



Working Well Program

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ABSTRACT

The majority of rural Albertans rely on groundwater for their domestic water supply. Every year, approximately 3700 new domestic water wells are drilled in Alberta. In Alberta's thriving economy, the continued expansion of rural subdivisions, industrial activity and agricultural operations is placing increasing demand on provincial groundwater supplies. As such, there is an overwhelming interest in groundwater protection and information on proper water well management (i.e., siting, construction, operation, maintenance and monitoring). The Working Well program was established to meet the demand for information and to help Alberta's private water well owners to protect their wells and groundwater supplies. This paper provides an overview of **Working Well**, including the vision, outcomes and program approach.

RÉSUMÉ

Le programme de Working Well a été créé pour répondre aux besoins d'information et d'aider l'Alberta privé les propriétaires de puits d'eau pour protéger leurs puits et les réserves d'eaux souterraines.

1 BACKGROUND

The majority of rural Albertans rely on groundwater for their domestic water supply. Every year, approximately 3700 new domestic water wells are drilled in Alberta. The highest density of wells surrounds the cities of Edmonton, Red Deer and Calgary and along the Highway 2 corridor (Figure 1).

In Alberta's thriving economy, the continued expansion of rural subdivisions, industrial activity and agricultural operations is placing more demands on provincial groundwater supplies. Consequently, interest in and concern about groundwater is increasing.

In June 2006, Alberta Environment (AENV), in partnership with other organizations, hosted a series of groundwater and coalbed methane (CBM) public information sessions to address landowner concerns about CBM development potentially affecting groundwater supplies. Given the overwhelming interest in groundwater, similar sessions related to water well management (i.e., proper construction, operation and maintenance) were requested. In response, Alberta Environment formed a working group with other provincial, federal and municipal agencies to develop and pilot a water well management workshop. The workshop was designed to help water well owners understand and manage their groundwater supplies. Two workshops and a shock chlorination demonstration were piloted in 2007.

The pilot reached 180 well owners in two west-central Alberta municipalities. Participant feedback indicated high rates of satisfaction and requests for more information. Follow-up phone calls to workshop participants indicated the majority had taken at least one action towards better managing their water wells as a result of attending the workshop. The success of the pilot led to the establishment of the Working Well program. This paper

provides an overview of this multi-faceted approach to water well education in the province of Alberta.

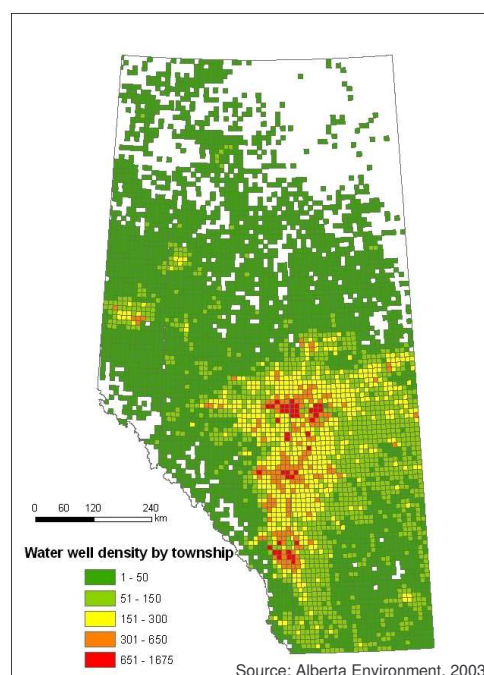


Figure 1. Water well density in Alberta

2 WORKING WELL

2.1 Overview

Working Well is a multi-agency program that encourages Alberta's private water well owners to protect their wells and groundwater supplies. The overarching goal of the program is to ensure safe and secure groundwater supplies for private water well users in Alberta.

Working Well workshops and extension materials prompt well owners to start looking closely at their wells and personal activities that may influence the quality of their well water and common groundwater supplies. The intent of these extension tools is to increase awareness, knowledge and practice change among well owners:

- Awareness— to help well owners recognize that proper management of private water wells is their responsibility
- Knowledge – to help well owners gain a basic understanding of groundwater science, how a water well is constructed, how it works, how to take proper care of it and how to keep it protected from contamination, and
- Practice Change – to help well owners acquire the motivation and skills needed to adopt recommended well management practices.

2.2 Partnerships and Program Delivery

Working Well is currently led and funded by AENV in partnership with other provincial, federal and municipal agencies. This collaborative effort is intended to help reinforce the credibility of program messaging, extend program reach (i.e., number of well owners reached) and improve capacity to deliver consistent water well education to rural communities.

