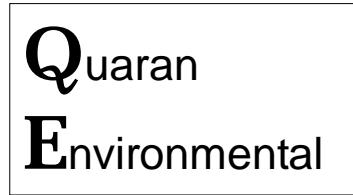


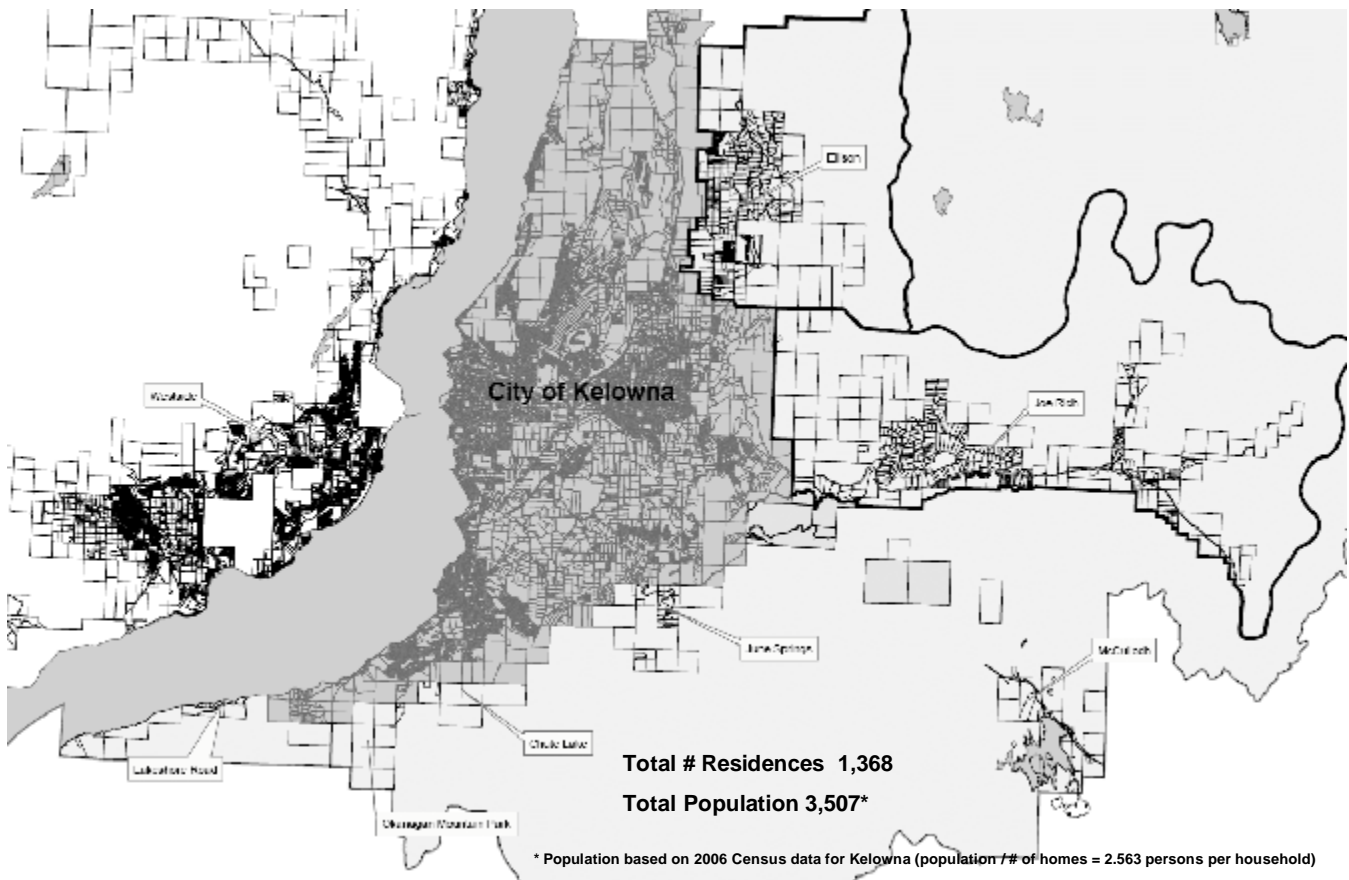
RDCO Area "East" Liquid Waste Management Plan *Options*

Public Information Meetings June 13 & 14, 2007

Tim Forty, P.Eng., Quaran Environmental
Jan Enns, MA, Jan Enns Communications



LWMP Area



Total # Residences 1,368
Total Population 3,507*

* Population based on 2006 Census data for Kelowna (population / # of homes = 2.563 persons per household)

What options have
been identified to date
for the management
of sewage wastes
in RDCO Area “**East**”?

