

Draft

**TOWN OF RED HOOK**  
**CONSERVATION ADVISORY COUNCIL**

Minutes of meeting

May 9, 2012

Members present: Chairwoman Laurie Husted, Susan Ellis, Anne Rubin, Mike Zelig, Sarah Imboden, Karen Schneller-McDonald, Dr. Jane Ferguson, Zoie Riel Absent: Denis Collet

**CALL TO ORDER/ QUORUM:** Chairwoman Laurie Husted called the meeting to order at 7:15 P.M. A quorum was present.

**MINUTES OF THE APRIL 11, 2012:** The minutes of the April 11 CAC meeting were approved with a motion made by Laurie Husted and seconded by Jane Ferguson.

**PLANNING BOARD MINUTES REVIEW:** Mike Zelig reported that he reviewed the Planning Board draft minutes for the meeting of April 16, 2012. There were questions and requests in a continuing discussion of an application by Norman Greig for a special permit for a landing strip; the Planning Board scheduled a public hearing on the permit for May 7, 2012. A continued discussion of the Arvine and Wendy Coon proposal to establish a Farm Market 3 at the southwest corner of Route 9 and Rokeby Road resulted in approval of the site plan. Bard College is seeking site plan approval and a special permit for construction of a baseball field. The Planning Board agreed to schedule a site visit to assess the impacts of field lighting. The Planning Board discussed tree removal along the Hudson River at Teviot, and scheduled a site visit for Saturday, April 21, 2012 to determine whether or not the removal had been part of a previous site plan approval. The owner of the former Bob Davis property adjoining Teviot is seeking approval to remove the existing house and replace it with a smaller structure similar to Teviot on the same footprint. The owner is also requesting permission to remove trees near the River. The Planning Board agreed to combine a site visit at the same time as the one to Teviot. In summary, Mike Zelig said that there appeared to be no significant issues for the CAC.

**APPLE BLOSSOM DAY MAY 12, 2012:** Laurie Husted reported that the Clothes Line Drying display used for Earth/Arbor Day will be repeated for Apple Blossom Day. In addition, Laurie and a member of the Energy Subcommittee put together a map and hints to be used for a scavenger hunt activity on Apple Blossom Day. There are 10 descriptions of places that participants need to identify. CAC members discussed suggestions for improvements. The map could be enlarged some, with inclusion of some additional location labels. Anne Rubin suggested a line for e-mail address for participants. The Town Hall should be drawn in. Anne Rubin suggested that a notation that green cleaning products don't contaminate water.

Laurie had considered doing a ribbon cutting for the bike rack spheres, but hadn't figured out how to manage it. She added an extra entry on the scavenger hunt for those who wrote down the labels of the 4 spheres that have been installed. Zoie Riel asked if there would be any way to make the scavenger hunt linked so that people could do it on i-phone or electronically. Laurie said that would have to be an upgrade for another year. Gift certificates will be used as prizes in a drawing for correct submissions.

**RECYCLING BROCHURE:** Sarah Imboden presented a revised brochure with some changes e-mailed by CAC members. She was wondering whether it could be done in a smaller format if the intent is to have it kept on the refrigerator as a reminder. She thought about doing a postcard, though that might be better after single stream collection is established. Laurie Husted suggested putting an announcement that single stream is coming with a website address for more information. Anne Rubin had a suggestion for substituting cloth for paper, and to move "buy less paper products" under it. Zoie Riel suggested putting some information in "The Red Hook Observer," a panel at a time.

**HYDROFRACKING:** Anne Rubin and Karen-Schneller McDonald gave a slide show presentation to the Town Board on Tuesday May 8 detailing the environmental issues of hydraulic fracturing (hydrofracking) for the production of natural gas resources. Laurie Husted wanted the same presentation for the CAC. Anne Rubin described the drilling and pressurized injection of chemicals to release gas in the process of hydrofracking.

