

## 2015: Okanagan Water Supply

### Water Management Support Webinar






**15 March 2015**  
11:00am – 12:00pm



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### Brought to you by the Okanagan Basin Water Board & Partners



Webinar Host: **Nelson Jatel, M.A., P.Ag.**  
Water Stewardship Director



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### 2015 Okanagan Water Supply: May 15<sup>th</sup> Updates (Week 14)

#### Presentation team

Introduction [Nelson Jatel]		
<b>OKANAGAN WATERSHED</b>		
• Okanagan Basin Water Board [Anna Warwick Sears]		Context
<b>FLOW &amp; STORAGE</b>		
• BC River Forecast Centre [Dave Campbell]		Snow Pack
• Okanagan River & Upper reservoirs [Shaun Reimer]		Flow & storage
• International Osoyoos Lake Board of Control [Gwyn Graham]		Osoyoos Lake
<b>GROUNDWATER</b>		
• Prepared by BC MOE / FLNRO [presented by Don Dobson]		Groundwater
<b>PRECIPITATION / WEATHER</b>		
• Environment Canada [Doug Lundquist]		Weather forecast
<b>FIRE PREPAREDNESS</b>		
• FLNRO Fire Season readiness [Ray Crampton]		Fire season risk
Okanagan Basin Water Board [Nelson Jatel]		Concluding remarks and thank you



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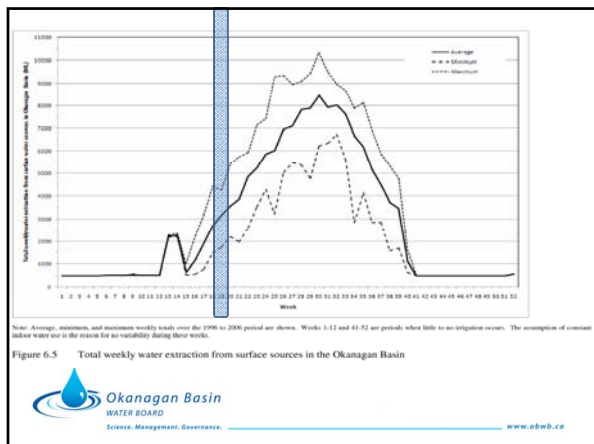
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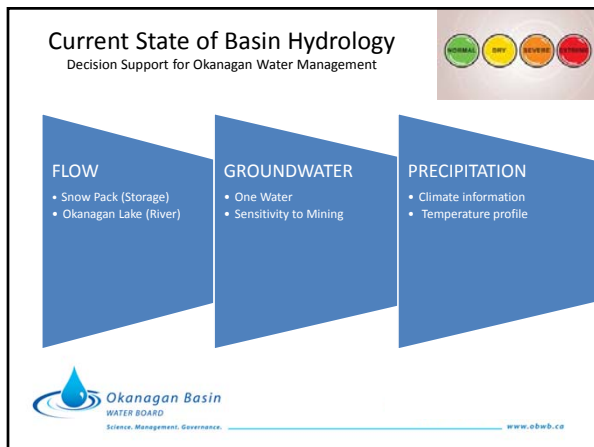
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### Better information = better decisions on Okanagan Water

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### OBWB – getting the word out since 1970

- Share resources, identify problems, suggest solutions, improve communication
- Water governance mandate
- Water management support
- Collaboration, community-to-community



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### One water, one community, many needs



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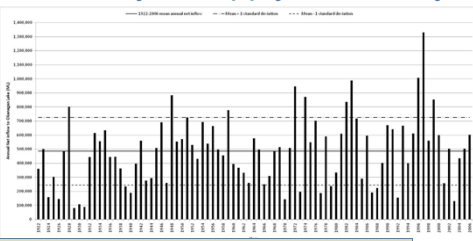
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### Uncertainty in supply between years



Okanagan Lake inflows 1922-2006



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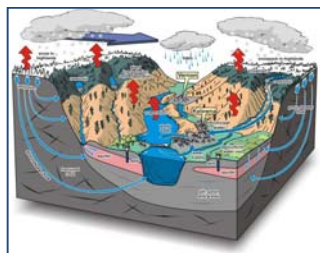
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### Regional approaches to practical water management issues



