



Report #7



Preventing the Invasion: 4th Annual Forum and Annual General Meeting

January 22-23, 2008

Funding provided by:



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Acknowledgements

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Overview

Preventing the Invasion, the Invasive Plant Council of BC's (IPCBC) 4th Annual Forum and Annual General Meeting (AGM), was held in Richmond, BC from January 22nd to January 23rd, 2008. This forum set a new attendance record with a total of 148 participants – thank you for your interest and support!

The focus of Preventing the Invasion was to share practical solutions to prevent the introduction and spread of invasive plants in BC. Concurrent workshops and plenary sessions provided an opportunity for a variety of land managers, organizations, and others to share their approaches, perspectives, successes, and challenges in preventing the establishment of unwanted invaders. Key themes included forest stewardship, building invasive plant lists, selecting responsible seed mixtures, learning from others, and engaging youth and communities. Presenters and participants from across Canada and the United States attended Preventing the Invasion, which illustrated that invasive plants know no boundaries and cross-border collaboration is key.

Overall, participant feedback was positive with key highlights being the level of organization and coordination; quality and diversity of presenters topics; opportunities to network, collaborate, and share expertise; excellent representation from a variety of individuals and organizations; and level of national and international participation.

Excellent feedback was also provided with regards to improvements for next year's forum and AGM, which is paramount in determining forum logistics, topics, and potential speakers.

This report provides a summary of forum sessions, perspectives meetings, and the AGM. Copies of several presentations are available for download from the Council's website (www.invasiveplantcouncilbc.ca).

As the Invasive Plant Council continues to evolve and diversify its activities, a special thanks goes to all those people who have volunteered time and provided expertise to the many committees, projects and documents produced over the last year. Your guidance and technical direction has helped ensure that the Council's work reflects the diverse range of knowledge and experience in managing invasive plants in British Columbia. Additional recognition is extended to all of the Directors and Committee Chairs who have stewarded the Council through the growing and changing demands to improve invasive plant management in BC and beyond.

The purposes of the Invasive Plant Council of British Columbia are: 1) to educate the public and professionals about invasive plants and their risk to ecosystems and economies through activities such as workshops, seminars, and newsletters; and 2) to fund research relating to invasive plants and make this available to the public.

An Ecological Approach to Invasive Plant Management



An Ecological Approach to Invasive Plant Management (pre-conference workshop) was delivered by Dave Polster in partnership with the Greater Vancouver Invasive Plant Council (GVIPC) on January 21st. This day-long workshop focused on the concept that if you **understand the ecology of target invasive plants** and develop informed strategies, management systems will **increase in effectiveness**. The morning session was held inside where participants were given an overview of the concept and many tools to enable them to make informed land management decisions. Armed with these new tools, participants travelled to the nearby **Iona Beach Pilot Project** where they were able to develop management recommendations and test out a variety of control options. If you are interested in learning more about this workshop, please contact the GVIPC by visiting www.gvipc.ca or contact Dave Polster by email at d.polster@telus.net.



Inaugural Meeting of Provincial Weed Council's Across Canada.



Duncan Barnett, Chair presents Leslie MacDonald, Ministry of Agriculture and Lands a departing gift from the IPC Board of Directors.



Forestry Panel: Warren Wartigg, Peter Mohammed (Director), Cathy MacKay, Doug Noren, Dave Borth (Director).

Session Highlights

CONCURRENT WORKSHOPS

Concurrent workshops were held on January 22nd and 23rd. Speakers in these sessions presented their perspectives, successes, and challenges as they related to invasive plant management and prevention at a regional, provincial, and national level.

Reducing the Impact of Invasive Plants

These sessions were held January 22nd and focused on providing practical approaches to invasive plant management related to forest stewardship and responsible seed mixes.

SESSION 1: Forest Stewardship

Forest Stewardship: Practical actions to reduce invasive plant spread during forestry operations

Doug Noren, Pope & Talbot

Invasive plants must be addressed in Forest Stewardship Plans, which are required of all licensed tenures under the *Forest and Range Practices Act*. Invasive plant management is also an ethical responsibility: we do it for future generations. Prevention is the key, just as for triple bypass heart surgery. An early response can be efficient and inexpensive, whereas the removal of an established invasive plant population is exponentially more expensive. Unfortunately, the best successes receive the least attention.

Pope and Talbot's Forest Stewardship Plan stipulates staff training on invasive plants, annual reporting to the Ministry of Forests and Range of new infestations, and participation on the Boundary Weed Management Committee. Staff have distributed guidebooks and the carabineers, entered GPS locations of infestations on the committee's database for treatment, and identified hotspots for seeding with Canada No. 1 grade seed or better.

Four key components of invasive plant management are: training of personnel, reporting, reseeding, and minimizing seed transfer by cleaning equipment and machinery yards. The IPCBC's website and T.I.P.S. documents are very useful, and invasive plant managers are encouraged to participate on their local weed committee, as it is easier and more effective to share the job.

Invasive Plant Management from a Coastal Forest Industry Perspective: An overview of regional approaches and challenges

Warren Warttig, International Forest Products Ltd (Interfor)

The Premier's intention for British Columbia to have the world's best environmental management is good news, but needs to be proven in action. Invasive plants needs to be better defined, as one person's forage may be another person's invasive plant. For example, the Clayoquot Panel report designed seeding with only native species, which are difficult to define.

There are many limitations to invasive plant management, as shown along the highways of Vancouver Island. Some sources are unexpected, such as office parking lot areas. Large-scale projects require the removal of plant sources, easier awarding of permits, and more funding under the Forest Investment Account.

Interfor has developed a risk matrix by biogeoclimatic variant that identifies drier sites as having a higher risk of invasive plant establishment due to their ability to outcompete native vegetation. Invasive plants may also pose a higher fire hazard. Belief systems are difficult to change, such as ensuring that operators check equipment for plant parts and seeds before moving to a new location.

Spatial Risk Modeling of Invasive Plants: Designing a practical management tool for the forest industry

Cathy Mackay, EDI Environmental Dynamics

IPEST (Invasive Plant Ecological Susceptibility Tool) is a predictive model for prioritization of invasive plant management. The project has five phases: model design, development, testing, finalization, and management strategies and draft indicators.

