NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
(NYSDEC)

Long Island Pesticide Pollution Prevention Strategy

NYSDEC RESPONSIVENESS SUMMARY

INTRODUCTION

By notice in the Environmental Notice Bulletin (ENB) on January 30, 2013, the New York State Department of Environmental Conservation (DEC) released the Draft Long Island Pesticide Pollution Prevention Strategy (Draft Strategy) for public review and comment. The public comment period ran from January 30, 2013 to April 30, 2013.

The Division of Materials Management (DMM) conducted four stakeholder meetings and two public availability sessions and public comment hearings on the Draft Strategy. DEC also provided testimony at two other legislative committee hearings.

Stakeholder Meetings

The first stakeholder meeting was with the Technical Advisory Committee (TAC) on February 13, 2013 at the DEC Region One office at SUNY Stony Brook, 50 Circle Road, Stony Brook, New York 11790. The TAC is comprised of about 25 members who represent a broad range of the primary stakeholders involved in pesticide and/or groundwater management on Long Island and who had been invited to contribute to earlier drafts of the Strategy. About 16 of the TAC members attended this meeting. DEC gave an overview of the Draft Strategy and responded to comments and questions from attendees.

The second stakeholder meeting was held on February 25, 2013 at the Riverhead Volunteer Fire Department at 540 Roanoke Avenue, Riverhead, New York 11901. About 33 people attended this meeting.

The third stakeholder meeting was held on February 26, 2013 at the Morrelly Homeland Security Center at 510 Grumman Road West, Bethpage, New York 11714. About 23 people attended this meeting.

These Riverhead and Bethpage stakeholder meetings were attended by individuals representing a broad range of interests, including certified applicators, registrants, public interest groups, municipal agencies, water authorities, and academia. At each of these stakeholder meetings, DEC presented an overview of the Draft Strategy and responded to comments and questions from attendees.

A fourth stakeholder meeting was held with a group of pesticide product registrants at their request on April 18, 2013. Approximately 32 registrants attended. DEC again gave an overview of the Draft Strategy and responded to comments and questions from attendees.

Public Availability Sessions and Public Hearings

Each public availability session was held from 6:00 PM to 7:00 PM and each public hearing was held from 7:00 PM to 9:00 PM. The purpose of the public availability sessions was to provide the public with an opportunity to review information about the Draft Strategy and discuss it with DEC staff. The purpose of the public hearings was to provide an opportunity for public comment

on the Draft Strategy. DEC presented a brief overview of the Draft Strategy in the beginning of each public hearing.

The first public availability session and public comment hearing was held on April 3, 2013 at the Suffolk County Community College, Eastern Campus at 121 Speonk-Riverhead Road, Riverhead, New York 11901. Approximately 76 people attended and approximately 22 attendees provided verbal comments. Administrative Law Judge Richard Wissler presided as Hearing Officer.

The second public availability session and public comment hearing was held on April 4, 2013 at the Morrelly Homeland Security Center at 510 Grumman Road West, Bethpage, New York 11714. Approximately 43 people attended and approximately 6 attendees provided verbal comments. Administrative Law Judge Richard Wissler again presided as Hearing Officer.

Legislative Meetings

DEC also gave a brief presentation and responded to questions at the Suffolk County Legislature's Environment, Agriculture, and Planning Committee Meeting on March 11, 2013 at the William H. Rogers Legislature Building, 725 Veterans Memorial Highway, Hauppauge, New York.

Subsequently, DEC provided testimony on the Draft Strategy at the New York State Assembly Environmental Conservation Committee Public Hearing on the Impacts of Pesticides on Long Island Water Quality on April 2, 2013 at Farmingdale State College, 2350 Broadhollow Road, Farmingdale, New York.

Public Comments

Approximately 50 distinct comment letters and emails were received during the public comment period. There were two organized letter-writing campaigns resulting in about 950 form letters submitted primarily by Long Island residents and some certified applicators. DEC established a special email address (LongIslandStrategy@gw.dec.state.ny.us) to facilitate submission of public comments. About 160 comments, some of which were repeated by various commentors, were included in the letters, emails and form letters. A list of commentors, except for those who submitted form letters, is provided in Attachment 1 to this Responsiveness Summary.

Format & Content of the Responsiveness Summary:

The format of this Responsiveness Summary follows the sections outlined in the Table of Contents of the Long Island Pesticide Pollution Prevention Strategy (Strategy). Each section contains the public comments received during the public comment period (January 30, 2013 through April 30, 2013) with a DEC response provided under each comment, which addresses whether any specific revisions have been made to the Strategy as a result of the comment.

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GENERAL COMMENTS

Comment G-1: DEC's latest Long Island Pesticide Pollution Prevention Strategy (Strategy) appears to consist primarily of yet another round of technical advisory committees.

Response: The Strategy incorporates the involvement of stakeholders and technical experts to achieve the goal of protecting Long Island water resources while meeting critical pest management needs. While the Strategy does involve a Technical Review and Advisory Committee (TRAC), comprised of state and local government agencies and Cornell Cooperative Extension, it does not simply involve a round of discussions with the TRAC. It outlines a process for DEC to follow in thoroughly and systematically evaluating and addressing the detections of pesticides in groundwater and surface water on Long Island and in focusing on potential sources, exposures, migration, alternatives, and pollution prevention (P2) measures to mitigate potential impacts.

Comment G-2: DEC's Strategy continues to place the burden on the public to accept the potential risks associated with pesticide exposure without requiring additional responsibility on the manufacturers and users to prevent the continued introduction of these pesticides. As over 30 years of testing have demonstrated, many pesticides, once introduced into the environment, become persistent pollutants for years, even decades later.

Response: The responsibilities of registrants and users to prevent adverse impacts caused by pesticides are initially addressed as part of the DEC's current pesticide product registration process. As described in Chapter 4 of the Strategy, restrictions on use patterns, application rates, users, and so on are negotiated with registrants when products containing new active ingredients and major changes in labeling are registered.

The Strategy builds on the strengths of the current pesticide product registration process by bringing together all the stakeholders (registrants, academia, pesticide users, and the public) to look at the causes and cures for pesticide detections in groundwater and surface water resources on Long Island. It outlines a process for DEC to follow in thoroughly and systematically evaluating and addressing the detections of currently registered pesticides, and in focusing on potential sources, exposures, migration, alternatives, and P2 measures. Through this process pollution prevention measures will be identified by DEC and stakeholders and implemented primarily by registrants and pesticide users, all of which will be monitored by DEC.

Comment G-3: DEC's Strategy accepts the continued detection of metalaxyl, imidacloprid and atrazine in drinking water because in most cases the levels meet the drinking water standards. The logic underlying the acceptance of these contaminants is flawed. The EPA has prepared specific drinking water standards, known as Maximum Contaminant Levels (MCLs), for only nine of the active ingredients in registered pesticides. The remaining pesticides are subject only to a generic MCL of 50 parts per billion, which is generally higher than chemical-specific MCLs, such as the MCL for atrazine. In addition, the MCLs don't consider pesticide degradation products or the cumulative and synergistic effects of exposure to multiple contaminants.

Response: The Strategy does not promote acceptance of the continued presence of pesticides in groundwater or surface water, irrespective of the drinking water standards, as a necessary consequence of pesticide application. Instead, the Strategy outlines a process for identifying, evaluating and prioritizing active ingredients detected in groundwater and surface water, adopting pollution prevention measures to address them, implementing those measures, and tracking their success.

The Strategy is an adaptive process that allows for effective consideration and utilization of the most current risk assessment data and scientific methods as they become available. The Strategy recognizes that more comprehensive evaluations of contaminants in groundwater and surface water are needed to understand the nature and extent of the contamination and to more clearly identify potential exposure and risks and feasible pollution prevention measures. These evaluations will go well beyond merely counting the number of detections and comparing them with drinking water standards. The Strategy indicates that the potential exposure and risks to human health from active ingredients detected in groundwater and surface water, aquifer vulnerability, and other scientific and background information will be considered by the TRAC, stakeholder workgroups, and ultimately DEC. This will include an assessment of the potential additive or antagonistic effects of exposure to multiple contaminants, information on degradates formed from the parent active ingredients, and other relevant information, so that appropriate pollution prevention measures can be identified and implemented. Although this is already indicated in the Strategy, it will be further clarified in Chapter 3 (Action Plan).

The Maximum Contaminant Level (MCL) is the maximum concentration of a chemical that is allowed in public drinking water systems. The MCL is established by the U.S. Environmental Protection Agency (USEPA). Currently there are fewer than 100 chemicals for which an MCL has been established. However, these represent chemicals that are thought to pose the most serious risk.

As mentioned in the Strategy, the USEPA has developed guidance associated with Human Health Benchmarks for Pesticides.[1] The guidance was created to set benchmarks for approximately 365 pesticides that are used on food crops, setting limits for acute exposure and chronic exposure. These benchmarks were developed to enable states to determine whether pesticide detections in drinking water or drinking water sources could be a potential health risk. The pesticides in the guidance are those for which USEPA has not set a drinking water health advisory or set an enforceable drinking water standard. USEPA recognizes that small amounts of pesticides detected in drinking water or source water for drinking water do not necessarily indicate a health risk. The EPA Human Health Benchmark for imidacloprid is 399 ppb and for metalaxyl it is 519 ppb, far higher than the 50 ppb Unspecified Organic Compound (UOC) public drinking water standards for these active ingredients.

Comment G-4: The Strategy seems to diminish the importance of pesticide contamination that has not reached MCL thresholds and objects to the need for any action in such cases. Lower levels of contamination are often a precursor to higher levels of contamination that have the potential to seriously impact public health, as well as private and public supplies of drinking

[1] USEPA Human Health Benchmarks for Pesticides – 2013 Update, August 2013, publication EPA-820-F-13-019. http://iaspub.epa.gov/apex/pesticides/f?p=HHBP:HOME

water on Long Island. As a result, the presence of pesticides (especially where multiple detections and products occur) should be viewed as a warning to be attended to well before the time when MCL's are exceeded.

Response: The Strategy recognizes that pollution prevention measures may be appropriate for pesticides detected in groundwater or surface water at levels below the MCLs. The Strategy proposes to follow the blueprint for pollution prevention, which calls for evaluation of all detected pesticides that are discovered via environmental monitoring. Potential pollution prevention measures will be identified based on the nature, extent and the characteristics of the detections. DEC may also consider regulatory measures if pollution prevention actions prove insufficient. Moreover, in some cases, the Department might need to take enforcement action with respect to products even without pursuing pollution prevention steps, in order to protect public health or the environment. If detected concentrations exceed, or even approach the groundwater standards, DEC can also invoke its current regulatory jurisdiction to immediately suspend the registration of the pesticides causing the problem. The Strategy has been modified to clarify that appropriate courses of action, including additional regulatory measures, will be considered based on a variety of relevant factors applicable to the particular active ingredient, including:

--the magnitude of groundwater concentrations of the active ingredient;
--exceedances or near-exceedances of the applicable standard;
--temporal trend in the groundwater data;
--evidence of the leachability of the pesticide;
--usage of groundwater for drinking water near the areas of contamination;
--agricultural dependence on the active ingredient;
--availability of a less toxic alternative;
--efforts to use alternatives or to change application practices, and outcomes; and
--other relevant factors.

Comment G-5: DEC is urged to modify its proposal drastically in order to fully address the severity and magnitude of pesticide contamination, incorporating specific actions (such as a ban) and establishing a clear trigger to prompt action.

Response: DEC intends to address pesticide detections on Long Island through implementing the process established in the Strategy. The Strategy focuses on pursuing prompt implementation of pollution prevention measures rather than establishing analytical trigger thresholds and waiting for them to be exceeded. In addition, it is recognized that some circumstances may warrant regulatory actions under the state’s existing pesticide statutes and regulations. Furthermore, DEC may consider use of these regulatory measures if pollution prevention actions prove insufficient. Moreover, in some cases, the Department might need to take enforcement action with respect to products even without pursuing pollution prevention steps, in order to protect public health or the environment. The Strategy has been modified to clarify that appropriate courses of action, including additional regulatory measures, will be considered based on a variety of relevant factors applicable to the particular active ingredient.

Comment G-6: It is essential that the NYSDEC produce a comprehensive and operational pesticide management plan (not just a passive prevention strategy) for Long Island with

measurable water quality goals, pollution reduction targets, and regulatory teeth that will actively and effectively protect the groundwater and surface water resources in the interest of public health and the overarching environmental health and economy of Long Island.

Response: The Strategy is not a "passive prevention strategy," but instead outlines a blueprint for action. Each step involves a number of actions and activities designed to achieve the goal of protecting water quality resources while meeting pest management needs. DEC already has sufficient regulatory jurisdiction and authority to regulate the use of pesticides as outlined in Chapter 6 of the Strategy. The Strategy has been revised to clarify the water quality goals and pollution reduction targets, and the factors that will be considered to establish them, to guide the decision making and implementation process.

Comment G-7, 3-62: The Strategy should include some specific triggers for regulatory action. Without some trigger for regulatory action, it's very difficult to bring people together to discuss pesticide use and water quality. The Strategy should also identify targets for water quality and how to measure when they are achieved.