Variation between drainages  
Each water source needs its own water management strategies  
Because we are connected, we need coordinated strategies



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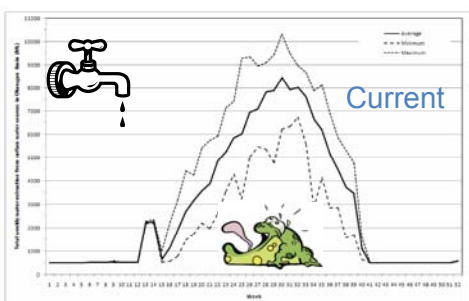
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Managing storage and flows to meet peak needs



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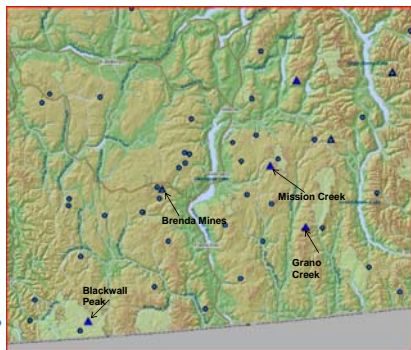
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### ASP and MSS Network



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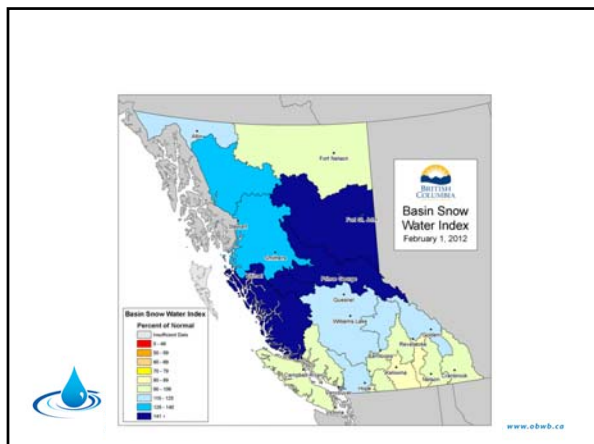
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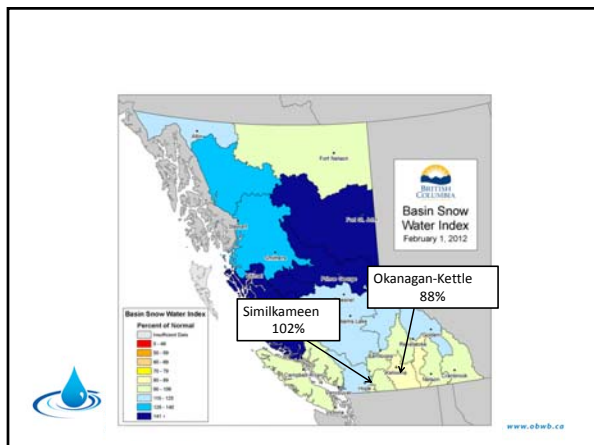
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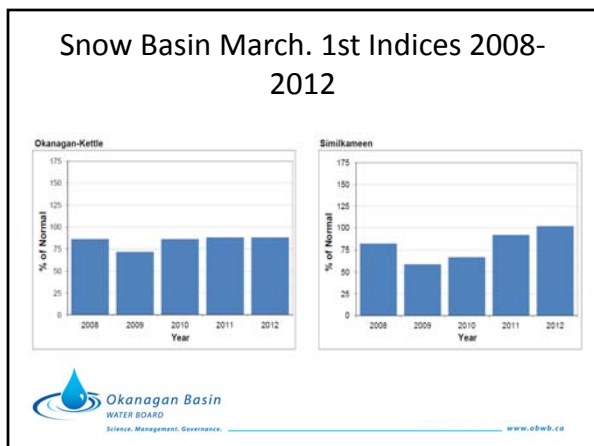
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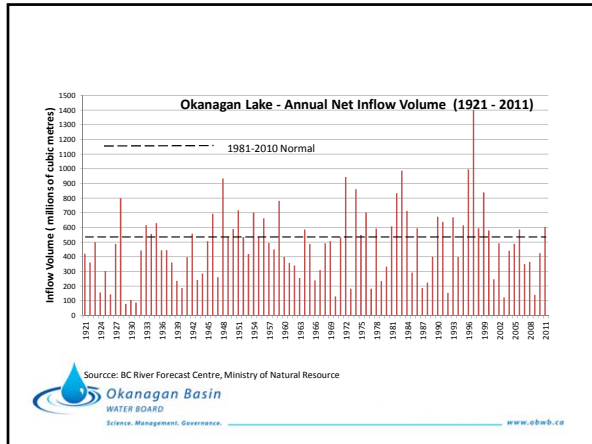
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### Seasonal Inflow Forecast – Okanagan Lake

