

From: Minister, ENV ENV:EX
Sent: Tuesday, September 18, 2012 10:24 AM
To: Correspondence Unit ENV:EX
Subject: FW: Marshall Lake and Providence Dam

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Greg

From: Executive Division Office, FLNR:EX
Sent: Friday, August 31, 2012 3:54 PM
To: 'smallestcity@gmail.com'
Subject: Marshall Lake and Providence Dam

Christopher Stevenson
Marshall Lake Stewardship Group
smallestcity@gmail.com

Dear Christopher Stevenson:

Thank you for your letter dated July 12, 2012, to the Honourable Steve Thomson, Minister of Forests, Lands and Natural Resource Operations regarding the future of Marshall Lake and Providence Dam. I have been asked to respond and apologize for the delay.

Providence (Marshall Lake) Dam is 155 meters long and 9.1 meter high. It is owned by the Okanagan Fisheries Section, which holds 2 water licenses on the dam for a total of 266 acre feet of storage. The conservation storage licenses on Providence Dam were obtained by Okanagan Fisheries Section in 1984. Since that time, routine inspection and minor maintenance works have been completed on the facility on an annual basis. In June 2010, during routine dam inspection a number of concerns were identified by the ministry that warranted further investigation. A Dam Safety Review was subsequently completed in the spring of 2011, which identified a number of management concerns.

Key management concerns included:

- Providence Dam does not currently meet the Provincial Dam Safety Regulations or the Canadian Dam Safety Association (CDA) standards. A significant amount of work is required in order to meet current regulations and ensure public safety.
- Providence Dam is classified as a 'High Consequence' facility according to the Provincial Dam Failure Consequence Classification Guidelines. This classification is based on the potential for loss of life, substantial economic and social loss (e.g. damage to infrastructure, houses, public facilities) and significant environmental and cultural loss (significant deterioration of provincially important fish, wildlife, ecosystem habitat)—in the event of a dam failure.
- The cost to address immediate maintenance requirements and long-term operation of Providence Dam was assessed and determined to be significant.

- The Okanagan Fish and Wildlife Program does not have the staff capacity or resources to maintain the dam and conduct annual repairs.
- There is a significant liability associated with the dam ownership to both the Okanagan Fisheries Program and the province.
- Other Provincial Ministries will not take over responsibility for the dam due to the significant maintenance and long-term operation costs, and liability issues.
- Marshall Lake contains sunfish, which are considered an invasive species. There is a high risk that the sunfish could enter the Kettle River system, via the dam spillway during spring freshet, negatively impacting native stocks.

Over the past 2 years, Fisheries staff have met with the City of Greenwood and Kootenay Boundary Regional District on several occasions to discuss above noted concerns and potential options on how to proceed. Three options were identified and considered for Providence Dam. Options included:

Option 1: Continue to maintain the dam and conservation license.

Option 2: Transfer the dam license and liability to local government or the public.

Option 3: Release the conservation license and deactivate the dam, bringing the lake down to natural storage (2.64 ha).

In January 2011, local government was granted a year to explore Option #2: the potential of transferring the license to local government, in order to preserve the ecosystem and recreational values around Marshall Lake. Unfortunately, the Kootenay Boundary Regional District and the City of Greenwood have both recently indicated they were not interested or capable of taking over the dam.

This ministry is currently completing a feasibility analysis to determine dam decommissioning options, costs and timelines. Decommissioning the dam would bring the Marshall Lake back down to natural storage (2.64 ha from 6.56 ha). It would alleviate the public safety risk as well as the liability and long-term maintenance costs to the province.

The lake would be 7.7 meters deep and continue to be stocked with rainbow trout to support a recreational fishery. This is the most cost effective option short of transferring the license to another entity.

Thank you once again for conveying your concerns regarding Marshall Lake and its value to the local community. Unfortunately, Minister Thomson is unavailable to meet. Therefore, Tara White, Senior Fisheries Biologist, Okanagan Fisheries Program would be pleased to meet with you and/or the Marshall Lake Stewardship Group to discuss your concerns further. Ms. White may be reached at 250-490-2287 or via email at Tara.White@gov.bc.ca.

Sincerely,

Doug Konkin
Deputy Minister

pc: Honourable Terry Lake, Minister of Environment
Honourable Steve Thomson, Minister of Forests, Lands and Natural Resource Operations
John Slater, MLA - Kootenay Boundary
Dan Peterson, Director, Resource Management, Thompson Okanagan
Michael Burwash, Section Head, Fish and Wildlife Section, Thompson Okanagan
Tara White, Senior Fisheries Biologist, Okanagan Fisheries Program

Jackson, Vickie ENV:EX

From: Minister, ENV ENV:EX
Sent: Thursday, August 16, 2012 4:46 PM
To: Correspondence Unit ENV:EX
Subject: FW: Emailing: Marshall Lake
Attachments: 2.pdf; M' Lake Memo1.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Lindsay, Greg