*Characteristics of hydrofracking:*

- Extraction pads for a well of up to 15 acres of cleared and disturbed land.
- Up to 200 tanker trucks per day will travel to and from a single operation.
- A well can be "fracked" up to 10 times.
- A pressurized mixture of chemicals and sand are injected into the well to cause the shale to crack, and the sand holds the fissures open. A "fracking" operation producing 4 million gallons of gas would use from 80 – 330 tons of chemicals. Jane Ferguson noted that the chemicals are proprietary, meaning that the potential toxic nature is not disclosed.

Anne Rubin said that according to her research, some of the chemicals to watch out for are the gluteraldehydes, tetramethyl chlorides, methanol, sodium acrylate-acrylamide, ammonium chloride, ethylene glycol, aromatic hydrocarbons and isopropanol. They all have known serious health impacts.

**WELL CASINGS:** Ann Rubin noted that there is an issue with failures of well casings that are installed to prevent contaminant and gas leakage. Casings are steel covered with several layers of cement. Anne asked an engineer what kind of testing has been done to assure that the casings will hold for 25, 50 or 100 years. The engineer replied that there has been no testing; there is no money for it. Anne referenced a slide of failed casings produced by hydrogeologist Paul Rubin showing natural and man-induced natural gas and contaminant pathways. Methane will not stay in hydrofracked strata, but will follow existing fractures and fault lines in the bedrock to the surface.

**HEALTH EFFECTS OF "FRACKING" CHEMICALS:** There are 353 chemicals known to be used in hydrofracking operations, though the particular mixture is currently classified as proprietary. Anne

showed a slide with a graph of 12 different types of health effects related to oil and gas chemicals, and the degree that each effect causes. One such chemical is benzene, a known human carcinogen at 5 parts per billion.

*DRILLING PADS:* Anne Rubin showed several slides with drilling pad configurations and equipment, and adjoining impoundment ponds. Jane Ferguson asked if the impoundment ponds contained the water that comes up from “fracking” the well. Anne replied that the ponds were to hold all of the waste water.

*FLOW BACK WATER:* Anne said that the Pittsburgh University Center for Healthy Environments and Communities has done some studies of the off-gassing from flow back water and have determined that organic compounds, such as methanol, are being released. They are now termed Hazardous Air Pollutants. The US Environmental Protection Agency reports that chronic exposure to methanol can cause ailments from headaches to blindness in humans.

Mike Zelig asked if the flow back water is what is released into the impoundment ponds. Anne replied that the flow back water includes salt and all of the other injected chemicals, plus any other chemicals released from the fractured shale, which includes radioactive substances and carcinogenic disinfection byproducts, such as trihalomethanes.

*MARCELLUS SHALE PLAY FAIRWAY AND UTICA SHALE PLAY:* Anne showed maps outlining the prime area of the Marcellus Shale deposit for gas production and a map of Pennsylvania indicating the location and number of drilling permits issued since January 1, 2007, a total of more than 9,500. Anne added a map of the Utica shale play in comparison to the Marcellus shale play showing a much larger deposit extending further through New York State. Parts of Germantown and western Red Hook fall in the Utica Shale Fairway.

Estimates have been made that the full development of the Marcellus Shale could involve upwards of 60,000 gas wells. As one 4 million gallon gas fracturing operation would use 80 – 330 tons of chemicals, multiplying by 60,000 wells would give a total of 4,800,000 – 19,800,000 tons of chemical used for the development of Marcellus Shale gas production.

*WHY DOES RED HOOK NEED A BAN?* Anne Rubin asked if an activity involving millions of tons of hazardous chemicals would be well regulated, why would there be need for a local ban? Anne noted that the New York State Department of Environmental Conservation (DEC) is mandated by Article 23 of the NYS Environmental Conservation Law to maximize the efficiency with which oil and gas are extracted. The DEC is preparing a Supplemental Generic Environmental Impact Statement for every drilling permit in the state in the future. A driller seeking a permit would not have to undergo the cost and inconvenience of the standard Environmental Impact Statement process that all other projects must follow.