Important Controls

- w Official Community Plan (OCP)
 - w Ellison area - Specifies land use policy and guides development in accord with the community's expressed wishes in the Ellison area
- w Rural Land Use Bylaw (RLUB)
 - w Joe Rich area - Specifies land use policy and guides development in accord with the community's expressed wishes in the Joe Rich area
- w Agricultural Land Reserve (ALR)
 - w Agricultural Land Commission (ALC) is tasked with the preservation of farmland and has control over how farmland may be developed or used for non-farming activities

City of Kelowna Sewer servicing policy for non- City areas

Policy in Short Form

If you want sewer
service you must
join the City



APPROVAL DATE: 2000/09/11
RESOLUTION #: R267/06/03/20
REPLACING #: R750/00/09/11
DATE OF LAST REVIEW: April 2009

SUBJECT: SEWER SERVICING - NON-CITY AREA

There are areas immediately outside the City limits that have been developed with an urban setting that require, or will require, adequate sewage disposal. These include existing neighborhoods that are experiencing septic field or treatment system failure or where an environmental or health need has been identified. There are also potential new developments that, to avoid installing a private sewage collection, treatment, and disposal system, should be connected to conventional sewer treatment facilities. It is generally recognized that when considering environmental, health, and cost benefits, that a central sewage treatment and disposal solution is the better alternative as compared to a number of small individual treatment facilities. The City of Kelowna will permit the connection of certain Regional District areas to the City sanitary sewer collection and treatment system with specific conditions. This policy defines the criteria for determining which properties will be considered.

CRITERIA

- 1) A parcel or area wishing to connect to the City of Kelowna sewer system must support the process required to amalgamate the boundaries of the subject property into the boundaries of the City, and join the City.
- 2) Areas to be considered are only the abutting "Kelowna Fringe Area" within the Regional District where the Regional Directors representing the City of Kelowna have full voting rights. Areas that are remote and do not abut the City boundaries will need special consideration and each case will be brought before City Council and the Regional Board before servicing is permitted.
- 3) There must be no negative net impact on existing City sewer utility customers or development within the City boundary either in the form of increased operating cost or increased Development Cost Charges.
- 4) Any proposal to amalgamate with the City and connect to City sanitary sewer must be reviewed with the appropriate City and Regional District staff and then be submitted to City Council for consideration.
- 5) The City sewer system intended to be utilized must have adequate capacity to serve all Lands in the City identified in the current CCP, and have additional capacity available for the Lands requesting the connection. If the proposed connection results in the need for improvements/expansion to the City sewer system, the benefiting property owner(s) or the Regional District will be required to finance the initial cost of improvements/expansion.

REASON FOR POLICY: To establish criteria to require properties within the Central Okanagan Regional District to join the City of Kelowna to allow connection to the City sanitary sewer system.

LEGISLATIVE AUTHORITY: Council Resolution.

PROCEDURE FOR IMPLEMENTATION: As outlined in policy.

Option 0: Everywhere in RDCO Area East

Status Quo, leave everything as it is Current

- w Everyone currently served by septic tanks, or collection and treatment systems continues on in the same fashion (O&M)
- w New lots using on-site disposal must be 1 Ha or larger in area (**OBWB & MCS - Ministry of Community Services**)
- w New home construction would use septic tanks or existing systems if in serviced subdivision

Ellison Area

Ellison Community

Population 741
Residences 289
Parcels 363
Residences at build-out (Unknown)