Response: DEC already has a strong regulatory program that authorizes immediate action to suspend a product registration when necessary to prevent an imminent hazard to the public or any other non-target organism. DEC can also place conditions on a registration when necessary to prevent damage or injury to health, property and wildlife. The decision to use regulatory action upon detection of a pesticide product or active ingredient cannot be based on fixed analytical triggers that are set before the Strategy is implemented. The decision to take regulatory action depends on a variety of relevant factors applicable to the particular active ingredient and its use.

Several types of criteria or evaluations will be considered in measuring the success of pollution prevention measures. Groundwater and surface water monitoring will demonstrate the actual environmental results of implementing those measures. Modeling the leachability of alternative products can also be used to supplement the monitoring program. The success of the Strategy would also be measured in terms of disseminating information and implementing specific P2 measures. For example, DEC will collaborate with partners to develop and disseminate best management practices (BMPs) for currently used pesticides, and provide outreach and education on general pest management topics, BMPs and alternative pest management methods. Criteria for success will include, but not be limited to, monitoring data, outreach and education, and implementation of P2 measures.

The Strategy has been revised to reflect the factors that will be considered in the decisions that trigger regulatory action and to delineate criteria for measuring success of pollution prevention measures.

Comment G-8: The goal and intent of the Strategy should be to protect Long Island's sole source aquifer rather than calling for more meetings and monitoring. The Strategy needs to identify actions, changes to current practices and protections of water quality.

Response: The Strategy requires stakeholders and technical experts to collaborate to achieve the goal of protecting Long Island water resources while meeting critical pest management needs. It does much more than "calling for more meetings and monitoring." It outlines a process for DEC to follow in thoroughly and systematically evaluating and addressing the detections of pesticides in groundwater and surface water on Long Island and in focusing on potential sources, exposures, migration, alternatives, implementation of numerous P2 measures, and outreach efforts designed to reduce pesticide use and its impacts on Long Island.

Comment G-9, 3-17: The Strategy should address legacy contaminants in the groundwater.

Response: A remedial program to address contaminants from past pesticide practices, particularly those related to pesticides that have not been registered for many years, is beyond the scope of the Strategy. However, the Strategy outlines a reasonable approach to achieving the goal of protecting Long Island's water resources while continuing to meet its pest management needs. The process will help identify and assess the nature and extent of contamination and potential sources so that degradation of water quality can be prevented in the future. Groundwater and surface water will also be monitored to track the success of pollution prevention measures in reducing contamination. The Strategy has been modified to clarify this.

Comment G-10: The Strategy should include a commitment to ensure release of a Best Management Practices manual for Golf Courses. DEC should offer their expertise in the development of the document and work with the golf courses on the implementation. This could be a potentially significant document in reducing pesticides throughout Long Island Golf Courses.

Response: DEC has reviewed and provided comments to New York State golf course superintendents on their November 2013 Draft Final New York Golf Course Best Management Practices. The final Best Management Practices for New York State Golf Courses can be found at http://nysgolfbmp.cals.cornell.edu/. It should be very useful in promoting pollution prevention measures with respect to pesticide use, water usage, and many other environmental activities. Part of the Strategy will involve an on-going outreach program on Long Island to promote P2 practices for all pesticide users, including golf courses. DEC provides funding to Cornell University to develop and promote best management practices (BMPs) and integrated pest management (IPM) approaches and will continue to expand these outreach efforts on Long Island.

Comment G-11: DEC needs to be adequately staffed with necessary funds to carry out critical monitoring, registering of new pesticides, and oversight of current pesticide practices. DEC has experienced massive budget cuts, and a loss in its workforce, including cuts to key staffing positions in the pest management program. These will hinder the ability of DEC to carry out its job of protecting public health and the environment.

Response: Comment noted.

Comment G-12, G-37: The Strategy should contain a section of recommendations. These recommendations should build on local and state initiatives that are already in place, including:

recommendations for towns to adopt ordinances that ban synthetic use of pesticides and encourage organic lawn practices on all town-owned land; recommendations for Nassau County to adopt a program to phase out the use of toxic pesticides used on County-owned land; and recommendations from the Seagrass taskforce that prohibit coastal watershed use of herbicides if convincing evidence shows that they are toxic to seagrass and species dependent on seagrass resources.

Response: The Strategy outlines a pollution prevention approach to addressing pesticide active ingredients that have been detected in Long Island's groundwater and surface waters. The process of following the blueprint for pollution prevention will help identify and assess the nature and extent of contamination and potential sources so that solutions can be sought. Recommendations for specific actions, programs, and practices for DEC and other stakeholders will be made throughout the implementation of the Strategy. Where appropriate, these recommendations may build on or be incorporated into state initiatives such as, or similar to, DEC's Be Green Organic Yards NY program and recent outreach efforts related to DEC's Be Green Great Lakes workshops or any other initiatives the state may undertake to address broader Long Island water resource issues. The Strategy has been modified to reflect this.

Comment G-13: How will the Strategy define, track, and measure success? What is the target or the goal in terms of groundwater contamination? Is the goal to "meet standards" or is it to stop pollution from entering Long Island's groundwater? At what concentration, relative to standards, is a pollutant considered a serious problem? What will trigger action? Will the TRAC consider ecological impacts of these chemicals as well as health impacts?

Also, the TRAC needs to be an open process. All meetings should be opened to the public and information available to the public. The TRAC should start sooner than 6 months after the Strategy is finalized. DEC should work to convene the TRAC as soon as possible.

Response: The Strategy outlines a reasonable approach to achieving the goal of protecting Long Island's water resources while continuing to meet its pest management needs. The process will help identify and assess the nature and extent of detections and potential sources so that solutions can be sought. Groundwater and surface water will also be monitored to track the success of pollution prevention measures in reducing pesticide impacts. Several types of criteria or evaluations are necessary to measure the success of pollution prevention measures. They may be defined in terms of monitoring data, outreach and education, and implementation of pollution prevention measures.

The Strategy's goal involves preventing pesticide pollution in the first place, and therefore preventing leaching into groundwater. The Strategy is intended to address pesticides that are detected in the groundwater, with the goal of preventing adverse effects on human health and the environment by altering the way these pesticides are applied and by reducing use of particular pesticides. If detected concentrations exceed, or even approach the groundwater standards, DEC can also invoke its regulatory jurisdiction to immediately suspend the registration of the pesticides causing the problem. Furthermore, DEC may consider regulatory measures if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that significant public health or environmental impacts may occur. The decision to suspend or cancel the registration of

a pesticide product or active ingredient would depend on a variety of relevant factors applicable to the particular active ingredient and its use. The Strategy has been revised to reflect the factors that will be considered in the decisions that trigger regulatory action and to delineate criteria for measuring the success of pollution prevention measures.

The TRAC is intended to provide DEC with information sufficient to support decisions about the active ingredients under evaluation and related actions. That process will include consideration of ecological impacts as well as health impacts.

The TRAC is not subject to the Open Meetings Law as it is not a public body and is merely advisory in nature. However, operation of the TRAC will be an open process. Meetings will be opened to the public and relevant materials will be posted on a designated webpage. The first meeting of the TRAC is proposed to begin within 6 months after the Strategy is finalized. Prior to the TRAC meeting, DEC will compile information and conduct an initial assessment of several active ingredients, reviewing monitoring data, product and use pattern information, water quality criteria, potential pollution prevention measures to evaluate, and other relevant information to present to the TRAC. The first active ingredients the TRAC will address are imidacloprid, metalaxyl, and atrazine.

Comment G-14: Lead and other contaminants from CERCLA, RCRA, and NPL sites are not considered in the Strategy.

Response: DEC and EPA already have major programs in place to address contamination caused by the disposal of hazardous wastes at particular facilities. The Strategy, however, was developed to assist in reducing contamination caused by the current and future use of pesticides, wherever it may occur.

Comment G-15: The health of citizens and wildlife are more important than monetary profits by big corporations.

Response: Comment noted. DEC has a very strong pesticide registration program, as described in Chapter 4 of the Strategy. Reviews of products containing new active ingredients or that represent major changes in labeling involve extensive evaluations, prior to registration, of their potential human health risks, potential effects on non-target organisms and endangered species, and potential groundwater quality impacts. The Strategy is intended to bolster and work hand in hand with the current registration program.

Comment G-16, 3-6, 3-7: Cesspools, homeowner use of pesticides, and illegal disposal are sources of water contamination in Long Island. Restrictions are recommended on the purchase of pesticides for homeowners and cost effective options and replacements for any pesticides that may no longer be available for use. Regulatory options associated with pesticide use and options are also recommended to reflect the needs of various pesticide user groups as well as protecting the environment.

Response: As a component of the Strategy the Department and other participants on the TRAC will be assessing the use of pesticides by homeowners as well as other user groups as

potential sources of the pesticides found in the groundwater. Based on these findings, the sale of certain pesticides to homeowners could, in an appropriate case, be limited. The Strategy has been developed to assess the use of the pesticides found in the groundwater and take pollution prevention actions associated with these materials. In assessing potential replacement of active ingredients, effectiveness and cost would also be evaluated.

Comment G-17: Federal and State Drinking Water Standards and Maximum Contaminant Levels (MCL) groundwater standards should be adhered to in determining pesticide registration status for all chemicals. Long Island should not have a boutique regulatory environment that supersedes state and federal regulatory frameworks, especially when groundwater levels of target pesticide products are far below established MCLs.

Response: Long Island's sole source aquifer is a unique and critical resource relied upon by about 3 million people. New York's pesticide product registration program and registration decisions are scientifically based and incorporate extensive environmental and health risk assessments as described in the Strategy. These assessments already incorporate consideration of federal and state groundwater and drinking water standards and the Strategy enhances the state's existing pest management program by specifically addressing Long Island's unique aquifer conditions.

The federal and New York State water quality standards will be one tool the Department uses in the evaluation of groundwater monitoring results reviewed under the Strategy. The Strategy will not create a specific regulatory response for Long Island, but will use groundwater monitoring data to determine the scope, goals, and effectiveness of responses, including pollution prevention measures, to detections of active ingredients. The federal and state standards have been used as benchmarks in water quality monitoring for evaluating the level at which pesticide contamination has been detected and, as already mentioned, they will be a factor in determining the type of response actions needed. The concentrations of many detected pesticide residues were much lower than these critical thresholds, although some have exceeded those thresholds. The enhanced protections of the pollution prevention Strategy will detail a process by which assessments and pollution prevention measures may be initiated upon identification and verification of pesticides and their degradates in the groundwater, even at low concentrations.

Comment G-18: The Strategy does not adequately emphasize the need for overall pesticide reduction by all applicators, from individual homeowners and do-it-yourselfers to local institutions. DEC should do more in the Strategy to encourage adopting prohibitions, such as those in the Child Safe Playing Fields Act, on the use of aesthetic turf pesticides policy at parks, town and village green-spaces, colleges and other places.

Response: The Strategy outlines a way to promote pesticide pollution prevention measures applicable to all users of pesticides including emphasis on outreach and educational programs that will promote appropriate use of and alternatives to pesticides. Recommendations for specific actions, programs, and practices for DEC and other stakeholders will be made throughout the implementation of the Strategy.

Comment G-19: We need strategies that will not increase the pesticide burden from mosquito control on the public. Source reduction and larvaciding are the best and most effective ways to control mosquito populations. Aerial or truck spraying of adulticides is the least effective control and puts non-target species, including humans and the environment at great risk.

Response: The scope of the Strategy does not specifically include the lawful application of mosquito adulticides over Long Island surface waters, which have been subject to years of review by EPA, a variety of experts, and the courts. However, DEC acknowledges the importance of source reduction and larvaciding as it relates to mosquito control.

Comment G-20: DEC should be supporting organic, alternative solutions for maintaining beautiful and healthy lawns without the use of pesticides. This is a positive and groundwater-protective segment of the landscaping industry.

Response: The Department agrees and the Strategy includes a description of DEC's Be Green Organic Yards NY organic lawn and landscape care program and emphasizes increased education and outreach that will help promote reduced or modified use of pesticides.

Comment G-21: Structural pests as well as indoor pests are being successfully controlled by bait treatments and a number of products classified by the USEPA as minimum risk pesticides (25b pesticides). Long Island homeowners concerned about the risks of toxic pesticides are embracing this new and effective product.

Response: The Department is preparing proposed regulations for application of minimum risk pesticides.

Comment G-22: With major advances in soil science and organic agriculture technologies, organic farming is a reality, even for large farms. There is more demand for locally grown organic produce and farmers' markets on Long Island than there are organic farmers to supply them.

Response: Comment noted. The Strategy recognizes that the various stakeholders have much of the expertise for identifying alternatives to conventional pesticides. These stakeholders will be expected to participate in encouraging the use of alternatives by getting the information about them to the largest number of pesticide users.

Comment G-23: We are concerned that the pesticide related chemicals detected in Long Island groundwater will have detrimental environmental and health impacts within our waterways. There is a concern regarding how the combination of pesticide related chemicals with other compounds may adversely affect the environment and human health if and when they reach our harbors and creeks.

