

Getting Climate Adaptation Tools Out There: A Workshop Process Guide

Based on the Okanagan Basin Water Board's **Keeping up with the Climate, Keeping up with Technology** workshop, March 2012.



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Introduction

Municipalities and local governments across Canada are facing unprecedented challenges due to rising climatic variability. They are seeking ways to modify existing polices, planning processes and infrastructure to meet these challenges. *Climate change adaptation* has been defined by Natural Resources Canada as:

[A]ctions that reduce the negative impact of climate change, while taking advantage of potential new opportunities. It involves adjusting policies and actions because of observed or expected changes in climate. Adaptation can be reactive, occurring in response to climate impacts, or anticipatory, occurring before impacts of climate change are observed. In most circumstances, anticipatory adaptations will result in lower long-term costs and be more effective than reactive adaptations. (Richardson 2010)

While local governments develop adaptation strategies on the ground, researchers, professional associations and senior levels of government are developing climate adaptation tools to support local decision-making. The value of these tools depends on the degree that tools are taken up by local governments, learned and applied. Unfortunately, there is often a gap between tool creation and tool dissemination.

To address this gap the Okanagan Basin Water Board (OBWB) launched its Climate Change Impacts and Adaptation Program (CCIAP), an innovative project to speed the uptake of climate change adaption tools by local government in the Okanagan. As Canada's driest region, the Okanagan Basin in British Columbia has been identified as one of the country's most vulnerable to climate change (Kundzewicz et al, 2007; Langsdale et al, 2007). Water resources are at risk and, as a watershed-based organization whose purpose is "to provide leadership to protect and enhance quality of life in the Okanagan Basin through sustainable water resources management" (OBWB 2009), OBWB is uniquely positioned to promote climate change adaptation. The project's aim of getting tools out there to engineers and planners at the frontlines of climate change adaption was achieved through a series of four workshops given in Kelowna in spring of 2012.

- Green Bylaw Tools Workshop Deborah Curran, author of the Green Bylaws Toolkit, the
 Groundwater Bylaws Toolkit, and the upcoming Soil Bylaws Toolkit walked participants through
 various options for creating bylaws to protect green infrastructure, minimize climate change impacts
 and take advantage of opportunities to improve ecosystem and community health through
 adaptation.
- Water Balance Model (WBM) Workshop Co-creators Kim Stephens and Jim Dumont presented the Water Balance Model, a tool for optimizing site development designs to promote stormwater management and support stream health. Participants were introduced to the history and logic of the model, and then taken through a hands-on training session, with assistance by Ted van der Gulik, another co-creator of the model.



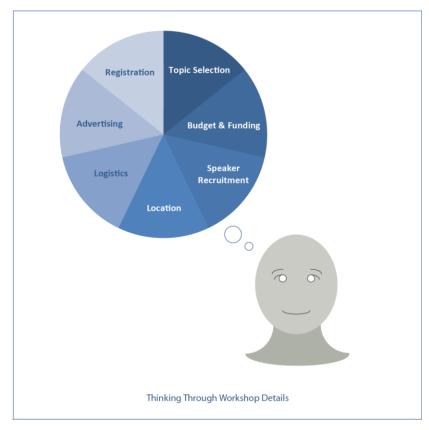
Figure 1. Six Phases of the OBWB Workshop Planning Process

- Foreshore Inventory and Mapping (FIM) Workshop Jason Schleppe, biologist and field director, introduced participants to the Foreshore Inventory and Mapping methodology and reviewed three different access points for obtaining photos, video, and survey data on BC lakes that have been assessed to date in a hands-on training session. FIM data can be used to identify ecological assets for planning purposes, as evidence of non-compliance, or to monitor and track change along shorelines over time.
- Public Infrastructure Engineering Vulnerability Committee
 (PIEVC) Protocol Workshop Engineering consultant Don Dobson
 explained the Public Infrastructure Engineering Vulnerability Committee
 Protocol to participants and ran through vulnerability assessment
 exercises with them. The PIEVC Protocol allows engineers to assess
 infrastructure vulnerability to climate change and recommend
 mitigation measures to adapt infrastructure and reduce risk.

