Shared Water Issues: Shared Solutions

Planning for Water in the Trust Area

Presented to:
Islands Trust Council

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SSIWPA Mission:

To cooperate on the development and implementation of **policies and initiatives** for:

improved raw water quality,

& coordinated management of quantity

of Salt Spring island water sources.


Islands Trust
Capital Regional District
Ministry of Forests Lands & Natural Resources
Beddis Water Service Commission
North Salt Spring Waterworks District
Fernwood - Highlands Water Commissions
Steering Committee
Technical Working Group
Public Advisory Committee
Conservation Work Group

Shared problem – shared solution

Our experience

- 2013 – initial SSIWPA focus: water quality, algal blooms
- 2014 - water supply issues worsened with Drought
- 2015 cemented the case – potential shortages, dry wells
  water restrictions introduced
  tiered consumption charges
  conservation dialogue, ramped up
- added water quantity issues to the agenda

Shared problem – shared solution

We know

- water resources – are stressed or
  approaching renewable limits
- some areas affected worse than others,
  but all gulf islands share the problem
- true – surface supplies (lakes) & ground water
- climate impacts – drier springs & summers, being felt now
  expected to get worse
- over-exploitation ➡ negative environ impacts

Shared problem – shared solution

We don't know

- where water resources are stressed, and not
- how much water is being used
  - by zoning
  - by actual land use
- how much water required – to meet community plans
- how much water we have available
- implications of climate impacts (drought)

Shared problem – shared solution

We need to know

- water utilization – geographical distribution
  linked to areas of stress
- renewable capacity – now, 50 years from now
  sufficient geographical resolution
  make useful planning decisions
- how bad climate change could be
- how to make conservation effective

Shared problem – shared solution

We need to do

- consolidate/interpret water resource data
  utilization & supply – GIS, database
- analysis capabilities – develop/retain in Islands Trust
- updating capacity – new information becomes available
- strengthen/maintain inter-agency working relationships -
  data exchange, study coordination, etc.

www.ssiwatersheds.ca

Shared problem – shared solution

Steps taken . . IWM program (applicable all Trust areas)

- Groundwater supply: ENV/FLNRO collaboration with SSIWPA

  – water budget

- Surface water supply: SSIWPA TWG methods & application
- Ground Water Utilization: SSIWPA TWG monitoring program data sharing w/ community systems
- Climate impacts on drought extremes - UVic/PCIC
- Measure/estimate conservation, utilization efficiency

  – SSIWPA CEWG

Shared problem – shared solution

Examples for Salt Spring Island – surface quantity

Renewable yield – St. Mary Lake watershed (in progress)

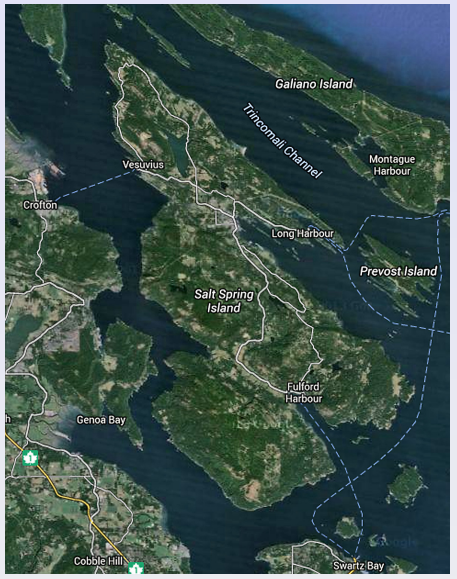
- detailed water balance – derived, calibrated
- applied 35 years of data
- analyzed for drought years
- renewable yield

Shared problem – shared solution

Examples for Salt Spring Island – ground water

Ground water utilization (in progress)

- mapping of existing wells & properties, serviced properties
- mapping of properties with unknown supply (assumed gw)
- correlation consumption – use/zoning
- overall consumption estimates
  by source, by use/zoning
- reconcile OCP with supply
- joint ENV/FLNRO SSIWPA project



Shared problem – shared solution

Examples for Salt Spring Island – water quality

St. Mary Lake water quality – algal blooms

- assumed septic input of P – significant driver of algal blooms
- solution: sewage collection/treatment $10sM
- 3 properties, 15 wells, 2 years monitoring
- septic-P negligible
- treatment unwarranted

Islands Trust, CRD, VIHA,
Mud Bay Drilling, NSSWD

Funding Partners 2014-15 – Monitoring Program

Islands Trust

BRITISH COLUMBIA
Ministry of Environment

CRD

The North Salt Spring Waterworks
flowing fresh and clean

island health

St. Mary Watershed
Integrated Planning Process
Funding Partners:

THE PHILIP AND MURIEL
BERMAN FOUNDATION

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IWMP Planning Roles