The Prince George Timber Supply Area has approximately 2,300 sites in the Invasive Alien Plant Program that host 20 invasive plant species listed under the *Forest and Range Practices Act*. The spatial risk assessment is used to optimize resources over a large and diverse area. IPEST uses nine types of field data based on three causes of succession. An example for marsh plume thistle in the Bowron Valley found much of the area high risk. The model will be ready very soon, with ground-truthing planned for this summer.

SESSION 2: Responsible Seed Mixes

De-mystifying the Canada Seed Act: An overview of the Act as it relates to invasive plants



Seed Panel: Don Biggan, Jamie Reader, Dave Polster, Don Gayton and Lisa Scott (Director).



Lisa Scott, South Okanagan Similkameen Invasive Plant Society.

Jamie Richardson, Canadian Food Inspection Agency (CFIA)

Canada's Seed Control Act was established in 1905 and has been amended over time. Today's Seed Regulatory Framework addresses reducing noxious weed introductions, monitoring quality and efficacy, ensuring accurate labelling, and facilitating domestic and international trade. These measures are taken to benefit health and safety of humans, livestock, and the environment.

Canada's Pedigreed Seed System separates seeds as Pedigreed Seed or Common Seed. Seed grading is unique to Canada. It integrates seed quality aspects and provides an overall indicator to inform the consumer of weed seed content, other crop content, and germination. In Canada, there are 36 Grade Name combinations. CFIA works in close cooperation with a number of national and international organizations.

The Weed Seeds Order of the Seeds Regulations was established in 2005. There are six Weed Seed Order Classes ranging from Prohibited Noxious (Class 1) and Primary Noxious



(Class 2) to Secondary Noxious (Classes 3 to 5) and all other plants not already listed as a weed or a crop (Class 6).

Since the *Seed Act* defines seed as “any plant part of any species belonging to the plant kingdom, represented, sold or used to grow a plant”, grain fed to animals, including birdseed, cannot be regulated under the Seeds Act and Regulations. Other key projects CFIA is involved in include:

- Increased monitoring of imported seed with an emphasis on seed of high risk crop types;
- Surveying of small packet seeds, birdfeed, and birdfeed mixes;
- Sampling of imported grain, screenings of grain/seed, and imported hay and straw;
- Development of Risk Management Documents for several high risk species; and
- Development of the Canadian Invasive Plant Framework and the CFIA Invasive Plant Policy.

For more information on the *Weed Seeds Order* of the Seeds Regulations, visit www.inspection.gc.ca/english/plaveg/seesem/seeseme.shtml.

Restoration Seed Mixtures: Options to reduce the introduction of invasive plants in restoration seed mixtures

Don Biggin, Pickseed Canada Inc.

In 1996, a coastal native seed collection program was initiated and projected to span over 15 to 20 years. In 2003, the existing seed stock was reviewed from a coastal native grass perspective. In 2005, resulting from a meeting with the Ministry of Forests and Range, Don’s invasive plant awareness significantly increased and gave further direction to developing restoration seed mixtures.

Seed mixture development can include the following steps:

1. Begin with a mixture made up of native, appropriate agronomic, or a combination native and appropriate agronomic non-invasive or low invasive species.
2. Review the seed testing certificates to confirm that each of the species used does not contain invasive plants or other crop seeds.
3. Determine if there are invasive species on the site to be seeded.
 - a) If present, place them under stress and seed the appropriate seed mixture.
4. Try to coordinate seeding with favourable weather conditions in the spring or very early fall and if possible use a suitable starter fertilizer.

Currently, two restoration mixes have been created by Pickseed: 1) Sodgrass Mix (roads and erosion/invasive plant control) and 2) Bunchgrass Mix (immediate protection where invasive plants are not present). Both were developed for Coastal BC, but they will work in other regions of BC. Seed mixtures specific to the interior and central regions of BC are not yet developed due to limited funding.

Key issues associated with seed mixtures include viability and cleanliness. Questions also arise as to which production method is more effective – hand collection or commercial production? To the best of Don’s understanding, molecular screening of seed strains is not a current practice.

In summary, Pickseed’s seed stock supplies will be increased and there is no tolerance for invasive plants within seed stocks. Additionally, Pickseed has monitoring programs in place for both seed mixtures as described above.

Seeding Dos and Don’ts: An overview of key issues related to seeding and seed mixtures

Don Gayton, Forest Research Extension Partnership (FORREX)

Don specializes in dryland ecosystems and believes there is one key point associated with invasive plant management: invasive plant control equals niche control. Therefore, do not create a vacant niche (e.g. soil disturbance) and if a vacant niche is created, fill it with a non-invasive species before invasive plants establish themselves. All niches are different and all plants will behave differently in different niches.

Some of Don’s top invasive grasses include crested wheatgrass, Kentucky bluegrass, Canada bluegrass, and smooth brome grass. For example, crested wheatgrass saved prairie soil in the ‘30s but now exists in a monoculture. Therefore, it has captured the site and stopped ecological succession. Others to watch for include timothy, tall wheatgrass, and orchardgrass.

Over the years the exercise of seeding has suffered from afterthought. Seeding is a precise activity and benefits will be achieved if this approach is taken. Timing is crucial when seeding. Seeding in the late fall is recommended because germinating seeds will benefit from early spring growing conditions and site access is easier. However, seeding in the late fall must be completed prior to the first snow and only in areas where the seed will not be lost during spring freshet. Other options, if fall seeding is not appropriate, include early or late spring. Overall, it is important to note that a cool, wet period is needed for seeds to germinate. Overseeding generally doesn’t work and seeding into niches that are already captured is not likely to be successful.

Seed mixes are valuable; however, we have tended towards “shot-gun mixes”. To change this approach, we have to ask “what are we seeding and where”. For example, nurse crops such as fall rye should be explored. Nurse crops may be beneficial in capturing the site, providing shade, and buffering the micro-climate, which will assist in the successful seeding of forage crops. Fertilization may also be an option but may also lead to increased invasive plant establishment as they are the most successful at capturing excess and surplus resources. Another area that needs to be explored is inoculation of both legumes and non-legumes including alfalfa, sweet clover, and red clover. This may be challenging due to limited availability, with the exception of alfalfa, and tedious handling requirements.

Reclamation and restoration projects would benefit greatly from the use of a “Napoleonic” grass – one that is short, aggressive, and short-lived. A species with these characteristics will capture the site and hold it while slower growing species establish.

