



PEACE RIVER REGIONAL DISTRICT
ELECTORAL AREA DIRECTORS COMMITTEE MEETING

A G E N D A

Thursday, April 20, 2017
in the Regional District Office Boardroom, 1981 Alaska Avenue, Dawson Creek, BC
Commencing at 10 a.m.

1. CALL TO ORDER: **Director Goodings to Chair meeting**
2. DIRECTOR'S NOTICE OF NEW BUSINESS:
3. ADOPTION OF AGENDA:
4. ADOPTION OF MINUTES:
M-1 Electoral Area Directors' Committee Minutes of March 16, 2017
5. BUSINESS ARISING FROM THE MINUTES:
BA-1 Deborah Jones-Middleton, Protective Services Manager, Digital Road Atlas
6. DELEGATIONS
D-1 Stu Garland and Ian Campbell, Moberly Lake Community Association - Moberly Lake Shoreline Condition Assessment (10:30 a.m.)
7. CORRESPONDENCE:
8. REPORTS:
R-1 March 2, 2017 - Bruce Simard, General Manager of Development Services - Consultation with Municipalities Regarding Municipal Participation in and Voting on Electoral Area Planning
R-2 March 31, 2017 - Erin Price, Bylaw Enforcement Officer - Enforcement File Quarterly Update.
9. NEW BUSINESS:
NB-1 Boards from the Chetwynd Arena [Director Goodings]
10. COMMUNICATIONS:
11. DIARY:
12. ADJOURNMENT:



**PEACE RIVER REGIONAL DISTRICT
ELECTORAL AREA DIRECTORS' COMMITTEE
MEETING MINUTES**

DATE: March 16, 2017
PLACE: Regional District Office Boardroom, Dawson Creek, BC
PRESENT:

DIRECTORS: Karen Goodings, Electoral Area 'B' and Meeting Chair
Brad Sperling, Electoral Area 'C'
Leonard Hiebert, Electoral Area 'D'
Dan Rose, Electoral Area 'E' (via telephone)

STAFF: Chris Cvik, Chief Administrative Officer
Trish Morgan, General Manager of Community and Electoral Area Services
Bruce Simard, General Manager of Development Services
Deborah Jones-Middleton, Protective Services Manager
Aden Fulford, GIS Coordinator
Barb Coburn, Recording Secretary

CALL TO ORDER Chair Goodings called the meeting to order at 10:06 a.m.

ADOPTION OF AGENDA:

March 16, 2017 Agenda

MOVED by Director Hiebert, SECONDED by Director Sperling,
That the Electoral Area Directors' Committee agenda for the March 16, 2017 meeting be adopted,
including items of new business:
Call to Order: Director Goodings to Chair the meeting
Director's Notice of New Business:
Adoption of Agenda:
Adoption of Minutes:
M-1 Electoral Area Directors' Committee Minutes of February 16, 2017
Business Arising from the Minutes:
Delegations
D-1 Aden Fulford, GIS Coordinator - PRRD Web Map Tutorial.
Correspondence:
Reports:
R-1 December 31, 2017 - Erin Price, Bylaw Enforcement Officer - Enforcement File Quarterly Update.
R-2 March 9, 2017 - Deborah Jones-Middleton, Protective Services Manager and Aden Fulford, GIS
Coordinator - Community Boundaries
New Business:
NB-1 Farmers' Advocacy Office for Discussion - Contract Expires Summer 2018
Communications:
Diary:
Adjournment:

CARRIED.

ADOPTION OF MINUTES:

M-1
EADC meeting minutes of
February 16, 2017

MOVED by Director Rose, SECONDED by Director Sperling,
That the Electoral Area Directors' Committee Meeting minutes of February 16, 2017 be adopted.
CARRIED.

Vary the Agenda

MOVED by Director Sperling, SECONDED by Director Hiebert,
That the agenda be varied to deal with item D-1 at the end of the meeting.

CARRIED

April 20, 2017

REPORTS:

R-1
Enforcement File Quarterly Update

MOVED by Director Sperling, SECONDED by Director Rose,
That the Electoral Area Directors' Committee recommends to the Regional Board that staff be requested to draft options to the "PRRD Bylaw Enforcement Policy" on the handling of land use applications brought forward by property owners that are in non-compliance, resulting from a complaint, with zoning or the Official Community Plan, including options for bylaw enforcement on same.

CARRIED.

MOVED by Director Sperling, SECONDED by Director Hiebert,
That the Electoral Area Directors' Committee recommends to the Regional Board that the Regional District forward a letter to the Agricultural Land Commission to express concerns regarding outstanding non-compliance issues in the region and enquiry what remedies are planned to encourage compliance.

CARRIED.

R-2
Community Boundaries

MOVED by Director Sperling, SECONDED by Director Hiebert,
That the Electoral Area Directors' Committee recommends to the Regional Board that the Electoral Area Directors review the Digital Road Atlas (DRA) map and consider amending the existing Provincial DRA Locality Boundaries to better represent community boundaries and that the amended map be brought back to the Electoral Area Directors' Committee for final review and recommendation to the Board.

CARRIED.

MOVED by Director Sperling, SECONDED by Director Hiebert,
That the Electoral Area Directors' Committee recommends to the Regional Board that \$4,000 be allocated for advertising, community meetings to inform residents and meetings with emergency response agencies, regarding proposed changes to the Provincial Digital Road Atlas (DRA) Locality Boundaries.

CARRIED.

Adjournment: The Chair adjourned the meeting at 11:55 a.m.

Karen Goodings, Chair

Barb Coburn, Recording Secretary

From: Deborah Jones-Middleton
Sent: April-10-17 9:19 AM
To: Chair Brad Sperling; Director Karen Goodings; Director Dan Rose; Director Leonard Hiebert
Cc: Trish Morgan; Chris Cvik; Barb Coburn; PRRD_Internal
Subject: Potential Changes to the Locality Boundaries for the Digital Road Atlas

Good Morning Directors

At the March 16, 2017 Electoral Area Directors Committee meeting staff presented the Locality Boundaries to the committee and the committee provided the following resolution:

“That the Electoral Area Directors review the Digital Road Atlas (DRA) map and consider amending the existing Provincial DRA Locality Boundaries to better represent community boundaries and that the amended map be brought back to the Electoral Area Directors’ Committee for final review and direction to the Board.”

Staff will be looking for direction on any changes required to the current Digital Road Atlas for your Electoral Area at the April 20, 2017 Electoral Area Directors Committee meeting.

Thank you

Deborah Jones-Middleton | Protective Services Manager

Direct: 250-784-3215 | Cell: 250-219-4011 | Deborah.Jones-Middleton@prrd.bc.ca

PEACE RIVER REGIONAL DISTRICT | Box 810, 1981 Alaska Highway Avenue, Dawson Creek, BC V1G 4H8

Toll Free: (24 hrs): 1-800-670-7773 | Office: 250-784-3200 | Fax: 250-784-3201 | www.prrd.bc.ca



PEACE RIVER REGIONAL DISTRICT



IMPORTANT: The information transmitted herein is confidential and may contain privileged or personal information. It is intended solely for the person or entity to which it is addressed. Any review, re-transmission, dissemination, taking of any action in reliance upon, or other use of this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please notify the sender and delete or destroy all digital and printed copies.

April 20, 2017



Moberly Lake Shoreline Condition Assessment



Prepared by
InterraPlan Inc.
Moberly Lake, BC.
For
The Moberly Lake Community Association
December 2016

March 16, 2017

Table of Contents

Executive Summary and Key Recommendations	3
Part A: Project Context	5
1.0 Background and Objectives	5
1.1 Project Methodology	7
1.2 Biophysical and Land-Use Features of the Moberly Lake Watershed	9
1.2.1 Fish and Aquatic Habitat:	11
1.2.2 Environmental Sensitivities	13
1.2.3 Water Quality and Flow Monitoring	14
1.2.4 General Land Use and Demographics	16
1.2.5 First Nations Land-Use	18
Part B: Riparian Health Assessment Findings	26
References	47
Appendices	
A. Shoreline Property Owner Survey Results	48

This report is prepared for the primary use of the Moberly Lake Community Association. Permission from InterraPlan for distribution is required as no representations of any kind are made by InterraPlan Inc. to any party with whom it does not have a contract. Copyright 2016 InterraPlan Inc. Moberly Lake Shoreline Condition Assessment (59 p.)

Executive Summary and Key Recommendations

Lakeshore stewardship has been a high priority of the Moberly Lake community for many years. Through its Community Association and other nonprofit organizations (Peace River Watershed Council, The Boreal Centre), there has been a considerable effort to track lake quality in partnership with the BC Ministry of Environment and the BC Lake Stewardship Society under the Volunteer Lake Monitoring Program. A renewed sampling program is currently underway, to determine changes in key parameters which will provide indication of trophic (productivity) status which were previously diagnosed (1999-2003) in the mesotrophic/oligotrophic range with suspected increases in phosphorus loading due to seasonal effects of sediment during the spring and early summer period. Phosphorus sources are also related to land-use management (waste-water, and development impacts) in the settlement areas around the Lake. Algal blooms and aquatic plant infestations can be linked to such increases in nutrients, particularly around shallow bays and the upper River delta and outlet locations. Based upon these early water monitoring assessments, community anecdotal observations, and Northern Health Authority public use site monitoring, it was recommended that shoreline development and riparian health condition should be undertaken. This project to assess riparian health was undertaken to provide an understanding of changing status using standardized field survey methods.

Our research applied the Riparian Health Assessment for Lakes, Sloughs and Wetlands to evaluate several key parameters or indicators a) vegetative cover (species coverage and composition), (b) minimal or no presence of invasive plants or disturbance-caused, undesirable herbaceous species (c) human alteration of riparian zone by vegetation removal or physical modifications. *Based upon those field surveys and subsequent analysis, it was determined that Moberly Lake remains in generally healthy riparian condition (76%). There are however, a significant number of both short and extended reaches in the poor (16%) or moderate (8%) category with varying extent of shorelines in a degraded condition. Due to the combined use of field and GIS measurements, a 2% error factor was used to account for changes in physical shoreline changes from natural events particularly at the upper Moberly River delta. When compared to other rules in Crown land management areas where riparian incursion thresholds (i.e. > 10%) are considered excessive, our work suggests that Moberly Lake is already showing considerable concern. This can be attributed to numerous factors ranging from i) a historical lack of property owner understanding or concern about shoreline stewardship conditions or best-practices, ii) lack of development control or monitoring of Lakeshore Development Guidelines (buffer reduction or removal, road access construction from upland to foreshore and shoreline modifications) and (iii) other water/land-use management issues (waste-water management, or water runoff controls and property development leading to sediment or contaminant inputs) linked to the local catchments in the upland areas beyond the riparian zone.*

The following report is presented in two parts and includes background and reference regarding present land-use, environmental features and community development including both the rural settlement zone under shared management jurisdiction of the Peace River Regional District and the Province, as well as the two First Nations communities which operate under their own governance and federal legislative authority. Such context provides guidance concerning future development on the Lake given these jurisdictional differences and interests in maintaining a collective approach to Lake and watershed protection as articulated in its shared work developing the Moberly Watershed Stewardship Strategy. Part presents summary data according to field data and analysis compiled for 23 shoreline reaches around the Lake.

A key issue will be to consider the unique (social, cultural, environmental, recreational) needs of Moberly Lake in terms of Lake classification for long-term protection of property and environmental values. This work suggests that the rating should be changed

March 16, 2017

from Development Lake (currently allows up to 50% perimeter development) to a modified Special Case status (amended for a limit to max 30% perimeter development) given degraded shoreline condition trends in key settlement areas to limit further loss of riparian function since there are limited areas left for shoreline due to hazardous slopes, shallow groundwater areas and critical environmental habitats. Further recommendations including support for the following measures to ensure implementation of these recommendations for future stewardship of this highly valued and regional amenity Lake;

- application of new land-use conditions (min 15 m setbacks and other provisions) through a new Lakeshore Development Permit area with increased controls on riparian development, designation of environmental sensitive areas;
- need for greatly increased property and realtor education on best-practices in shoreline property stewardship;
- need for regulatory oversight which is currently lacking by regional, provincial and federal authorities;
- new land-use zoning for future development to ensure watershed stewardship objectives with any new residential, commercial development directed into available or new upland areas; proposed industrial land-uses which have potential to impact further on riparian condition or Lake condition should not be permitted;
- establishment of a formal Watershed Stewardship function which involves key stakeholder representatives (at-large and non-government groups), all resource agencies (federal, provincial, regional) and First Nations provided with sufficient capacity through proposed consideration of an annual service-area taxation with First Nation contributions.

Moberly Lake Shoreline Condition Assessment

Part A Project Context

1.0 Background and objectives

The *Moberly Lake Shoreline Condition Assessment* is a project undertaken by the Moberly Lake Community Association with the objective of better understanding the status of riparian health with changes resulting from ongoing development and ecosystem changes. The work builds upon efforts of the MLCA and other community partners related to watershed stewardship and water quality monitoring over a period of approximately twenty years. Support for this component of the Moberly Lake Watershed strategy was provided through a combination of financial and in-kind resources from the MLCA, Peace River Regional District, InterraPlan Inc. and the Saulteau First Nations. The project also includes a renewed Water Quality assessment in collaboration with the BC Volunteer Lake Stewardship Program with the Ministry of Environment which builds upon earlier baseline data gathered through that initiative.



Moberly Lake is a changing community in both character and composition from a land-use development perspective. In terms of demographics, the rural community population has been in decline over the past ten years with 50% of residents now over 50 years of age according to the last available census data (2011). It is likely that trend will continue based upon the present year data when reported. The number of registered dwellings has shifted over the period of interest from 247 in 2001, and increasing to 385 in the rural settlement areas on both the north and shore¹. This change has included conversion of seasonal cottages to permanent homes and luxury residences with an annual converted value of \$53.693 Million for combined residential improvements and land in 2015 with tax assessment value of 5.720 Million.² Given increasing values particularly for shoreline properties, and increased incidence of risks from (flood and wildfire, water quality decline), community representations have been made to the Province and Regional District over the past 15 years to seek improved levels of service to address long-standing community issues and increasing risks. These include development of a potable water supply and waste-water management service as recommended by the Northern Health Authority, watershed assessment/monitoring, flood hazard mapping, emergency measures planning, and regulatory controls on shoreline development. Unfortunately insufficient progress has been made concerning these local priorities of the rural



¹ Urban Systems Ltd. West Peace Fringe Area Background Report, 2014

² Peace River Regional District Annual Financial Report, 2015.

unincorporated community and in part due to a jurisdictional overlap concerning legislated responsibilities. Other support service levels (e.g. fire protection, solid waste services, road maintenance and community hall operation) have been maintained. While both First Nation communities at Moberly Lake do have adequate levels of water/waste-water infrastructure, they share concern the rural community concerns and priorities related to watershed degradation and enhanced stewardship capacity as articulated in the collaborative Moberly Watershed Stewardship Strategy (2008).

As stated, water quality and shoreline development issues continue to be a high priority of the majority of Lake residents as confirmed in property owner surveys and public meetings recognizing this is an area of shared responsibility between (i) the Province and Federal government authorities responsible for Lake quality monitoring, fisheries, foreshore management and flood hazard risk (ii) the Peace River Regional District which is responsible for land-use zoning and building bylaw enforcement affecting shoreline development.



Over this period, and particularly over the past 15 years since the introduction of the PRRD's Lakeshore Development Guidelines (2000) and work by the Northern Health Authority (2001, Water & Sewer Study), there has been a consistent observed decline in Lake quality and riparian condition. Anecdotal evidence includes observed incidence of increased weed outgrowth, increased turbidity and possible nutrient source contributions from failing septic systems as indicated by persistent high levels of fecal and total coliforms and Ecoli recorded by Northern Health sampling. The increased loss of shoreline development, construction of hardened shoreline structures, vegetation removal and shoreline access roads are considered ongoing contributing factors related to water quality and a prevailing concern for a majority of Lake residents including neighbouring First Nations communities.

Other concerns about Lake quality and watershed stewardship relate to effects of upland industrial development in the Upper Moberly drainage the impacts from major natural events including floods (2011, 2016) and wildfire (2014). The June 2016 peak flow event primarily affected properties associated with Lake tributaries with resulting loss of riparian cover, protective works and sediment accumulation in the floodplain locations of affected Creeks (Medicine Woman, Alvin, Pys and LeBleu Creeks). This situation relates very likely to climate change effects as reported by provincial authorities where known hydrological stations predict long-term flood events (1:100 or 1:200) being replicated in short, intense periods of major precipitation accumulation exceeding normal flow conditions for a given period. Changes in temperature, precipitation and extreme weather events have already influenced regional and local hydrology, with increasing frequency of drought, flooding and slope stability/erosion effects. Scientists predict that more changes will come for the Peace region³. Identifying, understanding and preparing for these changes referred to as "climate change adaptation" has become a relevant lens to apply for both land-use and watershed planning processes.

³ a) [Climate Change Implications for Dawson Creek](#) (R. Whiten for City of Dawson Creek) b) M. Schnorbus and D. Rodenhuis "Assessing Hydrologic Impacts on Water Resources in BC Summary Report Joint Workshop BC Hydro 20 April 2010" - Pacific Climate Change Consortium, Victoria c) Egginton, 2002 Historical Change Variability from the Instrumental Record in Northern BC and its Influence on Slope Stability; BSC Thesis, UNBC; d) MWLAP, 2003 [Climate Change Adaptation](#) in Northern BC; e) BC Forest Lands and Natural Resource Operation [Climate Change Report](#); f) Resources North Association ["Climate change symposium"](#)

When combined with sediment accumulations in the Upper Moberly watershed from unprotected first and second order tributaries, and expanded logging and access development, there is a greatly increased level of suspended sediment with reduced water clarity both from observations and field (Sechi) measurements. Along the Lakeshore, human caused disturbances from removal of riparian buffers, uncontrolled runoff from upland road ditches, inadequate mitigation from Lake access construction, and installation of shoreline structures have all been observed to cause further site-specific impacts and induced sediment loading. This project was aimed at documenting these changes and furthering the MLCA's environmental & land-use management with the following specific objectives:



- support continued implementation of a three-year baseline water quality and shoreline sampling for standard bacteriological, chemical and physical indicators in partnership with the Province through a participatory volunteer program including data collection, review and analysis to track changes and limnological trends;
- assess shoreline riparian conditions to determine compliance with PRRD's Lakeshore Development Guidelines and a foundation for reviewing current Lake Classification Status;
- undertake public awareness and education of Lake residents on water quality monitoring, stewardship issues and best practices for shoreline environmental stewardship;
- providing technical reviews and planning Committee participation in support of the new current West Peace OCP with focus on environmental management issues in the Moberly Lake area and to provide meaningful input to Plan development

Present Challenges in Shoreline Management

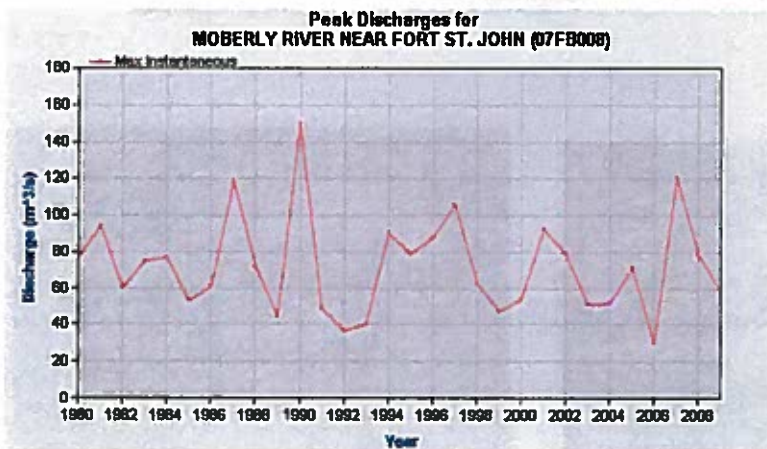


Clockwise from top left

1. 2 Erodible hazardous slopes with encroaching development and foreshore modification
2. Effects of erosion and lack of runoff controls for access development
3. Promotion of shoreline access development
4. Contrasting approaches to shoreline access
5. Access development and erosion from upland drainage



Moberly Lake shoreline and overland flood impacts (2011)



Historical flows (left) on lower Moberly River in 2011 exceeding flow gauge calibration and estimated to exceed 260 m³/sec at peak from this flood event which produced major overland flow from the Lake and breached Creeks as shown above!



Clockwise from top right:

Moberly Lake Elementary School Lake Trout juvenile release with Trout Unlimited

Community meeting on new West Peace Official Community Plan

Base deep water station sampling (biweekly)

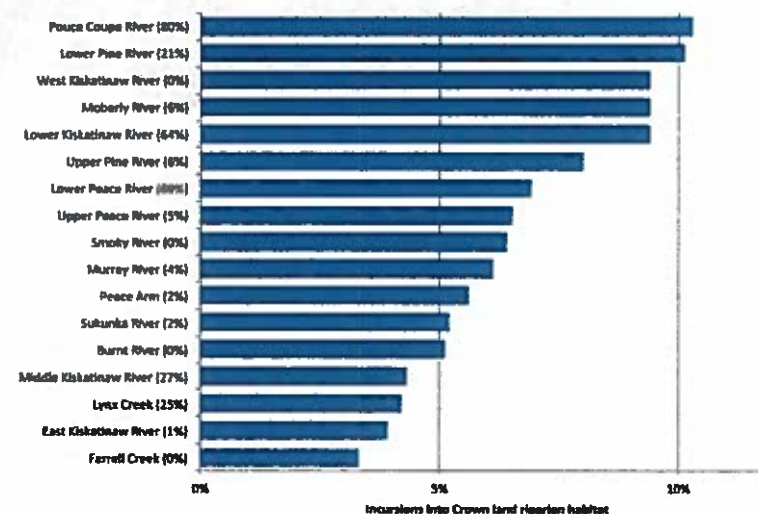
Community engagement on shoreline stewardship



1.1 Project Methodology

The project design for this community watershed research project is based upon a methodology that is drawn from Shoreline Condition Assessment (Caring for the Green Zone) Field Workbook "Riparian Health Assessment for Lakes, Sloughs and Wetlands" prepared by Cows and Fish Program 2005. The 'riparian assessment' component is considered a 'snap-shot' of riparian condition based upon 9 key ecological variables or parameters as a first-step and preliminary tool to identify problem areas similar to a medical 'check-up'. It does, not therefore constitute an understanding of absolute status of site health or trend (stable, degrading or improving) but serves more like a warning signal. This work then provides a foundation for a more detailed 'riparian inventory' which documents many more factors to more thoroughly examine and address management issues within the local watershed related to upland drainage controls, development activity impacting upon flows or other general impacts from peak flow events or other water level control measures. The data gathered does provide an objective method to document site-specific shoreline conditions and could be used to support basic riparian maintenance or restoration measures based upon follow-up investigation by a qualified environmental professional (QEP). As indicated in a study by the BC Gov't and the attached figure, the Moberly River watershed is approaching the 10% maximum incursion into riparian areas so this work further supports the need to consider riparian condition as our study presents.

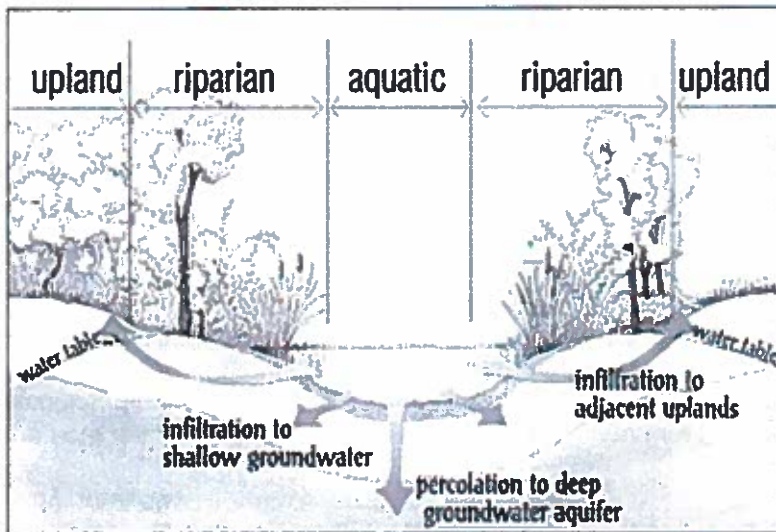
The field results in this report are presented in summary form for the associated Lakeshore reaches⁴. This is done to supporting land-use zoning designations as contemplated in the new West Peace Official Community Plan based upon review from within the public shoreline access. Site specific reviews are however, from the data gathered and can be made available for professional peer review or supplementary home-site consultation purposes on a confidential request basis. Our analysis will further serve for future comparisons in addition to tracking directed land-use changes over time related to shoreline habitat removal or degradation. It therefore makes reference to the Regional Lakeshore Development Guidelines (PRRD, 2000) as a foundation for maintaining riparian values and functions. The results further consider general linkages within the context of management in the associated catchment for follow-up examination to guide actions related to shallow groundwater and surface drainage and effluent controls emanating from upper slopes during peak rainfall events.



Incursions into riparian habitat for major watershed assessment units in the South Peace region. Numbers beside major watershed assessment unit labels indicate the percentage of riparian habitat located on private land where condition is unknown. To achieve the objective of >90% intactness, incursions must be <10% on crown land.

⁴ A reach is the area of land that drains into a creek, river, lake, or wetland, as defined within the boundaries of the local watershed. The extent/length of shoreline reach is the unit to be considered in the application of Lakeshore development guidelines to have greatest impact in maintaining or restoring riparian functions.

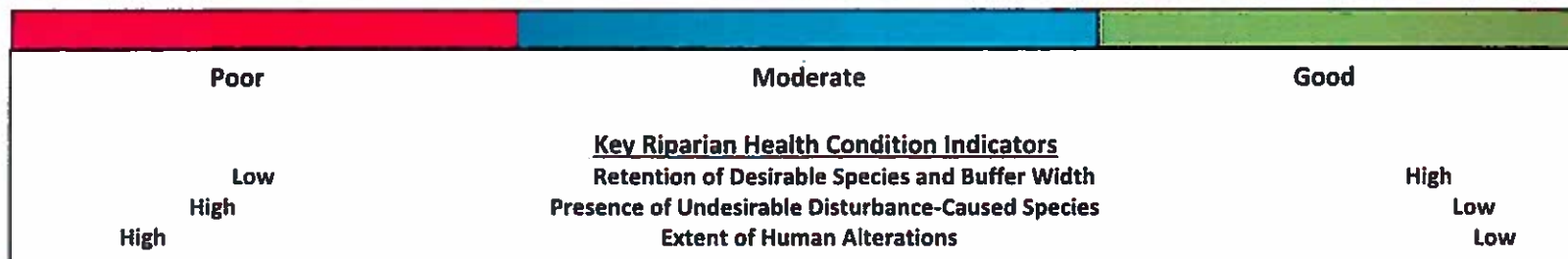
What is riparian health? Just as we consider the health of the human body and its interconnected internal organs and functions, landscapes require an understanding of hydro-ecological functions to determine riparian 'health' status. As illustrated in the following graphics, we can see that these inter-relationships and the role that riparian areas play.



Key Riparian Area Functions

- Trap and store sediment
- Build and maintain banks and shores
- Store water and energy
- Recharge aquifers
- Filter contaminants
- Reduce and dissipate energy & buffer peak water flows
- Maintain biodiversity for terrestrial species
- Create a source of primary productivity to support aquatic life

What is riparian habitat? Riparian habitat is defined as aquatic ecosystems and adjacent terrestrial ecosystems that are influenced by, and influence the aquatic ecosystem.



1.2 Biophysical Features of the Moberly Lake Watershed

Moberly Lake is located in the Omineca Peace region approximately 25 km northwest of Chetwynd, B.C. on Highway 29. The 2011 Census reports a total permanent population of 662 including both the Saulteau and West Moberly First Nations. The lake is roughly 14 km long, with maximum and mean depths of 42.7 m and 18.3 m, respectively. Its surface area is 29.4 km² and it has a shoreline perimeter of 41.2 km. The Lake is situated within the the Peace River Basin Ecoregion which is a wide, low elevation plain that lies between rolling uplands to the north and south; it is dissected by the Peace River and its tributaries. It extends eastward from the Rocky Mountain Foothills above the Peace River into Alberta where it turns northward to the base of the Caribou Mountains. In British Columbia this ecoregion consists of only the Peace Lowland Ecoregion which is a large lowland made up of deep sedimentary bedrock, in a region deeply dissected by the Peace River and its main tributary rivers. This ecoregion has been heavily glaciated during the past Ice Age, by both the westward flowing Laurentian Ice Sheet and the eastward flowing Cordilleran Ice Sheet, with the boundary being slightly to the east of the Rocky Mountain Foothills. During the waning of the glaciers a large glacial lake formed in the south Peace, covering most of the ecoregion with silt. The elevation of the Peace River at the BC/Alberta border is 427 m. while on the immediate benchlands it is 610 m., at its highest it reaches to 975 m north of Moberly Lake and along its southwest boundary with the Kiskatinaw Plateau Ecoregion.

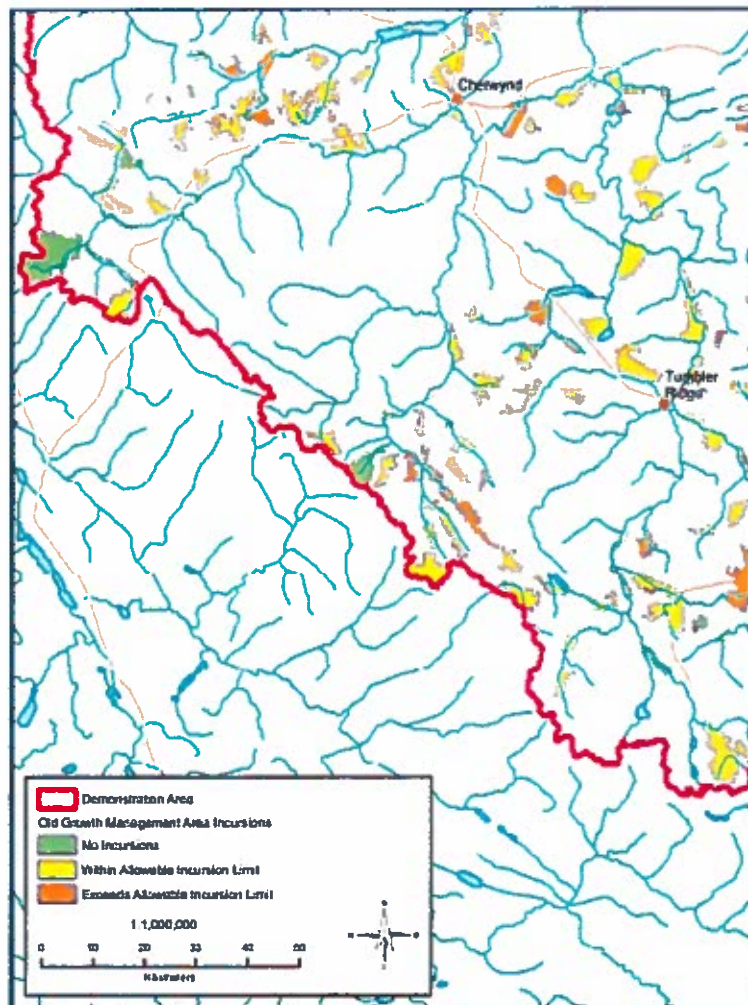
The following map below shows the Moberly Lake watershed and its present associated land use practices. It is believed that land use practices in the Moberly Lake watershed are integral to the health of the lake. Historically, some Moberly Lake First Nation members practiced a limited sustenance net fishery on the lake as part of their traditional resource use practice but this activity is now very limited. Land use within the upper watershed includes residential development, forestry, wind, ranching, oil & gas development and recreational activities. Lake water quality does likely benefit from a fast flushing rate of 0.41 times/year (i.e. a short water retention time of 2.4 years); however, because of this, the water entering Moberly Lake is highly dependent on the Moberly River which has inputs from the whole watershed, and thus could be impacted by any widespread detrimental land use activities in the upper basin and Lake catchments.



