



**Saskatchewan  
Watershed  
Authority**

# **Lake Diefenbaker Reservoir Operating Plan**

**Initial Targeted Stakeholder Consultation/Engagement Meeting  
Meeting Summary  
May 30, 2012  
Jim Kook Recreation Complex  
Outlook, Saskatchewan**

This meeting summary was prepared by the Saskatchewan Watershed Authority (Authority). It captures the key discussion points from the May 30, 2012 initial Targeted Stakeholder Consultation/Engagement meeting. It is not intended as a verbatim transcript, and is subject to review by meeting participants. If you have any questions or comments regarding the summary, please contact:

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# **1. ABOUT THE INITIAL LAKE DIEFENBAKER RESERVOIR OPERATING PLAN TARGETED STAKEHOLDER CONSULTATION/ENGAGEMENT MEETING**

The initial Targeted Stakeholder Consultation/Engagement meeting, hosted by the Saskatchewan Watershed Authority, was designed to:

- 1) Introduce participants to the Targeted Stakeholder Consultation/Engagement process;
- 2) Provide some background on how Lake Diefenbaker and Gardiner Dam are currently operated; and
- 3) Identify some of the factors that should be taken into consideration when developing a new Reservoir Operating Plan for Lake Diefenbaker.

Prior to the initial meeting, an invitation was sent out to targeted stakeholders to introduce them to the Lake Diefenbaker Reservoir Operating Plan Consultation/Engagement process, the timeframe of the process, the list of deliverables, and the list of stakeholders along the Saskatchewan River System that have been invited to participate in this process. The meeting agenda is attached as Appendix A and the list of participants is included in Appendix B.

## **2. WELCOMING AND OPENING REMARKS**

Dr Terry Hanley thanked all participants for coming and stated that the Saskatchewan Watershed Authority will listen to participants' comments and incorporate the feedback received from this meeting into a meeting summary document that would be posted on the Authority's Website (<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>).

Dr. Hanley reviewed the agenda and materials available for participants and indicated the meeting would provide more information about how Lake Diefenbaker and Gardiner Dam are currently operated; some of the factors that should be taken into consideration when developing a new Reservoir Operating Plan for Lake Diefenbaker, discuss next steps in the Targeted Stakeholder Consultation/Engagement process, and to also provide an opportunity to hear participants' views, concerns and questions.

## **PRESENTATIONS**

### **1) INTRODUCTION AND PROCESS OVERVIEW PRESENTATION**

Dr. Terry Hanley, Director of Policy and Risk Management for the Saskatchewan Watershed Authority discussed the Lake Diefenbaker Reservoir Operating Plan Targeted Stakeholder Consultation/Engagement process. For a PDF of the PowerPoint presentation, please see the Presentations on the Saskatchewan Watershed Authority's Website: <http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

## **2) INTERIM RESERVOIR OPERATING PLAN PRESENTATION**

Bill Duncan, Executive Director, Engineering & Geoscience for the Saskatchewan Watershed Authority discussed how Lake Diefenbaker and Gardiner Dam are currently operated. For a PDF of the PowerPoint presentation, please see the Presentations at the Saskatchewan Watershed Authority's Website:

<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

### **General Questions, Comments and Concerns following the presentation:**

Q: Concern was expressed about the slippage of Gardiner Dam.

A: *B. Duncan - the dam has moved 4mm per year over the past decade. During construction there was a lot of movement in the foundation of the dam, in excess of 2 m. However, since construction the dam has slipped approximately 900 mm. The movement of the dam's foundation has been declining on an annual basis since construction in 1968.*

Q: What sort of stakeholder feedback would be helpful in guiding future direction for developing a reservoir operating plan for Lake Diefenbaker?

A: *B. Duncan - there are many different and sometimes conflicting uses of the reservoir. Sometimes maximizing one use can be at the expense of another use. A key component of decision making has to do with the economics of operating in one mode versus another mode.*

Q: How much did the Centre for Hydrology's Review of Operations study cost?

