

Manitoba Surface Water Management Strategy

Summary of Surface Water Summit Discussions

April 3, 2012

Canad Inns Polo Park, Winnipeg, Manitoba

An initiative of the Manitoba Government

Hosted by the Manitoba Water Council



2012 Surface Water Management Summit

Executive Summary

The Surface Water Management Strategy will address the management of water across the province in a holistic way that considers the diversity of human needs and the importance of water to sustain the health of our natural environment and our economy.

The Department of Conservation and Water Stewardship partnered with the Manitoba Water Council to host a Surface Water Management Summit in Winnipeg on April 3, 2012 as a kick off to the development of the Surface Water Management Strategy. One hundred and thirty invited stakeholders representing Conservation Districts, the agricultural industry, non-governmental organizations, academics, and all levels of government participated. The goal of the Summit was to provide the first of several opportunities for stakeholders to openly discuss key issues that would need to be addressed by the Strategy.

Specific areas of discussion included: field drainage and the drainage network; flooding; drought preparation; wetlands; water quality; drinking water source protection; shoreline and riparian protection; terminal water bodies; water use and allocation; and governance at a watershed scale. It was clear from the discussion that surface water management is a high priority for many Manitobans.

Key messages that we heard from the summit were as follows:

- Education is needed both for the general public so that they can understand the role that they can play, as well as for landowners so that they can make well-informed land management decisions.
- Increased co-operation is needed between Conservation Districts, Municipalities, Provincial Government Departments and neighbouring jurisdictions.
- Meaningful financial incentives for landowners are desired that recognize the ecological goods and services provided to all of society by landowner adoption of environmentally beneficial land management practices.
- The provincial government needs to take a lead role.
- Conservation Districts should play a more significant role in surface water management, especially at the local watershed level.
- Better linkages between planning approaches are required in order to deal with issues in a proactive rather than a reactive way. Additional tools and resources are required to improve and support holistic surface water planning capacity.
- A process and guidelines are needed for resolving surface water management disputes to balance competing interests.
- The Strategy should take a holistic approach to surface water management, considering all aspects of land and water management in an integrated manner, including social, environmental, economic, and physical aspects.
- Surface water management needs to be a political priority. The money and resources needed to address these issues in a proactive way should be identified from appropriate sources.

Next Steps: Continued dialogue with stakeholders throughout June, July, and August 2012

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Introduction:

Manitoba has a unique opportunity to design and implement a province-wide Surface Water Management Strategy. The Strategy will provide an over-arching framework articulating principles, goals and policy direction to allow Manitoba to better align water-related initiatives and decisions across all government mandates. The Strategy will guide future planning and issue management for water. A bold, consistent and transparent Surface Water Management Strategy will reduce the tendency for escalation of water issues by providing local authorities and department officials with consistent rationale for decision-making on water management issues.

Surface Water Management Summit

Input from stakeholders is essential in the development of the Surface Water Management Strategy. Manitoba Conservation and Water Stewardship, in partnership with the Manitoba Water Council, hosted a Surface Water Management Summit on April 3, 2012 as the kick-off for an extensive stakeholder engagement process that will take place over the spring and summer of 2012.

One hundred and thirty invited stakeholders representing Conservation Districts (CDs), the agricultural industry, non-governmental organizations, academics, and all levels of government participated in the summit. The goal of the summit was to provide an opportunity for stakeholders to discuss key issues that would need to be addressed in the Strategy. A workbook with questions addressing many surface water management issues was discussed at the Summit. A summary of the responses to these questions is included in this report.

It was clear from the discussion that surface water management is a high priority for many Manitobans. Clear messages were delivered and priority areas were identified. Priority areas identified at the summit were: education, incentive programs, policy and regulation development and enforcement, co-operation and leadership, planning, a holistic approach to surface water management, and making surface water management a political priority.

Education

Education is needed both for the general public so that they can understand the role that they can play, as well as for landowners so that they can make well-informed land management decisions.

The need to educate the public on the importance of various aspects of surface water management was reiterated a number of times and was brought up in the discussion of nearly every question. Education is needed so that the general public can understand the role that they can play, as well as to help create the political will to make the necessary changes and devote the necessary resources to surface water management. It was suggested that non-governmental organizations, Conservation Districts, and the school system have an important role to play in educating the public.

Education for landowners was also considered important so that better informed land management decisions are made. Government extension services, Conservation Districts, non-governmental

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organizations and industry associations were considered important in this regard. The Environmental Farm Plan program was mentioned as an excellent program.

