

# A NETWORK MANAGER'S PERSPECTIVE ON DRI

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PFRA WORKSHOP  
JANUARY 10, 2007



# What drives drought interest?

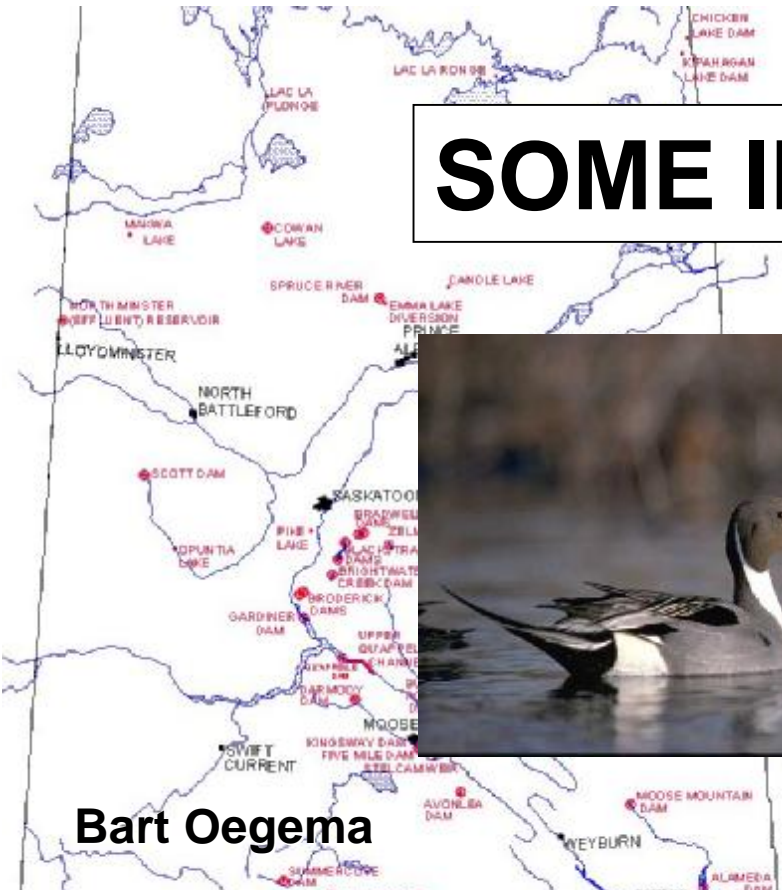
Answer: Public Opinion

A collage of newspaper headlines and images related to drought in Canada. The headlines include:

- Drought, from coast to coast** (with a photo of two people standing in a field)
- St. Lawrence Seaway volumes dip 2001** (with a map of the St. Lawrence Seaway area)
- Drought losses mount in Sask., Alta.** (with a photo of a field)
- Drought fallout widespread** (with a photo of a field)
- Drought puts pastures in peril** (with a photo of horses in a field)
- Hot, dry summer hits areas across Canada**
- Farm earnings shrivel** (with a table showing net farm income for various provinces)
- Drought costs economy millions** (with a photo of a field)

The table for 'Net farm income' shows a decline in Saskatchewan and Alberta. The text also mentions that grain industry is expected to generate \$770 million less than last year.