Response: The Strategy incorporates the involvement of stakeholders and a diverse group of technical experts to achieve the goal of protecting Long Island water resources. Through this collaborative effort DEC will be bringing all the latest scientific findings that are available to

address the issues of co-occurrences of contaminants and other issues. The Strategy outlines a process for DEC to thoroughly and systematically evaluate and address the detections of pesticides in groundwater and surface water on Long Island and to focus on all potential sources, exposures, migration, alternatives, and P2 measures.

Comment G-24: The draft Strategy should provide more detail about criteria for prioritizing active ingredients for evaluation, defining triggers and timelines for evaluation and action, and measuring success.

Response: The Strategy already identifies criteria that will be used to help prioritize the active ingredients for review. The Blueprint for Action includes specific steps to be taken depending on the circumstances applicable to an active ingredient under review, including its characteristics, use patterns, monitoring results, pollution prevention measures and progress toward implementation and meeting pollution prevention and water quality goals. The Strategy has been modified to clarify these issues. With respect to measuring success, criteria for evaluation of success have been added to the Strategy. See the response to Comment G-13.

Comment G-25: DEC and the Suffolk County Department of Health Services no longer have sufficient staff or resources to do what it once did. It is not very realistic to think they will be able to do more monitoring and more programs. And there will be a threshold to how much the public can bear the costs of cleaning up contaminated groundwater.

Response: The Strategy will be implemented through a collaborative effort utilizing existing DEC and stakeholder resources to achieve a comprehensive and cohesive focus on Long Island's water quality issues. The Strategy has been modified to indicate that DEC will work with Suffolk County Water Authority and other stakeholders to consider economic factors associated with pesticide use and the selection of pest management alternatives, including the costs of treatment provided to address pesticide-related contaminants in drinking water.

Comment G-26, 27, 28, 29, 3-66, 3-67: Growers and industry are as concerned about the protection of the drinking water as much as the people that are not using pesticides for a living, they drink the water as well. Growers and industry are also concerned that they will need pesticides in order to continue farming and operating in Long Island. They would like to see alternative pesticides if materials are no longer available. They generally support the Strategy.

Response: Comment noted. The focus of the Strategy is to protect Long Island's groundwater while allowing for the continuation of agricultural production and the proper use and application of pesticides.

Comment G-30: Suffolk County has a long history of aggressively protecting its aquifer and preserving open space and farmland. We can we do both. The County is spending significant amounts of money and time to try to save farming as an industry and certainly doesn't want to put farmers out of business. But people do have a right to be concerned about their drinking water. We need to find balance and the Strategy is constructed to find that balance. So let's try implementing the Strategy, monitor its results, and bring people together to find ways to protect public health and still keep farming viable, because they are critical to our past and our future.

Response: Comment noted. The overall goal of the Strategy is to protect water resources while continuing to meet the pest management needs, of farmers as well as all other sectors. It is designed to bring relevant stakeholders together to identify, assess, and implement viable pollution prevention measures, and to allow for continuous monitoring of progress and modification as necessary.

Comment G-31: A trace amount of a contaminant in the groundwater should be considered significant.

Response: See response to Comment G-4.

Comment G-32: The Peconic Institute is a new not for profit organization focused on sustainability and resiliency within the Peconic region and beyond. The Institute is available as a resource to help both environmentalists and the farming community in pursuit of clean water and clean food.

Response: Comment noted. The Strategy envisions that collaboration with such institutions will assist in altering existing pesticide use cultures such that integrated pest management (IPM) and pesticide alternatives will help reduce water quality impacts.

Comment G-33, 3-71: Various commenters representing the large segments of the regulated community generally support the Strategy, look forward to working with other stakeholders to reach a common goal, and would like to see recommendations for groundwater protection implemented as soon as possible.

Response: Comment noted. The Department acknowledges the overwhelming positive response and interest expressed by numerous stakeholders during the stakeholder meetings to assist with the implementation of the Strategy.

Comment G-34: It is good to see the Strategy indicate that DEC will put such time and effort, taking a scientific approach, working cooperatively with all the involved parties to make good decisions. Protecting the groundwater is vitally important to everyone, especially the farmer. They are the people who use the pesticide products and who live on the farms and use the groundwater.

Response: Comment noted, see above response.

Comment G-35: The Strategy should take a more aggressive approach to protecting groundwater and human health.

Response: DEC developed the Strategy to help protect groundwater and promote environmentally sound management of pests. We believe that combined with DEC's existing pest management program, the Strategy offers the best opportunity for protecting the integrity of water resources from pesticide-related contamination, while continuing to meet critical pest management needs.

Pursuing the approach outlined in the Strategy will result in more rapid adoption of alternative pest management practices and products than would occur through attempting to ban their use. Moreover, we expect that the effects of following the Strategy's Blueprint for Action and implementing pollution prevention measures will be more extensive and long-lasting and provide greater protection to the health of Long Islanders than attempting regulatory action, such as imposing a ban. But DEC may still consider certain regulatory measures if P2 actions prove insufficient and if DEC and NYSDOH determine that detections of a pesticide-related chemical in water quality monitoring data indicate significant public health or environmental impacts may occur.

Comment G-36: No one is arguing for zero tolerance. We need a sustainable strategy to protect groundwater.

Response: Comment noted. DEC developed the Long Island Pesticide Pollution Prevention Strategy (Strategy) to help protect groundwater and promote environmentally sound management of pests. We believe the Strategy offers the best opportunity for protecting the integrity of water resources from pesticide-related impacts, while continuing to meet critical pest management needs.

Comment G-37: The Strategy should contain a section of recommendations.

Response: See response to Comment G-12.

<u>Additional General Comments also applicable to Chapter 3</u>

Comment 3-9, 3-10: The structural pest control industry is concerned that removal of pesticides from Long Island based on active ingredients could unnecessarily impact their industry. The removal of an active ingredient from Long Island could remove pesticides formulations that would never come in contact with the groundwater when they are used properly.

Response: The Strategy does not call for the removal of any pesticides simply based on the fact that they contain a particular active ingredient. Assessments and subsequent actions related to active ingredients will be based on their detection in the groundwater and surface water and their use patterns. There are many pesticide products which are currently registered with very limited use patterns, such as indoor baits and gels and outdoor spot treatment that have little or no potential to impact the environment. DEC and the TRAC will attempt to identify problematic use patterns and applications of products containing active ingredients of concern which may have a negative effect on groundwater resources.

The Strategy is intended to address pesticides that are detected in the groundwater, with the goal of preventing adverse effects on human health and the environment by altering the way these pesticides are applied and by reducing use of particular pesticides. The decision to suspend or cancel the registration of a pesticide product or active ingredient would depend on a variety of relevant factors applicable to the particular active ingredient and its use. DEC may consider regulatory measures, based on a number of factors such as those outlined in the response to Comment G-4, if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that significant public health or environmental impacts may occur. The Strategy has

been revised to reflect the factors that will be considered in the decisions that trigger regulatory action. See G-4 for additional triggers for regulatory action.

Comment 3-59: The Department should be looking for other chemicals in groundwater and not ban any pesticides without considering the ramifications of the ban. Zero detection of pesticides in the groundwater is not a reasonable expectation. There is a need for pesticides in society and there needs to be balance to any solutions that are developed.

Response: DEC agrees that there is a need for pesticide use in society and will consider this need during the development of any pollution prevention measures that may be identified under the Strategy. The Strategy outlines a balanced approach to achieving the goal of protecting Long Island's water resources while continuing to meet its pest management needs. The Strategy's approach is a practical process to evaluate the use patterns and impacts of specific active ingredients and alternative products and processes to manage pests rather than outright elimination of those tools without available alternatives. This approach should result in more rapid adoption of alternative pest management practices or products than would occur through attempting to ban use of particular active ingredients.

Comment 3-66, 3-67: Sustainability should be part of pest control, the Department is doing a good job, and that New York has some of the strictest pesticide control laws and regulations in the country. There is a need to protect bees from pesticides.

Response: DEC agrees that sustainability should be incorporated into the use of pesticides. Integrated Pest Management and Pollution Prevention are some of the building blocks of sustainability in pest control and are fundamental to the Strategy. The protection of pollinators is not directly addressed in the Strategy, but Pollinator Protection has been a focus of both the State and federal pesticide programs, and has led to the development of pesticide label amendments to protect pollinators.

EXECUTIVE SUMMARY

No comments specifically on the Executive Summary were received.

CHAPTER 1: GOAL, PHILOSOPHY and PURPOSE

Comment 1-1: The Strategy seems intended to downplay the prevalence and significance of pesticides in groundwater and represents an unfortunate step backward. It is unclear why the Strategy is still talking about "initial assessments of active ingredients" rather than stressing the need to protect human health by preventing risks associated with pesticide-related contaminants in groundwater.

Response: The Strategy, in conjunction with DEC's current pesticide product registration program, is a step forward that is intended to protect human health by preventing risks associated with pesticide-related contaminants in groundwater. It establishes a process to more closely examine the available groundwater monitoring data and focus future monitoring efforts to better define the nature and extent of these contaminants in groundwater and surface water, their potential sources, and the most beneficial actions to take to prevent further contamination without waiting for regulatory thresholds to be exceeded.

The Blueprint for pollution prevention identifies the steps toward taking action. The first step involves assessing available information and prioritizing active ingredients to focus the efforts and resources of DEC and other stakeholders on those of greater potential risk to human health and the environment.

Comment 1-2: The Strategy should emphasize that public health will not be jeopardized, as a balance is sought between users of pesticides and groundwater protection.

Response: The Department agrees that it is vital for the Strategy to protect public health through protection of water resources and proper management of pests that threaten public health. Protection of public health is the foundation for the Strategy and as such it is emphasized throughout the Strategy.

CHAPTER 2: OVERVIEW: GROUNDWATER and PESTICIDE USE on LONG ISLAND

Comment 2-1: One of the first steps in the Strategy involves reviewing water quality monitoring results. Water quality studies rely on pesticide use data to prioritize pesticide testing determinations. The Department is charged with preparing an annual report on pesticide sales and application data. The last available annual report is from 2005. The most recent pesticide use information needs to be made available.

Response: The Finalized 2005 Report on Pesticide Applications and Sales was the last annual report of data collected under the Pesticide Report Law (PRL) that was released for public inspection. The Department has identified many errors in the data statewide for 2006, 2007 and 2008 report years, some of which have been fixed. However, many errors could not be readily corrected, such as: under-reporting and over-reporting (due to duplicative information); diluted amounts of product reported; incorrect units, addresses, zip codes, product registration numbers; and many others. The 2006, 2007, 2008, and 2009 data will be posted on DEC's website for public inspection along with a statement regarding the numerous data quality concerns and issues this summer. Data for 2010 and 2011 will be posted by this fall.

Nevertheless, extensive information about pesticides used on Long Island can still be obtained and utilized to help guide water quality monitoring efforts. Despite the numerous data quality deficiencies in the PRL data, DEC can still identify active ingredients registered for use on Long Island, as well as products sold and applied and their relative or approximate quantities from the PRL data and from inspections and interviews with pesticide users. Changes in pesticide reporting requirements could potentially improve timeliness, accuracy, and availability of the data. This will be clarified in the Strategy.

Comment 2-2: We urge DEC to make public all the water testing results in Nassau and Suffolk County. The public should be allowed access to information about pesticides that are being detected in drinking water wells, including locations and concentrations.

Response: Water quality monitoring summary tables compiled by the Suffolk County Department of Health Services were referenced in the Strategy and are available at: ftp://ftp.dec.ny.gov/dshm/pesticid/liwaterqualitydata.docx. This information primarily summarizes past monitoring data provided by the Suffolk County Department of Health Services, the Suffolk County Water Authority, and the United States Geological Survey. Information on public drinking water wells is available from the County health departments.

Suffolk County has been collecting groundwater and surface water samples since 1997 and providing the data under contract to DEC as part of a monitoring program designed to help DEC understand the potential health and environmental impacts associated with pesticide use on Long Island. Under these contracts, over 7,000 samples have been collected and each sample is typically analyzed for a full suite of over 200 active ingredients. The size of this database and its current format make it difficult to have this full data set readily available for public review. Instead, and as discussed above, the Department has made the water quality monitoring summary

tables referenced in the Strategy fully accessible to the public at the link shown above. In addition, DEC is currently working with both Suffolk County and Cornell University to have the historic data entered into an environmental data management database that will more readily allow for public review of the data. Both Nassau and Suffolk County collect additional samples beyond the scope of the contracts with DEC and have also collected samples prior to the contract starting in 1997. DEC does not have all of these additional water quality testing results collected by Nassau and Suffolk County.

As part of the ongoing outreach and education efforts outlined in the Strategy, the water quality monitoring data that is used to support decisions made throughout implementation of the Strategy and to track its progress will be made available to the public. However, DEC is not at liberty to release information about sampling locations that can be associated with specific residences.

Comment 2-3: Given the number of detections of metalaxyl, imidacloprid, and atrazine mentioned in the Strategy, it should acknowledge that they may have impacted our water resources.