Scotty Creek

Population 884
Residences 345
Parcels 350
Residences at build-out 345

Sunset Ranch

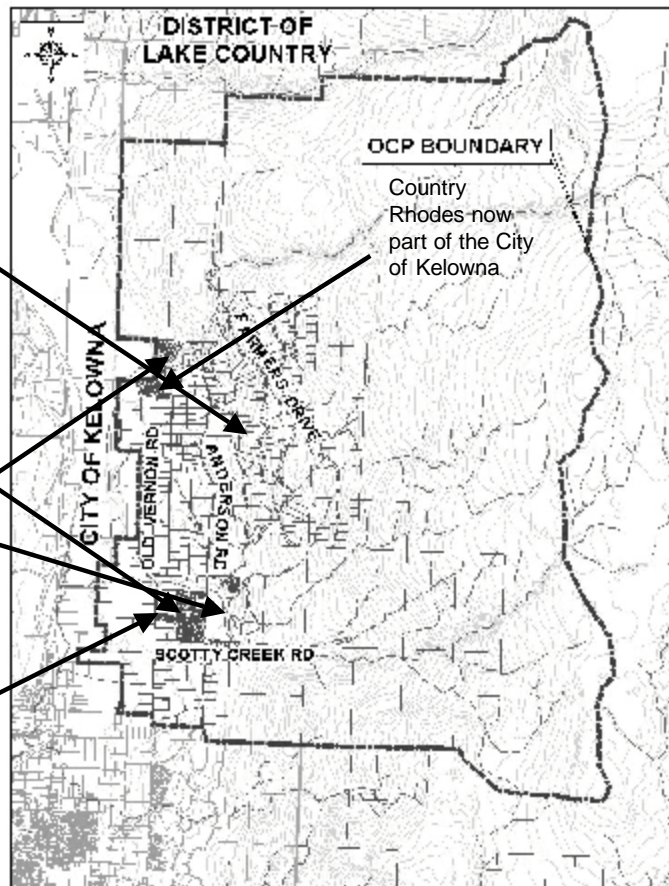
Population 351
Residences 137
Parcels 142
Residences at build-out 450

Spencer Road (Country View)

Population 259
Residences 101
Parcels 101
Residences at build-out 101

Ranch Park Mobile Home Park

Population 195
Residences 76
Parcels 1
Residences at build-out 76



Option 1: Ellison Community

Each residence continues to use an on-site septic tank tile field disposal system Current

- w Everything remains as is
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w There are 289 residences in the area today but the full build-out number is unknown

Ellison

Area

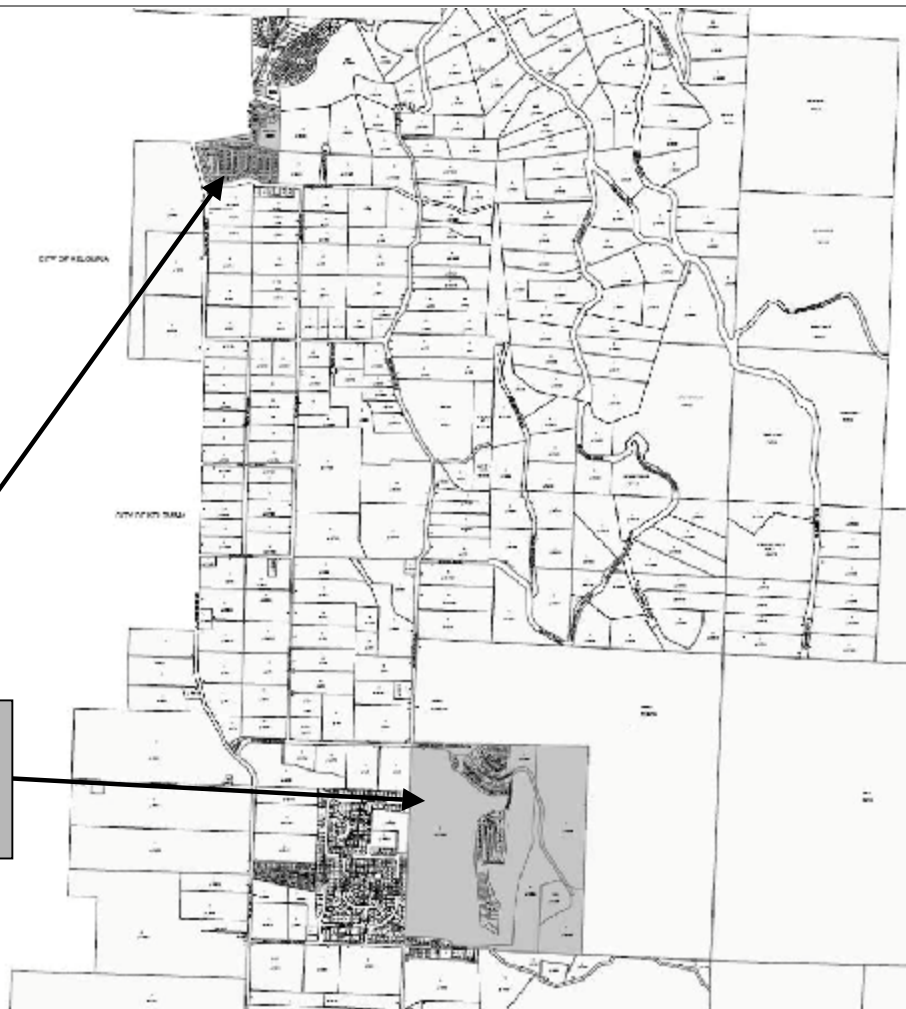
Existing
sewer
service

Sewer service:

Provided to Country Rhodes
by the City of Kelowna and
Country Rhodes is now part
of the City

Sewer service:

Provided to Sunset Ranch
by the City of Kelowna
under special agreement
(Area remains in RDCO)



Option 2: Sunset Ranch

Sunset Ranch area continues to be serviced
by the City of Kelowna **Current**

- w Status quo, nothing changes
- w This is a fixed area which currently has 137 residences and could have as many as 450 residences at full build-out

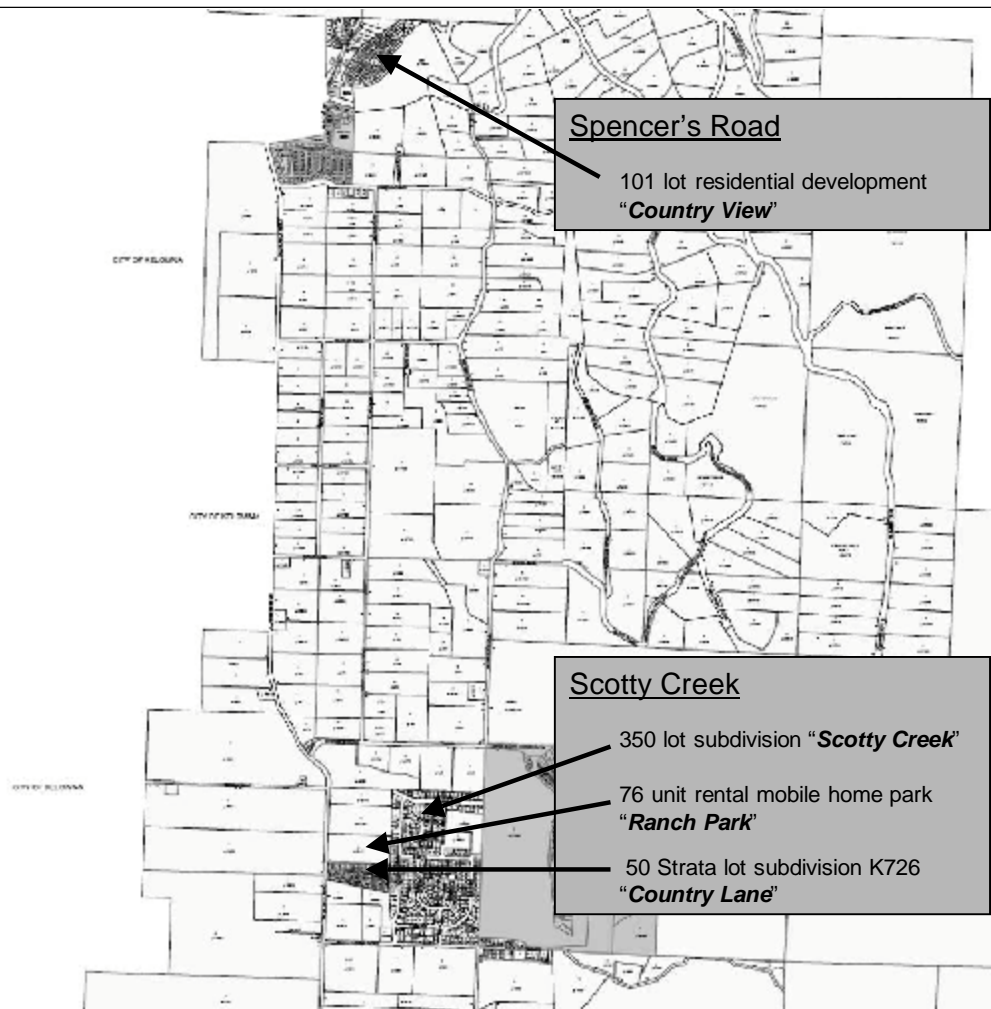
Option 3: Sunset Ranch

Sunset Ranch area sewer service could be provided by RDCO Long term

- w Need to secure land, grants and approvals
- w RDCO would construct, own and operate a sewage treatment & effluent disposal system
- w This is a fixed area which currently has 137 residences and could have as many as 450 residences at full build-out

Ellison Area

Existing high density but unsewered areas



Option 4: Scotty Creek area

Scotty Creek area could petition for boundary expansion and request to be serviced by the City of Kelowna Short term