# SOME IMPACTS

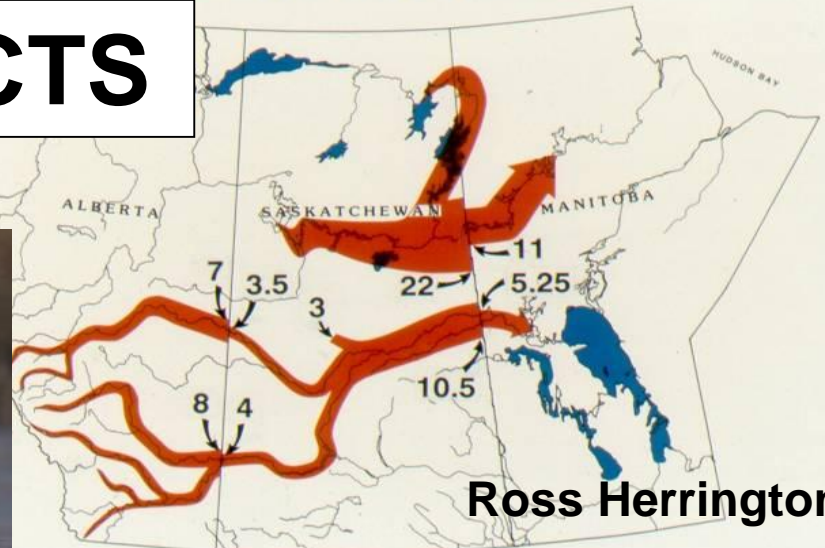


Bart Oegema

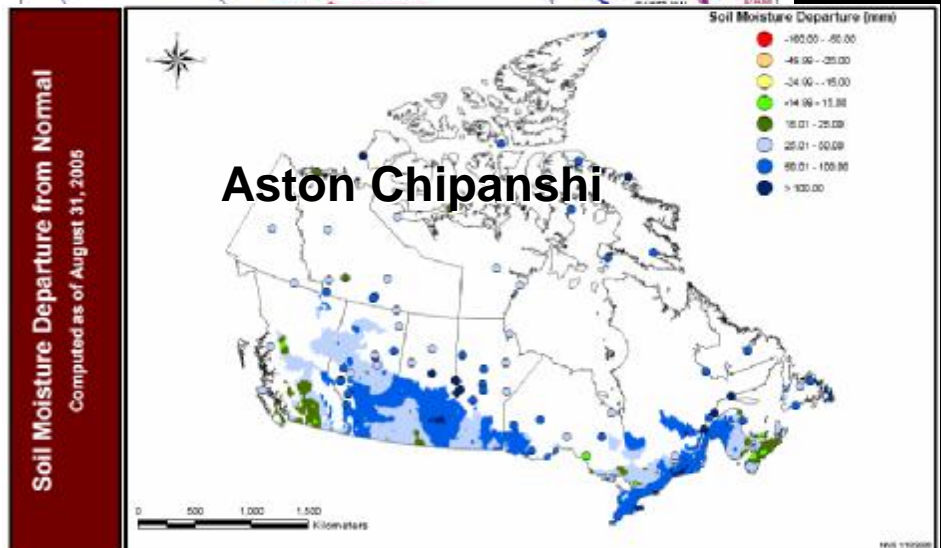


Bob Clark

## APPORTIONMENT (MILLIONS OF CUBIC DECAMETRES)

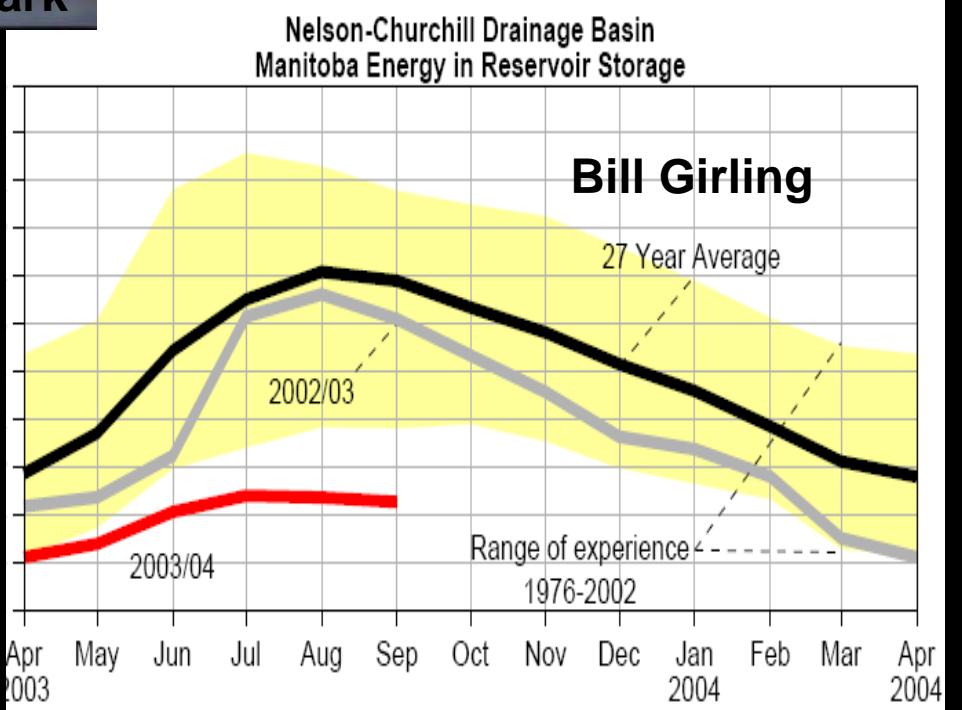


Ross Herrington



Aston Chipanshi

Soil Moisture Departure from Normal  
Computed as of August 31, 2005

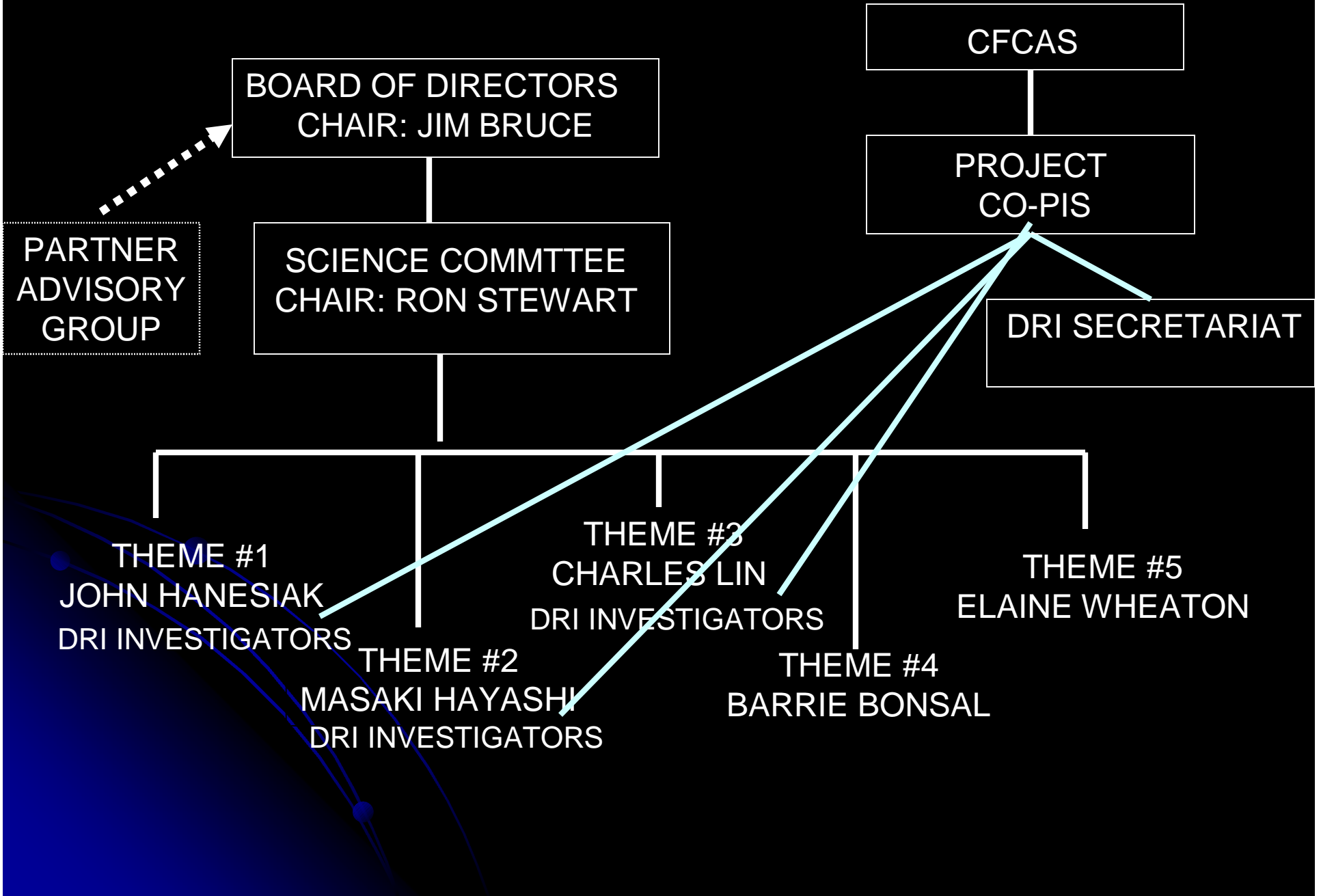


Bill Girling

# THE DRI TEAM

- | **Co-leads:**  
**John Pomeroy (Sask) and Ron Stewart (McGill)**
- | **Investigators (14):**  
