# Flow and Grow! – *Balancing Economy, Ecology and Settlement in the Okanagan*

*Towards Water Sustainability – A workshop on HOW to respect ecosystem and cultural values, ensure food security and build water-resilient communities*

November 29th, 2016 --- at the Coast Capri Hotel, 1171 Harvey Ave. Kelowna, BC

*Co-hosted by:*

**Partnership for Water Sustainability in British Columbia**

the partnership for water sustainability in bc

**Irrigation Industry Association of British Columbia**

iabc

**Okanagan Basin Water Board**

Okanagan Basin WATER BOARD

*Sponsored by:* real estate foundation BRITISH COLUMBIA

| **4th annual event in the Water Sustainability Year-End Workshop Series** | |
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| **Cost** (before GST): | Early Bird (until Nov 15) = $125 for members & $225 for non-members<br>Late Registration = $175 for members & $275 for non-members<br>**Note 1:** *Member rates are for PWSBC and IIABC members*<br>**Note 2:** *PWSBC members must request "Coupon Code" in order to register online and at member's rate*<br>**Note 3:** *Non-member registration includes a 1-year membership (for the "Professional" category) in PWSBC only* |
| **Online Registration:** | Visit the IIABC website *(and follow the links)* https://www.irrigationbc.com<br>**Enquiries:** iiabc@irrigationbc.com<br>Enquiries and/or to request the members 'Coupon Code': outreach@waterbucket.ca |
| **Program Details:** | Visit the waterbucket.ca website: http://waterbucket.ca/cfa |
| An initiative under the umbrella of the Water Sustainability Action Plan for British Columbia | |

## Flow and Grow! – Balancing Economy, Ecology and Settlement in the Okanagan

*Towards Water Sustainability – A workshop on HOW to respect ecosystem and cultural values, ensure food security and build water-resilient communities*


## ABSTRACT

*This timely and vital workshop in Kelowna will address both immediate and long term water security issues in the Okanagan Valley. Whether discussing the economy or ecological challenges, the significance of the findings from the workshop will be of equal importance and applicability to other areas within the province and beyond, given the focus is on the impacts of climate change and the need to plan now for a water sustainable future. The workshop will explore the role of water from the global to the local. The particular journey facing the Okanagan Basin includes the impact of climate change, water security, population demand and food security issues. These challenges will be discussed by expert inter-disciplinary presenters with the objective of seeking a balance of the economy, ecology and settlement in the Valley.*


| | | Modules & Themes | Team |
|---|---|---|---|
| 7:45 | Registration / Meet & Greet | | |
| 8:25 | **MODULE A Looking From Above** | **Spirit & Science – An Inclusive Journey** | |
| | | ▪ *Welcome, Opening Remarks, Program & Module Overview*<br>▪ *KEYNOTE #1: Water from a Global Perspective and Beyond*<br>▪ *Cultural values of fish and water for First Nations*<br>▪ *Blue Ecology: Interweaving Western Science and First Nations Cultural Knowledge* | Bob McDonald, *host of CBC Quirks & Quarks*<br>Chief Aaron Sam, *Lower Nicola Indian Band*<br>Michael Blackstock, *independent scholar* |
| 10:05 | Networking Break (25 minutes) | | |
| 10:30 | **MODULE B Looking at Today** | **Is Irrigation the Elephant in the Room?** | |
| | | ▪ *How Agricultural Demographics are Changing and How that will Affect Water Supply and Use*<br>▪ *What are the Social Benefits of Landscapes and is Irrigation Important to Maintain these Values*<br>▪ *Social Considerations about Water Conservation* | Denise Neilsen, *Ag & Agri-Food Canada &* Ted van der Gulik, *PWSBC*<br>Ken Salvail, *the "Grower Coach" on local radio*<br>Steve Conrad, *SFU* |
| 12:00 | Lunch & Tradeshow | | |
| 1:00 | **MODULE C Looking Forward** | **Create a Future in Harmony with the Water Balance** | |
| | | ▪ *Sustainable Watershed Systems: Mimic the Natural Water Balance to Restore Environmental Flows in Urban Creeks*<br>▪ *KEYNOTE #2: The Climate Nexus: Water, Food, Energy & Biodiversity in a Changing World*<br>▪ *Ecological Accounting: An Idea Whose Time Has Come* | Kim Stephens, *PWSBC*<br>Bob Sandford, *author & water champion*<br>Tim Pringle, *PWSBC* |
| 2:30 | Refreshment Break (10 minutes) | | |
| 2:40 | **MODULE D Securing Tomorrow** | **Moving Towards a Sustainable Water Future** | |
| | | ▪ *Ethics, Aesthetics and Leadership*<br>▪ *Recognize What We Value* | John Wagner, *UBC-O*<br>John Janmaat, *UBC-O* |
| | | ▪ *TOWN-HALL SHARING & LEARNING: where we go from here* | Facilitated by Kim Stephens |
| 4:00 | Closing Remarks | | |

