

**Genoa Comprehensive Planning Group Notes:
Environmental Panel
Monday 7 April 2010**

Committee Members Present: Maria Bachich, Dave Baildon, Sjana McClure-Berry, Barb Patchen, Dave Stilwell, Karin Wikoff.

Members of Public Present: George Bakouris, C. K. Beyea, Chris Blauch, Gary Buono, David Calton, Eric Clark, Scott Cook, Karl Czymmek, Peter Eldred, Ronda Fessenden, Tim Fessenden, John Gloss, Jeff Latham (?), Jeff Layton, Dorothy Lonsky, Dana Mandel, Nathan Mitchell, Dan Osborn, Bernard Oshaben, Janeen Oshaben, Carmel Schmidt, Elizabeth Shaw, Michele Shaw, Scott, Shaw, Deb Shea, Steven A. Smith, Connie Wilcox.

Panel: Hilary Lambert, Steward, Cayuga Lake Watershed Network; Bruce Natale, Environmental Engineer, Cayuga County Department of Planning and Economic Development;

Dave Stilwell opened the meeting by explaining what a comprehensive plan is and he introduced the committee members present.

The first panelist was Hillary Lambert, Steward of the Cayuga Lake Watershed Network. She described the watershed as 1,000 square miles draining into Cayuga Lake. We must work together to take care of the watershed. The Watershed Network has an advisory role and no regulatory power. It is an “IO” – Intermunicipal Organization, as there are 45 municipalities in the watershed area. It’s a big job and slightly crazy. The Network and the IO help inform the municipalities in a factual way as to the impacts on the watershed and how to plan for these impacts. For example, they are currently working with DRAC, a concerned citizens group in Dryden, who are worried about the effects on water resources. Aquifers in Dryden are plentiful and the residents don’t want them harmed. Comments are being sent to the State. The Watershed Network is a regular feature in the town, and though they have their bias, they are fact-based and work with the town officials. The network has services available for offer. On the other side of the lake, they are working with the town board in Ulysses (Trumansburg) on concerns about faulty septic systems and coordinating the info. Things might be done differently in the future in terms of domestic septic systems.

The Watershed Network has two meetings annually – in the spring they meet in the north end of the district and in the fall they meet in the south end. This weekend there is a meeting about the wetlands – how they protect us and we should protect them. Then there will be a Canoga Creek tour and clean up day. We are interested in wetlands restoration and farm wetlands management. We also have an Embrace the Lake campaign – think of the lake as a whole, from the creek in your backyard. Students at Wells College will be having a race with the 4 creeks on campus, and the Girl Scouts will be cleaning up Cascadilla Creek, etc. There are 34 creeks in all. This event helps people get the big picture at the same time it makes the issues personal.

The Network has a new publication – Smart Steps for Clean Water.

The Network is a membership organization – there are membership forms in the newsletter. Two Board members are here tonight – Ronda Fessenden and Dave Stilwell.

Question: Is the clean-up event only dealing with physical garbage and not the pollution you can't see? Answer: If you are interested in that aspect of clean up, you can get involved with the Community Science Institute and become a volunteer water sampler. People who are curious or concerned can get training. The local group is taking 4 samplings a year – a base sample plus 3 storm event samples. These samples are analyzed by a lab to get a snapshot and a better picture after so many years. Right now they are sampling 4 creeks, 2 tributaries and one more spot on one creek. All this info goes into a database and over time it will develop a portrait.

Question: I wish you well. I am curious about the lake pollution in Owasco Lake (still in Cayuga County) at Emerson Park. I've heard it is 90% in some areas due to agriculture and wildlife. Someone said that a professor at Wells said that 2-3 million geese pass through the lakes each year and each one outputs a pound of manure a day. Answer: We have no solution for this situation.

The second panelist is Bruce Natale of the Cayuga County Department of Planning and Economic Development. In the mid-80s he was a town engineer specializing in waste management. Now he is an environmental engineer. He specializes in solid waste and water quality, flood and environmental issues. Landfills started in the 60s and ran to the 80s; wetlands became gravel pits and were bad places. Solid waste issues include a burning ban including a brush burning ban for the past two months. Some have asked if this is a service to the residents - it is to prevent problems. Perhaps there could be a once a year drop off. Sticks and limbs greater than 8 ft long is definitely "brush." There's more information on the DEC website, including info on agricultural exemptions from the burning ban, though there is no more burning of ag plastics. Tompkins County has hazardous waste and computer parts collection for batteries and such. Scipio is having a collection day for 2 hours on May 1 – there will be flyers going out to the Town Halls by the 15th or 16th of April. Some things can be dropped off for free, while other things will have a \$5 charge, and no chemicals will be taken.