Incentives

Incentives for landowners are desired that recognize the value of the ecological goods and services provided to all of society by landowner adoption of environmentally beneficial land management practices.

The need was repeated a number of times by many organizations for meaningful financial incentives for landowners to adopt environmentally beneficial land management practices. These incentives should recognize the value of the ecological goods and services (EG&S) provided to the public as well as compensate landowners for lost opportunity costs which may result from adopting practices that benefit the environment rather than maximizing agricultural production.

Incentive programs were considered important with regards to wetland conservation and restoration, water retention programs, protection of shoreline and riparian areas, drinking water source protection, improving water quality, drought preparedness and water conservation. The Alternative Land Use Services (ALUS) pilot program was mentioned repeatedly as a successful model for payments for EG&S.

Policy and Legislation

Much of the existing policy and legislation seems to be ineffective or needs to be revised. Some new regulations are needed, but existing legislation and regulations need to be enforced consistently and effectively.

The need for the development of new policy, legislation and regulations or the strengthening of existing policy, legislation and regulations was heard a number of times. The protection of high risk areas such as shorelines and riparian areas, wetlands, and drinking water sources were identified as the most important for the development of new regulations.

There were repeated comments on the need to enforce existing regulations consistently, particularly with regards to drainage and shoreline protection. It was stated that in many cases existing legislation and regulations would be adequate if they were properly enforced.

Co-operation and Leadership

Increased co-operation is needed between Conservation Districts, Municipalities, Provincial Government Departments and neighbouring jurisdictions with the provincial government taking a lead role and Conservation Districts playing a more significant role.

The need for improvements in co-operation and communication was another common message. Improving the co-ordination of the efforts of Conservation Districts, Municipalities, Provincial Government Departments, non-governmental organizations and neighbouring jurisdictions was considered essential to avoid confusion, conflicts, and duplication of work, and to identify common goals.

The Provincial Government was called upon repeatedly to take the lead role in this regard, ensuring that all parties were aware of their respective roles and responsibilities. It was also suggested that

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Conservation Districts could play a more significant role in surface water management planning and co-ordination as well as implementing programs on a watershed basis. Advice from Conservation Districts about surface water management issues needs to be taken more seriously by regulatory sections of government.

At a local level, creating linkages between various planning documents such as Integrated Watershed Management Plans and Municipal Development Plans was considered essential, as was the involvement of stakeholders and landowners when addressing local issues.

Planning

Planning is required in order to deal with issues in a proactive rather than a reactive way. Additional tools and resources are required to improve surface water planning capacity.

Planning was seen as essential in order to deal with the many issues involved in surface water management in a proactive rather than a reactive way. In particular, good planning is required to identify high risk areas and protect vulnerable areas such as wetlands, shoreline and riparian areas, and drinking water sources. A more holistic approach is needed that considers cumulative environmental impacts in drainage infrastructure development and maintenance; and in flood and drought management.

The need for more co-ordinated and comprehensive provincial-scale planning was considered a very high priority, particularly given the uncertainties of climate change. The importance of being proactive in protecting and increasing the resilience of the landscape was emphasized many times. The importance of designing built infrastructure to standards that consider future extreme events was also stressed. The importance of adaptive management in the face of uncertain and changing conditions was considered essential.

Appropriate planning documents and planning tools were considered essential to support the development of a process to resolve disputes and balance competing interests, especially when managing sudden or extreme events.

It was reiterated that additional resources are needed, particularly LIDAR, provincial-scale geospatial capacity, research into best practices, modelling, up-to-date resource inventories, including a comprehensive wetland inventory, and improvements in forecasting and predictive capacity.

A Holistic Approach

The Strategy should take a holistic approach to surface water management, considering all aspects of land and water management in an integrated manner including social, environmental, economic, and physical aspects.

An integrated and holistic approach to surface water management was considered essential. This entails recognizing that land and water are interconnected; that what happens on the land impacts the water ecosystems; and that actions in one area can have far-reaching impacts downstream.

All aspects of land and water management, including industrial, urban and resource development need to be dealt with in an integrated manner. For example, drainage and water retention and storage should

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be integrated using both natural (i.e. wetlands) and human-made systems that will provide storage and flood mitigation when there is an excess of water; and will provide water sources, groundwater recharge and drought mitigation when water is scarce.

Management at the watershed level, taking into account all activities affecting land and water, was considered by many to be the most appropriate approach.

Surface Water Management Must be a Priority

Surface water management needs to be a political priority. The money and resources needed to address these issues in a proactive way should be identified from appropriate sources.