Some best practices in shoreline stewardship at Moberly Lake

Clockwise from top right : (a) Installation of graded rock slope with interplanting, tree and driftwood retention (b) restoration with indigenous species (c) constructed walkways with buffer retention (d) tethered driftwood and rock berms for control of high water erosive wave action

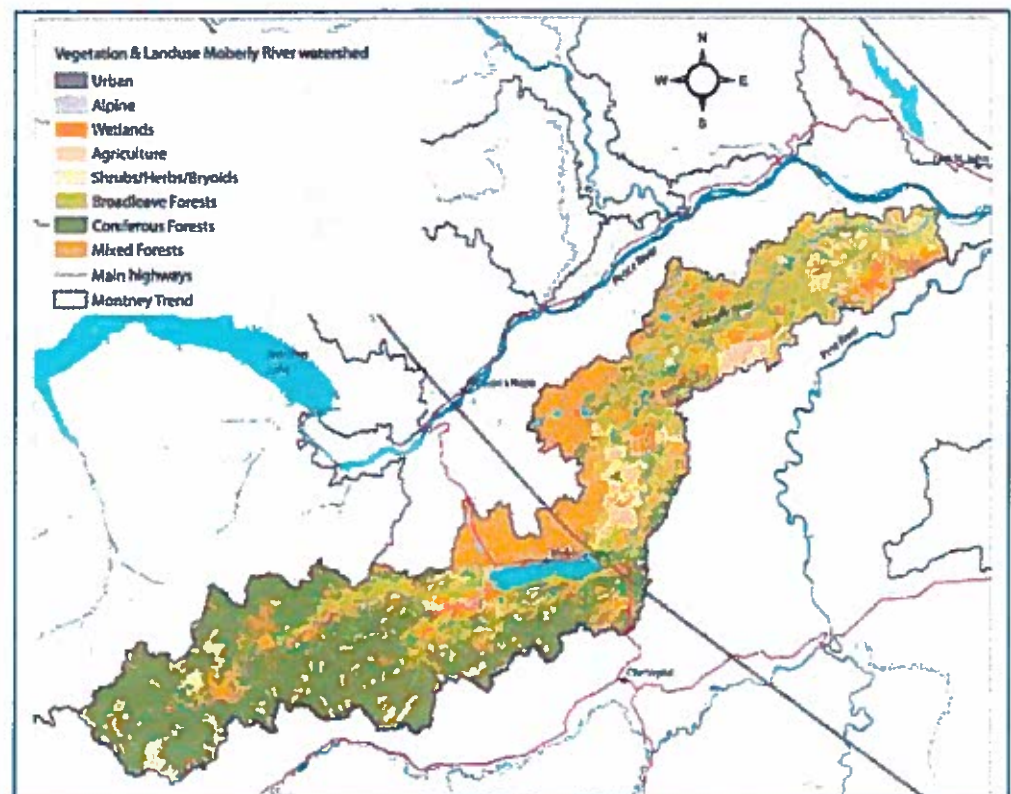
March 16, 2017



Land Use Challenges in the Moberly Watershed

- Predominant mixed conifer in the Lake & upper Moberly watersheds
- Expansion of clear-cut logging related to Mtn Beetle infestations and salvage
- High extent of riparian incursion approx. 9% approaching maximum threshold, including recent south shore logging
- Several areas of logging that approaches or exceeds max threshold

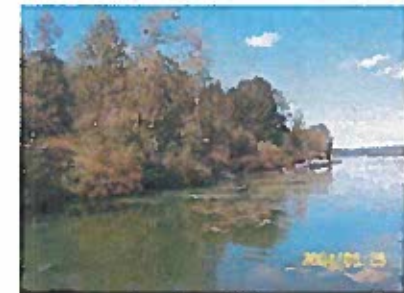
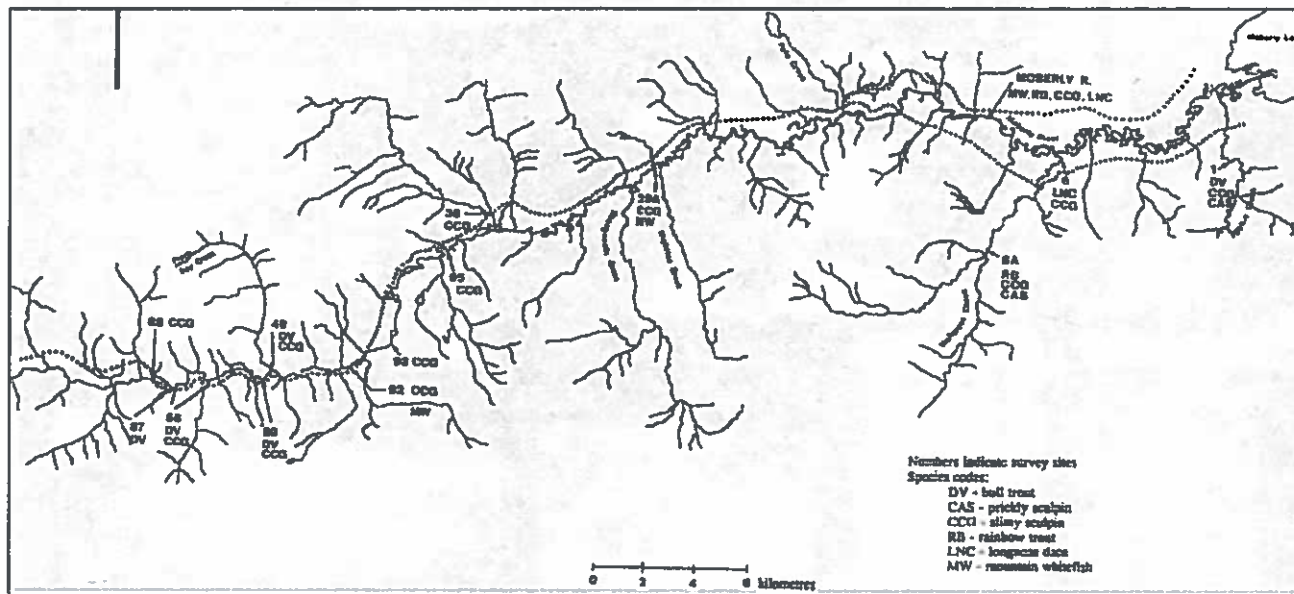
Land Use and Historic Logging



March 16, 2017

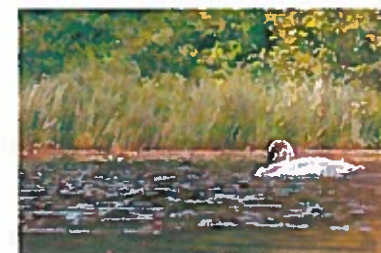
1.2.1 Fish and Aquatic Habitat: Creel census surveys going back to the 1980's and the early 1990's (PWCP, 1992) in Moberly Lake and its upper River tributaries report various sport and food fish species which include arctic grayling (*Thymallus arcticus*), burbot (*Lota lota*), bull trout (*Salvelinus confluentus*), lake trout (*S. namaycush*), mountain whitefish (*Prosopium williamsoni*), lake whitefish (*Coregonus clupeaformis*) and northern pike (*Esox lucius*). According to a BC study on food and nutrition habits of SFNs and other First Nations, the percentage of SFN survey participants who hunt and trap for food (47%), fish (42%), collect wild plant food (60%) and plant a garden (30%) were higher than other BC First Nations (UNBC 2011). Of the fish species consumed, the dominant species in order of harvest and preference from the Moberly Lake watershed include trout, whitefish, ling cod or burbot, northern Pike, Dolly Varden and Arctic Grayling.

According to the BC Ministry of Environment, the greatest challenge to lake quality and aquatic species management is likely the control of phosphorus (nutrient) loading from increased sedimentation and contaminants. This loading may also promote summer algal blooms and the spread of underside aquatic plants in shallower Lake bays. Although the lake is considered oligotrophic (which means it is low productivity and high oxygen but generally does not generate much aquatic vegetation), however inputs of phosphorus from increased natural sedimentation and induced shoreline erosion can increase the lake productivity, and hence increase the plant and algae biomass within the lake. Some lakes in the Peace region such as Charlie Lake are an example of eutrophic conditions with reduced Lake productivity and aquatic plant infestation. In recent government reports and anecdotal observations, there are increased incidents of algae blooms and aquatic plant infestations around the north and south shores of the lake, caused in part from nutrient loadings to the water due to poorly designed septic systems in the past. Steep slopes around the Lake also create hazardous slope and erosion conditions at elevated levels along both the north and south lakeshore.



March 16, 2017

Flora and fauna of the Moberly Lake shoreline

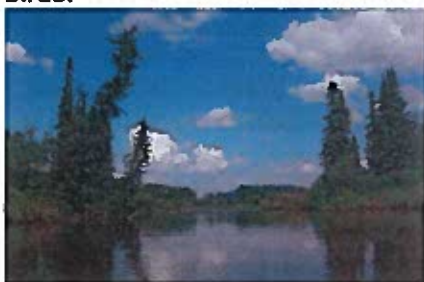
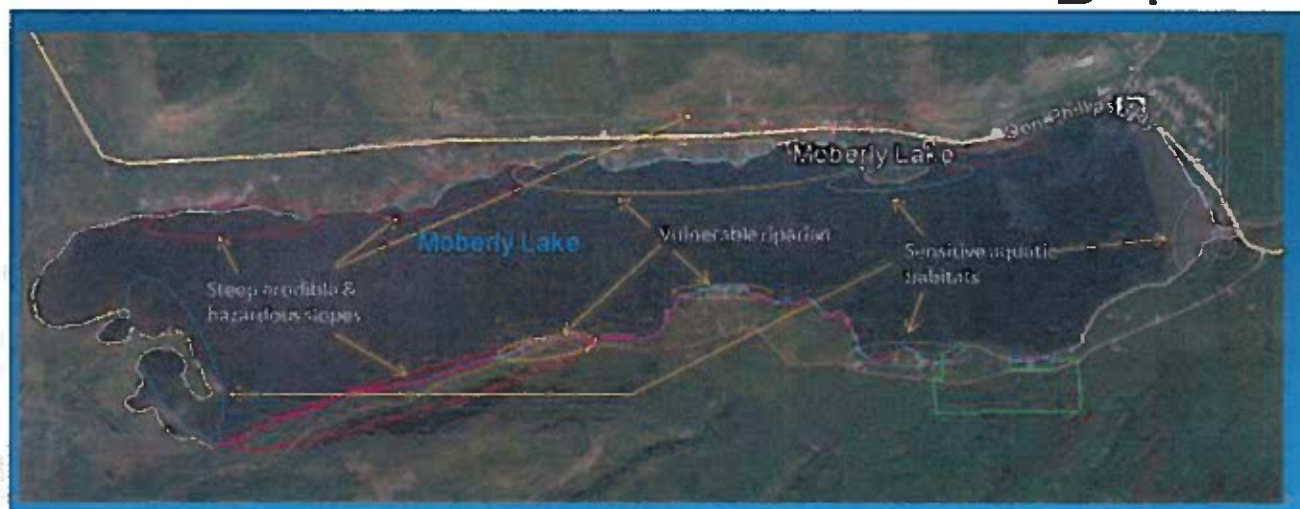


Mix of fauna species typical of Boreal Mixed White and Black Spruce Eco-Region: Trumpeter swan habitat at west delta, marten in old-growth, red-wing blackbird, ling-cod rearing habitat moose at Medicine Woman Creek, tiny wood frog,

March 16, 2017

1.2.2 Environmental Sensitivities

Based upon review of background studies, anecdotal research and reconnaissance field work, there are several locations around the Lake which are considered environmentally sensitive. As shown in the figure below, key issues relate to slope instability, fish and aquatic species habitat or vulnerable riparian areas. Other features along the Lake's water courses and associated riparian zones are also important as wildlife corridors and habitat for various species of furbearers and song-birds.



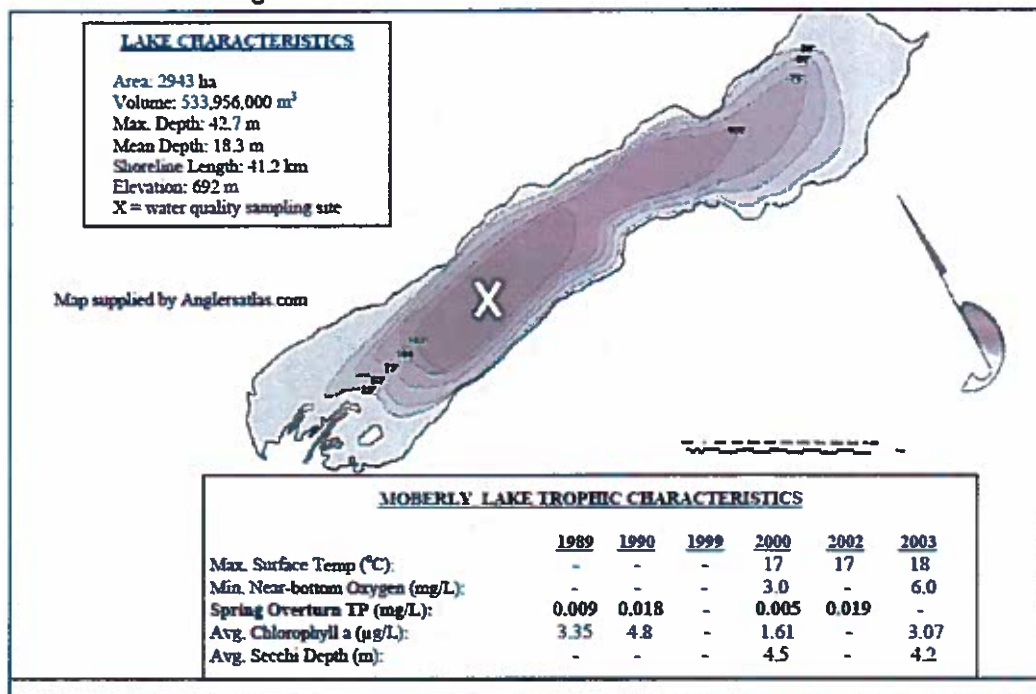
Erodible and hazardous slopes, blue-listed species (Black-Throated Warbler), aquatic bird and fish habitat on north and south shore, and upper/lower Moberly River, other important habitat for song-birds, waterfowl (swans, loons, ducks), furbearers and ungulates with intact riparian areas and corridors

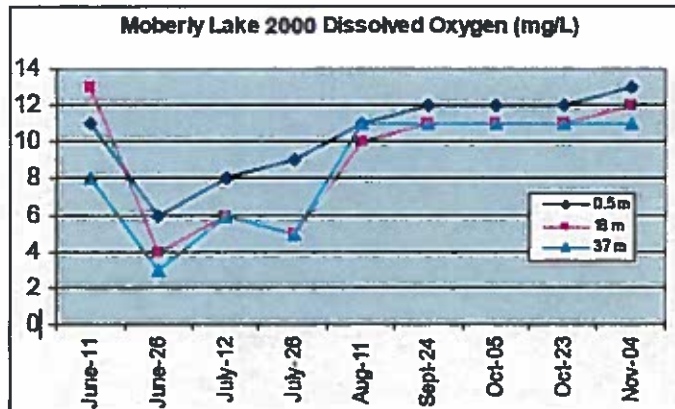
1.2.3 Water Quality and Flow Monitoring

As part of its efforts to track changes in water quality and flows, the MLCA and its partners have been long engaged in testing and monitoring on Moberly Lake. This work goes back to the 1990's through a partnership of local groups including Boreal Centre for Conservation Enterprise – now Boreal Centre for Sustainability, the Peace River Watershed Council and the MLCA) with the BC Lake Stewardship Society and the BC Ministry of Environment (Prince George). Current related community water quality initiatives have included:

- negotiation of Provincial support for in-kind services (training, staff support, laboratory analysis) for the baseline Lake deep station Lake & supplementary shoreline quality sampling;
- completion of training for volunteer Lake assessment with Ministry of Environment and BC Lake Stewardship Society with data collected between 1999 and 2003, and resumed in 2015 for a three year period to track further changes in key indicators where there are indications of change from land-use impacts (septic inputs, sediment, fertilization);
- Shoreline property owner surveys to understand community priorities related to lakeshore development and mitigation;
- participation in discussions for updated West Peace Official Community Plan
- workplan development, field task supervision and fund-raising
- public outreach (print, radio and social media)
- initiation of public information displays on Lake stewardship

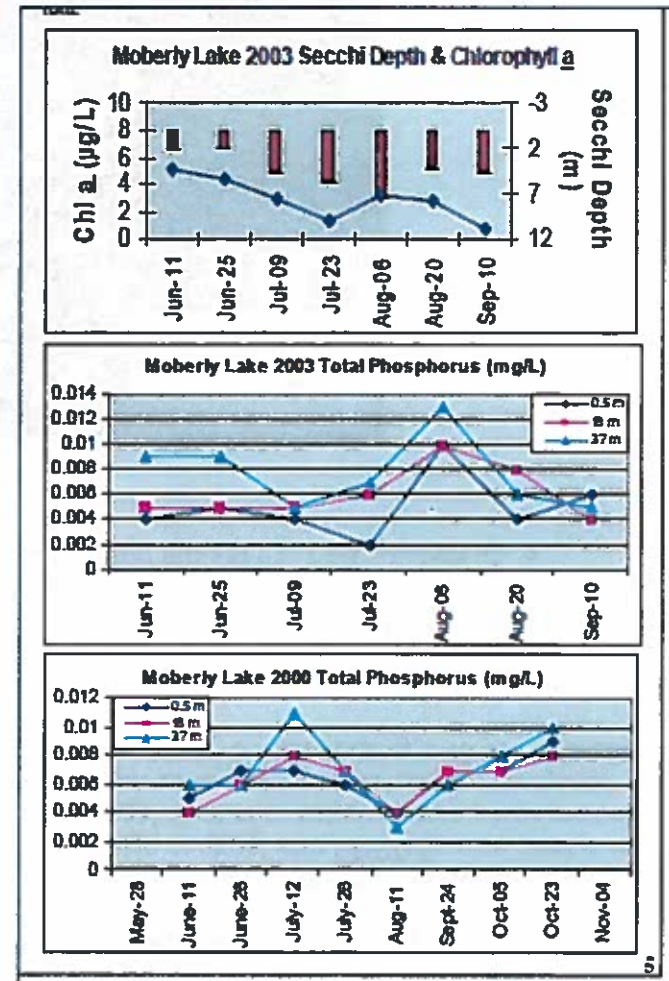
A formal report prepared after the 2000-03 sampling effort conducted at a base station at the mid-west end of the Lake considered to be the deepest point on average. Those results at that time already showed an indication of changes from induced effects on the Lake including increases in total phosphorus, a decline in clarity as indicated by changes in secchi readings and increases in chlorophyll *a* measurements indicating increased productivity ratings due to increased nutrient loadings.





Lake quality baseline data and trend observations (1989-2003)

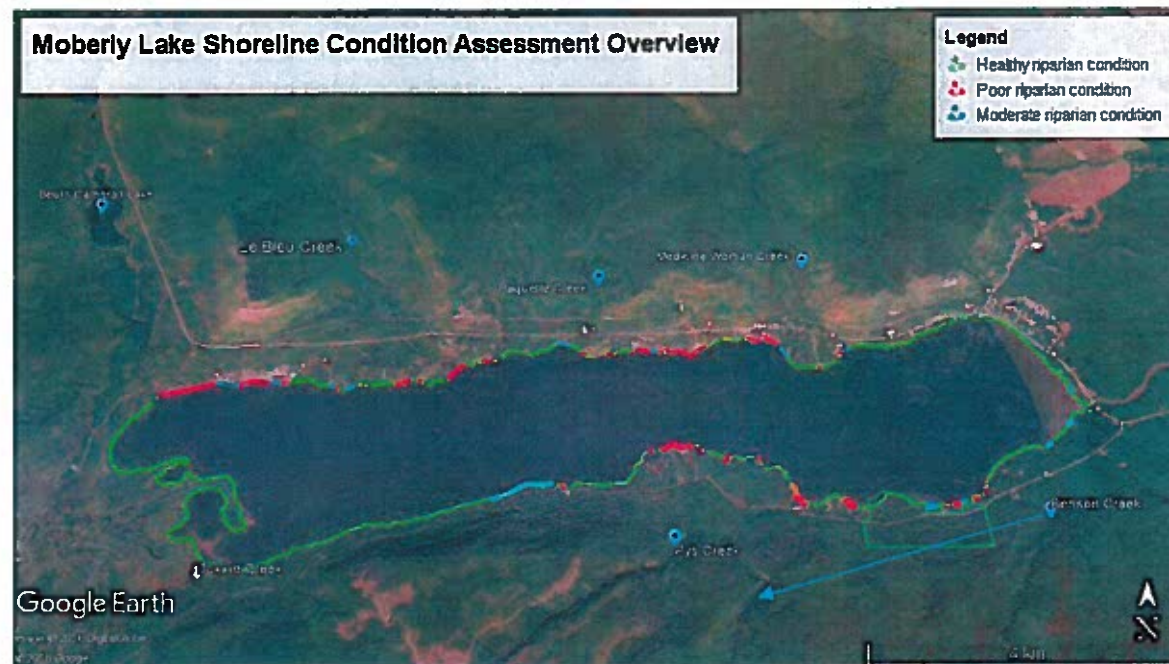
- Consistent lake temperature, stratification at deep basin in late May/early June and little mixing during summer
- early Oct fall overturn with cooling effects and increased mixing – change from early 1990's when isothermal conditions occurred in early Sept (with later Lake freezing may now occur even later)
- oxygen profile consistent from 1989-2003 period in 8-10 mg/L level with notable low range 3-5 mg at depth – anomaly found in 2003 low mid summer level at mid-depth may indicate increased decomposition or zooplankton respiration
- changing levels of phosphorus since 1989 possibly related to natural variations but higher mid summer levels due likely to upper Moberly River sediment inputs; internal phosphorus loading not suspected due to limited duration of anoxic conditions; chlorophyll a data consistent with phosphorus cycling patterns



1.2.4 General Land Use and Community Profile

The most current (2011⁵) official census data indicates a total permanent population of 619 (representing 199 for the rural unincorporated area, 324 Saulneau FN + 95 West Moberly) with 88 year-round dwellings. This represents a 33.9% population decline for the settlement area from the 2006 census year and 50% of this population is over 50 years of age. These figures do not include non-registered residents on-reserve which could add 10% to the Lake population. Totals also contrast with PRRD figures cited in its OCP Background report likely due to a change in the geographic enumeration area coverage⁶ from prior census years which included the Boucher Lake Rd area. Cottage and recreational users significantly increase pressure on Lake use and local service demands during the summer months. At Moberly Lake Park for example, there were 35,791 visitors in 2012/13 representing a 49.9% increase from the previous year.⁷

In addition to year-round residences and there are numerous summer properties (total 164 settlement area) situated on primarily on the north central and south-west Lakeside plateau. Residential land-use covers 435 ha on the north side and 165 ha on the south side. The Lake also has a regional park and a provincial park. On the south shore, parcel lot sizes are generally less than 1 ha in size and used for seasonal recreational use. Larger residential properties (< 2 ha) can be found in and around the Yips subdivision, a commercial marina and the Moberly Lake Provincial Park.

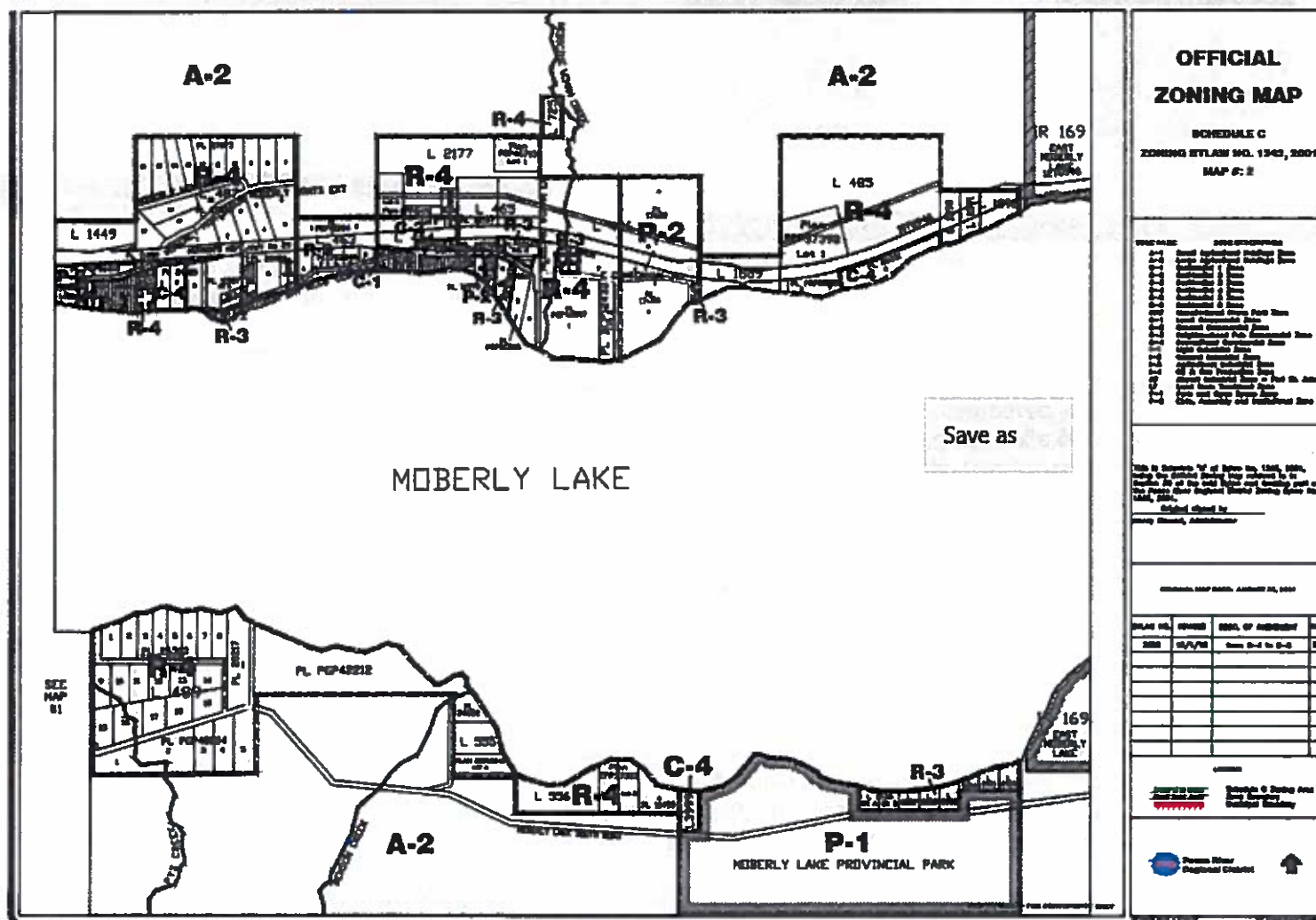


⁵ Moberly Lake [census report 2011](#)

⁶ Census [area](#) enumeration change for Moberly Lake unincorporated area contrast with PRRD [OCP report](#), p.46

⁷ BC Parks [Statistical Report 2013](#)

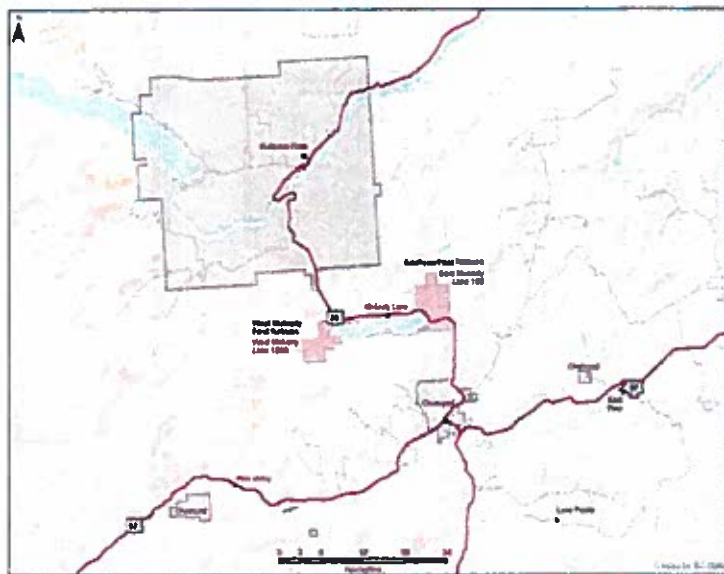
The north side of the lake has properties of various sizes, mostly between 0.05 in the R4 land-use zone class and up to 35 ha for R3 properties. Outside the settlement area, there are extended agricultural use and Crown land bordering to the north. Spencer Tuck Regional Park is located on the north side, along with several private and non-profit campgrounds or similar institutional land-uses. The parks and religious camp facilities draw thousands of tourists to the area each year. A fire hall, school, community hall and several businesses are situated in the central area of Moberly Lake's north shore and Hwy 29.ew construction permits at Moberly Lake in the past few years are on properties situated all along the north-shore of Moberly Lake and west of the Yips subdivision on the south shore



March 16, 2017

1.2.5 First Nations Land-Use

Both the Saulteau and West Moberly First Nations have completed draft Comprehensive Community Plans. As indicated below, specific policies are in effect to control development in proximity to the Lakeshore.



Its draft Community Plan calls for a future housing demand up to 170 units over the next 20 years.

Table 3-1: Saulteau First Nations Population, 2000 to 2012

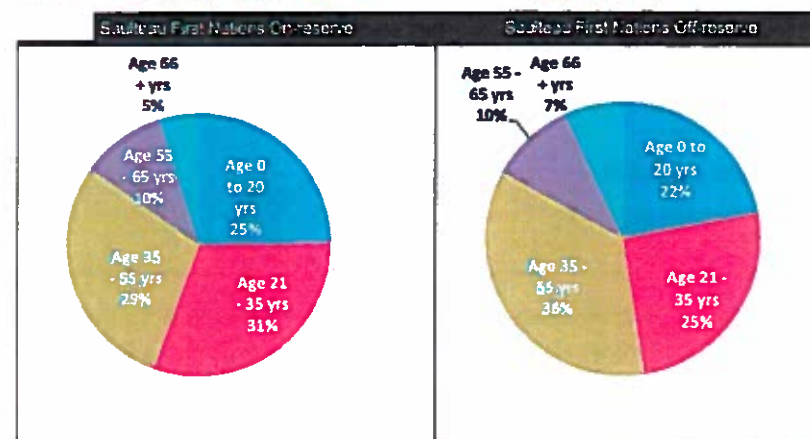
	2000	2005	2010	2011	2012
On-Reserve and Crown Land	378	418	366	372	364
Off-Reserve	389	416	515	543	520
Total	767	834	881	915	914

SOURCE: ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA (2000) (2005) (2010) (2011) AND SAULTEAU FIRST NATIONS (2012A)

Saulteau First Nations : According to the most recent (2011) census data, Saulteau First Nations has an on-reserve population of 324 members living in three primary subdivisions (Lakeside, Onion, Riverside and Davis). Other residents are located along the Lakeshore, up Boucher Road and in the Rodeo access area. The population counts do not include non-registered people living on-reserve or registered members of other Bands living on reserve and therefore indicating a higher population.