Forecast Date	Forecast Inflow (Forecast Date to July) (kdam3)	% of 1971-2000 Normal	Standard Error (kdam3)
Feb 1, 2012	284.4	51.2%	119.6
Mar 1, 2012	367.24	68.5%	109.8

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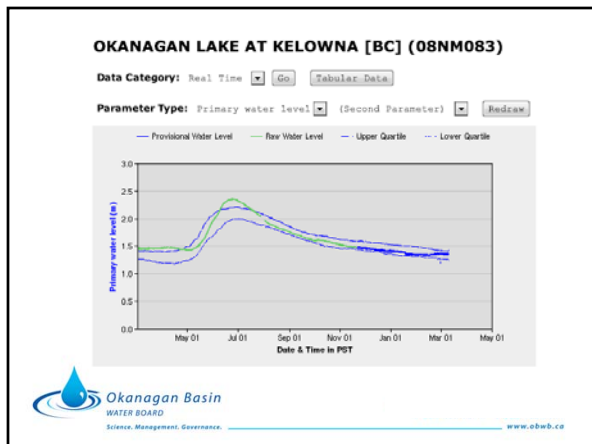
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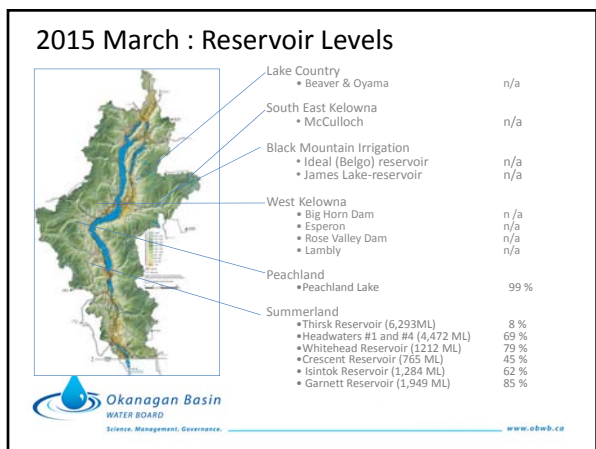
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### Sensitive Aquifers in the Okanagan

Priority Aquifer Identification in the Okanagan

- Provincial Observation Well Network Review BC (Hy-Geo Consulting, Hodge Hydrogeology Consulting, Azar & Associates, 2009)
- Phase 2 Okanagan Water Supply and Demand Project: Recommended establishment of new observation wells (Golder and Summit)