Response: The Strategy acknowledges the detection of these as well as other active ingredients in groundwater through past monitoring. In fact, these detections were in large part the impetus for the development of the Strategy and establishing a process to evaluate their impacts on groundwater quality.

Comment 2-4, 3-41: Several statements in the Strategy suggest there is minimal health risk associated with the detection of pesticides in groundwater and drinking water resources. It is recommended that several of these statements be rewritten to provide a more balanced perspective.

Response: One of the primary goals of the Strategy is to protect public health, and the implementation of the Strategy will address the detections of pesticides in groundwater and drinking water resources. The Strategy has been revised to provide further clarification of these specific statements.

Comment 2-5: The drinking water maximum contaminant level goals (MCLG) should also be considered as a reference point in Section 2.5.

Response: The Strategy has been revised to include references in Section 2.5 to MCLGs for non-carcinogens as guidance values for consideration in evaluating the need for preventive or corrective measures.

Comment 2-6, 2-8: If groundwater monitoring will be used as the primary indicator of whether the use of a pesticide or active ingredient should be reviewed under this strategy, then the monitoring must be properly conducted and results recorded with consistency. The groundwater monitoring must be done in accordance with a protocol that includes standards for the location of monitoring wells, the number and frequency of recording the presence of pesticides or Active Ingredient in samples taken from those wells, and the methodology used in

the monitoring. A truly accurate monitoring program must eliminate duplicate readings from the same monitoring well, as well as all groundwater monitoring data collected in conjunction with any enforcement case pursued by DEC.

Response: DEC acknowledges the importance of following appropriate protocols when collecting groundwater quality data and intends to closely examine future groundwater monitoring data in conjunction with the appropriate QA/QC procedures and protocols in order to better define the nature and extent of pesticides in groundwater. Groundwater monitoring results will be just one factor considered during the review process. Our intention is to thoroughly evaluate all data to determine the nature, extent and potential causes for detections and develop appropriate P2 measures.

Comment 2-7: The existing groundwater monitoring data on which the data graphs and charts in the strategy have been based must be scrutinized to eliminate duplicative readings from the same well(s). There are documented instances of numerous readings, taken from the same well on the same day showing separate indications of a given chemical's presence in groundwater. Since so much emphasis has been placed on the number of detections, the number must be recorded correctly. Readings from monitoring wells should be recorded correctly in accordance with appropriate reporting protocols. A truly accurate monitoring program must exclude all data related to an enforcement action. Once erroneous and inappropriate data has been excluded from the strategy, it must be recalculated and republished.

Response: The intent of the Strategy is to outline a path forward for assessing the impacts of pesticide detections in groundwater. It is our intent to closely examine the groundwater monitoring data in conjunction with the appropriate QA/QC procedures and protocols in order to best define the nature and extent of pesticides in groundwater. Our intention is to thoroughly evaluate all relevant data to determine the nature, extent and potential causes for detections and to develop appropriate P2 measures that can be taken and to monitor for corrective response to the P2 measures in the future.

Comment 2-9, 2-10, 2-11: Use of unregistered pesticides on Long Island is a concern in terms of both the illegal activity it represents and the impact they may have on public health and the environment. Can storage and use of these pesticides be monitored and traced back to the manufacturers?

Response: Under DEC's current pesticide regulatory framework we are able to investigate reports of illegal use, distribution, or possession of pesticides and can follow up with appropriate enforcement actions where necessary. However, there is no "cradle to grave" tracking system to follow the distribution of registered pesticide products from a manufacturer to the sites of use. Moreover, accurate records are usually not maintained for illegal pesticides or for registered pesticides used, handled or stored illegally. What DEC maintains is information on registered pesticides and on the businesses and individuals that distribute, possess and use them. Pesticide storage is governed by federal container storage requirements under 40 CFR Part 165, for large pesticide containers, and state requirements under 6 NYCRRR Part 326.11, for restricted use pesticides. Storage requirements often vary with the pesticide and will typically be a requirement on the pesticide label, which will be enforce under 6 NYCRR Part 325.2.(b).The Strategy has

been revised to include an expanded discussion of pesticide handling, use, storage, and reporting requirements and DEC's compliance program.

Comment 2-12, 2-13: What assumptions are used to develop the water quality standards mentioned in Chapter 2? Do they consider exposures to the most sensitive populations, to infants and pregnant women, or exposures to multiple contaminants? Do the standards represent levels that are considered "acceptable" or "safe" for the average person?

Response: The New York State and Federal drinking water standards consider the toxicological characteristics of chemicals and take into account protection of sensitive sub-populations. A summary of information about New York State Drinking Water Standards is below and information on Federal Drinking Water Standards is attached. The Strategy has been revised to incorporate some of this information to clarify some aspects of the standards' development and how they may be used as the Strategy is implemented.

New York State drinking water standards are at least as strict as the federal standards for specific pesticides. In addition, New York State has standards that apply to all organic chemicals (the majority of pesticides are organic compounds) to account for those pesticides that do not have chemical specific standards. Based on the chemical's structure, a standard of either 5 ppb (for Principal Organic Contaminants) or 50 ppb (for Unspecified Organic Contaminants) is applied to each organic compound. The development of these standards considered, among other things, toxicological data and accounted for human variability. New York State also has a total organic contaminant standard of 100 ppb to account for the possible presence of multiple contaminants in drinking water. That is, the combination of all organic compounds must not exceed 100 ppb. This standard can be used to address the presence of mixtures where each contaminant is below a standard.

Federal maximum contaminant levels (MCLs) are enforceable standards and are based upon assessments of health risks, treatment technologies, costs (affordability) and other factors. Currently there are fewer than 100 chemicals for which an MCL has been established, some of which are pesticides. The MCL derivation process includes the determination or use of a Reference Dose (RfD). The RfD is defined as an estimate of a daily exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

In addition, the USEPA has developed Human Health Benchmarks for Pesticides (HHBPs) as guidance values to enable states to determine whether pesticide detections in drinking water or drinking water sources could be a potential health risk. The pesticides in the guidance are for pesticides for which USEPA has not set a drinking water health advisory or set an enforceable drinking water standard. HHBPs are derived for acute (one-day) and/or chronic (lifetime) exposures for the most sensitive populations from exposure to pesticides that may be found in surface or ground water sources of drinking water.

Thus, the standards and guidance values that will be used in informing decisions regarding possible prevention and corrective actions will consider sensitive sub-populations and exposures to multiple contaminants.

CHAPTER 3: ACTION PLAN TO IMPLEMENT THE LONG ISLAND PESTICIDE POLLUTION PREVENTION STRATEGY

Comment 3-1: The Strategy should support organic agriculture and horticultural practices by providing incentives to organic operations. Operations that do not convert to organic practices should pay higher taxes and these extra taxes should be used to cover the costs associated with keeping the drinking water clean.

Response: The Strategy is designed to protect the groundwater from continued pesticide pollution by incorporating the voluntary use of pollution prevention practices into agricultural and horticultural operations. As a component of this strategy the use of organic practices will more than likely play a role as one component of pollution prevention. Currently there is no funding available to provide incentives for organic growers as part of the Strategy. The possible imposition of higher taxes on growers that do not adopt these practices is beyond the scope of the Department's authority in developing the Strategy.

Comment 3-2: Ban the use of imidacloprid, metalaxyl, and atrazine on Long Island.

Response: The Strategy does not call for an immediate ban on any active ingredient. However, DEC will focus attention and effort on imidacloprid, metalaxyl, and atrazine first. It should be noted that two of the main registrants of pesticides containing atrazine have voluntarily revised their labeled products to prohibit use on Long Island. These labels were approved by USEPA and DEC.

As its name states, the Strategy outlines a pollution prevention approach to addressing pesticide active ingredients that have been detected in Long Island's groundwater. A pollution prevention approach is ideally suited for addressing the pesticide-related contaminants that have been detected in groundwater in view of the currently available monitoring data and the legal and regulatory framework under which the pesticide product registration program operates.

The detections of atrazine, metalaxyl and imidacloprid have been fairly widespread and generally at low levels and well below drinking water standards. We will work with the Suffolk County Department of Health Services to focus groundwater monitoring on potential sources of these contaminants.

Pursuing the approach outlined in the Strategy will actually result in more rapid adoption of alternative pest management practices or products than would occur through attempting to ban the use of the three pesticides. Nevertheless, DEC may consider regulatory measures to manage use of an active ingredient if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that detections of pesticide-related chemicals indicate significant public health or environmental impacts may occur.

Comment 3-3: DEC should assess and identify safer alternatives to toxic pesticides found in groundwater.

Response: This is a key component of the Strategy. If we are to protect Long Island's groundwater and continue to effectively manage pests, then viable alternatives are necessary. DEC will work with county agencies and other members of the proposed Technical Review and Advisory Committee (TRAC) to identify effective alternatives to particular active ingredients. But the Strategy recognizes that the other stakeholders have much of the expertise for identifying safer alternatives, including Cornell, certified applicators and their associations, product registrants, and the public interest groups. Likewise, it is these stakeholders who must participate in encouraging the use of safer alternatives by getting the information out about them to the largest number of pesticide users.

Comment 3-4: Develop an aggressive program to incentivize farmers to voluntarily discontinue use of detected pesticides.

Response: Education about effective and less toxic alternatives will be the principal means for encouraging farmers and other users to discontinue unnecessary use of detected pesticides long before public health or the environment is impacted. As discussed in the Strategy, effective implementation of pollution prevention measures will involve extensive and aggressive outreach and education. The coordinated collaboration envisioned in the Strategy will call upon farmers and other stakeholders to advise DEC on potential pollution prevention measures and potential opportunities for financial or marketing incentives to pursue those measures, and to participate in their implementation.

Comment 3-5: One of the most prevalent pesticide-related chemicals found on Long Island is imidacloprid**,** which is in a group of insecticides called neonicotinoids. Unlike traditional pesticides that are typically applied to the surface of plants, neonicotinoids are systemic – meaning they are absorbed and then spread throughout the entire plant. One way honey bees and other pollinators are exposed to these unique insecticides is through pollen and nectar when visiting plants.

Neonicotinoids are also concerning because they persist in the environment and can accumulate quickly causing contamination of surface water, groundwater and soil, endangering species that inhabit these ecosystems. Harmful effects from this type of contamination have been identified in aquatic invertebrates, and concerns exist over long-term impacts on waterfowl, rangeland birds and other wild animals, and of course, the harmful effects on honeybees! Widespread declines of pollinators have serious consequences for both agricultural production and the global ecosystem.

Response: DEC is very concerned about the decline in pollinator health. DEC is working closely with the EPA to protect bees and other pollinators from pesticide risks through regulatory, voluntary and research programs. DEC will continue to work with the EPA to ensure pollinators are protected from harm by pesticides, and that decisions are supported by sound science consistent with federal and state pesticide law. The Strategy has been modified to highlight how DEC will consider specific concerns related to neonicotinoids in the evaluation and prioritization of active ingredients.

Comment 3-6, 3-7: Cesspools, homeowner use of pesticides, and illegal disposal are sources of water contamination in Long Island. Restrictions are recommended on the purchase of

pesticides for homeowners and cost effective options and replacements for any pesticides that may no longer be available for use. Regulatory options associated with pesticide use and options are also recommended to reflect the needs of various pesticide user groups as well as protecting the environment.

Response: See response to Comment G-16.

Comment 3-8: It is important that cost benefit analyses include the identification of costs and risks to the agricultural industries, insuring scientific, analytical decision-making. Implementing changes to farming practices that threaten the continued existence of farming on Long Island need to be measured against the benefits that motivate those changes. The Strategy must insure that unintended consequences like the creation of lower crop yields, higher farm expenses, and lower earnings do not result in farm business exits and irreparable farm resource losses. Agricultural industry financial benchmarking can provide important financial trend information that can benefit the success of the Strategy. Benchmarking will require participation by agricultural industry participants.

Response: The agriculture sector will be a key stakeholder and pollution prevention partner in implementing the Strategy. The Strategy has been modified to refer to ways in which DEC will work with representatives of the agriculture sector to consider economic factors and impacts associated with pesticide use and the selection of pest management alternatives.

Comment 3-9, 3-69: My main concerns moving forward is that we make decisions about products based on their use patterns and not just their active ingredient. Everyone must consider that active ingredients such as imidacloprid are in hundreds of products that are not used to treat the soil. As a matter of fact we have products like premise foam in a can that is used above ground to treat termites in conjunction with a bait system as a direct alternative to a soil application. These types of products are exactly what we need to be able to protect property for customers and our water supply collectively.

Finally as I have stated in the past I believe that technology and the creation of new products like termite bait systems are the answers to protecting our water.

Response: DEC agrees that actions should be based on the use pattern of a pesticide product. There are many pesticide products which are currently registered with very limited use patterns, such as indoor baits and gels and outdoor spot treatment that have little or no potential to impact the environment. We are currently working to identify problematic use patterns and applications of products containing the active ingredients of concern which may have a negative effect on groundwater resources. Although it was mentioned in the draft, the Strategy has been modified to further explain how use patterns are critical to the evaluation of active ingredients and the identification and selection of potential pollution prevention measures.

