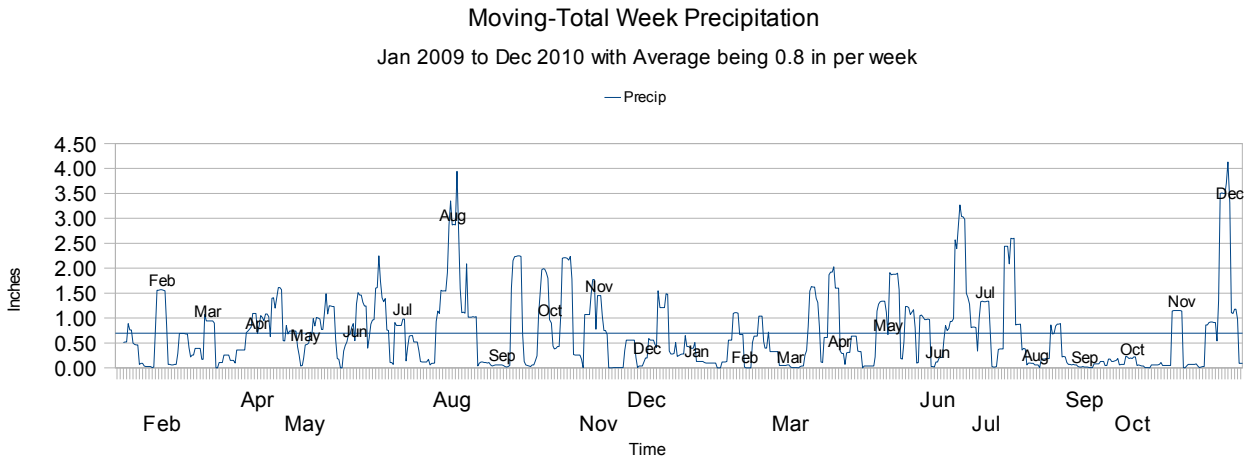


A couple of weeks in the past 2 years have had 4 inches of rain per the week, and about a dozen had between 2 inches and 3 inches. But the pump was not putting more water into the frog's observation pond than the pond could accommodate, namely about a foot deep and the extra pumping during the storm would extend for a second day which mitigated the rapid downpours at the distribution system trenches.

Hence although there was some adjacent surface area (around the constructed wetlands) contributing to the wetlands accumulation of rain, it wasn't very much. The house roof and the watershed from the woodsy areas each have their own customized diversion trenches being monitored and adjusted as data accumulated.

In total, 2009 saw 39 inches of rainfall, which would have added (direct fall) approx 19,744 gal in a year's time. Normal for SW Ohio, slightly dryer in 2010.

In that year's time our own greywater (estimated from BCRWA water data) was about 21,900 gal annual. Each pump cycle lasts slightly less than 1 minute and the pump is rated, at that lift, to move 41.67 gal/minute implying that it would need to run about twice a day -- once for BCRWA, once for rain. This approximately confirms easy observation of unusual pump operation sounds audible from nearby windows at computer desk and in bedroom area.

If there were groundwater intruding into the wetlands, inspite of the clay walls that we established do draw-through some stormwater from the watershed area of the woods based on earlier observations of proposed blighted septic tank installation attempts in 2006-2008, we would have had constant pumping the whole blessed winters of 2008-9 and 2009-10. Since the pump runs at a substantial 900watts then our electric bill would have ballooned from Dec to Apr at the least. No such electric usage nor any unaccounted rise in electric usage was observed to suggest even any noticeable excess pumping.

From our SCP electric bill, most recent data, the average increase in winter months (Jan-Mar) when groundwater in the soil manuals is predicted to be highest is only 1294kwh/month for an all-electric-heated, 1890 sf home in this climate. This implies $130/month for climate-caused heating-needs (such economy easily eliminating claims of excess pumping evidence).

Furthermore, the frogs' vernal pool observation pool and distribution trenches for returning the body-contact clean water from the constructed wetlands is approximately 90sf in area for that purpose, 30sf in the pond area and 60sf in the two arms of the trenches filled with stone that easily passes water through and through. So using the permeability of the soil in that area of the lot (Avonberg) of MAX 2in/hr, the most that this distribution system could return to the ground water in one hour is 2 inches of water, which would be about 9cf which = 70gal which is about 2 inches of pump output. So if the pump ran more than twice an hour, the water would begin to back up

and the pond would exceed its capacity, visibly, sooner or later, which it has not done with the possible exception of one late dark night when we had multiple inches of rain in one hour, following two other days that week with heavier than normal rain. By morning light (so that the path to the pond was clearly visible), any problems were not visible.

