

# PRESENTATION SUMMARY

- Introduction

- Overview (*Mike Ryan*)
  - Geography

- Living with the Red (*M. Clamen*)

- Conclusions and Recommendations

- Accomplishment's

- Improvements in Flood Forecasting (*D. Luna*)

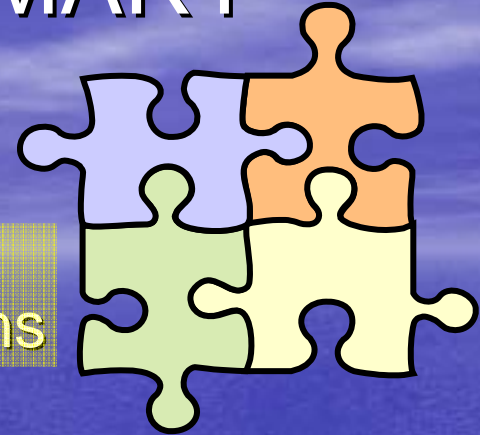
- Mitigation (Structural/non-structural/Policy/Legislation changes)

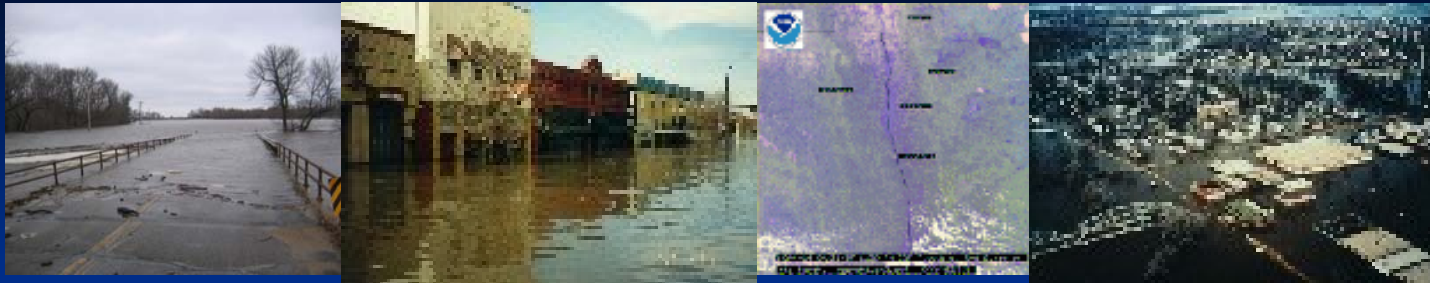
- North of the Border
  - Manitoba (*D. McNeil*)
- South of the Border
  - US Federal (*J. DeHarnais*)
  - US State (*D. Frink*)

- Summary

- What's next? (*M. Ryan*)

- Questions





# *Living with the Red –* Conclusions and Recommendations

Murray Clamen

Secretary, Canadian Section  
International Joint Commission



Introduction – Living with the Red

# Overview of Presentation

- Reference to the IJC
- Work of the Commission
- IJC's Main Conclusions
- IJC's Recommendations in Brief



# Reference to the IJC

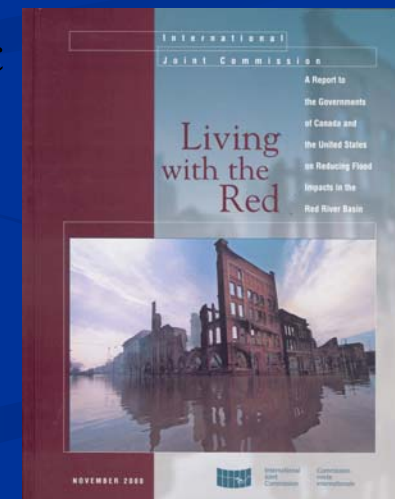
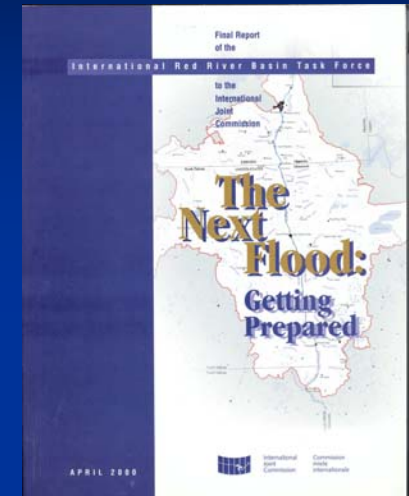
- June 12, 1997 – letters from both Governments to IJC
- “... pursuant to Article IX of the Boundary Waters Treaty of 1909, and in consideration of the devastation of the flood of 1997, to **examine and report on the causes and effects of damaging floods in the Red River basin, and to make recommendations on means to reduce, mitigate and prevent from harm from future flooding in the Red River Basin...** as soon as practicable before the end of 1998.”