**Bonsal (Sask/NHRC), Bullock (Man), Gyakum (McGill), Hanesiak (Man), Hayashi (Calg), Leighton (McGill), Lin (McGill), Pietroniro (Sask/NHRC), Snelgrove (Man), Strong (Alta), van der Kamp (Sask/NHRC), Wheaton (Sask/SRC), Woodbury (Man)**
- | **Collaborators (12):**  
**Boer (MSC), Caya (Ouranos), Derome (McGill), Donaldson (MSC), Granger (NHRC), Martz (Sask), Raddatz (MSC), Ritchie (MSC), Shabbar (MSC), Sills (MSC), Szeto (MSC)**
- | **Information Management: Matt Regier, Patrice Constanza**
- | **Network Manager: Rick Lawford**
- | **Nationally and internationally recognized co-leaders**
- | **Strong scientists**
- | **Research expertise covers critical areas for DRI**
- | **Solid track record of working together as well as being in and leading networks!**

# MANAGEMENT STRUCTURE FOR DRI



# DRI ADDRESSES CFCAS GOALS FOR TRAINING

	<b>Current (Jan 2007)</b>	<b>Planned (06- 07 budget)</b>
<b>PDFs</b>		<b>7</b>
<b>PhD</b>		<b>2</b>
<b>Masters</b>		<b>8</b>
<b>Undergrad</b>		<b>3</b>

# Why DRI now?

- I The 1999-2004 drought was one of the worst natural disasters that Canada has ever suffered.
- I Recent convergence of modelling and observational technologies
- I Crucial to be better prepared for the next drought period