As far as other protections, Anne said that at the federal level there is the Halliburton loophole, which exempts horizontal gas drilling and extraction from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA),

the Safe Water Drinking Act, the Clean Water Act, the Clean Air Act, the National Environmental Policy Act, and the Toxic Release Inventory Under Emergency Planning and Community Right to Know Act.

*HYDROFRACKING CONFERENCE AT CARY ARBORETUM MAY 5, 2012:* Anne Rubin reported on the Hydrofracking Conference, indicating that she felt that it was very pro-industry. Some speakers expressed the premise that hydrofracking is what the country needs as an alternative to dirty coal and to allow the time for the country to make the transition to clean renewable energy.

Karen Schneller-McDonald countered that much of the gas produced by hydrofracking would be sent overseas. She added that there is a high rate of accidents.

Anne noted that there was a geochemist from Duke University who was against hydrofracking and spoke of methane contamination. Anne spoke with her brother-in-law, hydrogeologist Paul Rubin, who said that the map appeared to show Red Hook in the Utica Shale Fairway, though maps are not entirely accurate. He recommended that the Town should be proactive in its opposition.

*TOWN BOARD RESPONSE:* Asked how the Town Board reacted to the presentation, Anne and Karen said that they were overwhelmed with the amount and complexity of the information about the hydrofracking issue. They will deliberate further on the issue and consider a ban for hydrofracking and/or a ban of use of waste fluids for road de-icing.

*HYDROFRACKING WASTE WATER DISPOSAL:* Karen Schneller-McDonald spoke about the waste water issues of hydrofracking. She noted that New York State does not regulate disposal of the wastes, and the gas industry has no other real plan for disposing of the waste water, except for offering it for sale or for free as road de-icing solution. Karen commented that it is really not free, because with the chemicals in the solution it could contaminate a well or other water resource, and the Town (or other government agency) would be responsible for clean-up. She added that this is an immediate concern for Red Hook as the Town may be approached to use it, or the State or County could use it on roads in Red Hook without Town consent. Karen noted that Ulster County has moved along with a proposed law for banning use going into its second public hearing. Zoie Riel asked if Dutchess County is looking at a moratorium or ban; Karen replied that she didn't think so. Zoie asked if it is really true that there is no plan to get rid of the waste. Karen said that in addition to road de-icing, there are underground injection wells and open water containments but no long term plan for treatment. Most treatment plants aren't equipped to handle the types of contaminants in the waste water; the City of Kingston rejected a proposal to treat "fracking" wastes.

Karen presented 3 studies from the NYS Water Resources Institute, the Center for Healthy Environments and Communities at the University of Pittsburgh and the Environmental Advocates of New York. All three address the potential contamination from chemicals in hydraulic fracturing fluids and dissolved chemicals from shale strata returning as flow back water or produced water (water pumped out as gas is produced), as well as the lack of regulation of their disposal.

*LEGAL RESTRICTION OF HYDROFRACKING:* Karen said that she had done some reports for two towns near Cooperstown that were the first to develop laws to ban hydrofracking. They were challenged in court and the Towns won.

Jane Ferguson asked how long the life of a well would be. Anne Rubin answered that a well could be “fracked” up to ten times, and Karen Schneller-McDonald added that there has been talk of a life span of 40 years, though she thought that 25- 30 years is more likely.

Laurie Husted mentioned the consideration by the Town regarding mining of water for a bottling operation. There was concern that the operation of a bottling facility would take too much of the Town water. Laurie asked if restricting the taking of water would be an avenue to oppose hydrofracking. Karen said that actually a town in Ulster County included a stipulation that water could not be taken out of the town as a part of its Water Resource Protection Law. Anne Rubin added that the Dutchess County Model Water Ordinance has a stipulation that for any land use that uses more than a certain amount of water, there has to be a plan to replace that amount.

Jane Ferguson asked about EPA guidelines on hydrofracking. Karen reminded her of the Halliburton loophole exempting horizontal gas drilling from environmental regulations. Anne noted that all costs associated with the impacts of hydrofracking are borne by the community; the gas industry does not assume any of those costs.

