

APPENDIX E. Summary of Public Comments and Responses

This summary was prepared to address comments and questions on the public comment draft of the Tonawanda Study Area Health Outcomes Review. The public was invited to review the draft during the public comment period which ran from February 11 through March 31, 2013. We solicited comments on the draft report to provide an opportunity for public review of the investigation's methods and findings as well as to better understand ongoing community concerns and questions. We received written and verbal comments during the NYS DOH public meeting on February 26, 2013 and additional written comments from individuals during the remainder of the comment period.

In the following summary of comments, we provide written responses to comments and questions about the health outcomes review. Some of the comments expressing similar concerns or questions were grouped together in the summary.

If you have any questions about this responsiveness summary, please contact James Bowers of NYS DOH at 518-402-7950.

A. Comments About Methods

1. Comment: Who was included in the study? Are people who work but don't live in the study area included? What about illnesses diagnosed before or after the study time period?

Only those health outcomes that were diagnosed among residents of the study area during the years covered by the study were included in the analysis. Available data provide residential address at diagnosis, so individuals who were diagnosed after moving out of the study area are not included, despite the possibility of exposure to site-related contaminants. Similarly, individuals who were diagnosed after recently moving into the study area were included, despite the decreased likelihood of exposure to site-related contaminants. Individuals who didn't live in the study area were not included in the analysis.

2. Comment: What streets were in the study area? How were the study areas selected?

The study areas were developed after cooperation between NYS DOH and NYS DEC with input and approval from community members. Additional information about the study area boundaries is available on page 5. The map of the study area is available on page 18 of the report.

3. Comment: Why is New York City excluded from the comparison population? Why were Erie and Niagara Counties used as another comparison population? Was the study area population subtracted from the Erie and Niagara County comparison population?

The population of the five boroughs of New York City is routinely excluded from the comparison populations in these kinds of studies because of the large differences (race and ethnicity differences, for example) between the populations of those areas and the rest of the state.

Among the community's initial comments on the study design was a request for a separate local comparison area. The population of Erie and Niagara Counties was used as that comparison. In addition, the report explains, on p. 12, that a local comparison area may be more appropriate to use than the upstate comparison area because superior screening and diagnostic practices in some areas result in more complete diagnosing and reporting of cancers and other conditions. Using a local comparison area also may assist with controlling for cultural or regional characteristics or behaviors, such as smoking rates, that affect disease rates.

Regarding subtraction of the study area population from the comparison area population, the answer differs for the two sets of health outcomes. For the birth outcomes analyses, the individual-level analyses (Poisson regression) compared the study area births to the rest of the upstate comparison births or the local comparison area births in an exclusive way; i.e., the study area births were not also present in the comparison birth data. For cancer, however, the upstate comparison expected numbers and county comparison expected numbers do include the study area cancers among the data used for the estimation. Because the study area population is very small compared to the comparison area populations, this should not have a substantive effect on the cancer incidence results. If there were an effect on the findings, it would bias the findings towards the "null," meaning it would bias the findings slightly towards finding no elevation or deficits in the study area. The approach of estimating expected numbers without subtracting the specific study area population is a standard approach, and is the approach used by the NYS DOH Cancer Surveillance Program as well as the NYS DOH Center for Environmental Health.

4. Comment: When was this study conducted? Were all residents contacted and questioned?

Work on this study began in 2010. At that time, public meetings were held to discuss the community's interest in a health outcomes review. Additionally in 2010, NYS DOH and NYS DEC worked together to identify areas of potential risk from hazardous air contaminant levels. Those areas of potential risk became the basis for the study areas.

No individuals were contacted or questioned directly in the course of conducting this study. This type of study uses health outcome information routinely collected by New York State and retrieved from the NYS Cancer Registry, Congenital Malformations Registry, and Vital Records. Additional information on the study process is available on page 30, Appendix D of the Report.

5. Comment: What about other health outcomes like blood disorders, asthma and other respiratory illnesses, miscarriages, autoimmune disorders, and neurological problems?