January 26, 1996 saw a lot of erosion and flooding in this area. Now we have a berm to protect the water treatment facility, thanks to FEMA. There's also a 500-year archeological flood study. So, when you are doing your comprehensive planning, think about possible flooding. The west side of Genoa is prone to flash flooding which can bring the danger of loss of life. Once there was a flood at the fire house and people had to be rescued out of the fire department, but improvements have been made since then. FEMA has archeological work which gives us a 500-year flood study. Clearview/Honoco Road is a potential flood area. When alfalfa or hay is planted, it's OK, but if the area has corn or houses, it's not good for flooding.

There's been a lot of interest in gas drilling. On 29 April Cayuga Community College is having a forum on the subject. (A sample of Marcellus shale was passed around the room). It is nearly at the surface in our area, like at the first waterfall in Great Gully or at Ray Lockwood's on 326, and the gorge behind the diner in Auburn. The Marcellus shale goes deeper as you go south. It's at about 1,200 to 1,800 ft at the county line. Horizontal drilling is done with high volume through about 100 ft thick shale, which is cracked into little pieces to give up the gas. They drill straight down then make a turn. The shale is 200-33 feet thick in Pennsylvania, so it's easier to hit. Shale is very brittle. If the rock is too close to the surface, it just breaks and you get no gas.

It needs a good 3,000 feet on top to get gas. There is none that deep anywhere in Cayuga County. There are 4 times as many gas wells in Pennsylvania this year as there were last year. This will result in more truck traffic (carrying waste brine) on 34 as they figure out how to dispose of the brine. Hundreds of thousands of gallons are used per well, and there are 5,000 more new wells in Pennsylvania. The drilling companies are looking for underground injections wells. We are keeping an eye on this situation. Putting the water/liquid back down in non-producing wells is a big concern. We don't want to see the brine treated at small treatment plants where they aren't really equipped to handle it – they just dilute it a very little bit. There was leakage at Monongahela, Pennsylvania and too much dissolved solids allowed salt to get into their streams and water supply.

As an aside, with the Queenston formation, 2,000-4,000 feet thick, the gas can be sucked out like with a straw.

Question: What's the profile for Auburn? A: Auburn has been accepting brine for years. There are 300 wells in Springport which produce brine. There's additional testing, permitting and more detailed organic screening. The City must satisfy more, so they went back to anything that was too loose or too old. Sandstone formations are questioned. Marcellus shale brine has naturally occurring radioactivity so Auburn does not take the brine from Marcellus shale drilling because of those radioactivity issues as well as the surfactants. Q: What about Brian Ross and the EPA analysis of water from Bradford, PA? A: Not familiar with this case. No one drinks the water downstream. Do attend the forum 29 April at Cayuga Community College.

The third panelist was Andy Zepp from the Finger Lakes Land Trust. He said our Town had seen less change than other places, but that our whole region will see a lot more change in the next 2+ years. People who are looking for space are moving west into this area. We will see growth and change. The Town of Burdett is a similar example with all kinds of new businesses. We'll want to take care to conserve open lands and farm land – it's all about economics. In desperations, we give up one asset – we will sell quality of life to avoid high taxes, etc. The future of open space is at risk – farming remains viable, but there are issues: conflicts with non-agricultural neighbors, water quality, landscape and views, etc. Conservation easements are one way to address some of these issues. Another issue is private land which was formerly made open to the public by the owners which is now closed due to insurance. In your executive summary of your plan, you should be sure to note 3 resources in Genoa. The first is our prime farmland for agriculture. This can be protected via the Farmland Protection program through the state. There are also various land trusts with compliment the work of Cayuga County. They have bought development rights to farm, to expand operations, to buy adjacent 500 acres farm. There are districts of viable farmland. Easements are not always possible. When it comes to rights of access, you may want to set limits on future use – things like subdivisions, structures, what can be built and where, rules that affirm existing forests and so forth. There are tax incentives for donating easements – it's tax deductible; the property tax credit is 25% (the difference is borne by the State). Easements don't have to be placed on the whole property. "Don't crowd the creek" is another approach. We can encourage Towns to do the right thing to protect sensitive areas. The lake shore is already largely developed on Cayuga Lake. Scenic lake views are another thing to consider. You can't eliminate development but you can shape it for the future – you can set limits like limiting to one home in a certain area, or must keep timber

in this area. If we don't take action, other pressures will impact water quality and scenic views, or we can see problems like erosion at the Owasco inlet under Route 38. The Town bought it, restored wetlands and grass cover and will donate it to the DEC to protect it. Our organization covers 12 counties and 200 Towns. We strive to nurture interest and build partnerships. We have challenges. One is conserving non-farm areas. There are dozens of families in a race against time as there are so many elderly land owners. Land will be sold and subdivided. There could be houses everywhere. We'd lose the countryside. Land owner rights are in the balance. We don't want to have roads lined with houses everywhere and hacked up frontages. If we don't do something now, it won't get easier in the future.