The native seed industry in BC is in its infancy and currently exists as backyard or greenhouse initiatives. Locally adapted seeds must account for BC’s diversity, complexity, and uniqueness. Develop local seeds to meet local needs (boutique approach). Alberta has a thriving industry partially due to restoration initiatives stemming from oil and gas disturbances. Near natives (e.g. EcoVar) may not be as invasive, but they raise the question of are we farther ahead?

Practical Solutions to Invasive Plant Management

These sessions were also held on January 22nd and focused on building invasive plant lists and learning from others.

SESSION 1: Building Invasive Plant Lists

Weed Impact Assessment in Washington State: Discussing risk assessment tools and their applicability to a Washington State Weed Impact Assessment

Tim Miller, Washington State Noxious Weed Control Board

In the mid-2000’s, the Washington State Noxious Weed Control Board began to consider the development of a formalized Risk Assessment when evaluating weed species for inclusion on the state Noxious Weed List. The Risk Assessment needed to be:

- A streamlined, systematic, transparent, *referenced*, defensible explanation as to why a plant is listed;
- An assessment that reflects reality in Washington State;
- A tool to help make the decision process more objective; and
- A check-list to ensure that all aspects of the weed’s ecology, physiology, and performance elsewhere were considered before it is listed in Washington State.

According to the Washington State model, Risk Assessment criteria are broken into sections (A to C) and Risk Elements (1 to 6). Points are assigned to each of the 6 Risk Elements (Habitat Suitability in Washington, Dispersal Potential, Economic Impact, Environmental Impact, Entry Potential, and Statewide Distribution) and totaled to provide a numerical ranking. Some subjectivity is involved and the process may be adapted slightly to address problem areas.

The Noxious Weed Committee tested this template during the 2007 listing process and found it to be accurate in some areas, however it needs improvement in other areas. Revisions will be made to the process in 2008.



Nab the Bully workshop involved active participation by attendees.

Selecting Species for Washington’s Gardenwise Booklets: An overview of the process for selecting species for the Eastern and Western Washington booklets

Alison Halpern, Washington State Noxious Weed Control Board

The objectives of the Gardenwise Booklets were to provide outreach to gardeners, educate nurseries, promote voluntary reduction of invasive plant sales, and remove already planted species. Gardenwise Booklets were developed with an attractive approach to celebrate non-invasives, focusing on the new and exciting, as well as being upfront about similarities and differences between plants.

Gardenwise focused on three types of invasive plants (invasive ornamentals still being traded, sold quarantined species, and invasives already planted as ornamentals) while highlighting non-invasive plant alternatives. A key step in the process was working with nurseries in identifying both invasive plants and alternatives. Non-invasive alternatives were collaboratively selected based on the following criteria:

- Suitable for Washington’s climate;
- Substitution for one or more of the invasive plant’s desirable characteristics;
- Readily available at wholesale nurseries;
- Sellable species (price, ease of growth, etc); and
- Alternatives included – but were not limited to – native species.

By educating the public and industry about the benefits (e.g. wildlife habitat) of local beauties, demand will increase for non-invasive ornamentals. For more information on Gardenwise, visit www.nwcb.wa.gov.

Assessing Processes and Criteria for Listing Invasive Plants: An overview of what could work in BC

Brian Wikeem, Solterra Resources Inc.

This presentation was based on a report prepared for the BC Ministry of Forests and Range that evaluated eight weed ranking and risk assessment procedures to assess their application in BC. The review revealed that numerous guidelines and protocols have been developed in North America, Australia, and the United Kingdom, but that protocols vary considerably in scope and purpose.

Over time, as protocols were developed, the number of questions has increased dramatically. A variable in all risk assessments is what and how a question is asked. Much of the studies needed to complete protocols properly have not yet been completed. Also, much of invasive plant biology is not currently understood.

Although all of the methods reviewed provide useful information for conducting weed-ranking elsewhere, none of the applications appear satisfactory in their present format for use in BC. A weed ranking system for BC should account for the unique features of the province including its geographic size; its diversity in climate, soils, and vegetation; and the biology of invasive plants relative to ecological conditions in the province. Criteria for land uses with different management priorities, legal responsibilities, and government policies also need to be considered in setting priorities. Questions that need to be asked when developing a system include where are the invasive plants growing and where else do these habitats exist. The system should also be based on known knowledge, without limiting possibilities, such as species adaptively. It is difficult to understand an invasive plant if it is not established; therefore, some focus should be on expert opinion and existing resources.

SESSION 2: Learning From Others

Common Tansy: Reducing the spread of Common Tansy in coastal and interior BC

David Ralph, BC Ministry of Agriculture and Lands

Common tansy is a noxious weed in five regions in BC and is most commonly found below 55°N. It is increasing in areas where established and present in all agricultural areas. Common tansy is an aromatic perennial that can create cumulative liver damage in livestock. It spreads primarily by seed and grows to 1.8 m tall. It is important to prevent the spread of seeds and root pieces by vehicle movement.



Control methods include pulling and digging individual plants, removing the entire rooting system to avoid regrowth, regular follow-up treatments, and re-vegetating disturbed soil with desired species. Cutting only prevents seed production and dispersal, but mowing before herbicide application may increase efficacy. Herbicide spraying is more effective than wipe-on treatment. Tordon (picloram) and Escort (metsulfuron methyl) are the most effective herbicides. Cultural control methods include adding alfalfa to a forage mix seed and soil testing for fertilization requirements.

The IPCBC has developed best management practices, or T.I.P.S., for the control of **common tansy**, which can be downloaded from the Council's website at www.invasiveplantcouncilbc.ca

Common tansy is best managed by prevention through good crop management, pulling and digging of individual plants at the initial incursion stage, and spraying herbicide followed by manual treatment for large, dense infestations.

Weeding out the Invaders: The Gitksan invasive plant management program

Merci Hillis, Gitksan First Nation

Through a partnership between the Gitksan and the Northwest Invasive Plant Council, the Gitksan proposed an invasive plant management project in 2004. The "Weeding Out the Invaders" project has five goals: train and develop skills, increase awareness through understanding and identification, conduct inventory and data entry into the Invasive Alien Plant Program, develop and implement an invasive plant management program (particularly in riparian areas), and report invasive plants of concern - particularly new infestations.

The project was designed to protect Gitksan territory from invasive plants. Recommendations require approval by chiefs before treatments. Plans include increasing project size with more individuals and communities involved, bigger crews, and an earlier start in the treatment season.