From: Lake.MLA, Terry [<mailto:Terry.Lake.MLA@leg.bc.ca>]
Sent: Tuesday, July 3, 2012 9:21 AM
To: Minister, ENV ENV:EX
Subject: FW: Emailing: Marshall Lake

Kirsty L Morris | Constituency Assistant

*Terry Lake, MLA Kamloops - North Thompson
Minister of Environment*

Email: kirsty.morris@leg.bc.ca
Phone #: 250-554-5413 Fax #: 250-554-5417
Toll Free #: 1-888-299-0805
Website: www.terrylakemla.bc.ca



THE BC
JOBS PLAN

From: Dennis GRAHAM [<mailto:djg@xplornet.ca>]
Sent: July-02-12 7:06 PM
To: Slater.MLA, John
Cc: Lake.MLA, Terry; White, Tara FLNR:EX; Taylor, Brian; Stevenson, Chris; Perepolkin, Irene; Kettel, Nipper; Baird, Bill
Subject: Emailing: Marshall Lake

Memo from the Phoenix Interpretive Forest Society, to John Slater M.L.A. Boundary-Similkameen, regarding Marshall Lake.

The message is ready to be sent with the following file or link attachments:
Shortcut to: C:\Documents and Settings\Dennis\My Documents\Marshall Lake

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

MEMO

To: John Slater,
M.L.A. Boundary-Similkameen

July 02, 2012

From: Phoenix Interpretive Forest Society

Re: Marshall Lake

Local residents concerned about the management of this wonderful local resource formed the Phoenix Interpretive Forest Society in 1995. The society represents diverse interests in the community including local ranching, recreation, downhill skiing, cross country skiing, **woodlots**, Community Forests, mining and historians. In cooperation with local forest users and licensees we help to manage a network of rail grades, and a trail system used by cross country skiers, hikers, bikers and tourists. We support a cooperative local approach to the **sustainable** management of the Phoenix Forest.

Of extreme concern to us at present is the future status of Marshall Lake. Specifically, the Ministry of Environment's stance that:

- The Marshall Lake dam is unstable - which it is not as indicated by Qualified Professional **reports**¹ and...
- That the Ministry does not have either the funds to upgrade it nor staff to monitor it and...
- That unless some entity takes over complete responsibility for **it**, its level will be **significantly** lowered and its status changed from a small lake to little more than a large pond.

We feel the M.O.E's. position on the above points is neither reasonable nor responsible.

The government has adequate funds to properly manage BC's resources; they do have the choice as to where these funds are spent. There is a big difference in the two and we believe that proper, safe management of the dam does not require an inordinate expense and whatever work is necessary to maintain the lake at its current **level** should be **proactively** undertaken by the government.

Also, as indicated by the cited report the "dam does not require operations **staff**" and "there are few operational requirements for Providence Dam." And what is most significant is that the dam was deemed to be "marginally safe". While one would think that being "marginally safe" was barely adequate, in actual fact, because of the many structural and integrity requirements necessary for any dam to be deemed "marginally safe" means that it is safe barring an inordinate and unpredictable natural disaster; therefore the '**marginally safe**' category means that it meets **all** provincial requirements to be considered reasonably safe.

¹ Ministry of Environment; Providence Dam Safety Review December 2010 by: Associated Engineering (B.C.)

You have stated several times that more dams should be built in the Kettle River drainage. We herein request therefore that an already **existing** dam, which requires far less funds to maintain than designing and constructing a new one will get your support for preservation instead of virtual destruction. The **West** Boundary area is nearly always in a water deficit position with the Phoenix Forest area being especially so and retention of Marshall Lake at its present level will help, albeit in a relatively small way, mitigate water shortages especially during drought periods.

Marshall Lake is not only important for its water storage capabilities but also its ecological and recreational values which contribute significantly to **both** the natural and enhanced features of the area **which**, in **turn**, add appreciably to the economic value to the entire Boundary area.

Marshall lake is a local treasure; one that has innumerable values only part of which have been noted above; these **values** (often referred to as ecological goods and services), while not being easily equated to **hard**, dollar values, are significantly important and hence have much more value than what the government may have to spend to preserve them.

We sincerely hope therefore that you will do whatever is necessary to ensure that Marshall Lake is preserved at its current level and whatever improvements are necessary to ensure its integrity and safety are completed in a timely manner.

Yours truly,



Dennis Graham
Chair, Phoenix Interpretive Forest Society

CC:

Terry Lake, M.O.E. Tara White, Bill Baird, Irene **Perepolkin**, Nipper Kettle; Brian Taylor, Chris Stevenson.