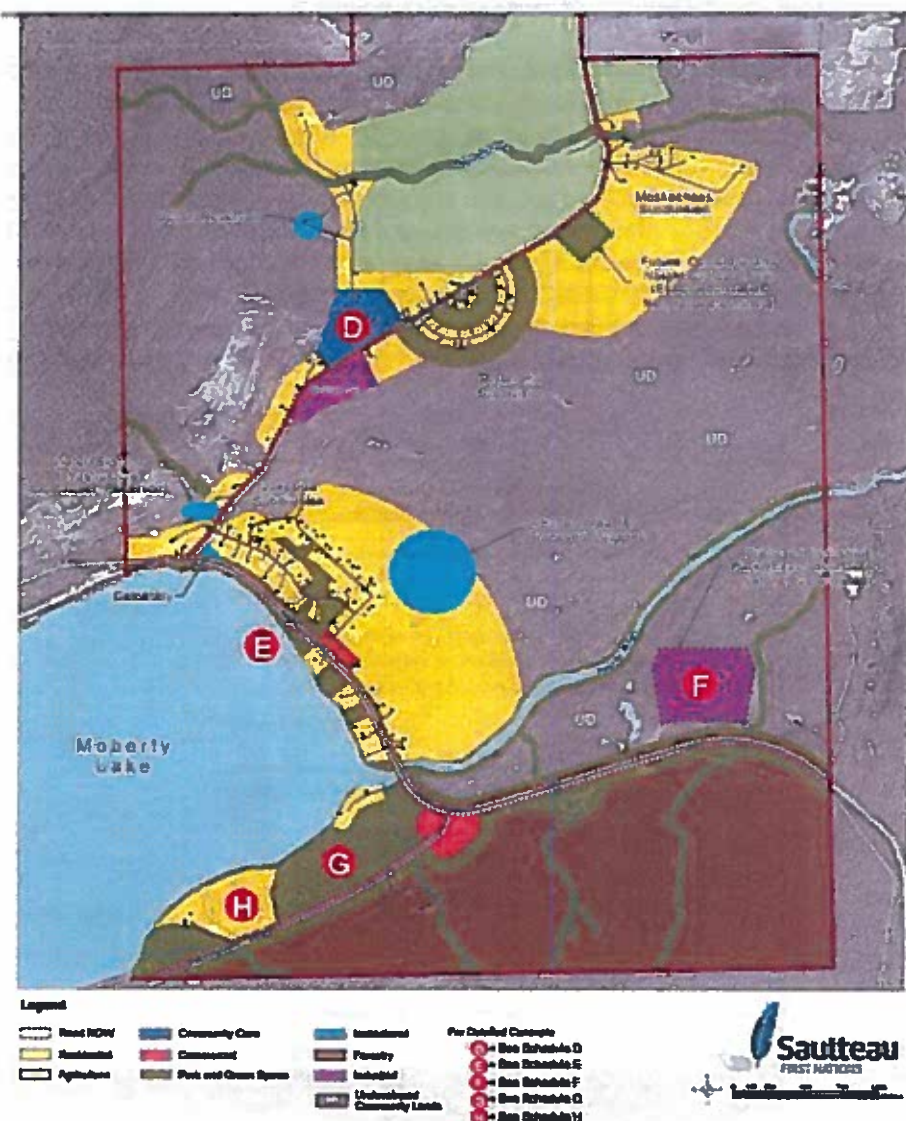
Recent non-census surveys put the total at 490 in 2014. SFN has a slightly younger population than the off-reserve population. The off-reserve population has 71% between the ages of 21 years and 65 years. Meanwhile the on-reserve population has 70% of its population between the 21 year and 65 year age group. The SFNs population has a smaller share of population in the under 20 year age group and a larger share in the 21 to 55 year age group when compared to the PRRD. The SFNs total population has indicated an increase of 19.3% over the past 12 years.

Figure 3-2: East Moberly Lake IR 189 and British Columbia Age Characteristics, 2011



SOURCE: SAULTEAU FIRST NATIONS (2012B)

March 16, 2017



Community development objectives relate a desire to maintain access to the Lakeshore and Lower Moberly River, and this includes future plans for a Lakeshore subdivision off the South Park Road. Such a development would be subject to all necessary engineering feasibility and feasibility to ensure environmental protection and an adequate water/sewer infrastructure development plan. The plan also considers creation of a water use park, a commercial plaza and industrial park as shown in the following images presented in the SFN's Draft Comprehensive Community Plan. These proposals are based upon community and federal agency input to support long-term population growth, social, cultural and economic development objectives.

All such plans have potential to impact upon future Lake quality and it will be critical for there to be sustained collaboration between all three government jurisdictions to ensure protection of quality of life and environmental objectives. Current issues of concern relate to runoff control from Boucher Lake road at the point of intersection at Hwy 29. Various land-use management objectives are presented in the following planning tables in the Draft CCP.

COMMUNITY INFRASTRUCTURE

Our community infrastructure plan (Schedule C) is intended to provide an overview of how our reserve lands are serviced and how they will be serviced moving forward. Specific servicing strategies for different types of community infrastructure are summarized in Figure 10 below.

Figure 10: Overview of Our "Infrastructure Development Plan"

CATEGORY	KEY ACTION ITEMS
WATER STRATEGY	<u>Short-Term Projects</u> - Complete planned upgrades to the existing community water system <u>Long-Term Projects</u> - Extend the community water system to the following areas: - Lakeview subdivision expansion(s) - New residential development between Onion Hill and Muskochees subdivisions - New development on the south side of Moberly Lake NOTE: The proposed "industrial park" on the south side of the Moberly River will not be connected to the community water system.
	<u>Short-Term Projects</u> - Design and construct a new sewer collection and treatment system for Lakeview subdivision (including potential subdivision expansions) - Plan for a regional wastewater system <u>Long-Term Projects</u> - Design and construct regional wastewater system infrastructure NOTE: On-site disposal systems or holding tanks will be used for most new developments. The notable exception being expansions to Lakeview subdivision.
SEWER STRATEGY	

Water and Waste-Water

Residents on the East Moberly Lake Reserve (IR 169) have access to potable water through well developed community infrastructure. This water is sourced from community groundwater wells at the Hwy 29 intersection and pipeline to an elevated in the water reservoir. There are two above ground metal storage tanks associated with this system. One tank has a capacity of 202,000 litres while the other has capacity of 330,000 litres. This system is serviced by a trained (certified) water treatment plant operator with the water system providing water to most of the on-reserve population. A local creek is a secondary water source for some community members. (UNBC 2011) Approximately 10 households are not part of the water distribution system and get their drinking water from shallow wells. Historically, the water distribution system did not include water treatment plant located on-reserve, and the well water was not filtered or treated with any chemicals. In 2016, however, the SFN Water System upgraded the existing main pump-house and replaced existing pipe to the reservoir located above the Pemmican Grounds. The project involved the new well hook-up, building a new booster station, construction of a new water fill-up station with a cement pad, back-up generators, and chlorination system.

CATEGORY	KEY ACTION ITEMS
STORMWATER MANAGEMENT STRATEGY	<u>Short-Term Projects</u> - Develop a comprehensive "Stormwater Drainage Plan" for the full extents of IR #169 <u>Long-Term Projects</u> - Design and construct a protective berm along Muskochees Creek to address potential flooding - Roadside ditching and culverts for the following areas: - Lakeview subdivision expansion(s) - New residential development between Onion Hill and Muskochees subdivisions - New development on the south side of Moberly Lake NOTE: Roadside ditching and culverts would occur as part of a larger roads project.
	<u>Short-Term Projects</u> - Undertake a detailed assessment of local roads and develop a long term "Roads Improvement and Rehabilitation Plan" - Install prominent signage with our new SFN logo at the entrances to our community (IR #169) with a message asking traffic to "Please Slow Down and Drive with Caution" <u>Long-Term Projects</u> - Undertake improvements to local roads (surface and subsurface) as outlined in a "Roads Improvement and Rehabilitation Plan" - Extend network of local roads to include the following: - Lakeview subdivision expansion(s) - New residential development between Onion Hill and Muskochees subdivisions - New development on the south side of Moberly Lake NOTE: At this time the surface of all new local roads will be gravel treatment.
ROAD NETWORK STRATEGY	

As for waste-water services, the SFN relies fully on individual septic tank pump out system, and some concerns have been reported that many of these systems frequently fail and therefore require a high level of maintenance and/or repair. Presently, the community is involved in feasibility research for a new sewage treatment facilities targeted for construction in 2018 that will accommodate the Lakeview Subdivisions while other residences will continue to rely on septic holding tanks/

SFN Land-Use Policies Relating to Lakeshore Development Area (selected citations)

12. New residential development should not occur within 300 metres of a landfill/transfer station or sewage lagoon site (whether existing, decommissioned or planned).

Lakeshore Development

Policies 12 through 16 apply to any new residential development occurring within the “Lakeshore Development Planning Area” (as shown on Figure 9 below). This area is prone to flooding and soil conditions are poor for sewage disposal (Health Canada will no longer issue sewage permits for the area fronting Moberly Lake).

13. New residential developments should be consistent with the Peace River Regional District’s “Lakeshore Development Guidelines”.

14. All structures, buildings, and landscaping (e.g., homes, sheds, driveways, and fencing) must be set back at least 15 metres and from the high-water mark of Moberly Lake.

15. All buildings and structures must be at least 3 metres above high-water mark of Moberly Lake.

16. New residential developments will only be allowed if they are connected to:

- a. A community sewer system;
- b. A wastewater holding tank (with hauling to be paid for by the occupant); or,
- c. A specialized onsite sewage disposal system that has been designed and inspected by a registered professional. In these cases the occupants will be required to allow SFN staff (or contractors retained by the Nation) to undertake regular testing for contamination. All costs associated with regular testing will be the responsibility of the occupant.

17. Septic fields are not allowed within the “Lakeshore Development Planning Area”.

18. All residential developers within the “Lakeshore Development Planning Area” will be required to submit a development plan to SFN that includes:

- a. A proposed lot layout; and,
- b. A description of the proposed sewage disposal system.

Figure 9: Lakeshore Development Planning Area



West Moberly First Nations: WMFN Indian Reserve 168A is 2033.6 hectares of land located at the west end of Moberly Lake. Based upon a consultant study completed for a major projects review by Askiy Resources (2014), a profile on community development is available upon which analysis is made concerning implications for Moberly Lake riparian and lake water quality management. As can be seen from the chart below, the registered band population rose from 66 members in 1979, to 91 in 1991 and more recently to 141. It has continued to grow as more descendants of women have been repatriated to the Band Register following the passage of Bill C-31 in 1985 and C3 in 2010.

Demographic Distribution of WMFN Community on Reserve

Age Distribution among WMFN Community Members living on Reserve 2013-09													
	0-5		6-19		20-34		35-49		50-64		65+		
2013	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	TOTAL
WMFN	14	10	10	11	17	5	10	8	5	6	0	4	100
Non-WMFN Status	0	0	2	7	3	5	1	4	0	1	1	0	24
Non Status	0	2	0	0	3	3	2	1	5	0	1	0	17
On-Reserve Totals	14	12	12	18	23	13	13	13	10	7	2	4	141

Source: DFO/Statistics Canada, Band Membership, 2013-09

The 2006 Census showed 22 houses on reserve, but this was inadequate to needs identified as early as 1999 in a Community Development Plan. New houses were then built in the Cryingman Subdivision bringing the total to 47 total occupied residential dwellings as reported in the 2011 Census.

There is significant pressure on existing housing on reserve, with some crowding reported. Any future upsurge in local/regional economic activity can result in housing pressures in Chetwynd, forcing rents up and putting financial pressure on members to return to the Lake reserve. Due to the expanding on-reserve population, a new fully serviced subdivision is in the planning stages with preliminary engineering work undertaken with respect to lot layout and infrastructure design. Considerations related to runoff control will hopefully be fully considered to ensure protection of Lake water quality.

The WMFN reserve has several kilometres of gravel and dirt roads it is responsible for. In addition to shorter subdivision roads, the main road goes the length of the reserve, through Tsay Keh Ne Cheleh Ranch connecting to the South Moberly Road at km 24. Roads are maintained by a WMFN contractor, for both winter and use throughout the community with sanding and calcium applied as necessary. The community has completed an upgrade to the main access road completed with road mats, contoured ditches and improved drainage.

Waste-Water Treatment: During the 1990s, increasing community concerns over water quality and sewer seepage into the Moberly Lake created a major push for modernizing sewage treatment at the WMFN community. In 1994 a new sewer system was completed, including a collection system, lift station, force main, and lagoons. Sewage flows directly from homes in a gravity system to a lift station in the Brown Subdivision. There are two septic tanks at Dunne-za Lodge that pump into the system. There is also a small lift station in the civic core that pumps waste from Council Offices and the Land Use Office. The main lift station has two 7.5 hp pumps operating at alternate times to send waste to the lagoon system some 3000 metres away. There is always a back-up pump on-site. In 1997, the Wetland System phase was completed, which is comprised of a series of ports similar to an irrigation system that allows effluents from the storage lagoon to flow into a natural wetland.

Registered WMFN Population (June 2014)

Registered WMFN Population	June 2014	2013	2010	2006	1996	1991	1979
Registered Males On Own Reserve	58	56	85	85	65	32	22
Registered Females On Own Reserve	51	52					
Registered Males On Other Reserves	2	0	131	123	73	59	45
Registered Females On Other Reserves	5	5					
Registered Males Off Reserve	72	74	216	208	138	91	66
Registered Females Off Reserve	86	82					
Total Registered Population	274	269					

Source 2014, 2013 & 2010 data: AANDC June 2014; Source 2006, 1996, 1991 data: Statistics Canada Census Data

March 16, 2017

The Band has a waste disposal permit allowing discharge into the natural wetland along the Moberly River from May 15 to September 15 each year. While 2011 was a huge flood year, in 2013 conditions were such that lagoon storage was deemed adequate and the Band did not utilize its permit to discharge into the wetlands at all during the summer. The 2016 flood also resulted in a permitted but non-utilized release to avoid risk of uncontrolled release along with regular lakeshore water quality to monitor for unacceptable bacteria or pathogens (D. Robertson, pers comm 2016). The sewer system was designed to be adequate for an on-reserve population of 288, so the lagoon capacity should suffice for several more years, despite the current rapid growth. However, AANDC recently commissioned a study of the storage and pump capacity at the lift station. The assessment is to ensure adequate capacity for future growth, and preliminary findings indicate that some upgrades may be necessary at the lift station before lagoon expansion will be needed. With increased population pressures at WMFN, and plans for a new subdivision to house the expanding on-reserve membership, wastewater facilities and existing lagoon capacity will continue to be monitored to ensure that the projected capacity meets demands to ensure that any new subdivisions can gravity feed into the system. As there are poorly drained soils in various locations, there are concerns that individual septic fields will not be sufficient to prevent seepage and Lake contamination. Unfortunately, other lakeshore residents do not have the same access to such a wastewater treatment system as do WMFN residents, so increasing concerns for the future quality of the Lake and community water supply persist.

Community Water Supply: In the past, WMFN members have relied on raw water sources for their domestic needs. In the last few decades, increasing water quality concerns from upstream development and Lake use raised concern about need for a proper treatment system. Increasing reports of elevated Lake bacteria and pathogens have also been reported since 2000, and the WMFN has invested in rebuilding its community water system to ensure potable water for all residents.

The WMFN community water system consists of a pump house that extracts water from Moberly Lake and purifies it using a combination of sand filtration and chlorination. All residential subdivisions, as well as the Band administration buildings, are connected to potable running water. Routine water quality testing is undertaken by the maintenance manager, who has been responsible for the system since it was built in the 1990s. Water is monitored daily, and samples are sent to Health Canada once per month. The Colilert tests (for *E. coli*) are performed weekly in-house, and test results are reviewed by Health Canada [DR]. During the massive flooding in 2011, increased turbidity and sediments necessitated a return to bottled water for several months due to pathogens in the water supply. A temporary pretreatment system was put in place – Dissolved Air Flotation (DAF). Chemicals are added to the water to bind with impurities and float them to the surface where they are continuously removed by a paddle system that scrapes the surface of the water. After the DAF pretreatment, water goes to the standard sand filtration and chlorination system. This temporary system has been working well, but an engineering study was commissioned in 2014 to find the best solution to prevent future problems and to ensure system capacity will meet future growth needs in the community. The results of the engineering pre-treatment design capital project are being considered for upgrading or improving the system.

Based upon flood effects from the June 2016 flood event, there is evidence that concerns persist regarding WMFN's infrastructure. Additional run-off catchments appear necessary to handle peak flows from the upgraded main access and CryingMan subdivision roads. Continuous monitoring of the Lake and road maintenance activities are necessary to ensure minimal overflow of contaminants and sediment loading to the Lake.



Runoff control challenges on WMFN access and Crying Man subdivision



March 16, 2017

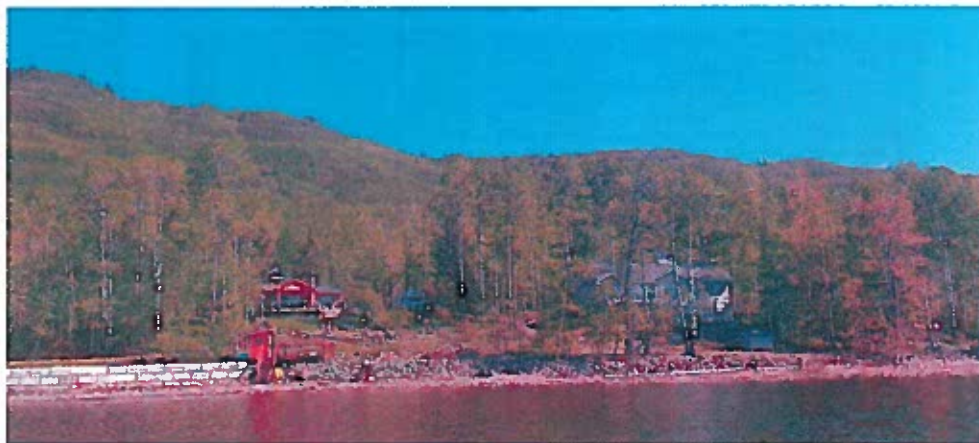
Part B Riparian Health Assessment Findings

During the period from June to Sept, 2015 and June to August 2016, riparian health assessment field surveys were undertaken by InterraPlan Inc for various locations or reaches around the Lake. Additional insights were gathered from community surveys to appreciate specific shoreline development and stewardship issues (Appendix A). Field data summaries were developed at the site level, based upon the evaluation criteria. Raw data summaries were compiled along with image references and available as a compendium resource to enable follow-up property and notwithstanding future natural or human disturbances. In the following section, we highlight key features from that work for 23 reaches around the Lake, and highlighting in particular features requiring attention to ensure i) compliance with existing PRRD guidelines, ii) provide summary information to guide review and developed of enhanced Lakeshore protection and iii) to guide community watershed groups in working with property owners assessments for lakeshore protection, enhancement or restoration based upon the present assessed condition. The research further points to the need for environmental compliance monitoring by the regulator where unauthorized developments are undertaken on the foreshore including but not limited to engineering works, installation of structures and/or other modifications impairing riparian health.

As indicated below in this overview satellite image, lakeshore development impact remains generally quite fragmented compared to the overall general good riparian health around the perimeter. When one considers impact at the site level, there are reaches of the lakeshore under considerable stress due to poor riparian health related to a) direct removal or reduction of preferred shoreline buffer width (minimum of 15 m) with ranging effect for both terrestrial and aquatic species, and loss of riparian function b) increased nutrient input from lack of upland surface water control resulting in sediment deposition and/or reduced water quality c) expansion of artificial foreshore development structures with resulting loss of natural riparian function and potential secondary effects (scouring, failed sediment control) and where also exacerbated by poorly designed Lake road access.

Data Assembly and Presentation

As presented in the foregoing section, the Riparian Health Assessment employs a series of field indicators of environmental and land-use parameters to catalogue the extent of ecological integrity versus signs of riparian degradation. The following display of the data field sheets presents a sample of the data for a range of sites from poor to good riparian health based on the field results, and confirmed by secondary analysis.



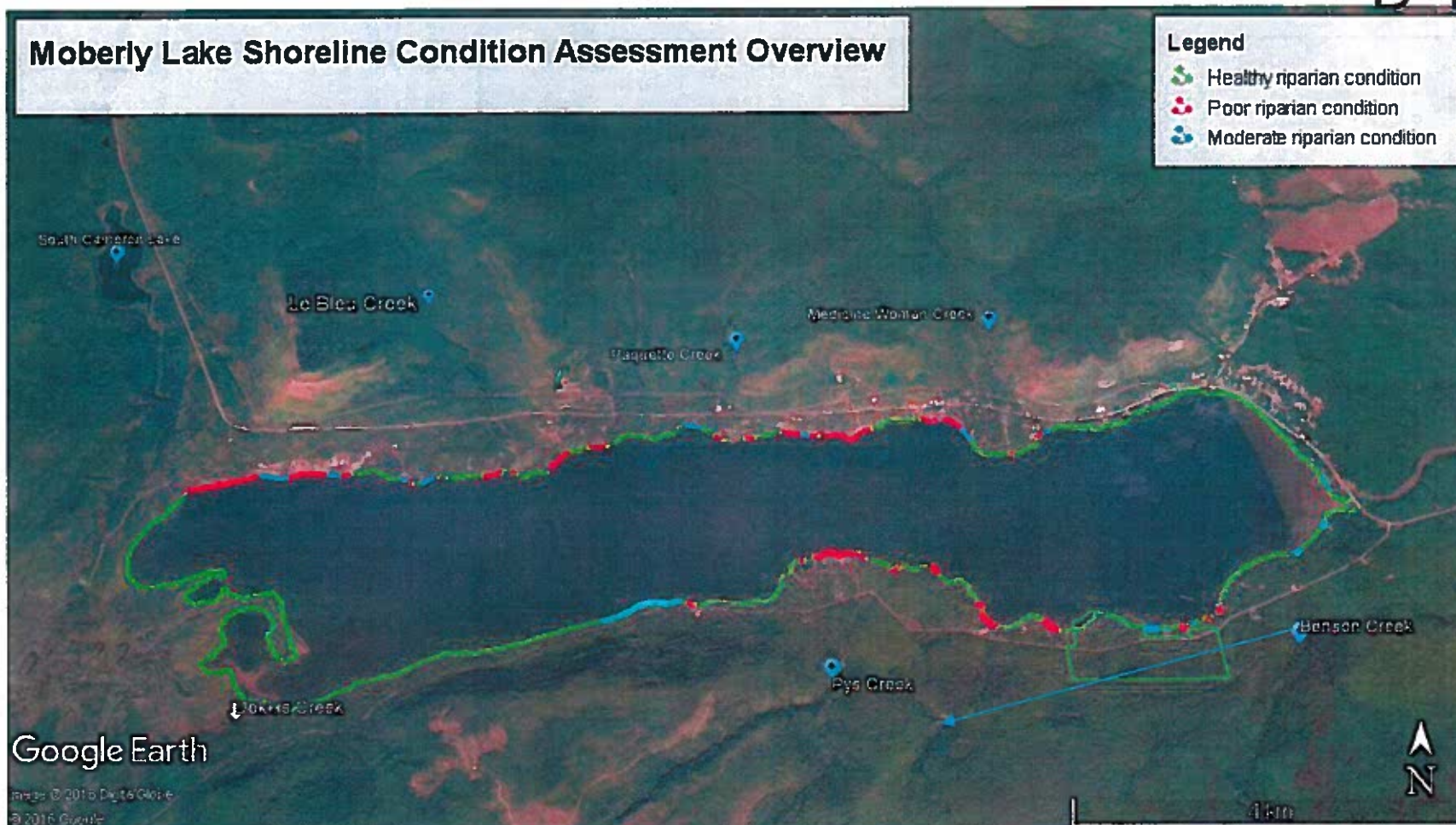
A mix of shoreline management treatments ranging from interlocking cement blocks, rock slope, mix rock/planting and natural cover

March 16, 2017

Sample Data Field Form and Riparian Health Rating

	A	E	F	G	H	I	J	K	L	M	N	O
1	MOBERLY LAKE, NORTH SHORE											
2	Riparian Health Assessment - Field Survey Data											
3	Addition survey: West Moberly, Cove Lane Cottonwood West, East Mission Rd., Holiday Beach central, Wayne C's, Spencer Tuck, School, Hudson Bay east, Cent Rd.											
4	Reach Number					A1		B1		C1		
5	Date	04-Aug-15		04-Aug-15		26-Aug-15		27-Aug-15		12-Sep-15		
6	Civic Number(s)											
7	GPS					N 55°49.874' W 121°44.588'		N 55°49.949' W 121°42.312'		N 55°49.619' W 121°48.862' (to) N		
8	Site Description	Sediment development, development,		Bank eroded probably from flood. Fine sediment deposition.		3 Properties: from dock at 2084 to "barrel" at 2094; very shallow water.		Canfor property.		2 properties; steep bank down to s		Site seems to be regenerating.
9	Length (m)	611		100		150		80		27		
10	Estimated Width (m)					10		10		20		
11	Photos					(87) WP_20150826_14_29_29_Pro (to) WP_20150826_15_57_48_Pro		(96) WP_20150827_11_50_58_Pro (to) WP_20150827_12_06_26_Pro		(15) WP_20150912_11_09_33_Pro WP_20150912_12_17_15_Pro		
12	Actual/ Possible score	Possible	Actual	Possible	Actual	Possible	Actual	Possible	Actual	Possible	Actual	Possible
13	1. Vegetative Cover of the Riparian Area	6	2	6	6	6	2	6	2	4	4	
14	Comments	Good veg. cover, all lake shore Mostly lawn; small strip of trees (~2m w/ Large open lawn area (grass)										
15	2A. Invasive Plant Species - Canopy Cover	3	1	0	2	2	1	2	1	2	2	
16	Comments	Invasive grasses found mostly on access down to shore Unscented chamomile, tansy, knapweed										
17	2B. Invasive Plant Species - Density	1	1	0	2	2	0	2	1	2	2	
18	Distribution	1	1	0	2	2	0	2	1	2	2	
19	Comments	Few grasses here and there. Sporadic Rare occurrence										
20	3. Disturbance-Caused Undesirable Herbaceous Species	0	2	0	3	3	1	2	1	2	2	
21	Comments	Clover, alfalfa family present Clover, dandelion, strawberry Clover, timothy, other grasses. Lots of clover and some grasses at										
22	4. Preferred Tree and Shrub Establishment and Regeneration	6	2	4	6	6	2	4	2	4	4	
23	Comments	Conifers, alders, saskatoon Saskatoon, birch, raspberry										
24	5A. Use of Trees and Shrubs - Preferred Trees and Shrubs (Browse)	2	3	3	2	1	3	3	3	3	3	
25	Comments											
26	5B. Use of Trees and Shrubs - All Trees and Shrubs (Use other than browse)						1	2	2	3	2	
27	Comments	Well-shaded buffer area; re-establishing. Some stumps but may be trees with										
28	6. Human Alteration of Riparian Area - Vegetation	0	2	2	6	2	0	4	2	0	4	
29	Comments	Set of stairs on each property Trees have been planted and cleared. Trees and shrubs in buffer area are mature. Minimal - some trees removed.										
30	7A. Human Alteration of Riparian Area - Physical; Alteration of the Area	0	4	0	12	8	4	8	8	12	8	
31	Comments	erosion; cement Road to water. none Dock, fire pit, walls, treelines and driftwood Stairs, 3 access points, some riprap 2 Staircases down to shore and 1										
32	7B. Human Alteration of Riparian Area - Physical; Severity						1	2	2	3	2	
33	Comments	Minor										
34	8. Human-Caused Bare Ground	0	0	6	6	2	6	6	4	4	4	
35	Comments	Water Road to water. none Minimal; porous driveway. Lawn is patch Driveway, less than 1% Erosion near staircase										
36	9. Degree of Artificial Addition/Removal of Water	9	9	9	9	9	6	6	6	6	9	
37	Comments	Wells, not severe. Well.										
38	TOTAL SCORE	27	26	30	54	41	27	47	34	45	46	
39	(Percent)	86.7%		131.7%		57.4%		75.6%		82.1%		
40	HEALTH ASSESSMENT	Unhealthy		Healthy		Unhealthy		Healthy with Problems		Healthy		
41												

March 16, 2017



Riparian Assessment Overview showing intact healthy shoreline (light green), poor health (red) and moderate condition (magenta)

Based upon the field surveys, data analysis and geomatic work, the total Moberly Lake shoreline (15,062M North, East to West 22,871M) indicates the following: Healthy* (76%) Moderate: (8%) Poor (16%)

North Shore: 4208 M Poor 1714 M Moderate 9140 M Healthy (includes SFN – 2715M; WMFN - 2716 M)

East Shore (SFN) – moderate 244 M poor 105 M healthy 2382 M

South Shore: 1584 M poor 1196 M moderate 8986M healthy

West Shore (WMFN): healthy 8374 M

Note*: Due to the combined use of field and GIS measurements, a 2% error factor was used to account for changes in physical shoreline changes from natural events particularly at the upper Moberly River delta.

March 16, 2017



Riparian condition assessments
illustrating issues related to
development activities

- Concrete block structures with uncontained sediment transport
- Road access with inadequate runoff control causing rill erosion
- Invasive weed infestation from exposed soil and natural vegetation removal

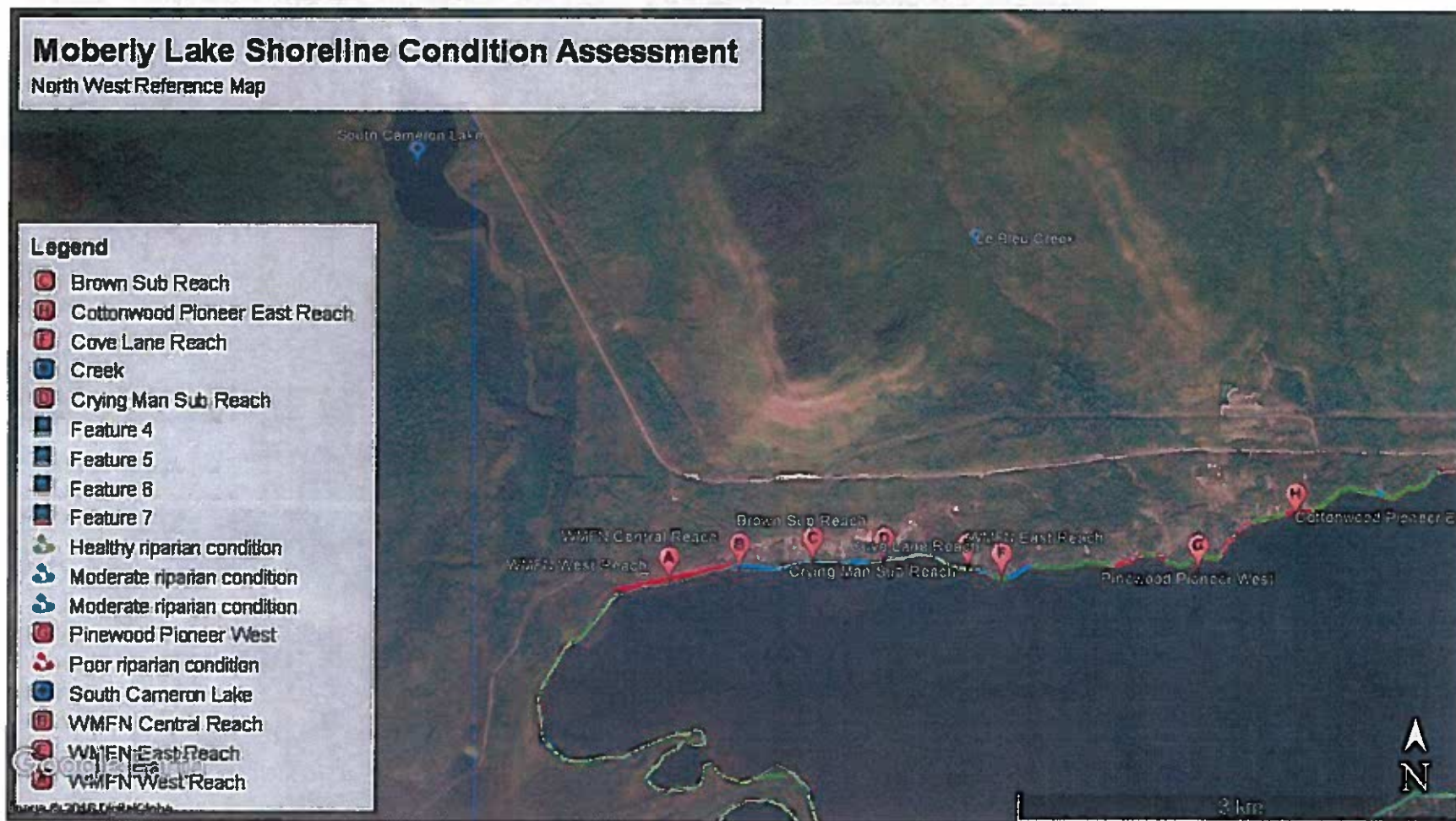
March 16, 2017



Invasive weeds on erodible exposed soils inhibiting succession of natural succession: Unscented chamomile, tansy, knapweed and undesirable species such as dandelion, fox tail barley and clover

March 16, 2017

Moberly Lake North Shore – Northwest Lakeshore Assessment Reference



March 16, 2017



West Moberly First Nations

(A) West Reach – hazardous slope est 71% gradient vulnerable to flood impact scouring, mass wasting and sediment loading.



(B) WMFN Central Community Use Area – limited shoreline development, with indications of “fair” riparian health condition for 67 m length due to loss of secondary cover, but maintenance of shrub and grass vegetation. Good riparian condition for eastern extent of reach to 22.5 m distance.



