	ХХ	xx	ХХ	ХХ
Any other condition on a property to provide food, shelter, or breeding conditions that could attract Wildlife or Vectors	\$100.00	XX	xx	XX	XX

SQUAMISH: \$230.00 for all but "unregistered hens attracting wildlife" = \$500.00 VANCOUVER: \$500.00 for feed or attempt to feed, leave attractants, and fail to comply.



## **Report to Council**

**District of Lake Country** 

To:	Mayor and Council	Meeting Date: May 20, 2025
From:	Paul Gipps, CAO	Meeting Type: Regular Council Meeting
Prepared by: Department:	Philippa Harding, Manager of Corporate Corporate Services	Administration
Title:	Wildlife and Vector Attractant Bylaw No.	1280, 2025
Description:	To consider a Wildlife and Vector Attracta	ant Bylaw and associated penalties.

#### RECOMMENDATION

THAT Wildlife and Vector Attractant Bylaw No. 1280, 2025 be read a first, second and third time; AND THAT BNE and MTI Amendment (Wildlife and Vector) Bylaw 1281, 2025 be read a first, second and third time.

#### **DISCUSSION/ANALYSIS**

At the July 20, 2021 Regular Council Meeting Council passed a motion directing staff to research and report back on implementing a wildlife and vector bylaw. On January 16, 2024 Council reconfirmed this motion and requested the wildlife and vector information be brought forward to a Strategy Session. Council received a <u>presentation</u> at the April 16, 2024 Strategy Session.

Staff reviewed and brought forward a number of bylaws from other municipalities that covered a wide variety of topics and options ranging from bees to horses. Also included in the review was the WildSafe BC <u>"Wildlife</u> <u>Attractant Bylaw Toolkit (2022)</u>" which is focused on mitigating bear-human interactions and does not include vectors. These sample bylaws and the toolkit assisted Council in narrowing down the scope of a bylaw for Lake Country. Staff also noted that Kelowna and the Regional District of Central Okanagan have included "managing attractants" in their Solid Waste Bylaw as opposed to a separate wildlife and vector bylaw. This was a recommendation of the Regional Solid Waste Technical Advisory Committee.

The City of Armstrong Wildlife and Vector Bylaw was noted by Council in the 2021 discussion in that it may be an easily transferable bylaw to suit the District's needs. In the Armstrong bylaw the "Managing Attractants" section is the same as the "Managing Attractants" section in the WildSafe BC Toolkit. Along with the WildSafe BC Managing Attractants, Armstrong also included vectors and an additional section prohibiting fallen fruit from remaining on the ground for more than three days.

During the 2024 strategy session Council reviewed prohibitions in existing District bylaws. This included the Parks Bylaw, Animal & Poultry Bylaw, Solid Waste Bylaw, Highways Bylaw and Nuisance Bylaw. Council determined that the example bylaw best suited for the District of Lake Country needs was the Vancouver Wildlife Feeding Regulation Bylaw.

When adding a regulatory bylaw with the potential of a fine, the District must also amend the Bylaw Notice Enforcement and Municipal Ticket Information Bylaws. This amending bylaw will include new schedules that lay out the penalties for the infractions contained in the Wildlife and Vector Bylaw. The Bylaw Notice Enforcement Bylaw No. 760 designates the bylaw contraventions that may be dealt with by Bylaw Notice, establishes the amount of the penalty and the period for payment or dispute of the Notice. The bylaw establishes that the District participates in a Bylaw Notice Dispute Adjudication System to resolve disputes in relation to Bylaw Notices and the legislation establishes a maximum penalty amount of \$500. The dispute resolution system is a more cost-effective administrative system for enforcing minor bylaw contraventions.

The Municipal Ticket Information Bylaw No. 753 enables prosecution by the District of minor to medium contraventions of the District bylaws. The bylaw establishes which offences are subject to municipal ticketing, who can issue the ticket and what penalties may be imposed. The current maximum penalty under the *Community Charter Bylaw Enforcement Ticket Regulation* is \$3000 or \$1,000 for young persons. In the case of a continuing offence, the maximum fine may be imposed for each day the offence continues.