CITY OF GREENWOOD

PO Box 129
Greenwood, BC V0H 1J0

Phone: (250) 445-6644 ... Fax: (250) 445-6441 .. Email: greenwoodcity@shaw.ca .. Website: www.greenwoodcity.com

26 June 2012

Jennifer Goad
Manager, Executive Issues
Ministry of Forests, Lands, and Natural Resources
PO Box 9522
STN PROV GOVT
Victoria BC V8W 9C2

174845

MINISTER'S OFFICE - RECEIVED			
MINISTRY OF ENVIRONMENT			
JUN 29 2012			
<input type="checkbox"/> Min Reply	<input type="checkbox"/> Reply Direct	<input type="checkbox"/> DM Reply	<input checked="" type="checkbox"/> Info/File
<input type="checkbox"/> Send Interim	<input type="checkbox"/> Redirect to _____		
<input type="checkbox"/> cc. _____			
CLIFF# _____			

Dear Ms. Goad:

cu-FLNR issue - file

Re: June 30/12 deadline to make a decision on the Providence Dam

At their regular meeting of 25 June 2012, the Council of the City of Greenwood passed the following resolution:

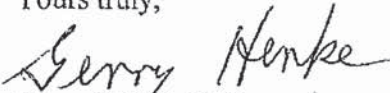
"Resolve that Council support in principal not taking over the Providence Dam and conservation licence, but defer final decision to give time to look into other options to keep the dam and lake as is."

At that same meeting senior staff was directed to contact the Ministry of Forests, Lands, and Natural Resources to ask for an extension of time before a final decision on Marshall Lake is made.

In her email of June 20, 2012, Tara White asked for a "response by the end of June as to whether the City is interested & capable of taking over the Providence Dam...."

I am writing to request a 5 week extension of that deadline.

Yours truly,


Gerry Henke, CAO
City of Greenwood

MINISTRY OF ENVIRONMENT CORRESPONDENCE UNIT
JUL 11 2012
RECEIVED

cc: Premier Christie Clark
The Honourable Terry Lake, Minister of Environment
Adrian Dix, MLA, Leader of the Opposition
Tara White, R.P. Bio., Min. of FLNR
John Slater, MLA
Alex Atamenko, MP

Jackson, Vickie ENV:EX

From: Minister, ENV ENV:EX
Sent: Thursday, June 21, 2012 4:56 PM
To: Correspondence Unit ENV:EX
Subject: FW: Marshall Lake Dam Information for Minister Lake

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Brian

From: christopher stevenson [mailto:smallestcity@gmail.com]
Sent: Wednesday, June 20, 2012 11:02 AM
To: Minister, ENV ENV:EX
Subject: Marshall Lake Dam Information for Minister Lake

Hi Jennifer. As discussed, here's some info on Marshall Lake. I've simply cut and pasted posts from the Facebook Group - please excuse the lack of "polishedness". It sure would make a lot more sense to you if you were able to simply go onto facebook, and type in "Marshall Lake Stewardship Group". Its an open group - anyone can read it without having to login or be a member....

Sorry its so chaotic - I just cut and pasted the posts from the group. If you have any comments, questions, etc. please contact me.

I'm hoping that Minister Lake will get a better understanding of the issues involved, and why this lake has value. Enough to conserve it in its present form.

- This group was created to achieve one goal - to preserve Marshall Lake. Marshall Lake is located in the Boundary Region - high in the hills between Grand Forks and Greenwood. A rock filled dam increases the size of this natural lake from 2.64 to 6.5 surface ha. The Ministry of Forests, Lands and Natural Resources has the licence for the dam - and since the Testalinden incident, the Fish & Wildlife dept has been working to transfer the licence, or decommission the dam. I believe that this lake is worth saving - and I know that other people feel the same way.

- one of the things we need to do is to figure out who the stakeholders are - who uses it, what uses does it have - who values it. I'm hoping that this issue will galvanize people in our region, to form a lasting stewardship community that could help in other conservation issues in the Boundary.

- This spring, the MoE (sorry - that's a mistake - I know now that it is the MFLNRO) has come back to the City and the Regional District, again looking to take the dam out - or for it to be taken over by another party. As the risk rating was downgraded, the MoE now cites only the "High Consequence" rating in their correspondence - the "High Risk" rating has been removed. What's concerning about this is that during our previous discussions, it was established that there has never been a study done to determine the consequence level of the dam - yet they are acting based on this assumptive rating of high consequence. These are scientists - Tara White and Jerry Mitchell are both biologists - who should base their opinions on facts - not assumptions. It strikes me as odd that they would not do their homework before drawing conclusions.

To date, no study has been done to establish consequence in regards to Marshall Lake.

Another issue in all of this - an issue that is of primary concern to the Fish & Wildlife dept - is that Marshall Lake has an invasive species in it. Sunfish have been introduced, and the concern is that if the dam should break, the Kettle Watershed could be contaminated. Their concerns are valid - but other lakes containing sunfish have been treated - this is a solveable problem.

The Regional District has shown little interest in either taking it over or participating in a new park function/service for the lake. The City of Greenwood is actively involved in this issue, but will likely not be able to take on the financial responsibility.

We need to find another solution - one based on a multi-stakeholder model. The lake is an important part of the Phoenix Ski Hill and Marshall Lake Cross Country Trails complex. It is a wonderful recreation asset, a valuable reservoir for fire fighting, and - evidently the water supply for some local farms.