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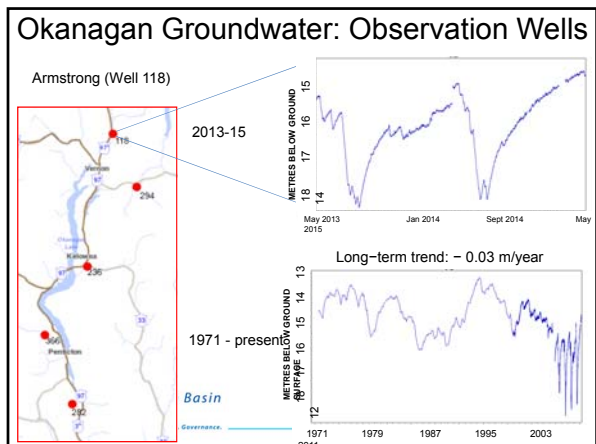
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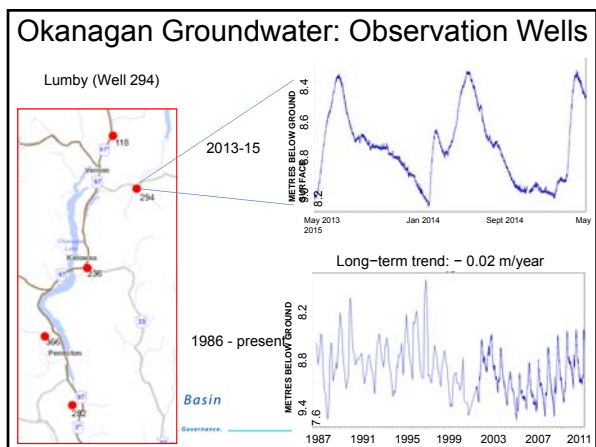
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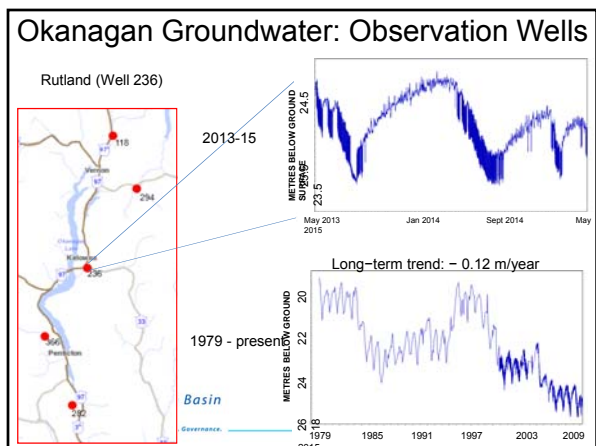
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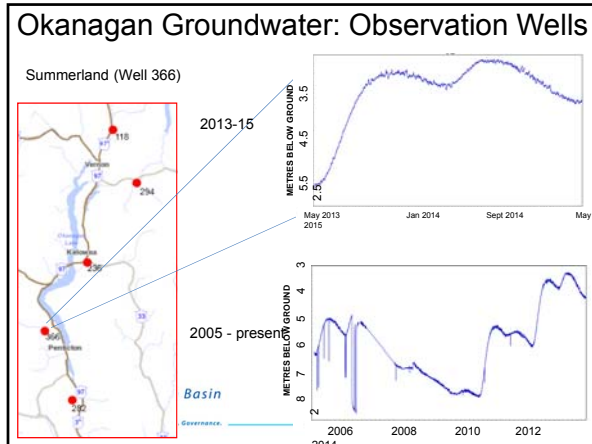
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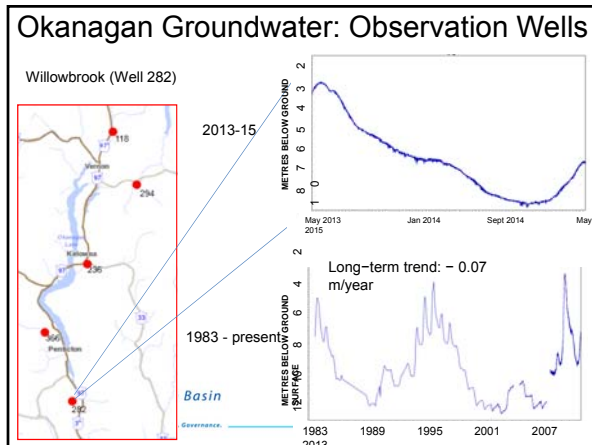
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### Further Info on the Observation Network and Groundwater Hydrographs

Observation Well Network Interactive Map

The Observation Well Network Interactive Map tool shows the general location of all active observation wells. Clicking on a well provides information on the well including hydrographs, data downloads, detailed well reports and observation well photos.

[http://www.env.gov.bc.ca/wsd/data\\_searches/obswell/index.html](http://www.env.gov.bc.ca/wsd/data_searches/obswell/index.html)

Environmental Reporting B.C. provides a summary of the long-term trends for all Observation Wells in B.C.

