

City of Geneva, NY Green Committee Meeting, 2024 Jan 16

City Hall, Second floor

Present: Richard Cox (Co-Chair), Anne Hoyt (Co-Chair), Jason Rearick, Jacob Fox, Larry Campbell, Marcia Cullen, Pat Wallace, David West; joining from CA via zoom, John Todd

JF: I want to propose to city council to support a grant to pay for installation of some of their (Eco Lake Solutions, <https://ecolakesolutions.com/>) solutions in our marsh creek corridor and other areas where there is high nutrient flows. He therefore arranged a zoom connection with John Todd of said company regarding removing contamination from storm water run-off. This year a car dealership spilled 100 gallons of diesel on Hogarth Ave which flowed into Marsh Creek and through Gulvin Park, into Seneca Lake. How to solve? Absorbent material can catch some of the contamination but then we would have to deal with the contaminated absorbent material. Can build a floating island with plant roots below the water's surface which decontaminate water, lagoons of large food processors; West Lake Village, Ca, etc. (See case studies at ecolakesolutions.com.)

AH: Here's a newspaper clipping regarding \$7million upgrade for wastewater treatment plant.

JF: Wastewater treatment plant sludge is trucked to Steuben County farm and spread on fields but PFAS chemicals are a concern along with other inorganic non-biodegradable chemicals. Sludge could be spread on non-food crops such as trees for lumber. Eco systems treat/remediate HABs (Harmful Algal Blooms), oil spills, help biodiversity, break down industrial hydrocarbons, cyanobacteria (aka blue-green algae), golden algae. John Todd needs us to ID a funding source, regulatory agencies, etc. Water flow must be w/in a certain velocity range, flowing slowly, but not too fast. Fabric baffles optimize surface area.

JT: South Burlington 1990's Lake Champlain project, nice-looking greenhouse, gardens, clean effluent waters the greenhouse plants, no smell, pleasant area, greenhouse tours; paraphytons on plant roots excellent for decontamination. Omega Institute, NY 2009 sand filter project. China unfiltered sewage in street gutters, canals treated to meet UN discharge standards. Berlin, MD, Tyson chicken plant water high in ammonia going into Chesapeake Bay, used 70% less electricity than conventional methods, 2001. Used sustainable HDPP (high density polypropylene non-woven geo-___?___ fabric, high surface area. Limoneira avocado farm in CA retrofit 20 cents on the dollar compared to conventional bid; compliance. Four seasons golf course fishpond, shrimp, saved electricity and money. Decontaminated Grafton, MA Blackstone River industrial mills, 1990 bunker fire released contamination, partnership with (town?)?, used 4 mushroom species plus native species of oil-consuming bacteria (serendipitous). Storm water erosion control, mycelia good, but when fruiting bodies form, they stop producing the beneficial enzymes for filtration and erosion control; ...pollutions and nutrients...

Select species native to that area. Englewood (CA?) bioswales... impermeable surfaces send rainwater to the sea instead of the aquifer. Secondary economic opportunities (e.g., selling edible mushrooms). Biologically complex, mechanically simple, low maintenance, it almost takes care of itself. 70% less energy use than conventional energy use, BOD-dependent, minimal energy. Q: do you monitor your projects after installation?

JT: that depends on who's there to do the monitoring, liaison between groups. Bio-remediation and/or phyto-extraction: mycelia bio-remediate (break down) the contamination, sometime plants are chosen to bio-accumulate the toxins, e.g., lead, arsenic, then remove those plants, compost them, and apply back to the land. Ex: Luminaire plants removed 2x/yr. "Living Machine" / "Eco Machine." Aeration: large # of small bubbles good to circulate/move the water. Mix contaminated soil with woodchips inoculated with turkey-tail mycelium.

JF: Seneca Lakes Pure Waters streambank-stabilization grant. Test first to ID a baseline, compare before/after. Stormwater, \$, retention areas, bank stabilization, Seneca Lake Pure Waters will be having more grants.

AH: Marsh Creek (as opposed to Seneca Lake, which is so big).

JF: Army Corps of Engineers won't let you do anything due to floodway designation.

DW: floodplains are shrinking due to improved technology. Need special permits for floodplains. EarthRestore floating plant islands break down petroleum 98%.

AH: Need to document contamination/contaminants.

JF: Get involved w Seneca Lake Pure Waters when they do a test, ask that they do one for us at the same time. Use FLI Boat, (HWS Professor) John Halfman, Ian Smith (of FLI). Urban stormwater pollution needs attention. There's brake dust from vehicles, etc.

