



0127111502.jpg



0127111508.jpg

(Above) The Constructed Wetlands is deeper in the stone than warm water designing and the microbial action has been quite effective. Testing shows that in spite of extremely cold weather prior to the testing (in December) the wetlands cleaned the effluent so that at the outlet end the finished water was still winter-warm – a microbe action adequate warmth of 42 degrees Fahrenheit, not freezing or subfreezing like outdoors above ground.

The deep snow had melted, the road was clear, no accumulation had reached the road ditch and the culvert-pipe (below) was basically dry.

As was the straw in the composting bins. The bin area for storage serves as a sheltering space for local winter birds.



0127111516a.jpg

Are you appalled by Brown County's natural beauty? Too common? Too unruly?

Some people insist on foreign influenced ideas of landscaping, with scalped mowing, herbicides, petrochem fertilizers and all the damages that these human- and nature-unfriendly styles cause, which we then have to pay for or suffer silently?

Will you defend a law that sensibly requires testing and sets performance standards that are science defensible? Free of autocratic falsity.



0127111503.jpg



0228111206.jpg

(Below) Clearly the combination of high seasonal ground water and twice the usual amount of rain has contributed a significant amount of rain water to our woodlands swales.

The farmer who had worked these now-woodlands, back many years ago had bequeathed our lot with nice swales running parallel exactly 25 feet apart.

Now interrupted by the house island and perimeter swale, the Raichyk habitat has added small pools at the edges to expand the capacity of the swales, to provide landscape interest and habitat improvements for the small fauna and visiting birds.



0228111206a.jpg

(Above) In winter, the strong concern is the seasonally high ground water in our area. Yet when studying the weather data, it was clear that the winter was also a low precipitation period.

These photos, in February were after a snow melt, a two day rain sequence of at least 0.9 inch rain in a month that had more than double the average February precipitation.

The road ditch above shows that our lot contributes nearly no rain since most in the ditch is likely from the road.



0228111258a.jpg

(Above) This is the stretch of road ditch downstream from our driveway and culvert.

Even with the unusual extremely wet winter conditions, the road ditch shows that our lot is managing to process the rainwater right along with the high groundwater.

Clearly if more people did something closer to natural landscaping and sensible stonecreek stormwater control, the problems of this area's climate extremes would not TAX us excessively.



0228111307b.jpg

<-- The open creeklet that collects the house-roof runoff, keeps that area around the house drained and isolates the composting island extends the whole length of the home.

This end is near the frog pool and its adjacent dispersal wings.

When the spring and summer come, this area is rich in black raspberries and wetlands plants of biblical fame, like bulrushes, plus cattails and reeds and sedges.



0228111305a.jpg

(Above right) Clearly the thermophilic composting bins are well protected from the wet weather extremes.

The overall average wetness of the Brown County area is perfect for normal thermophilic composting without such sheltering, but the extreme weather events makes simple tarp coverage sensible for disruption protection.

(Right) The open creeklet trails toward the slope to the road ditch, and has been dredged to allow water in the creeklet to drain IF it reaches high enough on the level ground.



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Raichyk
front road
ditch after
extreme
rain on
3/9/2011

Compared to what
the extreme rain
did to the neighbors
on similar flat lot.

Considering the amount of rainwater that fell and flooded the neighbor's flat lot, with no plan of management, shows that the water in the Raichyk front road ditch, the public right of way area, is strictly a small portion of the rain that fell on the Raichyk's very flat lot.

There is no public influence coming from the Raichyk subsurface Constructed Wetlands, even though permissible because of its cleanness -- displayed in EPA testing -- as eligible for landscape use in the ODH specifications for Approval of Pretreatment Components -- as permissible for restricted (to private) "surface application". See ODH Pretreatment Component Approval Rules.



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0309111403.jpg

Constructed Wetlands
unaffected.

Driveway culvert at right below
shows very little rainwater is
leaving our lot to go further
down the road.

0309111119a.jpg



0309111417.jpg

Woodlands soaking wet, watershed
diverted from constructed wetlands.

Raincreeklet around house island
nearly full. Compost bins high & dry

0309111118.jpg





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(Clockwise from above) Neighbors' creek across the road on child- and pet-endangering rampage, due to supersaturated soils + heavy day's rain again... AND due to constant mowing. Trees on banks are near washing away

Not however due to Raichyk contribution, see road ditch next. Stormwater from Raichyk's lot is sequestered and diverted to habitat pools. Constructed wetlands with highwater held by safety banks. Woodlands watershed diverted to side-of-driveway ponds. Tarp-covered Equipment&Materials Storage, House and Sunshed are unscathed even by highwinds.



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0420110845.jpg

With the April combination of supersaturated soils – from the previous couple of weeks of very ample spring rains – with the rapid downpour of the night-earlyAM of April 20th, the system's built-in overflow handling was pretty well tested.

The vernal pool – another habitat feature with overflow control protection – had expanded into a second cell, creating the elongated chain of pools -->



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0420110835.jpg

The open creeklet separating the composting bin island from the house island was definitely full, yet the islands were adequately protected from excessive stormwater.

Trial and error in designing the labyrinth of stone-filled channels for rain control as it rushes off the house roof is suitable for a sensible incrementally improving approach to custom design of stormwater provided the designers/implementers are on-site for the naturally unschedulable observations needed. As would be the case for homeowners/DIY with appropriate variance.

Open creeklet – seen above also – that protects the compost bin island from the house-roof runoff, trails along the backside of the bird sanctuary area (hummingbird and finch habitat and natural landscape plantings) curves toward the Avonburg soil areas on its way to the road ditch.

This allows expanding time for stormwater to soak in when the rain is more normal, but allows the relief needed for the house-island and composting island to remain unflooded.

It further provides visual interest in the landscape between the house and the less desirable views of traffic and blacktop. -->



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