<http://www.env.gov.bc.ca/soe/indicators/water/wells/>

**B.C. Ministry of Forests, Lands and Natural Resource Operations**  
**Penticton Regional Office**

Skve Thomson, Regional Hydrogeologist : (250) 490-8276  
[Skve.Thomson@gov.bc.ca](mailto:Skve.Thomson@gov.bc.ca)

Nicole Pyett, Groundwater Protection Officer: (250) 490-2285

[www.ebwb.ca](http://www.ebwb.ca)

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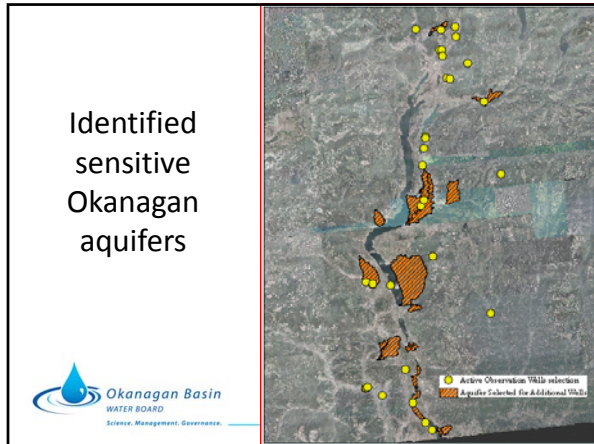
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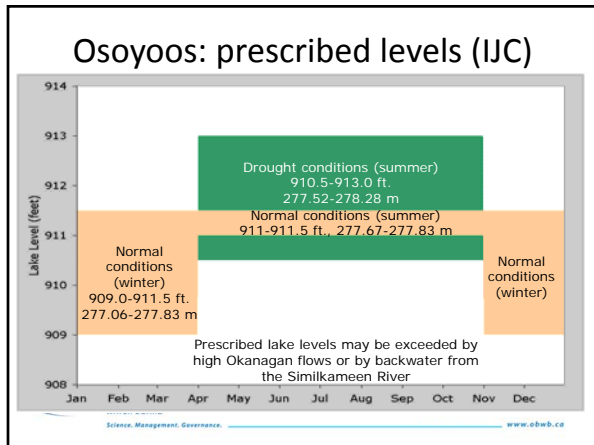
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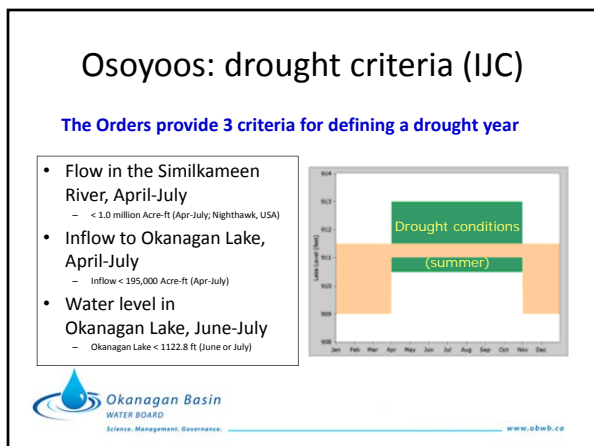
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## Osoyoos drought?

- Similkameen forecast
  - US flow forecast: 1,340,000 ac-ft
  - Drought criteria: below 1,000,000 ac-ft (Apr – Jul)
  - BC snowpack: 102% normal (Mar 1)
- Okanagan
  - BC snowpack: 88% normal (Mar 1)
  - Drought criteria: inflow below 195,000 ac-ft (Apr – Jul); lake level fails to reach 1122.8 ft (Jun – Jul)



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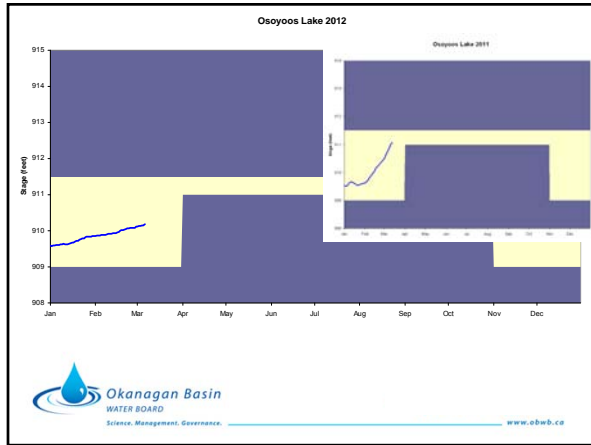
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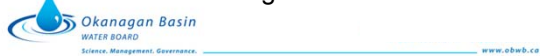
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## Weather – Environment Canada

