



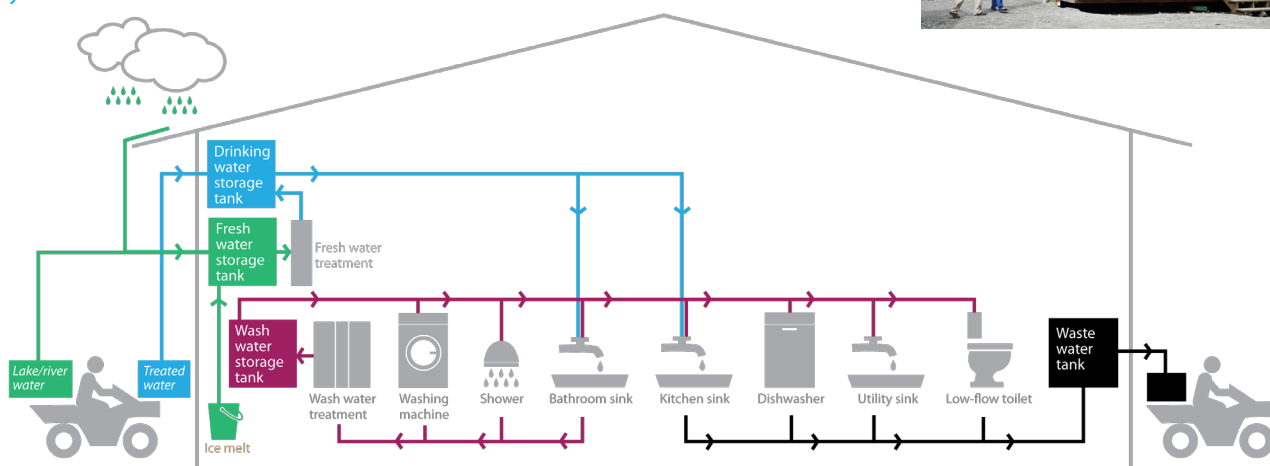
ALASKA Water and Sewer Challenge

SUMMIT CONSULTING SERVICES

IN-HOME WATER TREATMENT AND WASTE WATER SYSTEM

Drinking Water

Drinking water is available at the kitchen and bathroom sink. Treated or fresh water must be hauled or collected every three to five days to refill the 50 gallon fresh water tank. Rain water can be directly piped into the system when available. Fresh or natural water passes through two pre-screening filters, two filters to remove bacteria, and a filter to remove taste and odor to clean it for drinking. Treated water can also be added to the system.



Wash Water

Wash water is recycled from the washing machine, shower and bathroom sink. The wash water is treated to be used again for washing uses at the washing machine, shower, bathroom, kitchen sink, dishwasher, utility sink and to flush the toilet.

Wash water is treated in four steps using a pre-filter to remove dirt and hair, biological treatment, a pump with air to remove soap, then two filters to remove contaminants and bacteria and an ultraviolet light to kill viruses.

Waste Water

Water from the kitchen sink, dishwasher, utility sink and toilets drain to a waste water tank. Waste water is pumped out of the house through a button on the outside of the house.

Ten to 17 gallons of waste water is produced each day, depending on the toilet choice. Waste water must be pumped and hauled every three to five days from the 65 gallon waste water tank.

SYSTEM HIGHLIGHTS

In order for a household of four people to use 60 gallons of water per day, a total of **70 to 120 gallons** of water will need to be **brought into the home** each week.

Also, **70 to 120 gallons** of wastewater will need to be **removed from the home** each week. Wastewater is produced by the kitchen sink, utility sink, dishwasher and toilet.

System components for water treatment are **located inside the home**. Tanks are incorporated into walls. The wash water treatment system is located in the bathroom.

Sources of water that can be treated **for drinking and cooking** purposes include **rain, lake, river, ice melt, washeteria water**.

Sources of water that can be used **for wash water** include the **shower, bathroom sink and washing machine**. Wash water refers to water used in the house for uses besides drinking and cooking.

Hot wash water is made available by the system for showers, sinks and the clothes washer hook-up.

Summit Consulting is working with partner communities in the **Yukon-Kuskokwim and Northwest Arctic regions** to gather feedback on the system from potential end users.

Questions? Want More Info?

Website: www.summitwsc.com Facebook: www.facebook.com/summitakwsc Contact: Summit at 907-291-2339



ALASKA Water and Sewer Challenge

IN-HOME SYSTEM DESIGN

- Fits completely within the home.
- Flexible system components to meet home owner needs.
- Designed to be installed and maintained by local labor.



Rainwater catchment, intake and water overflow pipes, and waste water outlet.



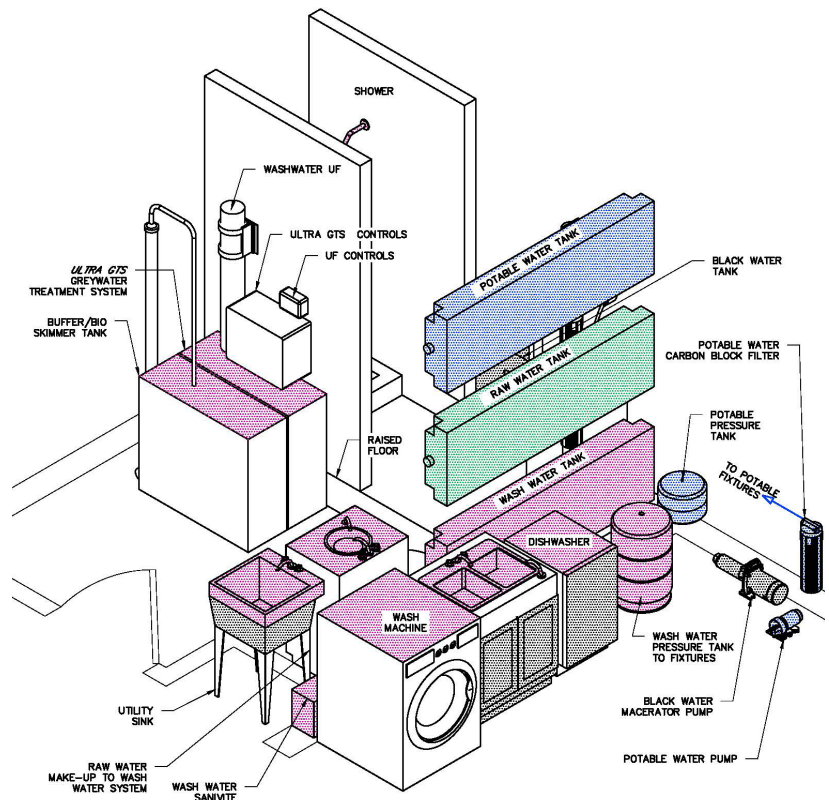
Tankage shown in wall.



Kent Supreme unit - drinking water treatment alternative



Core component of the wash water treatment system: Ultra GTS MBR tank, control panel and wash water ultrafiltration and controls.



THE TEAM

Summit Consulting Services
www.scsalaska.com

Agnew::Beck Consulting
www.agnewbeck.com

Re-Locate
www.relocate-ak.org

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