Field Scabious: Containing the spread of Field Scabious in Central and Northern BC

Bob Drinkwater, BC Ministry of Forests and Range

Field scabious is a tap-rooted perennial that grows to 1.3 m in height and produces up to 2,000 seeds per plant. It grows well in pastures, including healthy pastures, and it is moving into open stands, possibly



soon into forests disturbed by the mountain pine beetle. It is palatable early in the spring and grows in isolated incidences throughout BC due to high ecological amplitude. Field scabious is easily spread by vehicles.

Containment is the most frequently used system for field scabious: the problem area is delineated and treatment outside the line is mandatory, but optional within the containment area. Containment needs consensus by partners for the mandatory treatment and coordination of inventory and treatments. The containment line is entered into the Invasive Alien Plant Program.

Field scabious is best prevented because it is so difficult to remove once established. Cultivation can provide some control, but the plant's architecture generally gives herbicides low efficacy; Escort (metsulfuron methyl) is the most effective. Targeted grazing is being investigated through research. Biocontrol is unknown but is always best investigated when populations are low, not as a last resort. Provincial-level coordination is required through the IPCBC to help ensure adequate and consistent funding.

Spreading the Word – Not the Plant

These sessions were held on January 23rd and discussed approaches to actively engage the public and youth groups in preventing and managing invasive plants.

Eyes Across the Province: A practical approach to recruiting citizen scientists in Newfoundland and Labrador

Costa Kasimos, MUN Botanical Garden

Getting over common misconceptions is the biggest challenge when trying to implement change. With the less than ideal growing conditions in Newfoundland and Labrador, it is difficult for many to understand that a plant capable of growing over 3 meters in one summer, such as Japanese knotweed, should not be planted as an ornamental. Another misconception is that new invaders result in increased biodiversity – more species is good, right? For the past year, the Memorial University of Newfoundland (MUN) Botanical Garden has been educating the public and interested stakeholders on issues related to invasive alien plants and has become a hub for information. MUN Botanical Garden is in the process of developing a manual identifying invasive alien species and associated control methods.

Following a number of successful workshops and media (radio, television, and newspaper) coverage, Newfoundlanders and Labradoreans are becoming aware of the potential dangers posed by invasive alien species. Inviting people to become involved with our program by becoming our eyes across the province gives them a sense of ownership. It is when people feel that they are doing something as part of a team, as opposed to doing us a favour, that real change can be seen.



Bob Drinkwater, Ministry of Forests and Range

Youth and Invasive Plants: New resources for motivating youth groups and classes & introducing Warren the Weed Warrior

Nancie Dohan, Central Kootenay Invasive Plant Committee (CKIPC)

For those who wish to “Nab the Bully Plant” and “Become a Bully Plant Special Agent”, now is your chance! With funding from the Fraser Basin Council, a new educational package for youth in BC is now available. The package provides six activities that can be conducted by informal educators and teachers with little background, can be done any time of year without having invasive plants nearby, and can be done inside or outside. Furthermore, “Nab the Bully Plant” is available to all, requires only a few props, and targets youth ages nine to 11. If you wish to download a copy of this package, please visit www.fraserbasin.bc.ca.

Lisa Scott, South Okanagan Similkameen Invasive Plant Society

“Warren the Weed Warrior” is the Regional District of Okanagan Similkameen’s newest tool in battling against invasive plants in the South Okanagan-Similkameen. Warren is targeted at youth from grades three to five and his goal is to help youth understand the invasive plant problem and how they can make a difference. Warren visits schools and attends festivals/events where, through a character/mascot, children can identify him as a friendly action hero who battles invasive plants. It is also important that youth connect the invasive plant message to biodiversity, local habitats and wildlife, as well as ranching (agriculture). In turn, this message will reach the parents. For more information on Warren, visit www.rdos.bc.ca.



Managing for Invasives – Challenges and Successes

These sessions were held on January 23rd and presented community mapping initiatives as well as the process used to develop Washington State's Gardenwise booklets.

Community Mapping Network and Invasive Plants: Mapping invasive plants in the lower mainland

Rob Knight, BC Ministry of Environment

An online tutorial of the Community Mapping Network's (www.cmnbc.ca) invasive species atlas illustrated how the network supports communities and builds on federal and provincial databases. There are 60 communities/projects, including the invasive species atlas. The network includes data collection forms, and users can validate baseline data.

Washington State Gardenwise Booklets: An inside look at the Gardenwise development process



Alison Halpern, Washington State Gardenwise Booklets

Of the 135 listed noxious weeds in Washington State, approximately half are ornamentals. Regulatory solutions include: prevention (quarantine list), early detection/eradication, and control/restoration. Addressing established ornamental plants that are known to be invasive is difficult because many species, such as butterfly bush, are highly desired

by gardeners and landscapers. Voluntary measures work best, through outreach to gardeners, education of nursery owners and staff, and voluntary agreements with nurseries to stop selling invasive plant species.



The Washington State Nursery and Landscape Association (WSNLA) task force conducted a pilot study on five invasive species, resulting in sales dropping by 43 percent. The Gardenwise booklets for western and eastern Washington explain why alternatives are better than the invasive species. Good-quality photos were available from many willing contributors. Nurseries are requesting Gardenwise booklets and master gardeners are using it. A total of 46,000 copies have been distributed to date.

The partnership of the WSNLA, government, non-profit organizations, and private individuals was critical to the

project's success. Some big-box stores are still selling invasive species and voluntary measures are not intended to disadvantage independent nurseries. Future plans could include a Gardenwise Seal of Approval or some way of showing that a plant is non-invasive. However, WSNLA members have already signed a code of conduct which addresses invasive plants.

More information is available at www.nwpcb.wa.gov.

PLENARY SESSIONS

Plenary sessions were held both January 22nd and January 23rd and included a diversity of perspectives from regional invasive plant committees to national invasive species "councils". Key note speakers discussed new approaches to early detection and rapid response, the North American Plant Protection Organization, and invasive plants, biodiversity, and climate change on January 23rd. Also presented on the 23rd were the IPCBC's Annual Report and Annual General Meeting.