- Seasonal forecasting is limited and often has little skill
- Average: means little – extreme weather averages out vs. steady as she goes weather – both look the same in the outlook
- There is a “best practice” when it comes to seasonal forecasting



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## Best Practices

1. Knowing where we've been and are – persistence is a driver
2. Short-medium range weather forecasts have skill
3. For the long term, climatology works best most of the time – but modified by weather teleconnections




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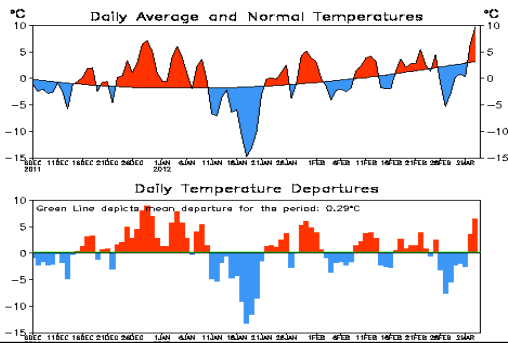
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## Last 90 Days – Temperature

PENTICTON, CANADA




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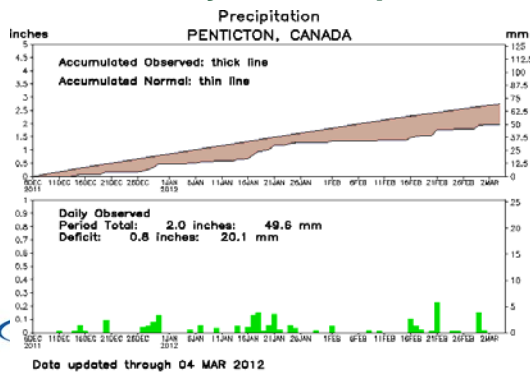
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## Last 90 Days – Precipitation

PENTICTON, CANADA




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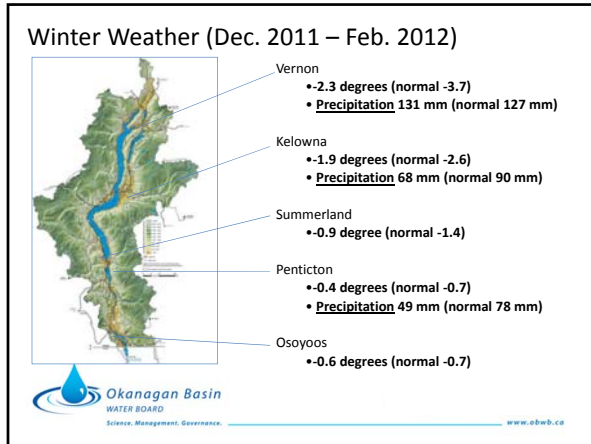
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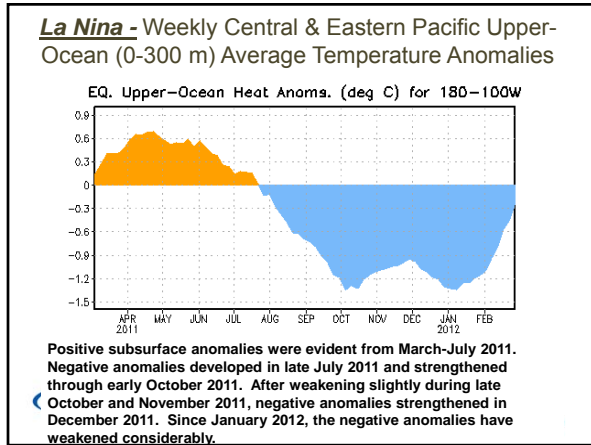
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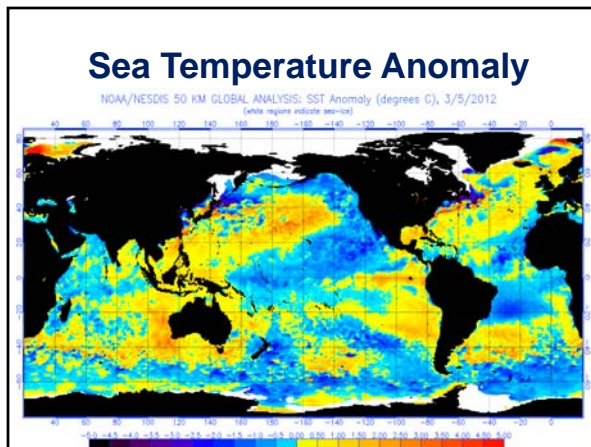
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### Week 1