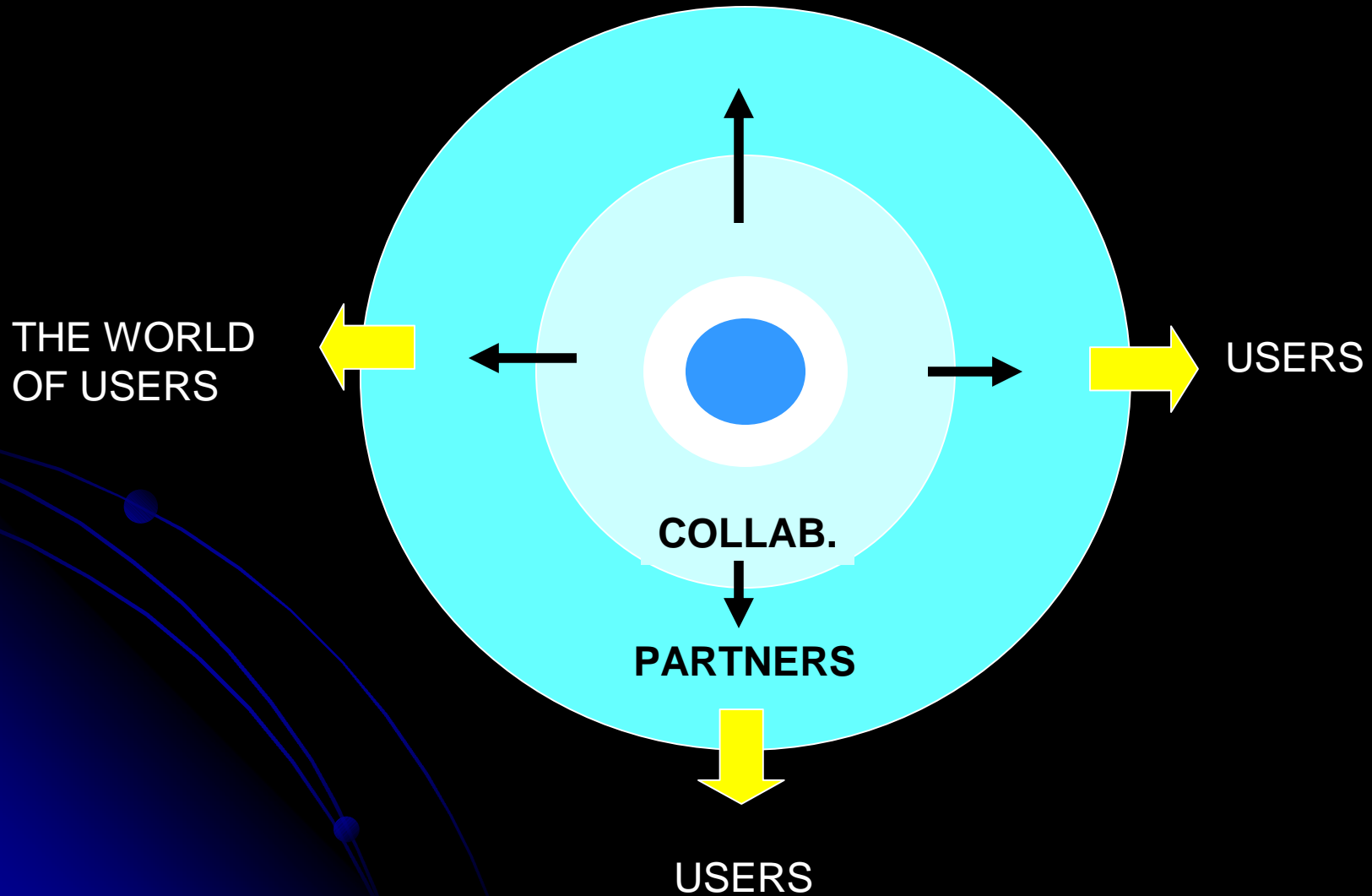


Salt storm in reservoir, Alberta, April 2004



Drifting soil in fields, Saskatchewan, April 2002

DRI IS WORKING ON BUILDING ITS LINKS WITH COLLABORATORS SO THEY WILL ADDRESS PROBLEMS AS A SEAMLESS TEAM. DRI WANTS TO STRENGTHEN ITS LINKS WITH PARTNERS WHOM IT SEES AS THE PRINCIPAL INTERFACE WITH THE WORLD OF USERS.





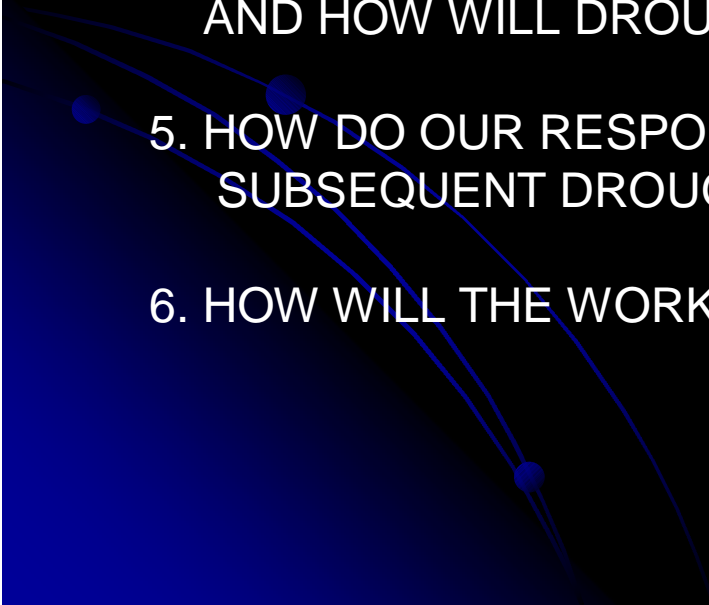
# **THE NETWORK MANAGER INTERACTS WITH STAKEHOLDERS**

**Good dialogue has been established  
with:**

- | PFRA, Agriculture and Agri-Food  
Canada**
- | Manitoba Hydro**
- | Manitoba Water Stewardship**
- | Saskatchewan Research Council**