- Greenwood Council meeting tonight - and the dam came up for discussion. Councillor Noll and Mayor Kettle brought up the site visit we did recently, with Public Works Superintendent Randy Smith. During question period, I relayed some thoughts on how I perceived the actions of the MoE in our earlier dealings - that they had not been upfront or objective about things, and that I felt that this needed to involve more than just the City.

- If anyone has suggestions, ideas, opinions to offer - please share them with us. This is intended to be an open discussion - a place to come together with a common goal, to work on this issue.....

- When we discussed taking on the monthly inspection role we would take on, the Jewel Lake dam was also a part of discussions. We were led to believe that in training our staff to do dam inspections, we might be able to do the inspections on other dams in the area. It came as quite a shock, then, when I visited the Jewel Lake Resort last summer, and was told that the Ministry people had removed the dam on Jewel Lake. No warning, no consultation - just went in there and took it out. The lake dropped nearly a foot in 3 days. The residents at the lake were furious.

Couple of things: the "dam" on Jewel Lake was in fact a weir-like structure - a number of wooden boards that Leo used to add and remove to maintain the lake level. It was about 15 feet across, and was located on the small stream that runs beside the resort. It wasn't even really a dam -and it certainly posed no risk or consequence to anyone. I was told that there were fish habitats on the stream - doubtful they survived the water that rushed down for the week after the dam was removed. Kind of strange that "Fish & Wildlife" would take such action without taking these habitats into consideration.....

- Just wanted to say -some of the people I've added might wonder why I'm including them in this group.....I'm adding some people who I know can bring something to the discussion, others who have expertise/experience in relevant areas, others who I've assumed are interested, others who are stakeholders. And some just because I respect their opinions and thought processes.

- A little background - the Providence Dam has been on the province's "hit list" for a couple years now - since the Testalinden Dam incident in Oliver led to a province-wide review of all provincially operated dams (2,000 or so). The structure on Marshall Lake dates back to the 1950s, when the Lake was used as a water source for the mining operations at Phoenix.

From what I remember of the information we received on council, the dam is a rock-based structure, approximately 33 feet high, which increases the surface area of the lake from 2.5 ha to 6.5 ha. In 1984, the dam was given to the City of Greenwood, which immediately transferred it to the province's Fish & Wildlife department. It is this agency that holds the licence, and has been working to get rid of the licence and the dam.

Their concerns lie surround several things - but they are most concerned about liability and cost. Several years ago, they installed a spillway that dropped the lake level. MoE claims that it costs them \$35,000 a year to maintain and monitor the dam, and that upgrades will cost \$135,000.

When they came to the City of Greenwood the last time (couple of years back), they claimed that the dam was the "highest risk and highest consequence" dam in the province. They made these claims before a study on the dam was published by Golder and Associates. When the report came out, it did not support the claims made by MoE - namely, that the dam was of "high risk" - and Provincial Dam Safety Officer Bert Brazier downgraded the risk level on the dam during a meeting with MoE staff Tara White and Jerry Mitchell. They subsequently dismissed the findings of the Golder study - which did not support their opinions - stating that it was not done to their satisfaction.

We (the city) proposed that they train local people to do the monthly inspections - which form the lions share of the MoE's ongoing budget for the dam. Each inspection requires two staff MoE staff people to come from Penticton to complete an inspection that takes an hour or two. This would also increase local capacity, as we would have people here that were qualified in dam inspection. I'm not sure how much of the training was done, or who is doing the inspections now.

Regarding costs to upgrade - the \$135,000 cost that they quoted did not take into account the costs to remove the dam (costs that we had to push them to share with us) - which turned out to be somewhere around \$50-75,000.

.....I'm going to keep adding information when time permits.....

- So the meeting has been set for June 18 - and it is an open meeting, which I'm hoping will draw new people into this discussion. Its time that this becomes a grassroots conversation and effort, with stakeholders, citizens, groups, etc involved in preserving Marshall lake. Please come to the meeting if you are able, and let others know about it.

- Why were only the RD and the City approached to consider options for this dam and lake? Shouldn't other stakeholders and interested parties be included in the discussion?

- If the Sunfish are a threat to the Kettle River Watershed, there are options to eradicate this invasive species. Those options include draining the lake, or the use of a piscicide such as Rotenone, which is an odorless chemical used as a broad-spectrum insecticide, piscicide, and pesticide. It occurs naturally in the roots and stems of several plants, such as the jicama vine plant. Attached is a report on the use of Rotenone in dealing with invasive fish species.

EradicatingIASFishNA.pdf

Download · Upload Revision

-- This is the backgrounder provided by Tara White of the Ministry of Forests, Lands and Natural Resource Operations on the dam. Read it with a skeptical eye - it is by no means comprehensive - it merely presents the Ministry's position on the dam. From my experience, this position is not an objective one. Comments?