- w City and residents approval required
- w Scotty Creek area would become part of the City of Kelowna
- w Area is adjacent to Sunset Ranch and sewer service could be provided from there as capacity was designed in
- w Scotty Creek has 345 residences and is currently at full build-out with no additional residences able to be constructed

Option 5: Scotty Creek area

Scotty Creek area could petition the City of Kelowna for sewer service but request to remain in the RDCO Short term

- w City* and residents approval required
- w Area is adjacent to Sunset Ranch and sewer service could be provided from there as capacity was designed in
- w Scotty Creek has 345 residences and is currently at full build-out with no additional residences able to be constructed

Option 6: Scotty Creek area

Scotty Creek area sewer service could be provided by the RDCO **Long term**

- w Residents approval, land, grants and discharge authorization required
- w RDCO would construct and operate its own sewage treatment plant (STP)
- w The STP could also service the adjacent Sunset Ranch and Country View areas
- w Scotty Creek has 345 residences and is currently at full build-out with no additional residences able to be constructed

Option 7: Spencer's Road "Country View"

Country View area could petition for boundary expansion and ask to be serviced by the City of Kelowna **Short term**

- w City and residents approval required
- w Country View area would become part of the City of Kelowna (same as adjacent Country Rhodes subdivision)
- w Country View has 101 residences and is currently at full build-out with no additional residences able to be constructed

Option 8: Spencer's Road "Country View"

Country View area sewer service could be provided by the RDCO Long term

- w Residents approval, land, grants and discharge authorization required
- w RDCO would construct and operate its own sewage treatment plant (STP)
- w There are no other nearby areas which could share the costs
- w Country View has 101 residences and is currently at full build-out with no additional residences able to be constructed

Joe Rich Area

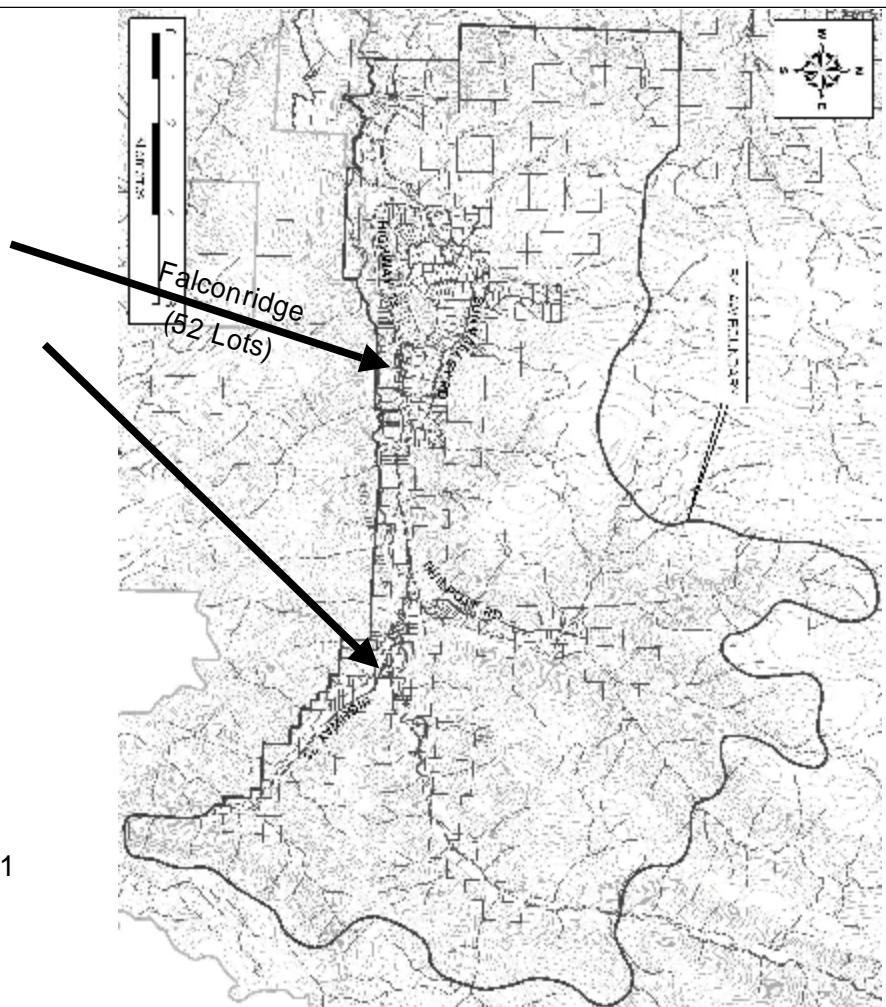
Existing high density but NOT sewered areas