To help other organizations bring climate change adaptation tools to their areas this training manual has been developed based on OBWB's workshop planning process and lessons learned through running this series. Wherever possible examples have been included from workshop experiences to illustrate things that worked well and opportunities to do things better. A common theme that emerged from all four workshops is that while climate change adaptation is a necessity, it is also a great opportunity to revise old approaches, to develop in ways that support healthy and resilient ecosystems and communities.

Overview of the Workshop Process

Workshop planning involves a combination of research, content development, logistics and event planning. Figure 1 depicts the six stages of the Water Board's workshop planning process, each of which will be covered in detail in the remainder of the training manual. Checkmarks at the beginning of each section highlight tasks that should be completed at each stage.



From Workshop Idea to Reality

The initial phases of this planning process center around coming up with an idea of exactly what is to be achieved by the workshop, specifying a target tool and scope, and then finding the funds to realize the project. Later phases focus on getting the details in order, both logistically and in terms of working with presenters to ensure that content aligns with workshop objectives. The last two phases see plans put into action, running the workshop and debriefing afterwards to learn from the experience.

Thinking through workshop details involves strong organization skills

and a good tracking system. Workshop coordinators should consider creating a Master Tracking sheet in Microsoft Excel, or using another project management tool to keep track of all of the details of the workshop planning process. Having the details in one accessible location is helpful to ensure that everything and everyone are where they need to be on the big day.

Phase 1: Identifying a training need

- **✓** Identify a training need
- ✓ Select a topic or tool
- **✓** Define target audience

There are two approaches to identifying a training need. The first starts with discovering a training gap, then seeking out tools to fill that gap. For example, if a municipality determined they have a training gap in local environmental reporting, they could search for tools to support improved reporting.

Alternatively, the second approach begins with selecting a tool, then doing an assessment to figure out how to disseminate it. In this example, one might have a tool to for environmental reporting and would need to assess who would find this tool useful to improve reporting. With either approach, taking the time to see if similar training sessions have been offered recently in the region is worthwhile to confirm that there is adequate demand for a workshop.

In the OBWB case, the genesis of the idea to run a series of workshops on tools came out of requests for more information and hands-on training by municipal attendees of a 2010 conference held in Kelowna on stormwater management entitled "From Rain to Resource". One local planner commented that she

did not believe existing tools were getting out to people who could use them. Water Board staff recognized a gap in tool uptake and set out to design a project to get tools into the hands of local governments with the hope of improving regional climate change adaptation.

Once the idea of what training is needed has been defined, the question becomes who needs to be trained to meet workshop objectives? Deciding on a target workshop audience is important because the workshop design, in terms of depth of technical detail and content, should be tailored to who is in the classroom. The following questions can help workshop planners to define their target audience:

- Who do we want to reach with our workshop(s)?
- What are we trying to achieve? Are we aiming to train a specialized group of experts (ex. engineers)
 to use a new tool or method, or are we trying to introduce the resource to a wider range of
 potential users (ex. engineers, planners, stakeholder groups)?
- What level of technical depth would we like the workshops to get into?

If there is enough demand to run multiple sessions on the same topic, organizers can tailor workshops to different audiences; for instance, providing different workshops for planners and engineers who may use tools differently and have different kinds of technical understanding.

For the climate change tools workshops, as soon as OBWB workshop planners knew which tools they wanted to use they set out to identify who would make the best use of them. They decided to leave the registration open to a wide range of participants, but targeted advertisements to those people they identified as primary users – local government engineers and planners.

Phase 2: Developing a budget and securing funding

- **✓** Develop budget
- **✓** Apply for funding

After the idea for a workshop has been formulated, a project budget needs to be drawn up. Expenses to keep in mind include:

- **Workshop planning** staff time and any contracting resources, such as a registration service, approvals for professional credits, advertising or other costs associated with the administrative aspects of a workshop.
- Workshop facilitation and expenses Fees for renting facilities, catering, and speaker stipends and travel expenses.
- **Reporting (optional)** Funds to hire a note taker, technical writer, and/or graphic designer, and any printing costs.

With a clear view of what funds are needed, the next task is to apply either internally or externally for funding. To turn a workshop idea into reality funding must be in place before moving on to the planning phase, otherwise an organization risks wasting staff time and resources. Planning workshops in anticipation of funding may result in the need to plan a workshop twice if funding does not come

through in time, wasting valuable staff time and any funds used for deposits on bookings or registration service fees.