Question: Where do you get your money to operate? A: We have about 2,000 members and some corporate sponsors. We are adding Pen Yann and Corning. Our organization appeals to a wide range of people. Land value increases on huge 1,000 house lots in Canandaigua.

The fourth speaker was Rachel Treichler (an attorney by profession) of the Sierra Club, a citizen's environmental organization. The Sierra Club has mostly grassroots members, about 36,000 members in New York State, but only 2 staff members, as the organization is run mostly by volunteers. Water, air, forests and transportation are just some of the areas of interest for the Sierra Club. This year in NYS gas drilling has been the big issue. What will it mean for our water and air? The Sierra Club is studying the situation and networking with others. There is much concern about gas drilling in New York City as well as upstate. Eight years ago when she moved up here there were some gas leases but there wasn't a lot of drilling yet. The Sierra Club is helping clients with wells and looking at the experiences of other states – in NY we are lucky to be able to have those examples before us: Wyoming, Texas, Pennsylvania. There's a lot to learn from. The DEC is also studying the situation. The State is revising its permitting rules and has issued a draft generic supplementary environmental impact statement to which there have been 15,000 comments from the public. Their proposal is not adequate as it has not addressed the key issue of water (flowback) disposal. Horizontal drilling takes a large volume of water under high pressure to fracture the rock and get the gas. 4-6 million gallons of water are used per well. They use fresh water then add chemicals including biocides to keep micro-organisms from eating the drill bits and other metal parts. These biocides are especially toxic to aquatic organisms even in micro amounts. The biocides are the most toxic part of the liquids used in drilling, but there are also others. Petroleum distillates, which are also included, are also toxic. There are small percentages of these toxins, but there are enormous amounts of water, so it adds up to a lot of chemicals. Additionally, when the rock is fractured, naturally occurring toxins in the rock comes up such as lead, arsenic and radioactive materials – none of which is thoroughly tested. A sample measured from the Watkins Glen area had 20,000 times the normal levels. The issue of toxins in the waste water from gas drilling will surely be studied more. Our water treatment plants are not designed to clean up radioactivity and some of the other chemicals found in the flowback water. This is worrisome because gas drilling waste water from Pennsylvania is being sent to New York State for disposal. A proposed disposal well in Pulteney was deemed too close to Keuka Lake and the ground there too porous. This wastewater was coming from the Trenton Black River formation and targeted to existing structures. The question is: will fluids that go down into these storage wells stay down there? Will it leach out and flow into lakes or ground water? There are geological issues. Tie the Pulteney issue into your Comprehensive Plan. They had zoning and special use permits, which gave them the right to issue a permit for

the wastewater disposal – or not. The Town had the authority. With the public outcry against the proposed wastewater disposal plan, Chesapeake withdrew. The Town had Lead Agency status and an environmental review process. As you develop your plans you will want to consider the impacts of gas drilling, especially in regards to zoning. Oil and gas production are exempted from all major federal environmental protections (like the Clean Water Act, for example). Hazardous chemicals are exempted if used in petroleum production. The DEC is woefully understaffed. There are about 17 people to cover hundreds to thousands of wells, and they may be facing cuts, though they may increase their permitting staff. Pennsylvania has 600 people in their equivalent department. The DEC can't possibly monitor all those wells with so few staff. Join the Sierra Club – we are looking for members.

Question: What could the people down in Texas who have been through this sort of thing tell us? A: Towns have more power in Texas. New York State limits our Towns' power. This should be questioned in terms of Home Rule, which is one way to have more regulatory power and is a good starting point. The DEC has info on the law, and the Sierra Club wants to see the law changed.

