

Flood Protection Measures Update

December 17, 2007



2007 Urgent Mitigative Flood Works

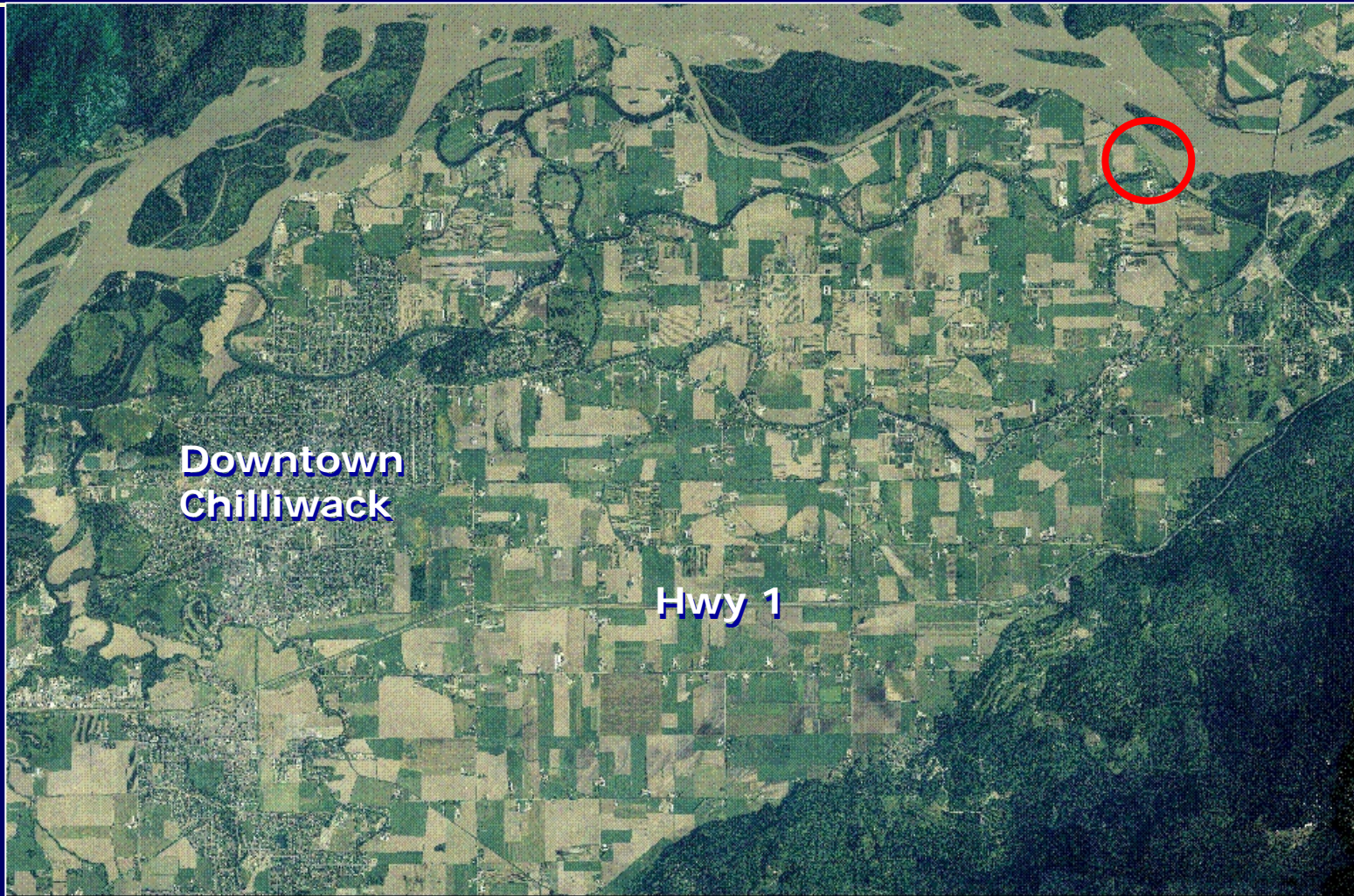
- 12 kilometres of dyke raised
 - East Dyke
 - Wing Dyke
- Erosion protection by CHIP Intake
- Total cost \$4.17M
- Provincial/Federal contribution \$3.75M



New Flood Hazard Mitigation Works Program

- Provincial funding program
- \$10 M per year for 10 years
- Two projects for 2007/08 in Chilliwack:
 - Erosion Protection
 - Relief Wells
- 100% provincial funding
- Complete by March 31, 2008

Project Location



Downtown
Chilliwack

Hwy 1

2007/08 Flood Hazard Mitigation Works

- Complete erosion protection by CHIP Intake
- Budget: \$360,000



2007/08 Flood Hazard Mitigation Works

- New relief wells for seepage control
- Budget: \$300,000



Emergency Preparedness

- Emergency Dyke Upgrades Plan
- Flood Response Plan
- Scenario Modelling / Dyke Breach Modelling

Scenario Modelling

- Modelling completed by Water Management Consultants
- 1894 and 1948 flows/water levels
- 3 dyke breach scenarios along dyke system:
 - Upstream End (Camp River Intake)
 - Middle (Carey Point)
 - Downstream End (near Vedder Canal)