Statewide databases and health registries with comprehensive, complete, and accurate information do not exist for many other health outcomes, such as those listed in the comment, making these health outcomes difficult to study. We need complete and accurate disease incidence data to conduct studies of specific study areas and to be able to compare incidence in the study area to incidence in a comparison area.

6. Comment: Please publish a map of all the cases included in the study.

Patient confidentiality, including patient addresses, is protected by Federal and State laws and regulations. Access to information from the Cancer Registry, Congenital Malformations Registry, and Vital Records is strictly limited. Researchers with access to this information are held to rigorous confidentiality and ethics training requirements and use restrictions. To protect patient confidentiality, maps of cases cannot be published.

7. How can the Clean Air Coalition of Western New York (CACWNY) obtain the health data used in this review?

This review used several types of health data, which reside in different databases within the New York State Department of Health (NYSDOH). Different programs within the Department are responsible for oversight of the various databases. For the types of analyses conducted for this review, we used individual-level data which we cannot share because of laws and regulations regarding the protection of health information. There may be health data in aggregated form that would be of interest to CACWNY. The processes by which various programs review data requests and provide data continue to evolve, so these are the types of issues best addressed by following up with each program.

For more information about requesting cancer data, contact the New York State Cancer Registry at nyscr@health.state.ny.us. Most research studies involving cancer data must be reviewed by NYSDOH's Institutional Review Board. Birth and death certificate data are part of Vital Records within NYSDOH's Bureau of Biometrics and Health Statistics (BBHS) at bio-info@health.state.ny.us. Again, most types of research studies must be reviewed by the NYSDOH's Institutional Review Board. For more information about availability and to request numbers of birth defects in specific categories, contact the Congenital Malformations Registry (CMR) at beoe@health.state.ny.us. An additional resource for exploring the availability of health data for NYS is the Health Data NY website, <https://health.data.ny.gov/>.

8. Comment: What about individual risk factors for cancer and birth outcomes? Can you address limitations to your study design?

NYS DOH does not have routine access to information about family medical history, diet, lifestyle (including smoking habits), occupation, or many of the other factors that affect the health status of individuals and communities. This type of investigation using readily available data is unable to take most of those factors into account. For the adverse birth outcome analyses, many individual-level factors were taken into account. For the cancer analyses, we only included adjustments for age and sex.

Based on our reading of the series of comments related to individual risk factors and study design limitations, we believe these commenters are hoping that a follow-up study could gather enough additional information to draw stronger conclusions about whether exposures occurring in the study area caused the health outcomes in this study population. Unfortunately, even with perfect knowledge of individual risk factors, such as smoking history, this type of study would not be able to draw strong conclusions about the role played by local exposures to pollutants because we do not have individual-level information about such exposures. At best, such a study might be able to produce stronger evidence about whether residence in the study area versus other personal risk factors appears to be more strongly associated with risk for specific types of health outcomes.

9. Comment: What is needed to be able to make a definitive statement of cause and effect?

In the field of human epidemiology, it is extremely rare for one study alone to have findings that are generally accepted as proof of a cause and effect link. An example of such a single study is the 1971 report of multiple cases of an extremely rare type of cancer (vaginal cancer) in a group of young women whose mothers had been exposed to diethylstilbestrol during pregnancy (Herbst et al., 1971). On the other hand, the link between smoking and cancer required the conduct of many studies before a consensus was reached about the cause and effect link. Because of the lack of needed information, especially about exposures over a lifetime, the variability of human beings, and many other reasons, the accumulation of consistent findings from many studies, preferably using various methods, is needed to build a case for or against a cause and effect link.

Some of the things scientists look for as evidence of a cause and effect link between an exposure or risk factor and a health outcome are:

- (1) a very strong increase in the health outcome of interest;
- (2) similar findings by different scientists studying different populations;
- (3) the lack of other likely explanations for the increase in the health problem;
- (4) evidence that the causal factor or exposure happened before the health outcome;
- (5) higher levels of exposures associated with higher levels of outcomes.

10. Comment: Some potential confounders such as smoking or low socioeconomic status can interact with each other and with air pollution. Low SES can be linked to higher smoking rates. Smoking can increase the health effects of air pollution.

