#### **Rhya Hartley**

From:

Lore Schick <LSchick@cariboord.bc.ca>

Sent:

Wednesday, November 7, 2018 2:01 PM

To:

Rhya Hartley

Subject:

Joint Committee Item

**Attachments:** 

Jerry Buron - Infestation of Goldfish in Dragon Lake.pdf

Hi Rhya,

At it's September 21 meeting the CRD Board passed the following resolution:

That the following recommendation from the North Cariboo Rural Directors Caucus meeting, held September 4, 2018, be referred to the North Cariboo Joint Planning Committee:

That the letter from Jerry Buron, dated July 1, 2018, regarding his concern about an infestation of goldfish in Dragon Lake, be received. Further, that Mr. Buron's report be forwarded to the Minister of Environment with a request that an action plan for invasive species in Dragon Lake be developed and that Mr. Buron be advised of same, thanking him for his report.

Can you please place this on the agenda for next week. The backup documents are attached to this email.

Thank you.

#### **Lore Schick**

Deputy Corporate Officer / Executive Assistant lschick@cariboord.ca



Cariboo Regional District

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July 1, 2018

TED ARMSTRONG AREA DIRECTOR, CARIBOO REGINAL DISTRICT 102-410 KINCHANT STREET QUESNEL, BC V2J2R5 CANADA

RE: Dragon Lake Fishery

Dear Mr. Armstrong:

I'm sending you a copy of a report I created regarding a serious concern addressing Dragon Lake and the lake's infestation of goldfish. The original has been sent to Mike Ramsay, Director of Fisheries Province of British Columbia.

As Area Director Cariboo Reginal District I believe it is important of you to consider this report and the effects that it may have on the City of Quesnel and surrounding area. I understand that Dragon Lake is not within the city of Quesnel, however, it is close enough to have significant consequences for Quesnel and vicinity.

If I can be of further help please feel free to contact me. I've included my contact information below:

Jerry Buron

Any help you can bring upon what I and others feel is a critical situation would be appreciated.

Jerry Buron



Cariboo Regional District
File No. 400-01

JUL 1 1 2018

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### Dragon Lake - Requiem?

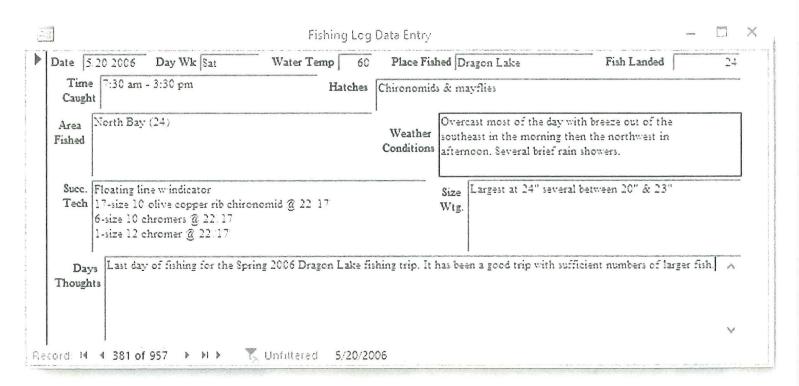
Readers, I'd like to introduce myself. I am Jerry Buron, residing at

I have been fishing Dragon Lake at least once, and in most years, twice yearly (Spring & Fall). I am an avid fly-fishing angler who is very concerned with the condition of Dragon Lake, near Quesnel, BC.

Those who know me know that I keep extensive records in a relational data base of every day I fish. These records are helpful to me as an angler and also are an indication of fishing conditions from which to make predictions and have continuing knowledge of areas fished. Below is one such record of a day's fishing at Dragon Lake.

- Evidence seems to suggest that there are indications that goldfish are negatively affecting Dragon Lake. Consider the following:
  - ✓ Egg harvest is it down, or the same as previous years?
  - ✓ Insect population Is it or has it been affected adversely by the infestation of goldfish?
  - ✓ What is the "growth rate" of fish currently and how does it compare historically in Dragon Lake?
  - ✓ Has the size and condition of the "brood-stock" remained the same in recent years?

I've kept, for nearly twenty years, records of fishing Dragon Lake. It shows evidences of what I see that has changed in recent years.