Furthermore, it should be noted from the weather data that WHEN THE GROUND WATER IS HIGH, THE RAIN / PRECIPITATION IS LESS THAN OTHER SEASONS, so ANY added groundwater will not come on top of excessive rain in all probability.

Those SEASONAL 'extreme' amounts are between 1” and 2” (two pump sessions) and furthermore those probabilities are less than ONCE a month Max in high groundwater months, so the stormwater accumulation will not occur. Hence the 3ft depth of high ground water in those seasonal months is ample for the stormwater on top of the groundwater.

EMERGENCY PERFORMANCE

Should the power go out on the ELECTRIC GRID...

The dimensions of the constructed wetlands would be DEPTH-ADJUSTABLE just to be a wetlends, since it's expected that there would be periods in their model-NATURAL wetlands when the water level would vary. This design is intended to maintain the water level just a few inches below the surface of the rock and the seasonal vegetation with its natural mulch.
-- 164 gal could be expected to exist in the processing area between low float and high float, from which the pump removes its 40-50gal to draw the next influx from the processing area into the collection area.

To fill the area beneath the stone and above the high float level in the processing area as well as in the collection area
-- 243 gal would be the fillable space (including the collection well).

The sides of the wetlands above the river gravel would accommodate some expansion as well
-- 2000 gal would be available for temporary wetlands-confined emergency control which would could be pumped even if the electric was generator supplied, confining the problem to our own designated processing area.

Since the usual activities involving hot water would be curtailed in a blackout, the usual BCRWA component of the wetlands input would be reduced without a doubt, making this QUITE adequate
-- 35 gal/day would be our estimate of conserving water usage in an emergency, based on our conserving 50gpd normal water usage (demonstrated now for 2 years with no difficulty in water & plumbing) (including indoor garden and 3 pets) Hence greywater input would not exceed even the high-float for 4 days (no rain) or 2 days with normal rain. It would not appear above the stone level for another 7 days (no rain), another 3 days with normal rain.

IF INSTEAD..
Should the BCRWA be seriously unable to continue service for an extended period, the body-contact clean water at the collection well would serve as a FULLY ACCEPTABLE SOURCE OF WATER FOR POINT-OF-USE FILTERING FOR FOOD AND DRINKING WATER, as well as FULLY ACCEPTABLE WASHING WATER without further work

Our British Berkefeld gravity-powered ceramic-silver filtering system is THOROUGHLY TESTED for handling MUCH LESS well-processed water for healthy drinking, and has a long distinguished history of protecting the health of EXPLORERS.

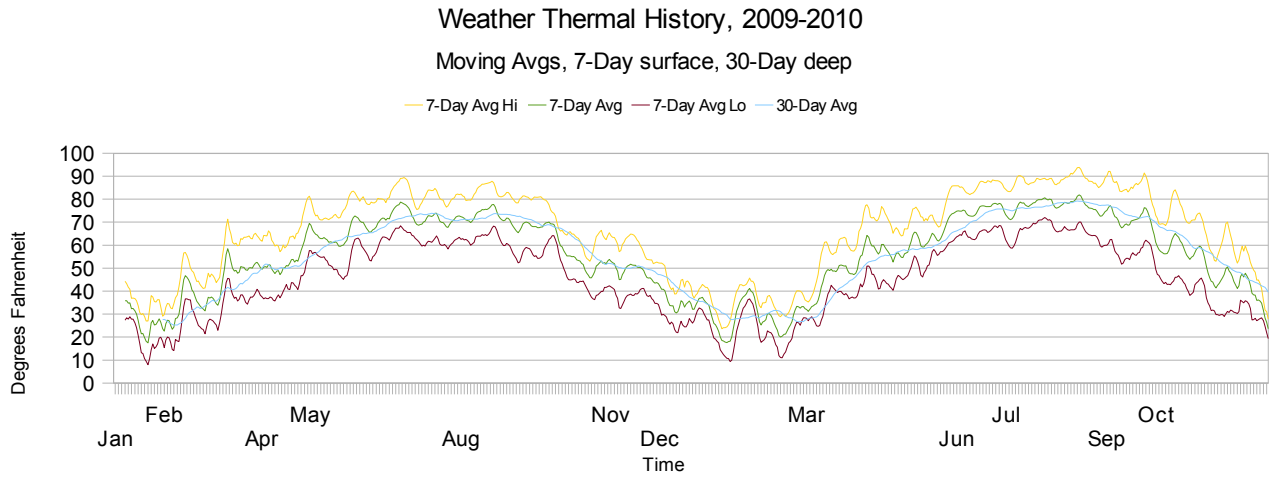
CAN YOUR ---- SEPTIC/SEWER --**-- DO YOU SUCH A FAVOR!!!**
ABANDON YOUR SEWAGE SYSTEMS. ADOPT A CONSTRUCTED WETLANDS and our THERMOPHILLIC BIOREMEDIATION SYSTEM. FOOD AND WATER ARE OUR BASIC RIGHT AND NECESSITY!