The report notes that smoking is a known cause for many of the health outcomes included in this review. Cancer Registry data do not have sufficient information about smoking, so we were not able to control for smoking or evaluate interactions or combined effects with air pollution. For the adverse birth outcomes, the analyses were adjusted for some factors associated with socioeconomic status, including mother's education and the level of prenatal care.

11. Comment: Was the study done in an impartial manner? Is there Federal oversight of the study process? Were the study results shared with Federal & State Agencies, and elected officials?

This type of study is scientifically rigorous. We conduct this type of study with these same methods repeatedly, so many of the data management and programmatic steps are standardized. A variety of staff are involved in gathering the health outcome data from databases and routine procedures are used to analyze the data. Analyses are re-run by different staff to make sure the findings are correct. We believe this ensures analyses are done in an impartial manner. For this particular investigation, we looked especially closely at the leukemia findings because leukemia is associated with exposures to benzene. The NYS DEC Tonawanda Air Study had indicated that exposures to benzene were a concern in the study area.

There was no specific Federal oversight of this study. However, the U.S. Agency for Toxic Substances and Disease Registry was kept informed about the progress of the study and the study results were shared with elected officials and agency representatives at the Federal, State, and local levels. All NYS DOH employees involved in this type of study are required to maintain certification in the protection of human subjects.

12. Comment: Statistical significance is not the only criterion for the importance of a result. Results that are close to significant may still be important.

Yes, we agree. We do use statistical significance as a tool for interpreting findings, but we do not solely rely on statistical significance for interpretation. We look for patterns of elevations as well as statistically significant differences when drawing conclusions from results. In addition, when outcomes are rare, or the study population is very small, we report findings carefully so that the reader is aware that it is very difficult to draw conclusions from small numbers, especially when there is very little chance of producing statistically significant results.

B. Comments About Findings & Health Concerns

13. Comment: Were there trends over time in the cases?

The health outcomes evaluated in this report were analyzed both for the entire study period, as well as for shorter timeframes. No unusual patterns of clustering in time were identified for these shorter time periods.

14. Comment: Some specific health outcomes included in the report were not mentioned in your presentation.

Details about findings for specific health outcomes are available in the “Findings” section of the report. The presentation at the public meeting included a very brief summary of findings and emphasized the health outcomes with elevations, as these were the findings expected to be of most interest and concern to people attending the meeting. In addition, the presentation was planned to be very short to provide time for responding to questions and comments because the full report had been made available to the community approximately two weeks prior to the meeting.

Staff provided some additional information about findings during the discussion. For example, during the meeting, DOH staff pointed out that total cancers, as well as 18 separate types for women, and 16 types for men were reviewed, and that most of these specific types of cancer were not elevated in the study area. For leukemia, which is known to be associated with benzene exposures, there was no evidence of an elevation for the study area as a whole or any specific sub-area for males. For leukemia among females, there was no strong evidence of an elevation (no statistically significant excess) for the study area as a whole. In one of the sub-areas, there was a statistically significant elevation of leukemia among females; but in the other sub-areas, there were no statistically significant elevations of leukemia among females. In fact, in two of the sub-areas, there were fewer leukemia cases than expected, although these findings were not statistically significant.

Among the low birth weight outcomes, only total preterm births and the subset of moderately preterm births showed statistically significant elevations in the study area as a whole. The low birth weight outcomes were not statistically significantly elevated in the study area as a whole, but the elevations were near the borderline of statistical significance. The outcome term low birth weight, which includes births that are not premature but that do have low birth weights, also showed a slight elevation that was near the borderline of statistical significance. However, the outcome small for gestational age, which takes account of gestational age and birth weight together, showed no elevation.

15. Comment: The statement on page 15 that the 4 subareas “do not represent known or estimated differences in exposure concentration” is not true. DEC air monitors and wind directions indicate that exposure is greater in NE areas of study area compared to Grand Island.