**More stakeholders will be added to this list in  
the coming months**

## IMPORTANT QUESTIONS FROM THE PARTNERS:

1. HOW DO WE KNOW THE 1999-2004 DROUGHT WAS REPRESENTATIVE OF OTHER DROUGHTS THIS CENTURY?
  2. HOW FREQUENT ARE HIGH IMPACT DROUGHTS WHEN YOU USE OUR (E.G. MANITOBA HYDRO) CRITERIA FOR A DROUGHT?
  3. HOW CAN DRI CHARACTERIZE THE GRADIENT OF DROUGHT PROCESSES THAT OCCUR ACROSS THE CANADIAN PRAIRIES?
  4. HOW WILL EVAPOTRANSPIRATION CHANGE IN A WARMER CLIMATE AND HOW WILL DROUGHT PROCESSES BE AFFECTED?
  5. HOW DO OUR RESPONSES TO DROUGHT AFFECT THE IMPACTS OF SUBSEQUENT DROUGHTS?
  6. HOW WILL THE WORK OF DRI LINK TO CLIMATE CHANGE INITIATIVES?
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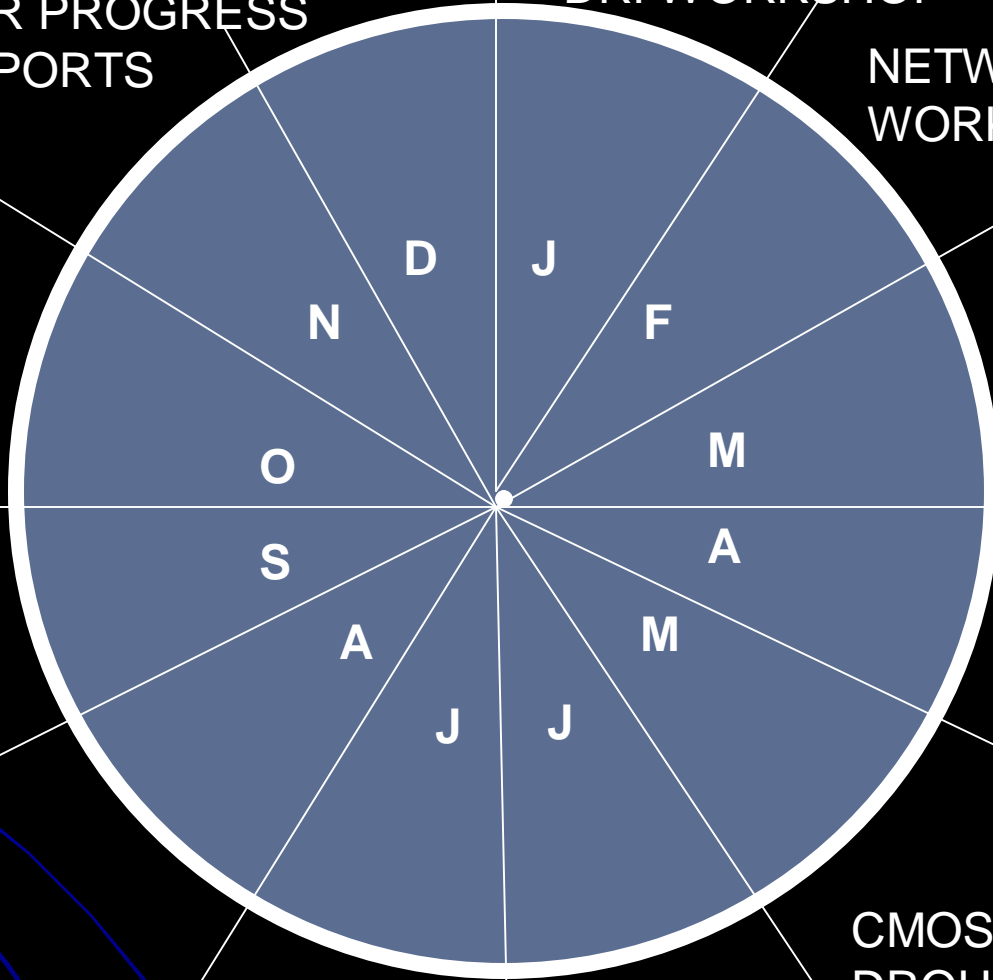
# 2007 DRI CALENDAR