Population 956

Residences 373

Parcels 471

Residences at build-out 471



Option 9: Joe Rich area

Each residence continues to use an on-site sewage treatment and disposal system

Current

- w Status quo, no change
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w There are 373 residences in the area today but the full build-out number is unknown

Option 10: Joe Rich area

Sewer service could be provided by the RDCO for the 2 high density areas

Long term

- w Residents approval, land, grants and discharge authorization required
- w RDCO would construct and operate the sewage treatment plant (Septic? Secondary?)
- w There are no other nearby areas which could share the costs
- w There are only two small lot subdivision areas in Joe Rich and they are some distance apart

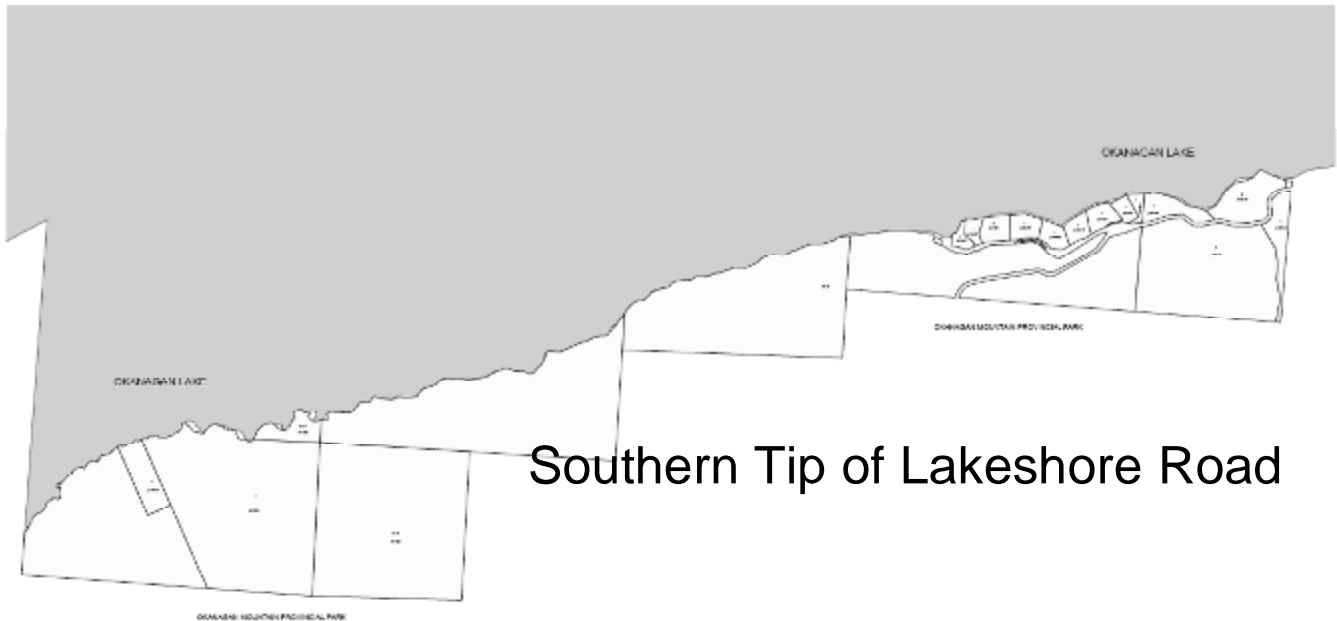
Southern Tip of Lakeshore Road

Population 21

Residences 8

Parcels 18

Residences at build-out 22



Option 11: Southern Tip of Lakeshore Road area

Each residence continues to use an on-site sewage treatment and disposal system

Current

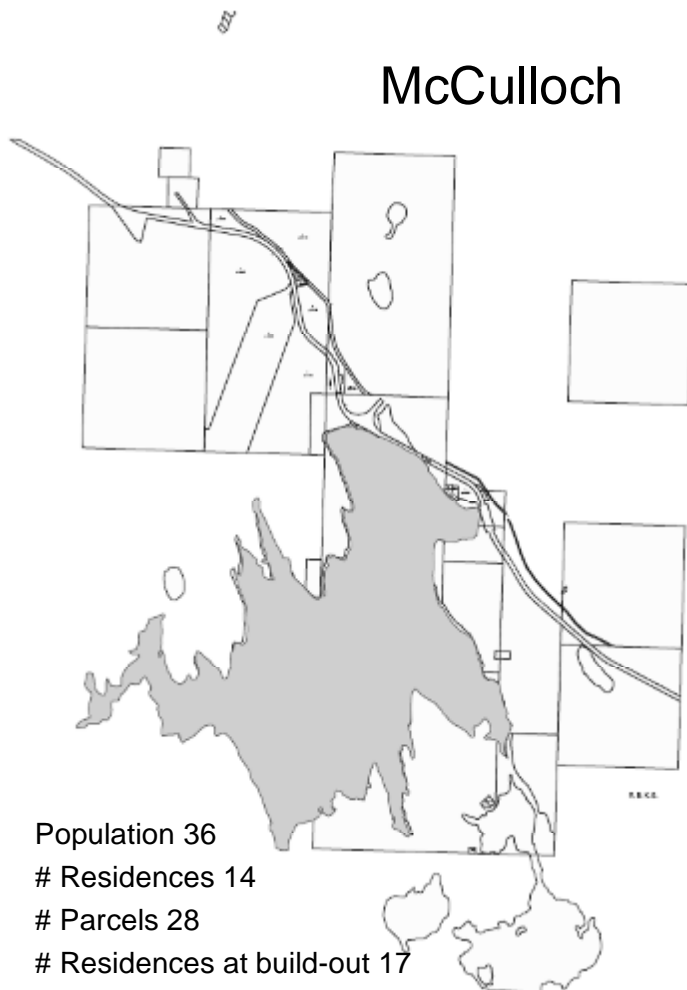
- w Status quo, no change
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w Recent media reports indicate the possibility of a new subdivision in the area**

Option 12: Southern Tip of Lakeshore Road area

Southern Tip of Lakeshore Road area could petition for boundary expansion and ask to be serviced by the City of Kelowna Short term (Long term implementation)

- w City and residents approval required
- w The Southern Tip of Lakeshore Road area would become part of the City of Kelowna
- w This is a fixed area which currently has 8 residences and could have a maximum of 22 residences at full build-out

Note: City sewer is some distance from the boundary



McCulloch & June Springs



June Springs

Population 56
Residences 22
Parcels 29
Residences at build-out 29

Option 13: McCulloch area

Each residence continues to use an on-site sewage treatment and disposal system

Current

- w Status quo, no change
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w There are 14 residences in the area with a maximum of 17 at full build-out