# Work of the Commission

- Formed a Task Force
  - Provided IJC with 9 Conclusions and 51 Recommendations April 2000
- IJC
  - Conducted meetings and hearings in the basin
  - Met with leaders at all levels in the public and private sectors
  - Extended the work of the Task Force
  - Reported to Governments in Nov. 2000
    - 7 Conclusions
    - 28 Recommendations



# Flood Management Approach

- Recognize Emergency Management Cycle
  - Preparedness
  - Mitigation
  - Response/Recovery
- Conclusions and Recommendations
  - Conclusions >> Findings
  - Recommendations >> Policies and Programs
    - General to specific



# IJC's Main Conclusions

- Floods of the same magnitude as 1997, or even greater, can be expected to occur in the future.



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Grand Forks Region  
Peak Flood Stage





# IJC's Main Conclusions (continued)

- Public safety requires immediate attention on designing and implementing measures to further protect Winnipeg.



Manitoba Floodway Authority



Manitoba Floodway Authority





# IJC's Main Conclusions (continued)

- Communities will remain at undue risk until a comprehensive binational multi-faceted solution to the full range of flood problems is developed and implemented.



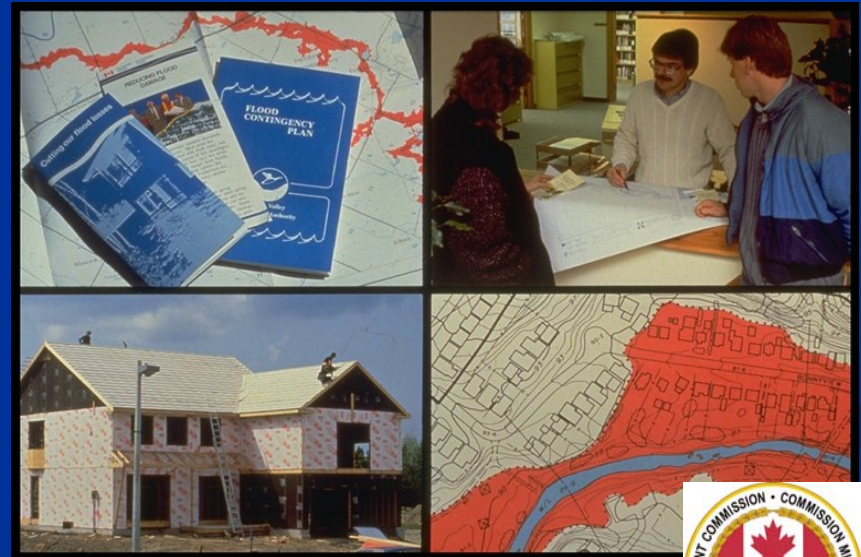
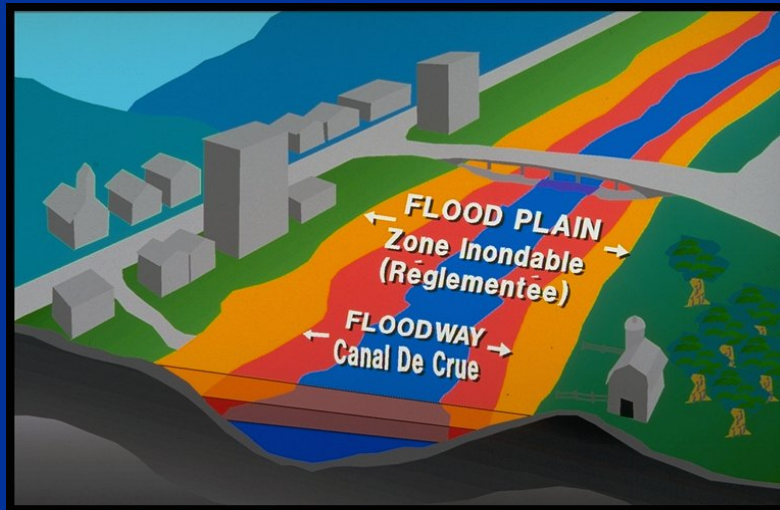
# IJC's Recommendations in Brief

- General – Policy -- Setting Direction
  - Rec. 11: Governments should develop a binational integrated approach to mitigation initiatives at all political levels, based on a comprehensive mitigation strategy...
  - Rec. 25: Governments immediately take steps, on a binational basis, to begin development of a comprehensive flood damage reduction plan for the Red River basin.



# Recommendations (continued)

- Rec. 12: The Canadian federal government should establish a national flood mitigation strategy... and support it with comprehensive mitigation programs.