The Working Well program delivery model includes provincial planning and coordination with some local delivery (i.e., workshop delivery). Provincial level functions include tasks such as: program design, strategic planning, partnership development, technical review, workshop delivery and program evaluation and reporting. To date, several partners have assisted with planning and coordination including: Alberta Agriculture and Rural Development (ARD), Agriculture and Agri-Food Canada (Prairie Farm Rehabilitation Association (PFRA)), Alberta Environment, Capital Health (on behalf of the Public Health Drinking Water Officer project), the Alberta Water Well Drilling Association (AWWDA) and several municipalities.

Locally, municipalities, counties and stewardship groups are responsible for hosting the water well workshops and contributing feedback for continuous program improvement. Technical experts (e.g., hydrogeologists, water engineers etc.) from provincial and federal agencies deliver workshop presentations and activities.

2.3 Program Outcomes

Two sets of outcomes have been identified for Working Well — 1. outcomes related to the target audience (i.e., primarily private water well owners) and 2. outcomes

related to the program (i.e., the multi-agency partnership). Each set of outcomes are organized based on the short- and medium-term program timeframes. These outcomes represent the concrete changes we are trying to bring about through the program (Figure 2)

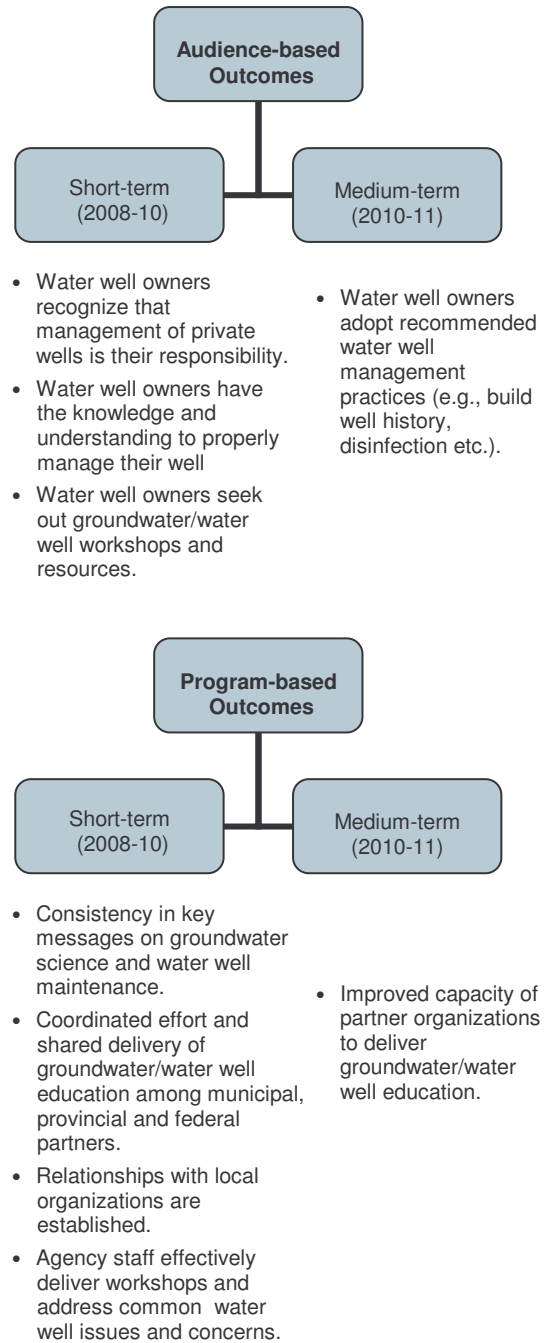


Figure 2. Working Well Program Outcomes

The long term outcome for the program is to have a province-wide, coordinated approach to water well education that results in a demonstrable increase in stewardship practices by well owners.

2.4 Program Approach

Working Well has four main elements or tools for extending key messages to water well owners:

- Workshops
- Information resources
- Interactive activities and exhibits
- Community outreach

These elements range in audience reach and scale, some in local communities (workshops) and others being province-wide (information resources). Below are brief descriptions of each element.

2.4.1 Workshops

There is much interest and value in attending local-level water well workshops. Groundwater and water well experts deliver key messages on the basics of groundwater, common well problems and best management practices and well owners have the opportunity to ask questions. Workshops are held in local communities at venues such as church halls and community centres.

Workshops are hosted by a local municipality, county or stewardship group. Workshop hosts are responsible for securing a venue, soliciting participants through media advertising and coordinating registrations. The Working Well programs partnership is responsible for workshop scheduling; delivering presentations and ensuring workshop requests are balanced with technical capacity and available resources. Workshop presentations are delivered by groundwater and water well experts from partner agencies such as AENV, AFD, and PFRA.

2.4.2 Interactive activities, demonstrations and exhibits

First hand experiences are recognized as an effective method for increasing people's interest in and understanding of an issue. Interactive activities are incorporated into the workshops including an exercise where participants learn how to interpret the information on their own well drilling report by using it to draw a well diagram. This exercise builds the participants' understanding of where their water supply is coming from, and how the well has been constructed to isolate the water zone and keep it protected from sources of contamination. It also provides the well owner with a clearer picture of the rate at which the well should be pumped at to ensure a sustainable supply of water. A suite of other extension tools such as an 8-foot high water well model and a groundwater flow model are also used to convey concepts to participants.