Workshop registration fees are another source of revenue to support workshops; however it is important to keep in mind the need to balance fee prices with potential impacts on recruitment of participants. Fees should not be prohibitively expensive for the target audience, or workshop attendance will fall and the objective of getting a tool out there may be compromised. For OBWB's climate change workshops, fees were set relatively low in order to ensure that participants from large and small municipalities could attend, and workshop costs were largely covered through a combination of grant and internal funding.

When funding has been secured it is time to move on to the workshop planning phase.

Phase 3: Planning a Workshop

- **✓** Recruit speakers
- ✓ Work with speakers to develop workshop content
- **✓** Find a workshop location
- **✓** Set a date and time and book location
- **✓** Arrange for catering
- **✓** Book travel and accommodation for speakers
- **✓** Prepare handouts

Planning a workshop takes a lot of work and attention to detail to ensure that the training runs smoothly. The planning phase is when the project really becomes defined and the details of the event are arranged.

Speaker Recruitment

One of the most important elements in hosting a successful workshop is choosing the right speaker or instructor to lead the training session. They set the tone, guide the class through background material and exercises, and ultimately determine how well the workshop goes. For training in technical tools, OBWB workshop planners wanted speakers to be experts as close to the actual project as possible – authors, tool creators, or people who did the fieldwork. Deborah Curran is the lawyer who wrote the Green Bylaws Toolkits. Kim Stephens and Jim Dumont, along with Ted van der Gulik, created the Water Balance Model. Jason Schleppe does foreshore inventory mapping in lakes across BC and wrote the manual on the methodology. Don Dobson was involved in all stages of the PIEVC protocol assessment work in Castlegar, BC. Each of these experts has in-depth knowledge of the tool they were teaching, which allowed them to present fundamentals and to answer any questions raised about a tool's design or application.

Tip: Speakers are often busy professionals and it helps to have funding to pay for their expenses and an honorarium.

Collaborating with Speakers on Workshop Content

Speakers may be the stars of the show; however, it is their collaboration with workshop planners behind the scenes that shapes how a workshop will unfold. A good script – one that is balanced and meets a training project's objectives – is essential if a workshop is going to live up to participants' expectations.

Recommendations for working with speakers to create a dynamic, hands-on training session:

- Discuss training objectives with speakers and work with them to develop an agenda that is
 aligned with the workshop's purpose. For hands-on training, ensure that the agenda has the
 right balance between background information and hands-on training or discussion.
- Early in the planning process determine how much time is needed to get through presentation materials and have a complete hands-on training session, then set workshop length to accommodate both. This lesson was learned in the Water Balance Workshop, as there was simply not enough time to get through the background presentations that laid the foundation for understanding how the model worked and working through an entire simulation to achieve a desired outcome. The half-day session would have been better as a full day workshop, with background in the morning and hands-on training in the afternoon.

Tip: For computer exercises, recommend that instructors run through a standard example first to acquaint people with their system's interface, and then move on to a groupdetermined example to walk people through the decision-making process. This way the two sides of the learning process – familiarity with the interface and understanding of the decision-making process – are dealt with separately and people are less likely to get lost.

- Closer to the workshop date review slides with instructors and discuss time allocation. When there are multiple speakers, set target times for each presentation and have them coordinate to minimize content overlap in their presentations. If there appear to be too many slides for the allotted presentation time, work with speakers to prioritize slides. Re-emphasize that hands-on training is the workshop's main objective and having enough time for training exercises is crucial.
- Encourage speakers to foster a learning environment by tailoring their presentations to suit their audience and by promoting discussion. In the Green Bylaws Workshop Deborah Curran used an ice breaker exercise to get a sense of who was in the audience and what they wanted to get out of the workshop. She then proceeded through her presentation relatively quickly, cutting out pieces she felt were less relevant to the crowd, and prioritizing time for discussion of issues as she went along over getting through all of the content. This flexibility allowed for a good balance between speaker presentation and group engagement, and made people feel comfortable about asking questions at various points, turning the presentation into a starting point for discussion.

Tip: Encourage speakers to be flexible about their presentations by skipping over materials that they think are less relevant to those in the room and by making clear from the outset that questions are welcome at any point in the workshop.