Providence (Marshall) Lake Dam.pdf

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- The Marshall Lake meeting today was an interesting - and potentially successful - one. At the meeting were Tara White from Fish & Wildlife, MLA John Slater and his assistant Diana Thomas, Greenwood Mayor Nipper Kettle, Councillor Lee Cudworth, Regional Directors Bill Baird and Irene Perepelkin, RDKB CAO John Maclean, Greenwood Public Works Superintendant Randy Smith, Boundary Creek Times reporter Pat Kelly, Robin Dalziel of Joybilee Farms and myself.

Following a short Power Point presentation by Tara White, we visited the lake and dam, and had a good discussion on the current situation and possible options for the future.

Bottom line is that the provincial licence holder does not want to continue to maintain the dam and hold the conservation licence on it. They are looking to decommission it this year, unless we can put together a plan to take over the licence.

We have a one month deadline to organize this and give them an answer.

Tara White agreed to investigate the possibility of using the monies required to decommission the dam (approximately \$75,000) to upgrade it, to provide more detailed figures on costs to upgrade, costs to decommission, and try to find out if the dam can be upgraded by adding fill to the lake side, as opposed to the much taller downhill face (this has been proposed for a year and a half, and remains an unanswered question). The estimated costs to upgrade according to the provincial presentation are \$135,000, but this is a projection that could be reduced if some of the options discussed at the meeting were pursued.

I believe that we can make this work - but we need to organize, to get all the figures in front of us, to pull in all the resources we can muster, and to get support from the users and stakeholders in our region. And we don't have much

time. It sounds like the city may be willing to participate - but as I've said before, I believe that this needs to be a multi-stakeholder effort.

Upgrading the dam will require trucks, excavators, rock, people and an engineer. Hopefully we can get some of these things locally - at nominal cost or donated. We need to look into what's involved in dealing with liability (do we need insurance? how much will it cost?).

We need to sit down and come up with a long term plan for maintenance, operation. Anyone interested in working on this?

- So - interesting meeting of the Kettle River Watershed study tonight in Midway. Very comprehensive presentation on the study by Summit Environmental Consultants. What were particularly interesting to me, in relation to Marshall Lake, were comments made by Hugh Hamilton, regarding the value of water storage for areas that are experiencing increasing aridity and decreasing flows. Other areas have and are considering and working on building dams to create or increase water storage. Which is extremely expensive and difficult to do - considering what's involved in getting approval and doing the actual construction.

So - increasing water storage capacity is a strategy in areas experiencing decreasing flows and increasing aridity.....which is exactly what the data for the Kettle watershed seems to indicate. Here we have a dam, which increases storage capacity by three times, if not more, on a spring fed lake that is at a relatively constant level year round (even in the hottest, driest summer). A lake that could function as a reservoir for a myriad of uses - some of which may not even be on the radar at present. We know the lake has recreational value. Ecological value. It is an invaluable asset to local forest fire fighting.

And we're a month away from losing it. The more I learn about it, the more convinced I am that letting it go would be a terrible mistake. Anyways, that's my rant for the evening. Anyone else wanna jump in with comments, feel free.....

- Here's a link to the BC Dam Safety Guidelines PDF - have a look at the photos of the Testalinden and similar dam failures - notice what materials these dams were constructed of.

http://www.env.gov.bc.ca/wsd/public_safety/dam_safety/cabinet/inspection.pdf

http://www.env.gov.bc.ca/wsd/public_safety/dam_safety/cabinet/inspection.pdf
www.env.gov.bc.ca

- Regarding recreation value - the lake has a sign designating the "Marshall Lake Recreation Site - British Columbia" - this is a Forestry recreation site, from what I'm told. Picnic tables, and campsites (?).....beautiful spot. What could we do to increase awareness of this recreation site? Something that came up during the site visit was that a lot of the people in the Grand Forks area - Area D in particular (in which the lake is located) - aren't even really aware of it - which is an obstacle to getting support for the lake. People won't support what they don't know about.

Christopher Stevenson

Jackson, Vickie ENV:EX

From: Minister, ENV ENV:EX
Sent: Thursday, June 21, 2012 4:56 PM
To: Correspondence Unit ENV:EX
Subject: FW: deadline

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Brian

From: christopher stevenson [<mailto:smallestcity@gmail.com>]
Sent: Wednesday, June 20, 2012 12:28 PM
To: Minister, ENV ENV:EX
Subject: deadline

Hi again, Jennifer. Just so you know - we've been given until the end of June to make a decision on this.

--

Christopher Stevenson

Jackson, Vickie ENV:EX

From: Goad, Jennifer FLNR:EX
Sent: Monday, June 25, 2012 2:40 PM
To: Donison, Sonia FLNR:EX; White, Tara FLNR:EX
Cc: Troke, Corri-Ann FLNR:EX; Beitz, Brian ENV:EX
Subject: Re: Marshall Lake Dam

This is entirely a FLNRO issue. Unless advised otherwise by the Min's Office - this might be better answered by a DM or ADM response.