**Forecast**

- Radar & Satellite
- Maine Info
- Air Quality
- Aviation Weather
- Analysis & Modeling
- Text Database
- Historical Weather
- Educational Resources
- About Us

**FAQ**

- Links
- Site Map
- Proactive Database

**Penticton**

**Current Conditions**

Observed at: **Penticton Airport** [More info](#)  
 Date: **6:00 AM PST Friday 9 March 2012**

Condition: **Mainly Clear** Temperature: **3.7°C**  
 Pressure: **102.1 kPa** Dewpoint: **-3.5°C**  
 Tendency: **falling** Humidity: **59 %**  
 Visibility: **24 km** Wind: **SSE 22 km/h**

**Forecast** [More info](#)

Today	Tue	Wed	Thu	Fri	Sat	Sun
1°C	3°C	2°C	7°C	8°C	8°C	8°C
4°C	4°C	3°C	0°C	2°C	2°C	4°C
40%	40%	40%	40%	40%	40%	30%

Issued: 4:55:00 AM PST Friday 9 March 2012

**Today** Increasing cloudiness early this morning. Wind south 30 km/h gusting to 50. High 10.  
**Tonight** Cloudy 40 percent chance of showers late this evening and overnight. Snow level 1700 metres lowering to 1400 metres after midnight. Wind south 30 km/h gusting to 50 becoming light this evening. Low plus 4.  
**Saturday** Cloudy 40 percent chance of showers late in the afternoon and in the evening. Snow level 1300 metres. Wind becoming south 30 km/h gusting to 50 in the morning then light in the evening. High 9.  
**Sunday** Showers. Low plus 2, high 7.  
**Monday** Cloudy with 40 percent chance of flurries or rain showers. Low zero. High 7.  
**Tuesday** Cloudy with 40 percent chance of showers. Low plus 2, high 6.  
**Wednesday** Cloudy. Low plus 2, high 8.  
**Thursday** Cloudy with 30 percent chance of showers. Low plus 4, high 9.