## *Module A:* Spirit & Science – An Inclusive Journey

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| **Scope:** | The workshop is both visionary and practical, so constructed to identify solutions regarding water security through a process of consensus, commitment and collaboration. Simply put, the unifying theme is "sense of place". This is another way of expressing the spiritual aspect. It is about connection, and understanding our place in the universe. |

### KEYNOTE #1: Water From A Global Perspective & Beyond

*Bob MacDonald CBC Quirks & Quarks*

Loved by audiences across Canada for making complex scientific issues understandable, meaningful, and fun, Bob McDonald is in high demand. A fixture in broadcasting for more than 30 years, he is currently the host of CBC Radio's Quirks & Quarks–the award-winning science program that is heard by 500,000 people each week. In addition, he is a regular reporter for CBC TV's The National and host of the children's series Head's Up. As a writer, Bob McDonald has authored four bestselling science books, and contributed to numerous textbooks, magazines, and newspapers. He holds eight honorary doctorates from Canadian universities.

**ABSTRACT:**

A global perspective reminds us of the limited availability of fresh water on the planet, a vital life sustaining resource that demands a raised level of consciousness and commitment from the global to the local level, regarding the protection and sustainable use of water. Protecting fresh water has the potential of being a catalyst for cooperation rather than conflict, a level of cooperation that seeks solutions for the common good and survival.

### Cultural Values of Fish and Water for First Nations

*Chief Aaron Sam Lower Nicola Indian Band*

Aaron Sam is a lawyer and elected Chief of the Lower Nicola Indian Band, a community of over 1200 members. He has been a practicing lawyer for almost 10 years. Chief Aaron is a leader in his community, and continues to advocate for sustainable use of lands and waters, for the present and future generations. He is passionate about protecting and taking care of wild salmon and is an active member of the Wild Salmon Alliance.

**ABSTRACT:**

The call for an intercultural and intergenerational approach to water security issues has never been more timely or pressing than now, given the pending impacts of climate change. Water is truly the connector of all activities on earth. Addressing this challenge demands an integrated approach that blends both science and spirit, recognizing Traditional Ecological Knowledge, our sense of place in the universe, and an inclusive journey towards sustaining this vital resource.

### Blue Ecology: Interweaving Western Science and First Nations Cultural Knowledge

*Michael Blackstock, Independent Scholar*

Michael D. Blackstock is an independent scholar, professional forester and chartered mediator of European and Gitxsan descent. Currently, he is Negotiator/Project Engagement Lead at BC Hydro.

**ABSTRACT:**

Interweaving is a tool for bringing perspectives together. Western science is not wrong. It is just not complete. Water is part of a living ecosystem.

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| **You will learn that:** | *Managing water is critical to many other sustainable development goals. In fact those other goals cannot be achieved without managing water better in the context of a change in climate.* |

## *Module B:* Is Irrigation the Elephant in the Room?

**Scope:**

The Okanagan Region is heavily dependent on irrigation to nourish crops and provide greenspace throughout a parched region. The region is a key part of the provincial food security initiative while it is undergoing development pressure. How will agriculture production be sustained in the region?