A: *B. Duncan – could not provide exact number, but it was under \$100,000 and would confirm actual figure later in the meeting. Terry Hanley followed up with this question later in the meeting, after talking with John Pomeroy. The Centre for Hydrology received \$82,900 for this review. The money received by the university was used for hiring research assistants, travel, etc.*

## **3) REVIEW OF LAKE DIEFENBAKER OPERATIONS 2010-2011 STUDY PRESENTATION**

Dr John Pomeroy is the Canada Research Chair in Water Resources and Climate Change (Tier 1), Professor of Geography and Director of the Centre for Hydrology at the University of Saskatchewan, an Honorary Professor of the Centre for Glaciology, Aberystwyth University, Wales and an Institute Professor for the Biogeoscience Institute of the University of Calgary. Dr. Pomeroy was to present, remotely via SKYPE, on the document the Centre for Hydrology completed on the Review of Lake Diefenbaker Operations 2010-2011. However, due to technical difficulties the presentation was not possible. This presentation will be posted on the Authority's Website (<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>).

#### 4) HYDRO POWER GENERATION PRESENTATION

Lain Lovelace, Manager, Business Development for SaskPower discussed how Coteau Creek Generating Station at Gardiner Dam is operated, and the financial impact of water levels in the reservoir to SaskPower. For a PDF of the PowerPoint presentation, please see the Presentations on the Saskatchewan Watershed Authority's Website:  
<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

#### **General Questions, Comments and Concerns following the presentation:**

- Q: Could you provide clarification about the first point in the Financial Impacts slide: 1 m head = \$1 to 2 million year. Was that 1 meter in the water level of the reservoir.
- A: *L. Lovelace - it relates to 1 m of pressure.*
- Q: If SaskPower spills at the Coteau Creek Hydroelectric Power Station does SaskPower have to spill at the two stations downstream (Nipawin Hydroelectric Power Station and E.B. Campbell Hydroelectric Power Station)?
- A: *L. Lovelace - if you spill enough at Coteau Creek you have to spill at both Nipawin and E.B. Campbell.*
- Q: How many power stations does SaskPower have?
- A: *L. Lovelace – SaskPower has 25 locations and 71 units [confirmation of the number of locations and units provided after meeting]. Note: Each wind turbine at the four wind farms were not counted as separate units.*
- Q: How does SaskPower optimize the worth of water at some stations and minimize fuel costs at others?
- A: *L. Lovelace - every day SaskPower makes a plan that considers how much water they have available. SaskPower tries to get the most amount of energy from the station with the lowest cost to operate. The plan is produced every day on an hour-to-hour and minute-to-minute basis. SaskPower's plan often changes several times in a day.*
- Q: What is the relationship between the Saskatchewan Watershed Authority and SaskPower in their operation of Lake Diefenbaker and Gardiner Dam?
- A: *L. Lovelace - the Authority sets the weekly discharge amount from Gardiner Dam and provides this to SaskPower, but within that discharge value SaskPower has some discretion. Sometimes the Authority will provide SaskPower with direction on how much to discharge but SaskPower may find that something else would work better. In this case SaskPower goes back to the Authority with their idea and the Authority balances it with the different stakeholders in mind.*
- Q: Dr. Karl-Erich Lindenschmidt from the University of Saskatchewan commented that during the winter SaskPower can't fluctuate the discharge levels too much

because of ice conditions. Dr. LindenSchmidt wanted to know what the estimated amount of costs/revenue was lost because of this constraint?

A: *L. Lovelace - there are many issues like that that pose constraints (e.g., fish spawning, towns downstream) on how the reservoir is operated, but couldn't really say what the losses/costs are unless he could see what the actual constraint is.*

Q: It sounds like the decisions regarding the operation of the reservoir are made on an economic basis to maximize power.

A: *L. Lovelace- this is not the only factor, as the Authority takes into consideration all stakeholders when making decisions regarding discharge.*

Q: How does SaskPower mix the economic viability with the environmental policy, which is supposed to be very concerned with the environment? Why does SaskPower lets the Saskatchewan Watershed Authority look at the environmental considerations of operating the reservoir?

A: *L. Lovelace - SaskPower maximizes power generation within whatever constraints we have, including environmental constraints.*

Q: If it's not just economic considerations that determine what SaskPower recommends to the Saskatchewan Watershed Authority, how does SaskPower include the environment in decision making? What matrix does SaskPower use in decision making?