Based on the Aermid risk modeling of hazardous air pollutant concentrations and meteorological data by NYS DEC in 2010, the statement has been rewritten to read, “The four sub-areas of the moderate impact area were developed in response to community input for the health outcome study. In these four areas, different exposures to hazardous air pollutants could be expected to occur under various meteorological conditions, but all four areas are included in the moderate impact area as defined by the Tonawanda Community Air Quality Study.” Please see the NYS DEC study (<http://www.dec.ny.gov/chemical/59464.html>) for additional detail about these issues.

16. Comment: Are there plans for additional studies of the area?

We received requests for several additional studies in the area including a review of health outcomes among residents during an earlier time period, evaluation of hospitalization data, a comprehensive area survey, and biomonitoring. We will work with the community to further discuss these options. We believe a biomonitoring study could be the most useful of these suggestions, and we have added a recommendation regarding biomonitoring to the report.

Regarding biomonitoring, in July 2009 we met with representatives of CACWNY to discuss the possibility of conducting a biomonitoring study. The concept of a biomonitoring study is that area residents would be tested for chemicals related to area industries. At that time, we did not have the resources necessary to conduct such a study. Since then, with the help of the NYS DOH Wadsworth Laboratory, we have been able to identify resources and some funding to do some sampling. We would like to work with the community to formulate plans and move forward with biomonitoring, if there is continued interest. If there is interest in a larger project than NYS DOH resources can support, we may need to seek additional funding. See the Recommendations section of the report, which has been revised to include this recommendation (p. 16).

17. Comment: What was the purpose of the study? How will the results be used? Why do you conduct studies with limitations? Why do you do studies without a plan for afterwards?

Our goal for this study was to determine if the residents of the study area were experiencing health outcomes at different rates from people in the rest of update New York as well as Erie and Niagara counties. While not making a cause and effect determination, the findings have been used to help answer some of the community’s health concerns and provide information to drive discussions of possible future work. We presented this study’s findings to the community

as the next step in the process of addressing community concerns. The public meeting's goal was to focus discussion on the study methods and findings. With the release of this final version of the report, we are adding recommendations for next steps, but the specific plan for next steps needs to be decided with input from and discussion with community members.

18. Comment: If the western part of the state shows higher levels of birth defects, is it possibly due to the outcomes being more frequent there, rather than better reported?

Yes, a higher level of birth defects compared to other areas of the state could reflect a higher rate of occurrence, rather than better reporting. Our study did not focus specifically on the levels of birth defects in the entire western part of the state, the subject of the comment. We stated that there may be better reporting of birth defects in some regions of the state, including the western part of the state, in the discussion sections on pages 9 and 12 of the report. We cited a published study that suggested some areas of the state may have more complete reporting of birth defects than other areas. Our interpretation of the birth defect findings noted the statistically significant elevations for the entire study area for **total** heart defects but not for **major** heart defects as support for the suggestion there may be better reporting of the minor birth defects that do not require medical attention. The major heart defect category did show a slight elevation but the elevation was not statistically significant (12 cases observed, versus 9.9 expected; Standardized Incidence Ratio of 1.18; Confidence Interval, 0.65-2.12 [See Table 3A). Our interpretation is that the lack of statistical significance for this small elevation of major defects suggests there may be no actual elevation of heart defects in the study area. We made some minor revisions to the Birth Outcomes Discussion section, on page 10 of the report, to clarify this point, since the lack of statistical significance is the basis for the interpretation.

The revised report states (additions are italicized):

“Regarding the total cardiac defects category, the majority of defects included in this general grouping are minor cardiac defects. These minor defects are unusual features that, in and of themselves, are not expected to cause health problems. The major defect category, which includes defects of medical significance, was not *statistically significantly* elevated for the entire study area (*SIR: 1.18; CI, 0.65-2.12*). It was *statistically significantly* elevated, however, in one sub-area, the Brookside Terrace sub-area (*SIR: 2.82, CI; 1.06-7.52*). This statistically significant elevation is based on small numbers, with four cases observed compared to about two cases expected.”

19. Is it safe to live here? Where can I move to be safe? Would you live here?

Recent air monitoring results from NYS DEC show substantial improvements in air quality compared to the findings reported by NYS DEC in 2009. The earlier monitoring results (2009) produced estimates showing increased lifetime cancer risk in the study area. These findings were used to guide the selection of the health outcome study boundaries.