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# Recommendations (continued)

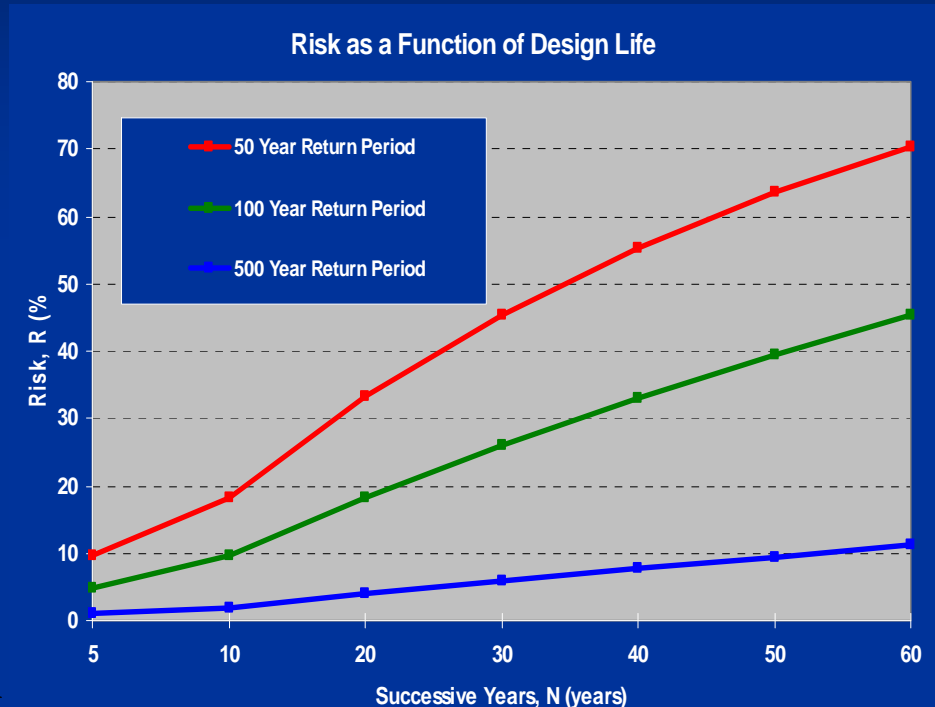
- Rec. 9: Governments at all levels should ensure that in the development of flood mitigation strategies for the basin that the needs for small communities, individual isolated farmsteads and agriculture are not overlooked.





# Recommendations (continued)

- Rec. 13: Governments should use, at a minimum, the 100-year flood as a basis for floodplain regulations and revise its estimate based on 1997 and new data as they become available.
- Rec. 24: Flood protection projects should focus not only on reduction of flood damage but also on protection and enhancement of the floodplain environment.



# Recommendations (continued)

- Rec. 22: Governments should take immediate steps to ensure that all banned materials such as toxaphene are removed from the Red River basin and that potentially hazardous materials are not stored in the 500-year floodplain other than for immediate use.



# Recommendations (continued)

- Specific Local Policy and Program Direction
  - Rec. 2: The design flood... for Winnipeg should be the highest that can be economically justified or, at a minimum, the flood of record, the 1826 flood.
  - Rec. 3: The city, province and the Canadian federal government should cooperatively develop and finance a long-term protection plan for the city ...and it should respect... the interests of those outside the city who might be affected by such a plan.



# Recommendations (continued)

- Rec. 4: ...expedite the study of flood risk potential and implement plans for flood protection measures for the Fargo-Moorhead area.
- Rec. 5: ...ensure that the planned flood protection works for the cities of Grand Forks and East Grand Forks are promptly and expeditiously completed.





# Recommendations (continued)

- Rec. 6: ...expedite approval and implementation of flood protection plans to reduce the risk of flooding at Wahpeton-Breckenridge.
- Rec. 7: The province of Manitoba and the city of Selkirk should expedite studies of flood-risk potential in the Selkirk area.



# Recommendations (continued)

- Specific Policy or Technical Program
  - Rec. 16: a digital elevation model of basin should be pursued
  - Rec. 10: work towards resolving the lower Pembina flooding issue
  - Rec.17: establish an appropriate network of hydrological and meteorological stations and data exchange
  - Rec. 18: establish a binational Red River Flood Forecasting Liaison Committee under the IRRB
  - Rec. 19: develop basin-wide models rather than separate but coordinated models for each country
  - A few others...



# Recommendations (final)

- Rec. 27: outlines a number of functions governments should assign to the IJC for implementation by its International Red River Board (IRRB) from monitoring progress on the implementation of recommendations to promoting the application of innovative technologies for supporting flood modelling and mapping.
  - Directive to the IRRB was revised in February 2001 to reflect Rec. 27.
  - Governments of the United States and Canada approved directive June 2001.



*Living with the Red...*  
*working together can make the*  
*difference!*



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