2.4.3 Information resources

Engaging and accessible information resources such as fact sheets, posters and brochures serve a variety of purposes. They are used to promote the program, communicate key messages and act as a reference. Resources need to attract the reader's interest, hold their interest, and lead them to action. Information resources are based on a series of topics such as shock chlorination and best management practices. A website is also being designed to make this information readily available to the public.

2.4.4 Community outreach

Extending Working Well information and key messages will be maximized in several ways such as:

- distributing Working Well information to well owners at venues such as water festivals, agricultural fairs, home and garden shows, stewardship meetings and other community events.
- mounting posters in visible locations such as storefronts, post offices, municipal offices and Regional Health Authority rural offices.
- organizing speakers for community group meetings
- local media coverage including prepared articles and radio interviews.

2.5 Program Evaluation

An evaluation strategy is currently being developed for the Working Well program. Program evaluation will be necessary for informing program direction and determining if outcomes have been achieved. Evaluation will also be important for facilitating continuous improvement. Based on the evaluation results, the Working Well steering committee will decide if the project should be extended, revised or cancelled.

2.6 Program Highlights

Working Well has made significant progress since the pilot workshops in 2007. The following highlights some of these accomplishments.

2.6.1 Workshops

- 19 workshops were held across the province between January and July 2008 reaching more than 600 water well owners. (Figure 3).
- More than 20 individuals representing four government agencies have participated in workshop delivery.
- 100 percent of municipalities that hosted a workshop have requested additional workshops.
- More than half of workshop participants strongly agreed that the workshop provided information that would help them properly manage their water well.

2.6.2 Extension tools

A suite of extension tools and information resources were developed for the program including:

- Three fact sheets: Shock Chlorinating Your Well; Water Well Design and Construction; and Ten Ways to Protect Your Well and Groundwater Supply.
- A program brochure and poster.
- A media package including pre- and post workshop news releases.

- Identify strategies to broaden the reach of program messages (e.g., radio, press releases etc.)

The Working Well program is successfully satisfying public demand for information on proper water well management in a way that is comprehensible and easily understood.

REFERENCES

Chapman, K. 2007. Final Report: Pilot Water Well Extension Program, 36(1): 65 - 78.

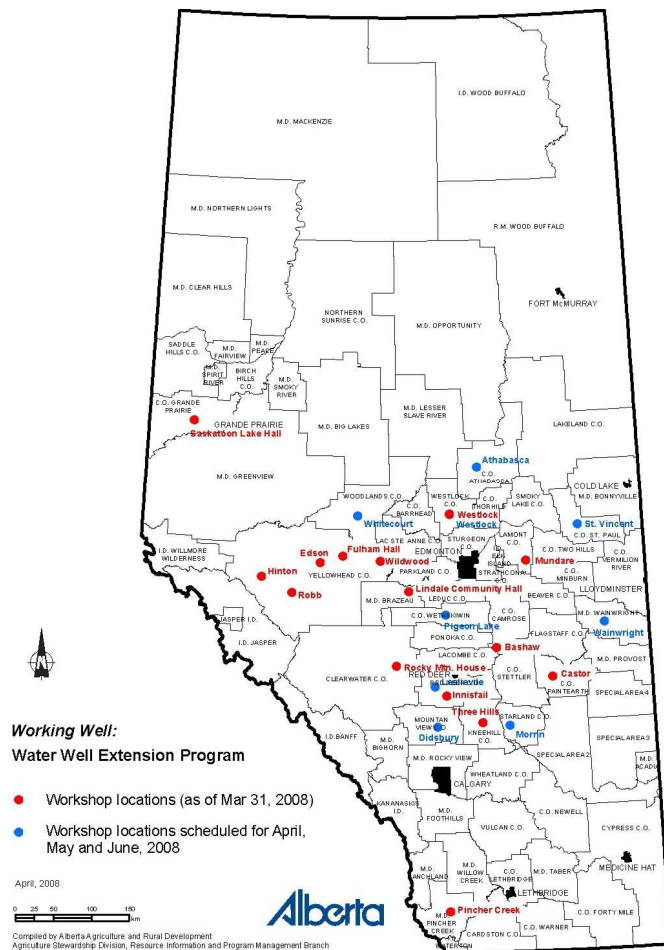


Figure 3. Working Well Workshop Summary

2.7 Conclusion

Working Well is a new program generating a groundswell of interest and support in Alberta. Moving forward, several priorities have been identified to expand and improve the program including:

- Continued development of high quality extension tools and resources (e.g., fact sheets, website)
- Finalize the program evaluation strategy
- Continue to build capacity for workshop delivery including providing training to workshop presenters)