(C) Brown Subdivision Reach:

Key issues include loss of shoreline tree and shrub cover; Poor (40%) to Moderate (60%) riparian health condition for surveyed 460 m reach with noxious weed presence and surface runoff with loss of buffer to control nutrient loading; need for restoration with appropriate selection of native plant materials to restore riparian cover for erosion control, and attention to runoff management through improved storm-water retention control design measures recommended at east end of subdivision.

(D) Crying Man Subdivision:

Key issue of concern for segment of reach ranked in "fair" riparian condition due to very limited buffer (5- 7.5m) on 118m of this reach; also indications of stormwater overflow from road access ditching and priority need for runoff retention controls (sediment pond and ditch dams) from main access road.



March 16, 2017

D-1



(E) West Moberly FN East: this is the most well protected of the on-reserve north shore; only one minor beach access indicates sign of fair riparian health (33 m) with clearing of buffer and recommended restoration with native species which support traditional use and awareness below Dunne-Za Lodge.

(F) Cove Lane Reach

This reach has a mix of riparian health condition:

healthy condition (462m) with good mix of indigenous species & canopy layers and desirable species; few disturbance species; moderate health (197m) where there are large trees but few understory shrubs; use of stair access; poor condition (112 m) requiring restoration due to lack of retention < 7.5 m, and prevalence of undesirable species (e.g. dandelions, chickweed and clover) with runoff risk from lawns and developed beach access



(G) Pinewood Pioneer West Reach

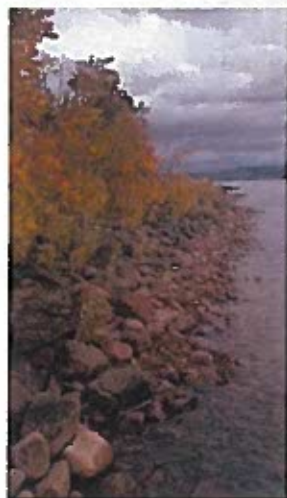
Pinewood Place:

Healthy: Western and eastern range has generally a high ranking (292 m) with adequate buffer up to 15 m, and full mix of understory shrubs and overstory tree species to protect the steep slope

Poor: eastern reach is generally poor condition (235m) with placement of cement blocks, and road access with inadequate runoff control causing direct sediment loading, lawns with minimal buffer.

West Pioneer:

Situated within west Le Bleu Creek drainage, and subjected to major flooding in 2011; generally good buffer on eastern extent with partial degradation
Healthy – 442 M retained buffer > 100m
Poor – 908 m; several adjacent properties with development, buffer removed or degraded from invasive & disturbance caused species (clover, dandelion) minimal overstory canopy;



March 16, 2017



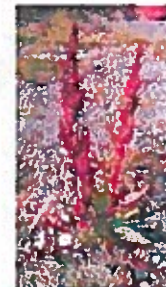
(H) Pioneer East Rd

This shoreline reach is also within the Lebleu Creek drainage

Cottonwood Place: Extensive range of disturbance caused species along shoreline (poor – 348 m)

Pioneer Rd East (poor -233 m; with extensive disturbance species – dandelion, clover, stinkweed, broad-leaf plantain; open access with loss of riparian cover, lack of understory, constructed cement wall, signs of erosion

healthy -226 m) – rock walls and groin to reduce wave action, walkway down to shore, good mix of overstory species, few disturbance species, broad-leaf plantain





(I) Pioneer East to Mission Rd West

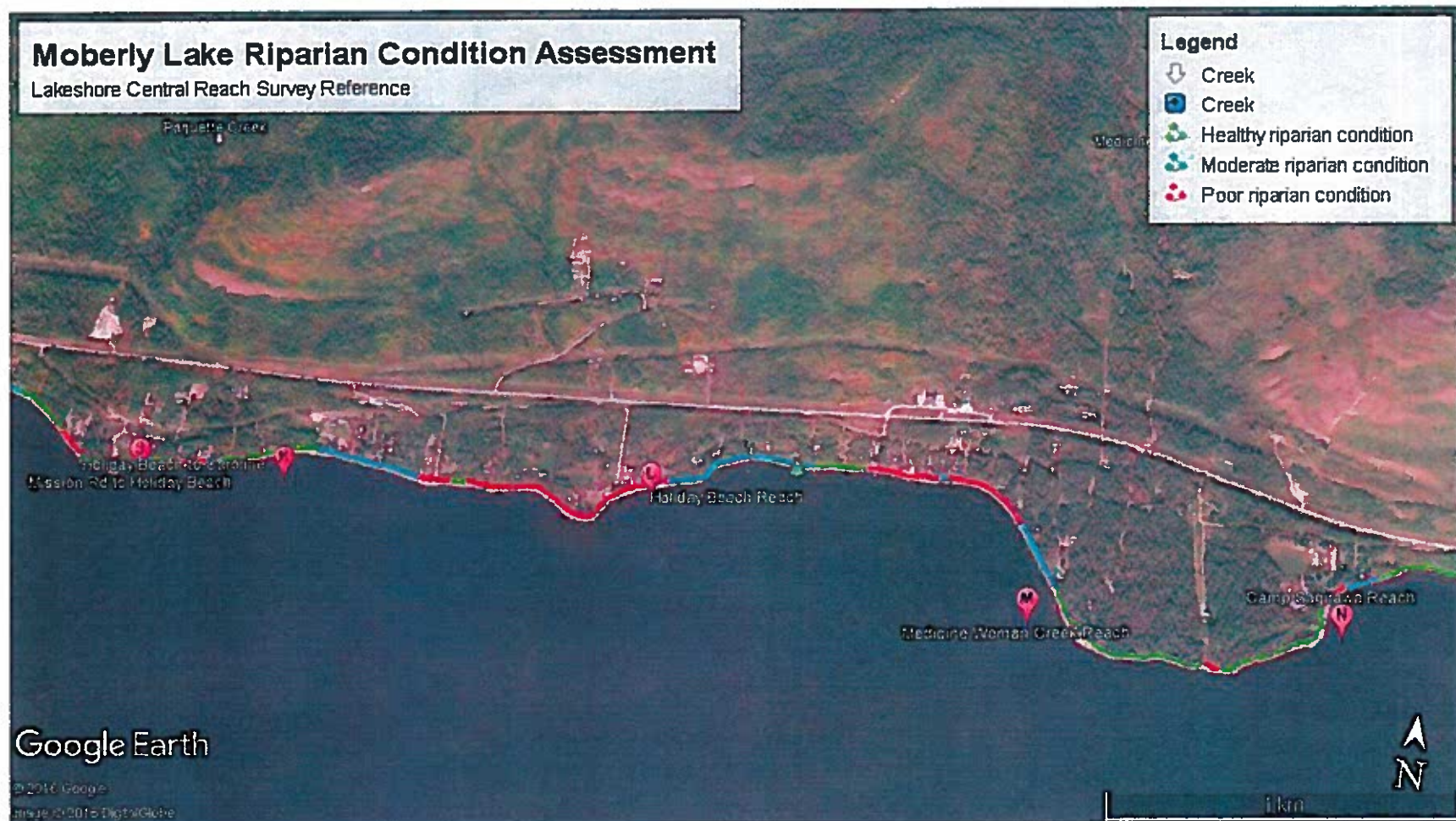
Extensive range of healthy riparian condition (941m) undisturbed from Mission Rd west to east Pioneer with full mix of overstory and understory species (cottonwood, driftwood

Mission Rd. west – generally moderate to poor condition (217 m) minimal buffer, some cottonwood trees (< 5m), but some good mix of shrubs – presence of invasive (hemp, nettle, stinkweed, groundsel) and disturbance species (broad-leaf plantain, dandelion, clover); some driftwood retained



March 16, 2017

Moberly Lake North Shore – Lakeshore Central Assessment Reference



March 16, 2017



(J) Mission Rd to Holiday Beach

This reach is situated within the Paquette Creek drainage and has a variable range of riparian condition with segmented sections of healthy condition (358 m), some moderate (152m) with some good recovery with willow buffer to resist erosion, and contaminant risk, but needing additional restoration of tree species; poor condition (123 m) along Holiday Beach due primarily to dense historical lakeshore property development with presence of some invasives (lady's thumb) and numerous disturbance species (dandelion, stinkweed, plantain); lack of adequate understory; exposed soil and altered drainage with overflow contaminant risk; efforts undertaken to use driftwood protection and restoration



March 16, 2017



(K) Holiday Beach to (L) Caroline Road

Field surveys indicated that this reach indicates a range of riparian condition; healthy (333 m) including Spencer Tuck Park but evidence of overland runoff at east of boat-launch/picnic area, with some exposed soils; most extent of Caroline Rd frontage is ranked generally poor condition (353 M) due to many shoreline sites with removal of buffer understory and installation of numerous artificial structures, and sloping grassed lawns but some efforts made to retain and restore vegetation to 15+m and reduce erosion/high water wave impact

Aside from one segment of healthy riparian (53m), this shoreline area is rated poor over a distance of 641 m with loss of buffer, overland surface runoff issues from sloping lawns to beach with reduced biodiversity and represents one of the longest continuous reaches of such status; prevalence of invasive species (unscented chamomile, tansy, knapweed); numerous artificial and constructed shoreline structures and disturbance including driftwood removal



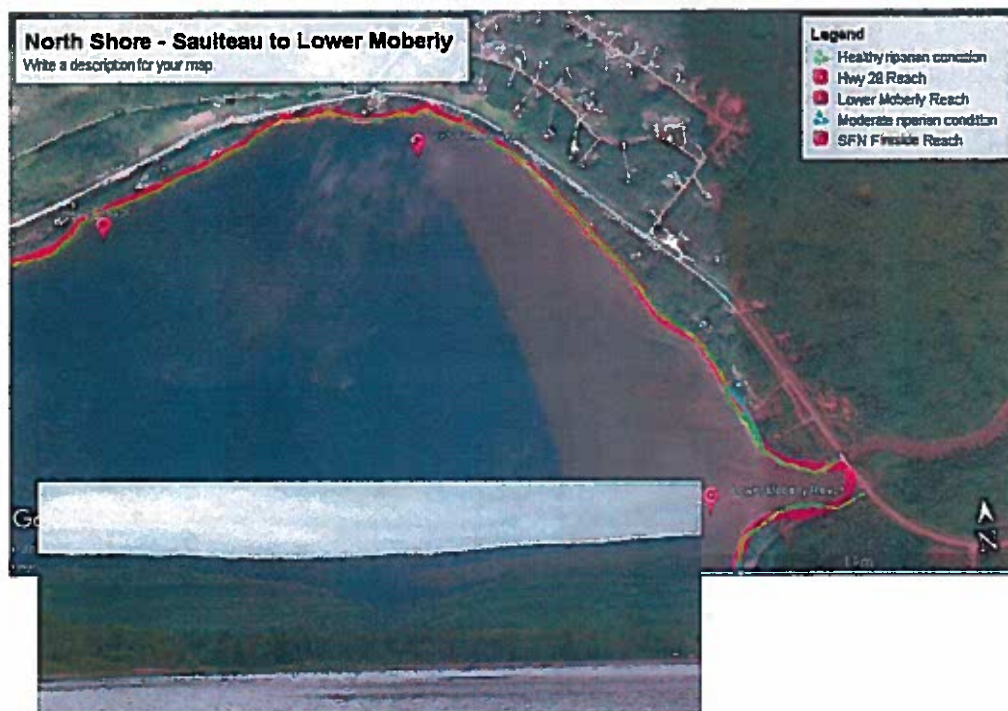


(M) West Centennial to Medicine Woman Creek

While much of this western reach still has maintained adequate riparian function with minimal invasive plants and generally good mix of understory and preferred tree species with healthy ranking (646 m), and including use of foot paths to beach at western range;

At mid Centennial West considerable disturbance with riparian buffer removed or degraded and high incidence of both invasive (hemp-nettle, scentless chamomile, groundsel, lambsquarters), and disturbance species and shoreline modifications (access roads, artificial structures), poor condition (509 m), however several good sites with buffer retention within this reach

The Medicine Woman Creek buffer represents one of largest extent of healthy riparian condition on the north shore (984 m) with significant potential for natural areas designation and/or application of covenant protection.



(N) East Centennial

Sections of this reach (Camp Sagitawa to Canfor property) have been developed to enable shoreline access with removal of the riparian vegetation (total 95 m poor condition); some preferred shrub species with some potential for buffer re-establishment (moderate condition (46 m))

(O) Saulteau Lakeshore to Lower Moberly River Outlet

Most of this reach is in healthy riparian condition with only minor incursions near access sites at Boucher Rd intersection; there are sections with



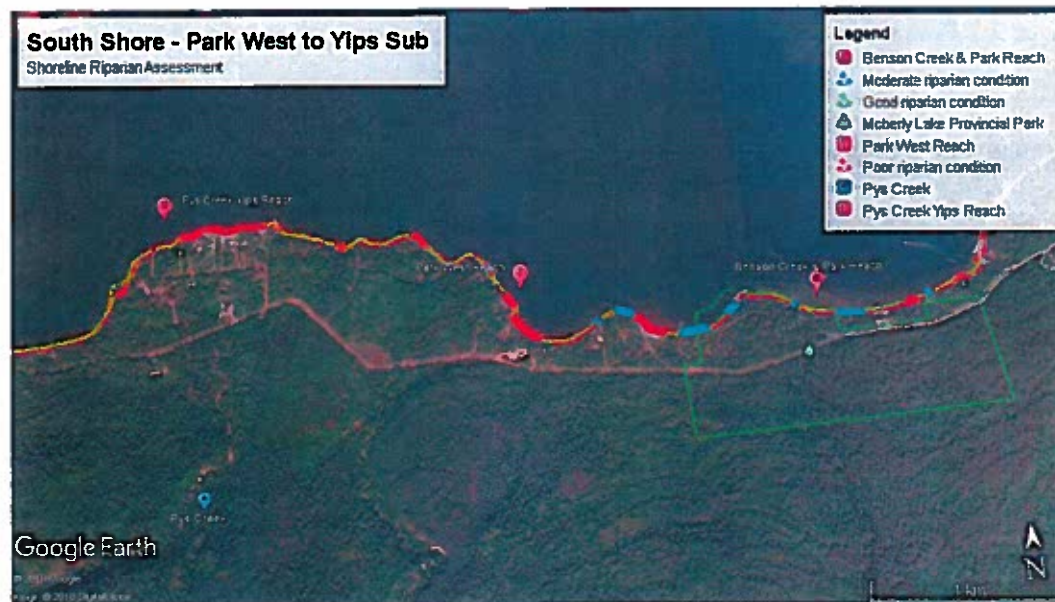


(P, Q, R) Saulteau First Nations South

Most of this reach is in general healthy riparian condition; some sections of shoreline have minimal buffer and risk of surface flow with signs of erosion as a result in isolated locations; the Lower Moberly Reach is an important habitat for fish migration but is also vulnerable to flooding during peak flow periods



March 16, 2017



(S-U) South Shore – Park West to Yips

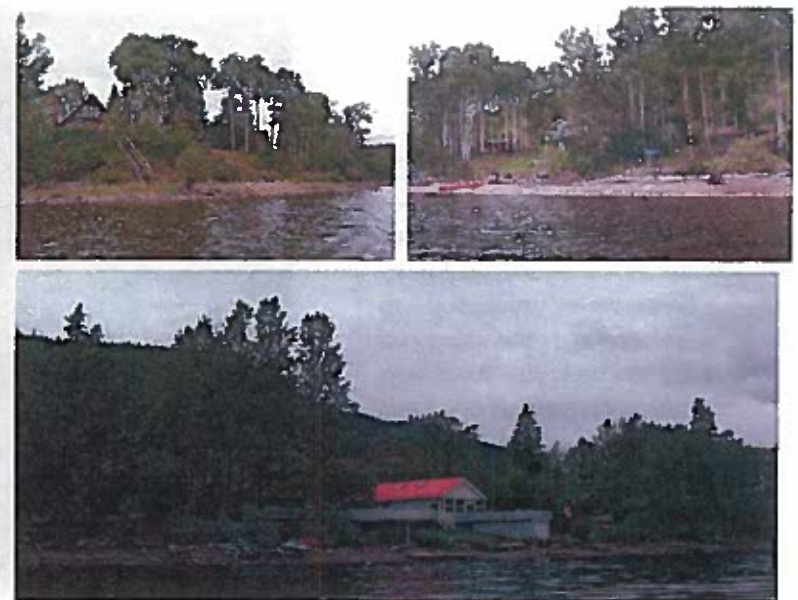
While the south shore is generally in good riparian condition (est. 9 km), the various reaches have a mix of riparian condition ranging in the south-east reach with moderate (679 m) to poor (1119 m) status with numerous properties having removed riparian buffers, or altered properties enabling surface overflow from long sloping lawns. Given much of this shoreline has developed direct road access, it is not likely that restoration will be possible with decommissioning such developments however some segments in the moderate category would benefit from native plantings, invasive weed control, and shoreline bio-engineering controls.





Southwest Lakeshore

This reach has a concentration of predominantly seasonal cottages. While this range has a average moderate healthy riparian condition, there are several segments with developed access and shoreline development that present issues and potential for long-term degradation. Generally, there is a good range of desired tree and understory species, however the fragmentation effect needs attention through increased monitoring and restoration.



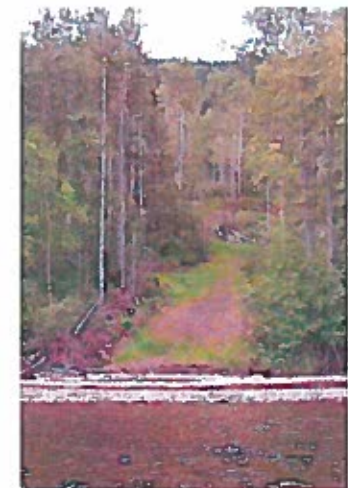
March 16, 2017

D-1



(W) West Shore

The west shoreline is an important feature to support lake ecology given the extent of natural intact riparian cover (8.4 km) that supports numerous waterfowl and fish species. Most of this zone is situated within the West Moberly First Nations boundary, and does not have any proposed land-use developments, so would be a candidate for formal protection designation.



March 16, 2017

References

- Ambrose, N.G Ehlert K, Spicer-Rowe, 2004 Riparian Health Assessment for Lakes, Sloughs and Wetlands – Field Workbook. Modified from Fitch, L, B.W.Adams and G.Hale, 2001 Riparian Health Assessment for Streams and Small Rivers – Field Workbook. Lethbridge Alberta 90 p.
- Askiy Resources, 2014 West Moberly First Nations Socio-Economic Study North Montney Pipeline Project Submission to Nova Gas Transmission Ltd. & National Energy Board, Victoria, BC
- BC Ministry of Environment BC Volunteer Lake Sampling Program Moberly Lake (1999, 2000, 2002, 2003) Prince George, BC
- InterraPlan Inc. 2008 Moberly Community Watershed Strategy, Moberly Lake, BC
- Peace River Regional District, 2000 Lakeshore Development Guidelines Dawson Creek
- Peace River Regional District, 2016 Draft West Peace Fringe Area Official Community Plan Dawson Ck.
- Peace Williston Compensation Program 1992 Stream surveys of the west (Upper) Moberly River. Watershed Peace/Williston Fish and Wildlife Compensation Program, Report No. 67. 17pp.
- Saulteau First Nations, 2015 Draft Community Comprehensive Plan, Moberly Lake BC
- University of Northern BC (UNBC), 2011 Saulteau First Nations Baseline Profile for Federal Joint Review Panel on the Site C Clean Energy Project
- Urban Systems Ltd. 2014 West Peace Fringe Area Background Report Fort St. John, BC

March 16, 2017

Appendices

A. 2015 WATERSHED SURVEY RESULTS

Working under the guidance of InterraPlan Inc, a student researcher undertook a survey of shoreline property owners during the summer of 2015. This was completed through home-visits and mail-in options with the majority of property owners providing a response. The information was compiled to understand priority issues for input to the current Official Community Plan development, and recommendations for further action by relevant authorities and the MLCA through its Watershed Stewardship working group.

1) Do you Own, Lease or Rent water-front property? (n=79, 54% response rate)

Yes: 42 Own: 42 Lease: Rent:
No: 1

2) How long have you been in possession of your property?

<1 yrs: 1 1-5 yrs: 9 6-10 yrs: 5 11-15 yrs: 4 16-20 yrs: 2 >20 yrs: 19

3) Do you live on the property?

Year-round: 17 Seasonal: 26

Commentary: This result points to the importance of understanding the balance between seasonal and permanent residents from the standpoint of investments in shoreline stewardship given property owners are more likely to undertake the necessary expenditures for improved water quality protection.

Recommendation: Considerable emphasis should be place on the education and demonstration activities of shoreline stewardship best-practices, by targeting these two classes of property owners and communicating the importance of cumulative benefits of sustained and/or improved riparian conditions on aquatic species, erosion control, aesthetics/enjoyment, etc.

4) Are there any external factors over which you have no control, which may affect your property?

Yes: 18 No: 24 Responses:

- | | | |
|--------------------|-------------------------------|-------------------------------|
| - Spring runoff | - Hwy 29, Lakeshore Dr, | - sometimes heavy vehicle use |
| - High water | Mission Rd: runoff ditches | - runoff ditches |
| - Flood | - Logging at west end of lake | |
| - Noisy neighbours | well-used road above south | |
| - Creek | Moberly | |

March 16, 2017

Commentary: It is apparent from this result that most property owners do not perceive any direct problems affecting their property maintenance or enjoyment. Run-off control, however was identified as a priority issue, obviously during periods of seasonal peak flows and one that needs further examination. In addition to effects on property management, there are also links to potential increased sedimentation and contaminants from both point-source and diffuse runoff into the Lake. Other concerns related to quality of life indicators may be a growing concern that needs attention.

Recommendation: The Ministry of Transportation should be advised of this concern to determine needs and opportunities for improved drainage controls from existing roads and new access development. Efforts should be also directed by the MLCA and other partners in the value of conducting Homesite Assessments to evaluate such issues and others related to shoreline stewardship and including upland or off-Lake properties which may be contributing to surface runoff impacts. Other matters related to quality of life indicators (noise and other nuisance) should be monitored and options considered for addressing such matters through OCP policy.

5) Have you had any problems with your property?

Yes: 22

No: 19

- High water at shoreline
- Flooding from lake and creek (multiple)
- Floodwaters which brings drift wood etc.
- Erosion from flooding (multiple)
- Sometimes water levels cover the road
- Road allowance (road through their property to the water, public will use it)
- Septic collapsed (was old) from ground flooding
- Bank was affected during flood, so want to stabilize to prevent erosion
- Seepage used to come out of bank, continual ditch to drain
- Loss of trees from erosion during flooding
- pasture land used to be flooded, and built a dugout – no longer problem
- Spring has disappeared

March 16, 2017

Commentary: Based on the results gathered and as presented in question 4, the principle concern for shoreline residents relate to the impacts of high water during peak periods (spring freshet, and summer rain), particularly as they recall the flood event of 2011 and previous high-water years. There are secondary issues related to overland surface flows including road ditch drainage. Concern about failing septic systems was also noted, as reported in 2000 by the Northern Health Authority during their water/sewer assessment.

Recommendation: There will continue to be issues related to peak flow events, and efforts will be required in the following ways: (i) increase public awareness and demonstration about the importance of maintaining Lake buffers, and the value of [shore protection](#) from wave scouring effect with the tethering of drift-wood, inter-planting/soil bio-engineering with natural forms of rock and vegetation, and/or properly designed and installed engineering structures only as a last resort; ii) conduct a surface/shallow-subsurface flows from road right-of-ways, and natural drainage channels with possible mitigation in the form of [runoff controls](#) (e.g. berms, biofiltration methods with wales/wet detention ponds, etc.) which have the added benefit of reducing sediment inputs to the Lake.

6) How much of your property falls into the following categories?

Total shore length:	not on shore	1	< 10 m	10-20 m (3)	20-30m (5)	30-40m (6)	40-50m (2)	50-60m (1)	60-70m
	70-80m (2)	80-100m (5)	>100m (15)						
Ornamental/Landscaped:	<10%: 2	10-20%: 8	21-30%: 3	31-40%: 8	41-50%: 4				
	51-70%: 3	71-90%: 2	>90%:						
Naturalized:	<10%: 1	10-20%: 5	21-30%: 5	31-40%: 3	41-50%: 5				
	51-70%: 7	71-90%: 4	>90%: 4						
Being Restored to Natural:	<10%: 1	10-20%: 2	21-30%: 1	31-40%: 0					
	41-50%: 0	51-70%: 1	71-90%: 0	>90%: 0					
Building Structures:	<10%: 8	10-20%: 15	21-30%: 6	31-40%: 3	41-50%: 0				
	51-70%: 0	71-90%: 0	>90%: 0						
Degraded:	<10%: 1	10-20%: 2	21-30%: 1	31-40%: 0	41-50%: 0	51-70%: 0	71-90%: 0	>90%: 0	

7) Does your property contain any aquatic habitat?

Lake: 39	River:	Marsh:	Swamp:	Bog: 2
Creek: 2	Spring: 2			

8) How far is your home situated from the water?

<10m: 5	11-29m: 22	>30m: 16	N/A: 1
---------	------------	----------	--------

9) Which land uses apply to your property?

Residential: 35

Agricultural:

Livestock Rearing:

Private Business:

Recreational: 8

Commentary: This results points to the following observations: a) there is a wide range of property size with a significant number of respondents falling in the range of large Lake frontage (70m to > 100 m), and the balance falling within the lower range (<60m).; b) respondents indicated a range of land surface change which includes conversion of vegetation to lawns, landscaping, hardened and/or gravelled surfaces; c) most property owners indicated a range of built structures falling in the range <30% of lot size; d) extent of perceived degradation is quite low likely indicating opportunity for sustaining natural vegetative cover for shoreline stewardship. Distance to Lakeshore was reported as being in the lower range (<30 m) which raises concern about off-site impacts on Lake quality. Many property owners also indicated adequate setbacks for their principle residence which provide an adequate shoreline protection measure.

Recommendations: Consideration should be focused on planning policy regarding linear lot subdivision optimums, and set-back distances. Existing PRRD Lakeshore Guidelines (currently limiting to 50% of property, and minimal 7.5 m buffer) may not be sufficient to increase benefits of natural buffers for limiting nutrient loading and optimal set-backs should be increased (min 10 m to 30 m) preferred depending upon percentage of shoreline length retained on the property. This needs to be combined with education on the risks and alternatives on the use of chemical weed controls for lawns. Further guidance can be provided through workshops/clinics which promote [GreenShore practices](#) (e.g. natural species retention, planting), [natural landscaping](#)/regenerative design alternatives including permaculture applications. Existing properties that are in the narrow range should be provided tips about these natural restoration measures.

10) What is your principle source of household water?

Well/Spring: 12

Lake Water: 16

Haul: 14

11) Have you ever had your water tested?

Yes: 18

No: 15

Don't Know: 7

12) Do you use filters to treat your water?

Yes: 18

No: 18

Don't Know: 4

March 16, 2017

13) What is your type of disposal system for sewage water?

Holding/Septic Tank: 18/8 Tank/Field System: 17/16 Outhouse: 7/8 Drainage Pit/field: 1/ Other: 1/ (horiz culvert)
 Seepage G/W pit: 1 No Response:

Support for Treated water supply: yes 4 no not sure 1 no answer 8 (n=12):

Form: community waterline (south)

Support for community watershed plan: yes 28 no/NA 2 not sure 7 no response 4

Willing to receive: information/updates yes 26 no not sure 9 no response 6

Formats to receive info: info pamphlets, email (off-season), public meeting , guidebook,
 workshop, children's activities , personal visit, social media

Support for Plan: research (Petra Powell)

Types of information requested

Creating waterfowl/wildlife habitat Erosion control: Ecological landscaping:

Shoreline restoration: Septic function/maintenance

Commentary: Shoreline properties have a range of sources for
 their domestic water including (deep/shallow wells, Lake water
 withdrawal, and hauling). A high proportion

14) What do you consider the priority water or land-use issues at Moberly Lake? (responses)

- water quality protection
- Sewage; septic tanks not located away from high-water
- Pumping Septic
- Bird protection; north end of ML should be conserved (swan habitat)
- Need greater buffers to lake
- Boating @ north end of lake
- Dr. Water system
- Lake level control
- Garbage in lake
- Need to keep lot sizes restricted
- Controlled clearing of land/lots
- Linear disturbance
- Weeds: invasive species
- Riparian studies should be done
- Sediment build-up
- Logging
- Outhouses close to water
- Clearing for buildings
- Lawn runoff
- Population
- Poorly managed septic systems
- Lake level from Site C
- Surface runoff
- Water quality
- Flooding
- Fish populations
- No commercial use on shoreline
- Keeping Moberly potable
- Turbidity
- Shoreline excavation
- Weir for lake levels
- Healthy habitat for wildlife and humans
- Summer logging
- Contamination from upstream industrial activity
- Warming water temps
- Watershed logging/erosion into lake
- Boat cleaning facilities at launches
- Increased weeds
- Erosion shoreline/bank
- Septic survey not completed in 2000 (not involved?)
- Land use issues affecting Lake quality
- Shoreline excavation

15) What kind of positive actions have you taken, currently practice or propose to undertake to ensure protection of our shorelines, lake property or protection or water quality? (responses)

- Keeping vegetation
- Cleaned garbage off beach
- Avoid erosion
- Leave shoreline alone
- Pump out septic
- Leave natural buffer
- Observe dying off trees & deal with it if need be
- Planted trees to slow runoff
- Drainage rock
- Removing invasive plants
- Additional fill to build up shoreline at high water mark
- Restoration
- Outhouse
- Haul water
- Fill rocks to protect shore
- Fiber cloth to prevent erosion
- Practice water conservation
- Concrete wall → tried boulders but it didn't work
- Retainer walls (log); Loose stacked walls
- Minimal property development
- unmolested natural shoreline and beaches
- No spray on lawns or gardens
- Minimal land clearing during construction
- use of non-motoring vessels
- use of non-chemical/eco-friendly products used
- natural plants left in place
- contouring yard for runoff control

Other comments/concerns

- use of mesh nets for keeping shoreline(erosion control)
- neighbours cutting
- clearing old veg
- support PRRD regs
- worried about mussels; need info about invasive species
- need boat lake patrols, lake patrolling
- like to know there is upkeep on Lake re: fish health/stocking (trout); water quality,
- signage to “drain dry boats”

- density issues at ML
- kids on quads (ATV access & safety) on roads
- need crackdown on sewers,
- monitor on Lk pollution
- better water safety
- dealing with problem wildlife (cougars), and pets (abandoned) since no local SPCA
- people not caring for campfires
- want building inspectors to check septic systems
- support fish stocking

March 16, 2017

REPORT

To: Chair and Board

Date: March 2, 2017

From: Bruce Simard, General Manager of Development Services

Subject: Consultation with Municipalities Regarding Municipal Participation in and Voting on Electoral Area Planning (Part 14), LGA s.381

RECOMMENDATION(S): [All Directors - Corporate Unweighted]

THAT the Regional Board approve the “Backgrounder: Cost Sharing Part 14 Services” as the supporting information for Electoral Director discussions with municipalities.

BACKGROUND/RATIONALE:

At the January 12, 2017 meeting the Regional Board endorsed the following recommendation from the EADC:

PRRD PLANNING FUNCTION PARTICIPATION (Recommendation No. 3)

RD/17/01/20

MOVED Director Rose, SECONDED Director Goodings,

That staff prepare a report, that includes consultation with the Chief Administrative Officer of each municipality, that explains the process for each member municipality to participate in the Peace River Regional District planning function, as outlined in Part 14, Section 381 of the *Local Government Act*, and the associated cost to each municipality for its participation, including options for reduced areas of municipal participation (i.e., fire protection areas and/or fringe planning areas) that would be facilitated by Section 381, and that the Electoral Area Directors be supported in presenting the information to the municipal councils.

CARRIED.

Up to 2006, municipal participation in planning occurred through a variety of contracts that differed in scope and duration. From 2007-2010, five of seven municipalities had opted in. By 2011 six of the seven municipalities had been fully opted in, and all seven have been opted in since 2015.

Further to the January 12, 2017 resolution the attached background information has been prepared for presentation to member municipalities.

A consultation schedule will be set up with the CAO of each municipality.