In January 2013, NYS DEC provided updated information based on more recent air monitoring. (*January 2013 Update, Tonawanda Community Air Quality Study*; <http://www.dec.ny.gov/chemical/88968.html>). The information sheet and full data report describe the reduced ambient concentrations of benzene and other air pollutants in the area. The 2013 information sheet states that the recent benzene results at the residential monitor (Brookside Terrace Residential Site) produced an estimated excess annual lifetime cancer risk that is **below** that estimated in most urban locations in New York State.

Cancer is a concern for everyone, no matter where one lives. Nationally, and in NYS, one in two men and one in three women are diagnosed with some type of cancer in their lifetime. The health outcomes review can be used to estimate the increased risk of cancer for people in the study area. It may be useful to put this estimated increased cancer risk into the context of a “usual” risk for cancer. The actual risk of cancer for an individual depends on personal factors that are not taken into account in this investigation, such as family history and whether the person smokes. National data are available that estimate lifetime cancer risks (American Cancer Society, from federal SEER data, <http://www.cancer.org/cancer/cancerbasics/lifetime-probability-of-developing-or-dying-from-cancer>).

The lifetime risk for U.S. males of developing any type of cancer over an entire lifetime is 45%, which is usually expressed by rounding it up to 50%, or one in two males. Simply put, one in two men will develop some type of cancer in their lifetime. Many cancers are curable, and there are competing causes of death, so the risk of dying from cancer among males is one in four, much smaller than the risk of developing cancer. For women, the risk of being diagnosed with any type of cancer over their lifetime is slightly less than for men, 38%, which is usually expressed as one in three women. The risk of dying from cancer, for females, is 19%, or one in five.

To get an idea of how the estimated increased cancer risk shown in this review for those living in the study area would affect a person’s overall lifetime cancer risk, we can apply this current investigation’s estimate of the increased risk for being diagnosed with any type of cancer while living in the study area (.10 or 10%, Table 4B) to national estimates of lifetime risk. (These lifetime estimates may be slightly different from estimates specific for the study area, but the national estimates are used here because they are readily available.) For all types of cancer for men, the 10% increased risk estimated for the Tonawanda study area means that the lifetime risk increases from about 45% to 49%, which continues to fall within the rounded estimate of 50%, or “one in two men.”

For lung cancer among men, the current investigation’s estimate of the increased risk for males in the study area of 24% results in an increase in the risk of developing lung cancer from 1 in 13 to 1 in 10. (The actual risk for an individual depends on whether the person smokes.) For bladder cancer among men, the current investigation’s estimate of the increased risk for males in the study area of 24% (Table 4B) results in an increase in the risk of developing bladder cancer from 1 in 26 to 1 in 21 over a person’s entire lifetime.

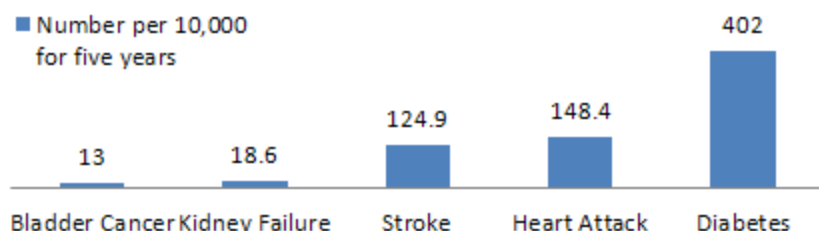
Similarly for females, for all types of cancer, the health outcomes review estimated an increased risk of 10% (Table 4B) for those living in the study area. This results in lifetime risk for all types of cancer increasing from 38% to 42%. This increase results in a rounded estimate that is now closer to the male estimate of one in two, rather than one in three.

For lung cancer among women, the current investigation's estimate of the increased risk for women living in the study area of 29% results in an increase in the risk of developing lung cancer from 1 in 16 to 1 in 12. For bladder cancer among women, the current investigation's estimate of the increased risk for females in the study area of 81% results in an increase in the risk of developing bladder cancer over an entire lifetime from 1 in 87 to 1 in 48.