ANNUAL PROGRESS  
REPORT DUE

PROVIDE INPUTS  
FOR PROGRESS  
REPORTS

DRI WORKSHOP

NETWORK MANAGERS  
WORKSHOP



-END OF FISCAL  
- YEAR

UNIVERSITIES  
REPORT ON  
EXPENDITURES

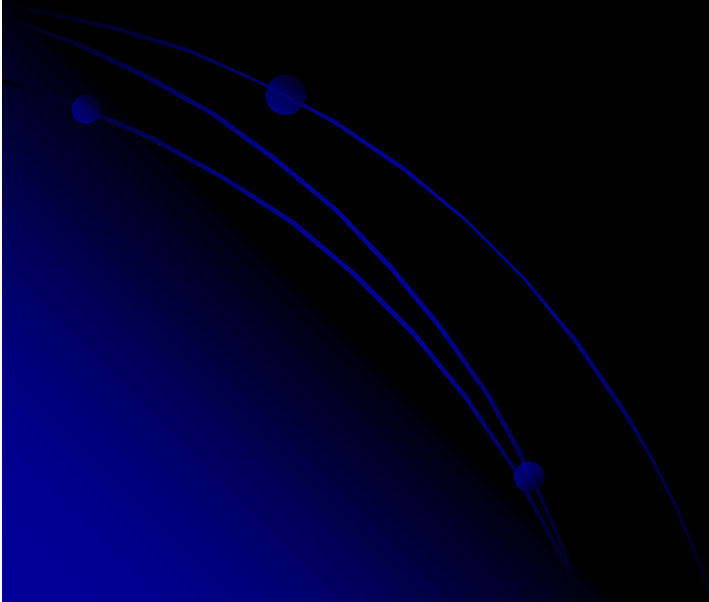
CMOS CONGRESS  
DROUGHT SESSION

RESEARCH  
PROGRESS

## SOME EXTERNAL QUESTIONS

SHOULD WE BE PLANNING FOR A FOLLOWON TO DRI AND  
WHAT SHOULD THE STRUCTURE OF THIS FOLLOW ON BE?

TO WHAT EXTENT SHOULD WE MOBILIZE THE EXTENSIVE  
DATA, INFORMATION AND MODELING CAPABILITIES IN THE USA?  
WHAT TERMS OF REFERENCE SHOULD CONSIDER  
COLLABORATIVE RESEARCH EFFORTS?



## SOME INTERNAL QUESTIONS

HOW CAN WE BRING PARTNERS INTO THE PROJECT IN A MORE INTEGRAL WAY?

CAN WE SHARPEN UP THE OBJECTIVES AND MILESTONES AND USE THEM MORE EXPLICITLY IN MAKING DECISIONS ABOUT FUNDING, ETC.?

HOW SHOULD WE ALLOCATE OUR RESOURCES OVER THE NEXT THREE YEARS TO ENSURE WE CONTRIBUTE TO EACH THEME IN A TIMELY WAY?

