

Water Literacy:

What we know about what we know about water

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Defining Water Literacy

Water Literacy Ladder

Ladder Level	Desired Outcome
Actions	Albertans are active stewards of water and watersheds.
Skills	Albertans have the skills and resources required to apply their knowledge and participate in the creation of water policies, plans and stewardship activities.
Attitudes	Albertans adopt attitudes of appreciation and concern for water and healthy watersheds.
Knowledge	Albertans understand watershed function and provincial water management functions.
Awareness	Albertans are aware of the significance of water within social, economic and ecological systems.

Feltham Research Service, 2015. Water literacy assessment tool and public water literacy survey in Alberta, Final Report. Prepared for the Alberta Water Council, Water Literacy Project Team, August 22, 2015. 51 pp. Downloaded from <https://awchome.ca/Projects/WaterLiteracy/tabid/199/Default.aspx> accessed 4/23/2019

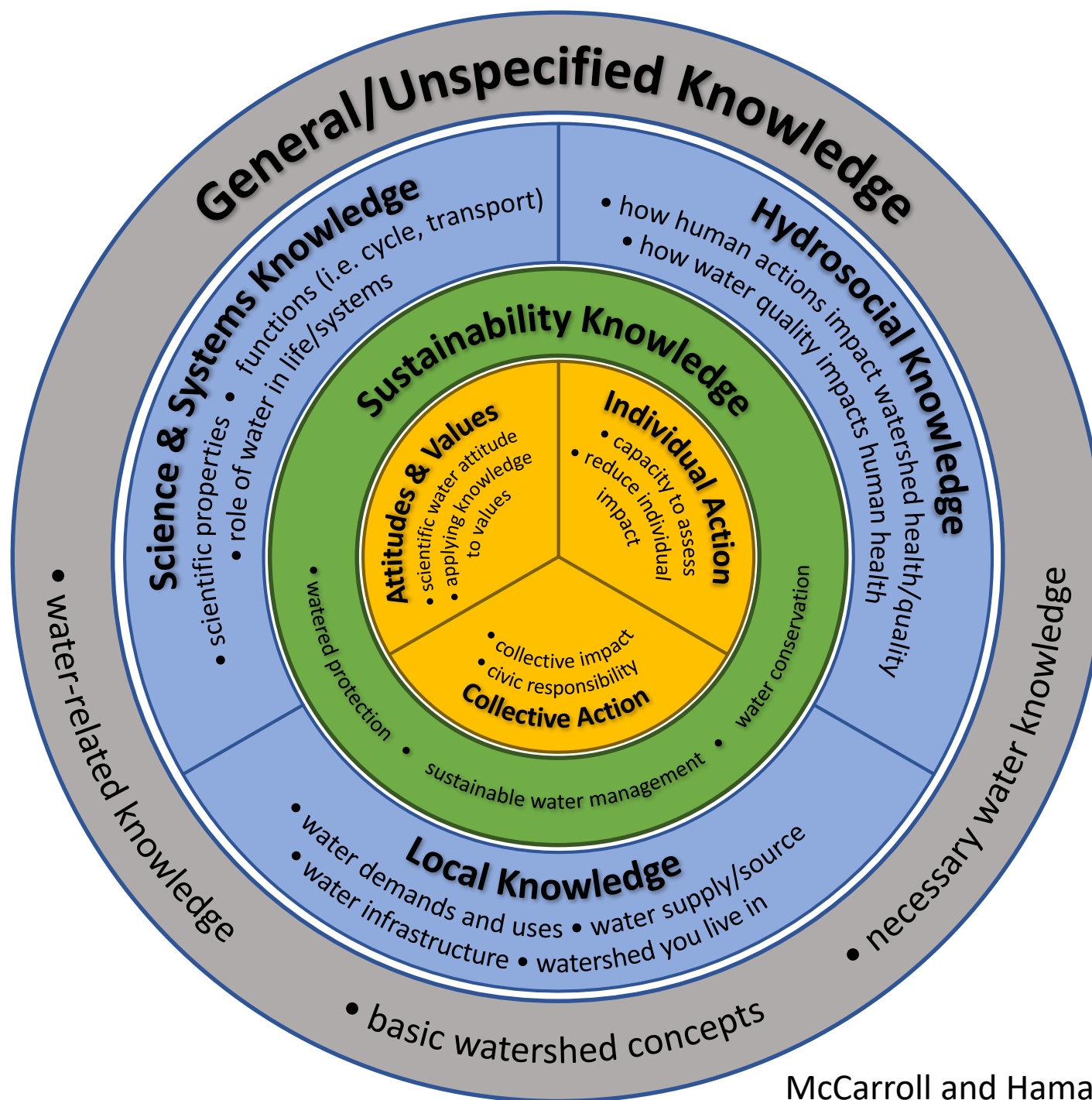
Water Literacy Principles (Project WET)