A: *L. Lovelace - environmental and economic factors are all considered by SaskPower in decision making before SaskPower's operating suggestions/decisions go to the Authority for approval.*

## **5) IRRIGATION USE AND BENEFITS FROM LAKE DIEFENBAKER PRESENTATION**

Duane Harding, District Manager of the South Saskatchewan River Irrigation District presented on how Lake Diefenbaker Irrigation Districts use water from Lake Diefenbaker and the timing of irrigation. For a PDF of the PowerPoint presentation, please see the Presentations on the Saskatchewan Watershed Authority's Website:

<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

### **General Questions, Comments and Concerns following the presentation:**

Q: Two-thirds of the land in the Lake Diefenbaker Area is not suitable for irrigation because of alkali.

A: *D. Harding – for some land that is definitely true, but there is still a lot of land that has the potential for irrigation. Individual landowners should have their soils evaluated for irrigation suitability.*

Q: Dr. Terry Hanley asked what the future of irrigation looks like and what impact a drought and increased pressure from everyone would have?

A: *D. Harding - there are a lot of water opportunities from Lake Diefenbaker. Irrigators in the Lake Diefenbaker Development Area. Drought will increase the requests for additional irrigation. SSRID is currently licensed for 93,000 acre feet of water. They are currently not using all of their allocation. There is room within the current licensed irrigation allocation for additional 23,000 acres based on today's irrigation practices.*

## **6) PROVINCIAL PARKS AND TOURISM IMPORTANCE OF LAKE DIEFENBAKER PRESENTATION**

Chris Potter, Senior Park Planner for Ministry of Parks, Culture and Sport presented a Parks and Recreation perspective on how the management of the reservoir impacts the parks and recreational uses of the reservoir. For a PDF of the PowerPoint presentation, please see the Presentations on the Saskatchewan Watershed Authority's Website: <http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

### **General Questions, Comments and Concerns following the presentation:**

- Q: What is the estimated dollar value on how tourism was affected by the conditions at Lake Diefenbaker last year (2011)?
- A: *Joel Perry (Park Supervisor, Douglas & Danielson Provincial Parks) - Financial losses are difficult to put a solid figure to. They still had a record number of people coming to the parks, but there was the inconvenience of not knowing what to do with people who expected beaches and they didn't have any, as the beaches were under water. This may impact future visitation if people were disappointed with their experience. Parks on the reservoir experience erosion of beaches and facilities, but we don't have a solid figure of costs.*

### **Comments and Concerns:**

1. There were a number of residents along the lake that were very concerned about the amount of erosion that is occurring to Lake Diefenbaker's shoreline.
2. A participant from Cumberland House was very concerned about the environmental impact the control structures on the South Saskatchewan and Saskatchewan River are having on the Cumberland Inland Delta, the largest freshwater inland delta in North America, due to trapping of sediment in the reservoirs.

## **7) DOWNSTREAM USES PRESENTATION**

Susan Lamb, CEO for the Meewasin Valley Authority and representative of the Partners FOR the Saskatchewan River Basin presented on the uses of the South Saskatchewan River downstream of Gardiner Dam. For a PDF of the PowerPoint presentation, please see the Presentations on the Saskatchewan Watershed Authority's Website: <http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.

## **8) STATE OF LAKE DIEFENBAKER PRESENTATION**

Heather Davies, State of the Watershed Scientist for the Saskatchewan Watershed Authority was to present on the health and environmental issues surrounding the operation of Lake Diefenbaker. However, due to time constraints the presentation did not happen. This presentation will be posted on the Authority's Website (<http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>).

## **9) NEXT STEPS IN THE TARGETED STAKEHOLDER CONSULTATION/ENGAGEMENT PROCESS**

Terry Hanley commented that this initial meeting was to provide stakeholders with a quick overview of the issues surrounding Lake Diefenbaker, from a technical perspective.

Terry Hanley noted that SaskPower has agreed to provide some more economic modeling that the Authority will post on the website when it becomes available.

Terry Hanley asked participants to let the Authority know if there were any additional stakeholder groups that the participants felt should be included in the response sessions of this process.

Terry Hanley introduced Jeremy Pittman and Dazaway Landrie-Parker, both consultants with Rescan Environmental Services Ltd, who will be leading the stakeholder response sessions.