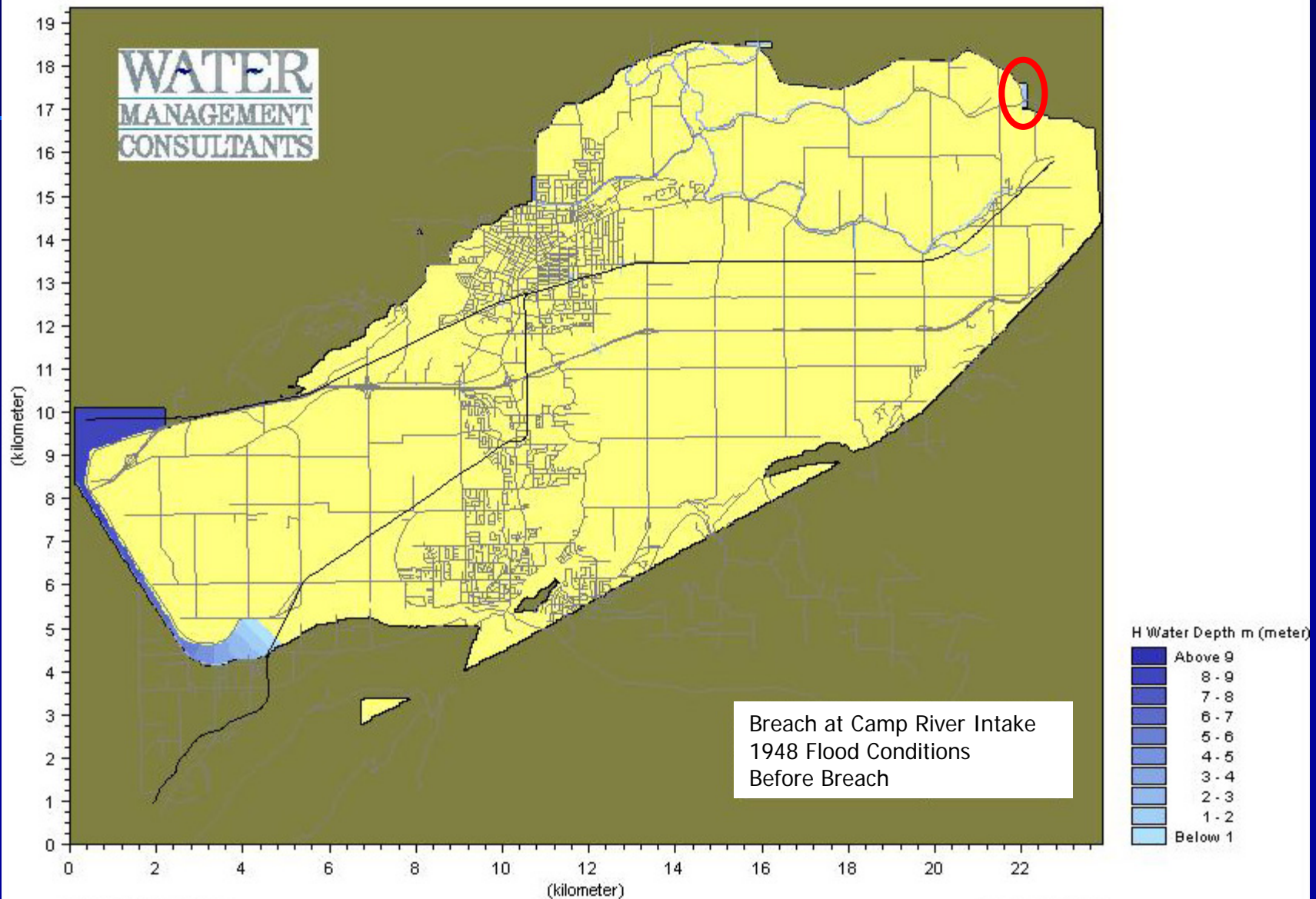
Scenario Modelling

- Assumes 120 metre long dyke breach coinciding with freshet peak water level
- Estimates flow paths, water levels and timing
 - Where will the water flow?
 - How deep will it be?
 - How long will it take?
- Valuable tool for emergency preparedness

1948 Flood Simulations

- Simulations last 5 days
- 120 m wide breach takes 10 hours
 - Breach occurs at peak of freshet
- Mission water level = 8.2 metres
- Area of flooding and depth of flooding are essentially the same for the 1948 and 1894 simulations

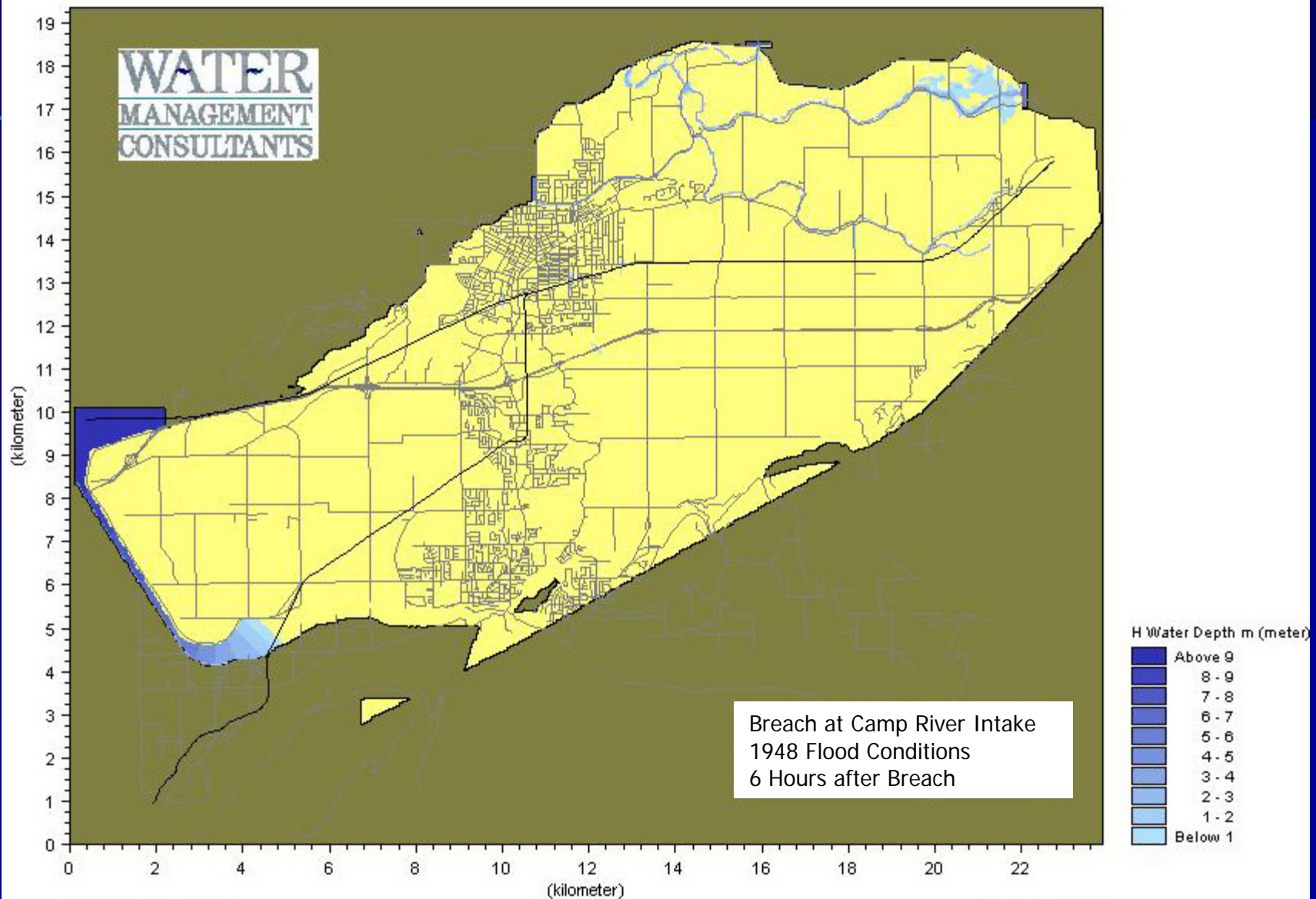
Upstream Dyke Breach



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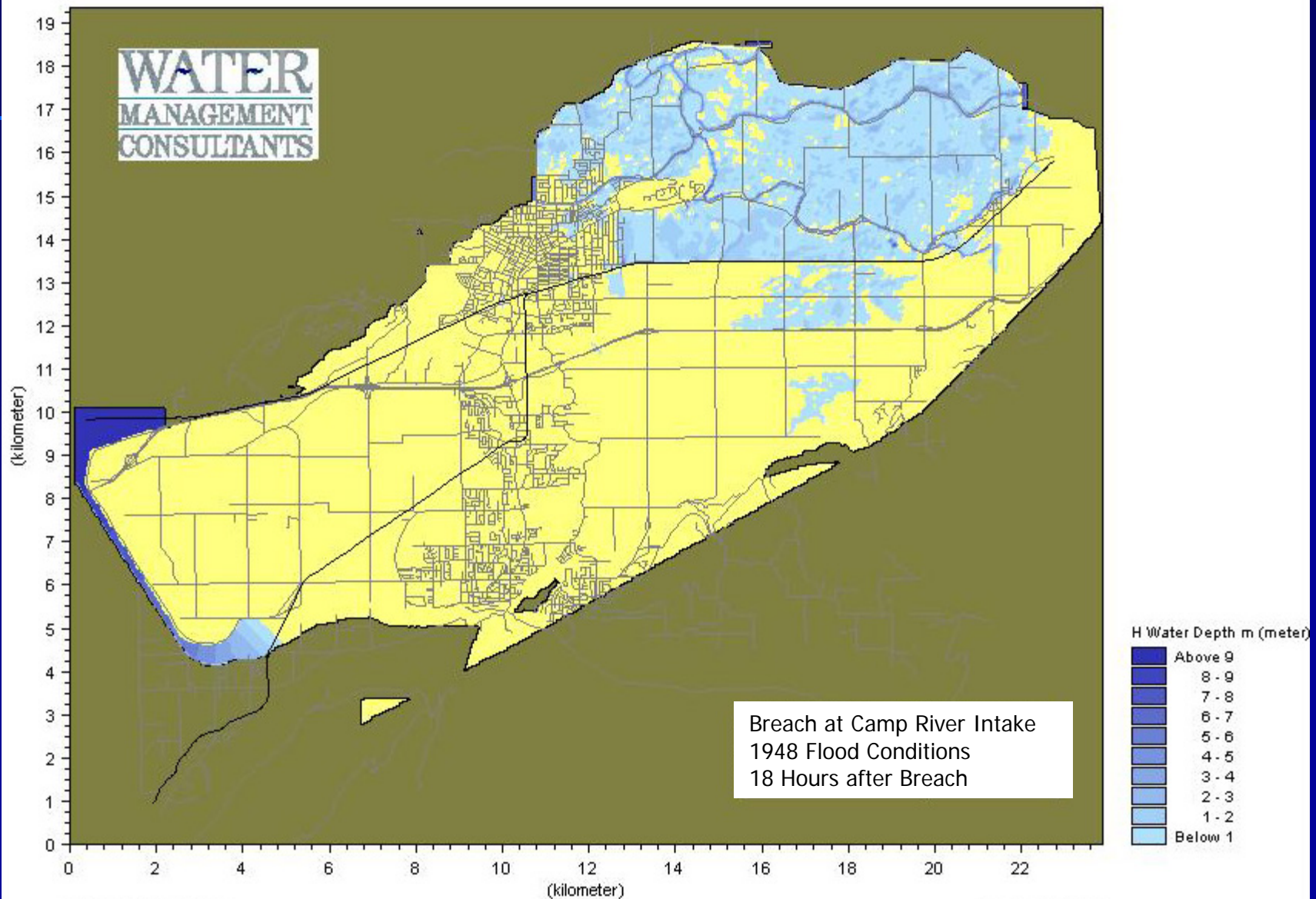
Upstream Dyke Breach