	Water Has Unique Physical and Chemical Characteristics <i>The nature of the water molecule determines the physical properties of water and its behavior. The physical and chemical properties of water are unique and complex.</i> <small>PHOTO CREDIT: © iStockphoto - Thinkstock Photos</small>
	Water Is Essential for All Life to Exist <i>Life processes, from the level of the cell to that of the ecosystem, depend on water. Both the quantity and quality of water contribute to the sustainability of life on Earth.</i> <small>PHOTO CREDIT: © Hemera - Thinkstock</small>
	Water Connects All Earth Systems <i>Water is an integral part of Earth's structure and plays a unique role in Earth's processes. It is found in the atmosphere, on the surface and underground. The water cycle is central to life on Earth and connects Earth systems.</i> <small>PHOTO CREDIT: © Hemera - Thinkstock Photos</small>
	Water Is a Natural Resource <i>All living things use water. The available freshwater supply on Earth is limited and must sustain multiple users. Multiple uses of water can lead to water resource issues.</i> <small>PHOTO CREDIT: © Hemera - Thinkstock Photos</small>
	Water Resources Are Managed <i>Multiple use of water resources leads to diverse and sometimes conflicting demands, which require water resource management practices. Management decisions involve distribution of water resources and protection of acceptable water quality and quantity.</i> <small>PHOTO CREDIT: © Landsat imagery courtesy of NASA Goddard Space Flight Center and U.S. Geological Survey</small>
	Water Resources Exist within Social Constructs <i>Over time, societies develop water management systems and practices to meet the needs of diverse water users. People's values, attitudes and beliefs shape political and economic systems that are dynamic.</i> <small>PHOTO CREDIT: © Peter Elvidge / Dreamstime.com</small>
	Water Resources Exist within Cultural Constructs <i>Cultures express connections to their unique water environments through art, music, language and customs. Cultures around the world hold similar and contrasting views toward water.</i> <small>PHOTO CREDIT: © Tetsiagreen / Dreamstime.com</small>

<https://www.projectwet.org/what-we-do>

Defining Water Literacy

Knowledge sets derived from 23 published definitions

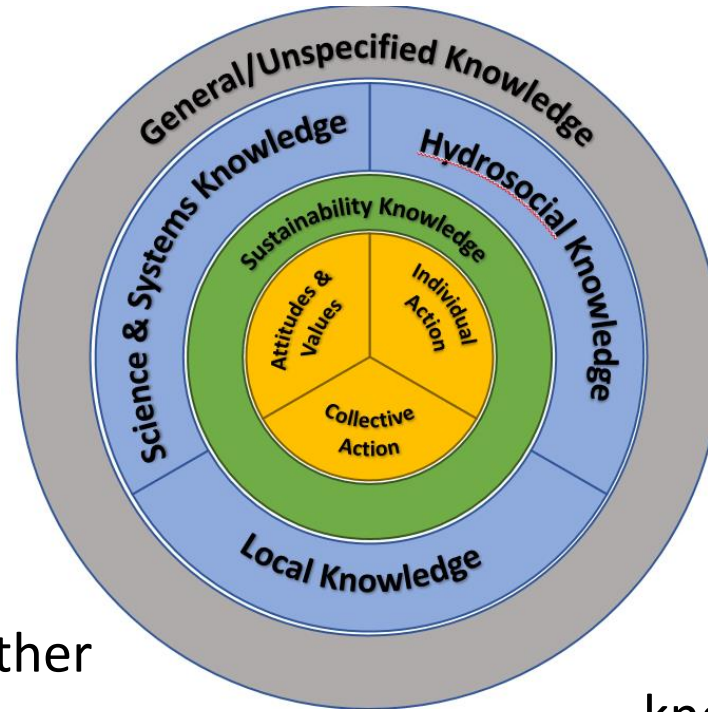


McCarroll and Hamann (*in progress*)

Water Knowledge & Misconceptions

Students (K-16)

- Challenged by unseen/invisible aspects (eg. groundwater)
- Cycles & transfer knowledge incomplete (eg. biosphere)
- Conceptualize natural settings without humans
- Conceptualize textbook ideals rather than local realities
- Limited knowledge of indirect water use
- Aware of drinking water treatment, but not the fate of wastewater
- Some sustainable actions may be understood, but may not fit with social realities (eg. prefer longer showers)



Adults/Public

- Continued misconceptions of groundwater, but experience improves some science knowledge
- Think they know where water comes from, but majority can't ID local watershed or local provider
- Better supply-side infrastructure knowledge, but not fate of wastewater
- Trends shows increasing knowledge of action impacts and socio-political systems
 - Knowledge of 'easier' conservation actions, but ask for more education and are less likely to take 'harder' sustainability actions

Stay tuned...publication coming 2020-21 (we hope),
or reach out with questions



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