



# Hydrology and Environment

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Attention: to the watershed management

## Re: Proposal of "Hydrology and Environment" for the Community Action Grants

(<http://www.rbc.com/community/donations/blue-water.html>)

"Hydrology and Environment" is an Ontario-based company founded in 2001, hereby is offering services based on a novel approach developed by Rimma Vedom, Ph.D. in Hydrology.

Rimma Vedom graduated from the State Hydrometeorological Institute of Russia in St. Petersburg in 1976, and made her PhD in hydrology in 1995. During the 1983-98 periods she was responsible for optimization of the integrated monitoring network of Estonia, upgrading it from the manual to automatic data acquisition, processing and analyzing as well as preparing the real-time datasets for hydrological forecast and the water resources qualitative and quantitative assessments.

Novelty of the company's approach consists of the Structural Harmony Chart of Hydrosphere (SHC) that is the new technical solution for the synchronized structure of the hydrosphere spacetime performing the hydrosphere entirety and uniqueness. Under the hydrosphere spacetime it is meant the synchronized state of atmospheric, cryospheric, biospheric, surface, and geo-spherical waters in gaseous, liquid and solid phases at particular space (spot, watershed, territory) and particular time (instant, hour, day, month, year, and a period). SHC proposed by R. Vedom as the governing principle for monitoring spatial (network) and temporal (program) settings allows dramatically improve the monitoring, modeling and assessment efficiency in cost-effective manner.

The following interrelated projects can be fully customized and accomplished by the company with high quality and in timely manner:

### 1. Identification of community role in the watershed management for sustainable development (Credit River, Etobicoke or Mimico Creek) in a warm period:

Dew is a clean local part of liquid precipitation, which size depends on surface condition. The proposed activity for and with community will include the following:

- Introduction of the Structural Harmony Chart of Hydrosphere and identification of the structural-functional role of dew in the water cycle emphasizing its landscape-and-climate-specific characteristics (based on data of Credit R., Etobicoke and/or Mimico Creek watersheds);
- Training course for community members to observe dew and to report results using the original forms for that
- Observation of dew and speed of its evaporation at different locations of the watershed (3 times per period);
- Based on obtained results, identification of criteria for the optimal distribution of dew within the watershed and a property

### 2. Identification of community role in the watershed management for sustainable development (Credit River, Etobicoke or Mimico Creek) in a cold period:

Snow is the solid form of precipitation of a cold period stored on a watershed surface in dependence of the surface character. The proposed activity for and with community will include the following:

- Introduction of the Structural Harmony Chart of Hydrosphere and identification of the structural-functional role of snow in the water cycle emphasizing its landscape-and-climate-specific characteristics (based on data of Credit R., Etobicoke and/or Mimico Creek watersheds);
- Training course for community members to observe snow depth, retention capacity, density, and aging using an original tool for that ([www.hydrology.ca/snow\\_meter.pdf](http://www.hydrology.ca/snow_meter.pdf)) and to report results using an original form
- Snow depth, density and aging assessment at different locations of the watershed (during 1 week after snowfall)
- Based on obtained results, identification of criteria for the optimal distribution of snow within the watershed and a property

Main Objective: to educate the community about structural and functional consistency of a watershed system in order to open possibilities to sustain the natural cycling of the local water resources at the personal level

Value Proposition: to engage the most numerous human resource, a community, into the sustainable management of watershed improving the efficiency of conservation and sustainable development of water resources.

The company would be delighted to evaluate a scope of the specific works and provide detailed plan of its accomplishment and proposed contract costs. Preliminary meeting and discussions of your needs are free and can be held at any time convenient to you. The high quality works specifically tailored for your specific needs and requirements are guaranteed.

Thank you for your attention.

For the additional information and preliminary conversation please contact Rimma Vedom by e-mail [rimma@hydrology.ca](mailto:rimma@hydrology.ca) or phone 905 823 6088; [www.hydrology.ca](http://www.hydrology.ca)

Best Regards,

**Rimma Vedom, Director**