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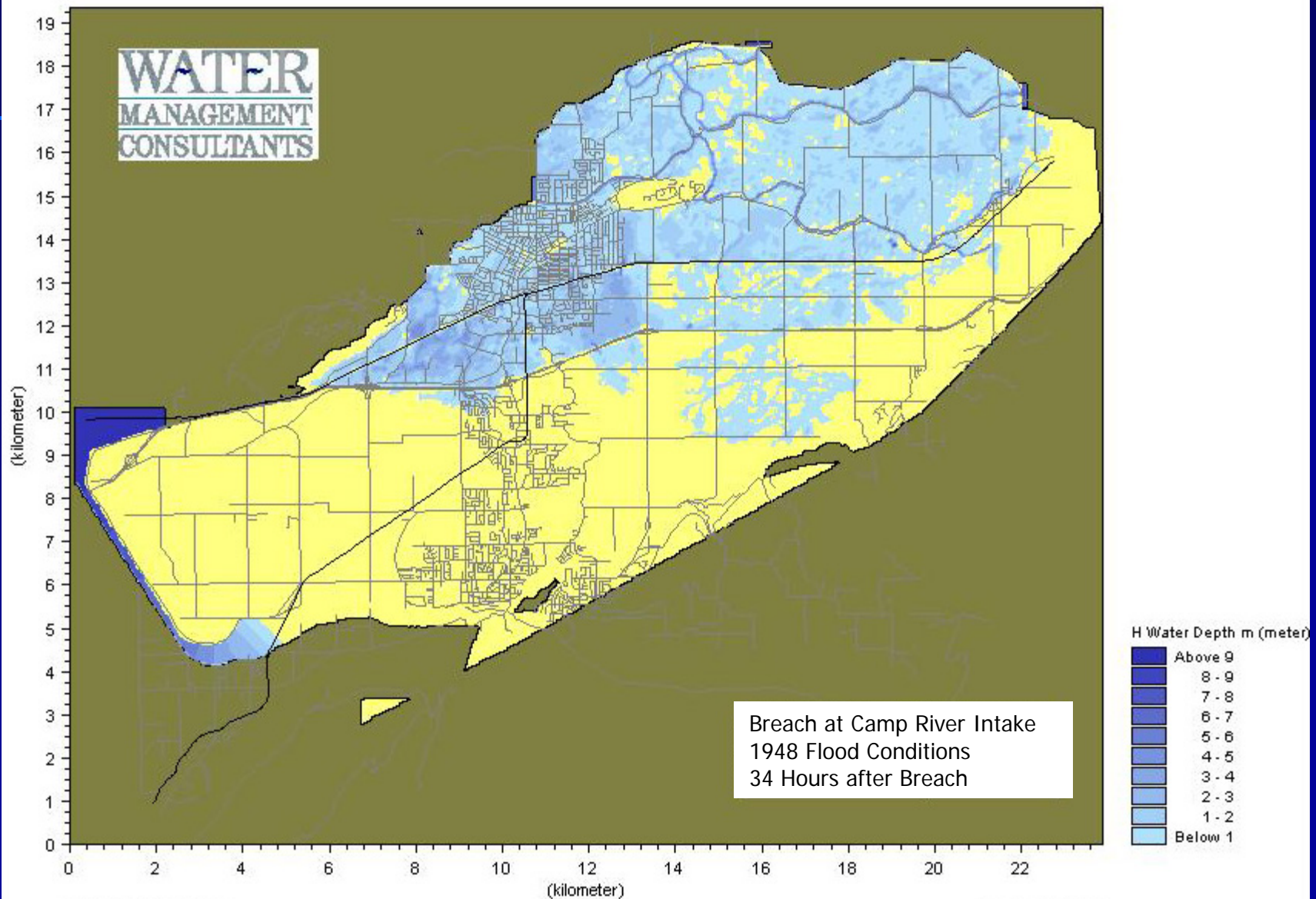
Upstream Dyke Breach



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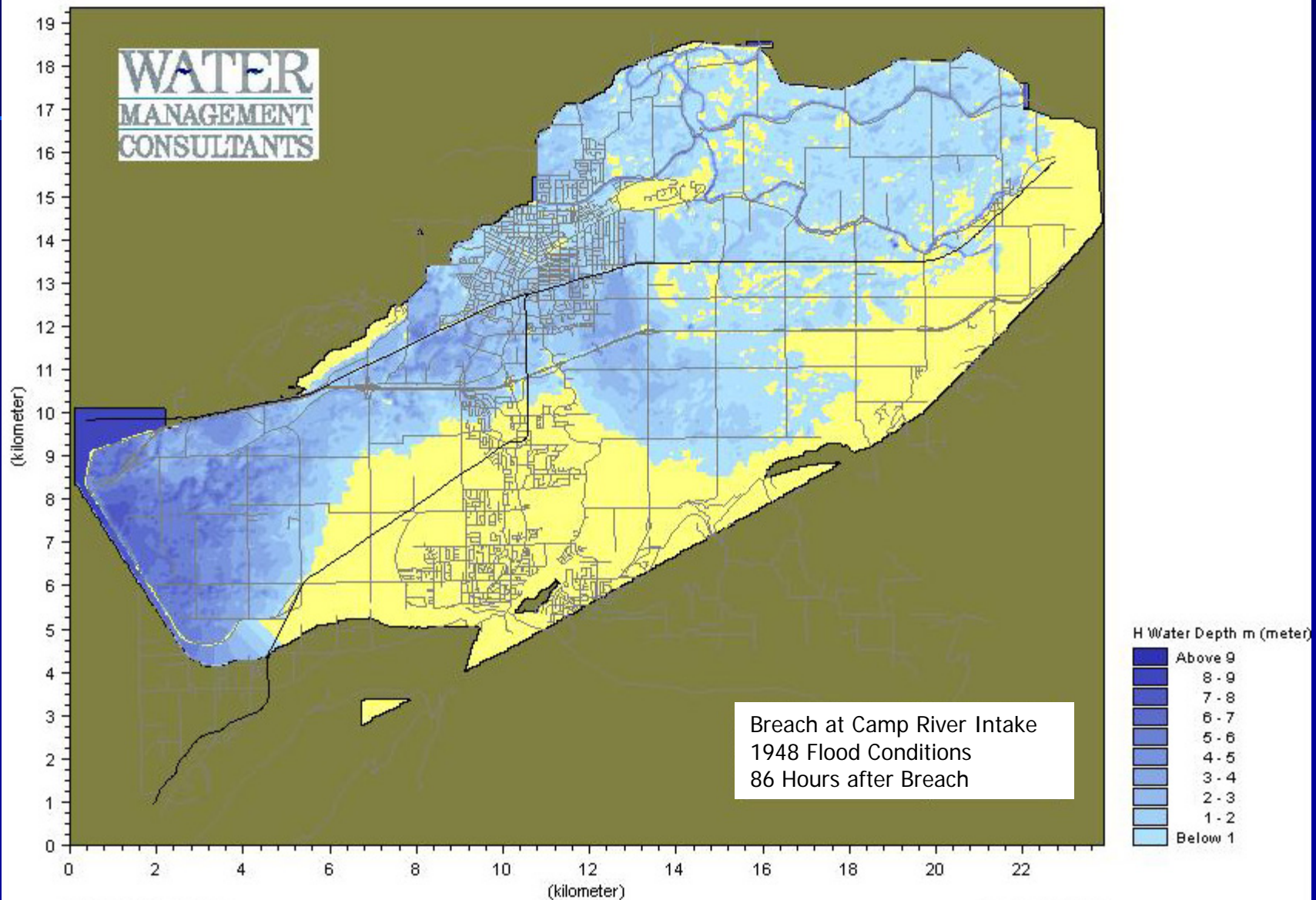
Upstream Dyke Breach