*LAND USE IMPACTS OF HYDROFRACKING:* Karen continued that the land use impacts of hydrofracking are such that they fall into the class of heavy industrial use. She said that she finds it troubling to learn of the changes in community in the areas of Pennsylvania where the process is active. She noted that a book The End of Country by Seamus McGraw, describes the experiences observed by a resident in an area of northern Pennsylvania impacted by hydrofracking; the effect tears communities apart. Anne added that the gas industry has to develop the whole play, and the changes that Karen is speaking about will be on a massive scale if it is done in New York. She said that what the CAC needs to focus on is that the Country really doesn’t need this, so are we going to go ahead and change the State so drastically. Karen stated that we do need sources of energy, but the point is that we don’t get much of this gas, as it goes overseas. She added that if this area has to make a sacrifice, what will be the return benefit?

*WHAT TO DO IN RED HOOK?* Laurie Husted asked CAC members where they thought the CAC and Town should go for long term and short term alternatives. Anne Rubin suggested that the Town and CAC support efforts to make jobs to build net zero structures and reduce energy use by making older buildings more energy efficient. Jane Ferguson said that beyond discussing the hydrofracking issue, the greatest problem for the Town is the lack of sewer.

Karen Schneller-McDonald said that the Town should pursue development of a Watershed Management Plan, an Aquifer Protection Plan and Watershed Resources Plan. Laurie Husted said that it is an important goal to her to do whatever the CAC can to prevent hydrofracking. She had suggested regulations to prevent taking of Town water.

CAC members also discussed preventing usage of hydrofracking brines on the roads. Karen Schneller-McDonald stated that she does not know how the Town contracts for road salts. Jane Ferguson said that then the CAC needs to ask for clarification of the contract process. Karen added that if the CAC intent is to ban use of hydrofracking usage on roads within the Town, the CAC should look at what regulations are being put in place, such as the proposed law in Ulster County, and use what is appropriate for the Town. Karen suggested that it could be as simple as requiring a supplier to certify that what they bring in wasn't generated by hydrofracking, with severe penalties for failure to comply. Laurie Husted said that the CAC then needs to know who is putting what brines on our roads among the Town, the two villages, the County and the State. Susan Ellis suggested that another way to address hydrofracking brines would be not to place a ban, but to require testing of road salts and restrict use of any that have contaminants that exceed recommended levels.

Laurie Husted reported that she had asked Town Attorney Chris Chale in April about what the CAC could reasonably explore regarding the issue of hydrofracking, and Chris answered that she would have to have legal advice and attorney client privilege first from the Town Board, before she would speak with the CAC. Laurie gave the name of Victoria Polidoro as an attorney who prepared a ban for the Town of Middlefield, Connecticut regarding their "fracking" law. Karen said that she would speak with Ted Fink of Greenplan, and look at what the City of Beacon has done as well.

Anne Rubin suggested that the Town of Red Hook could become a sole source aquifer Town, because it draws all of its water from its aquifers, and does not have a feasible use of river water. Karen suggested that might be an appropriate time to discuss these options with the Town Attorney. Jane Ferguson asked if there would be a legal advantage to starting with a moratorium on hydrofracking. Karen agreed that it might be a good start, and then should be combined with a ban of hydrofracking fluids. Karen agreed to follow up on the legal opinions. Susan Ellis said that the CAC would need to see that any legal action would be upheld.

Anne Rubin said she would go over the Dutchess County Model Water Ordinance and review Russell Urban-Meade's estimate of \$4 – 6,000 to do an Aquifer Protection Ordinance. She will also review the water resource protections included in the Town of Amenia Comprehensive Plan's 2007 update.

**E-WASTE COLLECTION:** Laurie Husted announced that there would be an e-waste collection on Saturday, May 12, 2012 at Hardscrabble Parking lot.

**ADJOURNMENT:** The meeting was adjourned at 9:00 P.M.

**NEXT MEETING:** Wednesday, June 13, 2012 at 7:00 P.M. at the Town Hall

Respectfully submitted,

Susan H. Ellis, Secretary