Highlights of Regional Invasive Plant Committees

Coastal Invasive Plant Committee (CIPC)

Wendy Tyrrell, Coordinator



The CIPC formed in 2005 and now has over 500 members representing a diversity of organizations and individuals including First Nations, agriculture, forestry, horticulture, municipalities, regional districts, and professional biologists. The CIPC region encompasses seven regional districts and 38 municipalities. The CIPC's Action Plan is based on five themes, or committees, including Communication, Education and Awareness; Management and Coordination; Funding; and Baseline Inventory/Mapping. The Board of Directors and committee members are very active and most stakeholders are ready for coordinated and collaborative approaches to invasive plant management. For more information on the CIPC, including its accomplishments, structure, upcoming events, and future priorities, please visit www.coastalinvasiveplants.com/resources.php.

Northeast Invasive Plant Council (NEIPC)

Kerry Clark, Ministry of Agriculture and Lands (on behalf of Dennis Meier, Coordinator)

The NEIPC evolved from the Peace River Weed Committee and is based on the Northwest Invasive Plant Council (NWIPC) model. To date, the NEIPC has 30 members representing a variety of organizations including local government, industry, First Nations, agriculture, and regional districts. Two

meetings are hosted annually by the NEIPC: one in the fall to review the field season and one in the spring to plan for the upcoming season. This Council covers the area east of the Rocky Mountains in north-eastern BC. Some areas of the region are seeing increased soil disturbance from oil and gas exploration and extraction, which may facilitate invasive plant introduction and spread.

Currently, there is a low diversity of invasive plants in the area, particularly in agricultural fields; therefore, the NEIPC's primary focus is prevention. Some invasive plants exist in the region; however, due to a number of key pathways of invasion, particularly in the Pine Valley (e.g. utilities, highways, railways), areas managed within the NEIPC require complex management systems. For example, in 2005 oxeye daisy was observed to be moving north and the Pine Pass Project was established. To prevent the invasion of oxeye daisy into north-eastern BC, a containment line was "drawn" at the height-of-land and a survey was completed. In 2006 and 2007, outlying infestations were controlled and the containment line was moved back. The Pine Pass Project is expected to continue into 2008 and beyond.

Cariboo Chilcotin Coast Invasive Plant Committee (CCCIPC)

Mike Simpson, Fraser Basin Council Coordinator

The CCCIPC, one of the newest committees in BC, formed in November 2006 and incorporated as a society in November 2007. The CCCIPC is a multi-stakeholder organization that is inclusive of anyone with an interest or responsibility for invasive plants. Currently, the CCCIPC has a membership of 200 individuals and organizations and covers both the Cariboo and Central Coast Regions of BC. The Committee's role is to coordinate management and communication/education activities, but not on-the-ground treatments (e.g. pulling and spraying).

Accomplishments in 2007 focused on communications and education, membership activities, and a regional strategic plan. In 2008, the Committee plans to solicit feedback on the regional strategic plan, host at least three field tours, focus on practical projects and information, develop region-specific communications products and tools, and finish/update the regional strategic plan.

Boundary Weed Management Committee (BWMC)

Barb Stewart, Coordinator

Operating since 1998, the BWMC's mandate is to educate people about noxious weeds and invasive plants and to coordinate management efforts towards similar goals across the Boundary region. The BWMC is a society and registered charity with a membership comprised of 20 stakeholder groups including



government agencies, local government, community groups, industry, and others. The main function of the BWMC is to set objectives for regional invasive plants of concern, coordinate management efforts, and provide education. The Committee hosts two meetings per year (Spring AGM and Fall Stakeholder meeting) and the six Directors meet twice per year.

Highlights from 2007 included community weed pulls, a June field day at Harpur Ranch, information signs at key Trans Canada Trail locations, many education activities, biocontrol projects, coordination, strategic plan, and the Weeds Cross Borders Project. Overall, there appears to be a change in attitudes towards invasive plant management and increased support for local initiatives stemming from the BWMC's efforts.

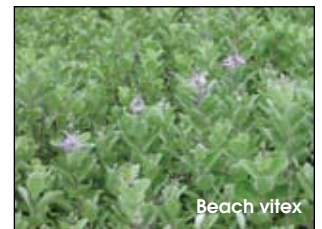
Keynote Speakers

New Approaches for Early Detection and Rapid Response to Invasive Plants in the US and Canada

Randy Westbrooks, US Geological Survey

Randy is an advocate of inter-agency partnering. From his experience, one agency does not have the necessary resources. The solution is collaboration between agencies, which, Randy noted, is occurring. For example, approximately 30 US states have councils, whereas Canada has almost 100% provincial coverage. Randy believes that Canada will have a national EDRR system before the US does. Invasive plant management and stewardship is part of being a good neighbour.

Invasive plants cost the US \$50 billion annually; however, we haven't come to grips with invasive species as an issue – they are the last environmental frontier. In the US, **beach vitex** was introduced to decrease erosion and now it's a big problem. It doesn't hold the dunes in a storm and interferes with sea turtle nesting. People need to understand and that is why Randy is excited about the IPCBC's work. We need a biological protection ethic and to be more responsible; who's ultimately responsible if things go bad?



In China, there are 30,000 native plants and now that trade has re-opened, how many of these species will be invasive here?! **Be careful!** There are only so many niches in nature, when they are full they are full and something goes extinct. **Oriental bittersweet** is anticipated to be a huge threat in the next 10 years, so Canada needs to be on guard for it. An aquatic plant BC needs to be watching for is **hydrilla**, which is currently found in Washington State.

Randy compared biological invaders, which continually reproduce and spread, to chemical pollution, which degrades over time, and asked "what is the worst



Kristy Palmantier, IPC Vice Chair thanks key note speaker, Randy Westbrooks.

problem?" To date, 75% of invasive plants were brought here intentionally, as a choice, not an accident. We must think ecologically, generationally, and with respect for the natural landscape. Invasive plant funding is not about money, it's about priorities and getting people interested in why they need to prevent and control invasive species.

Randy presented three strategies for the IPCBC to consider and work on:

1. Permitted listing approach;
2. A local, regional, provincial, and national EDRR framework (costs are less to prevent a new invader than to control an established invader); and
3. A new biological protection ethic.