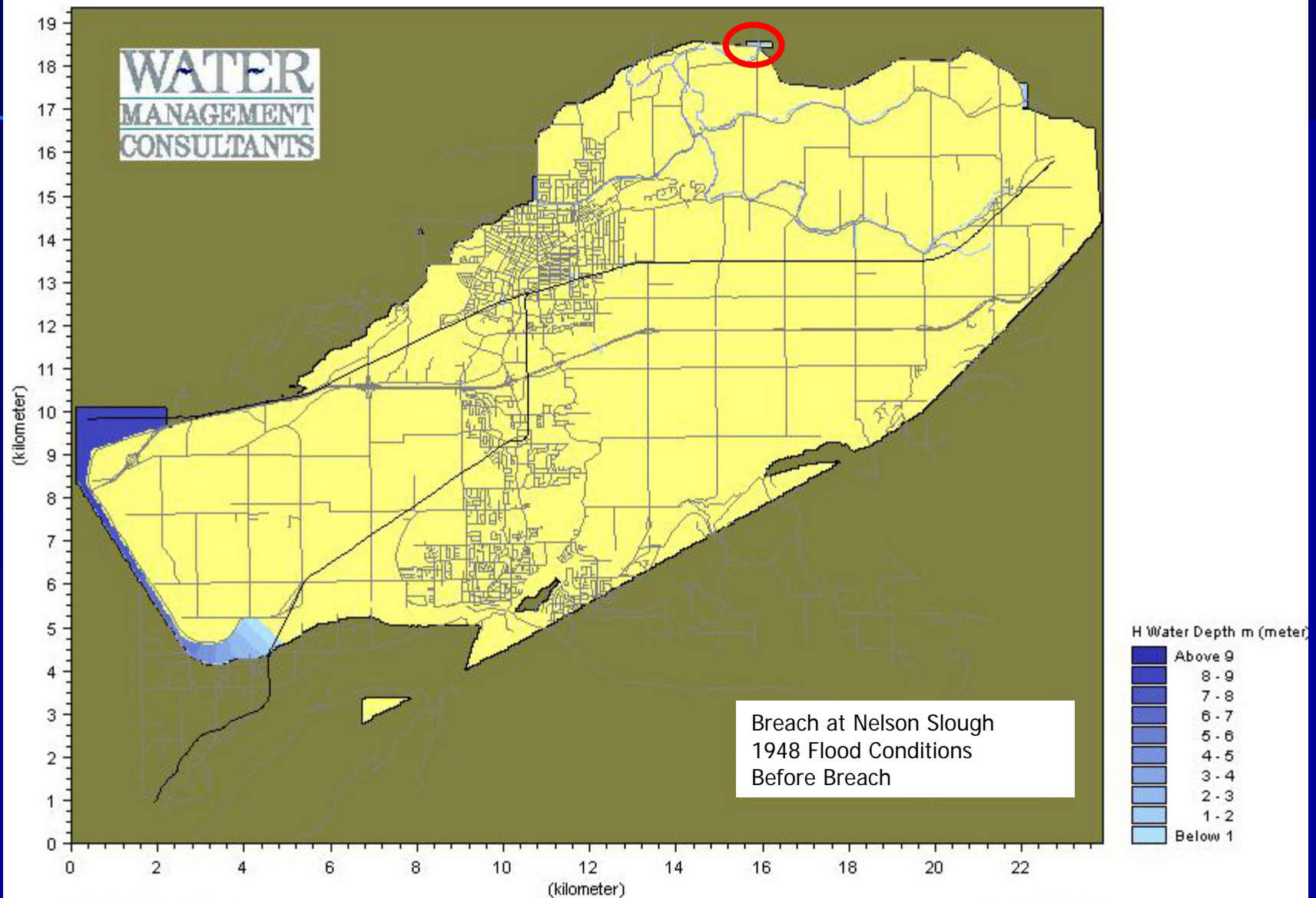
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Upstream Dyke Breach