Comment 3-10, 3-56: We find the Strategy to represent a comprehensive, scientifically-based approach toward addressing the issues at hand and in the future. We feel that it is through this type of balanced approach that the goals of protecting water resources from possible pesticide contamination while at the same time addressing the legitimate pest management needs

for Long Island can be met. While structural pest management professionals do employ limited use of one of the materials of concern (imidacloprid), those uses are not likely to cause imidacloprid to find its way to ground water. However we do have a concern in regard to the initiative that decisions continue to be arrived at in a scientifically based manner which incorporates a risk assessment and cost benefit analysis as the basis of pesticide use in Long Island as well as the entire state.

Response: DEC agrees that actions should be based on sound science and focused on problematic use patterns and applications. Our intention is to move forward in this manner.

Comment 3-11: Although many legacy pesticides currently found in our drinking water cannot practicably be remediated at this point, the draft Strategy should propose a greater commitment to addressing liability or remedial action criteria associated with future contamination. The public can no longer be expected to absorb the externalized costs of ongoing water contamination, and regulatory agencies must develop suitable plans to take action when contamination takes place.

Response: DEC does not have statutory authorization to assign liability to users, distributors and registrants for treating water impacted by the ordinary application of pesticides. Such actions would be beyond scope of the Strategy and would require legislation.

However, the Strategy is intended to address pesticides that are detected in the groundwater with the goal of preventing adverse effects on human health and the environment by modifying or reducing use of those pesticides. DEC may also consider regulatory measures if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that significant public health or environmental impacts may occur. If concentrations exceed, or even approach the groundwater standards, DEC may be able to immediately suspend the registration of the pesticides causing the problem.

Comment 3-12, 3-60, 3-61, 3-73, 3-75: The draft Strategy should provide sufficient detail regarding how and when active ingredients will be considered for review. Well-defined triggers and timelines for review must be included to ensure these reviews will be conducted in a timely and equitable manner. In addition, the Strategy should clearly discuss how any proposed Maximum Contaminant Level (MCL) criteria for active ingredients would reflect both public health and ecological standards given the varied consequences that pesticides can have on both the human and other living resources. The Strategy should also define an active ingredient priority list from among the possible ingredients proposed for review. Timelines for review should also be established so they can be tracked, monitored, and accelerated when necessary.

Response: The Strategy identifies the criteria that will be used to prioritize the active ingredients for review. They will be prioritized during the early stages of implementation of the Strategy. The Strategy will focus first on the three active ingredients – imidacloprid, metalaxyl, and atrazine. DEC and stakeholder resources will be needed to follow the blueprint for pollution prevention for these three active ingredients. The process for the next group of active ingredients will be triggered as soon as sufficient resources become available.

The Blueprint for Action includes specific steps. However, they are not designed or intended to impede progress or preclude rapid implementation of obvious and appropriate pollution prevention measures, including the use of known and effective alternatives. The steps also do not have specified time frames. The process, and each step in the process, may take different amounts of time for different active ingredients. Each active ingredient will follow its own timeline as the characteristics, use patterns, monitoring results, pollution prevention measures and progress toward implementation and meeting pollution prevention and water quality goals will be different for each. The Strategy has been modified to clarify these issues.

Comment 3-13: How can the DEC support its position in the Strategy that the current situation does not necessitate any regulatory action?

Response: Review of the groundwater data indicates that most detections have been at extremely low or trace levels, which did not contravene water quality and public drinking water standards; very few detections of individual pesticide-related contaminants exceeded the standards. These low level detections do not indicate damage or injury to health, property or wildlife, nor do they indicate an imminent hazard to the public or non-target organisms. DEC may consider certain regulatory measures to manage use of a specific active ingredient, if P2 actions prove insufficient and if DEC and NYSDOH determine that detections of a pesticide-related chemical in water quality monitoring data indicate significant public health or environmental impacts may occur. Under such circumstances, DEC may reassess the registration status of products containing the target active ingredient by reviewing the product registrations associated with the active ingredient and, if necessary, take regulatory action to prohibit use on Long Island. The Strategy has been modified to clarify that appropriate courses of action, including additional regulatory measures, will be considered based on a variety of relevant factors applicable to the particular active ingredient and its use.

Comment 3-14: DEC should incorporate the costs associated with both testing and treating Suffolk County Water Authority's drinking water source for pesticide-related contamination, into an overall cost-benefit analysis for registration of new active ingredients for use on Long Island. DEC should also factor these costs into any decisions to continue to allow already registered active ingredients to be used on Long Island for either existing or new uses.

Response: The ECL does not expressly indicate that costs, including projected groundwater treatment costs, should be considered in making registration decisions. (See ECL 33-0709.) However, a cost-benefit analysis may be a useful tool for comparing alternative products and potential pollution prevention measures. The Strategy has been modified to indicate that DEC will work with Suffolk County Water Authority and other stakeholders to consider economic factors associated with pesticide use and the selection of pest management alternatives, including the costs of treatment provided to address pesticide-related contaminants in drinking water.

Comment 3-15: A statement in Chapter 2 of the Strategy should be revised as follows: "The Suffolk County Water Authority ensures that finished water (treated water) that they supply to their customers exceeds expectations for quality set by New York State drinking water standards."

Response: The Strategy has been revised to incorporate this language.

Comment 3-16: DEC should share the manufacture testing methods for active ingredients with the SCWA's laboratory so they can begin to develop an appropriate test method and determine whether or not any of these active ingredients are in the source water.

Response: Registrants are required to provide analytical methods for their new active ingredients in their application. This information is available to SCWA.

Comment 3-17: The Strategy should have a component to address the remediation of legacy compounds in the groundwater, suggesting the use of mobile granular activated carbon adsorption units to remove contaminants from the groundwater, as has been done in other contaminations sites.

Response: There is no statutory authority to conduct a remedial program of the type proposed. Potential statutory amendments are beyond the scope of the Department's authority in developing the Strategy.

Comment 3-18: DEC has not established a threshold that defines potential harm. DEC should immediately seek to ban 3 more active ingredients based on groundwater data.

Response: The Strategy does not call for an immediate ban on any active ingredients. The detections of atrazine, metalaxyl and imidacloprid have been generally at low levels and well below drinking water and groundwater standards, which are established to be protective of human health and the environment. However, DEC will focus attention on imidacloprid, metalaxyl and atrazine first, and will work with the Suffolk County Department of Health Services to focus groundwater monitoring on potential sources of these contaminants.
A pollution prevention approach is ideally suited for addressing the pesticide-related contaminants that have been detected in groundwater in view of the currently available monitoring data and the legal and regulatory framework under which the pesticide product registration program operates. Pursuing the approach outlined in the Strategy will actually result in more rapid adoption of alternative pest management practices or products than would occur through attempting to ban the use of these active ingredients. Nevertheless, DEC may consider regulatory measures to manage use of an active ingredient if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that detections of pesticide-related chemicals indicate significant public health or environmental impacts may occur.

Comment 3-19: The Strategy should recognize the concern for the potential synergistic and cumulative effects from pesticides and other types of contaminants.

Response: As indicated in the Strategy, the review of water monitoring data will be an important element in determining which pesticides and pesticide use patterns are responsible for causing significant impacts to groundwater, as well as for determining which pesticides pose an exposure potential to people. The Technical Review Advisory Committee will use the latest available research and assessment tools in considering the water quality monitoring data, including whether drinking water contains chemical mixtures, and assess risks to the public posed by the chemical mixtures (and individual chemicals) as warranted.

Comment 3-20: Although the Strategy identifies a need for increased monitoring, it does not recommend or identify additional resources that would be available to local health departments to perform such monitoring. The Strategy should include a comprehensive monitoring protocol to ensure that monitoring data is sufficient to verify trends associated with pesticide contamination.

Response: Comment noted. The Strategy will be implemented with existing State resources. DEC contracts with SCDHS to monitor groundwater quality. Annual scopes of services with SCDHS, and potentially with other entities, are intended and will be designed to ensure that a comprehensive monitoring program is developed over time which is sufficient to identify the nature and extent of pesticide contaminants in the groundwater and surface water. Sampling and analysis performed under these scopes of services is performed in accordance with a DEC reviewed and approved Quality Assurance Project Plan.

Comment 3-21: The Strategy does not address co-occurrences or synergistic effects of active ingredients detected in the groundwater. More than one pesticide has been detected in about half of the private wells in Suffolk County and several have been detected in a number of them.

Response: See responses to Comments G-3 and 3-19.

Comment 3-22 & 3-25: The focus of the Strategy should be limited to chemicals with increasing presence. Active ingredients detected in earlier testing were not detected in later testing. There has been significant discussion about the presence of chemicals in groundwater due to historical, yet discontinued, pest management practices. There is a need for a systematic review and analysis of the detection methods used so that active ingredients in products that are effective and efficacious are not needlessly banned or re-classified as restricted use pesticides. In order to conserve the scarce resources of the Strategy participants for those situations where a currently-used chemical should be reviewed, and those practices scrutinized, there should be a working rule for the Strategy.

Response: The Department agrees that the historical groundwater monitoring results will be just one factor considered during the review process. Other factors such as use patterns and potential to impact the environment will be considered as we move forward with implementation of the Strategy. The intent of the Strategy is to outline a path forward in the future and to focus on currently registered products and use patterns. DEC intends to thoroughly evaluate all data to determine the nature, extent and potential causes for detections and develop appropriate P2 measures.

Comment 3-23: Many of the pollution prevention activities contemplated by the Strategy would start with recommendations made by the TRAC. In an early discussion of the Strategy, DEC indicated that the TRAC would have the authority to determine which pesticides and/or active ingredients (AI) would be considered for pollution prevention activities. While the role of the TRAC is very important, it should not usurp DEC's role in regulating pesticide use. DEC should be the authority giving direction and guidance to the TRAC.

Response: The mission of the proposed TRAC is to make recommendations to the Department, but it will not have a regulatory role. Jurisdiction in all matters pertaining to the distribution, sale, use and transportation of pesticides, is vested exclusively in the Commissioner. DEC cannot and will not shift any of that authority to the TRAC or any other entity. The TRAC's purpose will include evaluation of the use of the pesticides identified in implementing the Strategy and providing information to support the scientific approach for pesticide product registration. The TRAC will assist in investigation and assessment of active ingredients identified by DEC, evaluate existing information related to the active ingredients, such as monitoring data, potential human health risks, existing pest management needs, and effective alternatives, and it will advise DEC regarding potential response actions to prevent further pesticide-related impacts. DEC will work with county agencies and other members of the proposed TRAC to identify effective alternatives to particular active ingredients. But the Strategy recognizes that the other stakeholders have much of the expertise for identifying safer alternatives, including Cornell, certified applicators and their associations, product registrants, and public interest groups. The Strategy has been modified to clarify this.

Comment 3-24: The TRAC should be a source of technical information to DEC, and participation on the TRAC should be limited to individuals and entities that have the technical information relevant to the pollution prevention process. If the TRAC is reviewing a pesticide or AI, the registrant company may have substantial technical information that would be valuable to TRAC discussions. While DEC has the discretion to include or exclude registrants as members of the TRAC, we suggest additional provisions for the TRAC to invite technical personnel from registrant companies to join meetings and provide technical information in order to proceed on the soundest scientific basis.

Response: DEC is aware of the substantial technical information that the registrants possess for pesticide active ingredients. DEC will not hesitate to include registrant technical personnel in meetings as needed. The Strategy has been modified to explain this.

Comment 3-26: It is important to determine a measurable and realistic gauge of success for Strategy actions. The notion that the success of the Strategy will be seen by a decreasing presence of pesticides in groundwater is difficult to demonstrate. If DEC and draft participants in the Strategy have tremendous success in addressing the use of a particular chemical that is, at the start of the plan, showing numerous detections in groundwater, it may still take 3 to 5 years for the chemical to reduce its presence in groundwater monitoring or to disappear from the monitoring detections entirely. DEC will need to work with stakeholders and residents to manage expectations across the 3 to 5 year timeline. The lack of an immediate change in groundwater detections is understood to be part of a lengthy process. We urge you to consider other measures and outreach activities to increase understanding among stakeholders and residents about the Strategy's achieving both short and long-term goals.

Response: It is agreed that measuring the success of Strategy's actions is difficult and may seem to be delayed and not instantaneous. However, as outlined in the Blueprint for Action, ongoing monitoring of the results of P2 implementation is just one measurement of success. Monitoring will include not only environmental monitoring, but also inspections, user surveys and reporting, etc., so that adjustments can be made to specific P2 measures or to methods used

to promote and explain those measures, or to determine if additional P2 measures are needed. Potential P2 measures could include a range of actions involving alternative products, practices, processes, and outreach; therefore, several types of criteria or evaluations are necessary to measure their success. The Strategy has been modified to clarify this.

Comment 3-27, 3-28, 3-29: Cornell Cooperative Extension of Suffolk County is a distinct, local component of Cornell University. Please specifically identify Cornell Cooperative Extension in addition to Cornell University throughout the document and add information about the variety of pesticide related programs that are developed and implemented by Cooperative Extension.

Response: The Strategy has been modified, particularly Chapters 3 and 5, and the Supplemental Information, to reflect the requested change.