In determining fine amounts, staff used comparisons from seven other municipalities. The comparisons included the sample municipalities that Council viewed at the strategy session in 2024. As mentioned, some municipalities have very robust detailed Wildlife and Vector Bylaws while others limited it to one section in their Solid Waste Bylaw. The sample provided a greater scope of penalties to draw from and showed a variety of amounts that are currently being used which enabled staff to determine penalties suitable for the District. A Comparison Table is attached for Council's information.

While the proposed bylaws implement fines and penalties, enforcement of District bylaws is governed by Bylaw Enforcement and Building Compliance Policy 187 that states the primary objective of enforcing bylaws shall be to obtain voluntary compliance through education, information and effective enforcement based on consistency, education and fairness. Enforcement of bylaw contravention is primarily initiated on a complaint basis except as otherwise set out in the policy. Staff do not anticipate any additional enforcement action although the bylaw will provide an opportunity for education and residents, and, where appropriate, penalties can be issued.

#### FINANCIAL IMPLICATIONS

oxtimes None

#### COMMUNICATION

Staff will work with the Communications team to provide community information on the new bylaw and associated penalties.

#### **ALTERNATE RECOMMENDATION(S)**

1. THAT the Wildlife and Vector Attractant Bylaw No. 1280, 2025 be referred back to staff for amendments as identified by Council.

Respectfully Submitted. Philippa Harding, Manager of Corporate Administration

#### **Report Approval Details**

Document Title:	Wildlife and Vector Attractant Bylaw No. 1280, 2025.docx
Attachments:	<ul> <li>Fine Comparable Table.pdf</li> <li>Wildlife and Vector Attractant Bylaw No. 1280, 2025.pdf</li> <li>BNE and MTI Amendment (Wildlife Vector) Bylaw 1281, 2025.pdf</li> </ul>
Final Approval Date:	May 14, 2025

This report and all of its attachments were approved and signed as outlined below:

Reyna Seabrook, Director of Corporate Services - May 9, 2025 - 10:00 AM

Greg Price, Manager of Building and Bylaw Services - May 13, 2025 - 12:38 PM

Jeremy Frick, Director of Development Approvals - May 14, 2025 - 8:07 AM

Paul Gipps, Chief Administrative Officer - May 14, 2025 - 9:56 AM

Makayla Ablitt, Legislative & FOI Coordinator - May 14, 2025 - 10:55 AM

#### DISTRICT OF LAKE COUNTRY

#### **BYLAW 1281**

#### A BYLAW TO AMEND BYLAW NOTICE AND MTI BYLAWS

The Council of the District of Lake Country, in open meeting assembled, enacts as follows:

- 1. Bylaw Notice Enforcement Bylaw 760, 2010 is hereby amended by:
- 1.1. Adding Schedule A.23 Wildlife and Vector Attractant Bylaw 1280, 2025 attached hereto as Schedule A, in numerical order.
- 2. Municipal Ticket Information Bylaw 753, 2010 is hereby amended by:
- 2.1. Adding the following to Schedule 1 as the last row:

Wildlife and Vector Attractant Bylaw 1280, 2025	Bylaw Enforcement Officer
	Manager of Building and Bylaw Services
	Chief Administrative Officer
	Public Works Manager
	Members of the R.C.M.P.

- 2.2. In sections 3, 4, and 4.i), deleting and replacing the words "Schedules 2 to 23" with the words "Schedules 2 to 24".
- 2.3. In section 7, deleting and replacing the words "Schedules 1 through 18" with "Schedules 1 through 24".
- 2.4. Adding Schedule 24 entitled "Wildlife and Vector Attractant Bylaw 1280, 2025" attached hereto as Schedule B, in numerical order.
- 3. This Bylaw may be cited "BNE and MTI Amendment (Wildlife and Vector) Bylaw 1281, 2025."