I'm writing to express a serious concern about the Dragon Lake fishery. I have many questions that I'm wondering who if anyone is concerned with the answers. A sampling of which include:

- Has the infestation of goldfish (carp) affected the balance of this fishery?
- If not what is the evidence to their affect?

Size of fish is significantly decreasing. (See chart entitled "Dragon Lake Spring Yearly Fish Catch Records 2008 – 2018" on next page)

## Dragon Lake Spring Yearly Fish Catch Records 2008 - 2018

15 Inches     3     25     14     3     10     14     7     6     2     14       16 Inches     9     32     14     7     21     38     13     18     11     16       17 Inches     10     27     8     17     36     21     14     11     11     14       18 Inches     22     18     3     23     34     15     35     13     10     28       19 Inches     4     4     2     11     14     17     5     9     1     19       20 Inches     17     7     5     13     21     25     5     5     5     15       21 Inches     2     3     2     7     5     12     1     11     14     9       22 Inches     5     7     2     6     3     3     7     7     7     5       23 Inches     3     7     2     7     1     2     2     8     5     1       24 Inches     1     2     2     5     5     9     10     5     2     0       25 Inches     0     2     0     5     2     4	Fish Size	2018	2017	2016	2015	2.014	2.013	2012	2010	2009	2008
15 Inches   3   25   14   3   10   14   7   6   2   14     16 Inches   9   32   14   7   21   38   13   18   11   16     17 Inches   10   27   8   17   36   21   14   11   11   24     18 Inches   22   18   3   23   34   15   35   13   10   28     19 Inches   4   4   2   11   14   17   5   9   1   19     20 Inches   17   7   5   13   21   25   5   5   5   5     21 Inches   2   3   2   7   5   12   1   11   14   9     22 Inches   5   7   2   6   3   3   7   7   7   5     23 Inches   3   7   2   7   1   2   2   8   5   1     24 Inches   1   2   2   5   5   9   10   5   2   0     25 Inches   0   2   0   5   2   4   1   6   4   0     26 Inches   0   0   0   0   0   1   1   1   1   1	13 Inches	24	35	28	2	19	24	4	24	4	8
16 Inches       9       32       14       7       21       38       13       18       11       16         17 Inches       10       27       8       17       36       21       14       11       11       24         18 Inches       22       18       3       23       34       15       35       13       10       28         19 Inches       4       4       2       11       14       17       5       9       1       19         20 Inches       17       7       5       13       21       25       5       5       5       5       15         21 Inches       2       3       2       7       5       12       1       11       14       9         22 Inches       5       7       2       6       3       3       7       7       7       5       5       15       14       9       11       14       9       9       10       11       14       9       11       14       9       11       14       14       14       9       14       14       14       14       14       14       14       1	14 Inches	21	43	17	1	15	20	1	7	8	11
17 Inches     10     27     8     17     36     21     14     11     11     24       18 Inches     22     18     3     23     34     15     35     13     10     28       19 Inches     4     4     2     11     14     17     5     9     1     19       20 Inches     17     7     5     13     21     25     5     5     5     5     15       21 Inches     2     3     2     7     5     12     1     11     14     9       22 Inches     5     7     2     6     3     3     7     7     7     7     5       23 Inches     3     7     2     7     1     2     2     8     5     1       24 Inches     1     2     2     5     5     9     10     5     2     0       25 Inches     0     2     0     5     2     4     1     6     4     0       25 Inches     0     0     0     0     1     5     3     2     2     0       25 Inches     0     0     0     0     1 <td>15 Inches</td> <td>3</td> <td>25</td> <td>14</td> <td>3</td> <td>10</td> <td>14</td> <td>7</td> <td>6</td> <td>2</td> <td>14</td>	15 Inches	3	25	14	3	10	14	7	6	2	14
18 Inches       22       18       3       23       34       15       35       13       10       28         19 Inches       4       4       2       11       14       17       5       9       1       19         20 Inches       17       7       5       13       21       25       5       5       5       15         21 Inches       2       3       2       7       5       12       1       11       14       9         22 Inches       5       7       2       6       3       3       7       7       7       7       5         23 Inches       3       7       2       7       1       2       2       8       5       1         24 Inches       1       2       2       5       5       9       10       5       2       0         25 Inches       0       2       0       5       2       4       1       6       4       0         26 Inches       1       2       0       0       1       1       1       1       1       0         27 Inches       0       0	16 Inches	9	32	14	7	21	38	13	18	11	16