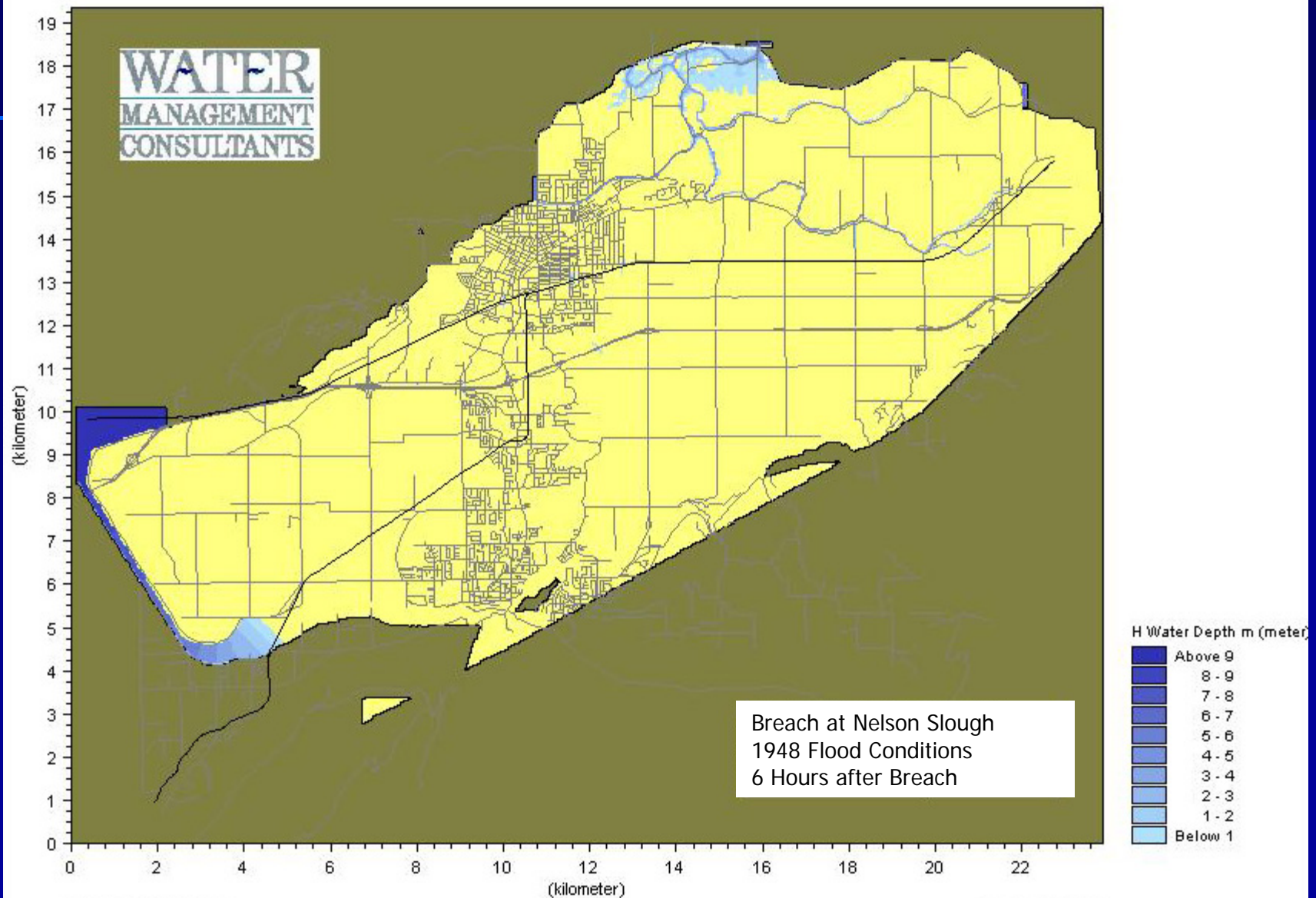
Middle Dyke Breach



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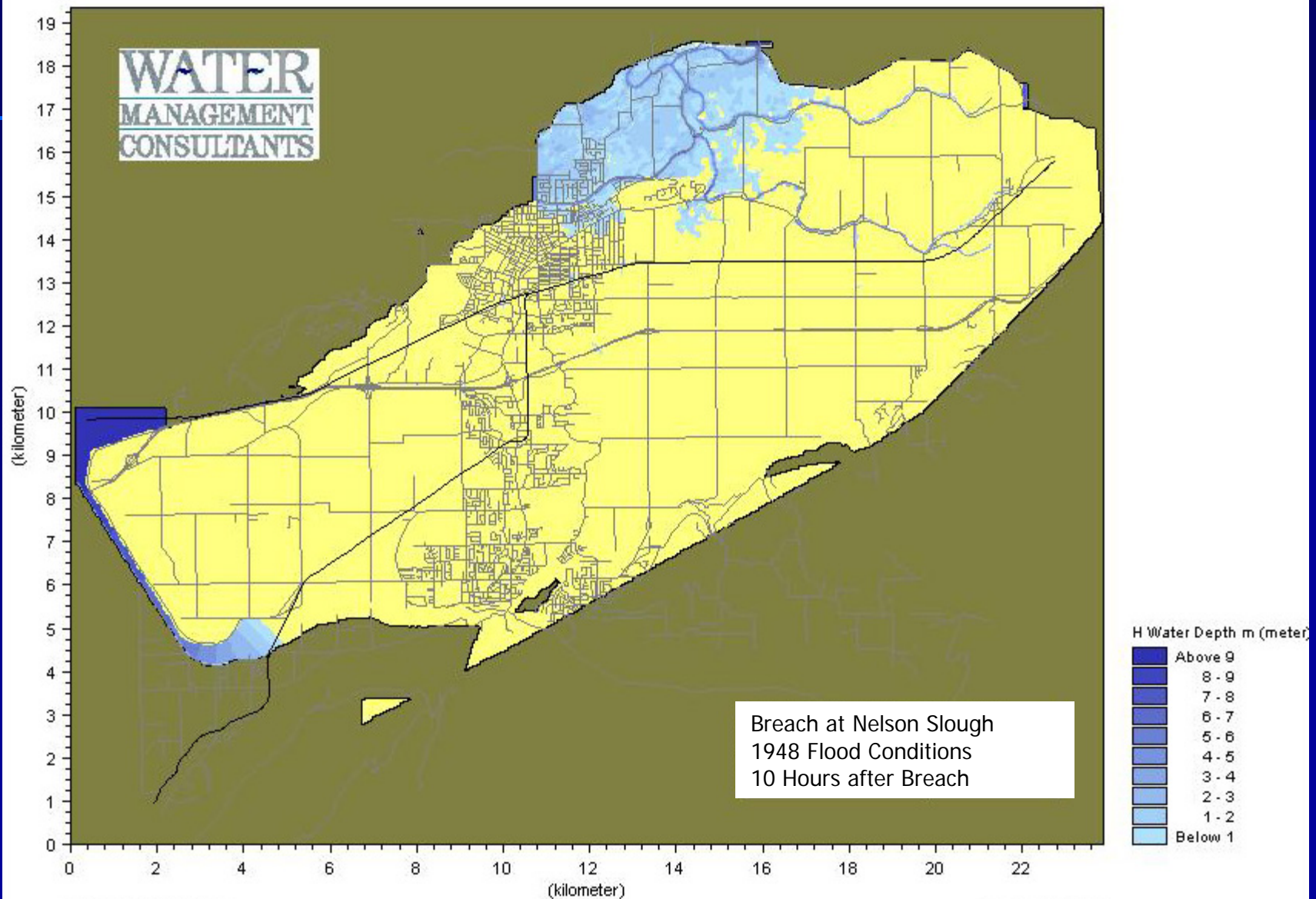
Middle Dyke Breach



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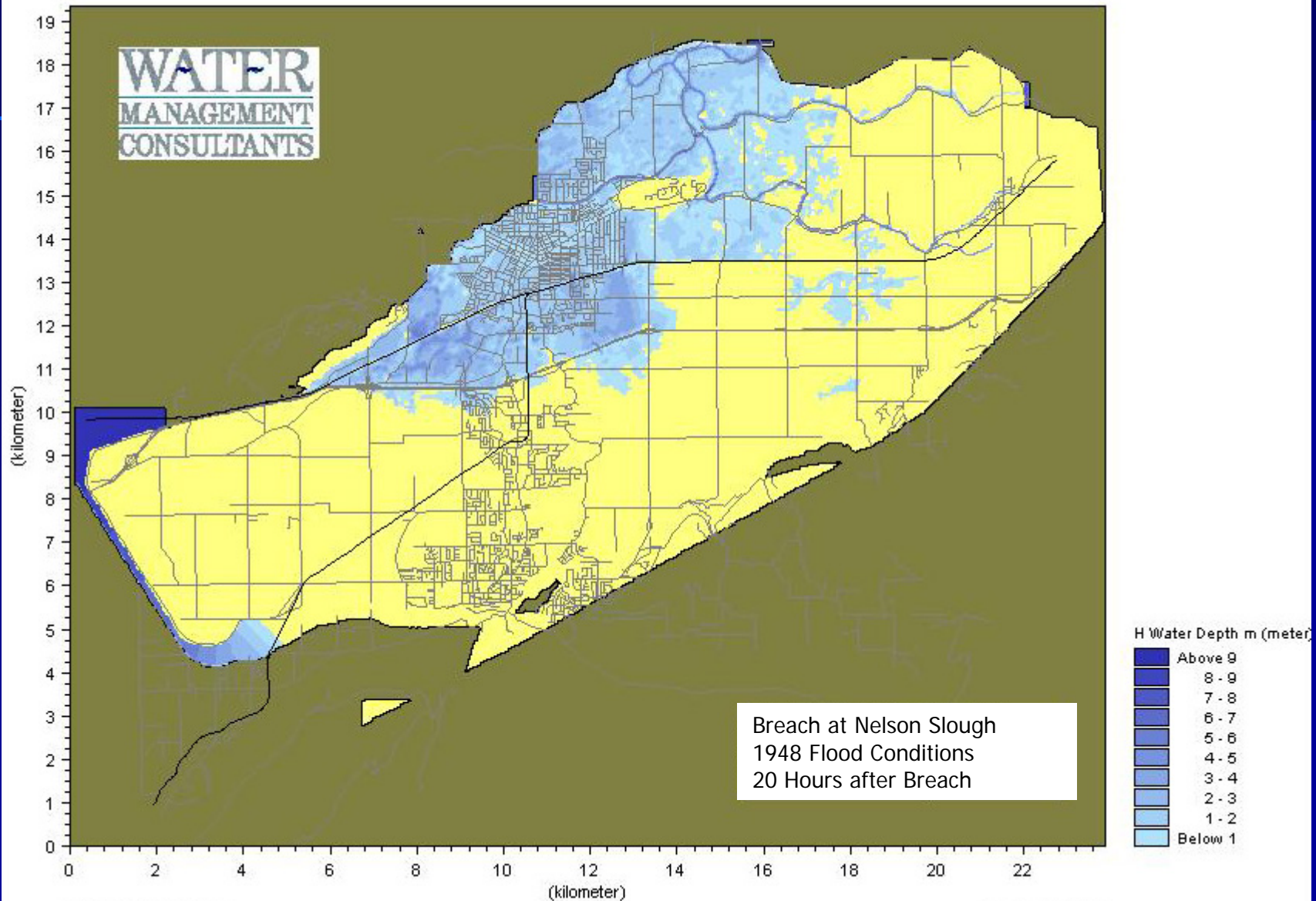
Middle Dyke Breach