LC: The Depot?

JF: Yes, and Reeder Creek, too. \$6million CAFO manure lagoons. Soil & Water gets projects done but they need people to reach out to them. Castle Creek project on Carter Rd where trees were removed, upstream retention ponds on 25 acres of donated land, where Brook Creek bends...

AH: wetlands along banks are water retention areas.

JF: get 100 rain barrels around City plus retention ponds.

RC: Oberlin's Living Machine is cool, filters wastewater from the Ecology building and two dorms into drinking water.

MC: about a year and a half after I bought my house here, a crew dug up a spot in my front yard (apparently at the request of the previous owner), accessed the water supply pipe, and later mailed a full report.

JF (looked at it): nothing is over the action limits but there are measurable PFAS, fertilizers, etc. I entered us into a Source Protection plan but haven't heard back yet. Lake Champlain Total Maximum Daily Load. Geneva's wastewater treatment plant might need a PFAS filter soon. 1) NYS, 2) Rochester/FLX Region. Jackie Augustine.... CPRG grant.... Ask for list of projects.

MC: the canal is of concern due to boats.

JF: yes, and the (proposed) marina – boats leak.

DW: Arcadia, CA wastewater treatment system replacement: a giant constructed wetlands which filterers the water and attracts birds, Humboldt Bay.

AH: there's land around Marsh Creek

RC: it's a long distance to the creek bed, hard to make land near railroad tracks, need 5-ft lower than it is, almost flat.

AH: Also goes through Seneca Lake State Park (via pipe).

JF: Castle Creek upland retention pond on Cornell Univ farmland. Lead, arsenic from old apple orchard, sprayed on back in the day. Near (proposed?) bike trail, Cornell Univ granted access.... Bridge over Doran Ave.... Jackie Augustine involved.... Seneca Meadows owns property around there, part of rail bed, etc. trees removed for several projects (including solar farm, etc.) Brook St Park and McDonough Park's tile drainage flow into Castle Creek.... FLX Radio Group owns land along PreEmption, Morgan Stanley Building along PreEmption.... HWS Bazzuto Center has a 1000gallon rain barrel.

RC: what about the Cemetery Creek infrastructure problem?

JF: that would involve a lot of digging. do projects which are least invasive and have the biggest return on investment. DPW owns in cemetery.... put another retention pond into HWS's O'Dell's Pond

AH: can put retention ponds underground.

JF: expensive, invasive. Could spread compost all over park grounds, it'll retain water, significant amounts. Jefferson Park, for example.

RC: MZ3, Sat April 27th: I've talked to 4 vendors: Simply Installs, Greenspark, FLX (_?_), ____?. We need more vendors, more ideas, such as poems and art projects for school children to display all around the inside of the ice rink curved plexiglass arranged through the schools ahead of time, maybe a judged competition.

AH will contact teachers.... Geneva Music Festival....

RC: need to identify a place/places where the contest winners will be displayed after MZ3.

Others: do we want winners? That means that others will be losers. Who's going to judge children's artwork?

RC: the MLK children's poems were judged, winners received ribbons. The rain barrel workshop can be in the locker room foyer where the benches are, we'll have the Shadetree Committee tree give-away, want HWS Solar Farm tours with vans for transportation, 3 Solar Village units have said Yes. Dave Sharman will give the rain barrel workshop charging \$300, we're charging \$200 for large vendors, \$50 for small vendors, \$0 for non-profits.

JF: need to charge participants something for their rain barrel. Use social media to advertise and take payment.

Soil & Water gets the barrels for free from Constellation.

RC: call vendors. I have two now. Need tables.

JF: Town of Geneva has some.

RC: so does the Pre3sbyterian Church.

AH: Amara Dunn wants to collaborate with us and with BID. She currently has garden plots near the Cornell AgriTech greenhouses, wants to expand into downtown and lakefront. Gardens are for beneficial insects, wants to organize scavenger hunts for beneficials. (She?) will be on a JAN 31st zoom call at 10:00 for ___? With ___?

DW: Betsy Lamb wants City Public Works involved. Amara is recruiting other municipalities to hear BID...

Cornell Bulb-planting machines from the Netherlands make bulb-planting fast and easy.

AH: but those aren't native species, so we don[t want them at the Lakefront Park.

JF: can pick aronia berries (aka choke cherries), they're edible, nutritious.

AH: or leave them for the birds.