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SciTech Report: Sustainable Utility Services

"The Village Water Cycle and System – a Master Plan to Meet all Needs"

By Bob Wubbena

Past articles for the newsletter have shared these stories with readers:

- The unique story of the work volunteers have done to build a new hydro/potable water intake high on Copper Creek
- The use of modern technology and natural gravity flow to provide membrane filtration of the drinking water
- Upgrading the Village's "antique" hydroelectric plant through the creative genius of one of our volunteers
- The conversion of the 75 year old water distribution system into a modern demand management program
- The reconstruction of the sewer collection system and construction of a modern "old technology" septic tank with modern land application of the treated effluent to meet the rigid criteria for waste disposal in a pristine wilderness

The Village has a high tech modern antique style water, hydro and wastewater management system that rivals sophisticated community systems in its performance.

Reading the current system description, the reader might think we have completed most of our work and our system is ready to serve the Village into the future. This is partially correct. However we have several significant issues still facing the group of volunteers and the Science and Technology Committee members in ensuring that the Village's infrastructure is fully meeting the needs of the Village and its mission.

The current "buzz word" associated with infrastructure and resource management in professional circles is "Sustainable Design and Operation". Helping the Village to plan, construct and implement a "Sustainable System" remains our near term challenge.

The issues include:

- The shrinking of the glacier that feeds the Copper Creek drinking and hydroelectric water supply
- The balance of forest management for environmental reasons vs. protecting the Village from wildfires
- The identification of how the Village will produce their required energy: from water, wind, solar, bio fuels or fossil fuels
- Documenting the reliability and limit of the future supply of Copper Creek or shifting to Railroad Creek for water

- New and more efficient controls to optimize our production and use of electrical power
- Installing purple pipes to provide a "water/fire shield" around the Village to secure the Village from those forest fires
- Developing a strategic partnership with the managers of the "mine clean up" that is designed to reduce the environmental impact of the mine tailings while providing some of the remaining answers to the Village's sustainable management of the valley's resources.

All of this must be achieved within the balance of the natural resources of the valley, while still protecting the environment as good stewards of God's gift to us.

The Village and the Science and Technology Committee has completed wonderful improvements for the Village by the careful use of the valley's water cycle and modern technology in a sustainable manner. Now it must complete the task of balancing the natural and financial resources so that these key remaining tasks can be completed and the life of the Village can continue. This answer will be documented in a new "Village Utility Master Plan" that is now being developed.