The critical need to develop and implement this surface water management strategy was repeated numerous times. Lack of political will at a number of levels was cited repeatedly as one of the main barriers to effective surface water management. The need to make this a priority and devote adequate resources to it was reiterated a number of times. It was suggested that additional funding for surface water management could be raised through user fees, levies, and taxes.

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SURFACE WATER MANAGEMENT SUMMIT DISCUSSION SUMMARY

Question 1: Field Drainage

Should field drainage on private lands be limited to a drainage system's existing capacity or should a different system, such as "user pay," be implemented? What new tools or resources are necessary to help track, plan and maintain the existing and any new drainage network?

Responses:

- Drainage is important in maintaining agricultural production in many areas of Manitoba. Need to recognize the realities of the current agricultural production system and realize that we will likely continue to drain in the foreseeable future.
- Need to look at all potential benefits and impacts in the context of the watershed not just the individual farm or municipality. Drainage should be designed and managed to local conditions in order to maximize the benefits and minimize any negative impacts. Need to integrate drainage and retention systems as well as control and slow the flow of water from drainage.
- Better enforcement of existing regulations is needed.
- Need to take into account water retention and storage on the land in both natural systems such as wetlands as well as constructed and controlled structures. Landholders should be compensated for the storage and retention of water in an ecological goods and services (EG&S) program such as the Alternative Land Use Services (ALUS) program.
- Better planning management and coordination is needed. Leadership is needed from the province. Co-operation and communication between municipalities, Conservation Districts, provincial departments, water resource officers and farmers needs to be improved.
- Conservation Districts could play a much more significant role in managing field drainage. If Conservation Districts are going to play a bigger role in surface water management they will need many more resources.
- The existing drainage infrastructure needs to be adequately maintained.
- Co-ordination and cooperation with neighbouring jurisdictions should be improved. Need to take into account the impacts of the actions of upstream jurisdictions when putting limitations on drainage in Manitoba.
- A user pay model in which those who benefit from drainage pay for and maintain it is a good idea. This would be tricky to implement as there are often a number of individuals who benefit from drainage projects to varying degrees.
- Tools are needed: LIDAR, technical expertise (engineering), and GIS databases and capacity.

Question 2: Flooding

Should we limit development in designated flood prone areas or insist that developers bear the cost of prescribed flood protection?

Responses:

- Everyone agreed that development should be limited or prohibited in highly flood prone areas.
- The risk of flooding needs to be clearly assessed, identified and clearly communicated.
- Cost-benefit analyses should be done to determine if the risks of flooding outweigh the benefits of development in areas where there is some risk of flooding.
- Most expressed that the developer should bear all the costs of flood protection and taxpayers should not pay for flood protection in new developments in flood risk areas.

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- One commented that the province should cost-share flood protection costs with developers on new developments, as they have done this in the past.
- Some said the province should cost-share flood protection works for existing developments.
- We should not over-react based on the extreme events of the 2011 flood.
- More research is needed to better understand the impacts of climate change on flooding.
- Producers, landowners and developers should not be responsible to bear the costs of artificial flooding caused by provincial flood fighting efforts.

Question 3: Drought Preparation

What needs to be done to adequately prepare for a prolonged drought in Manitoba? Is a water conservation strategy needed? What would this include?

Responses:

- Water storage on the land is needed, both smaller on-farm water retention in natural and manmade systems, as well as larger water retention systems (ie. Shellmouth Reservoir).
- Conserve and restore wetlands was mentioned often, with several suggestions to consolidate wetlands.
- Develop a resource inventory for surface water and identify high risk areas.
- Incentives for beneficial management practices (BMPs) that increase resilience to drought.
- Research improving the drought tolerance of crops.
- Irrigation will be needed to ensure that agriculture remains viable (i.e. Alberta irrigation districts).
- Community-level or watershed-level drought planning is needed. Need to identify and address local risks.
- Develop policies and procedures before a crisis arises, be proactive rather than reactive. Improve predictive capacity to allow for better planning.
- Plan on a watershed level and include the Conservation Districts, municipalities, towns, landowners, and government departments.
- Prioritize allocation of water in times of shortage, this should be developed before the crisis and clearly stated.
- Apportionment agreements with other jurisdictions need to ensure that adequate instream flow is maintained in Manitoba.
- A water conservation strategy is needed and should include: public education on ways to reduce personal consumption, incentives to adopt water conserving technologies and pricing that reflects the true cost of water.

Question 4: Climate Change

What surface water management actions should we take that will build resilience to manage increased variability and larger magnitude extreme events that are predicted due to climate change? What tools or resources would help with climate change adaptation for surface water management?