19 Inches	17 Inches	10	27	8	17	36	21	14	11	11	24
20 Inches     17     7     5     13     21     25     5     5     5     15       21 Inches     2     3     2     7     5     12     1     11     14     9       22 Inches     5     7     2     6     3     3     7     7     7     5       23 Inches     3     7     2     7     1     2     2     8     5     1       24 Inches     1     2     2     5     5     9     10     5     2     0       25 Inches     0     2     0     5     2     4     1     6     4     0       26 Inches     1     2     0     0     1     5     3     2     2     2       27 Inches     0     0     0     0     1     1     1     1     1     0       28 Inches     0     0     0     0     0     1     0     0     1     0       Totals     122     214     99     107     187     211     109     133     88     150	18 Inches	22	18	3	23	34	15	35	13	10	28
21 Inches       2       3       2       7       5       12       1       11       14       9         22 Inches       5       7       2       6       3       3       7       7       7       5         23 Inches       3       7       2       7       1       2       2       8       5       1         24 Inches       1       2       2       5       5       9       10       5       2       0         25 Inches       0       2       0       5       2       4       1       6       4       0         26 Inches       1       2       0       0       1       5       3       2       2       0         27 Inches       0       0       0       0       1       1       1       1       1       0         28 Inches       0       0       0       0       0       1       0       0       1       0       0       1       0       0       1       0       0       1       0       0       1       0       0       1       0       0       1       0       0	19 luches	4	4	2	11	14	17	5	9	1	19
22 Inches       5       7       2       6       3       3       7       7       7       5         23 Inches       3       7       2       7       1       2       2       8       5       1         24 Inches       1       2       2       5       5       9       10       5       2       0         25 Inches       0       2       0       5       2       4       1       6       4       0         26 Inches       1       2       0       0       1       5       3       2       2       0         27 Inches       0       0       0       0       1       1       1       1       1       1       0         28 Inches       0       0       0       0       0       1       0       0       1       0         Totals       >       122       214       99       107       187       211       109       133       88       150	20 Inches	17	7	5	13	21	25	5	5	5	15
23 Inches 3 7 2 7 1 2 2 8 5 1 24 Inches 1 2 2 5 5 9 10 5 2 0 25 Inches 0 2 0 5 2 4 1 6 4 0 26 Inches 1 2 0 0 1 5 3 2 2 0 27 Inches 0 0 0 0 0 1 1 1 1 1 1 0 28 Inches 0 0 0 0 0 0 1 0 0 1 0  Totals > 122 214 99 107 187 211 109 133 88 150	21 Inches	2	3	2	7	5	12	1	11	14	9
24 Inches     1     2     2     5     5     9     10     5     2     0       25 Inches     0     2     0     5     2     4     1     6     4     0       26 Inches     1     2     0     0     1     5     3     2     2     0       27 Inches     0     0     0     0     1     1     1     1     1     0       28 Inches     0     0     0     0     0     1     0     0     1     0       Totals     >     122     214     99     107     187     211     109     133     88     150	22 Inches	5	7	2	6	3	3	7	7	7	5
25 Inches 0 2 0 5 2 4 1 6 4 0 26 Inches 1 2 0 0 1 5 3 2 2 0 27 Inches 0 0 0 0 0 1 1 1 1 1 1 0 28 Inches 0 0 0 0 0 0 1 0 0 1 0  Totals > 122 214 99 107 187 211 109 133 88 150	23 Inches	3	7	2	7	1	2	2	8	5	1
26 Inches	24 Inches	1	2	2	5	5	9	10	5	2	0
27 Inches         0         0         0         0         1         1         1         1         0           28 Inches         0         0         0         0         0         1         0         0         1         0           Totals         122         214         99         107         187         211         109         133         88         150	25 Inches	0	2	0	5	2	4	1	6	4	0
28 Inches         0         0         0         0         1         0         0         1         0           Totals         122         214         99         107         187         211         109         133         88         150	26 Inches	1	2	0	0	1	5	3	2	2	0
Totals > 122 214 99 107 187 211 109 133 88 150	27 Inches	0	0	0	0	0	1	1	1	1	0
	28 Inches	0	0	0	0	0	1	0	0	1	0
	Totals ->	122	214	99	107	187	211	109	133	88	150
	W (1) (5 )	20	10	25	10	15	10	1 4 8	46	16	4.8
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### Condition of fish caught and released:

In previous years fish were much "fatter" than currently. (See photo of three different fish taken circa 2012 on previous page)



and 3,000 eggs. Goldfish, on the other hand, spawn repeatedly during the year and I'm told may produce up to a million eggs per female yearly. If this is true, and once a goldfish gets to a size which is too large for a trout to consume, it's understandable the

goldfish will overwhelm the lake's ability to produce sufficient food for both species.

# Fish stocking in British Columbia:

A number of years ago I wrote an article, after spending one morning, visiting the egg collection site, I believe on Hallis Creek, in May of 2006. At that time I was told by Kurt Vinge and Derek Ingram, a Fish Culturist with BC Fisheries, that approximately 35%

to 40% of all eggs harvested in BC came from Dragon Lake. At

### Available food for trout:

As a serious angler, I will often take many "throat samples" of fish I catch. During the spring of 2018 there was a pronounced decrease in a fundamental food source. Chironomids were far less present in this year's throat samples. Was this an anomaly or is this a trend moving forward?

I know for a fact that goldfish eat the same insects, predominantly as do rainbow trout. I know this because I hook and catch goldfish using the same flies that I catch and release rainbow trout.

If what I'm told is correct this is very alarming. Rainbow trout spawn once a year in the spring and the average female trout will produce between 2,600



Above is a throat sample taken in 2014 of one 18" fish!

that time they were harvesting approximately three million eggs which were sent to either Fraser Valley Trout Hatchery in Abbotsford, BC and about one-third to the Clearwater Hatchery in Clearwater, BC.

This spring I had the opportunity to talk with one of the men responsible for harvesting fish for egg collection one evening while fishing and he related to a friend, "They are really struggling this year to get near their quota of fish for the Province's fish stocking program." Why is this? Is this year an anomaly or part of a trend? Is it, or has it been affected by goldfish? And finally his comments as mentioned that their traps were "loaded" with goldfish!

I've also been told that those responsible for the well-being of Dragon Lake claim there is no "significant" problems between goldfish and trout! My response is; "Where is the data to support this contention?" Is it empirical evidence or is it just conjecture on their part?

Dragon Lake was once considered one of, if not the Crown Jewel Lake in the Province of British

Columbia. From my perspective it is a shadow of its once preeminence. I hope I'm wrong regarding the "death of the lake," however, I see no evidence to the contrary. If it's not too late to take steps to rectify this condition where do folks start? I believe that poisoning the lake is probably not an option for several reasons. However, denying there is no problem or not getting the major stakeholders involved as to addressing the problem is equally not acceptable.

This brings us to another area of serious consideration. If Dragon Lake is dying, what is the economic impact on the area of Quesnel? I for one usually travel twice a year to fly fish this once wonderful destination. Notwithstanding the considerations of your stocking program, consider the economical impact of letting Dragon Lake die as a trout fishery. There are numerous friends who converge on Dragon Lake who come from as far away as Colorado and Arizona each spring.

Restaurants, service stations, retail outlets, lodging

accommodations will all be severely impacted by the loss of this fishery.

It's time for the stakeholders to act or at least explore the possibilities of ways to correct this situation.

In closing, I've been told that several in our fishing fraternity will not return next year. Some are willing to give it one more year. As for me I have an additional reason to continue fishing Dragon Lake. My wife of fifty years loved to come to Robert's Roost with me each year. She had many friends both locally and those whose husband's fished the lake. She passed away in April of 2016 and she loved the lake so much I placed her cremated ashes in Dragon Lake.

I would appreciate a response and I'm willing to share any and all data I've collected from nearly twenty years of fishing Dragon Lake.

Or



I can be reached at:

Jerry Buron

Regards,

Jerry