Comment 3-30, 3-31: The formation of the Technical Review Advisory Committee (TRAC) is a very effective tool to evaluate products. Although implied in the Strategy, specialists with scientific knowledge should be consulted as needed by the TRAC.

Response: The Strategy has been modified to reflect the suggested change.

Comment 3-32, 3-62, 3-63, 3-74, G-7: There must be a way to accurately gauge the success of pollution prevention measures undertaken through the Strategy. The Strategy should reflect a time frame for this measurement that is sufficiently long in duration, perhaps several years, to allow for accurate measurement of the success of pollution prevention activities.

Response: Several types of criteria or evaluations are necessary to measure the success of pollution prevention measures. Groundwater and surface water monitoring will demonstrate the actual environmental results of implementing the Strategy. Modeling the leachability of alternative products can also be used to supplement the monitoring program. The success of the Strategy would also be measured in terms of disseminating information and implementing specific pollution prevention measures. For example, methods can be pursued to measure the efforts of DEC and its partners to develop and disseminate best management practices (BMPs) for currently used pesticides, and provide outreach and education on general pest management topics and alternative pest management methods. Criteria for success will therefore include, but not be limited to, monitoring data, outreach and education, and implementation of pollution prevention measures.

Comment 3-33: The TRAC should not have the authority to determine which pesticides and/or active ingredients would be considered for the pollution prevention activities described in the Strategy. The role of the TRAC should be advisory. They should not regulate pesticide use.

Response: Agreed, the mission of the TRAC is to make recommendations to the Department and it will not have a regulatory role. The TRAC's purpose will be to evaluate the use of the pesticides identified as part of the Strategy and provide information to support the scientific approach for pesticide product registration. The TRAC will assist in investigation and assessment of active ingredients identified by DEC, evaluate existing information related to the

active ingredients, such as monitoring data, potential human health risks, existing pest management needs, and effective alternatives, and it will advise DEC regarding potential response actions to prevent further pesticide-related impacts. Also, the TRAC may assist the Department with the development of a comprehensive groundwater monitoring plan that will be a component of the measurement of the Strategy's success.

Comment 3-34: It is clearly time for action. The Strategy should contain specific timeframes and actions.

Response: DEC is taking action by implementing the Strategy. As indicated in the Strategy, the first meeting of the TRAC will be within six months after the Strategy is finalized. Specific pollution prevention measures will be identified by following the Blueprint. Some of these actions may be implemented in the short term, others over the long term.

DEC will promote implementation of feasible preventive measures as they and implementation partners are identified (Step 3 of the Blueprint for Action). The timeframes for actual implementation of each action will depend on the type of action, the number of entities that will implement it, and many other factors. The Strategy has been clarified with respect to this comment.

Comment 3-35, 3-72: The absence of triggers in the Strategy represents one of the biggest flaws. The Strategy needs to be modified to establish specific criteria for how DEC will proceed in response to existing and future detections.

Response: The Strategy has been modified to identify the factors that DEC will consider as triggers to prompt regulatory action. The decision to suspend or cancel the registration of a pesticide product or active ingredient cannot be based on a fixed trigger. It would depend on a variety of relevant factors applicable to the particular active ingredient and its use.

Comment 3-36: The Strategy offers very few new actions that will lead to a decrease in the existing contamination and the prevention of future contamination. The formation of yet another advisory committee will do little to offer solutions.

Response: The Department disagrees. The Strategy outlines a balanced approach to achieving the goal of protecting Long Island's water resources while continuing to meet its pest management needs. The process will help identify and assess the nature and extent of contamination and potential sources so that solutions can be sought before groundwater standards are violated. Groundwater and surface water will also be monitored to track the success of pollution prevention measures in reducing pesticide-related impacts.

Comment 3-37: DEC has the responsibility to regulate pesticides pursuant to Article 33 of the Environmental Conservation Law, but the Strategy seems intended to shift some of those responsibilities to the Technical Review and Advisory Committee (TRAC). The Strategy's delegation of such authorization results in a lack of clarity regarding the review process, including who will ultimately make determinations.

Response: Jurisdiction in all matters pertaining to the distribution, sale, use and transportation of pesticides, is vested exclusively in the DEC Commissioner. DEC cannot and will not shift any of that authority to the TRAC or any other entity. The role of the TRAC is to advise DEC. The Strategy has been modified to further clarify and reinforce these roles.

Comment 3-38: The Strategy relies too much on voluntary efforts and half-measures (e.g. restricted use) and seems to limit the recommendations a TRAC may make to less than the full range of options under §33-0715 of the Environmental Conservation Law. In addition, the Strategy does not appear to contemplate the potential for a TRAC or workgroup's recommendations to include registration changes, and seems to require that even DEC must wait for P2 measures to prove insufficient before it can commence any regulatory action. In instances where the need to protect human and environmental health clearly outweigh any potential benefits of a specific active ingredient, the Strategy should focus on swift action, and not on protecting the product.

Response: The Strategy has been modified to clarify that the TRAC is not an advisory committee as described in §33-0715 of the ECL, which is formed at the request of the Commissioner or a registrant and whose role is limited to recommending registration changes to the Commissioner. The TRAC's purpose will include evaluation of the use of the pesticides identified in implementing the Strategy and providing information to support the scientific approach for pesticide product registration. The TRAC will assist in investigation and assessment of active ingredients identified by DEC, evaluate existing information related to the active ingredients, such as monitoring data, potential human health risks, existing pest management needs, and effective alternatives, and it will advise DEC regarding potential response actions to prevent further pesticide-related impacts, which in some cases may include recommendations regarding registration changes for DEC to consider. The Strategy has been modified to clarify the TRAC's role and responsibilities. It has also been modified to clarify DEC's ability to take regulatory action when necessary and to identify some of the factors that DEC will consider as a basis for regulatory action.

Comment 3-39: The Strategy fails to ban active ingredients with a history of detection in groundwater, and instead identifies them only as being in the first category for review by the TRAC. Despite these detections, these pesticides are not subject to any action other than continued "review."

Response: The Strategy focuses on pursuing prompt evaluation of pesticide detections and the identification and implementation of pollution prevention measures. The pesticide pollution prevention blueprint in the Strategy has been revised to identify the considerations for review and explains the steps that DEC and other stakeholders will take to address detections of active ingredients in the groundwater. The focus of the blueprint is on implementing actions, not simply reviewing information. The Strategy has been modified to reinforce this concept.

Comment 3-40: The Strategy does not include a cost benefit analysis and fails to consider <u>all</u> of the costs associated with pesticide use, including costs associated with increased drinking water filtering needs. Suffolk County Water Authority estimates that their capital costs alone of filtering are $12.8 million. All of these costs are borne by ratepayers.

Response: The Strategy has been modified to indicate that DEC will work with Suffolk County Water Authority and other stakeholders to consider economic factors associated with pesticide use in the selection of pest management alternatives, including the costs of treatment provided to address pesticide-related contaminants in drinking water.

Comment 3-41, 2-4: Several statements in the Strategy suggest there is minimal health risk associated with the detection of pesticides in groundwater and drinking water resources. It is recommended that several of these statements be rewritten to provide a more balanced perspective.

Response: One of the primary goals of the Strategy is to protect public health and it will be implemented to address detections of pesticides in groundwater and surface water. The Strategy has been revised to reinforce that fact.

Comment 3-42: The Strategy should include a threshold or trigger mechanism at which additional action would be pursued. Such mechanisms could include a stepped or tiered approach to monitoring and management decisions. A tiered monitoring approach could be implemented to provide site specific data on pesticide fate and transport wherein the program is expanded or focused based on initial monitoring results. In addition, a pesticide rating system that incorporates evaluation of the need, toxicity, leachability and physical characteristics of a particular active ingredient could be utilized to help guide monitoring and management actions.

Response: These recommendations will be considered by DEC and the TRAC as the Strategy is implemented. The Strategy involves robust monitoring and an adaptive assessment process for evaluating the characteristics of active ingredients detected in the groundwater and surface water. The decision to take action, whether related to monitoring, pollution prevention measures, or registration, for a pesticide product or active ingredient would depend on a variety of relevant factors applicable to the particular active ingredient and its use, including those that are already outlined in the Strategy as well as some of those recommended above. However, the Strategy has been revised to reflect the factors that will be considered by DEC in the decisions that trigger regulatory action in particular.

Comment 3-43: The Strategy should identify additional pesticides for evaluation based upon their similarity to pesticides that have been detected in the groundwater and records of the amount of pesticides used in Suffolk County.

Response: The Strategy will focus on pesticides detected in groundwater and surface water. The initial list is included in Appendix A. However, the monitoring program will be modified over time to incorporate newly registered active ingredients as well as others that have not been included in the monitoring program to date. The Strategy has been modified to reflect that. It should be noted that new active ingredient applications undergo extensive technical review of the potential effects to health, ecological resources, and water resources of the state. Potential groundwater impacts are thoroughly modeled and evaluated as part of this process. It is anticipated implementation of the Strategy will help to further inform the Product Registration

process relative to pesticide impacts. Any concerns related to potential groundwater impacts need to be mitigated prior to registration as is outlined in Chapter 4 of the Strategy.

Comment 3-44: The Strategy should better define monitoring needs and assure that all high priority pesticides of concern continue to be adequately monitored. This should include prioritization of new pesticide analyte monitoring that incorporates factors such as toxicity, leachability and physical characteristics. Consideration should also be given to pesticides similar to those already detected in groundwater.

SCDHS has been instrumental in promoting and implementing pesticide monitoring programs with DEC's support. SCDHS will continue to aggressively conduct and expand our monitoring efforts, to the extent that resources permit.

Response: The Strategy will focus on pesticides detected in groundwater and surface water. The initial list is included in Appendix A. However, the monitoring program will be modified over time to incorporate newly registered active ingredients as well as others that have not been included in the monitoring program to date. Prioritization of active ingredients for monitoring will be based on factors such as those recommended above as well as those already outlined in the Strategy. The monitoring program will also be modified over time to improve monitoring related to particular active ingredients, use patterns and locations. The Strategy has been modified to reflect that.

Comment 3-45: It should be noted the New York State Department of Health (NYSDOH) generic unspecified organic contaminant (UOC) MCL of 50 ppb standard applies to numerous organic compounds. Further, it should be noted that drinking water standards applied to various compounds might change or become more restrictive. In addition, many pesticides that are designated as a UOC are not monitored within Suffolk County. Also, it should be noted that many public water suppliers in Suffolk County typically provide treatment for various contaminants, including pesticides, when concentration are detected significantly below MCL's.

Response: Comments noted. While there are relatively few pesticides with specified standards (e.g., atrazine), the NYSDOH Principal Organic Contaminant (POC) and Unspecified Organic Contaminant (UOC) standards capture all other pesticides that are organic chemicals. Most of the pesticide active ingredients (and their degradates) that the NYSDOH has reviewed have been classified as UOCs.

Principal organic contaminant (POC) defined in 10 NYCRR Subpart 5-1 means any organic chemical compound belonging to the following classes: Halogenated alkanes, Halogenated ethers, Halobenzenes and substituted halobenzenes, Benzene and alkyl- or nitrogen-substituted benzenes, Substituted, unsaturated hydrocarbons, or Halogenated non-aromatic cyclic hydrocarbons; except for trichloromethane (chloroform), dibromochloromethane, bromodichloromethane, tribromomethane (bromoform) and any other organic contaminant with a specific MCL listed in section 5-1.52 table 3 (Organic Chemicals Maximum Contaminant Level Determination) of Subpart 5-1.

Unspecified organic contaminants (UOCs) comprise any organic compound (including pesticides and their degradates) for which the POC designation does not apply, and for which a specific MCL has not been adopted.

Specific MCL means a maximum contaminant level (MCL) included in 10 NYCRR 5-1.51, 5-1.52 or 5-1.55 for either an individual substance or group of substances. A Specific MCL does not include the 10 NYCRR Part 5 MCLs for principal organic contaminants or unspecified organic contaminants.

The Strategy will focus on pesticides detected in groundwater and surface water. The initial list is included in Appendix A. However, the monitoring program will be modified over time to incorporate newly registered active ingredients as well as others that have not been included in the monitoring program to date. The Strategy has been modified to reflect that.

Comment 3-46: Applying a UOC of 50 ppb as a human health risk benchmark may not be restrictive enough to ensure groundwater, drinking water and surface water resources will be adequately protected.

Response: New York State developed generic drinking water standards of 5 micrograms per liter for POCs and 50 micrograms per liter for UOCs, in order to be protective of public health. While they are generic in scope, toxicological data was considered in their development. They apply to all organic compounds, which includes the vast majority of pesticides. In general, they provide an immediately available standard for organic compounds in public drinking water systems so that appropriate actions can be taken if an organic compound is detected. In general, drinking water criteria derived based on non-cancer endpoints using chemical-specific toxicological data would be higher than the UOC of 50 ppb. In addition to water resource protection, it should be noted that the product registration process also includes an evaluation and mitigation of the potential effects of pesticide use on non-target organisms and endangered species.