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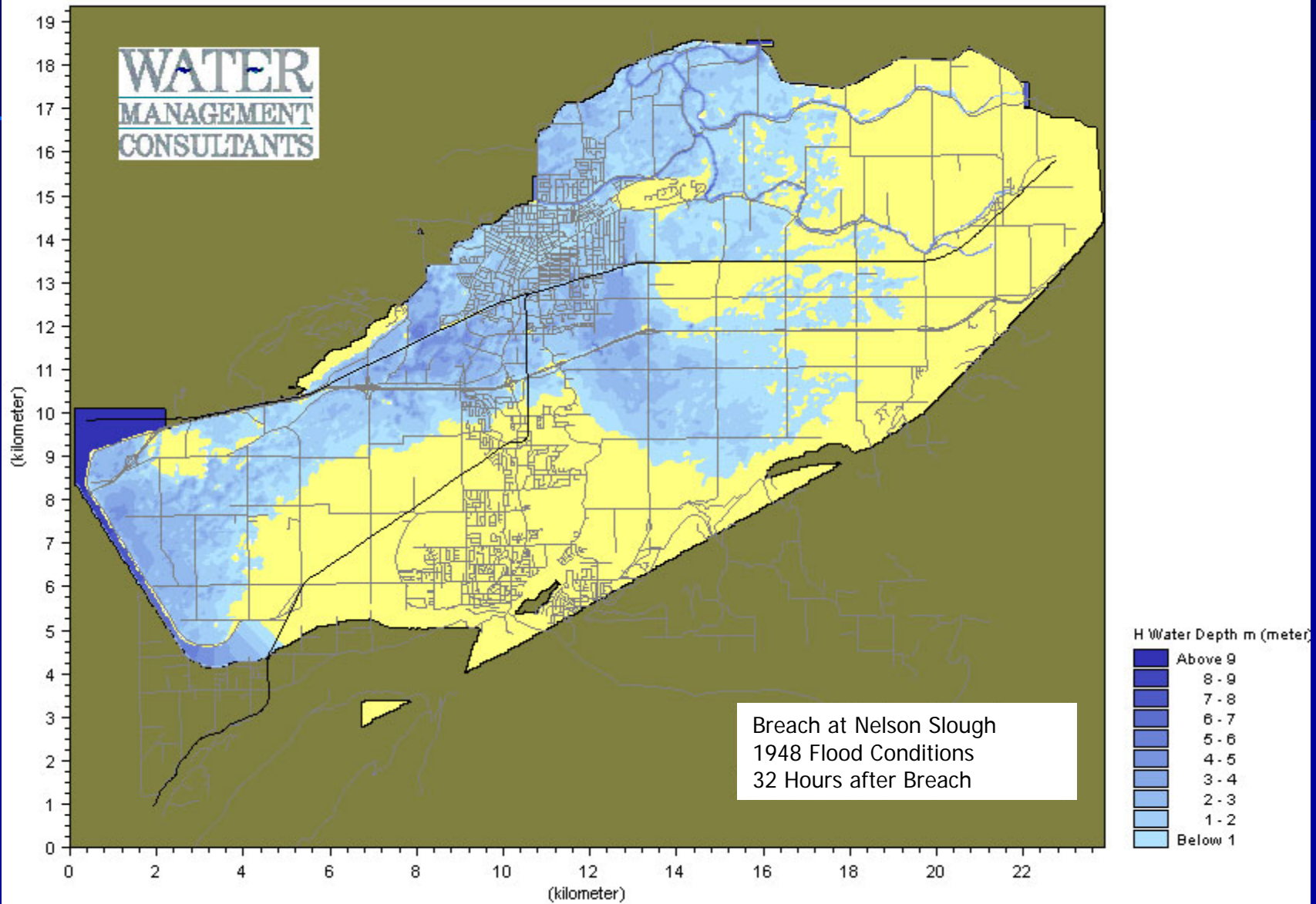
Middle Dyke Breach



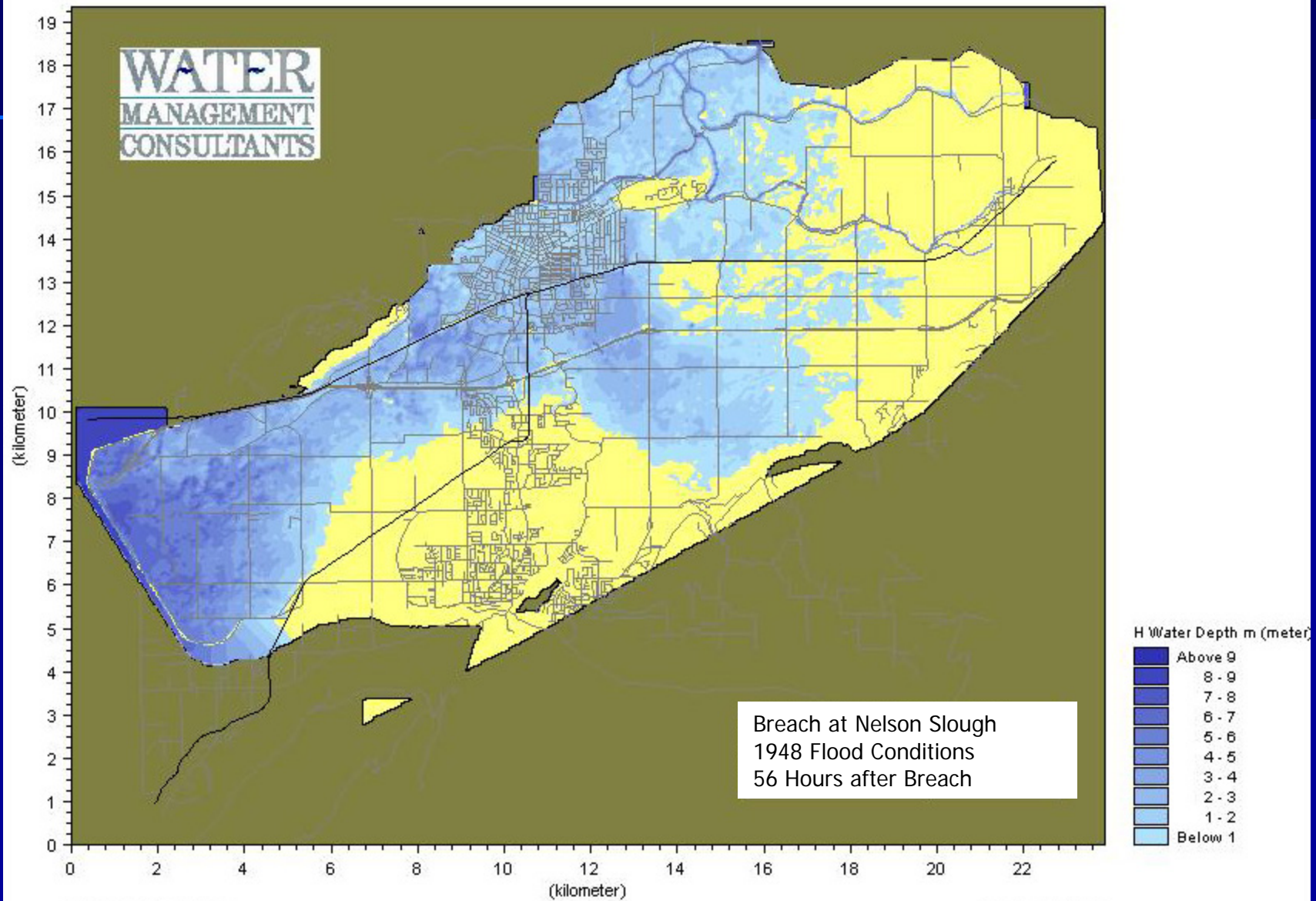
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Middle Dyke Breach