North American Plant Protection Organization (NAPPO)

Bruce McTavish, Kwantlen University College



NAPPO, a Regional Plant Protection Organization of the International Plant Protection Convention, sets standards and coordinates efforts among Canada, the United States, and Mexico to protect plant resources from the entry, establishment, and spread of regulated plant pests. NAPPO also facilitates intra- and inter-regional trade. It is the only plant protection organization to include industry and it includes a new Invasive Alien Species Panel. Canada has fewer measures for imported plants than countries such as Australia and New Zealand. There are many potential impacts to consider, including:

1. Ecosystem processes (e.g. alteration of hydrology, sedimentation rates, a fire regime, nutrient regimes);
2. Natural community composition (e.g. reduces biodiversity, affects native populations);
4. Community structure (e.g. changes the density of a layer, covers the canopy, eliminates or creates a layer);

5. Human health, such as allergies or changes in air or water quality;
6. Sociological impacts on recreation patterns and aesthetic or property values; and
7. Stimulation of control programs including toxic chemical pesticides.

One goal of NAPPO is to have screening tools in place within a year, which the Canadian Food Inspection Agency will implement. NAPPO works under the North American Free Trade Agreement, and trade barriers that exclude the movement of specific invasive plants are expected to be allowed.

Invasive Plants, Biodiversity, and Climate Change

Don Gayton, Forest Research Extension Partnership (FORREX)

Climate change has many non-anthropogenic drivers, which confound the data, but climate data from the last few centuries do show causality. The most obvious example now is from warmer winters that have enabled the mountain pine beetle epidemic in the British Columbia Interior. Plants will need to adapt to increased CO₂, longer frost-free seasons, warmer temperatures, and more extreme weather events.

Climate change will cause plant climates to move north, requiring plant communities to adapt, if they can. Physiological stress and reduced growth of native vegetation will create surplus resources for invasive plants with unpredictable ecological results. Climate change will also cause more successful horticultural escapes to become new invasive plant species. Entire ecosystems will not move, but individual species may or may not shift north from climate change, which will change or reshuffle the composition of plant communities.

Climate change will generally act as an ecological conveyor belt from the south to the north. Richard Hebda from the Royal BC Museum advises us to keep native ecosystems in good condition to help them adapt to climate change.

Highlights of Provincial Invasive Plant Committees

Alberta Invasive Plants Council (AIPC)



Karen Sundquist, Coordinator

The AIPC is a not-for-profit association of professionals from federal, provincial, and municipal government, industry, and non-government organizations with a common interest in the prevention, management, and control of invasive plants in Alberta. The purpose of the AIPC is to increase awareness of invasive plants and their impacts as well as to promote

collaboration in the management and prevention of invasive plants in Alberta. The more you work together, the less work there is for everyone.

Personalizing messages by learning the language of target audiences is an important approach to increasing awareness and collaboration. The AIPC is working on a number of projects using this approach including newsletters, factsheets, and placemats. The Council is also looking to the BC Peace Region's risk assessment tool, which was developed by the NWIPC and adopted by the NEIPC in BC.

More information on the AIPC is available at:
<http://www.invasiveplants.ab.ca/>

Development of an Atlantic Canada Invasive Plant Group

Costa Kasimos, MUN Botanical Garden

A workshop was held in Truro, Nova Scotia, September 26th and 27th, 2007 to discuss the current situation regarding invasive plants in Atlantic Canada, and to explore possibilities and opportunities for moving forward collaboratively on the management of invasive plants. Presenters from across Atlantic Canada discussed the current status of invasive plants and various projects in their respective provinces. In addition, the federal response with respect to invasive plants was presented. There were also presentations about the IPCBC and the Invasive Plant Atlas of New England. Furthermore, there were facilitated discussions about various topics related to collaboration in dealing with invasive plants, including reasons to collaborate, key areas that are of interest for collaboration, how to collaborate, geographical considerations, and processes on how to move forward.

The outcomes from this facilitated discussion created a framework for provincial collaboration and the creation of an Atlantic network. A decision was made to focus the work on a provincial level. The creation of a regional network will compliment this work. The main focus of the provincial networks is to create provincial working groups, increase awareness of invasive alien species within the provinces, identify key players, provide public education on prevention, early detection, and rapid response, identify leaders, and make invasives a public issue.

Development of an Ontario Invasive Plants Council

Ken Towle and Francine MacDonald, Interim Directors

In the heavily settled landscape of southern Ontario invasive plants pose a serious threat to biodiversity. The Ontario Federation of Anglers and Hunters in partnership with the Ontario Ministry of Natural Resources has in place a successful program on aquatic invasive species, but there was a clear gap in dealing with major terrestrial invasive plants such as garlic mustard and swallowwort. In 2007 interested stakeholders came



Garlic Mustard



Swallowwort

together to discuss the formation of a Council to coordinate response efforts and avoid duplication. A symposium was held in October where 200 people from many groups and all levels of government reviewed a draft framework and endorsed the formation of a Council with an interim Board of Directors. A work plan has been developed and the Council is applying for funding to form a series of committees to undertake the proposed activities.

Invasive Species Council of Manitoba (ISCM)

Haley Catton, Coordinator

Single species groups managing invasive species have existed in Manitoba since the early 1990s and include the Manitoba Purple Loosestrife Project and the Leafy Spurge Stakeholders Group. Stakeholders began meeting in 2006 and the ISCM officially formed in December 2006. The ISCM is a non-profit organization that provides a centralized province-wide leadership and coordination body that deals with all invasive species. This Council is modeled after other provincial councils and currently represents over 160 stakeholders. The objectives of the ISCM are to:

1. Focus on prevention and coordination of a system of early detection and rapid response, investigate possible control or eradication;
2. Improve cooperation between stakeholders;
3. Establish a digital provincial directory;
4. Identify and promote coordinated monitoring and research;
5. Promote public awareness and understanding; and
6. Operate in a spirit of partnership and collaboration.

The ISCM distributes an informative newsletter and is involved in many partnership projects including best management practices for industry, the Leafy Spurge Stakeholders Group, the unwanted invaders calendar, Prairie Region Invasive Plant Species Inventory and Map Display (PRIPS), and the Breaking Down Borders invitational forum (February 26, 2008). The Council is also involved in many other promotion, education, and awareness projects.

For more information on PRIPS visit www.crerl.usask.ca/prips/.

Perspectives Meeting

The objectives of the perspectives meetings were to connect and facilitate dialogue between individuals with similar industry or land management interests; to review or appoint (if due) a Director and/or Alternate Director for each perspective; and to provide direction, by relevant

committee, on priority actions for the Council to undertake. Twelve perspective groups, representing the 12 perspectives and 17 positions that comprise the Board of Directors, met concurrently to address these meeting objectives. The 12 perspectives represented on the Board of Directors are: local government (2), provincial government (2), transportation, Mining, First Nations (2), regional weed committees (2), forestry, horticulture, federal government (2), conservation and wildlife, recreation and tourism, and utilities.