OPTIONS:**STRATEGIC PLAN RELEVANCE:****FINANCIAL CONSIDERATION(S):****COMMUNICATIONS CONSIDERATION(S):**

April 20, 2017

Bruce Simard

Chris K

OTHER CONSIDERATION(S):

Attachments:

- LGA s. 381
- Bulletin No. A.7.0.0 (Aug, 2000): Municipal Participation in and Voting on Electoral Area Planning
- Backgrounder: Cost Sharing Part 14 Services

LGA s. 381

Cost sharing for services under Part 14 [*Planning and Land Use Management*]

381 (1) The costs of services under Part 14 must be apportioned on the basis of the converted value of land and improvements in the service area as follows:

(a) if no municipality has entered into an agreement under subsection (2) or opted out under subsection (3), among all the municipalities and electoral areas, with the service area deemed to be the entire regional district;

(b) subject to paragraphs (c) and (d), if one or more municipalities have opted out under subsection (3) and are no longer participating in the services, among the electoral areas and any municipalities that have not opted out, with the service area deemed to be those areas;

(c) if one or more municipalities have entered into an agreement under subsection (2) to share only some of the costs, those costs are to be recovered in accordance with the agreements and the remaining costs are to be apportioned among the other municipalities and electoral areas participating in the services;

(d) if a municipality is liable for costs under subsection (6) or (7), those costs are to be recovered from the municipality and the remaining costs are to be apportioned among the other participating municipalities and electoral areas.

(2) The board and a municipality may enter into an agreement that the municipality is to share in some but not all of the costs of services under Part 14, to the extent set out in the agreement and in accordance with the terms and conditions for the municipality's participation established by the agreement.

(3) Subject to subsection (4), a municipality may opt out of participation in services under Part 14 by giving notice to the board, before August 31 in any year, that until further notice it will no longer share the costs of services under Part 14.

(4) A municipality that is a party to an agreement under subsection (2) may give notice under subsection (3) only in the last year of the term of the agreement.

(5) After notice is given under subsection (3), the municipality ceases to participate in the services, effective at the start of the following year.

(6) As an exception to subsection (5), if a municipality that is not a party to an agreement under subsection (2) gives notice under subsection (3) after a board has passed a resolution authorizing the preparation of an official community plan or bylaw under Part 14, the municipality continues to participate in the services and must share the costs in that preparation until the earlier of the following:

(a) the date the plan or bylaw is adopted;

(b) 2 years after the date the resolution is passed.

(7) Subsection (6) also applies to a municipality that is a party to an agreement under subsection (2) if the official community plan or bylaw is in relation to the Part 14 services for which the municipality shares costs under the agreement.

Note:

References to Part 26 should now be to Part 14.
s.804.1 is now s.381

Using the Local Government Act **BULLETIN**

Date: August, 2000

**Bulletin
Number:**

A.7.0.0

Municipal Participation in and Voting on Electoral Area Planning

Rationale:

The new provisions, **which come into effect August 30, 2000**, primarily respond to the Municipal Act Reform principles of flexibility and resolution of inter-local government issues. The amendments respond to consultations with regional districts which emphasized the need to reduce conflict between municipalities and electoral areas and to encourage co-operative planning. Finally, they are consistent with the recommendations of the report by Professor Bish, commissioned by the ministry, which particularly emphasized the need for establishing fair voting rules. To this end the provisions:

- authorize broader, longer term agreements on municipal participation in electoral area planning; and
- change the rules for municipal directors' voting on municipal-regional district agreements for electoral area planning.

The overall objective is to encourage agreements between a municipality and the regional district with respect to the extent of participation in electoral area planning by the municipality. This is done by allowing greater scope and longevity of agreements, as well as clarifying the relationship between the agreement and notices relating to a municipality opting out of all electoral area planning services.

New Provisions:

Municipal Participation in Electoral Area Planning

- Regional districts are authorized under Part 26 to undertake planning and land use management within electoral areas, but this service differs from many other regional district services in two substantive ways:
- unlike most other services, the regional district is not authorized to provide Part 26 services in municipalities [section 873]; and
- unlike other services, all municipalities participate in decision making and share in the cost of the service even though they are not within the service area (unless the municipality indicates that it

April 20, 2017

does not wish to participate in electoral area planning, or can come to an agreement with the regional district on partial participation).

- Municipal participation is based on the view that planning benefits all areas, not just the electoral areas for which the plans are developed (i.e., good planning benefits the region as a whole). This can be seen most clearly in urban fringe areas, but is true, at least conceptually, for all electoral area planning. In addition, decisions about planning are often considered a general government or corporate responsibility of the entire board (similar to the decisions for establishing services) rather than a service operation or management decision of the participants.
- However, it is recognized that the extent of this benefit to individual municipalities is a matter that is best judged locally, based on the specifics of the situation. Therefore, the legislation provides opportunities for municipalities to make agreements with the regional district whereby the municipality partially participates in electoral area planning. The legislation also authorizes municipalities that have not entered into such agreements to provide notice to the regional district that it does not wish to participate in any electoral area planning services (i.e., municipal opt-out).

Signalling an intention to participate, partially participate, or not participate

- The legislation provides that a municipality is deemed to be fully participating in electoral area planning unless it provides a notice that it intends to opt-out entirely, or agrees with the regional district to participate partially (i.e., **if the municipality does nothing, it is deemed to be fully participating**). Full participation means that municipal directors are entitled to vote on all resolutions and bylaws relating to Part 26 matters and that costs related to Part 26 services will be apportioned to the municipality based on converted values.
- A municipality may make an agreement with the regional district which sets out conditions under which the municipality partially participates in electoral area planning. Partial participation means that municipal directors are entitled to vote on resolutions and bylaws relating to Part 26 to the extent authorized under the agreement, and costs related to Part 26 services will be apportioned to the municipality in accordance with the agreement.
- If a municipality does not have an agreement as noted above, or if it is in the last year of an agreement, it may provide notice to the regional district by August 31 that it no longer wishes to participate in any electoral area planning, in which case, the municipality ceases to be a participant in the following year. No participation means that municipal directors are not entitled to vote on any resolutions and bylaws relating to Part 26 and that the costs of the Part 26 service will not be apportioned to it (with the exception that it must continue to pay for plans or bylaws under Part 26 for 2 years after the board resolution initiating them). There is no longer a requirement to provide notice every year -- **once a notice has been given, the municipality remains excluded from participation in the service in all subsequent years until it either provides notice that it wishes to fully participate, or makes a partial participation agreement.**

Agreements

- Section 804.1 (2) provides that a municipality and a regional district *may* enter into an agreement that a municipality will participate in some, but not all, electoral area planning. The agreement authority differs from the previous authority in four important aspects:
- Councils and boards may make an agreement at any time in the year. The previous authority required that agreements be in place by August 31 and would become effective for the following year. The new authority allows agreements to be made at any time, with their effective dates set by the parties to the agreement.
- The agreement can be made whether the municipality is a full participant or has opted out. The previous authority allowed for an agreement only if a municipality had provided notice to opt out.
- The agreement may set out the terms and conditions of the municipality's participation. The previous authority was unclear about the extent to which the agreement could set out terms and conditions of participation -- it allowed the agreement to specify "particular plans, permits or bylaws and particular areas" but did not specifically allow any other terms. The new authority makes it clear that any term or condition which can be agreed upon may be provided for in the agreement. The legislation does not specify a maximum term or the scope of the agreement -- this is left to the judgement of the parties to the agreement -- but it is intended that certainty and stability be considered when entering into these agreements, and it is anticipated that these factors will be enhanced when broader, longer term agreements are developed.
- Once an agreement is made, the parties to the agreement are obligated to comply with the agreement until it expires or is amended. If circumstances change, the agreement can always be reviewed and renegotiated, but both parties will need to agree to any changes. Compliance with an agreement means, in part, that **once an agreement is in place, municipalities cannot either fully participate or fully opt-out of participation in electoral area planning during the term of the agreement.** The only exception to this provision relates to the last year of an agreement -- municipalities may provide notice to the board in the last year of an agreement that it wishes to fully opt-out of participation in electoral area planning effective the following year. This opt-out is authorized because the notice must be given by August 31 in a year, but is not effective until the next year (when the agreement would have expired).
- Both cost apportionment for Part 26 services and voting on Part 26 decisions should be dealt with in an agreement. Section 804.1(1)(c) provides that if a municipality has entered into an agreement, costs are to be recovered in accordance with the agreement (therefore, if the agreement does not provide for cost recovery, the municipality is not required to share in the costs). Section 791(12)(c) provides that while an agreement is in force, the director for the municipality cannot vote on Part 26 resolutions or bylaws except in accordance with the agreement (therefore, if the agreement is silent with respect to voting then the director is not entitled to vote).

Fairer Voting Rules

- All votes by the regional district board on planning agreements and resolutions and bylaws under Part 26 continue to be unweighted -- i.e., each director who is entitled to vote has one vote [section 791(2) and (3)].

April 20, 2017

- Voting rules for municipalities that are fully participating in electoral area planning have not changed. A director from a fully participating municipality continues to be entitled to vote on all partial participation agreements and all resolutions and bylaws pertaining to Part 26 services.
- Previous provisions prevented a municipal director from voting on the agreement for that municipality but allowed voting on another municipality's agreement. Section 791(12) is amended to eliminate the ability to vote on another municipality's agreement. Therefore, a municipal director representing a municipality that has entered into an agreement in accordance with section 804.1(2) in which it is a partial participant in Part 26 services, cannot:
 - vote on the acceptance of an agreement with the director's municipality;
 - vote on any agreement with another municipality; or
 - vote on any resolution or bylaw under Part 26 except as authorized by their municipality's agreement.
- Similarly, municipal directors representing municipalities that had fully opted-out were authorized to vote on other municipality's agreements. The provisions have been changed to prevent this. Therefore, a director for a municipality which has fully opted-out, cannot:
 - vote on an agreement pursuant to section 804.1(2); or
 - vote on bylaws and resolutions pertaining to Part 26 except when the municipality is required to continue to pay for Part 26 services under section 804.1(6) or (7).
- The timing of voting entitlement is also changed. With respect to agreements, as soon as a municipality has entered into an agreement, it is not entitled to vote on other agreements. However, the entitlement to vote on Part 26 services is linked to the term of the agreement, rather than the date it is entered into. Therefore, if a municipality and regional district agree in September of 2000 to limited participation in Part 26 services commencing in March of 2001, then the director for the municipality would be entitled to vote on all planning matters until March 2001 (assuming that the municipality has not opted-out of electoral area planning for 2000). Similarly, as soon as notice to opt-out has been given directors are not entitled to vote on agreements, but their entitlement to vote on Part 26 matters continues until January of the following year.

Related Provisions:

N/A

Practical Considerations:

- The intent of the new provisions is to encourage regional districts and member municipalities to enter into longer, more comprehensive agreements. This will avoid the annual renegotiation of agreements or annual decisions about opting-out which, in the past, have created uncertainty and, in some cases, conflict.
- The agreement provisions are broad both in terms of scope and timing. It is recommended that boards approach this new power prudently. Since a municipality cannot opt-in or out during the term of an agreement, and since an agreement may only be amended with the consent of both the

April 20, 2017

municipality and the regional district, it is recommended that initially consideration be given to agreements with relatively short time frames, for example, three years. Once the board and the municipality have had a chance to see how the agreement is working they may want to consider a longer or a shorter term.

- It is recommended that regional districts consider the annual budgeting and tax requisition system when negotiating agreements with municipalities. Agreements may be made at any point in the year, but the regional district must ensure that the effective dates of the agreement mesh with its requisition cycle.
- It is recommended that the agreement lay out the scope of the planning program, in the fullest detail possible, so as to minimize misunderstandings. This can provide an opportunity to deal with a number of critical issues including the following:

municipal interests in electoral area planning and vice versa;

consultation and referral processes between municipalities and electoral areas; and

the priority projects to be undertaken within the time frame of the agreement.

- Regional districts and municipalities are encouraged to use regional growth strategies and official community plans to establish municipal interests in electoral area planning and electoral area interests in municipal planning. This could, for example, focus on the definition of and policies for "urban fringe" areas.
- municipalities and regional districts may also want to use the new consultation requirement for Official Community Plans contained in the new section 879 as an impetus to develop protocols as to how the two jurisdictions can achieve cooperative planning processes. A bulletin will be developed on this topic prior to the new section 879 coming into effect.
- The Ministry will be undertaking research and will work with regional district and municipal planning staff on the development of model agreements and a best practices guide. In addition, Ministry staff are available to meet with regional boards and municipal councils to provide any assistance they might need in using these new legislative provisions.

Transitional provisions:

- [B.C. Regulation 241/2000](#) specifies that the new provisions will be effective August 30, 2000. This date has been chosen specifically because of the August 31 deadline for municipal opt-out notices.
- As in previous years, if a municipality wishes to fully opt-out of electoral area planning, it must do so by August 31.
- Also as in previous years, if a municipality and a regional district wish to enter into an annual partial participation agreement, and the agreement is made prior to August 31, the municipality must first give the regional district an opt-out notice and then may enter into an agreement. Voting on any of these annual agreements prior to August 31 would be based on the old voting rules (i.e., a municipal director cannot vote on its own agreement, but can vote on another

April 20, 2017

municipality's agreement). However, if partial participation agreement is voted on after August 30, it must be voted on using the new voting rules (i.e., municipal directors cannot vote on any agreements unless their municipality is fully participating in electoral area planning).

- If a municipality and a regional district wish to enter into a multi-year agreement under the new provisions, it may do so at any time. Depending on the timing, however, the process will be different. The two options are as follows:
- Agreements under the new provisions may be made before August 30. The *Interpretation Act* provides authority to exercise new powers prior to them coming into force, but states that the action has no effect until the new powers come into force. This means that the municipality and the regional district can use the new powers for making agreements before August 30, but that the agreements themselves have no effect until after that date. However, if the new agreement powers are used, voting on the agreements must be done in accordance with the new voting rules (i.e., municipal directors cannot vote on any multi-year agreements unless their municipality is fully participating in electoral area planning, no matter whether that voting takes place prior to or after August 30).
- Agreements under the new provisions may also be made after August 30. Both the new agreement powers and the new voting rules come into force August 30, and so are applicable to any agreements made after that date. **It is recommended, however, that municipalities currently negotiating a multi-year agreement consider its options with respect to opting-out as well, in case it cannot come to an agreement with the regional district. This is because if the municipality does not give a notice to opt-out by August 31 and subsequently cannot come to an agreement with the regional district, it is considered to be fully participating in electoral area planning.**

Local Government Act References:

Primary Sections: 791, 804.1, 879

Bill 14 Sections:



BACKGROUNDER

R-1

Cost Sharing Part 14 Services
Local Government Act Section 381

1.0 RATIONALE

Pursuant to Part 14: Planning and Land Use Management, of the LGA, the PRRD undertakes activities in the electoral areas of the region to plan, manage and regulate development. The PRRD considers that municipal participation in these activities is important because proactive planning benefits all jurisdictions.

2.0 PART 14: PLANNING AND LAND USE MANAGEMENT

Activities authorized under Part 14 include:

Official Community Plans	Farm Bylaws
Zoning Bylaws	Development Permit Areas
Public Hearings & Public Notifications	Development Variance Permits
Advisory Planning Commission	Temporary Industrial & Commercial Permits
Development Approval Procedures	Tree Cutting Permits
Board of Variance	Application & Inspection Fees
Housing Agreements	Development Cost Charges
Parking & Loading Regulations	Development Works Agreements
Run-off Control	School Site Acquisition Charges
Regulation of Signs	Subdivision Servicing Regulations
Screening & Landscaping Regulations	Site Profile Assessments

3.0 LGA SECTION 38: MUNICIPAL PARTICIPATION IN PLANNING

(excerpt from Bulletin No. A.7.0.0, Aug. 2000)

These provisions, **which came into effect August 30, 2000**, primarily respond to the Municipal Act Reform principles of flexibility and resolution of inter-local government issues. The amendments respond to consultations with regional districts which emphasized the need to reduce conflict between municipalities and electoral areas and to encourage co-operative planning. Finally, they are consistent with the recommendations of the report by Professor Bish, commissioned by the ministry, which particularly emphasized the need for establishing fair voting rules. To this end the provisions:

- authorize broader, longer term agreements on municipal participation in electoral area planning; and
- change the rules for municipal directors' voting on municipal-regional district agreements for electoral area planning.

The overall objective is to encourage agreements between a municipality and the regional district with respect to the extent of participation in electoral area planning by the municipality. This is done by allowing greater scope and longevity of agreements, as well as clarifying the relationship between the agreement and notices relating to a municipality opting out of all electoral area planning services.

- unlike other services, all municipalities participate in decision making and share in the cost of the service even though they are not within the service area (unless the municipality indicates that it does not wish to participate in electoral area planning, or can come to an agreement with the regional district on partial participation).

April 20, 2017

- Municipal participation is based on the view that planning benefits all areas, not just the electoral areas for which the plans are developed (i.e., good planning benefits the region as a whole). This can be seen most clearly in urban fringe areas, but is true, at least conceptually, for all electoral area planning. In addition, decisions about planning are often considered a general government or corporate responsibility of the entire board (similar to the decisions for establishing services) rather than a service operation or management decision of the participants.
- However, it is recognized that the extent of this benefit to individual municipalities is a matter that is best judged locally, based on the specifics of the situation. Therefore, the legislation provides opportunities for municipalities to make agreements with the regional district whereby the municipality partially participates in electoral area planning. The legislation also authorizes municipalities that have not entered into such agreements to provide notice to the regional district that it does not wish to participate in any electoral area planning services (i.e., municipal opt-out).

Signalling an intention to participate, partially participate, or not participate

- The legislation provides that a municipality is deemed to be fully participating in electoral area planning unless it provides a notice that it intends to opt-out entirely, or agrees with the regional district to participate partially (i.e., **if the municipality does nothing, it is deemed to be fully participating**).
 - Up to 2006, participation occurred through a variety of contracts that differed in geographic scope and duration. From 2007-2010, five of seven municipalities had opted in. By 2011 six of the seven municipalities had been fully opted in, and all seven have been opted in since 2015.
- A municipality may make an agreement with the regional district which sets out conditions under which the municipality partially participates in electoral area planning. Partial participation means that municipal directors are entitled to vote on resolutions and bylaws relating to Part 14 to the extent authorized under the agreement, and costs related to Part 14 services will be apportioned to the municipality in accordance with the agreement. Section 4.0 sets out cost sharing models that have been used in the past.

4.0 HISTORICAL COST SHARING

- 4.1 There were three levels of participation available, based on the geographic area over which participation in Part 14 Services was desired. These levels were set at 100%, 75% and 50%, as illustrated on maps for each municipality.
- 4.2 Two options for cost sharing were offered;
 - 1) by requisition, or
 - 2) by per-capita (not to exceed the 100% requisition amount)
- 4.2.1 The per-capita option was based upon population figures as estimated by BC Stats. **This option was only available to those municipalities that chose the 100% participation level.** The per capita rate in 2008 was \$2.48 and the scheme included an annual increase equal to the annual CPI change of the preceding year. Using this formula the per capita fee for 2017 would be \$2.81.
- 4.2.2 The requisition option is based on apportionment of the Part 14 requisition, assuming all jurisdictions participate. This was the only cost option available for participation levels less than 100%. This calculation is based on completed assessments and confirmed budget for the given year.

5. SUMMARY OF MUNICIPAL PARTICIPATION

R-1

Municipality	1999	2000	2001	2002	2003	2004	2005	2006
Chetwynd	\$6,706 100%	\$6,705 100%	\$6,705 100%	\$6,705 100%	\$5,830 100%	\$5,830 100%	\$5,904 100%	\$6,662 100%
Dawson Creek	\$9,368 50%	\$9,247 50%	18,751 100%	25,031 100%	22,688 100%	22,599 100%	23,786 100%	24,442 100%
Fort St John	\$23,044 75%	\$25,052 75%	33,797 100%	33,797 100%	36,086 100%	36,086 100%	38,863 100%	42,764 100%
Hudson's Hope	\$2,524 100%	\$2,524 100%	2,524 100%	2,524 100%	2,338 100%	2,338 100%	2,492 100%	2,782 100%
Pouce Coupe	\$1,206 100%	\$892 100%	879 100%	1,106 100%	961 100%	863 100%	903 100%	998 100%
Taylor	\$2,320 100%	\$2,320 100%	2,320 100%	2,320 100%	2,572 100%	2,572 100%	2,924 100%	3,237 100%
Tumbler Ridge	0	0	0	0	0	0	0	0
Total	\$45,168	\$46,740	\$64,976	\$71,483	\$70,475	\$70,288	\$74,872	\$80,885

Municipality	2007	2008	2009	2010	2011	2012	2013	2014
Chetwynd	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in
Dawson Creek	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in
Fort St John	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in
Hudson's Hope	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in
Pouce Coupe	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in	Opt-in
Taylor	\$2,320 100%	\$4,544 50%	\$4,772 50%	\$3,177 50%	Opt-in	Opt-in	Opt-in	Opt-in
Tumbler Ridge	0	0	0	0	0	0	0	0

Note: The requisitions for each participating jurisdiction for the period 2007-2017 are shown on budget sheets contained in Schedule 3.

April 20, 2017

Municipality	2015	2016	2017
Chetwynd	Opt-in	Opt-in	Opt-in
Dawson Creek	Opt-in	Opt-in	Opt-in
Fort St John	Opt-in	Opt-in	Opt-in
Hudson's Hope	Opt-in	Opt-in	Opt-in
Pouce Coupe	Opt-in	Opt-in	Opt-in
Taylor	Opt-in	Opt-in	Opt-in
Tumbler Ridge	Opt-in	Opt-in	Opt-in

6.0 ALTERNATIVE COST SHARING

6.1 Looking forward this report now considers alternative cost sharing models. Similar to before, three cost levels are proposed:

- A. 100% (opt-in)
- B. 75% of requisition
- C. 50% of requisition

Attached maps illustrate applicable area for each municipality. The per capita rate is not considered as an option to entice municipalities toward full participation since they are currently opted-in at full cost and full area participation.

6.2 Summary of alternative cost levels:

2017 Requisition	A	B	C
\$ 765,012.00	Opt-In		
	100%	75%	50%
Chetwynd	\$ 16,316.00	\$ 12,237.00	\$ 8,158.00
Dawson Creek	\$ 65,519.00	\$ 49,139.25	\$ 32,759.50
Fort St John	\$ 142,450.00	\$ 106,837.50	\$ 71,225.00
Hudson's Hope	\$ 9,933.00	\$ 7,449.75	\$ 4,966.50
Pouce Coupe	\$ 2,926.00	\$ 2,194.50	\$ 1,463.00
Taylor	\$ 11,050.00	\$ 8,287.50	\$ 5,525.00
Tumbler Ridge	\$ 19,989.00	\$ 14,991.75	\$ 9,994.50
	\$ 268,183.00	\$ 201,137.25	\$ 134,091.50
Electoral Areas	\$ 496,829.00	\$ 563,874.75	\$ 630,920.50

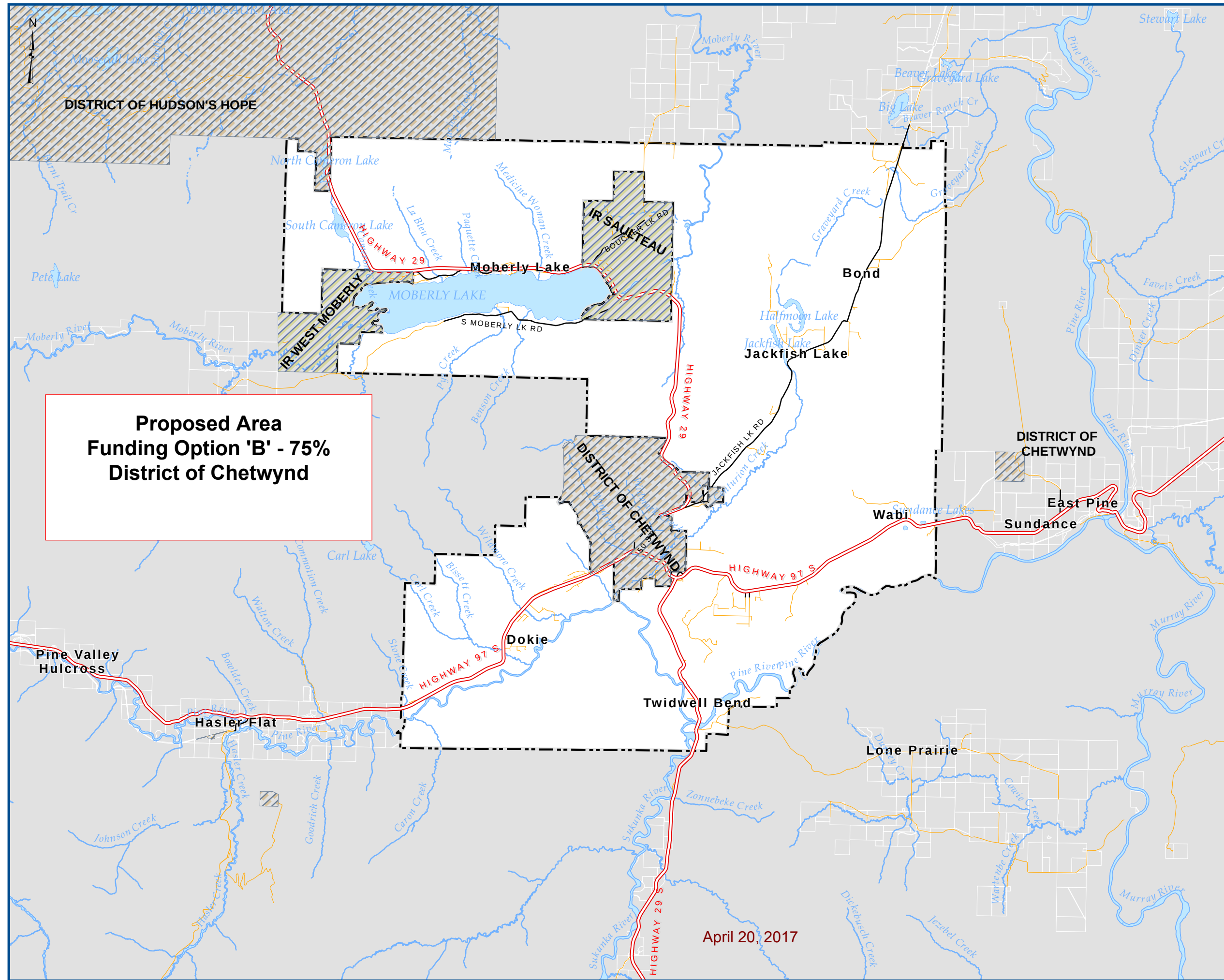
April 20, 2017

SCHEDULE 1

R-1

GEOGRAPHIC AREAS FOR COST LEVEL B
75% of Requisition

April 20, 2017



**Proposed Area
Funding Option 'B' - 75%
District of Chetwynd**

KEY MAP

LEGEND

- West Peace Fringe Area
- Agriculture
- Municipal
- First Nations
- Lakes
- Rivers
- Highway
- Roads
- Gravel Roads

Data Source: Peace River Regional District

1:200,000 0 1,250 2,500 5,000 7,500 10,000 Meters

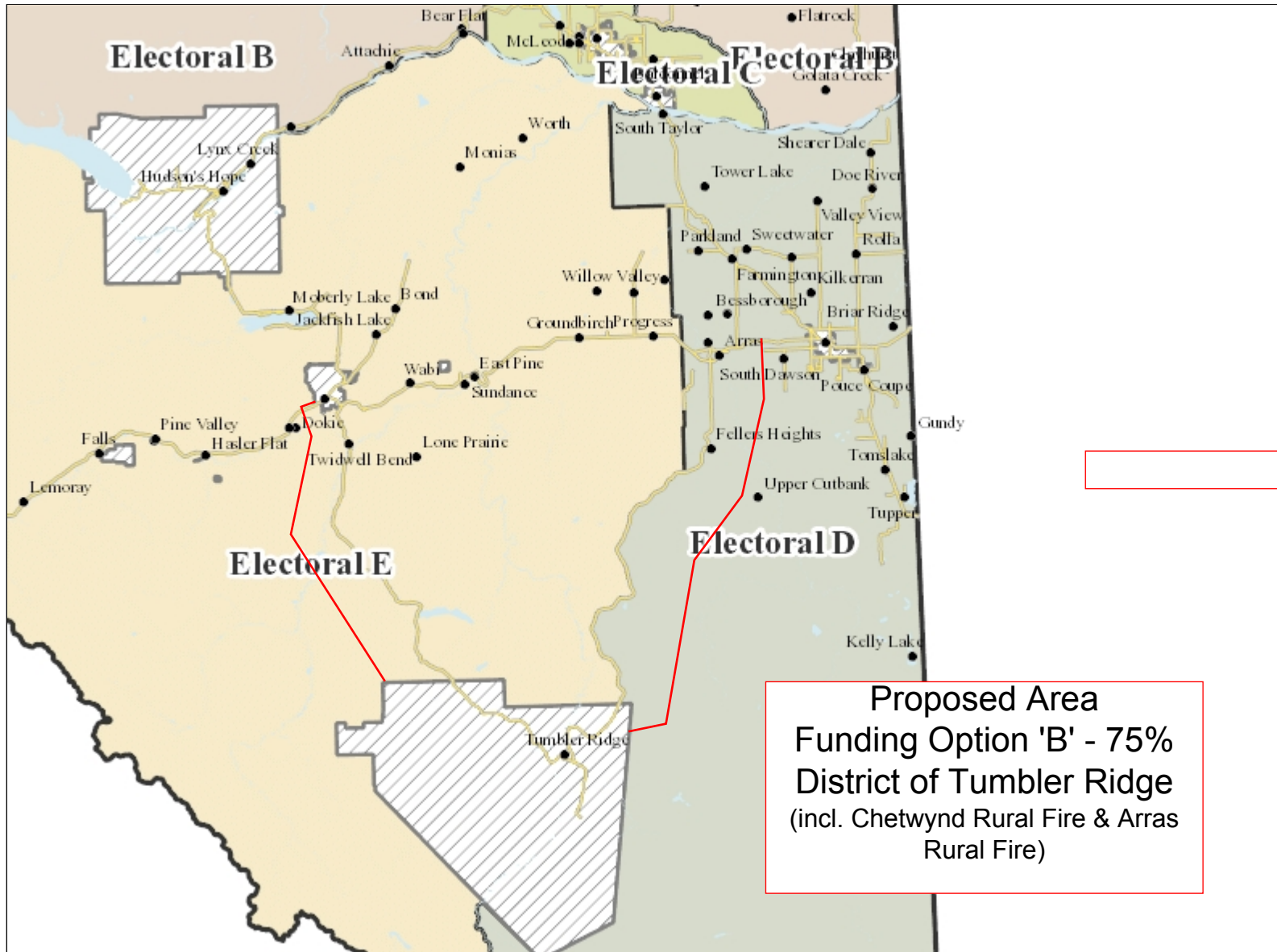
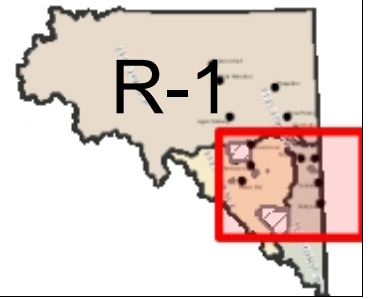
**WEST PEACE
FRINGE AREA**

Date: Feb,06,2013; Drawn By:

April 20, 2017



Peace River Regional District



Legend

- Rural Community
- Main Roads (< 1:1000000)
- Water Bodies
- Regional District Boundary
- ▨ Municipal Boundaries
- Electoral Area Boundaries
 - Electoral B
 - Electoral C
 - Electoral D
 - Electoral E

Proposed Area
Funding Option 'B' - 75%
District of Tumbler Ridge
(incl. Chetwynd Rural Fire & Arras
Rural Fire)

1: 1,068,005



54,254.7 0 27,127.33 54,254.7 Meters

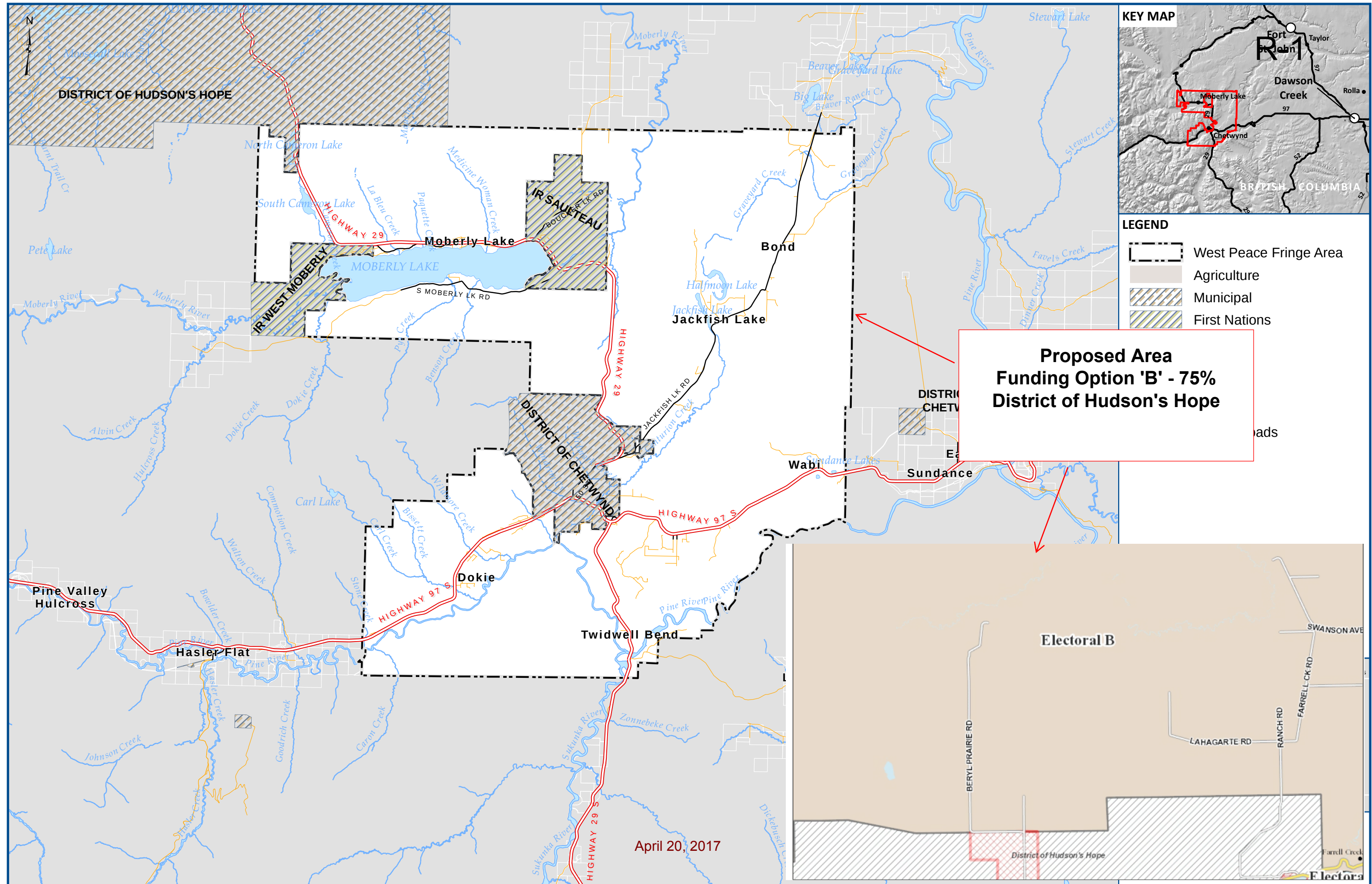
NAD_1983_UTM_Zone_10N
© Latitude Geographics Group Ltd.