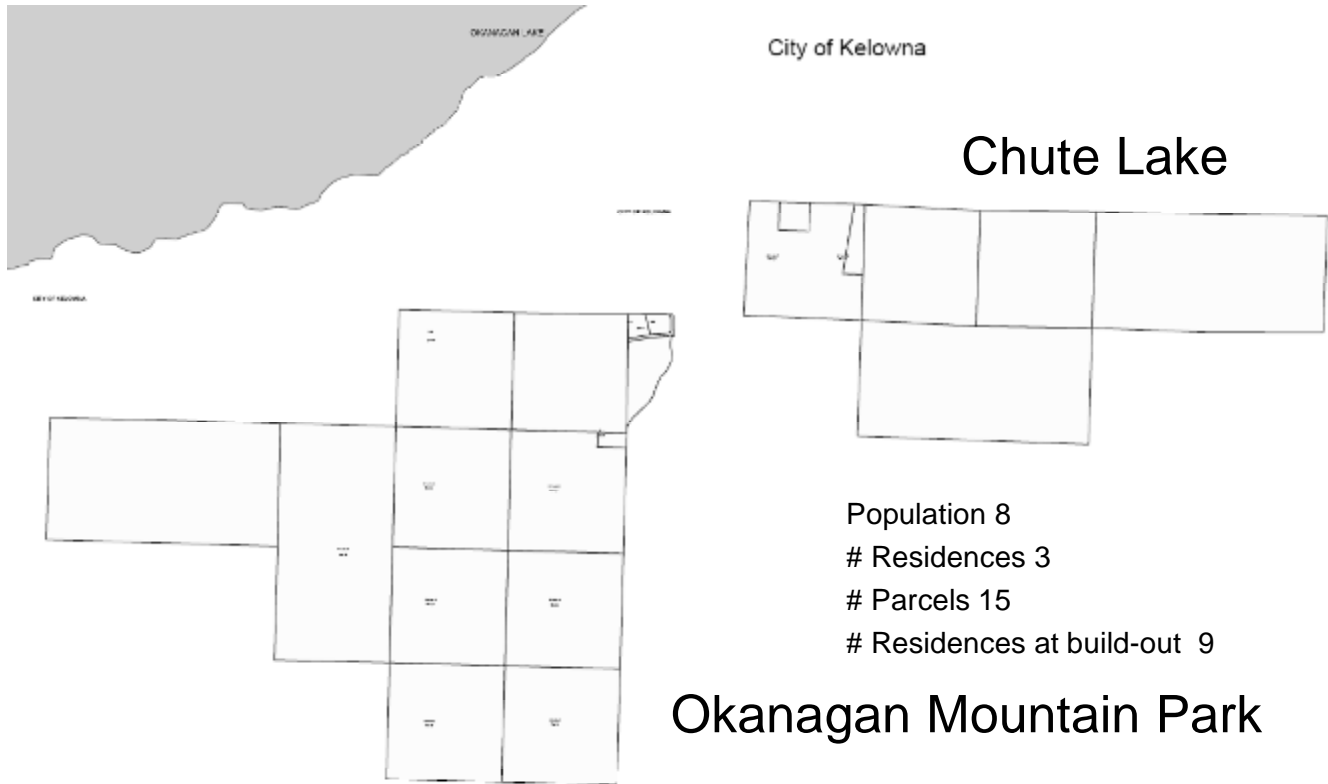
Option 14: June Springs area

Each residence continues to use an on-site sewage treatment and disposal system

Current

- w Status quo, no change
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w There are 22 residences in the area with a maximum of 29 at full build-out

Chute Lake & OK Mountain Park



Option 15: Chute Lake & OK Mountain Park area

Each residence continues to use an on-site sewage treatment and disposal system

Current

- w Status quo, no change
- w New home construction would use on-site sewage treatment and disposal systems with septic tank tile field systems being the most likely choice
- w There are 3 residences in the area with a maximum of 9 at full build-out

Option 16: All Area “East”

“Enhanced” Status Quo options

- w Public education programs: **Short term**
 - w Optimal septic tank operation and maintenance
 - w Water conservation
 - w Source control
- w Pump-out bylaw ** **Long term**
 - w Mandatory or voluntary with incentives
- w Water conservation bylaw **Long term**
 - w Mandatory or voluntary with incentives
- w Source control bylaw **Long term**
- w Environmental monitoring program(s) **Short term**

Option 17: Existing small lot areas

Sewer service could be provided by a private utility **Long term**

- w Residents approval, land and discharge authorization required
- w The utility would construct, own and operate the sewage treatment plant(s) (STPs)
- w A single central STP could service the Sunset Ranch and Scotty Creek areas
- w A small STP could service the Country View area

Note: Grant monies would not be available and there is a large security deposit required under the MSR (\$1,440 x Q)

Option 18: All NEW subdivisions

Sewer services could be constructed by the developers with systems turned over to the RDCO upon startup

Short term

- w A developer would construct each of the systems to RDCO standards, using standard pumps, pipe, valves and fittings to reduce RDCO inventory requirements and facilitate replacement of worn out or defective parts and equipment