These examples are provided to show how the estimated cancer elevations shown by the health outcomes review affect the estimated risks for particular types of cancer. If a particular type of cancer is rare in the general population, a relatively large increased risk, such as for bladder cancer among women (81% elevation in the health outcomes review) contributes to an increase in risk, but the risk may still be relatively low. The 81% elevation of bladder cancer estimated for women in the study area by the health outcomes review analysis does not mean that people in the study area have an 81% chance of getting that type of cancer. Rather, the risk increases by 81%, from about 1% to about 2%, expressed as 1 in 87 women in the general population versus 1 in 48 women in the study area.

These examples are not provided to downplay the estimated elevations in levels of cancer in the Tonawanda study area, but rather to add perspective on what the elevations mean for individuals in terms of their actual risks for various types of cancer or other outcomes over a lifetime. Some additional information for comparing risks for cancer with risks for other types of health outcomes in NYS is available on the NYS DOH Environmental Facilities and Cancer Mapping web application (https://apps.health.ny.gov/statistics/cancer/environmental_facilities/mapping/map/). This application shows areas in NYS where specific types of cancer show patterns of elevations, and compares the cancer rates to other disease rates, as in the graphic shown below. See the website for more information about the details of the data used for this comparison.

How common is Bladder cancer compared to other chronic diseases in New York State?



20. Should the government be helping people to relocate? Please advise residents about how to take precautions to live safer in the high impact areas. Could you identify safer neighborhoods? Could residents get incentives to move out of the High Impact Area?

As described in the report, the health outcomes review findings are not able to be used to conclude that living in the study area caused the observed cancer elevations. Smoking, for example, is a known risk factor for most of the health outcomes that show elevations in this review, so if more people are smokers in the study area than in the comparison area, this could have contributed to the elevations. In addition, as stated in the previous answer, air quality appears to be improving substantially in the study area. Recent data indicate that current ambient air quality in the residential areas may be similar to, or better than, other urban areas in NYS.

Due to the types of cancer elevations shown in the review, primarily smoking-related cancers, an important precaution for reducing cancer risk if you smoke is to quit smoking. Smoking is known to cause lung and other types of cancer. In addition, smoking might increase a person's susceptibility to the effects of ambient air pollution. For assistance with quitting smoking, there are now a great variety of ways smokers can be helped to quit. We encourage smokers to call the New York State Quit line at 1-866-NY-Quits (1-866-697-8487) or visit this website, www.nysmokefree.com.

People in the high impact areas, just like people living elsewhere, can reduce their risk for cancer and other health problems by striving for a healthy lifestyle, including good nutrition, exercise and healthy body weight. Eating foods such as vegetables, fruits, lean meats, whole grains and reducing salt and sugar are part of a healthy diet. Regular exercise helps keep us fit and heart healthy. Diet and exercise in turn are the keys to having a healthy body weight.

21. Comment: I have concerns about the health of myself and my relatives.

The DOH staff involved in this health outcome review focused on group-level data that provided summary information about entire communities or groups of people. The review showed that for the study area as a whole, some types of cancer occurred more frequently than expected. This does not tell us what the risk for a health problem for any specific individual might be. For concerns about an individual's or family member's health, we encourage you to discuss your concerns with a health care provider who can address your personal health issues.

22. Comment: Will there be clinics or financial help for the sick?

New York State has numerous health care programs that promote access to essential health services for lower-income residents including Medicaid, Child Health Plus, Family Health Plus, Healthy New York, Prenatal Care Assistance Program and others. We encourage individuals eligible for these programs to participate. Additional information regarding eligibility criteria and enrollment can be found on the Erie County Health Department website, or by calling 716-858-7690. Information is also available at <http://www.health.state.ny.us>.

NYS DOH encourages individuals to discuss their cancer screening concerns with their health care provider. Because many individual factors, such as age, gender, smoking status, and personal and familial medical history, should be considered prior to recommendation of cancer screening activities, seeking professional medical advice tailored to your individual situation helps to ensure appropriate cancer screenings. Assistance with getting free cancer screenings and other cancer services for people without health insurance or people who are Medicaid-eligible is available from the Cancer Services Program of Western NY which is funded by NYS DOH. Information about these programs is available at <http://www.cspwny.org/index.html> or by calling 1-716-886-9201.

