

CHURNING RAPIDS FACT SHEET

Home to: Sue Ellen Kingsley
Terry Kinzel

Property: 2.7 acres

Built: 1992

Builders
(of various stages): Dan DePuydt
Brian Maynard
Dave Bach

Design: Terry Kinzel

Energy Production:

Photovoltaic: 8 Solarex MX 60 panels mounted on Wattsun tracker
Producing 480 watts (28 amps @ 17.4 volts in full sun)

Hydroelectric: Energy Systems and Design Turgo Generator
16 feet of head, flow 75 gpm
Producing 145 watts (11+ amps at 13 volts)

Wind Genny: Air X: cut in for useable power is about 10 mph, max is
400 watts at 25 mph. 47 foot guyed tip down tower

Energy Storage: 2 L16 lead acid industrial batteries in series giving about 350 amp
hours at 12 volts. Batteries receive minimal use as we are
connected to grid to sell back excess power. Used primarily when
the grid is down.

Energy Management:

Charge control: Enermaxer with 45 amp hot air resistance coil to drain off
excess electricity and protect the batteries when the grid
goes down.

Inverter: Trace SW2512 (true sine wave)

Heat Source: Napoleon high efficiency wood stove with McLean Propane hot
water boiler for back up

Hot water: Aquastar instantaneous propane heater

- Well: 362 foot artesian well. Shurflow booster pump to pressurize system
- Appliances: SunFrost 12 cuft refrigerator/freezer
SunFrost 10 cuft freezer
Caloric propane range and oven
GE front loading washer
SunWave microwave
Mac notebook computer
- Lights: Compact florescent (electronic ballast) and 12v halogen
- Electricity use: about 100 kwh/mo with our average production being a bit more than that (< 1/10 average American consumption)
- Water use: about 125 gallons a week – low flow shower heads, low flow flush toilet, front loading clothes washer, no dishwasher (again < 1/10 average American consumption)
- Waste water
Treatment: Audrey III (apologies to *Little Shop of Horrors*) a lean-to greenhouse utilizing algae tanks and **very** vigorous filter plants in constructed wetlands to purify all our waste water
- The Hermitage: A different kind of Bed & Breakfast. Nestled into the eaves above our sauna/greenhouse is a room with a double bed, roof windows and dormers providing views in all directions. The Hermitage offers a week end getaway for those of you interested in sustainable living and supporting land preservation. The Hermitage is our attempt to support our local land trust, the Keweenaw Land Trust. When you stay with us, your entire payment goes to support the work of the Keweenaw Land Trust.
- The Trails of
Churning Rapids: Adjacent to the homestead, we own 900 acres of woods, fields and streams for which the Keweenaw Land Trust holds a conservation easement. The 20 plus miles of trails are open to the public for nonmotorized recreation such as hiking, bicycling, and cross country skiing. Enjoy.