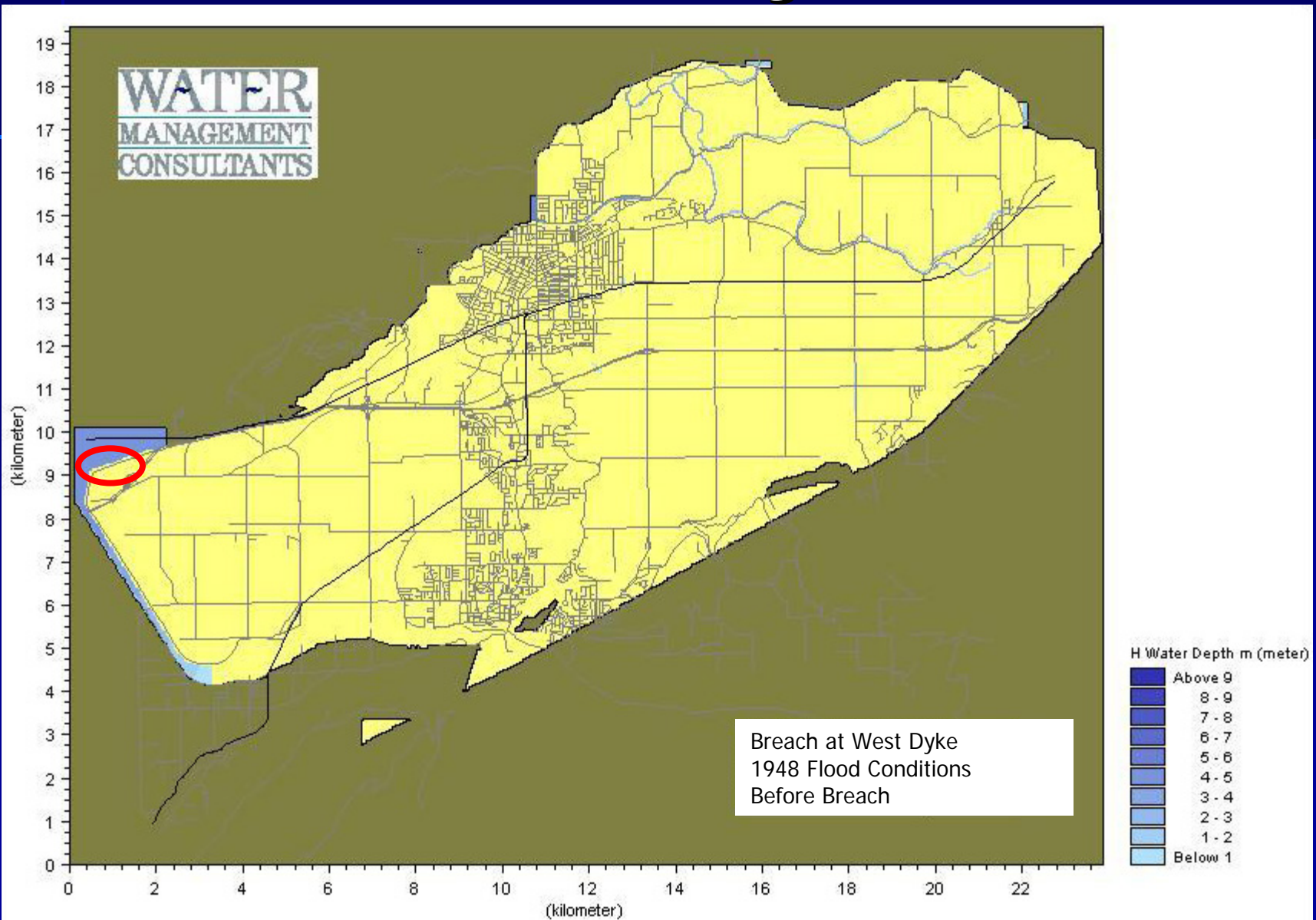
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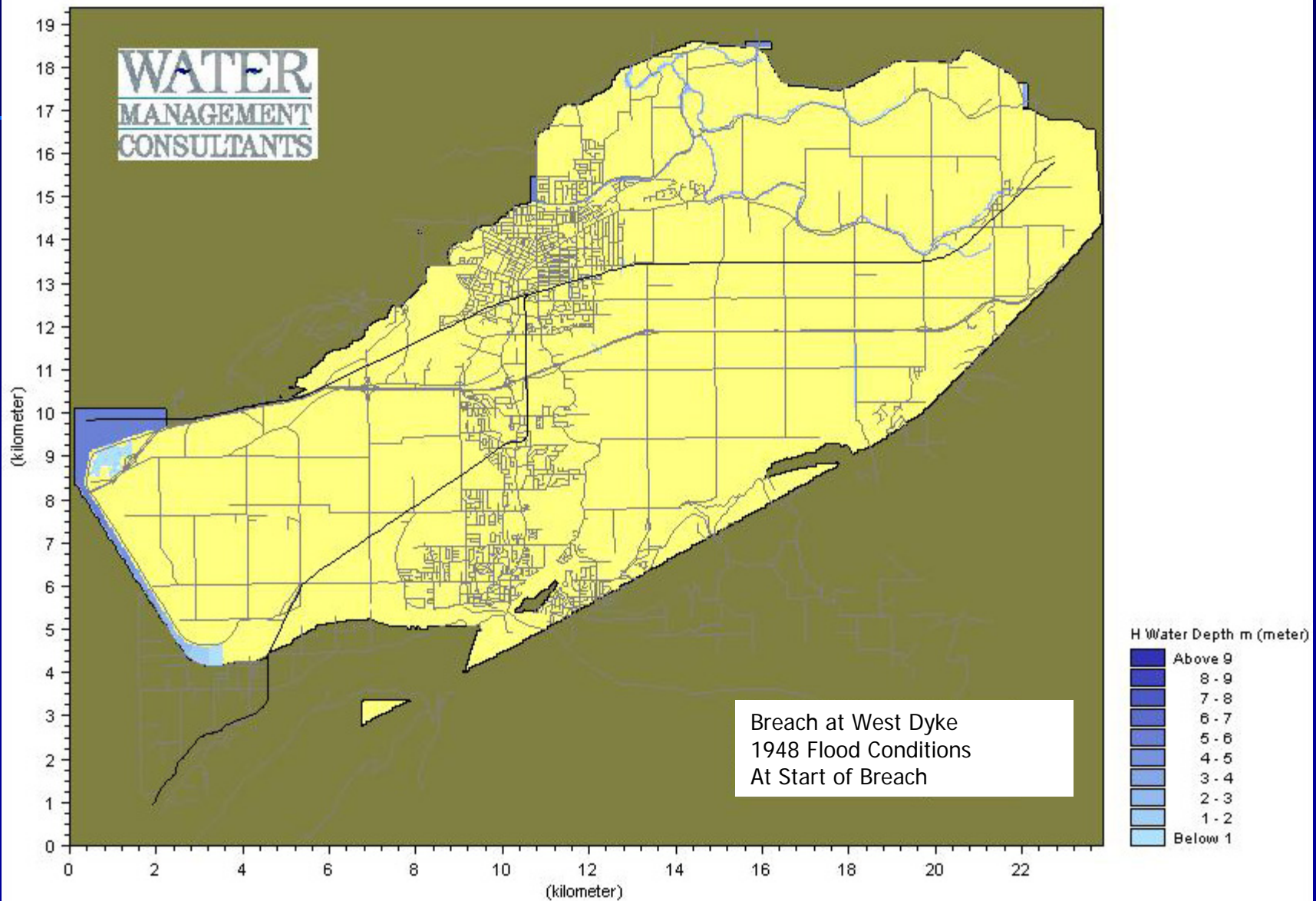
Downstream Dyke Breach