Breast cancer, cervical cancer and colon cancer were not elevated in the study area. However, breast cancer among women and colon cancer among men and women are relatively common cancers. Routine screening for these three types of cancer can be life-saving because screening helps find the cancer early when treatment is most helpful.

Some additional tools for fighting cancer are two specific vaccinations that can prevent cancer. The Human Papilloma Virus (HPV) is the most common sexually transmitted infection in the U.S. HPV is a major cause of cervical cancer, anal cancer, and throat cancer, making this vaccine an anti-cancer vaccine. Talk to your health care provider to get additional information on the HPV vaccine.

HBV is the vaccine for Hepatitis B. Hepatitis B is a serious infection that affects the liver. It is caused by the hepatitis B virus. Each year about 2,000 to 4,000 people die in the U.S. from cirrhosis or liver cancer caused by hepatitis B. Talk to your health care provider to get additional on the HBV vaccine.

23. Comment: How can we find physicians that are educated in environmental impacts on health?

There are experts in occupational and environmental medicine affiliated with the NYS Occupational Health Clinic Network. For general information about the Clinic Network, see the general website, <http://www.nyhealth.gov/nysdoh/environ/occupate.htm>. For assistance in your area, please contact Finger Lakes Occupational Health Services affiliated with the University of Rochester at 800-925-8615 or 585-244-4771. More information is available at www2.envmed.rochester.edu/envmed/occmmed/fingerlakeswelcome.html or via e-mailing FLOHS@urmc.rochester.edu.

24. Comment: Community health services, including smoking cessation programs, should be improved.

Information about available community health services is available from the Erie County Department of health at 716-858-7690. The County Health Department and Western Regional Office of the NYS DOH welcome information you can provide about gaps in public health

services and suggestions for improving public health services. You can reach the Western Regional office of NYS DOH at 716-847-4501.

25. Comment: Are there any studies of the health of pets in the area? Please consider animal surveillance for cancer and other environmentally related diseases.

We are unaware of any studies of pet health in the area.

26. Comment: NYS DOH should try to get residents of the Tonawanda area included in the NHANES survey so they can be tested for contaminants identified by EPA's Toxic Release Inventory and the NYS DEC Tonawanda Air Study. DOH should prioritize grants and funding opportunities to further investigate the health impacts of environmental pollution in the Tonawanda area and structure continued research collaborative opportunities with the University at Buffalo. NYS DOH should provide funding for research into the link between environmental pollutants and health outcomes, as well as programs to educate the public about the effect of air quality on their health.

The geographic areas and populations covered by the federal National Health and Nutrition Examination Survey (NHANES) are determined by a rigorous sampling scheme, and, to our knowledge, NYS DOH would not be able to influence such decisions to ensure inclusion of the Tonawanda area. In addition, the NHANES biomonitoring results are reported at the group-level for large regions of the U.S., such as the Northeast region, but are not reported for specific states, cities, or smaller areas. However, NYS DOH is proposing to conduct a biomonitoring study to test for contaminants among Tonawanda area residents. (See Comment 16, p. 37, and the recommendations on p. 16.) Such a biomonitoring project would seek to address potential health impacts of environmental pollution in the Tonawanda area by measuring body burdens of contaminants. Such a project may also be able to play a role in providing useful information to the community about the effects of air quality on health.

NYS DOH does not currently have funding available to provide to other organizations to support research into the link between environmental pollutants and health outcomes. NYS DOH frequently applies for federal funds to assist with expanding our activities that address environmental health issues. NYS DOH routinely seeks opportunities to collaborate with academic researchers and community groups when conducting research or developing programs to reduce exposures.

C. Comments about environmental issues

27. Comment: Has environmental sampling been done in the area? What are the next steps to clean up the area? Is the soot that settles on houses something to be concerned about?

Questions regarding environmental sampling, planned environmental remediation, and other local environmental concerns should be directed to NYS DEC Region 9 at (716) 851-7200.