Terry Hanley thanked everyone for their participation and feedback at the meeting and indicated that the attendance at the meeting showed how important the consultation/engagement process is to the stakeholders. The questions and comments/concerns from this meeting will be incorporated into a summary document and posted on the Saskatchewan Watershed Authority's website: <http://www.swa.ca/WaterManagement/LakeDiefenbaker.asp>.



## **APPENDIX A: AGENDA**

**Lake Diefenbaker Reservoir Operating Plan:  
Initial Targeted Stakeholder Consultation/Engagement Meeting  
1:00 – 3:30 PM, May 30, 2012  
Jim Kook Recreation Complex, Conquest Avenue East, Outlook, SK**

1. Welcome
2. Presentations
  1. Dr. Terry Hanley, Introduction and Process Overview
  2. Bill Duncan/John Fahlman, Interim Reservoir Operating Plan
  3. Dr. John Pomeroy, University of Saskatchewan, Review of Operations Study
  4. Lain Lovelace, SaskPower, Hydro Power Generation
  5. Duane Harding, Saskatchewan Irrigation Projects Association, Irrigation Use and Benefits from Lake Diefenbaker
  6. Chris Potter, Ministry of Parks, Culture and Sport, Provincial Parks and Tourism importance of Lake Diefenbaker
  7. Susan Lamb, Meewasin Valley Authority, Downstream Uses
  8. Heather Davies, State of Lake Diefenbaker
  9. Dr. Terry Hanley, Next Steps
3. Discussion of Process - all stakeholders

Meeting Adjourns

## APPENDIX B: LIST OF PARTICIPANTS

The following is a list of stakeholders signed in at the Initial Meeting:

Name	Stakeholder Organization	Email address
Gord Bell	Agriculture and Agri-Food Canada	gordon.bell@agr.gc.ca
Ben Boots	Buffalo Pound Water Treatment Plant	bboots@regina.ca
Christian Boyle	Diefenbaker Destination Developments Inc.	ldtdap@gmail.com
Bryan Cafferata	Elbow and District Wildlife Federation	cafferata@sasktel.net
Gary Carriere	Northern Village of Cumberland House	northernvillageofhouse@sasktel.net
Duane Clarkson	Outlook and District Wildlife Federation	
Velma Corbett	Organized Hamlet of Hitchcock Bay	dvcorbett@sasktel.net
Heather Davies	Saskatchewan Watershed Authority	heather.davies@swa.ca
John-Mark Davies	Saskatchewan Watershed Authority	johm-mark.davies@swa.ca
Calvin Day	Rural Municipality of Lacadena No. 228	dayranching@xplornet.ca
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Jason Drury	Ministry of Agriculture	jason.drury@gov.sk.ca
Bill Duncan	Saskatchewan Watershed Authority	bill.duncan@swa.ca
Gary Dunn	Elbow and District Wildlife Federation and Village of Elbow	zebdunn@yahoo.ca
Raymond Dussion	Cumberland House Cree Nation	
Gary Ewen	Rural Municipality of Maple Bush No. 224	rm224@explornet.com
John Froese	Saskatchewan Regional Parks Association	jkfroese@explornet.com
Brad Gaetz	Resort Village of Beaver Flat	lens.plg@sasktel.ent
Duane Haave	Wascana and Upper Qu'Appelle Watersheds Association Taking Responsibility	wuqwatr@sasktel.net
Dr. Terry Hanley	Saskatchewan Watershed Authority	terry.hanley@swa.ca
Duane Harding	South Saskatchewan River Irrigation District	duane.ssrid@sasktel.net
Vincent Harper	Fisheries and Oceans Canada, Saskatchewan District	Vincent.Harper@dfo-mpo.gc.ca
Milt Harriman	Organized Hamlet of Hitchcock Bay	milharriman@gmail.com
Ray Hawrish	Ministry of Highways and Infrastructure	ray.hawrish@gov.sk.ca
Peter Heal	Ministry of Highways and Infrastructure	peter.heal@gov.sk.ca
Karen Heiber	Saskatchewan Watershed Authority	karen.heiber@swa.ca
Mel Henry	RM of Corman Park	
Murray Hidlebaugh	Saskatchewan Environmental Society	allysonb@environmentalsociety.ca
Dale Hjertaas	Saskatchewan Watershed Authority	dale.hjertaas@swa.ca
Jeff Hovdebo	Fisheries and Oceans Canada, Saskatchewan District	Jeff.Hovdebo@dfo-mpo.gc.ca
Bruce Howard	Fisheries and Oceans Canada, Saskatchewan District	Bruce.Howard@dfo-mpo.gc.ca
Dr. Gordon E. Johnson	Resort Village of Coteau Beach	gordon.johnson@usask.ca
Rick Jukes	Harbor Golf Club/Lakeside RV Trailer Park Ltd.	rick@harborgolfclub.com
Len Kowalko	Ministry of Municipal Affairs	Len.Kowalko@gov.sk.ca