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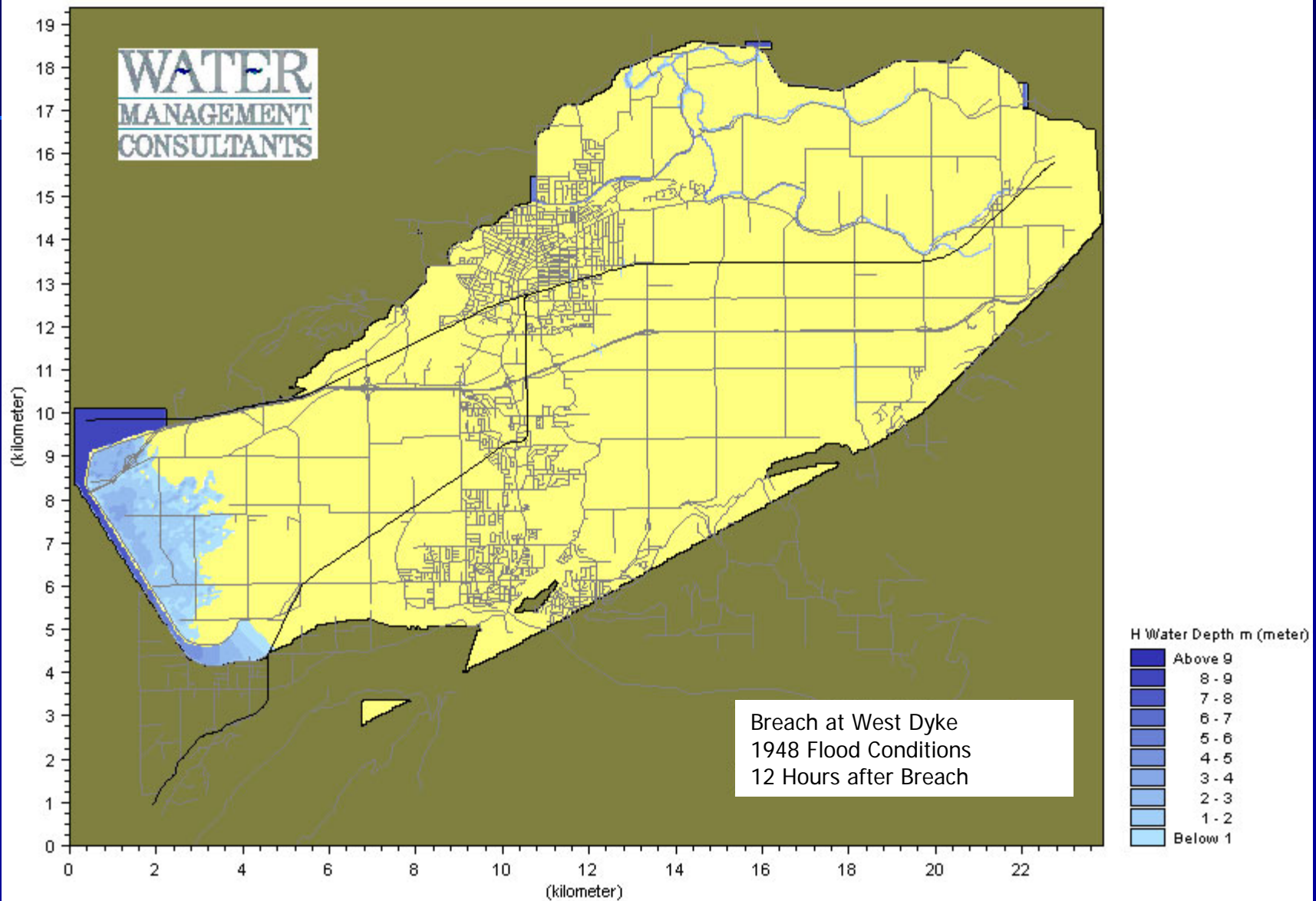
Downstream Dyke Breach



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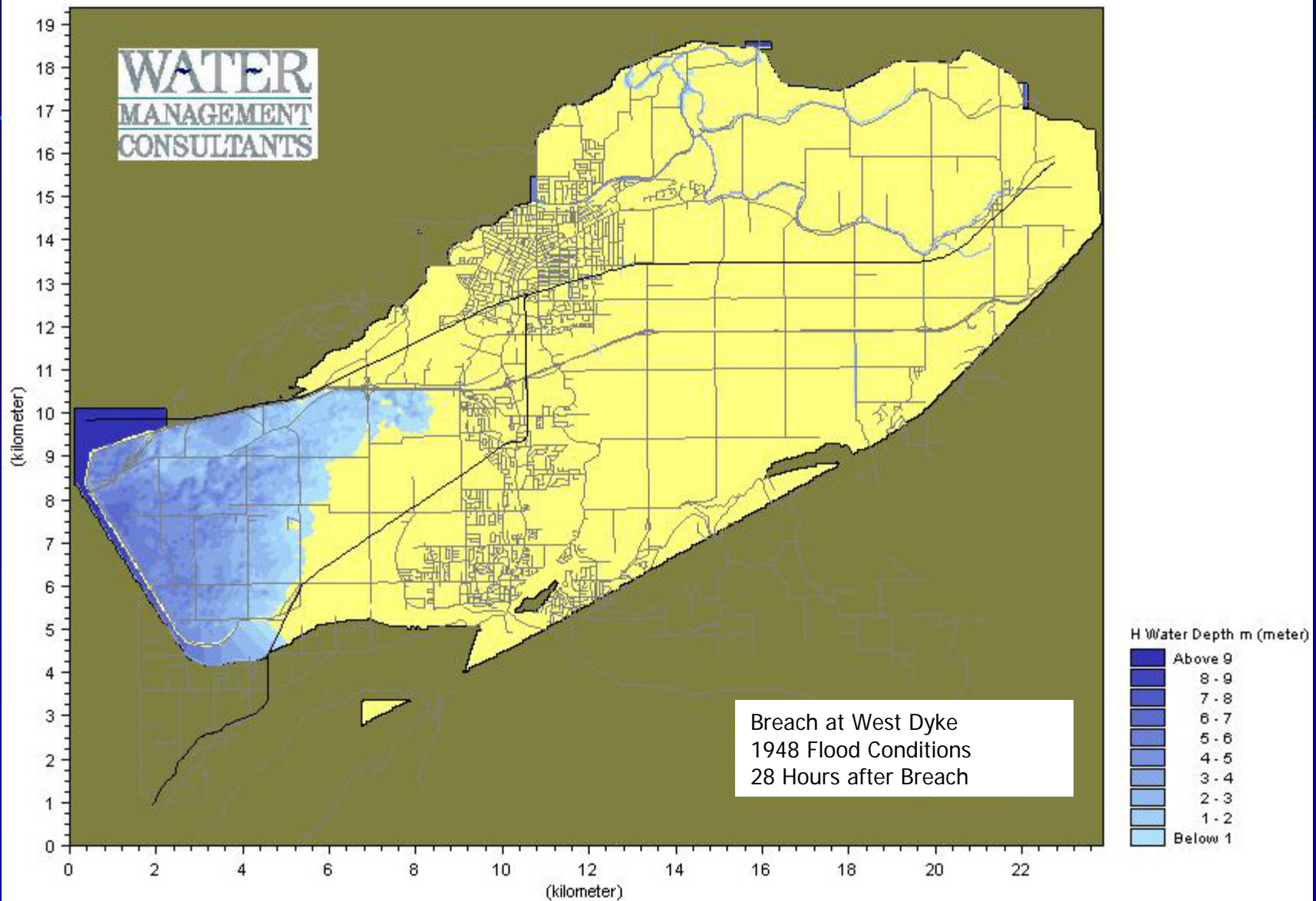
Downstream Dyke Breach



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Downstream Dyke Breach



06/06/2006 15:00:00

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Summary

- Significant dyke upgrades and bank protection work completed in 2007
 - Additional upgrades in future
- Bank protection and seepage control works to be complete by March 31
- Emergency preparedness tools available