- Be sure to include breaks when setting the agenda. If possible, have presenters plan their
 presentations so that if there is any portion that is particularly complex or data intensive that it
 is followed by a break, so people can get up and move around, then come back refocused. This
 strategy worked well in the Foreshore Inventory and Mapping Workshop where the audience
 welcomed a break after an intense review of inventory variables.
- Prepare a handout for participants. Include information on how to access tools and whom to
 contact for further information or training. In both of the Water Board's computer lab training
 sessions, people wanted to know how they could access the tools, what data would be available
 after the session, and where to find out about subscription rates for online tools.

Location Selection

Ideally, the workshop's geographic location should be centrally located and easily accessible to speakers and participants. If speakers or participants need to fly in, as was the case for OBWB workshops, choosing a city with an airport is a good idea.

Once a general location has been decided on, finding the right venue involves discussions with speakers about what is needed to run a particular training session and then locating a space that meets these needs. Different considerations have to be taken into account depending on whether a workshop will be run in a classroom or computer lab setting.

Questions to ask when defining room requirements:

- Will this be a computer lab or classroom session?
- How many people will be running the session?
- What is target range in terms of number of participants (min and max)?
- Is a projector or other audio-visual equipment needed?
- Are there any other specific features the speaker would like to have in the room?

Additional questions for computer lab sessions:

- What are the operating system requirements for the tool?
- Is there a particular web-browser that needs to be used?
- Are there software or files that will need to be loaded?
- How much bandwidth is required to run the tool and how many users can be on the system at the same time?
- Do support staff need to be trained to help with exercises?
- Will logins have to be created to allow workshop participants to access the tool?

The shape and size of the room, as well as the arrangement of tables or computer stations impacts the workshop environment. In classroom sessions, room size and table arrangements will affect the workshop atmosphere. Arranging tables so that participants are facing each other (layout 1) or having a round table (layout 2) is more conducive to discussion than a lecture style table layout (layout 3). The Green Bylaws workshop began with tables arranged in lecture style, and then was changed for the discussion half of the session to a rectangular formation similar to layout 1.

Classroom table arrangements







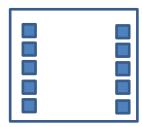
Classroom Layout 1

Classroom Layout 2

Classroom Layout 3

In computer lab sessions terminals are most likely fixed, either in a central island with participants facing each other (layout 1) or in rows along the walls (layout 2). Both layouts will work for a tool training session; however, layout 1 will be easier for one instructor to manage during exercises as they can see all of the participants from one central location. The Water Balance Model and Foreshore Inventory and Mapping workshops were held in a computer lab similar to layout 2. The benefit of this layout was that having participants face each other created more of a group dynamic, and there were enough staff on hand to assist both sides of the room.

Computer lab layouts





Lab Layout 1

Lab Layout 2

Logistics

Logistical details are the most important ones to track in a planning spreadsheet or project tracking system. Keeping track of contact names and phone numbers, details that have been agreed upon with venues and caterers, and other logistical elements is critical for any workshop coordinator.

Set a date and time and book location

Factors that need to be taken into consideration when scheduling a workshop include:

Speaker availability

- Room or computer lab availability
- Any conferences or events that may overlap for target audience
- Obstacles to participant availability (such as council day for municipal employees)

Identify options for dates and times, run them by speakers and venues, and if targeting a specific audience (such as staff in one municipality) be sure to ask if there are any regular meetings or events that would conflict.

Setting a date and booking venues can be challenging, particularly when running multiple workshops in a series. OBWB workshop planners had to plan around the computer lab's regular class schedule and speakers' availability. They ended up scheduling the workshops in conjunction with a water conference that some of the speakers were attending to reduce the number of trips they had to make to Kelowna. If planning timing around a conference, work with conference organizers and do not compete for audiences.

Catering

Catering can be done later on in the planning process, once participants are registered and organizers have a good sense of how many people will be attending. How much catering is required depends on how long the workshop will be. For a half-day session, plan on a coffee break with snacks such as pastries and fruit. If planning a full-day session, plan on having one or two coffee breaks and lunch.

Arrange flights and accommodations for speakers

Workshop coordinators can offer to arrange flights and accommodations for speakers or, if speakers wish to arrange their own travel, make recommendations for flight timing and places to stay. When booking flights consider whether or not someone will have to pick-up and drop-off speakers at the airport and, if there are multiple speakers, try to arrange flights that come in at roughly the same time. Choose accommodations near the workshop venue and if there are multiple speakers try to have them stay in the same location to make pick-ups and drop-offs easier. If speakers will not have vehicles keep in mind they will likely want to be within walking distance of restaurants.