From: Donison, Sonia FLNR:EX
Sent: Monday, June 25, 2012 02:33 PM
To: White, Tara FLNR:EX
Cc: Troke, Corri-Ann FLNR:EX; Beitz, Brian ENV:EX; Burwash, Michael FLNR:EX; Peterson, Dan FLNR:EX; Goad, Jennifer FLNR:EX
Subject: RE: Marshall Lake Dam

Thanks Tara! If response completed will it be from minister? Assume we will also respond on behalf of MOE?

Thank You! Di Bohja!

Sonia Donison, Manager
Correspondence Services
4th Floor, 780 Blanshard
Tel: 250-356-9638
Fax: 250-356-6791
sonia.donison@gov.bc.ca

From: White, Tara FLNR:EX
Sent: Monday, June 25, 2012 2:21 PM
To: Donison, Sonia FLNR:EX
Cc: Troke, Corri-Ann FLNR:EX; Beitz, Brian ENV:EX; Burwash, Michael FLNR:EX; Peterson, Dan FLNR:EX; Goad, Jennifer FLNR:EX
Subject: RE: Marshall Lake Dam

Yes — we have been dealing with this.

I wrote an IN for Dan Petersen on Friday (attached) .

Both Jennifer Goad and I have spoken with Mr Stevenson.

Tara

Tara White, R.P.Bio.
Senior Fisheries Biologist
Ministry of Forests, Lands and Natural Resource Operations
Okanagan-Thompson Region
Phone: (250) 490-2287
Email: tara.white@gov.bc.ca

><(((°>

From: Donison, Sonia FLNR:EX
Sent: Monday, June 25, 2012 2:16 PM
To: White, Tara FLNR:EX
Cc: Troke, Corri-Ann FLNR:EX; Beitz, Brian ENV:EX
Subject: FW: Marshall Lake Dam
Importance: High

Hi Tara! Have you previously dealt with this? Is this something FLNR should handle?

Thank You! Di Bohja!

Sonia Donison, Manager
Correspondence Services
4th Floor, 780 Blanshard
Tel: 250-356-9638
Fax: 250-356-6791
sonia.donison@gov.bc.ca

From: Beitz, Brian ENV:EX
Sent: Friday, June 22, 2012 2:28 PM
To: Donison, Sonia FLNR:EX
Cc: Correspondence Serv. Sectn, FLNR:EX
Subject: Marshall Lake Dam

Hi Sonia,

Please see the attached. Can you confirm that these fall under FLNR? If so, will FLNR respond obo MOE?

Please note the end of June deadline on the 2nd incoming.

Thanks!

Brian Beitz
A/Correspondence Assistant
Ministry of Environment
Phone: 250 356-7191

From: WWW ENVMail ENV:EX
Sent: Thursday, June 28, 2012 1:47 PM
To: 'smallestcity@gmail.com'
Cc: Konkin, Doug FLNR:EX
Subject: RE: Marshall Lake Dam Information for Minister Lake

Reference: 171453

June 28, 2012

Christopher Stevenson
Email: smallestcity@gmail.com

Dear Mr. Stevenson:

Thank you for your email of June 20, 2012, addressed to the Honourable Terry Lake, Minister of Environment, regarding the Marshall Lake Dam.

I appreciate that you took the time to share your thoughts. Due to a realignment of the provincial government, this topic now falls under the purview of the Ministry of Forests, Lands and Natural Resource Operations.

Ministry of Environment staff are continuing to work closely with our colleagues at the Ministry of Forests, Lands and Natural Resource Operations. I have shared a copy of your enquiry with staff at the Ministry of Forests, Lands and Natural Resource Operations, for their review and consideration.

Thank you again for writing.

Sincerely,

Cairine MacDonald
Deputy Minister

cc: Doug Konkin, Deputy Minister, Ministry of Forests, Lands and Natural Resource Operations

From: christopher stevenson [mailto:smallestcity@gmail.com]
Sent: Wednesday, June 20, 2012 11:02 AM
To: Minister, ENV ENV:EX
Subject: Marshall Lake Dam Information for Minister Lake

Hi Jennifer. As discussed, here's some info on Marshall Lake. I've simply cut and pasted posts from the Facebook Group - please excuse the lack of "polishedness". It sure would make a lot more sense to you if you were able to simply go onto facebook, and type in "Marshall Lake Stewardship Group". Its an open group - anyone can read it without having to login or be a member....

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I'm hoping that Minister Lake will get a better understanding of the issues involved, and why this lake has value. Enough to conserve it in its present form.

- This group was created to achieve one goal - to preserve Marshall Lake. Marshall Lake is located in the Boundary Region - high in the hills between Grand Forks and Greenwood. A rock filled dam increases the size of this natural lake from 2.64 to 6.5 surface ha. The Ministry of Forests, Lands and Natural Resources has the licence for the dam - and since the Testalinden incident, the Fish & Wildlife dept has been working to transfer the licence, or decommission the dam. I believe that this lake is worth saving - and I know that other people feel the same way.

- one of the things we need to do is to figure out who the stakeholders are - who uses it, what uses does it have - who values it. I'm hoping that this issue will galvanize people in our region, to form a lasting stewardship community that could help in other conservation issues in the Boundary.