Our fifth and final speaker was Scott Cooke from the Water Division of the State Department of Environmental Conservation (DEC). His special areas are CAFOs, Agriculture and storm issues. He is in Region 7 which covers nine counties. There are 15 staff members, most of them environmental or chemical engineers, and some with biology backgrounds. About half the staff cover issues of point-source pollution, while 3 cover flood control and 3 cover non-point-source pollution. Their job is to protect and preserve bodies of water. State Pollutant Discharge Elimination System (SPDES, pronounced "Speedies") permits, a program under the Federal EPA, allows the State to enact our own regulations. These regulations cover private, commercial, institutional and other cases. General permits, also Federal, are issued for storm water under construction, municipal (for ex. Ithaca), multisector (industrial), CAFO programs, further P/C/Is, and subsurface sanitary water disposal. The DEC regulates waste water discharge and effluent limits, and requires discharge reports, annual reports from treatment plants and CAFOs, and does facility inspections of these as well. CAFOs do 30-35 per year. They must report on their compliance activities. Enforcement is up to the DEC. If a CAFO is not following the regulations, the DEC can take action in terms of penalties and fines, and can also schedule corrective actions. The core programs of the water division are the SPDES and the large P/C/Is. They also cover the levees from Binghamton to Elmira and the Cayuga Inlet. They have flood patrol programs and walk the structures during storm events. They do flood mapping and monitor coastal erosion. They have a water supply program. For example, locally, at Onondaga Lake, a Federal Law Judge has set down that certain activities must be done – the DEC must insure that they get done. They look at TMDI – Total Maximum Daily Loads. Clean up is via the EPA. Mr. Cooke's special areas are non-point-source (CAFOs) and storm water. He works with the County Soil and Conservation department, with Cornell Cooperative Extension and with ProDairy. They all cooperate and share resources. They work with watershed programs. There are lots of grants in that area. They look into invasive aquatic species and do water quality monitoring. Agriculture-related issues have gotten a lot of "bad press." They've done a macro-invertebrate study, looking at water quality. Under the SPDES program they sample water at water treatment facilities for compliance. Under the "Ritz" program they check ambient water in streams. They are due back in this basin in 2011. When they find impacted or impaired sites,

they return for intensive sampling the next year. These programs have generated very big data sets. They got 150 sites in the first pass and 12 more in the second, with lots and lots of tests). Lake assessment work is being done by Cliff Callahan. It's called a Lake Class Inventory. The idea of the assessment is to find impaired areas by communities and use the data to develop a state-wide water quality document which will list all water bodies and any impairments. The idea is to identify areas of concern. The data is also used for DEC reports – 305B (Health of bodies of water) and the 303D list of those with impairments which will need TMDL clean-up. These documents are used for numerous grant programs, as well as for construction training outreach, CAFO presentations to commercial manure spreading companies recently, etc. FLOWPA is involved in a lot of the grant program and grant administration. We are trying to keep the dollars locally. There is some stimulus money, some green grants. The DEC also does compliance investigation – runoff, failing septic systems, smelly drinking water – we respond and deal with it. Mr. Cooke is one of 2 DEC employees who inspect CAFOs. He finds them very well-managed, very innovative, using very new treatments, things like anerobic digesters, lagoon covers, bedding materials – he has much praise for them. He also mentioned ground water concerns and well head protection programs and said “Not on MS4” (?) Be proactive. Zone for no subdivisions or lots of construction. Look to South Lansing – they are building like crazy. You can enact local laws to protect against all that. You should also have a storm protection plan in place before doing any building. You should have stream corridor protection plans which include buffers. Development may be headed this way, so enact zoning. Soil disturbances can be a measure for permitting.

Question: If the DEC is the lead agency on water issues, why is the EC's list of toxic stuff in water half the length of the EPA's list? Is it to do with mineral resources? For the purposes of wastewater treatment, they just must be equal or greater, but it doesn't look like they are. If you are considering disposing of this wastewater around here, you must do a lot of planning, studies, work, etc. Are the treatment plants working with the DEC to develop standards? A: The DEC develops the limits.

Question: We know there is concern over phosphorus levels in Cayuga Lake. Which Finger Lake is the most polluted? A: None really stands out. Q: How high does the phosphorus level in Salmon Creek run? A: I would have to look it up.

Question: What can you tell us about the EPA study on the water impact of gas drilling? A: It's a 2 year study and I don't really know any more about it. The Watershed is having a kick-off meeting in Washington, DC to look at the scope of the study. They will be asking every question about fracking. The DEC invited citizens' groups to become “stakeholders.”

At this point, Dave Stilwell took a moment to recognize the Town Board.

Respectfully submitted,
Karin Wikoff, Secretary, Town of Genoa Comprehensive Planning Committee