The Strategy will allow for P2 measures to be taken before drinking water standards are violated. As mentioned before, the Strategy is designed to address groundwater contamination before drinking water standards are exceeded.

Comment 3-47: The Strategy attempts to consider addressing or taking some type of action only after significant detections of pesticide contamination has been discovered in groundwater or drinking water resources and implies that some regulatory action may be considered only if a drinking water or groundwater standard is exceeded. As such, the overall approach is not proactive enough to prevent pesticide pollution.

Although the SCDHS Public and Environmental Health Laboratory (PEHL) has significant laboratory capabilities, it can only analyze for approximately 150 pesticide related compounds (80 active ingredients and an additional 70 breakdown products). There are nearly 500 active ingredients that are registered for use on Long Island. This underscores the need to continue to proactively monitor for pesticides.

Response: If detected concentrations exceed, or even approach the groundwater standards, DEC can invoke its regulatory jurisdiction to suspend the registration of the pesticides causing the problem. The Strategy has been modified to identify the various factors that DEC will consider as triggers to prompt corrective actions under the Strategy. It would depend on a variety of relevant factors applicable to the particular active ingredient and its use.

The Strategy involves a robust monitoring program, which will focus on pesticides detected in groundwater and surface water. However, the monitoring program will be modified over time to incorporate newly registered active ingredients as well as others that have not been included in the monitoring program to date. The monitoring program will also be modified over time to improve monitoring related to particular active ingredients, use patterns and locations. The Strategy has been modified to reflect that.

Comment 3-48: The proposed "Blueprint" in the Strategy does not appear to address the potential impacts that may result from the co-occurrence or synergistic effects of multiple pesticides or active ingredients.

Response: DEC and the Technical Review Advisory Committee will consider the water quality monitoring data, including whether drinking water contains chemical mixtures, and assess risks to the public posed by the chemical mixtures (and individual chemicals) as warranted. (See answer to G-3 also.)

Comment 3-49: It is recommended that the Technical Advisory Committee (TAC), which met during the development of the Strategy, should be convened periodically, so that progress and updates can be provided and input from the TAC can be received.

Response: Agreed. The Strategy has been modified to reflect that DEC will meet with the TAC annually.

Comment 3-50: What assurances do residents of Suffolk County have that sufficient staff and resources will be directed toward accomplishing the goals of the Strategy?

Response: DEC is committed to implementation of the Strategy and will utilize its Central Office and Region 1 resources to coordinate and accomplish its tasks and achieve its goals. The Strategy recognizes that a comprehensive approach engaging all stakeholders is needed. By bringing everyone together to work towards a common cause of protecting and preserving Long Island water quality, we will have the best possible outcome. It is a very important initiative for DEC and for all of the stakeholders, many of whom have already expressed great interest in participating in its implementation.

Comment 3-51: The Strategy should include a timeline for evaluating the 47 currently registered active ingredients identified in Appendix A of the Strategy.

Response: The Strategy identifies the criteria that will be used to prioritize the active ingredients for review. They will be prioritized during the early stages of implementation of the Strategy. However, each active ingredient will follow its own timeline as the characteristics, use patterns,

monitoring results, pollution prevention measures and progress toward implementation and meeting pollution prevention and water quality goals will be different for each. It is too early to develop an overall timeline. However, timelines for individual active ingredients as well as an overall timeline may be able to be estimated as the Strategy is implemented. The Strategy has been modified to address this issue.

Comment 3-52: It may be worthwhile to consider evaluating classes (e.g., fungicides, triazines, etc.) of pesticides at one time rather than individual active ingredients. For example, suitable alternatives or pollution prevention measures identified during the evaluation of the fungicide metalaxyl, may also be suitable for other fungicidal active ingredients. Similarly, DEC and the TRAC may find it beneficial to review active ingredients from a similar chemical class, such as Triazines, at the same time due to similarities in environmental fate, human exposure or toxicity.
SCDHS

Response: Agreed. The Strategy has been modified to incorporate this recommendation.

Comment 3-53: As a company that has collaborated with government and not-for profit entities to educate consumers on the benefits of green spaces and sustainability, we would be honored to work with the State and other stakeholders to develop effective messaging to help consumers address pest problems and reinforce the proper use of pest control products.

Response: DEC looks forward to working with the many stakeholders willing to participate in implementation of the Strategy. Their participation is critical to its success.

Comment 3-54: It is recommended that DEC institute plans to mitigate the pesticides that are currently detected in the groundwater before it is found that contaminant levels deem it unfit for human consumption and/or an environmental threat.

Response: The Department agrees. The Strategy outlines a process for DEC to thoroughly and systematically evaluate and address the detections of pesticides and to focus on potential sources, exposures, migration, alternatives, and pollution prevention (P2) measures.

Comment 3-55: DEC should identify Maximum Contaminant Levels for combinations of pesticide related chemicals, which will be used to trigger regulatory action by DEC to mitigate the presence of pesticides in the groundwater.

Response (See G-4 & G-5): The Strategy indicates that the potential exposure and risks to human health from active ingredients detected in the groundwater and surface water, aquifer vulnerability, and other scientific and background information will be considered by the TRAC, stakeholder workgroups, and ultimately DEC. This will include an assessment of the potential additive or antagonistic effects of exposure to multiple contaminants, information on degradates formed from the parent active ingredients, and other relevant information, so that appropriate pollution prevention measures can be identified and implemented. Appropriate courses of action, including regulatory measures, will be considered based on a variety of relevant factors applicable to the particular active ingredient.

It is recognized that some circumstances may warrant specific and prompt regulatory actions. DEC may consider regulatory measures if pollution prevention actions prove insufficient. Moreover, in some cases, the Department might need to take enforcement action with respect to products even without pursuing pollution prevention steps, in order to protect public health or the environment. The Strategy has been modified to identify other factors that DEC will consider as triggers to prompt regulatory action. However, the decision to take regulatory action upon detection of an active ingredient or combination of active ingredients cannot be based on fixed triggers without consideration of these other factors and site-specific circumstances.

Comment 3-56: We find the Strategy to represent a comprehensive, scientifically-based approach toward addressing the issues at hand and in the future. We feel that it is through this type of balanced approach that the goals of protecting water resources from possible pesticide contamination while at the same time addressing the legitimate pest management needs for Long Island can be met. While structural pest management professionals do employ limited use of one of the materials of concern (imidacloprid), those uses are not likely to cause imidacloprid to find its way to ground water. However we do have a concern in regard to the initiative that decisions continue to be arrived at in a scientifically based manner which incorporates a risk assessment and cost benefit analysis as the basis of pesticide use in Long Island as well as the entire state.

Response: See Response to Comment 3-10.

Comment 3-57: The three most discussed products (imidacloprid, metalaxyl, and atrazine) are critical to agriculture on Long Island in Suffolk County. Without those three products and no viable alternatives, farming becomes next to impossible. Suffolk County, New York State, and farmers have put in literally tens of millions of dollars to protect farmland in Suffolk County because it's been widely recognized by many people here today that farms are the best use of land, both economically and, more importantly, environmentally.

Response: The Strategy does not call for a ban on any active ingredients. However, DEC will focus attention and effort on imidacloprid, metalaxyl, and atrazine first. The Strategy outlines a pollution prevention approach to addressing pesticide active ingredients that have been detected in Long Island’s groundwater. However, DEC may consider regulatory measures if pollution prevention actions prove insufficient.

Assessing viable alternatives is a key component of the Strategy. If we are to protect Long Island’s groundwater and continue to effectively manage pests, then viable alternatives are necessary. DEC will work with county agencies and other members of the proposed Technical Review and Advisory Committee (TRAC) to identify effective alternatives to particular active ingredients. But the Strategy recognizes that the other stakeholders have much of the expertise for identifying safer alternatives, including Cornell, certified applicators and their associations, product registrants, and the public interest groups. Likewise, it is these stakeholders who must participate in encouraging the use of safer alternatives by getting the information out about them to the largest number of pesticide users.

Effective implementation of pollution prevention measures will involve extensive and aggressive outreach and education. The coordinated collaboration envisioned in the Strategy will call upon farmers and other stakeholders to work with DEC on potential pollution prevention measures and to participate in their implementation.

Comment 3-58: What is the target or the goal? What will trigger action? How will the Strategy define, track, and measure success?

Response: See Response to Comment G-13.

Comment 3-59 (Also in General Section): The Department should be looking for other chemicals in groundwater and not ban any pesticides without considering the ramifications of the ban. Zero detection of pesticides in the groundwater is not a reasonable expectation. There is a need for pesticides in society and that there needs to be balance to any solutions that are developed.

Response: The Department agrees that the ramifications of a proposed ban must be considered, that zero detection of pesticides in the groundwater is not a reasonable expectation under current circumstances, that there is a need for pesticides in society, and that there needs to be balance to any solutions that are developed. It should be noted that the Department also operates programs for the investigation and cleanup of contamination in groundwater attributable to the disposal of hazardous waste and petroleum spills.

Comment 3-60 & 3-61: The draft Strategy should provide sufficient detail regarding how and when active ingredients will be considered for review. Well-defined triggers and timelines for review must be included to ensure these reviews will be conducted in a timely and equitable manner. In addition, the Strategy should clearly discuss how any proposed Maximum Contaminant Level (MCL) criteria for active ingredients would reflect both public health and ecological standards given the varied consequences that pesticides can have on both the human and other living resources. The Strategy should also define an active ingredient priority list from among the possible ingredients proposed for review. Timelines for review should also be established so they can be tracked, monitored, and accelerated when necessary.

Response: See Response to Comment 3-12.

Comment 3-62, 3-63, 3-74 , G-7: The Strategy should include measures of success and viable alternatives for farmers and other users of pesticides.

Response: Several types of criteria or evaluations are necessary to measure the success of pollution prevention measures. Groundwater and surface water monitoring will demonstrate the actual environmental results of implementing the Strategy. Modeling the leachability of alternative products can also be used to supplement the monitoring program. The success of the Strategy would also be measured in terms of disseminating information and implementing specific pollution prevention measures. For example, DEC will collaborate with partners to develop and disseminate best management practices (BMPs) for currently used pesticides, and provide outreach and education on general pest management topics, and alternative pest

management methods. Criteria for success will include, but not be limited to, monitoring data and diminishing concentrations of active ingredients detections found in groundwater, outreach and education, and implementation of pollution prevention measures.

Identifying viable alternatives for pesticides is a key component of the Strategy. DEC will work with members of the proposed Technical Review and Advisory Committee (TRAC) to identify effective alternatives to particular active ingredients. The Strategy recognizes that the other stakeholders have much of the expertise for identifying safer alternatives and must participate in encouraging the use.

Comment 3-64, 3-62: Long Island's sole source aquifer creates a unique environment that requires different standards and different protections than other parts of the state. Best management practices won't be sufficient to prevent pesticide pollution. We should focus more on finding alternatives to pesticides that appear to be a problem rather than focusing exclusively on pesticides to ban.

Response: Identifying viable alternatives for pesticides is a key component of the Strategy. DEC will work with members of the proposed Technical Review and Advisory Committee (TRAC) to identify effective alternatives to particular active ingredients. The Strategy recognizes that the other stakeholders have much of the expertise for identifying safer alternatives and must participate in encouraging their use.

Comment 3-65: The Strategy should specify targets, triggers, and time frames for its proposed actions.

Response: The Strategy has been modified to address targets, triggers, and time frames for action.

Comment 3-66, 3-67 (Also in General Section): Sustainability should be part of pest control, the Department is doing a good job, and that New York has some of the strictest pesticide control laws and regulations in the country. There is a need to protect bees from pesticides.

Response: Comment noted. . The protection of pollinators is not directly addressed in the Strategy, but Pollinator Protection has been a focus of both the State and federal pesticide programs, which has led to the development of pesticide label amendments to protect pollinators.

Comment 3-68: I'm not suggesting zero tolerance. The Strategy should aggressively seek responsible alternatives to pesticides.

Response: Identifying viable alternatives for pesticides is a key component of the Strategy. DEC will work with members of the proposed Technical Review and Advisory Committee (TRAC) to identify effective alternatives to particular active ingredients. DEC developed the Strategy to help protect groundwater and promote environmentally sound management of pests. We believe the Strategy offers the best opportunity for protecting the integrity of water resources from pesticide-related contamination, while continuing to meet critical pest management needs.

Comment 3-69: My main concerns moving forward is that we make decisions about products based on their use patterns and not just their active ingredient. Everyone must consider that active ingredients such as imidacloprid are in hundreds of products that are not used to treat the soil. As a matter of fact, we have products like premise foam in a can that is used above ground to treat termites in conjunction with a bait system as a direct alternative to a soil application. These types of products are exactly what we need to be able to protect property for customers and our water supply collectively.

Finally, I believe that technology and the creation of new products like termite bait systems are the answers to protecting our water.

Response: See Response to Comment 3-9.

Comment 3-70: The Department should look at other products that could replace imidacloprid.

Response: The Strategy outlines a process that incorporates evaluating alternative products, processes, and practices that users may be able to adopt in lieu of their current practices, allowing them to continue to meet their pest management needs while minimizing their impact on the environment.