- This spring, the MoE (sorry - that's a mistake - I know now that it is the MFLNRO) has come back to the City and the Regional District, again looking to take the dam out - or for it to be taken over by another party. As the risk rating was downgraded, the MoE now cites only the "High Consequence" rating in their correspondence - the "High Risk" rating has been removed. What's concerning about this is that during our previous discussions, it was established that there has never been a study done to determine the consequence level of the dam - yet they are acting based on this assumptive rating of high consequence. These are scientists - Tara White and Jerry Mitchell are both biologists - who should base their opinions on facts - not assumptions. It strikes me as odd that they would not do their homework before drawing conclusions.

To date, no study has been done to establish consequence in regards to Marshall Lake.

Another issue in all of this - an issue that is of primary concern to the Fish & Wildlife dept - is that Marshall Lake has an invasive species in it. Sunfish have been introduced, and the concern is that if the dam should break, the Kettle Watershed could be contaminated. Their concerns are valid - but other lakes containing sunfish have been treated - this is a solveable problem.

The Regional District has shown little interest in either taking it over or participating in a new park function/service for the lake. The City of Greenwood is actively involved in this issue, but will likely not be able to take on the financial responsibility.

We need to find another solution - one based on a multi-stakeholder model. The lake is an important part of the Phoenix Ski Hill and Marshall Lake Cross Country Trails complex. It is a wonderful recreation asset, a valuable reservoir for fire fighting, and - evidently the water supply for some local farms.

- Greenwood Council meeting tonight - and the dam came up for discussion. Councillor Noll and Mayor Kettle brought up the site visit we did recently, with Public Works Superintendent Randy Smith. During question period, I relayed some thoughts on how I perceived the actions of the MoE in our earlier dealings - that they had not been upfront or objective about things, and that I felt that this needed to involve more than just the City.

- If anyone has suggestions, ideas, opinions to offer - please share them with us. This is intended to be an open discussion - a place to come together with a common goal, to work on this issue.....

- When we discussed taking on the monthly inspection role we would take on, the Jewel Lake dam was also a part of discussions. We were led to believe that in training our staff to do dam inspections, we might be able to do the inspections on other dams in the area. It came as quite a shock, then, when I visited the Jewel Lake Resort last summer, and was told that the Ministry people had removed the dam on Jewel Lake. No warning, no consultation - just went in there and took it out. The lake dropped nearly a foot in 3 days. The residents at the lake were furious.

Couple of things: the "dam" on Jewel Lake was in fact a weir-like structure - a number of wooden boards that Leo used to add and remove to maintain the lake level. It was about 15 feet across, and was located on the small stream that runs beside the resort. It wasn't even really a dam -and it certainly posed no risk or consequence to anyone. I was told that there were fish habitats on the stream - doubtful they survived the water that rushed down for the week after the dam was removed. Kind of strange that "Fish & Wildlife" would take such action without taking these habitats into consideration.....

- Just wanted to say -some of the people I've added might wonder why I'm including them in this group.....I'm adding some people who I know can bring something to the discussion, others who have expertise/experience in

relevant areas, others who I've assumed are interested, others who are stakeholders. And some just because I respect their opinions and thought processes.

- A little background - the Providence Dam has been on the province's "hit list" for a couple years now - since the Testalinden Dam incident in Oliver led to a province-wide review of all provincially operated dams (2,000 or so). The structure on Marshall Lake dates back to the 1950s, when the Lake was used as a water source for the mining operations at Phoenix.

From what I remember of the information we received on council, the dam is a rock-based structure, approximately 33 feet high, which increases the surface area of the lake from 2.5 ha to 6.5 ha. In 1984, the dam was given to the City of Greenwood, which immediately transferred it to the province's Fish & Wildlife department. It is this agency that holds the licence, and has been working to get rid of the licence and the dam.

Their concerns lie surround several things - but they are most concerned about liability and cost. Several years ago, they installed a spillway that dropped the lake level. MoE claims that it costs them \$35,000 a year to maintain and monitor the dam, and that upgrades will cost \$135,000.

When they came to the City of Greenwood the last time (couple of years back), they claimed that the dam was the "highest risk and highest consequence" dam in the province. They made these claims before a study on the dam was published by Golder and Associates. When the report came out, it did not support the claims made by MoE - namely, that the dam was of "high risk" - and Provincial Dam Safety Officer Bert Brazier downgraded the risk level on the dam during a meeting with MoE staff Tara White and Jerry Mitchell. They subsequently dismissed the findings of the Golder study - which did not support their opinions - stating that it was not done to their satisfaction.

We (the city) proposed that they train local people to do the monthly inspections - which form the lions share of the MoE's ongoing budget for the dam. Each inspection requires two staff MoE staff people to come from Penticton to complete an inspection that takes an hour or two. This would also increase local capacity, as we would have people here that were qualified in dam inspection. I'm not sure how much of the training was done, or who is doing the inspections now.