**DID YOU KNOW THAT:** *BC needs ~215,000 ha of irrigated land to achieve food security, an increase of ~30,000 ha. This compares with ~20,000 ha of irrigated agriculture in the Okanagan. So, BC needs another 1½ Okanagans!*

### How Agricultural Demographics are Changing and Why This will Affect Water Supply & Use

*Dr. Denise Neilsen, Agriculture and Agrifood Canada / Ted van der Gulik, Partnership for Water Sustainability in BC*

Denise is a Senior Research Scientist with Agriculture and Agri-food Canada in Summerland and an adjunct professor at UBCO. Her research focuses on the management of nitrogen and water use in horticultural crops, integrated studies on climate change and water management as well as modeling of agriculture and domestic water demand and supply.

During his 35-year career as the Senior Engineer with the Ministry of Agriculture, Ted built an international reputation for his innovation in irrigation and water resources planning. His contributions to agriculture and integrated watershed planning initiatives in BC resulted in two Premier's Awards of Excellence (Water Balance Model; Agricultural Water Demand Model) and a Premier's Legacy Award.

**ABSTRACT:**

The Okanagan region is leading the province when it comes to the development of innovative tools and water planning initiatives. Agriculture is a large fresh water user and the demand for water will only increase as summers get longer, hotter and drier. Using the Agriculture Water Demand Model results this presentation will provide information on how water demand is expected to change, taking into account potential cropping changes, irrigation system improvements and a changing climate.

### What are the Social Benefits of Landscapes and is Irrigation Important to Maintain these Values

*Ken Salvail, KHS Landscaping and Design*

A passionate gardener since the early '80's, Ken cut his teeth in landscaping at an early age. He quickly went on to growing of tropical plants, hot house cucumbers and tomatoes, poinsettia production, tree and shrub propagation, wholesale perennial production all while developing over 2500 landscape designs. Now Ken is running his full service landscape company spring till fall and educating the public as the 'Grower Coach' on the weekly garden show that he does with Don Burnett every Saturday morning.

### Social Considerations about Water Conservation - *Steve Conrad, Simon Fraser University*

Steve is the Associate Director of the Pacific Water Research Centre at Simon Fraser University. He has consulted widely concerning decision-making theory, municipal energy use, water demand management, greenhouse gas emissions, and resource efficiency. His research interests include human behavior response to resource management policy, and the integration of social science theories with technical models to improve decision-making.

**ABSTRACT:**

How we use our water is set by individual choices. Faced with various scenarios, residents will make decisions based on environmental and economic choices. These two presentations will demonstrate some of the factors that go into the decision making process.

**You will learn that:**

*Understand how social choices are made and the considerations that go into making these choices. Decisions about our food supply and landscapes will determine how the valley will look over time.*

## *Module C:* Create a Future in Harmony with the Water Balance

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| **Scope:** | Communities unwittingly accept incremental and cumulative environmental degradation. Yet it would be possible to turn the clock back to replicate desired watershed conditions. This outcome would be achievable through an approach that is being branded as *Sustainable Watershed Systems, through Asset Management*. |

**Sustainable Watershed Systems: Mimic the Natural Water Balance to Restore Environmental Flows in Urban Creeks** - *Kim Stephens, Partnership for Water Sustainability in BC*

An engineer-planner, Kim's four decades of experience as cover the spectrum of water resource and infrastructure engineering issues. Provincially, he has had a leadership role in a series of initiatives related to water sustainability, rainwater management and green infrastructure. Since 2003, Kim has been responsible for developing and delivering the **Water Sustainability Action Plan for British Columbia** program.

**ABSTRACT:**

*Beyond the Guidebook 2015: Moving Towards "Sustainable Watershed Systems, through Asset Management"*, has initiated the branding of watersheds as infrastructure assets. The pathways by which rainfall reaches streams are the assets, and these provide Water Balance Services. Protect the integrity of these pathways. Mimic the natural water balance. Sustain flow in urban streams.