Coordinate transportation for speakers

If necessary, coordinate rides for speakers from the airport or train station to their hotel, and to and from the workshop.

Phase 4: Advertising and Registering Participants

Attracting people from the target audience identified in Phase 1 is the next step. By this stage the workshop agenda and speakers have been established and it is time to reach out to people through various channels and give them an easy way to sign-up for the workshop.

Advertising

- ✓ Choose a name for the workshop that reflects its value to users
- **✓** Register course for professional development credits
- **✓** Advertise on host organization and partners' websites
- ✓ Have ads posted on professional organization websites

- ✓ Add link to staff signatures to advertise by email
- **✓** Email contacts an invitation
- ✓ Call target audience organizations and invite them to participate

Choosing a good name

A workshop's name is the key to an effective workshop marketing strategy. In addition to referring to the name of the technical tool being taught, a good workshop name should describe what value the tool offers to users. Taking care when formulating the name of a workshop is important because it may be the only item a potential attendee sees when exposed to an advertising channel, for example in a table of upcoming professional development events or in the subject line of an email. If the name does not catch the eye of a potential participant, they may decide not to attend without even looking at the workshop description.

One of the workshops given by the Water Board, the PIEVC workshop, was not well subscribed despite the fact that it is extremely relevant for climate change adaptation. In hindsight, workshop planners suspect that the name 'Public Infrastructure Engineering Vulnerability Committee Protocol Workshop' did not effectively communicate that the workshop focused on assessing the vulnerability of municipal infrastructure to climate change risks. The name might have been improved by making a direct reference to municipal climate change adaptation, reflecting the value of the tool to users.

Workshop marketing channels

Workshops on technical tools are typically geared to specialized audiences; therefore targeted marketing channels directed at specific industries or professionals are highly appropriate for advertising them. Some targeted marketing channels to consider advertising on when developing a workshop marketing strategy include:

- Host organization and project partners' websites
- Professional association websites
- Online community forums relating to water
- Social media (facebook, twitter or linkedin)
- Industry newsletters or e-newsletters

Tip: Try to get the workshop registered with a professional association (like the Association of Professional Engineers and Geoscientists of BC) as a professional development course that counts towards annual professional development credit requirements. Then the workshop will be advertised under professional development rather than events, and it will be easier for people to justify the time and expense of attending the workshop to their superiors.

Other advertising strategies include:

- Adding a link to staff signatures
- Emailing a workshop notice to contacts in the host organization's database
- Calling the relevant department in a target organization and inviting them to participate

To promote the Climate Change Impacts and Adaptation Program workshops, OBWB staff put online ads on their website; emailed out a request to their master contact list asking that they pass on workshop information to anyone who might be interested; advertised through professional associations including the Planning Institute of BC, the BC Water and Waste Association, and the Association of Professional Engineers and Geoscientists of BC; advertised through Okanagan Waterwise on facebook and twitter; and added links to staff's email signatures. Far and away the most effective advertising method used was making direct calls to local planning offices.

Registration

- **✓** Use a registration service (such as Civic Info BC) to handle registration
- **✓** Set up logins for computer lab training

An easy way to set up and manage workshop registration is to use an online registration service. OBWB used CivicInfo BC to do their workshop registration. For information on CivicInfo BC's services see the services page on their website: http://www.civicinfo.bc.ca/70.asp#13.

Depending on the tool, a workshop registration list may need to be used to set up system logins for participants to be able to access the tool, as was the case for the Water Balance Workshop. Remember that all participants should have the same level of access to the tool in order for online screens to appear the same way. Instructors may want to create a sign-in for themselves that is the same level as the participants' access if they typically have more advanced administrator access, to guarantee that the screens they have on the projector will match those on the participants' monitors.

Phase 5: Running a Workshop

- **✓** Send out reminder email to workshop participants the day before
- **✓** Confirm catering
- ✓ Pick up and drop of speakers (if necessary)
- **✓** Review workshop agenda with speakers and staff
- **✓** Assign support tasks
- **✓** Prepare classroom (arrange tables, load files, set up projector, etc.)
- **✓** Register participants as they arrive
- **✓** Distribute any written materials

When the big day arrives all of the major planning has been completed and it is time to put everything into action. If possible the workshop coordinator should have some support staff to help them take care of all of the details, particularly if running multiple workshops simultaneously. At least one staff member should be on hand to support the speaker in each session.