The Board of Directors for 2008 is provided in the AGM section of this report. Key recommendations from each perspective meeting were referred to the relevant IPCBC committee for discussion, approval, and inclusion into the 2008 IPCBC Action Plan. Note that the 2008 Action Plan will be available from the IPCBC website in June 2008.



Annual Report

Please visit the IPCBC's website, www.invasiveplantcouncilbc.ca, to download a copy of the 2007 Annual Report

Annual General Meeting

Duncan Barnett chaired the Invasive Plant Council of BC's (IPCBC) 2007 Annual General Meeting (AGM). Duncan called the meeting to order at 12:10PM PST and introduced the 2008 Board of Directors.

Financial Reports

Gail Wallin presented financial statements, which were provided to participants in their binders, for the year-end to December 31, 2006 and for the projected year-end to December 31, 2007. Gail covered highlights of the financial year, including a mid-year reforecast for year-end and current healthy financial situation, which is expected to continue in 2008. Based on the current income statement and balance sheet, there has been a large increase in the level of project work undertaken by the Council. This trend is expected to continue.

ACCEPTED: The 2006 financial report and the 2007 projected year-end were accepted by consensus.

2008 Committee Proposed Priorities

Duncan Barnett presented proposed committee priorities for 2008.

Communications and Awareness Committee:

- Build on 2007's unprecedented media attention to further increase public awareness.
- Complete provincial Communications Plan and develop a priority Action Plan.

- Expand/update IPC's website, including the IP-InfoSource.
- Participate in relevant workshops, trade shows, and conferences.
- Facilitate regular communications between IPC and regional invasive plant committees.



Regulations, Compliance, and Enforcement Committee:

- Initiate the development of user-specific Guidebook Modules to accompany the more generic Legislative Guidebook. Modules scheduled for 2008 and 2009 include: Local Government, First Nations, and Invasive Plant Coordinators and Contractors.
- Review IPCBC Legislation Compendium to maintain accuracy of information.

Technical and Operations Support Committee:

- Improve collaboration to support rapid and effective responses to new invaders – clarify roles and responsibilities of key agencies and organizations.
- Collaborate with provincial government and industry to develop standard criteria for listing of invasive plants.
- Continue to expand T.I.P.S. series with best management practices related to recreation, transportation, and seed mixes.



Research and Development Committee:

- Develop and host the "Invasive Plant Research in BC: Current Projects and Future Trends" forum.
- Continue monitoring the completion of the bio-control research project.
- Complete the State of the Weeds project and progress towards the completion of the larger Economic Impacts study.



Finance and Fund Development Committee:

- Establish the Trust Fund and determine revenue options.
- Develop a solid fund development strategy that will attract key funders.
- Diversify the IPC funding base.

Key recommendations from each Coffee Corner session were referred to the relevant IPCBC committee for discussion, approval, and inclusion into the 2008 IPCBC Action Plan. Note that the 2008 Action Plan will be available from the IPCBC website in June 2008.

Duncan closed this topic by reminding members that the IPCBC's role is, as Randy Westbrooks said, "To connect the dots".



2008 Board of Directors

Based on input from each of the Perspectives meetings, the Board of Directors for 2008 are:

PERSPECTIVE	DIRECTOR(S)	ALTERNATE
Agriculture	Vacant	
Conservation and Wildlife	Ernie Sellentin	Lesley Douglas
Federal Government	Jamie Richardson	
	Brian Reader	
First Nations	Kristy Palmantier	
	James Manuel	
Forestry	Peter Mohammed	Guy Fried
Local Government	Duncan Barnett	Christine Ensing
	Caroline Jackson	Carolyn MacDonald
Mining	Marty Hafke	David Polster
Provincial Government	David Borth	Val Miller
	Linda Wilson	David Ralph
Recreation and Tourism	Glen Davidson	
Regional Weed Committees	Denise McLean	Dennis Meier
	Lisa Scott	Barb Stewart
Transportation	Barry Gibbs	Al Planiden
Utilities	Tom Wells	Mike Miller
Horticulture	Rod Nataros	

Bylaw Revision

On Behalf of the Board, Gail presented a proposed bylaw change. The proposed change would enable the Council to provide honorariums to Directors. The bylaws currently enable this for Officers. Based on the approval of this change, a policy would require pre-approval and define the rates. There were no objections and the motion was carried and approved by IPCBC members.

ACCEPTED: That the bylaw be amended to enable honorariums for Directors.

Other Business

Randy Westbrook asked to be an international member and the Council welcomes all members. He is particularly interested in EDRR and the Technical and Operations Committee and suggested that the IPCBC form an EDRR sub-committee. Jodi Romyn (staff support) and Val Miller will be working on the next steps for moving forward on EDRR for BC.

Duncan, on behalf of the Board, thanked all of the funders, participants, weed committees, and others for working together to improve invasive plant management in BC.

The AGM closed at 12:40PM PST.

Appendix A. Forum Participants

First Name	Last Name	Organization
Terry	Anderson	Ministry of Environment
Andrew	Appleton	Evergreen
Chris	Armstrong	BC Parks
Sarah	Atherton	Langley Environmental Partners Society
Duncan	Barnett	BC Cattlemen's Assoc.
Jon	Bell	Ministry of Agriculture & Lands
Beverly	Benedict	University of New Brunswick
Don	Biggin	Pickseed Canada Inc.
Tom	Blackbird	Ministry of Environment
David	Borth	Ministry of Forests and Range
Hannah	Bottomley	Student - Simon Fraser University
Becky	Brown	Ministry of Agriculture & Lands
Haley	Catton	Invasive Species Council of Manitoba
Sandy	Cesselli	Ministry of Forests and Range
Kerry	Clark	Ministry of Agriculture & Lands
Robin	Clark	Envirothon BC
Dusty	Cooper	E-Quest Consulting Ltd.
Tony	Correia	Dept. of National Defence
Brenda	Costanzo	Ministry of Environment
Amber	Cowie	Grasslands Conservation Council of BC
Stuart	Craig	SMC Consulting
Danielle	Cuthbertson	BC Cattlemen's Assoc.
Rachel	Darvill	Wildsight
Cathy	Davidson	Fraser Basin Council
Darren	DeFord	Ministry of Environment
Ronni	Deol	Fraser Valley Reg. Dist.
Marsha	DeWolf	Ministry of Forests and Range
Nancie	Dohan	Central Kootenay Invasive Plant Committee
Lesley	Douglas	Metro Vancouver Regional Parks
Keri	Dresen	Environmental Dynamics Inc.
Bob	Drinkwater	BC Ministry of Forests
Dr. Katherine	Dunster	BC Society of Landscape Architects
Andrea	Eastham	NWIPC
Christine	Ensiing	City of Burnaby
Karen	Field	Dept of National Defense
Percy	Folkard	Ministry of Forests and Range
Bob	Fowler	Ministry of Forests and Range
Jo-Ann	Fox	Southern Interior Weed Mgmt. Committee
Leonardo	Frid	ESSA Technologies Ltd.
Guy	Fried	BC Timber Sales
Don	Gayton	FORREX
Barry	Gibbs	Dow Agro Sciences
Stephen	Godwin	City of Surrey
Peter	Goetz	Ministry of Environment
Christine	Gooch	City of North Vancouver
Paul	Goodkey	Columbia Shuswap Regional Dist.
Michelle	Gorman	City of Victoria