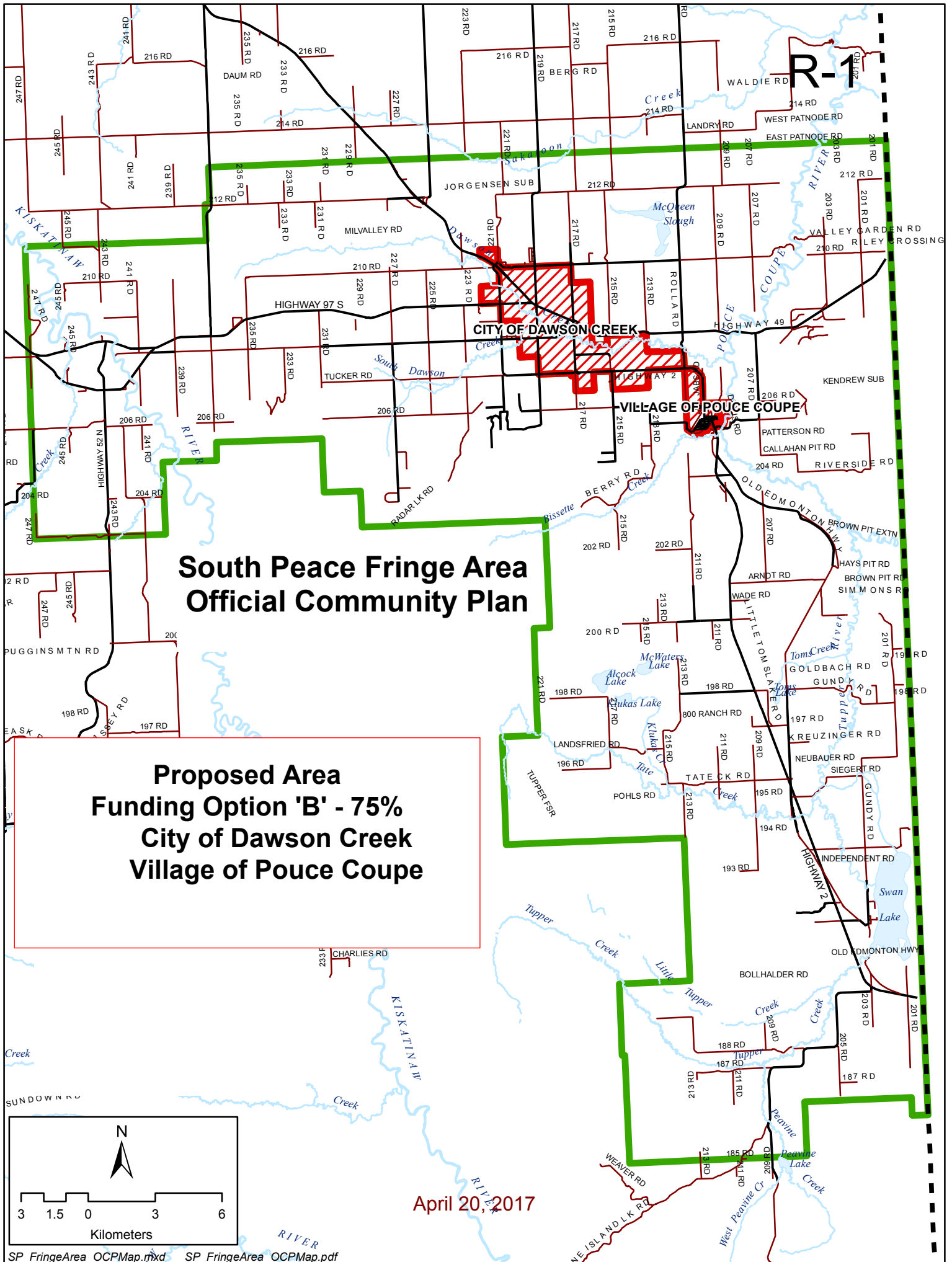
April 20, 2017

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

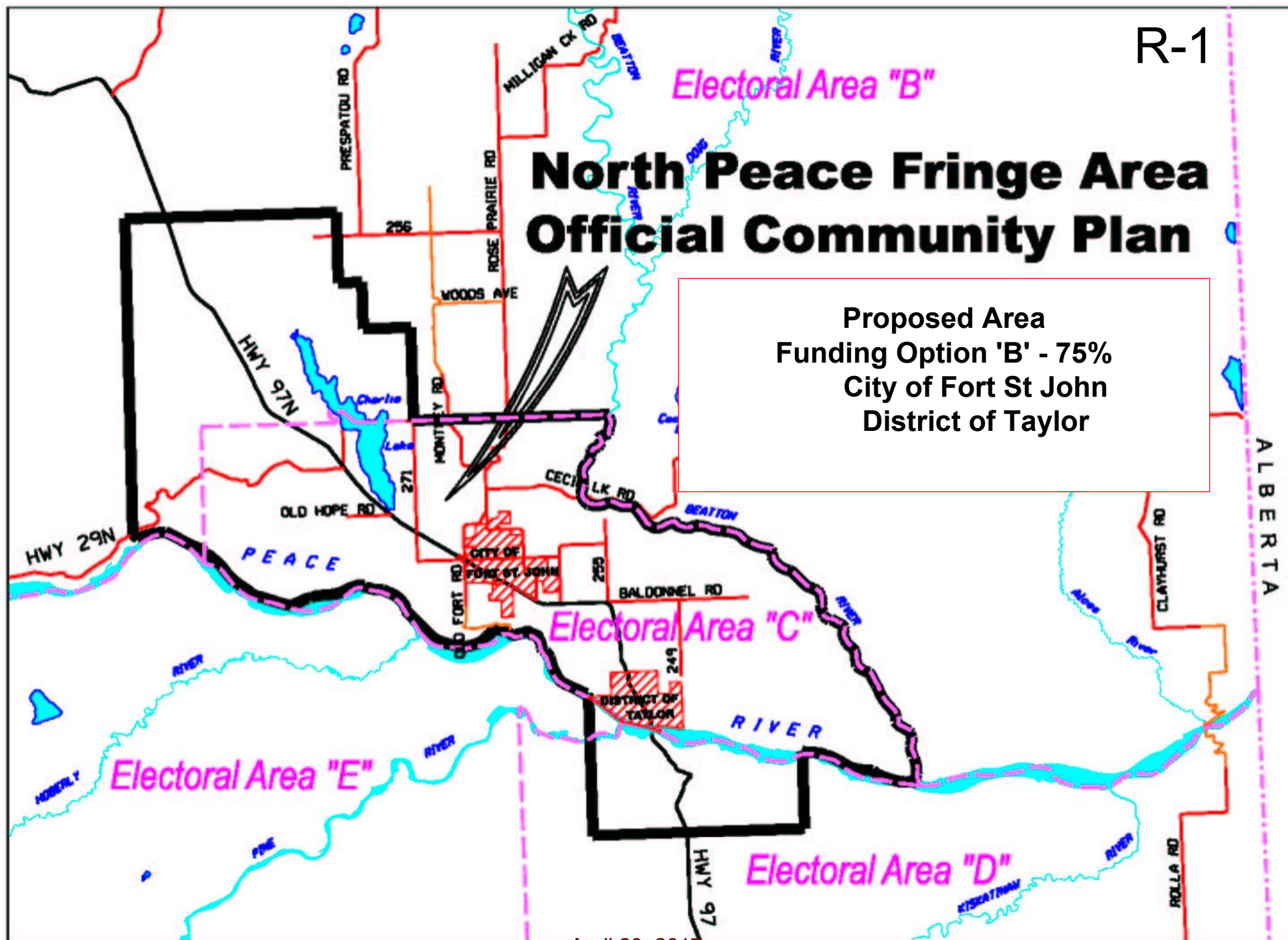




April 20, 2017

North Peace Fringe Area Official Community Plan

Proposed Area
Funding Option 'B' - 75%
City of Fort St John
District of Taylor



SCHEDULE 2

R-1

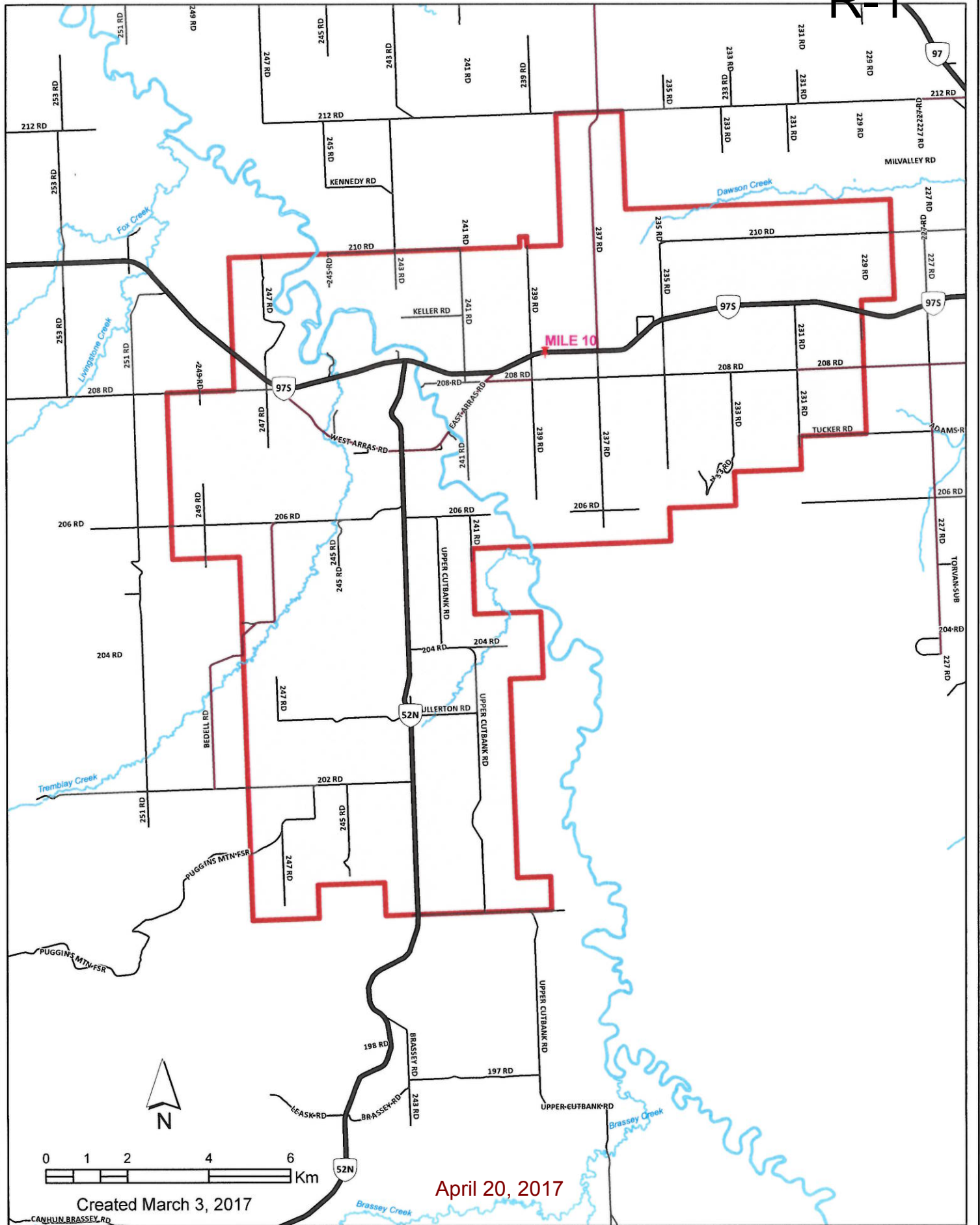
GEOGRAPHIC AREAS FOR COST LEVEL C 50% of Requisition

City of Fort St John	Fort St John and Charlie Lake Rural Fire Protection Areas
District of Taylor	Taylor and Fort St John Rural Fire Protection Areas
City of Dawson Creek	Dawson Creek, Pouce Coupe, and Arras Rural Fire Protection Areas
Village of Pouce Coupe	Dawson Creek, Pouce Coupe, and Arras Rural Fire Protection Areas
District of Chetwynd	Chetwynd and Moberly Lake Fire Protection Areas
Hudson's Hope	Chetwynd and Moberly Lake Rural Fire Protection Areas
District of Tumbler Ridge	Chetwynd and Arras Rural Fire Protection Areas