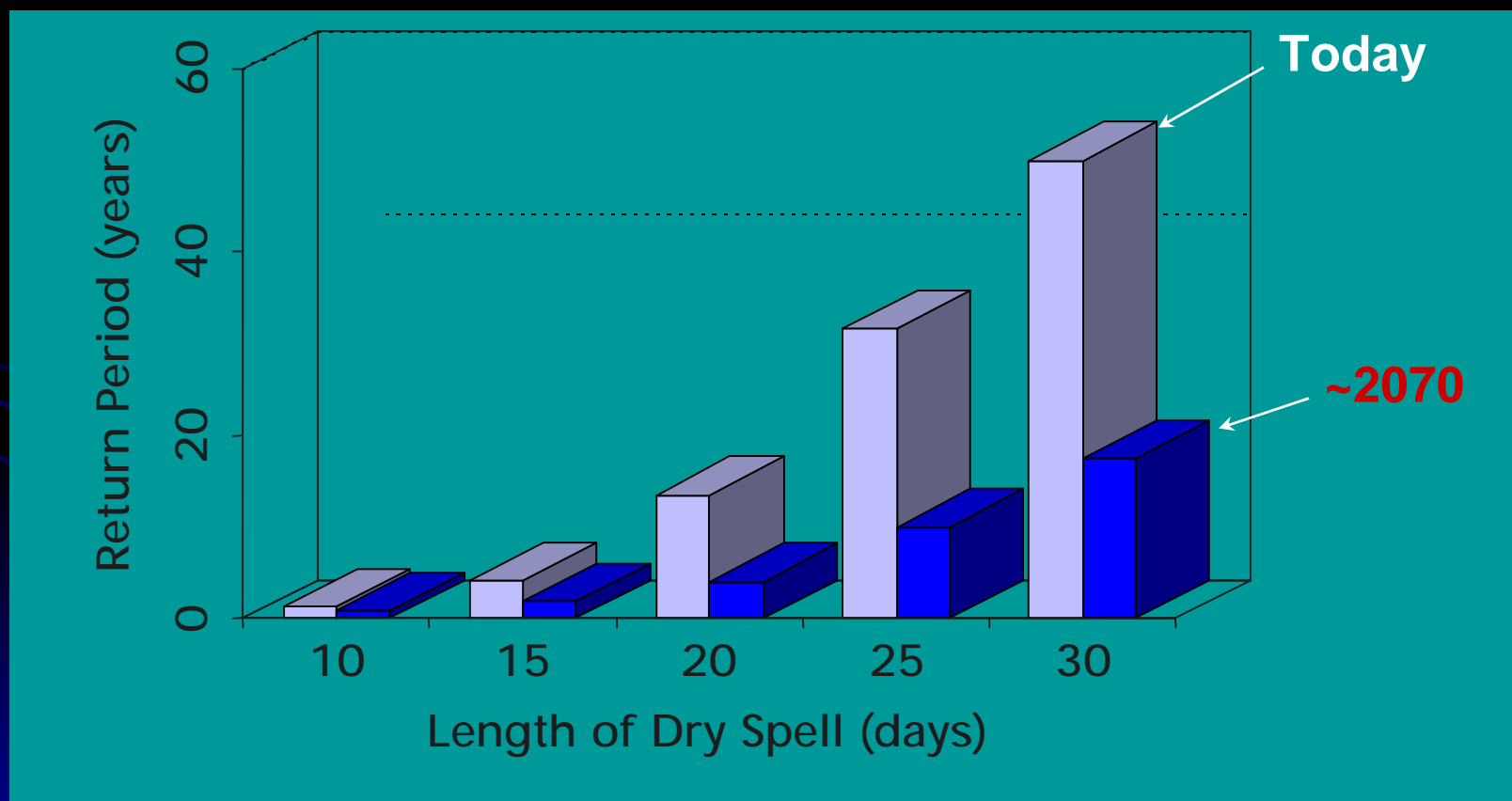
CAN WE RAISE THE VISIBILITY FROM DRI PROJECTS TO INCREASE THE IMPACT THAT DRI HAS ON POLICY?

HOW ARE WE GOING TO MEET OUR OBJECTIVES IN 2010 AT THE CURRENT RATE OF PROGRESS?

# DROUGHT IS AN ISSUE WITH GROWTH POTENTIAL

The frequency and severity of droughts are likely to increase in southern Canada

Central North America



Gregory et al., 1997

# DROUGHT STUDIES WITH POLICY IMPLICATIONS

PAUL BULLOCK: RELATING CLIMATE TO THE PRODUCTIVITY OF DIFFERENT CROPS.

MASAKI HAYASHI AND JOHN POMEROY: DOCUMENTING THE PROCESSES DRIVING THE RESPONSE OF SURFACE HYDROLOGY TO DROUGHT.

AL WOODBURY AND KEN SNELGROVE: ASSESSING THE CONSEQUENCES OF DROUGHT FOR GROUNDWATER RESERVES.

BARRIE BONSALE AND ELAINE WHEATON: DOCUMENTING THE PHYSICAL AND IMPACT CONTEXTS FOR THE 1999- 2004 DROUGHT.

HOW CAN WE BUILD ON THESE?