First Name	Last Name	Organization
Jude	Grass	Federation of BC Naturalists
Perry	Grilz	Ministry of Forests and Range
Pearl	Guthrie	Fraser Valley Reg. Dist.
Brian	Haddow	Agriculture & Agri-Food Canada
Marty	Hafke	Elk Valley Coal Corp.
Jeff	Hallworth	Ministry of Forests and Range
Alison	Halpern	
Dawn	Hanna	Greater Vancouver Invasive Plant Council
Kristen	Harrison	
Ian M.	Hayes	Regional District of Bulkley Nechako
Merci	Hillis	Gitksan First Nations
Fred	Hook	City of Victoria
Nobuhle	Hughes	
Caroline	Jackson	City of North Vancouver
Marney	James	Min. of Agriculture, Food & Fisheries
Lisa	Jarrett	Dow Agro Sciences
Costa	Kasimos	Memorial University of Newfoundland
Crystal	Klym	Invasive Plant Council of BC
Graham	Knell	District of North Vancouver
Rob	Knight	Community Mapping Network
Penny	Koch	MGABC
Cathy	Koot	UBC Alex Fraser Research Forest
Laura	Kristiansen	Ministry of Forests and Range
Leslie	Kristoff	Terasen Gas
Gail	Lucier	Fraser Basin Council
Conway	Lum	GardenWorks
Carolyn	MacDonald	Municipality of Saanich
Francine	MacDonald	Ontario Federation of Anglers & Hunters
Cathy	Mackay	Environmental Dynamics Inc.
Catherine	MacRae	Ministry of Forests and Range
Jan	Magnusson	Ministry of Agriculture & Lands
James	Manuel	Kamloops Indian Band
Denise	McLean	Ministry of Agriculture & Lands
Bruce	McTavish	Kwantlen University College
Eric	Meagher	Vancouver Parks
Ian	Miller	Ministry of Forests and Range
Mike	Miller	Columbia Mountain Institute of Applied Ecology
Tim	Miller	Washington State University
Val	Miller	Ministry of Forests and Range
Alison	Millham	Comox Valley Naturalist Society
Mitch	Minchau	Cariboo Regional District
Jenny	Mingo	Terasen Gas
Peter	Mohammed	Spectrum Resource Group Inc.
Rhoda	Mueller	Reg. Dist. of Central Okanagan
Judith	Myers	Dept. of Zoology & Faculty of Ag. Sciences - UBC
Carrie	Nadeau	Summit Environmental Consultants Ltd.
Rod	Nataros	NATS Nursery Ltd.
Nick	Nolin	Dept of National Defense
Doug	Noren	Pope & Talbot Ltd.
Chris	Nunn	N&R Forest Management Ltd.

First Name	Last Name	Organization
Steve	O'Hara	Gibraltar Mines Ltd.
Nick	Page	Raincoast Applied Ecology
Kristy	Palmantier	Ministry of Environment
Jane	Perry	J.Perry Resource Communications
Al	Planiden	Ministry of Transportation
Dave	Polster	Polster Environmental Services Ltd.
Joe	Post	Thompson Nicola Reg. Dist.
Dave	Ralph	Ministry of Agriculture & Lands
Brian	Reader	Parks Canada
Scott	Richard	Town of Qualicum Beach
Jamie	Richardson	Canadian Food Inspection Agency
Michael	Roboz	Cascadia Society
Rene	Roddick	BC Hydro
Donna	Romain	Ministry of Environment
Jodi	Romyn	Invasive Plant Council of BC
Mark	Salzl	Ministry of Forests and Range
Cindy	Sayre	VanDusen Botanical Gardens
David	Schmidt	Country Life in BC
Lisa	Scott	South Okanagan Similkameen IPS
Daryl	Seip	Environment Canada
Caresse	Selk	City of Coquitlam
Ernie	Sellentin	Ministry of Forests and Range
Jacqueline	Shaben	GVI PC
Gwen	Shrimpton	BC Transmission Corp
Mike	Simpson	Fraser Basin Council
Andrew	Sloss	Urban Developments
Emily	Sonntag	Cariboo Regional District
Debora	Soutar	Madrone Environmental Services Ltd.
Ryan	Spillett	Ministry of Transportation
Barb	Stewart	Boundary Weed Mgmt Committee
Karen	Sundquist	Alberta Invasive Plants Council
Lisa	Tedesco	Ministry of Environment
Ken	Towle	Conservation Ontario
David	Turner	City of North Vancouver
Susan	Turner	Ministry of Forests and Range
Wendy	Tyrell	Coastal Invasive Plant Committee
Mary Ann	van den Berge	BC Landscape & Nursery Assoc.
Dave	vander Put	City of Abbotsford
Paulus	Vrijmoed	Linnaea Nurseries Ltd.
Gail	Wallin	Invasive Plant Council of BC
Warren	Warttig	Interfor, Forestry & Land Use Division
Tom	Wells	BC Transmission Corp.
Randy G.	Westbrooks	US Geological Survey
Crystal	Wheeler	Ministry of Forests and Range
Tom	Wheeler	UBC Botanical Garden
Brian	Wikeem	Solterra Resources Inc.
Linda	Wilson	University of Idaho
Ann	Wong	Chilliwack Forest District
Pamela	Zevit	Como Watershed Group