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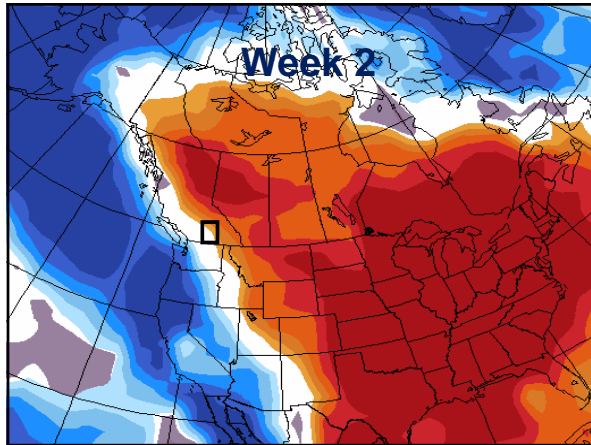
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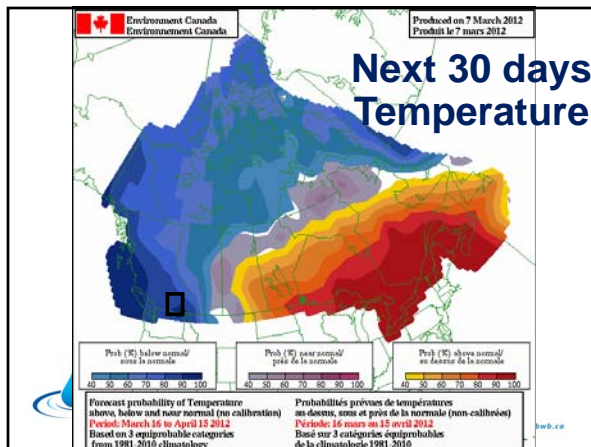
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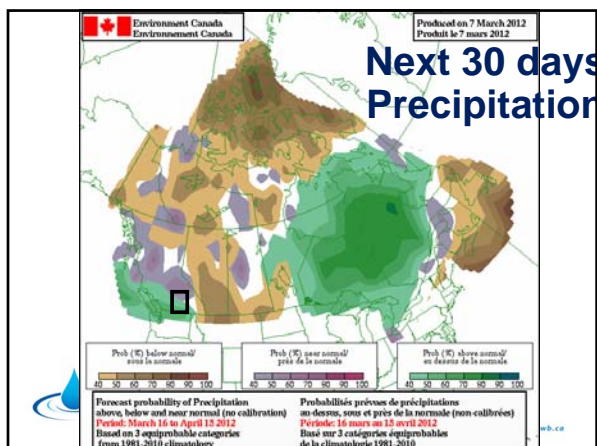
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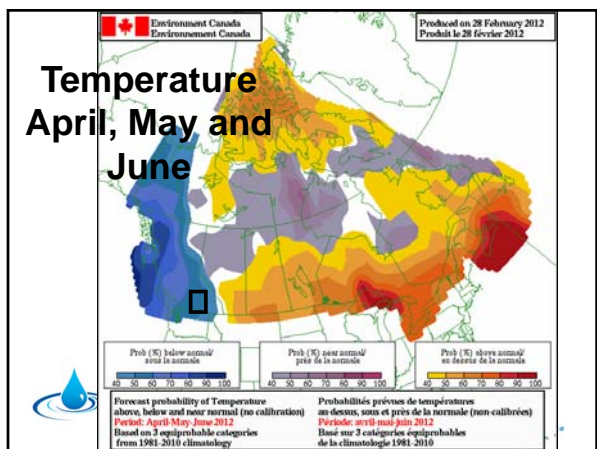
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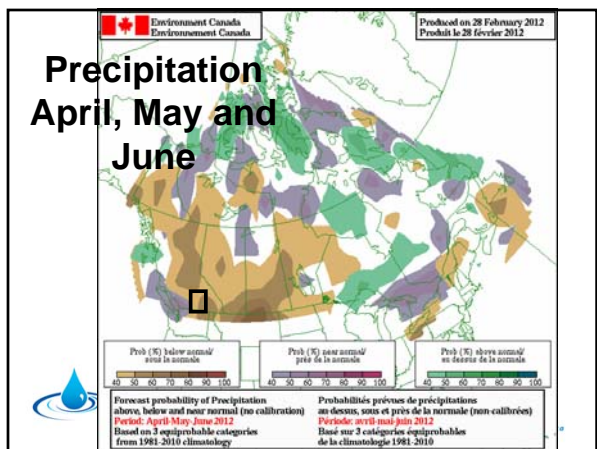
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### Key Points:

- Winter was near to warmer than average
- Winter was near to drier than average
- La Nina weakening ...
- Greatest likelihood for spring
  - Average temperature
  - Average rainfall



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### PLACE HOLDER

- STATUS OF FOREST FIRE RISKS 2015
- 2-5 slides



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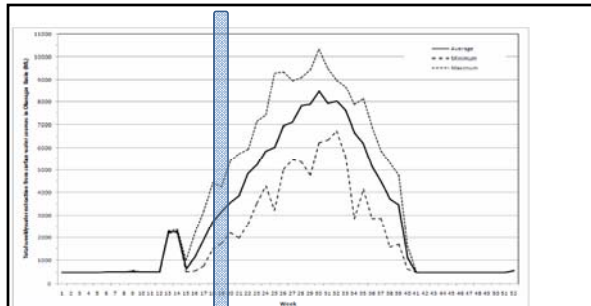
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Note: Average, minimum, and maximum weekly totals over the 1996 to 2006 period are shown. Weeks 1-2 and 51-52 are periods when little to no irrigation occurs. The assumption of constant inflow water use is the reason for no variability during these weeks.

Figure 6.5 Total weekly water extraction from surface sources in the Okanagan Basin



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