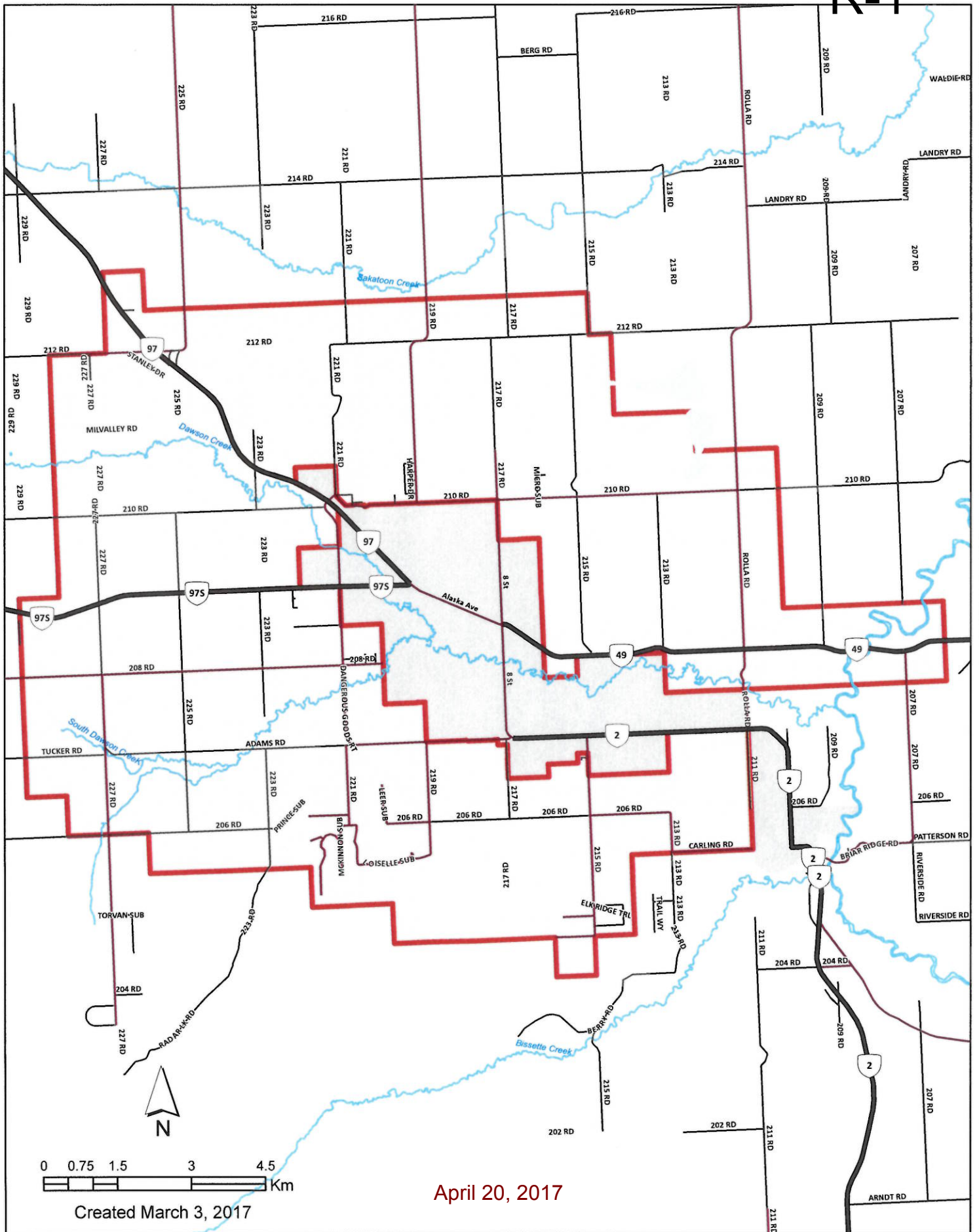
April 20, 2017

Arras Fire Protection Area

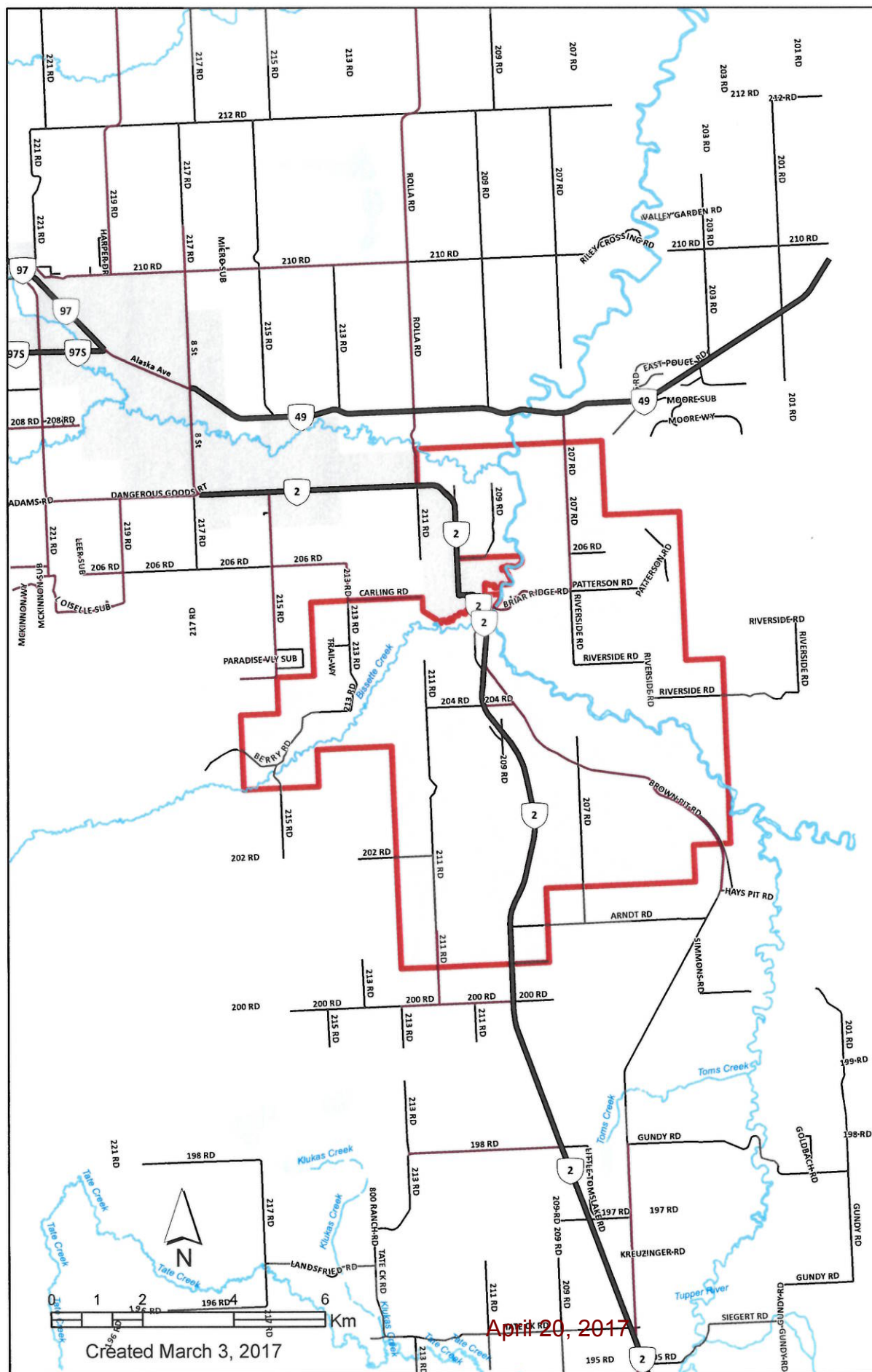
R-1



Dawson Creek Rural Fire Protection Area R-1

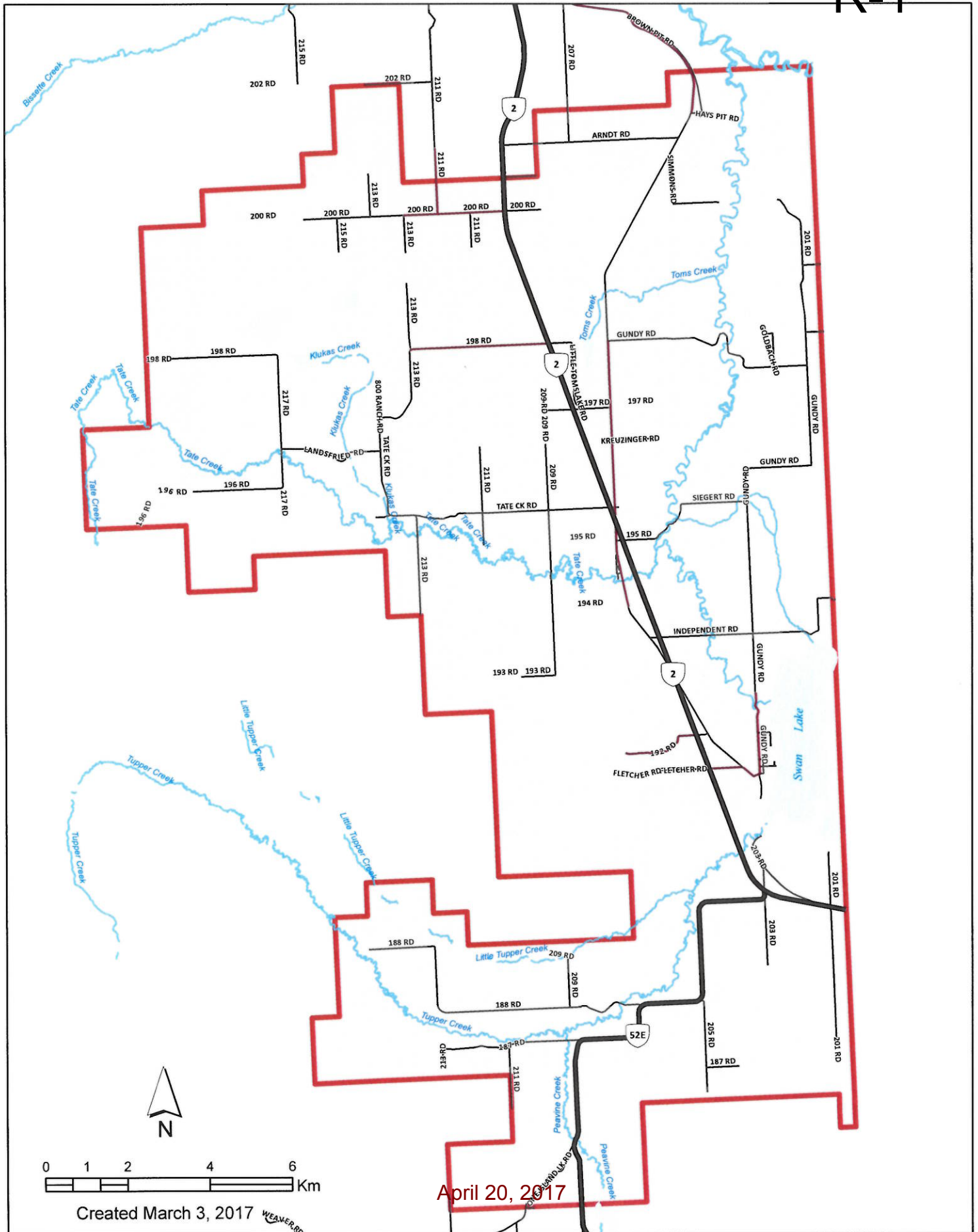


R-1



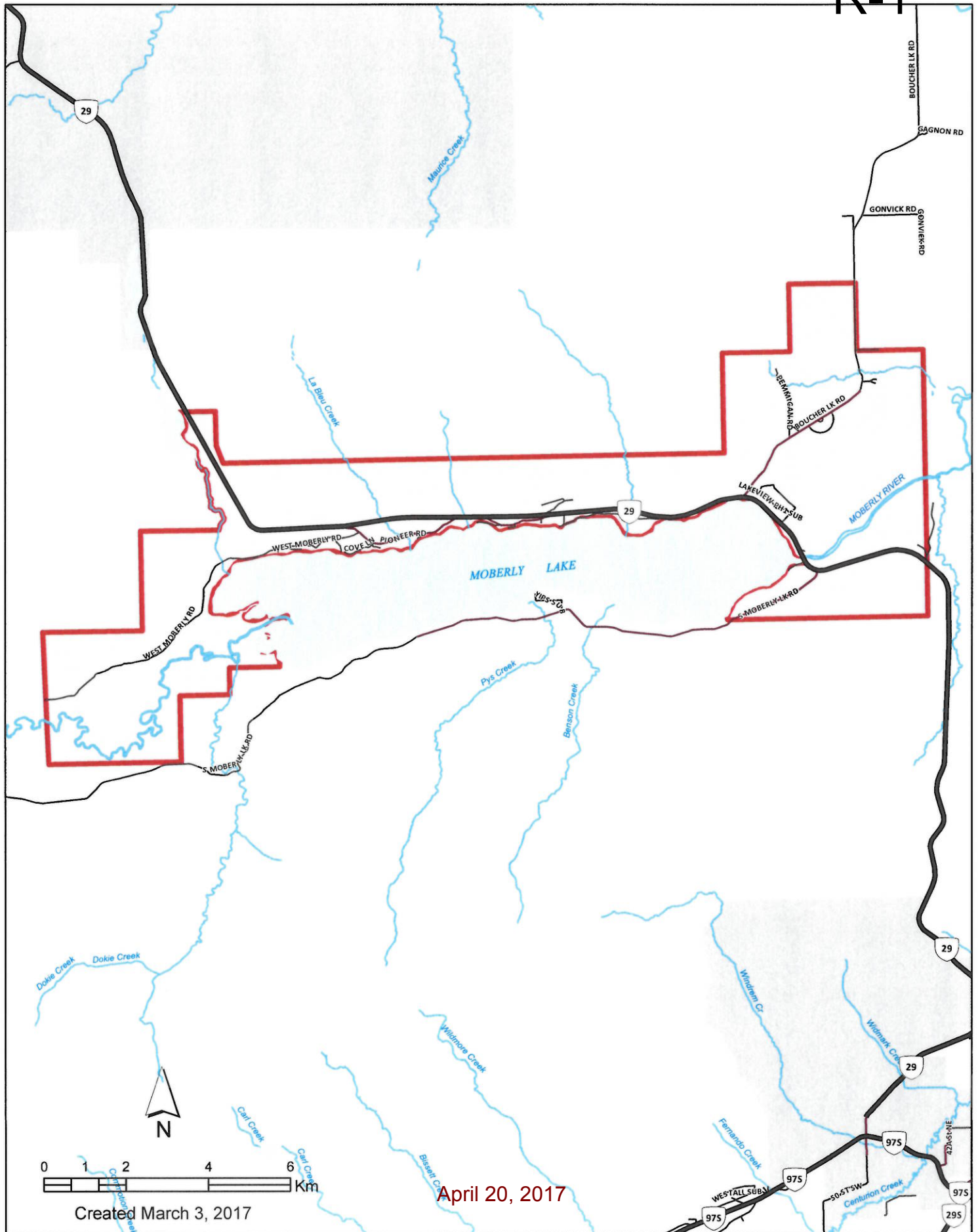
Tomslake Fire Protection Area

R-1

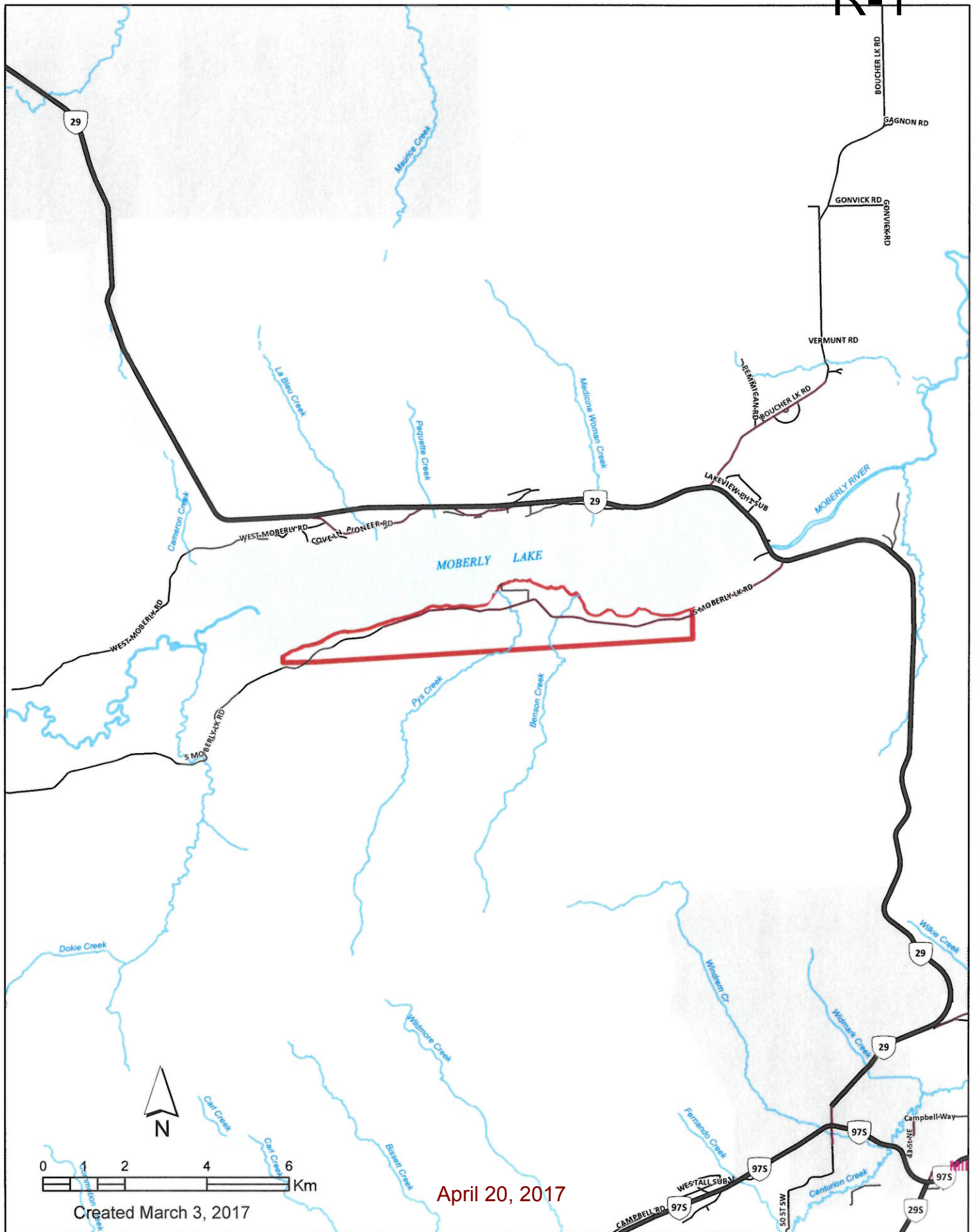


Moberly Lake Fire Protection Area

R-1

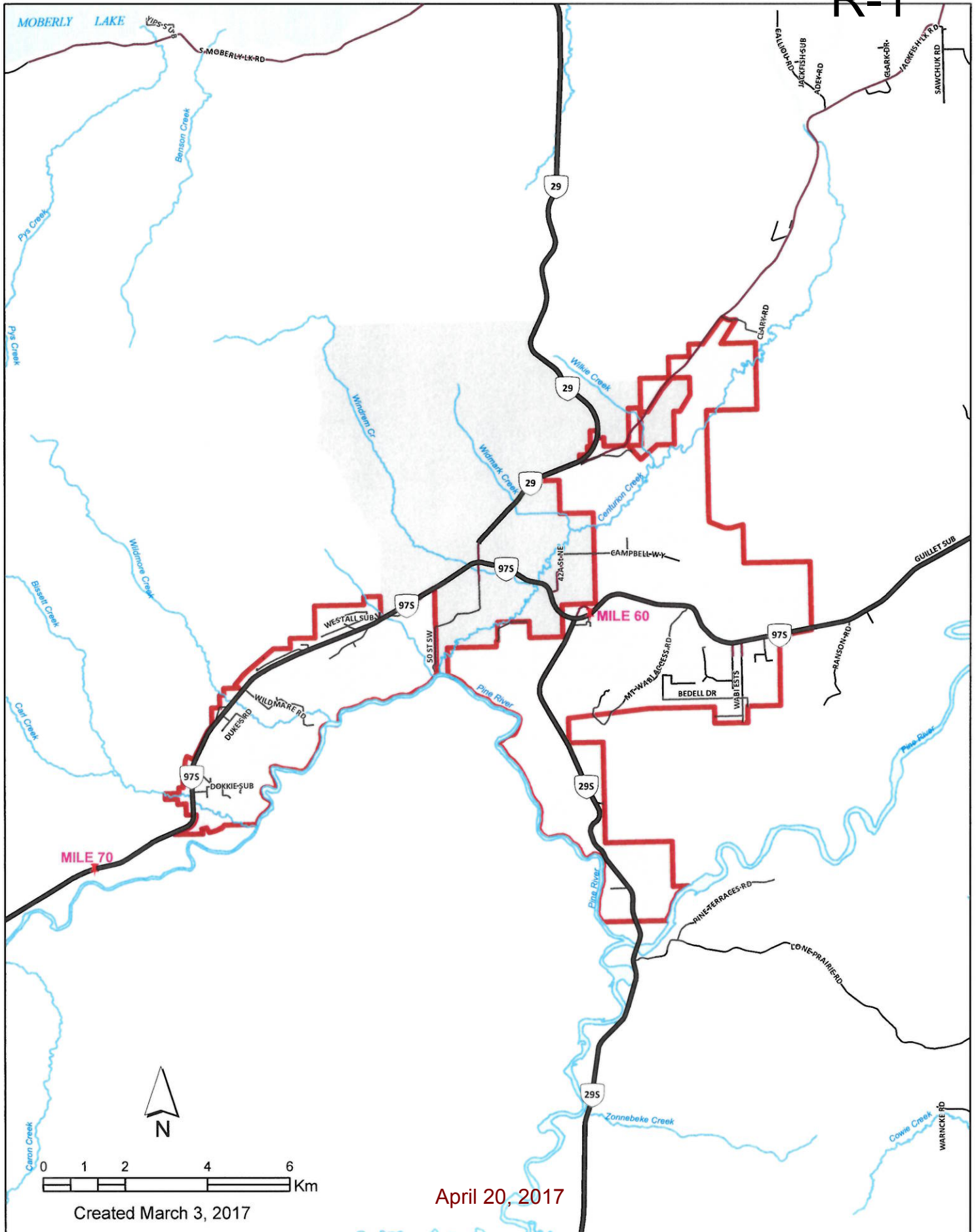


South Moberly Lake Fire Protection Area R-1



Chetwynd Rural Fire Protection Area

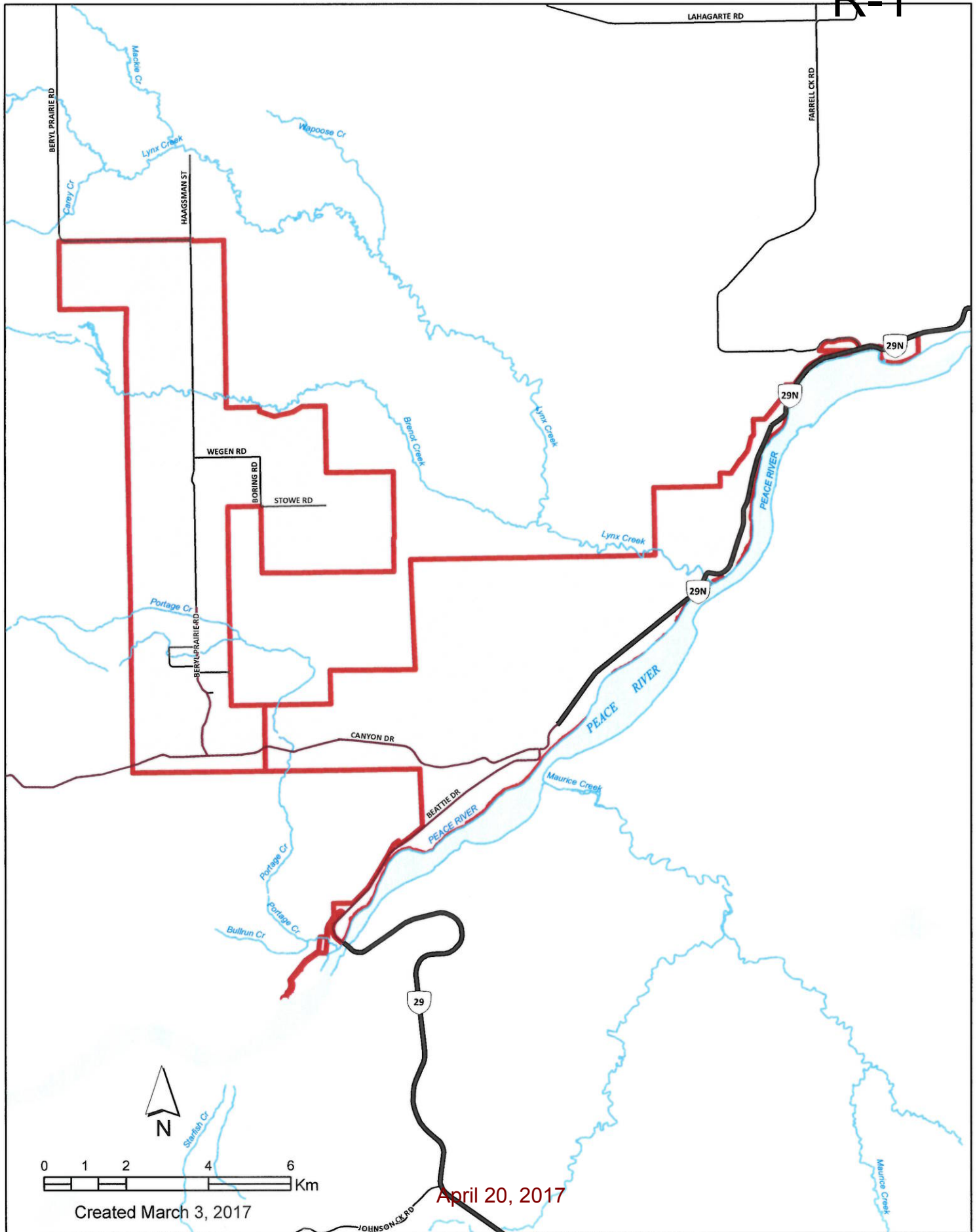
R-1



April 20, 2017

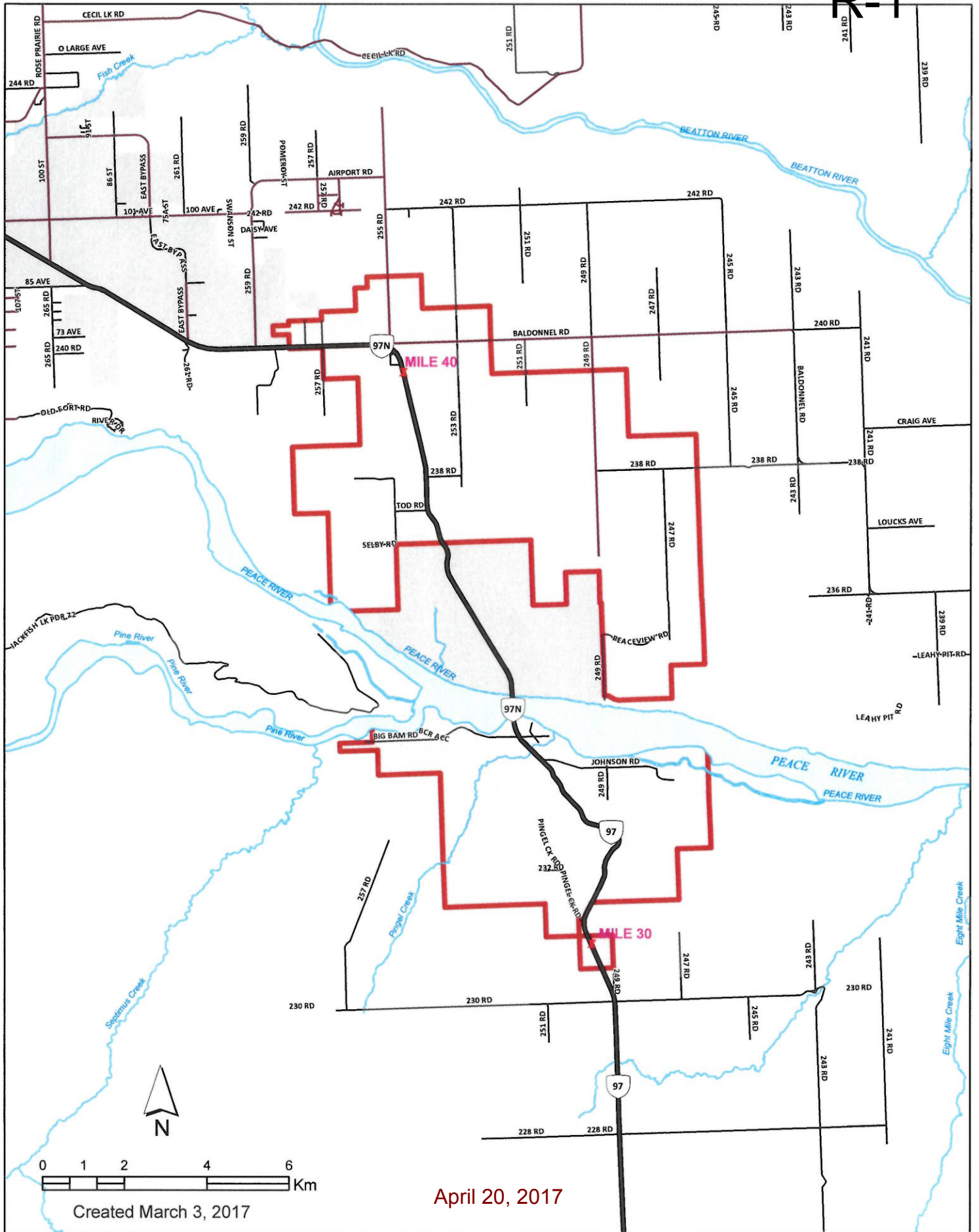
'HH - Beryl Prairie, HH - Downtown, and HH - Peace Canyon Fire Protection Areas

R-1



Taylor Rural Fire Protection Area

R-1



R-1



R-1



Created March 3, 2017

2007-2017 REQUISITIONS FOR
MANAGEMENT OF DEVELOPMENT

EXHIBIT 3

Management of Development

Category

1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Draft to COW Feb. 23, 2017

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	19,989	0.026	76,545,687	2.61%	-	19,989
Dawson Creek	65,519	0.026	250,896,936	8.56%	296	65,815
Hudson's Hope	9,933	0.026	38,036,067	1.30%	108	10,040
Fort St. John	142,450	0.026	545,498,718	18.62%	484	142,935
Taylor	11,050	0.026	42,313,184	1.44%	-	11,050
Pouce Coupe	2,926	0.026	11,206,117	0.38%	29	2,955
Chetwynd	16,316	0.026	62,481,193	2.13%	47	16,363
Area B	232,868	0.026	891,744,521	30.44%	(2,053)	230,816
Area C	61,599	0.026	235,886,018	8.05%	111	61,710
Area D	114,347	0.026	437,881,400	14.95%	837	115,185
Area E	88,015	0.026	337,042,943	11.51%	141	88,156
See Area E Jurisdiction Split Below						
Total	765,012		2,929,532,784	100.00%	(0)	765,012

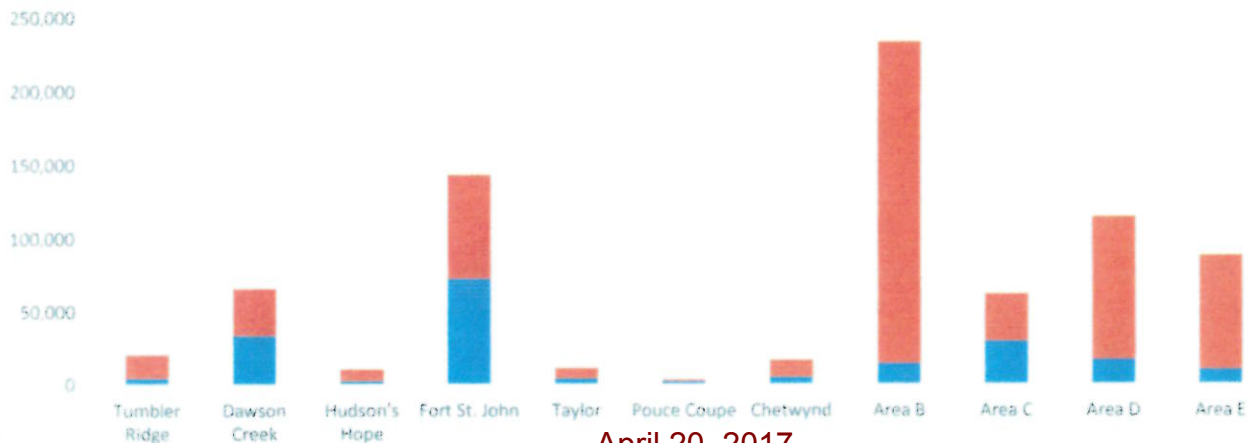
Area E - Jurisdiction 759	87,067	333,413,265	98.92%	139	87,206
Area E - Jurisdiction 760	948	3,629,678	1.08%	2	949
	88,015	337,042,943	100%	141	88,156

Municipal Requisition	269,147
Electoral Area Requisition	495,866
Total Requisition	765,012

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	612,423	24.9%	152,589
Assessment	2,934,954,937	-0.2%	(5,422,153)
Tax Rate	0.021	25.1%	0.005

Class 1 - Residential Total All Other Classes



April 20, 2017

EXHIBIT 3

Management of Development

Category

1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 24, 2016

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	17,720	0.021	84,921,438	2.89%	-	17,720
Dawson Creek	52,405	0.021	251,143,553	8.56%	(316)	52,089
Hudson's Hope	8,088	0.021	38,760,367	1.32%	(6)	8,082
Fort St. John	115,847	0.021	555,181,831	18.92%	130	115,978
Taylor	8,984	0.021	43,052,312	1.47%	-	8,984
Pouce Coupe	2,236	0.021	10,715,824	0.37%	(6)	2,230
Chetwynd	12,822	0.021	61,446,619	2.09%	3	12,824
Area B	187,709	0.021	899,571,178	30.65%	49	187,758
Area C	52,485	0.021	251,526,749	8.57%	(4)	52,480
Area D	90,332	0.021	432,902,178	14.75%	277	90,609
Area E	63,796	0.021	305,732,888	10.42%	(127)	63,669
See Area E Jurisdiction Split Below						
Total	612,423		2,934,954,937	100.00%	0	612,423

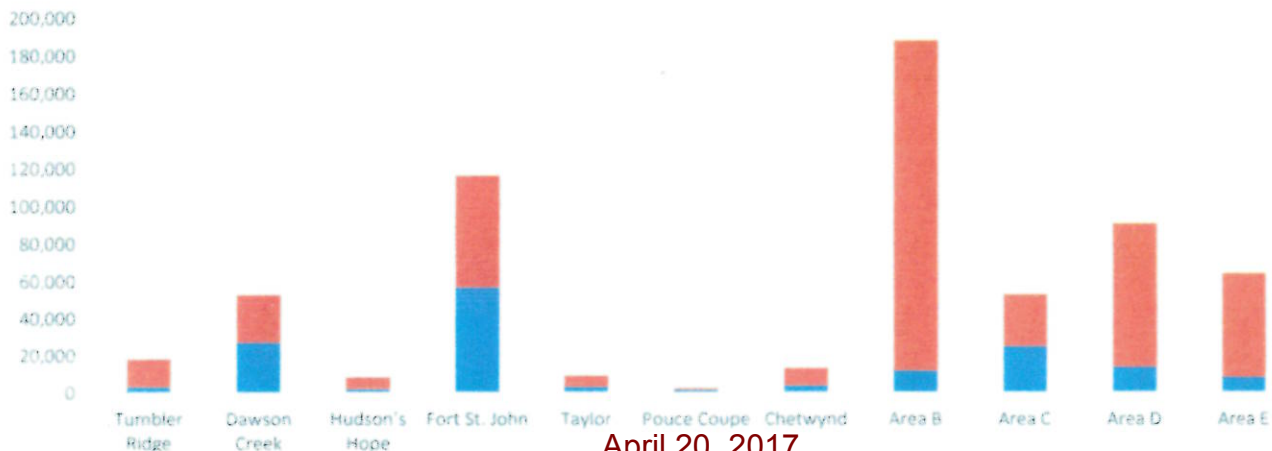
Area E - Jurisdiction 759	63,038	302,102,411	98.81%	(125)	62,913
Area E - Jurisdiction 760	758	3,630,477	1.19%	(2)	756
	63,796	305,732,888	100%	(127)	63,669

Municipal Requisition	217,906
Electoral Area Requisition	394,517
Total Requisition	612,423

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	768,178	-20.3%	(155,755)
Assessment	2,753,809,522	6.6%	181,145,415
Tax Rate	0.028	-25.2%	(0.007)

Class 1 - Residential Total All Other Classes



April 20, 2017

EXHIBIT 3

Management of Development

Category

1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments - Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 25, 2015

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	26,602	0.028	95,363,796	3.46%	-	26,602
Dawson Creek	69,127	0.028	247,809,014	9.00%	(316)	68,810
Hudson's Hope	10,676	0.028	38,273,134	1.39%	(6)	10,670
Fort St. John	137,080	0.028	491,411,567	17.84%	130	137,210
Taylor	11,372	0.028	40,765,944	1.48%	-	11,372
Pouce Coupe	2,978	0.028	10,674,364	0.39%	(6)	2,972
Chetwynd	16,889	0.028	60,543,592	2.20%	3	16,891
Area B	235,406	0.028	843,898,049	30.64%	49	235,456
Area C	62,235	0.028	223,104,002	8.10%	(4)	62,231
Area D	112,356	0.028	402,781,479	14.63%	277	112,633
Area E	83,458	0.028	299,184,581	10.86%	(127)	83,331
See Area E Jurisdiction Split Below						
Total	768,178		2,753,809,522	100.00%	0	768,178

Area E - Jurisdiction 759	82,438	295,529,867	98.78%	(125)	82,313
Area E - Jurisdiction 760	1,019	3,654,713	1.22%	(2)	1,018
	83,458	299,184,580	100%	(127)	83,331

Municipal Requisition	274,527
Electoral Area Requisition	493,651
Total Requisition	768,178

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	438,633	75.1%	329,545
Assessment	2,459,966,431	11.9%	293,843,091
Tax Rate	0.018	56.4%	0.010

Class 1 - Residential Total All Other Classes

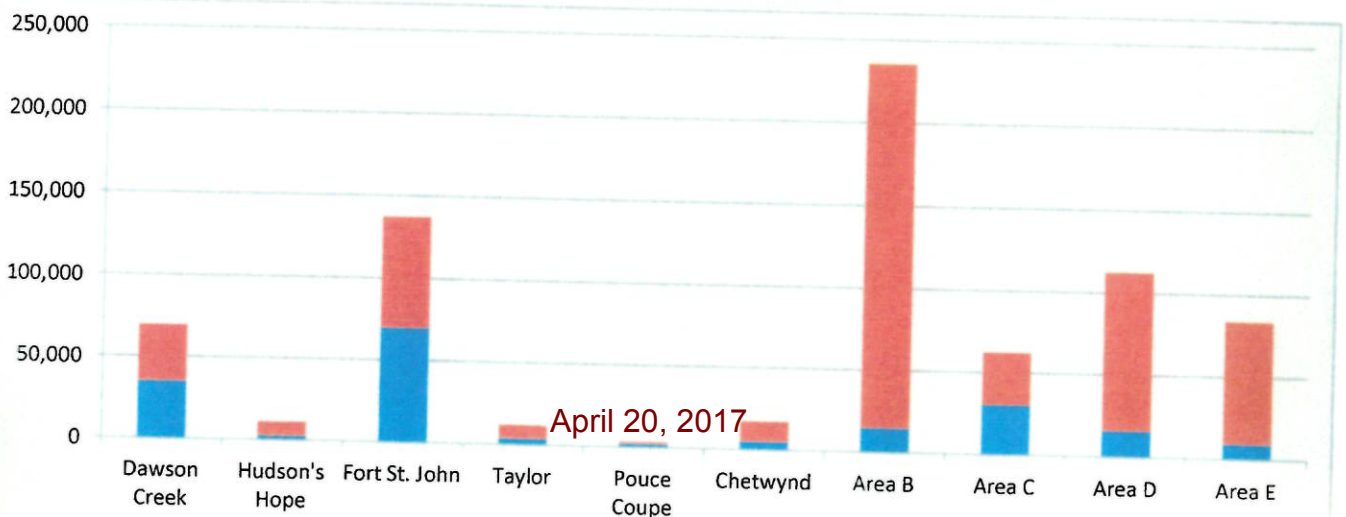


EXHIBIT 3

R-1

Management of Development

Category
1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 27, 2014

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge (Does Not Participate)	-	-	-	-	-	-
Dawson Creek	41,549	0.018	233,019,556	9.47%	(434)	41,116
Hudson's Hope	6,686	0.018	37,494,421	1.52%	2	6,688
Fort St. John	74,856	0.018	419,809,489	17.07%	177	75,033
Taylor	7,023	0.018	39,389,418	1.60%	-	7,023
Pouce Coupe	1,811	0.018	10,156,515	0.41%	9	1,820
Chetwynd	10,383	0.018	58,231,829	2.37%	39	10,422
Area B	139,453	0.018	782,088,350	31.79%	(707)	138,746
Area C	36,399	0.018	204,134,636	8.30%	710	37,109
Area D	66,926	0.018	375,338,212	15.26%	(904)	66,022
Area E	53,547	0.018	300,304,005	12.21%	1,107	54,654
See Area E Jurisdiction Split Below						
Total	438,633	0.018	2,459,966,431	100.00%	0	438,633

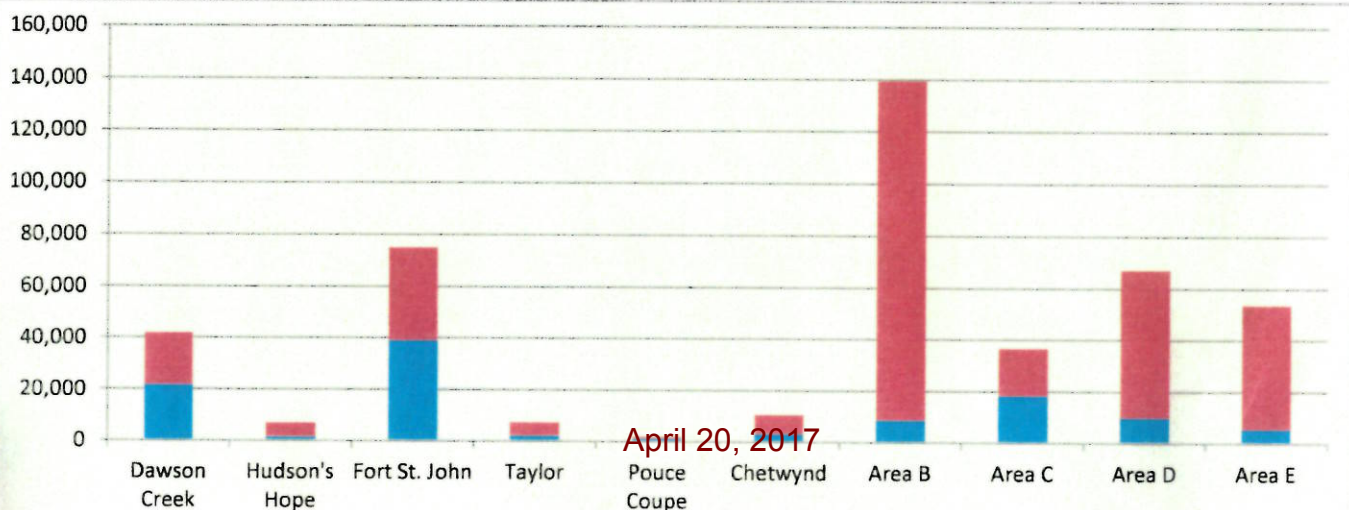
Area E - Jurisdiction 759	52,895	296,647,231	98.78%	1,094	53,988
Area E - Jurisdiction 760	652	3,656,773	1.22%	13	666
	53,547	300,304,004	100%	1,107	54,654

Municipal Requisition	142,102
Electoral Area Requisition	296,531
Total Requisition	438,633

After Prior Year Adj.