28. Comment: Did the clean-up and air quality improvements at Tonawanda Coke make a difference for local air quality?

Recent information from DEC air monitoring shows air quality improvements in the local area. For more information, please access the NYS DEC January 2013 update at: www.dec.ny.gov/chemical/88968.html.

29. Comment: What is the impact of environmental contamination on wildlife in the area?

We are unaware of any studies of this topic.

30. The government demolished a whole area along the Niagara River by Westside because of contamination. Then after a cleanup they rebuilt housing. This was around 1997-1998. What does it take to get that done in other areas along the river such as Riverside/Tonawanda?

We recommend contacting NYS DEC Region 9 at 716- 851-7200 for specific questions about local environmental activities, plans and community involvement.

31. Comment: Who makes enforcement action decisions regarding Tonawanda Coke? Will the study result in additional enforcement activities at Tonawanda Coke? Why aren't emissions at Tonawanda Coke better controlled?

NYS DEC and US EPA are involved with enforcement and permitting activities related to Tonawanda Coke. Questions related to those activities should be directed to NYS DEC Region 9 at (716) 851-7200 and US EPA Region 2, Buffalo office, at 716-551-4410.

32. Comment: I would like to see a stronger philosophical endorsement and strategic alignment between the NYS DOH and the EPA's Environmental Justice initiative.

An overview of some NYS DOH work on environmental justice is available on our website at: http://www.health.ny.gov/environmental/investigations/environmental_justice/.

33. Comment: OSHA should be involved to make sure area workplaces are safe.

Specific concerns about workplace safety in the area can be directed to OSHA's Buffalo Area Office, U. S. Dept. of Labor/OSHA, 130 S. Elmwood Avenue, Suite 500, Buffalo, NY 14202-2465 (716) 551-3053

34. Comment: The Town of Tonawanda Development Corp. is planning public waterfront access, parkland and redevelopment near Tonawanda Coke. We need clean, healthy air before this plan can be successful.

Concerns about this plan should be directed to the Town of Tonawanda Development Corporation. Information can be found at <http://www.tonawanda.ny.us/index.aspx?NID=641>.

35. Comment: NYS DOH and NYS DEC should establish and participate in a working group to reduce environmental exposures and prevent illness related to such exposures.

NYS DOH and NYS DEC currently work closely on a variety of programs where the reduction of environmental exposures and illness prevention are interconnected. Examples include the Fish Advisory Program and the Hazardous Waste Site Remediation Program. This comment's suggestion for a working group will be shared with NYS DOH and NYS DEC leadership.

36. Comment: The toll plaza at the Grand Island Bridge should be eliminated. Economic development funding should be allocated to pollution prevention projects. Polluting industries should be prohibited from obtaining government subsidies.

Regarding environmental and health issues beyond the scope of this health outcomes review, we recommend residents continue to support and participate in their local organizations to address environmental health concerns and pursue follow-up actions. There is currently a collaborative effort underway to improve the environmental quality of the area through the E3—Economy, Energy, and Environment Program. E3 is a coordinated federal, state and local voluntary technical assistance initiative that helps communities work in conjunction with their manufacturing base to adapt and thrive in a new business era focused on sustainability while using green technology. More information about this program can be found at the following websites: <http://www.epa.gov/r02earth/capp/TCC/tonawanda-e3charter.pdf> and <http://www.tonawanda.ny.us/index.aspx?NID=691>.

At least two local environmental organizations, including the Clean Air Coalition of Western NY and the Tonawanda Community Fund, played critical roles in requesting and planning this health outcomes review. In addition, as suggested in a prior response, we recommend contacting the NYS DEC Region 9 office at (716) 851-7200 with comments and suggestions about local environmental concerns. In addition, the NYS DEC Citizen Participation webpage contains information about how to become involved in NYS DEC activities (<http://www.dec.ny.gov/public/51805.html>).

References for Responses to Comments

Herbst AL, Ulfelder H, Poskanzer Dc (1971) Adenocarcinoma of the vagina. Association of maternal stilbestrol therapy with tumor appearance in young women. N Engl J Med 284(15):878-881.