This greywater ConstructedWetlands, agri-urine separated, thermophillic bioremediation system HAS ONLY LACKED DECENT PAPERWORK REQUIRING WORK FROM SDick -- AND HIS FORMER ADMINISTRATOR WHO BACKED UP THE MALFEASANT SDick's DAMAGING HANDIWORK.

This system is the child of my son's genius and my family's hardwork in spite of the injustice of SDick. Now the lazy and greedy mentality thinks to smother this child with some BRIBE of grant money to destroy the child and substitute the malfeasant guilty SDick's waste-generating, overpriced, hand-tying systems, under which Brown County will continue to be subjected, as will we if we accept it, to untold damage to our conservation sustainability and workingclass-equity efforts required to make it to the next century.

Don't allow the malfeasant - at best, else lazy, lying example of a civil servant -- SDick, full of pretended cocern, smother the child for lack of decent sanitarian paperwork that can be supplied with some minor decent effort. The system works excellently well, there is time to expend the effort.

For the simple sake of Brown County, explore our proposed sanitation experimental system.



Until we had confirmation that the hydrologic parameters were accounted for adequately, we availed ourselves of the opinion from some wetlands bioengineers that the main remediation of greywater was the work of the microbial population, and that plants could be propagated over time.

Hence we determined to study the naturally occurring wetlands plants in our lot and observe the hydrologic performance initially, without full planting in the center of the processing area.

Our lot has a multitude of reeds, bulrushes and occasional cattails, all ideal for a constructed wetlands with no apparent difficulty to be propagated in the planting zone.

Since the microbes work more diligently when favorable temperatures are presented, we designed our wetlands to expect support from the household contributions -- always room temperature water and moderated ground temperature -- and the warmth from the incoming water in winter was enhanced with the choice of pipe locations. Which we consider to be a trademark of our designing.

From our study of berm designing and thermal wave movement from homeheat input, we expect the ground from the perimeter of the house to the nearby wetlands to have a constant supply of BTUs. Since BTUs move through this soil, per our discussions with the regional Ohio Soil Scientist of the OEPA, at about our anticipated 1.3 in/day, the deep levels of the wetlands should benefit from the house area's proximity as designed.

The groundwater beneath the house would not rise as high as in the surrounding woodlands due to the slightly higher elevation and drainage for stormwater plus ample vegetation of our wildcrafted habitat landscape. However it would be sheltered from outdoor input and receive the benefit of crawlspace warming, as it is.

Although the groundwater moves typically from west to east on this side of Cincinnati because of the bedrock's slope, this is still manageable. The constructed wetlands would pull any rising groundwater from under the

house downward, thereby helping to maintain the crawlspace warmth from being swept away by our westward moving groundwater while it's close. In return the now protected soil beneath the house footprint would contribute more warmth to the soil adjacent to the wetlands.

Further the crawlspace is more climate-stable and retains more of the house warmth also due to the berm designing progress we've made in dealing with the usual local seasonal crawlspace dampness and desired thermal performance, another innovative discovery in our testing and research. We may not be so amply rewarded for our intelligent research and intensely thought-through designing by outside observers, at least not yet, but we have considerable benefit to offer even at this point and even with hazards abnormal to the inventive. Since the crawlspace in winter does not lose as much heat sideways to the perimeter air with these crawlspace adjustments, then the vertical ground thermal-input would be more stable and warmer than otherwise. Hence we feel that our constructed wetlands does perform more appropriately through all seasons, including winter.

This progress is the combined handiwork of our group of very intensely motivated and creative souls who are working under adverse circumstances locally and with minimal financial lavish resources of the material kind. See our resumes.