Name	Stakeholder Organization	Email address
Romauld Lagace	Lake Diefenbaker Yacht Club	a.r.lagace@shaw.ca
Susan Lamb	Meewasin Valley Authority	lambs@meewasin.com
Dazawray Landrie-Parker	Rescan Environmental Services Ltd.	dparker@rescan.com
William Lemisko	WorldAway Farm	wlemisko@sasktel.net
Karl-Erich Lindenschmidt	Global Institute for Water Security	karl-erich.lindenschmidt@usask.ca
John Linsley	Ministry of Agriculture	john.linsley@gov.sk.ca
Lain Lovelace	SaskPower	llovelace@northpointenergy.com
Charles L. Marcoux	Aboriginal Affairs and Northern Development	Charles.Marcoux@aandc-aadnc.gc.ca
Harold Martens	R.M. of Excelsior No. 166 and South Saskatchewan River Watershed Stewards Inc.	mbranchltd@shaw.ca
Adam Maticchuk	Saskatchewan Wildlife Federation	amaticchuk.swf@sasktel.net
Ian McGilp	Tourism Saskatchewan	ian.mcgilp@sasktourism.com
Jennifer Merkowsky	Ministry of Environment	Jennifer.Merkowsky@gov.sk.ca
Trent Michelman	Town of Outlook	michelman@town.outlook.sk.ca
Michael Mitchell	Enterprise Saskatchewan	michael.mitchell@enterprisesask.ca
John Moynham	Ministry of Highways and Infrastructure	john.moynham@gov.sk.ca
Kelly Neuert	Ministry of Environment	kelly.neuert@gov.sk.ca
Ingrid Newton	SaskWater	ingrid.newton@saskwater.com
William Nike	Village of Elbow	elbow@sasktel.net
Robert Oldhaver	Saskatchewan Irrigation Projects Association and South Saskatchewan River Watershed Stewards Inc.	sbathgate.sipa@sasktel.net
David Oliver	Saskatchewan Watershed Authority	david.oliver@swa.ca
Joel Perry	Ministry of Parks, Culture and Sport	Joel.Perry@gov.sk.ca
Travis Philipation	Five Hills Health Region	Travis.Philipation@fhhr.ca
Jeremy Pittman	Rescan Environmental Services Ltd.	jpittman@rescan.com
Dr. John Pomeroy	Centre for Hydrology (University of Saskatchewan)	john.pomeroy@usask.ca
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Lynne Saas	Resort Village of Mistusinne	saas@sasktel.net
Brian Scribe	Federation of Saskatchewan Indian Nations	brian.scribe@fsin.com
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Bill Sheppard	RM of Canaan	
Norm Simaluk	Ministry of First Nations, Métis and Northern Affairs	norm.simaluk@goc.sk.ca
Michael Stensrud	Lake Diefenbaker Yacht Club	miners.co@shaw.ca
Gary Stone	Rural Municipality of Loreburn No. 254	rm254@sasktel.net
Inga Thorsteinson	Transport Canada	Inga.Thorsteinson@tc.gc.ca

Name	Stakeholder Organization	Email address
Robin Tod	Saskatchewan Watershed Authority	robin.tod@swa.ca
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Saeed Ul Amin	South Saskatchewan River Watershed Stewards	saeedulamin@southsaskriverstewards. ca
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Mike Velonas	Meewasin Valley Authority	mvelonas@meewasin.com
Brenda Wallace	City of Saskatoon	brenda.wallace@saskatoon.ca
Jim Webster	Heartland Health Region	Jim.Webster@hrha.sk.ca
Kevin Wingert	Saskatchewan Watershed Authority	kevin.wingert@swa.ca