There are a few final tasks that should be completed in the days immediately before a workshop:

- Confirm catering dates, times and quantities.
- Verify availability of audio visual equipment. If using a projector installed in the room, consider bringing a backup laptop and projector in case of technical difficulties.
- If needed, coordinate rides for speakers.

- The day before the workshop a reminder email including time and location details should be sent out to all registered participants.
- Review workshop agenda with speakers and staff. Assign staff tasks and make sure everyone is on the same page.

The following tasks should be completed on the day of the workshop:

- Pick-up and drop off of speakers
- Classroom preparations:
 - Arranging tables in the formation preferred by the instructor
 - o Loading any necessary files or programs onto computers in the lab
 - Setting up a registration sign-in table
 - o Connecting computer to projector and testing audio visual equipment
 - Setting up catering
- Note taking for any materials to be produced from the workshop
- Answering questions and assisting in a computer lab setting. Note this may require some pretraining of staff so that they can answer the simpler questions participants may have.

At the end of the day it is time to pack everything up, get speakers to the airport, and feel the satisfaction that comes with getting good tools out there into the hands of people who can apply them to create a more sustainable future.

Phase 6: Post-workshop evaluation and info distribution

- **✓** Debrief speakers
- ✓ Use an online survey or questionnaire to get feedback from participants
- ✓ Prepare any reporting materials

To learn from the workshop process it is important to elicit feedback from participants and speakers on what went well and what could be better. OBWB workshop coordinator Melissa Tesche asked participants in each session to give her feedback on the workshops in person or via a short online survey done through Survey Monkey. She also debriefed speakers to hear their views on how the workshops went while driving them back to their hotels. What she learned has been used to add depth and detail to this guide in the hope that it will help others to run similar sessions smoothly and effectively, getting even more tools out there in the future.

Checklist for Workshop Coordinators

Phase 1: Identifying a training need

- ✓ Identify a training need
- ✓ Select a topic or tool
- ✓ Define target audience

Phase 2: Developing a budget and securing funding

- ✓ Develop budget
- Apply for funding

Phase 3: Planning a Workshop

- ✓ Recruit speakers
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- ✓ Register participants as they arrive
- ✓ Distribute any written materials

Phase 6: Post-workshop evaluation and info distribution

- ✓ Debrief speakers
- Use an online survey or questionnaire to get feedback from participants
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Resources

Links to Tools from OBWB Workshop Series

Green Bylaw Toolkits:

- Green Bylaws Toolkit http://www.greenbylaws.ca/
- Groundwater Bylaws Toolkit http://www.obwb.ca/groundwater bylaws toolkit/
- Soil Bylaw Toolkit (Coming soon see www.obwb.ca)

Water Balance Model (WBM): http://waterbalance.ca/

Foreshore Inventory and Mapping (FIM):

• Okanagan Habitat Atlas: http://cmnmaps.ca/OKANAGAN/

Public Infrastructure Engineering Vulnerability Committee Protocol (PIEVC): http://www.pievc.ca/e/index.cfm

Links to Professional Associations in BC

Association of Professional Engineers and Geoscientists of BC (APEG): http://www.apeg.bc.ca/

BC Water and Waste Association (BCWWA): https://www.bcwwa.org/

Planning Institute of British Columbia: http://www.pibc.bc.ca/

References

Kundzewicz, Z.W., L.J. Mata, N.W. Arnell, P. Döll, P. Kabat, B. Jiménez, K.A. Miller, T. Oki, Z. Sen and I.A. Shiklomanov (2007). Freshwater resources and their management. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 173-210.

Langsdale, S., A. Beall, J. Carmichael, S. Cohen, C. Foster (2007). An exploration of water resources futures under climate change using system dynamics modeling. In *The Integrated Assessment Journal* 7(1). 51-79.

Okanagan Basin Water Board (2009). *Water Management in the Okanagan*. http://www.obwb.ca/fileadmin/docs/obwb_brochure.pdf (accessed March 16, 2012)

Richardson, G. R. A. (2010). *Adapting to Climate Change: An Introduction for Canadian Municipalities*. Ottawa: Natural Resources Canada.