READ A FIRST TIME this READ A SECOND TIME this READ A THIRD TIME this

ADOPTED this

Mayor

Corporate Officer

#### SCHEDULE A

#### SCHEDULE A.23

#### Wildlife and Vector Attractant Bylaw 1280, 2025

Section No.	Designated contravention	Column	Column A2	Column A3	Column A4
in bylaw		Penalty	Payment	Payment	Agreement
			Penalty	Penalty	Available
2.1.(a)	Feed or attempt to feed Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes
2.1.(b)	Provide Animal Attractant	\$100.00	\$50.00	\$125.00	Yes
2.1.(c)	Accumulate Animal Attractant	\$100.00	\$50.00	\$125.00	Yes
2.1.(d)	Nuisance created by Animal Attractant	\$100.00	\$50.00	\$125.00	Yes
2.1.(e)	Nuisance created by Wildlife or Vectors on property	\$100.00	\$50.00	\$125.00	Yes
2.1.(f)	Storage container containing Animal Attractants is accessible	\$100.00	\$50.00	\$125.00	Yes
2.1.(g)	Accumulate garbage or compost that attracts Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes
2.2.(a)	Structure that attracts Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes
2.2.(b)	Growths that could attract Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes
2.2.(c)	Water that could attract Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes
2.2.(d)	Conditions that attract Wildlife or Vectors	\$100.00	\$50.00	\$125.00	Yes

#### SCHEDULE B

#### **SCHEDULE 24**

#### Wildlife and Vector Attractant Bylaw 1280, 2025

Column 1 Section No.	Column 2 Authorized Expressions	Column 3 Set Fine in S	Column 4 Set Fine in S if Paid
in Bylaw			within 30 days
2.1.(a)	Feed or attempt to feed Wildlife or Vectors	\$100.00	\$50.00
2.1.(b)	Provide Animal Attractant	\$100.00	\$50.00
2.1.(c)	Accumulate Animal Attractant	\$100.00	\$50.00
2.1.(d)	Nuisance created by Animal Attractant	\$100.00	\$50.00
2.1.(e)	Nuisance created by Wildlife or Vectors on property	\$100.00	\$50.00
2.1.(f)	Storage container containing Animal Attractants is accessible	\$100.00	\$50.00
2.1.(g)	Accumulate garbage or compost that attracts Wildlife or Vectors	\$100.00	\$50.00
2.2.(a)	Structure that attracts Wildlife or Vectors	\$100.00	\$50.00
2.2.(b)	Growths that could attract Wildlife or Vectors	\$100.00	\$50.00
2.2.(c)	Water that could attract Wildlife or Vectors	\$100.00	\$50.00
2.2.(d)	Conditions that attract Wildlife or Vectors	\$100.00	\$50.00



## Okanagan Basin

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www.obwb.ca

#### **OBWB Directors**

Blair Ireland - Chair, Regional District of Central Okanagan

**Doug Holmes - Vice-Chair,** Regional District of Okanagan-Similkameen

**Victor Cumming,** Regional District of North Okanagan

**Rick Fairbairn,** Regional District of North Okanagan

**Bob Fleming,** Regional District of North Okanagan

Wayne Carson, Regional District of Central Okanagan

Charlie Hodge, Regional District of Central Okanagan

Subrina Monteith, Regional District of Okanagan-Similkameen

#### Sue McKortoff, Regional District of Okanagan-

Similkameen

**Tim Lezard,** Okanagan Nation Alliance

**Bob Hrasko,** Water Supply Association of B.C.

Jeremy Fyke, Water Stewardship Council

The next regular meeting of the OBWB will be Tuesday, June 3, 2025 at the offices of the RDOS in Penticton, 101 Martin St, Penticton, BC.

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#### **Okanagan Basin Water Board Meeting Highlights**