	Last Year	Change %	Change \$
Requisition	385,652	13.7%	52,981
Assessment	2,266,632,551	8.5%	193,333,880
Tax Rate	0.017	4.8%	0.001

Class 1 - Residential Total All Other Classes



April 20, 2017

Management of Development

Category

1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 28, 2013

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge (Does Not Participate)	-		-		-	-
Dawson Creek	35,178	0.017	206,752,933	9.12%	(364)	34,813
Hudson's Hope	5,896	0.017	34,652,482	1.53%	2	5,898
Fort St. John	64,568	0.017	379,492,953	16.74%	149	64,717
Taylor	6,614	0.017	38,875,367	1.72%	-	6,614
Pouce Coupe	1,486	0.017	8,732,906	0.39%	8	1,493
Chetwynd	9,779	0.017	57,476,462	2.54%	33	9,812
Area B	124,840	0.017	733,733,797	32.37%	(594)	124,245
Area C	31,003	0.017	182,219,851	8.04%	597	31,600
Area D	59,166	0.017	347,745,519	15.34%	(759)	58,407
Area E	47,121	0.017	276,950,281	12.22%	930	48,051
See Area E Jurisdiction Split Below						
Total	385,652		2,266,632,551	100.00%	0	385,652

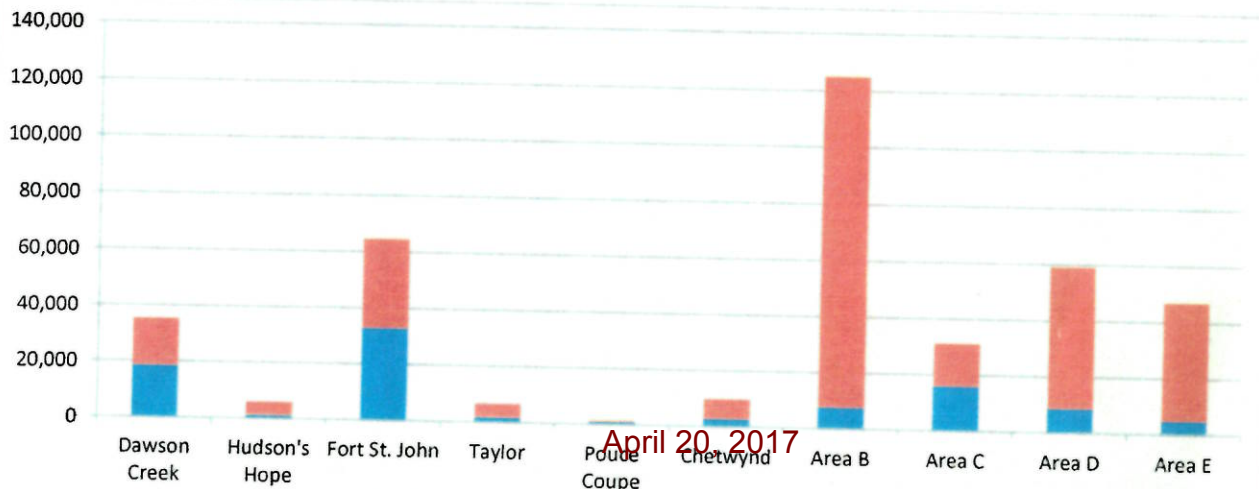
Area E - Jurisdiction 759	46,524	273,442,091	98.73%	918	47,443
Area E - Jurisdiction 760	597	3,508,188	1.27%	12	609
	47,121	276,950,279	100%	930	48,051

Municipal Requisition	123,348
Electoral Area Requisition	262,304
Total Requisition	385,652

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	550,854	-30.0%	(165,202)
Assessment	2,085,216,094	8.7%	181,416,457
Tax Rate	0.026	-35.6%	(0.009)

Class 1 - Residential Total All Other Classes



April 20, 2017

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted 22 March 2012

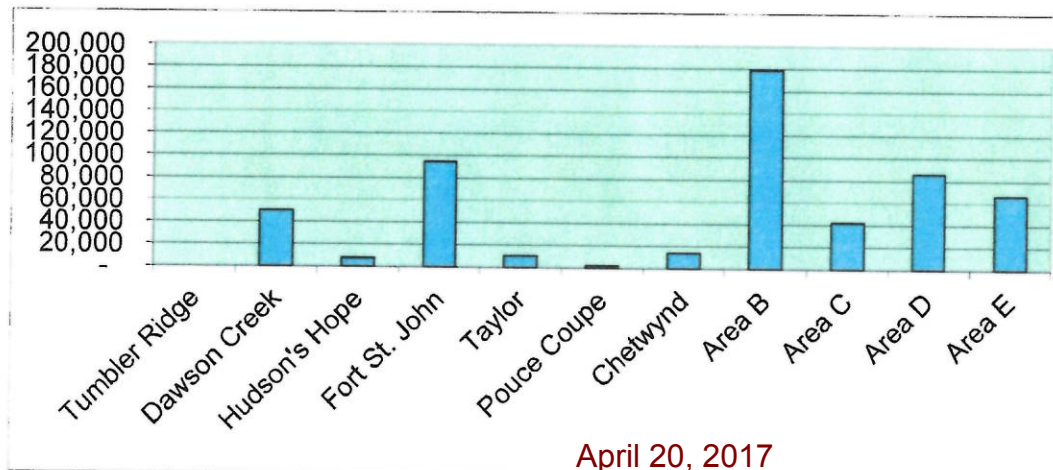
	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	-	-	-	-	-	-
Dawson Creek	49,928	0.026	188,997,532	9.06%	42	49,970
Hudson's Hope	7,671	0.026	29,037,101	1.39%	(2)	7,669
Fort St. John	94,771	0.026	358,747,017	17.20%	249	95,019
Taylor	10,037	0.026	37,995,662	1.82%	-	10,037
Pouce Coupe	1,991	0.026	7,537,724	0.36%	4	1,996
Chetwynd	13,885	0.026	52,560,405	2.52%	62	13,947
Area B	178,869	0.026	677,094,641	32.47%	(1,561)	177,307
Area C	41,576	0.026	157,382,956	7.55%	108	41,684
Area D	85,891	0.026	325,132,989	15.59%	779	86,670
Area E	66,236	0.026	250,730,067	12.02%	318	66,554
See Area E Jurisdiction Split Below						
Total	550,854		2,085,216,094	100.00%	0	550,854

Area E - Jurisdiction 759	65,337	247,326,746	98.64%	314	65,651
Area E - Jurisdiction 760	899	3,403,322	1.36%	4	903
	66,236	250,730,068	100%	318	66,554

Municipal Requisition	178,638
Electoral Area Requisition	372,215
Total Requisition	550,854

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	463,717	18.8%	87,137
Assessment	1,928,681,648	8.1%	156,534,446
Tax Rate	0.024	9.9%	0.002



April 20, 2017

Management of Development

Category
1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 24, 2011

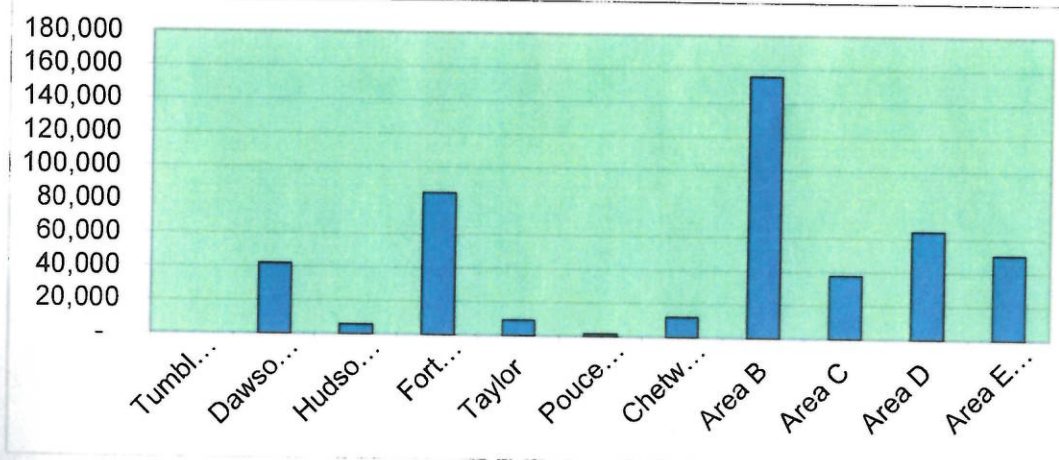
	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	-	-	-	-	-	-
Dawson Creek	41,907	0.02	174,300,404	9.04%	206	42,113
Hudson's Hope	5,897	0.02	24,525,871	1.27%	24	5,921
Fort St. John	84,567	0.02	351,726,898	18.24%	(202)	84,365
Taylor	9,228	0.02	38,381,430	1.99%	-	9,228
Pouce Coupe	1,657	0.02	6,890,742	0.36%	10	1,667
Chetwynd	11,982	0.02	49,836,399	2.58%	25	12,007
Area B	155,787	0.02	647,943,708	33.60%	257	156,044
Area C	37,861	0.02	157,469,069	8.16%	101	37,961
Area D	64,417	0.02	267,922,722	13.89%	201	64,618
Area E (see jurisdiction split below)	50,415	0.02	209,684,405	10.87%	(621)	49,794
Total	463,717		1,928,681,648	100.00%	(0)	463,717

Area E - Jurisdiction 759	49,607	206,322,121	98.40%	(611)	48,995
Area E - Jurisdiction 760	808	3,362,283	1.60%	(10)	798
	50,415	209,684,404	100%	(621)	49,794

Municipal Requisition	155,300
Electoral Area Requisition	308,417
Total Requisition	463,717

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	504,306	-8.0%	(40,589)
Assessment	1,754,309,631	9.9%	174,372,017
Tax Rate	0.03		



April 20, 2017

EXHIBIT 3

Management of Development

Category
1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 25, 2010

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	-	-	-	-	-	-
Dawson Creek	45,990	0.03	161,738,321	9.12%	(24)	45,966
Hudson's Hope	6,698	0.03	23,557,067	1.33%	223	6,922
Fort St. John	96,193	0.03	338,295,474	19.07%	83	96,276
Taylor	5,473		contract		-	5,473
Pouce Coupe	1,685	0.03	5,925,935	0.33%	11	1,696
Chetwynd	13,356	0.03	46,972,051	2.65%	12	13,368
Area B	175,347	0.03	616,666,031	34.77%	(408)	174,939
Area C	42,990	0.03	151,187,030	8.52%	(133)	42,857
Area D	65,093	0.03	228,919,741	12.91%	144	65,237
Area E	51,481	0.03	181,047,981	10.21%	91	51,571
Total	504,306		1,754,309,631	98.91%	0	504,306

Contract Total

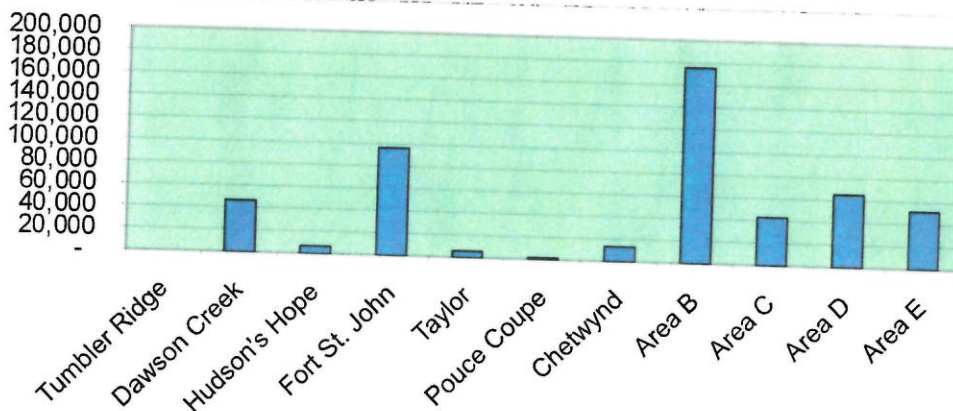
5,473

Taylor - Fire Service Area Only (50% of what would be apportioned in Prior Year)

Municipal Requisition	169,702
Electoral Area Requisition	334,605
Total Requisition	504,306

After Prior Year Adj

	Last Year	Change %	Change \$
Requisition	562,740	-10.4%	(58,434)
Assessment	1,642,085,172	6.8%	112,224,459
Tax Rate	0.03		



April 20, 2017

EXHIBIT 3

R-161

Management of Development

Category
1-6100

Basis of Apportionment:

Electoral Areas: Converted Hospital Assessments - Land & Improvements

Municipalities: Converted General Municipal Assessments -
Land & Improvements

Tax Rate or Other Limitations: None

LGA s. 800 (2) (f)

Adopted March 26, 2009

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	-		-		-	-
Chetwynd	16,090	0.03	47,485,620	2.86%	-	16,090
Dawson Creek	48,593	0.03	143,414,654	8.64%	(464)	48,129
Hudson's Hope	7,430	0.03	21,928,512	1.32%	(23)	7,407
Fort St. John	105,866	0.03	312,447,933	18.81%	-	105,866
Taylor	6,354		contract		-	6,354
Pouce Coupe	1,726	0.03	5,092,736	0.31%	1	1,727
Area B	207,625	0.03	612,771,155	36.90%	473	208,098
Area C	47,155	0.03	139,170,064	8.38%	(227)	46,928
Area D	64,920	0.03	191,599,578	11.54%	706	65,626
Area E	56,983	0.03	168,174,920	10.13%	(466)	56,516
Total	562,740		1,642,085,172	98.87%	(0)	562,740

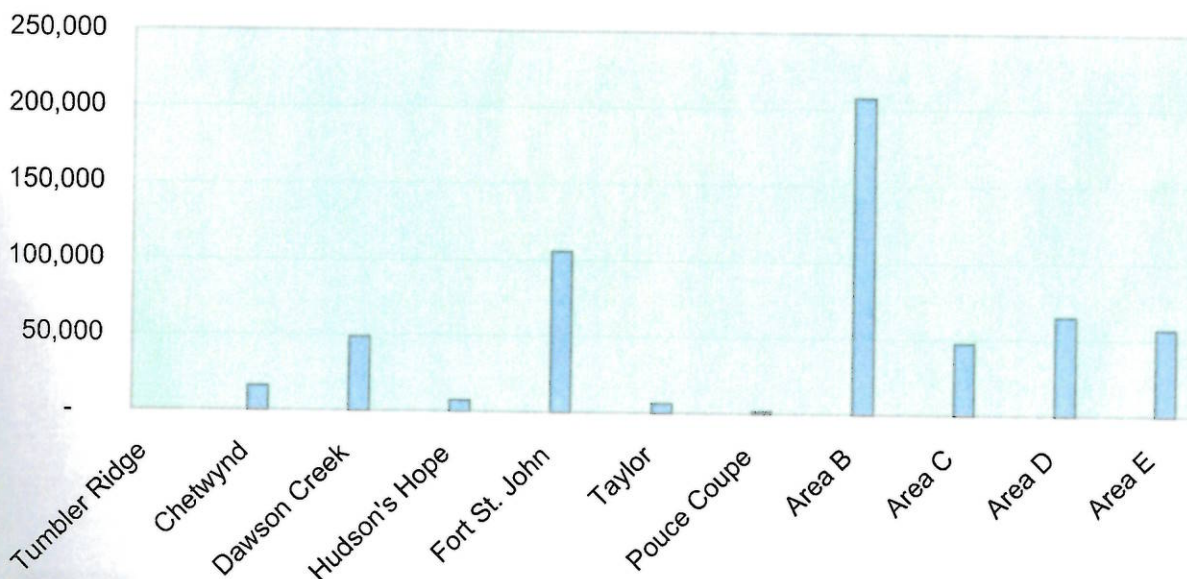
Contract Total

6,354

Taylor - Fire Service Area Only (50% of what would be if opted in)

Municipal Requisition	186,058
Electoral Area Requisition	376,682
Total Requisition	562,740

	Last Year	Change %	Change \$
Requisition	390,559	44.1%	172,181
Assessment	1,214,296,863	35.2%	427,788,309
Tax Rate	0.03		



April 20, 2017

EXHIBIT 3

Management of Development

Category

1-6100

Basis of Apportionment: Assessment as fixed for taxation for Regional Hospital District taxation purposes in Electoral Areas

Assessment as fixed for taxation for general purposes in the municipalities

FINAL - As Adopted 27 March 2008

Tax Rate or Other Limitations: None

	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent	Prior Year Adjustment	Adjusted Requisition
Tumbler Ridge	\$ -	-				\$ -
Chetwynd	\$ -	per contract				\$ -
Dawson Creek	\$ 40,049	0.03	\$ 140,411,912	10.25%		\$ 40,049
Hudson's Hope	\$ 5,825	0.03	\$ 20,423,963	1.49%		\$ 5,825
Fort St. John	\$ 44,213	per contract		11.32%		\$ 44,213
Taylor	\$ -	per contract				\$ -
Pouce Coupe	\$ 1,380	0.03	\$ 4,837,972	0.35%	\$ 42	\$ 1,422
Area B	\$ 167,625	0.03	\$ 587,696,523	42.92%	1,183	\$ 168,808
Area C	\$ 38,838	0.03	\$ 136,167,287	9.94%	(337)	\$ 38,501
Area D	\$ 46,510	0.03	\$ 163,063,715	11.91%	(429)	\$ 46,081
Area E	\$ 46,119	0.03	\$ 161,695,491	11.81%	(459)	\$ 45,660
Total	\$ 390,559		\$ 1,214,296,863	100.00%	\$ 0	\$ 390,559

Contract Total \$ 44,213

Municipal Requisition	\$ 91,509
Electoral Area Requisition	\$ 299,050
Total Requisition	\$ 390,559

Last Year		Change %	Change \$
Requisition	\$ 407,501	-4.2%	\$ (16,942)
Assessment	\$ 929,628,123	30.6%	\$ 284,668,740
Tax Rate	\$ 0.04		

average

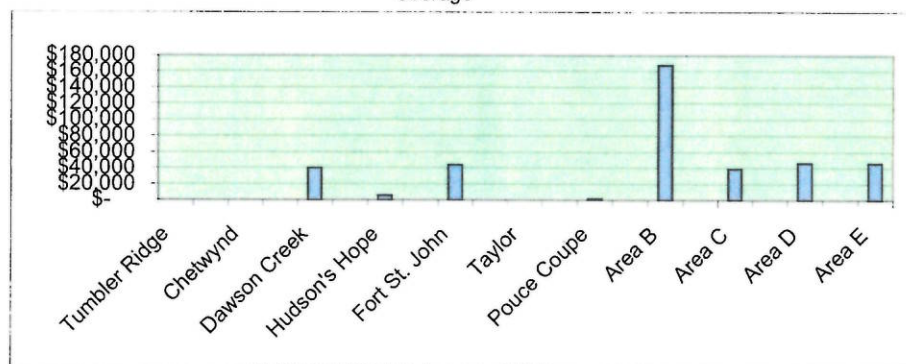


EXHIBIT 3

Management of Development

Category
1-6100

Basis of Apportionment: Assessment as fixed for taxation for Regional Hospital District
taxation purposes in Electoral Areas

Assessment as fixed for taxation for general purposes in the
municipalities

Tax Rate or Other Limitations: None

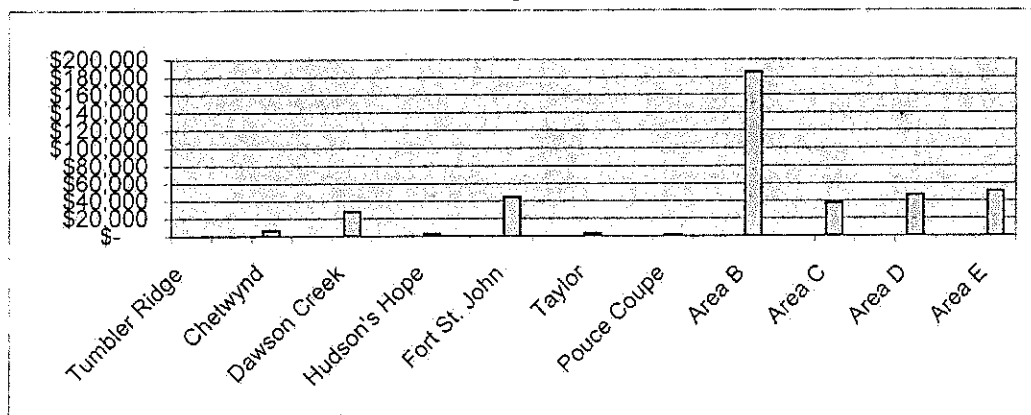
	Requisition Amount	Tax Rate Per 1000	Figures for Apportionment	Percent
Tumbler Ridge	\$ -	-	-	
Chetwynd	\$ 6,936		per contract	
Dawson Creek	\$ 28,108		per contract	
Hudson's Hope	\$ 2,805		per contract	
Fort St. John	\$ 44,213		per contract	
Taylor	\$ 3,340		per contract	
Pouce Coupe	\$ 1,383	0.03	\$ 3,992,612	
Area B	\$ 185,765	0.03	\$ 536,145,163	
Area C	\$ 37,328	0.03	\$ 107,734,251	
Area D	\$ 46,448	0.03	\$ 134,055,185	
Area E	\$ 51,176	0.03	\$ 147,700,912	
Total	\$ 407,501		\$ 929,628,123	0.00%

Contract Total \$ 85,402

Municipal Requisition	\$ 86,785
Electoral Area Requisition	\$ 320,716
Total Requisition	\$ 407,501

	<u>Last Year</u>	<u>Change %</u>	<u>Change \$</u>
Requisition	\$ 336,710	21.0%	\$ 70,791
Assessment	\$ 832,231,336	11.7%	\$ 97,396,787
Tax Rate	\$ 0.04		

average



April 20, 2017



Peace River Regional District
Development Services
BYLAW ENFORCEMENT REPORT

To: Electoral Area Directors Committee
From: Erin Price, Bylaw Enforcement Officer
Subject: Enforcement File Quarterly Update

Date: March 31, 2017

INFORMATION

Attached is a table summarizing the enforcement files- current to March 31st, 2017.

To date, there are 30 Bylaw Enforcement Files in total (Active + Inactive).

Active Files- shaded blue:

There are 25 active enforcement files.

There are no new active files since the last report.

1 file is going back to court on April 13, 2017 for the enforcement order

1 file has a deadline for a RAR on April 30, 2017

Inactive or On Hold Files- shaded green:

There are 5 inactive or "on hold" files.

1 has had an extension revision from the ALC until July 23, 2018 and is close to achieving ALC and MOTI conditions.

1 involves too many homes for the zone, 2 of the residents are trying to relocate.

- The complainant and the other neighbors do not want them evicted and are happy with the current state of the file.

1 is awaiting a meeting with the Assistant Manager of Development Services.

1 has applied to the Board of Variance.

1 has applied for re-zoning and the necessary variances.

3 applications were refused and put back on the active list.

2 applications were refused and subsequently closed.

1 application for a campground received MOTI approval and was adopted thus bringing the property into compliance.

1 was closed because the property was brought into compliance

Closed Files- shaded orange:

There have been 8 files closed since the last report

1 of these have been opened and closed since the last report and was not in contravention.

1 was a SWN with a fine. The BP and DP were issued, the SWN was lifted and the fine was paid.

1 was a property that was incorporated into the City of FSJ.

2 were properties that were brought into compliance after being contacted.

1 had their re-zoning approved and therefore was no longer in contravention.

2 had their DVP or re-zoning refused and brought the properties into compliance.

April 20, 2017

ACTIVE FILES

R-2

Bylaw Enforcement File Summary March 31, 2017

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	CIVIC ADDRESS LEGAL DESCRIPTION	ELECTORAL AREA
1	2007	91	WHITFORD, Jerry	27-Apr-07	Junkyard in residential zone	Met Mr. Whitford at property on Feb. 22, 2016. Will contact him with more information.	12498 256 RD Lot 1 & 2, Plan 27341, Part SW-15-86-19	B
2	2007	132	LUNDQUIST, Lanny	27-Jun-07	Junk yard in C-2 zone	Need to update Board after the expiry of the Bylaw Notice Ticket- on Oct. 5/15. Disputed ticket- working on a Compliance Agreement	7087 255 RD L 1 24-83-18 Pl 9697	C
3	2007	203	CLAY, Martin & Wendy	17-Apr-07	Concern regarding a recycling and salvage yard operating in Rolla not in compliance with zoning	Kane CLAY reported he will have a picker truck at the properties in April 2017. Has cleaned out the shop and will begin clean up outside.	5209 Rolla RD Parcel A (S22581), Blk 1, Plan 10648, 32-79-14; and Parcel B (T18682), Blk 1, Plan 10648, 32-79-14; and Lots 5,6, 7 & 10, Bk1, Pl 10648, 32-79-14	D
4	2009	96	MEEK, Faye & BEEBE, Brandy	10-Jul-09	Non-farm use in ALR & commercial use in A-2 zone	Mar.28/17 update was that MOTI approved a final draft and the owners will be executing the covenant this week. Once they sign off, PRRD can adopt (has 3rd reading).	Hwy 97N and 269 Rd in FSJ Pt NE 1/4 3-84-19	C
5	2010	64	LEFFERSON, Allan	12-Apr-10	Salvage yard in A-2	March13,2015- I spoke to Tammy from Richmond Steel. They are planning to go when it dries up- March 2016 activity on property however not likely to be completely cleaned or remain cleaned up	13492 & 13522 Old Edmonton Hwy Lot 1, PL 28960, 21-77-14	D
6	2010	107	SAMUEL RANCH LTD	19-Jul-10	3 homes	ALC has requested consolodation of a full section with a half section. Property owners are requesting an alternative	13805 Rose Prarie RD Lot 16,Plan 3986	B
7	2011	207	LUNDQUIST, Lanny	15-Nov-11	Unsightly Premises, 20-30 vehicles and junk yard	There has been some improvement, Mr. Lundquist has sold the tractor that was outside the fence.	9336 Willow RD Lot 2 & 3, Blk 4, 35-83-19 Plan 14402	C
8	2012	210	DONALDSON, Hilding	12-Oct-12	Salvage yard in A-2	Spoke to new owner on Feb. 24 and took pictures on site Feb. 25, 2016. Property is noticably improved and Mr. Donaldson is no longer involved. Will continue to work with new owner	15927 Prespatou RD NE 30-86-19	B

April 20, 2017

ACTIVE FILES

R-2

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	CIVIC ADDRESS LEGAL DESCRIPTION	ELECTORAL AREA
9	2013	91	SHEARS, John	23-May-13	unsightly premises	noticeable improvement, lots 7 & 8 are clean, lot 6 has a renter and is a work in progress	7617 269 RD Lot 6, 7 & 8 PL 13235, 26-83-19	C
10	2013	102	NORNBERG, Neil	3-Jun-13	Salvage yard in R-4 Zone	March13,2015- I spoke to Tammy from Richmond Steel. They are planning to go when it dries up	1728 210 RD Lot 2, Plan BCP30608 28-78-15	D
11	2013	206	MAXWELL, Joe	4-Nov-13	Storage of many old vehicles	RCMP reported a person, impersonating a PRRD Bylaw Officer, went to Mr. Maxwells place of employment and complained to his supervisor that buses could not turn around on Fell Rd. I reported that it was not a PRRD employee.	13305 Fell RD Lot 2, Plan BCP38667 19-84-19	C
12	2013	207	WESTERGAARD, William	4-Nov-14	Storage of many old vehicles	have not looked at file yet	12937 Cherry RD Lot 1, Plan BCP 38667 19-84-19	C
13	2014	116	OSTERLUND/ GILLET/UNRUH	23-May-14	Railway repair business	sent Bylaw Notice Ticket No. PRRD 00129- unnecessary delays	Between 6352 & 6342 Daisy Ave Lot 3, Block 2, 34-83-18 Plan 16203	C
14	2014	219	BLAIR, Roxann	17-Sep-14	Junk yard in R-4 zone	Property not cleaned up in 30 days going back to court for an enforcement Order on April 13, 2017	3992 Blair RD DL 2083	E
15	2014	245	EVENSON, David	20-Oct-14	Junk yard in R-4 zone	ABC Recycling left a "metal only" container which Mr. Evenson filled. Mr. Evenson told ABC not to bring another bin for the garbage.- Sept.29/15 sent warning ticket and letter	1372 210 RD Lot 5, 27-78-15 Plan 11473	D
16	2015	97	WIDDICOMBE, John & PHILLIPS, Randy	5-May-15	Complaint was of unsightly property but no unsightly bylaw in area. Storage of many old vehicles	John called me and I asked for a written plan for compliance but did not receive one. Will send a letter to all property owners (there are 5 listed)	5907 Hillview Access RD Lot 3, DL 1909, PR, PL 26267	E
17	2015	103	GARDNER, Robert	6-May-15	Oilfield equipment storage on A2 land	Refused at Mar.23.2017 RB Meeting	9819 240 RD PCL A (46726M), 19-83-18, W6M PR, EXC PL 20464	C

April 20, 2017

ACTIVE FILES

R-2

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	CIVIC ADDRESS LEGAL DESCRIPTION	ELECTORAL AREA
18	2015	250	SMITH, Frank & John (both deceased)	6-Nov-15	Dangerous buildings & contents. Vacant land & buildings for years-owners both deceased. Strangers come to dump garbage and vandalize	Opened file, sent initial letter. Contacted Les Dellow(lawyer representing family)?? Asked for his assistance in contacting executor.	7114 Jorgensen Sub Lots 20-23, S31, T78, R15, W6M, PR, PL 13534	D
19	2015	263	CARLSON, Gary (DUSTY ROSE ENT.)	20-Nov-15	tank farm in I-1 Zone	Refused at Mar.23.2017 RB Meeting	9808 240 RD Lot 10, S30, T83, R18, W6M, PR, PL 24226	C
20	2015	265	Dr. BADENHORST	24-Nov-15	3 dwellings on .63 acres, no BP's, ALR Land	DVP refused at Dec. 9, 2016 RB Meeting. BP issued for the 2 structures, site plan shows they will be moved out of the setback.	8931 Old Fort Loop Lot 7, Bk 2, DL 418, Cariboo Situated in the PRD, PL 18222	C
21	2016	80	WALTER, Peter & Agnes	6-Apr-16	industrial use in A-2 Zone- Commercial trucks, oil tanks, industrial washing	March 2017- letter asking for plan for compliance. Spoke to Peter regarding a property that was suitable. Told Peter May 2017 was not an acceptable deadline. Left message March 28, 2017	11040 271 RD NE 1/4, S4, TP84, R19, W6M, Peace River	C
22	2016	99	BASTION HOLDINGS LTD	12-May-16	3 dwellings in R-4 zone	received response from land owner. I did a site inspection and took photos. Will follow up	5979 Hillview Sub. PCL B, DL 1910, PL PGP35656	E
23	2016	213	WILLIAMS, Darrell	9-Sep-16	Disobey SWN, Restrictive Covenant and Consent Order	RB confirmed RAR at Feb.23.2017 meeting after hearing Mr. Williams at the Jan. 26.2017 meeting and obtaining advice regarding his concerns. Mrs. Williams signed for and received notice of this confirmation on March 9, 2017. Mr Williams returned the letter sent regular mail but signed for and received the registered mail on March 31, 2017 (Apr.30, 2017 is deadline).	9813 River Drive Lot 1, BK 2, S18, TP83, R18, W6M, PR, PL 14194	C
24	2016	250	ROSENKRANZ, Harvey	21-Nov-16	building in setback	Requested plan for compliance	9325 River Drive Lot 3, BK 3, S18, TP83, R18, W6M, PR, PL 14194	C
25	2016	253	PUTRUS, Peter	21-Nov-16	too many dwellings, building in setback, garbage	contacted owner, sent pictures will contact again	2016 Taylor Frtg. Rd PCL A (PJ28394), S24, TP82, R18, W6M, PRD, Plan 3039	D

April 20, 2017

INACTIVE FILES

R-2

Bylaw Enforcement File Summary March 31, 2017

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	LEGAL DESCRIPTION	ELECTORAL AREA	DATE PLACED ON INACTIVE LIST
1	2011	194	GOERTZ, Howard-sold to WARD	7-Dec-11	Worker Camp	ALC gave new owner WARD extension until July 23/18. Our TUP is on hold until ALC & MOTI conditions are met. I did a site inspection on Mar.16.2017. The ALC conditions have been met, MOTI conditions are currently being dealt with	Block A, District Lot 1307	B	11-Mar-15
2	2012	109	AKULENKO, Andreas & Olga	28-May-12	four homes on A-2 Zone	Property owner knows no more homes can be placed, 2 of the families are looking for alternate place to live. Neighbours do not want them evicted and are satisfied with current state of file	12728 260 RD SE 1/4, 4-87-19 W6M	B	1-Apr-15
3	2015	251	KILFOYLE, Robert	6-Nov-15	3 Sheds located within Interior Side Parcel Setbacks	has a BP to add onto his home, then will remove the sheds(1 has been moved already) from the setback. Applied for BofV. Met with Assitant Manager of Dev.Serv. NP Planner and Bylaw to review plan for compliance Asst. Mgr. to meet with complainants.	12278 Oak Ave. Lot 7, Block 5, S2, T84, R19, W6M, PRD, PL 15012	C	14-Dec-15
4	2016	111	AITCHISON, Kevin	31-May-16	building in setback	Applied to the Board of Variance on Jan.10, 2017	8931 River Dr Lot 8, Bk 4, S18, TP83, R18, W6M, PRD, PL14194	C	10-Jan-17

April 20, 2017

INACTIVE FILES

R-2

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	LEGAL DESCRIPTION	ELECTORAL AREA	DATE PLACED ON INACTIVE LIST
5	2016	97	HANEY, Darryl	9-May-16	HBB, BP, and Zoning contraventions on 3 parcels	Rezoning and DVP applications have been received and paid for.	8340, 8306 Micro Sub & 1080 210 RD Lots 1&2, S26, TP 78, R15, PL PGP46412 & PCL A (BNG a Consolodation of Lots 3&4 See BB1974913) S 26, TP 78, R15, PL 12184	D	17-Mar-17

April 20, 2017

CLOSED FILES

Bylaw Enforcement File Summary March 31, 2017

R-2

	YEAR	FILE NO.	LAND OWNER	DATE OPEN	COMPLAINT DESCRIPTION	STATUS	LEGAL DESCRIPTION	ELECTORAL AREA	DATED CLOSED
1	2016	269	MADDIGAN HOLDINGS LTD	22-Dec-16	Construction without DP or BP	DP & BP issued, SWN Removed	8600 Old Fort Rd Lot B, S36, TP83, R19, W6M, PRD, Plan BCP 45985	C	9-Jan-17
2	2013	164	ZIRA PROPERTIES	03-Sep-13	Property set up as a trucking company	property was included in the City of FSJ Expansion effective Dec. 7, 2016	10782 East Bypass RD Lot 8, 5-84-18 Plan 38300	C	13-Jan-17
3	2015	254	SUNDMAN, Glenn	13-Nov-15	No sewer, furntature and hay bales stacked around holiday trailer being used as a residence, wood stove	family has moved out of trailer. No longer being used as a residence	5266 West Arras RD E1/2, S8, TP 78, R17, W6M PR EXC PCL A(A1051), PCL B(PL 17268) & PL H311	D	18-Jan-17
4	2016	113	GSD HOLDCO Ltd.	31-May-16	Unsightly	garbage removed, RV relocated, lumber stacked and covered with tarps- property is under a building permit so some construction material is allowed as it relates to the construction	10050 257 RD Lot 1, S3, TP84, R18, W6M, PRD, PL 6885	C	23-Jan-17
5	2014	104	SILVER SPIRITS INVESTMENTS	20-May-14	Campsite operating long term contrary to C-2 Zone	MOTI signature received Jan. 9, 2017. Bylaw adopted at January 26, 2017 RB Meeting	10688 Alder RD Lot 8, Block 2, 2-84-19, W6M, PRD, Plan 9723	C	26-Jan-17
6	2017	4	OJ PIPELINES (leasing from 0825038 BC Ltd)	9-Jan-17	fuel storage on site	all uses fit within Section 45 1) (g)- FSJFD will conduct fire inspection- 911 Civic address assigned	10534 Enterprise Way SE 1/4 , S25, TP83, R19, W6M, PRD, EXC Plan 20374	C	3-Feb-17
7	2016	153	MACDONALD, Darryl	7-Jul-16	Potential construction w/o BP	DVP refused, BP denied. At this point there is no contravention as there is only a cement pad.	12881 Palm Ave. Lot 1, S17, TP84, R19, W6M, PR, PL BCP3749	C	15-Feb-17
8	2015	288	GOLDEN SUNRISE LAND DEV	14-Dec-15	Heavy Equipment stored in C-2 zone, yard lights shine in homes	Heavy Equipment has been moved off the property.	13076 Firehall RD Lot 1, S17, T84, R19, W6M PL 4750, EXC portions of PL PGP47983 & BCP 5647	C	27-Mar-17

April 20, 2017

Updated: January 23, 2017

ELECTORAL AREA DIRECTORS' COMMITTEE

DIARY ITEMS

Item

Status

Notes

Diarized