**KEYNOTE #2: The Climate Nexus: Water, Food, Energy & Biodiversity in a Changing World**

*Bob Sanford, EPCOR Chair for Water & Climate Security at the UN University Institute for Water, Env & Health*

An internationally recognized author, Bob is co-authored the UN **Water in the World We Want** report on post-2015 global sustainable development goals relating to water. He is committed to translating scientific research outcomes into language decision-makers can use to craft timely and meaningful public policy and to bringing international examples to bear on local water issues. His latest book is **The Climate Nexus**.

**ABSTRACT:**

Secure accessible and abundant supplies of water, food and energy are essential to human dignity and well-being around the globe. The vitality of these three elements depends in turn of a thriving biodiversity supported by healthy ecosystems. The complex interdependence among these four factors is known as the climate nexus.

**Ecological Accounting: An Idea Whose Time Has Come**

*Tim Pringle, Partnership for Water Sustainability in BC*

Tim was the founding Executive Director of the Real Estate Foundation of BC, and served in that capacity for 20 years. The first winner of BC's **Land Champion Award,** he has demonstrated leadership, innovation and collaboration to address issues related to the use and conservation of land. He is Chair of the Partnership's Ecological Accounting Protocol Project.

**ABSTRACT:**

The purpose of the proposed protocol is to enable comparison of engineered infrastructure to natural systems by means of common units of measurement and value. The challenge is in HOW to calculate the most effective blend of services from nature and engineered infrastructure.

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| **You will learn that:** | *Do business differently. Accepting risk opens the door to creativity and results in innovation. Know the context for action; change the culture and instil a new ethic; create a legacy.* |

## *Module D:* Moving Towards a Sustainable Water Future

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| **Scope:** | Module D is the book-end for the "sense of place" theme which will be introduced in and discussed from the global and spirituality perspectives in Module A. Specifically, the focus will be on how to facilitate a stronger connection between Okanagan residents and their landscape. The presentation duo will describe measures of the value that natural services provide, and suggest ways to reform policy to better recognize and encourage people to provide more of these services. |

### Ethics, Aesthetics and Leadership

*John Wagner, Associate Professor of Anthropology, UBC-Okanagan University*

An environmental anthropologist, Dr. John Wagner focuses especially on the role of agriculture in water governance systems and has just completed a cross-border study focused on the Creston Valley (BC) and Moses Lake (Washington State).

**ABSTRACT:**

Ensuring the long term sustainability of environmental flows in the Okanagan requires that we fundamentally transform the 'settler culture values' that have dominated the region for the past century and a half, in favor of a made-in-the-Okanagan water ethic and landscape aesthetic. This transformation could occur as the result of a convergence of grassroots movements and decisive political leadership.

### Recognize What We Value

*John Janmaat, Associate Professor of Economics, UBC-Okanagan University*

A resource economist, Dr. John Janmaat has a research chair position in water resources. Since joining UBC in 2007, he has studied irrigator perceptions about water markets, residential water conservation behavior and the valuation of environmental goods and services.

**ABSTRACT:**

For much of recent history, the Okanagan economy has been dominated by construction to accommodate new immigrants. The greatest measured wealth comes from the partitioning and sale of land for new construction. This economic model has not recognized the services provided by the landscape that we are building on, and the value that can be generated by facilitating a stronger connection between Okanagan residents and that landscape.

### Town-Hall Sharing & Learning: *"where we go from here"*

*Facilitated by Kim Stephens*

**ABSTRACT:**

Bob McDonald, Chief Aaron Sam, Michael Blackstock and Bob Sandford will be seated together on-stage. Each will provide a 2-minute summary of what each sees as the important takeaways from the workshop. A moderated open forum will follow. Participants will be encouraged to share what gem they learned that is of value to them, and what they will do differently as a result of acquiring this knowledge and/or understanding.

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| **You will learn that:** | *Understand that addressing major challenges demands new ways of thinking, collaboration and creative problem-solving.* |