Responses:

- Incentives to reduce carbon emissions, and increase resilience on the landscape are desired.
- Need more science and more communication to better understand the risks of current and future climate change.
- Improve flood and drought management by better use of land use planning and zoning.

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- Enhance natural and human-made water storage on the landscape to mitigate for both flood and drought.
- Tools needed to make better management decisions such as LIDAR, GIS and up-to-date resource inventories.
- Coordination is needed between federal, provincial and municipal governments.
- Better predictive capacity and more robust risk assessment is needed. We know more extreme events are likely but do not know if next year will be a flood or a drought.

Question 5: Wetlands

What is the balance between wetland conservation and agricultural development, can they co-exist?

How do we develop trade-offs or compromises between maintaining the environmental benefits of wetlands and recognizing there are sometimes economic advantages to agriculture of draining them?

What would it take to stop the drainage of wetlands?

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Responses:

- Wetlands provide many benefits, agriculture and wetlands must co-exist, we need to find a way.
- Some said that conservation should take priority over restoration.
- Ecological goods and services programs (such as ALUS and WRIP) need to be implemented and provide meaningful incentives to landowners to conserve and restore wetlands. Suggested amounts \$50 - \$200/acre.
- Reform the tax assessment system, because the current system rewards drainage.
- One suggestion was to reconfigure and consolidate wetlands to improve accessibility for large equipment. Consider weirs on interconnected wetlands to limit amount of water discharge from wetlands.
- Need political will to protect wetlands. It is necessary to educate the public on the importance of wetlands to create the political will and understanding of the need for money to protect them.
- Ad-hoc efforts need to be consolidated or better coordinated (i.e. Manitoba Habitat Heritage Corporation, Conservation Districts, Red River Basin Commission, etc).
- Better enforcement of existing regulations is needed. Need for law, not policy. Laws must be adaptable to changing environment and human conditions and to variations in the landscape.
- Should be a moratorium on drainage of permanent wetlands with severe penalties for non-compliance.
- A No Net Loss program approach would be acceptable to many producers.
- Improve cooperation between government departments and all levels of government.
- Increase cooperation between Conservation Districts and Water Resource Officers.
- Wetland conservation should be included in the Integrated Watershed Management Planning process.
- Some concerns were expressed about perpetual Conservation Agreements.

Question 6: Water Quality

What actions are we, as Manitobans, willing to take to protect and improve the quality of our water?

Responses:

- Increase investments in waste water management and treatment from cities, towns, and rural municipalities.
- Enforce existing legislation particularly with regards to urban wastewater systems.

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- Address nitrogen and phosphorus issues more effectively.
- Engage other contributing jurisdictions outside Manitoba more visibly.
- Expand network of water quality monitoring stations.
- Provide an EG&S program (ALUS type program) that provides incentives for BMPs.
- Additional research is needed on the effectiveness of BMPs.
- Educate the public on what actions need to be taken, costs, and what they can do to contribute.
- Expand the Lake-Friendly campaign and make it obvious it applies to all lakes and rivers.
- Prevention of shoreline erosion both on individual properties and collectively is badly needed.
- Limit or eliminate the use of pesticides and fertilizers for cosmetic uses.
- Require Manitoba Hydro to regulate lake levels to maximize benefits to the environment.

Question 7: Drinking Water Source Protection

What types of special protection are warranted to protect source drinking water? What additional tools or resources do we need to ensure source water protection in all areas of the province?

Responses:

- Restrict activities in source water and recharge areas through the use of conservation agreements, land buy-outs by municipalities or the province.
- Source water protection plans that identify drinking water sources and specific risks, like the CDs are doing, are critical.
- Research to better understand the risks and possible solutions.
- Need stronger legislation, regulations and enforcement to protect these areas.
- Consultation must precede regulation.
- Provide incentives for the use of BMPs in drinking water source areas.
- Educate municipalities about their responsibility to protect drinking water source areas.
- Enhance the ability of the natural system to improve and protect the water rather than relying on man-made solutions.
- Conserve wetlands to improve water storage and enhance source water protection.
- Seal abandoned wells and more education about preventing groundwater contamination.
- Continue to invest in rural water infrastructure with federal and provincial funding.
- Work co-operatively with First Nations communities to develop Integrated Watershed Management Plans (IWMPs).

Question 8: Shoreline and Riparian Areas

What steps can we take to assure that our shorelines are adequately protected? How much of this activity is the responsibility of the individual landowner? How should shoreline and riparian protection by individual landowners along a shared shoreline be coordinated?