Regarding costs to upgrade - the \$135,000 cost that they quoted did not take into account the costs to remove the dam (costs that we had to push them to share with us) - which turned out to be somewhere around \$50-75,000.

.....I'm going to keep adding information when time permits.....

- So the meeting has been set for June 18 - and it is an open meeting, which I'm hoping will draw new people into this discussion. Its time that this becomes a grassroots conversation and effort, with stakeholders, citizens, groups, etc involved in preserving Marshall lake. Please come to the meeting if you are able, and let others know about it.

- Why were only the RD and the City approached to consider options for this dam and lake? Shouldn't other stakeholders and interested parties be included in the discussion?

- If the Sunfish are a threat to the Kettle River Watershed, there are options to eradicate this invasive species. Those options include draining the lake, or the use of a piscicide such as Rotenone, which is an odorless chemical used as a broad-spectrum insecticide, piscicide, and pesticide. It occurs naturally in the roots and stems of several plants, such as the jicama vine plant. Attached is a report on the use of Rotenone in dealing with invasive fish species.

EradicatingIASFishNA.pdf

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-- This is the backgrounder provided by Tara White of the Ministry of Forests, Lands and Natural Resource Operations on the dam. Read it with a skeptical eye - it is by no means comprehensive - it merely presents the Ministry's position on the dam. From my experience, this position is not an objective one. Comments?

Providence (Marshall) Lake Dam.pdf

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- The Marshall Lake meeting today was an interesting - and potentially successful - one. At the meeting were Tara White from Fish & Wildlife, MLA John Slater and his assistant Diana Thomas, Greenwood Mayor Nipper Kettle, Councillor Lee Cudworth, Regional Directors Bill Baird and Irene Perepelkin, RDKB CAO John Maclean, Greenwood Public Works Superintendant Randy Smith, Boundary Creek Times reporter Pat Kelly, Robin Dalziel of Joybilee Farms and myself.

Following a short Power Point presentation by Tara White, we visited the lake and dam, and had a good discussion on the current situation and possible options for the future.

Bottom line is that the provincial licence holder does not want to continue to maintain the dam and hold the conservation licence on it. They are looking to decommission it this year, unless we can put together a plan to take over the licence.

We have a one month deadline to organize this and give them an answer.

Tara White agreed to investigate the possibility of using the monies required to decommission the dam (approximately \$75,000) to upgrade it, to provide more detailed figures on costs to upgrade, costs to decommission, and try to find out if the dam can be upgraded by adding fill to the lake side, as opposed to the much taller downhill face (this has been proposed for a year and a half, and remains an unanswered question). The estimated costs to upgrade according to the provincial presentation are \$135,000, but this is a projection that could be reduced if some of the options discussed at the meeting were pursued.

I believe that we can make this work - but we need to organize, to get all the figures in front of us, to pull in all the resources we can muster, and to get support from the users and stakeholders in our region. And we don't have much time. It sounds like the city may be willing to participate - but as I've said before, I believe that this needs to be a multi-stakeholder effort.

Upgrading the dam will require trucks, excavators, rock, people and an engineer. Hopefully we can get some of these things locally - at nominal cost or donated. We need to look into what's involved in dealing with liability (do we need insurance? how much will it cost?).

We need to sit down and come up with a long term plan for maintenance, operation. Anyone interested in working on this?

- So - interesting meeting of the Kettle River Watershed study tonight in Midway. Very comprehensive presentation on the study by Summit Environmental Consultants. What were particularly interesting to me, in relation to Marshall Lake, were comments made by Hugh Hamilton, regarding the value of water storage for areas that are experiencing increasing aridity and decreasing flows. Other areas have and are considering and working on building dams to create or increase water storage. Which is extremely expensive and difficult to do - considering what's involved in getting approval and doing the actual construction.

So - increasing water storage capacity is a strategy in areas experiencing decreasing flows and increasing aridity.....which is exactly what the data for the Kettle watershed seems to indicate. Here we have a dam, which increases storage capacity by three times, if not more, on a spring fed lake that is at a relatively constant level year round (even in the hottest, driest summer). A lake that could function as a reservoir for a myriad of uses - some of which may not even be on the radar at present. We know the lake has recreational value. Ecological value. It is an invaluable asset to local forest fire fighting.

And we're a month away from losing it. The more I learn about it, the more convinced I am that letting it go would be a terrible mistake. Anyways, that's my rant for the evening. Anyone else wanna jump in with comments, feel free.....

- Here's a link to the BC Dam Safety Guidelines PDF - have a look at the photos of the Testalinden and similar dam failures - notice what materials these dams were constructed of.

- Regarding recreation value - the lake has a sign designating the "Marshall Lake Recreation Site - British Columbia" - this is a Forestry recreation site, from what I'm told. Picnic tables, and campsites (?).beautiful spot. What could we do to increase awareness of this recreation site? Something that came up during the site visit was the a lot of the people in the Grand Forks area - Area D in particular (in which the lake is located) - aren't even really aware of it - which is an obstacle to getting support for the lake. People won't support what they don't know about.

Christopher Stevenson