- New Water Quality Project Manager begins at OBWB: The Okanagan Basin Water Board's (OBWB) May Board meeting included the introduction of Christina White, the new Water Quality Project Manager. A Registered Professional Biologist with 12 years of experience in aquatic biology, White's appointment will expand the OBWB's capacity and support ongoing programs such as invasive watermilfoil control, invasive mussel prevention, and water quality research.
- Joint OBWB-OWSC Meeting Strengthens Collaboration: The OBWB and the Okanagan Water Stewardship Council (OWSC) held their second annual joint meeting at the Capri Hotel in Kelowna. The session focused on strengthening communication and coordination between the OBWB and its technical advisory body. By bringing together local elected officials and water experts, the meeting fostered strategic alignment ahead of the OBWB's 2025–2029 planning cycle and encouraged deeper collaboration on critical water issues affecting the Okanagan.
- **OBWB thanks ONA for Letter:** At the May meeting, Water Board Directors expressed their appreciation for the Okanagan Nation Alliance's recent letter to the B.C. Ministry of Water, Land and Resource Stewardship. The letter supports a recent <u>OBWB statement</u> opposing the use of chemical aquatic herbicides in Okanagan lakes, streams, and reservoirs. The ONA's letter was written in response to recent federal and provincial approvals of chemicals, including the aquatic herbicide "ProcellaCOR FX," and an aquatic pesticide formulation of potash. Directors were encouraged by the ONA's letter and reaffirmed their commitment to protecting Okanagan water from chemical contamination.
- Launch of 2025 public outreach campaigns Directors were informed that the 2025 "Make Water Work" and "Don't Move a Mussel" public outreach campaigns are in their final stages of preparation. This year, staff are pleased to announce a collaboration between the Make Water Work campaign and FireSmart<sup>™</sup>, promoting WaterWise landscaping practices that also create fire-resilient yards. The annual spring launch of Make Water Work will be held at 11:00 a.m. on Wednesday, May 21, 2025, at the xeriscape gardens in front of Armstrong City Hall. Community leaders and WaterWise garden experts are expected to speak at the launch.
- **OBWB** Advances Harmful Algal Bloom Monitoring Initiative: Water Stewardship Director Dr. Nelson Jatel updated Directors on collaborative efforts with the City of Kelowna and Westbank First Nation to monitor harmful algal blooms in Okanagan Lake. Together, the partners have submitted a funding proposal to Environment and Climate Change Canada for a project titled "Collaborative Monitoring and Early-Warning System for Harmful Algal Blooms." With a proposed budget of approximately \$180,000, the project aims to develop a region-wide monitoring network and early-warning system for cyanobacteria blooms, running from September 2025 to August 2027. The application requests 50% funding through EcoAction, with OBWB contributing \$30,000 and significant in-kind support for coordination and data management. Designed to be both scalable and transferable, the system offers long-term value for Canadian water utilities facing climate -related water quality challenge.

**OBWB** Awards Hydrometric Monitoring Contract to ONA: The OBWB Board of Directors has approved a \$344,080 contract with the Okanagan Nation Alliance (ONA) for the 2025– 26 operation and maintenance of hydrometric stations under the OBWB Hydrometric Information Network Program. This decision reflects the ONA's proven technical expertise and reinforces the strong, ongoing partnership between the two organizations in support of regional water monitoring.

#### For more information, please visit: www.OBWB.ca



#### COUNCIL'S VALUES, VISION, AND MISSION STATEMENT

#### VALUES

- 1. INTEGRITY: We practice honesty by showing a consistent adherence to our shared vision and mission statement and through the truthfulness and accuracy of our actions.
- 2. ACCOUNTABILITY: We answer to our citizens with the expectation that we acknowledge and assume responsibility for our actions, decisions, and policies at all times.
- **3.** EMPATHY: We make a sincere effort to understand our citizens' perspective and assist them with all our abilities within the boundaries given to us by the law, local regulations and approved policies.

#### VISION

Lake Country, Living the Okanagan Way. Embracing our Histories and Nurturing our Future

#### **MISSION STATEMENT**

To nurture a healthy natural environment, strong rural character and urban core, sustainable infrastructure, economic opportunities, an inclusive community with involved citizens, through respectful, transparent government, focused on balanced strategic decision-making.

#### THE 5 PILLARS OF OUR VISION AND MISSION STATEMENT

ENVIRONMENT:	Maintaining a healthy and natural environment through responsible use, protection, and sustainable practices.
INFRASTRUCTURE:	Well maintained infrastructure and facilities that meet community needs and allow growth and development for prosperity.
ECONOMY:	Building a strong and vibrant community by attracting, supporting and retaining businesses and residents.
SOCIAL:	Building Social Capital and engaging citizens and partners to improve the well-being and diversity of the community.
GOVERNANCE:	Fiscally sustainable government focused on strategic decision-making, transparency and inclusiveness.

# LAKE COUNTRY