Responses:

- Develop an inventory and assessment of all shorelines, identifying sensitive and degraded areas.
- Public education on the importance of these areas and how their activities can have an impact is needed.
- Increase availability of technical expertise to landowners and municipalities.
- Encourage municipalities and planning districts to take a stronger lead role in protecting shorelines and riparian areas from development.
- Pilot projects to demonstrate best practices are needed.

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- Need political will to enforce existing regulations and develop new regulations including penalties for non-compliance.
- Increase setbacks from the shoreline for industrial, farming, and housing developments.
- Require a riparian conservation component within development plans for new developments.
- Recognize EG&S value of riparian areas and offer incentives for BMPs.
- Can't have cookie-cutter approach, need to develop site specific solutions.
- Co-ordination is needed with the province taking the lead and identifying roles for the province, CDs, municipalities, and planning districts.

Question 9: Terminal Basins

Should the issue of high water in terminal basins be dealt with primarily as a water management issue by constructing an outlet and/or limiting water inflow from upstream, or should this be dealt with primarily as a land use issue, limiting development and land use activity near the water body? What factors need to be taken into consideration when making decisions for these situations?

Responses:

- It is both a land use and water management issue. Each situation needs to be dealt with individually taking into account the agricultural capability, ecological sensitivity and the social and economic impacts of any decisions.
- A standard process to review each situation should be established with criteria and guidelines.
- Long term management plans should be developed with input from CDs, province, RMs, and landowners. Local development goals need to be established and land use decisions need to be based on these goals. Need to integrate IWMPs and development plans.
- Stakeholders must be consulted, including those in downstream areas.
- Need to find a way to balance competing interests by establishing a clear process for decisions.
- A cost benefit analysis should be done to determine the best option for the situation.
- Control the 'top water' with an outlet and establish a maximum limit so that valuable agricultural land is not flooded.
- Historical levels need to be examined to determine what the 'normal' level is.
- Maintain the water body at a level somewhere between the natural high and natural low.
- Need to take into account excess water from upstream human-made drainage which raises the level above its natural 'high' level. Should not allow upstream drainage without an outlet.
- Higher levels of precipitation in future will require more drainage.
- Develop assistance programs to help landowners through extreme events.
- Restrict new developments. New developments should be at the owner's risk.

Question 10: Water Use and Allocation

What tools and approaches are necessary to manage surface water allocation? Should Manitoba maintain a precautionary approach in the allocation of surface water?

Responses:

- Water allocation decisions should consider ecological needs as well as economic development and should uphold the concepts of sustainable development.
- Rural water supply systems drive economic development.
- Precautionary principal, 80% retention of water for in-stream flow needs (best available science).

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- Build more resiliency into the system through natural and human-made water retention systems.
- More efficient water use (i.e. irrigation systems, distribution systems, Water Soft Path approaches, etc).
- Disincentives to wasting water (i.e. increase cost as usage level increases).
- Need to understand the 'real' cost of water.
- Priorities will change in wet vs. dry years, an adaptive approach is needed.
- Regulations are required to monitor usage by large industries such as oil companies.
- Need better understanding of the surface and groundwater interface.
- Need baseline data to make informed decisions, we should be cautious because we have limited information.
- Water needs to be managed as a finite resource, we have increasing pressures on water and competing policies and shifting priorities.

Question 11: Governance at a Watershed scale

Do more functions of land use planning and governance need to be realigned to the watershed scale?

Responses:

- There would be many benefits to adopting the watershed model for all land use planning and governance functions.
- The watershed model would be an overwhelming change economically and socially in the short-term, but in the long-term it could be an ideal solution to many issues.
- The cost-benefit of changing boundaries is questionable and would have huge implications on the tax base.
- There are synergies and benefits of having two CDs working together in a shared jurisdiction.
- We would still have to deal with provincial and national trans-boundary issues.
- Province should set base standards and goals, not the watershed.
- Would require significant resources to implement.

Next Steps

The Surface Water Management Strategy team will be conducting face-to-face meetings throughout June, July, and August of 2012 with all stakeholder groups who have requested further discussion on the development of the strategy. Interested individuals and stakeholder groups continue to have the opportunity to submit their comments and input to the strategy through Conservation and Water Stewardship's website at: www.gov.mb.ca/conservation/index.html and click on Surface Water Management Strategy on right-hand side of page.

We offer a genuine thank-you to all who have taken the time to provide thoughtful input to the development of this strategy so far. We look forward to ongoing interaction as this strategy continues to take shape.

Please contact us by email at: mws@gov.mb.ca with Surface Water Management Strategy in your email subject line, or by telephone at: (204) 476-7033.

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