- w RDCO would own and operate the systems

Option 19: Stormwater

Stormwater may present an issue in the LWMP area, however, due to limited resources it is not possible to include stormwater management in this LWMP

Short term

- w Recommend that a commitment be made to fund an engineering study in the LWMP area to determine if stormwater is an issue. The study would be conducted over the next 5 years and would form the basis for the management of stormwater when next the LWMP is updated
 - w Existing watershed studies conducted for the City of Kelowna by Dayton & Knight should also be reviewed
 - w Stormwater policy for new subdivisions is needed

Option 20: Agricultural Wastewater

Specific procedures are in place to ensure that agricultural wastewater is properly managed and does not cause pollution

Current

w Agricultural wastewater issue

- w Reported to Ministry of Agriculture (MA)
- w MA contacts a “Farm Practices Review Board” (FPRB)
- w FPRB reviews the issue and makes recommendations. They may require that a Best Agricultural Management Plan (BAMP) be developed and implemented
- w If issue is unresolved and causing pollution MOE can take action

What can I do?

Feedback on Conceptual Options

Your suggestions and comments regarding these or additional options are requested and welcomed

A Reminder!

LWMP Overview Summary

- w A LWMP is a tool which allows the citizens of a community to understand the issues in their community, with respect to wastewater, and assists them in selecting the best option for the resolution of those issues
- w A LWMP belongs to the community which developed it
- w The job of the consultants **and** RDCO staff is to ASSIST in developing the LWMP, by providing clear, understandable, technical **and** cost information

Wrap-up!

- w Questions?

For Further Information

- w RDCO website www.regionaldistrict.com
- w Telephone RDCO Engineering Services at (250)469-6327
- w Or email lwmp@cord.bc.ca