Comment 3-71 (Also in General Section with G-33): Various commenters representing the large segments of the regulated community generally support the Strategy, look forward to working with other stakeholders to reach a common goal, and would like to see recommendations for groundwater protection implemented as soon as possible.

Response: Comment noted. The Department agrees that through stakeholder collaborations the greatest possible outcome will be achieved.

Comment 3-72: What criteria or triggers would DEC use for regulatory actions on a pesticide prduct or active ingredient?

Response: See Response to Comment 3-35.

Comment 3-73 & 3-75: The draft Strategy should provide sufficient detail regarding how and when active ingredients will be considered for review. Timelines for review should also be established so they can be tracked, monitored, and accelerated when necessary.

Response: See Response to Comment 3-12.

Comment 3-74: The Strategy should include measures of success and viable alternatives to pesticides for farmers.

Response: See Response to Comments 3-62, 3-63.

CHAPTER 4: PESTICIDE REGISTRATION in NEW YORK STATE

Comment 4-1: Rework the two year re-registration process to include labeling changes or a ban on Long Island for pesticides that are contaminating groundwater.

Response: The pesticide product registration program operates within the current parameters set forth by New York State Laws and regulations. Products currently are registered for a two-year registration cycle in conjunction with a specific registering company. The registrant usually has a variety of products registered in New York State with different active ingredients and labeled use patterns. The registration of a pesticide is required to be renewed every two years. In New York State, registrant renewal cycles expire on a quarterly basis. Therefore, in a two-year period there are eight different expiration dates for the approximately 1250 currently registered companies that maintain the approximately 13,000 registered products.

If an active ingredient is found to be contaminating groundwater at levels that DEC and NYSDOH determine to indicate significant public health or environmental impacts may occur, or even at levels that approach the groundwater standards, action would be warranted on the active ingredient and problematic use pattern for all similar products, and generally not on a product by product basis at renewal.

Comment 4-2: DEC has one of the most robust pesticide registration programs in the country and it must continue to tap into the advances in technology that are made every day. We encourage DEC to consider changes to its registration program that would spur the creation of products with better environmental and health profiles for use by consumers, farmers and pest control professionals on Long Island. This program should also examine ways to more accurately assess the water quality on Long Island to assist our understanding and prioritization of potential pollution issues.

Response: The pesticide product registration program operates within the current parameters set forth by FIFRA, federal regulations (40CFR), and New York State laws and regulations. The USEPA currently has a Reduced Risk and Organophosphate (OP) replacement incentives, as well as an expanding Biopesticide program. DEC registers products which have gone through these programs and currently does not have separate review timeframes for such products, as USEPA has but that may be a consideration in the future. This has been added to the Strategy.

Comment 4-3, 4-10: The pesticide registration and re-registration process should be re-visited to ensure adequate remedies in the event that pesticides are shown to be potentially significant environmental problems after they are registered.

Response: The pesticide product registration program operates within the current statutory, regulatory and legislatively mandated timeframes which are based on particular product registration applications submitted to DEC. DEC does have the authority to revisit the registration of a pesticide product at renewal.

DEC may consider certain regulatory measures to manage use of a specific active ingredient, if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that

detections of a pesticide-related chemical in water quality monitoring data indicate significant public health or environmental impacts may occur. Under such circumstances, DEC could potentially reassess the registration status of products containing the active ingredient by reviewing the product registrations associated with the active ingredient and, if necessary, take appropriate regulatory action. If an active ingredient is re-evaluated, all similar products containing an active ingredient of concern should be reviewed at the same time so that all registrants are treated fairly and all similar products are handled equally.

DEC also has the authority to suspend the registration of a pesticide immediately when such an action is necessary to prevent an imminent hazard to the public or any other non-target organism, including cases where detected concentrations exceed, or even approach the groundwater standards. However, short of a finding of such significant or imminent impacts from active ingredients, currently there are no statutory or regulatory mechanisms in place to revisit the registration of pesticide products based broadly on an active ingredient and/or use pattern. Statutory and regulatory changes, along with the required staff, would have to be pursued and implemented in order to conduct a formal and routine re-registration program similar to USEPA's. The formation and implementation of such a program may be considered in the future.

Comment 4-4, 4-9, 4-10: It is recommended that DEC engage SCDHS to assist in site-specific pilot testing and monitoring throughout Long Island for new pesticides. This allows problems to be identified before they occur.

Response: DEC intends to continue our close working relationship with SCDHS and will explore the possibility of site-specific pilot testing for pesticide products which contain new active ingredients or represent major changes in use pattern. The current legislatively mandated timeframes would make it difficult to incorporate such a program for pre-registration of a product in New York State. Such a testing and monitoring project has been undertaken in the past on a very limited, case-by-case basis. Additional testing was performed in order to confirm the real-world mobility and leaching potential for a particular active ingredient and use pattern in order to allow the use on Long Island. The active ingredient had undergone extensive review and out of an abundance of caution was registered in conjunction with labeling that prohibited use on Long Island. The Strategy would not preclude such a program, which could be implemented on a case-by-case basis in order to allow additional products to be used on Long Island. The Strategy has been revised to reference incorporating potential pilot testing into the product registration process.

Comment 4-5: The regulatory scheme in New York State provides avenues for addressing the type of concerns raised in the Strategy. In fact, the existing regulatory scheme in New York and at the federal level (U.S. EPA) provides measures and provisions that not only help identify potentially adverse human health and environmental fate issues, but help prevent incidents from occurring by relying on sound science and risk assessments based on studies that use proven methodologies. The analysis of such reliable and credible data also incorporates margins of safety. Only the pesticides that successfully navigate this regulatory scheme are registered by U.S. EPA and the New York State Department of Environmental Conservation.

Response: Comment noted. The Department will utilize scientific information and other relevant data available under existing federal and State procedures.

Comment 4-6, 4-11: Technology is always developing and the state should work with manufacturers to leverage these new technologies to address the concerns they are facing. We would also ask that the state look at implementing an official reduced risk registration program that would encourage the registration of active ingredients with better health and environmental profiles. There is also a need for a systematic review and analysis of the detection methods used for environmental samples so that active ingredients in products that are effective and efficacious are not needlessly banned or re-classified as restricted use pesticides.

Response: The pesticide product registration program operates within the current parameters set forth by New York State laws and regulations. The USEPA currently has a Reduced Risk and Organophosphate replacement incentives program, as well as an expanding Biopesticide program. DEC registers products which have gone through these programs and currently do not have separate review timeframes for such products as USEPA has. Current laws and regulations outline legislatively mandated timeframes for review and registration based on product application type and receipt date.

Products are designated as Reduced Risk by the USEPA based on whether the company can justify that a pesticide poses less risk to human health and the environment than existing conventional alternatives for a particular use. Implementing a separate Reduced Risk program in New York State would require statutory and regulatory authority as well as additional staffing and resources. However, a program which gives preferential treatment to active ingredients with favorable health and environmental profiles would appear to be consistent with the spirit of the Strategy.

Comment 4-7 & 4-8: Future registration of pesticide products on Long Island should be outlined in more detail and include: registering a product with leaching potential on a limited basis for a particular use only after experimentation and research involving application of the product and groundwater monitoring in an area limited in size and location. Also, DEC should have more flexibility in labeling products for use on Long Island to stipulate following Best Management Practices, groundwater monitoring, use of lower rates, limiting application methods, etc., to expand the restricted pesticide use classification on more pesticides, and to allow pesticides to be used under limited registration.

Response: Currently, pesticide products containing new active ingredients or representing major changes in labeling which indicate the potential for leaching are not registered for use on Long Island. If there is a specific need for such a product, expansion of the use of the product may be pursued in conjunction with research and experimentation conducted by Cornell and the registrant. The Pesticide Registration program operates within the current parameters set forth by FIFRA and 40CFR. Pesticide products must bear labeling which adheres strictly to numerous Federal laws and regulations. Individual states cannot impose additional requirements for labeling or packaging which are different from FIFRA or 40CFR. New York State has had great success working with the registrants in order to address specific labeling concerns. As a result, registrants have voluntarily made changes to their product labels. Additional labeling modifications and reference to Best Management Plans will be explored in the future.

See response to comments 4-4, 4-9, and 4-10 about registrations after experimentation and research.

Comment 4-9: The Strategy should include proposed modifications to the pesticide registration process to ensure that greater information is provided by manufacturers, such as testing methods to allow for more effective detection, and requirements for more real-world testing in soil conditions similar to Long Island. In addition, follow up and enforcement of existing registration conditions, such as those related to groundwater monitoring, should be a component of DEC's future efforts.

Response: Pesticide registrants are already required to submit analytical methods to DEC for review of new active ingredients and major changes in labeling. DEC will work with Cornell Cooperative Extension, Suffolk County, and other stakeholders to explore the possibility and practicability of experimental use registrations to evaluate alternative application methods and use patterns for pesticides on Long Island. It should also be noted that DEC is working with Cornell University to evaluate and update the model used to estimate leaching potential of active ingredients to groundwater in order to ensure that current and conservative methods are employed in making registration decisions.

As mentioned in Chapter 6 of the Strategy (Legal Authority and Enforcement), data from water quality monitoring programs is used in making registration decisions and assessing trends and impacts of pesticide contamination of groundwater and surface waters. Chapter 3 of the Strategy also explains that environmental monitoring is critical for evaluating the success of pollution prevention measures and determining if they need to be modified or other measures implemented.

Comment 4-10, 4-12: It is recommended that DEC re-visit the pesticide registration and re-registration processes if significant environmental and health problems occur after their initial registration; incorporate SCDHS more into the registration review process; and perform site-specific pilot testing and monitoring prior to Long Island registration.

Response: See Response to Comments 4-3 and 4-4.

Comment 4-11: See Comment 4-6.

Comment 4-12: See Comments 4-3, 4-4, and 4-10.

Comment 4-13: Through the years pesticide users have supported the scientific approach to pesticide product registration, making decisions based upon environmental and health risk assessments, along with cost benefit analysis for the use of various products. The scientific process should be not be subverted by calls for employing arbitrary targets for pesticide detection and reduction.

Response: Comment noted.

Comment 4-14: The Strategy should require that any new active ingredients proposed for use on Long Island be subjected to thorough "pilot trials" before any broader registration approvals to evaluate how these products will behave in Long Island soils and ground waters. Despite the complexities of evaluating active ingredients that are also found in many household products, where contamination is identified, the State must not ignore the potential implication of contaminating ingredients simply because they may be prevalent in many products.

Response: The Strategy does not preclude exploring the use of “pilot trials” with registrants and Cornell Cooperative Extension. Currently, pesticide products containing new active ingredients or representing major changes in labeling which indicate the potential for leaching are not registered for use on Long Island. If there is a specific need for such a product, expansion of the use of the product may be pursued in conjunction with research and experimentation conducted by Cornell and the registrant. These concerns have been better clarified in the Strategy and it is envisioned that the Strategy may in fact encourage more use “pilot trials” and other assessments with respect to evaluating pesticide use impacts.

Comment 4-15: Industry has already been adopting practices to reduce pesticide use and have always supported the use of Integrated Pest Management. The Strategy should support the scientific approach for pesticide product registration in which state and federal environmental agencies make pesticide product registration decisions based upon environmental and health risk assessments, along with cost/benefit analyses for use of the product. New York should not equate a detection of a pesticide product in a private well that is well below tolerance levels set by scientific standards as contamination and that drinking water standards and maximum contaminant levels groundwater standards should be adhered to in determining pesticide registration status for all chemicals.

Response: New York’s pesticide product registration program and registration decisions are scientifically based and incorporate extensive environmental and health risk assessments as described in the Strategy. The Strategy is intended to address pesticides that are detected in the groundwater, with the goal of preventing adverse effects on human health and the environment. The Strategy’s pollution prevention approach is ideally suited for addressing the pesticide-related contaminants that have been detected in groundwater in view of the currently available monitoring data and the legal and regulatory framework under which the pesticide product registration program operates. Nevertheless, DEC may consider regulatory measures to manage use of an active ingredient if pollution prevention actions prove insufficient and if DEC and NYSDOH determine that detections of pesticide-related chemicals indicate significant public health or environmental impacts may occur.

The decision to suspend or cancel the registration of a pesticide product or active ingredient would depend on a variety of relevant factors applicable to the particular active ingredient and its use. The Strategy has been revised to reflect the factors that will be considered in the decisions that trigger regulatory action.

CHAPTER 5: EXISTING POLLUTION PREVENTION PROGRAMS AND ACTIVITIES

Comment 5-1 & 5-2: The State should conduct a comprehensive assessment of the programs outlined in chapter five to 1) determine the specific water quality goals that each is achieving, 2) identify the extent of each program's limitations (in terms of resources and areas of influence), and 3) determine whether there are any programs that simply cannot demonstrate any measurable effectiveness that should be restructured or eliminated. Such an assessment is needed to know how significantly the programs identified are actually contributing to the Strategy's overall stated goal of "preventing effects on human health and the environment by protecting Long Island's ground water and surface water resources."

Response: The actions proposed in the Strategy are intended to supplement, not supplant, the existing programs, plans, and regulatory and legal requirements described in Chapter 5. A number of them were developed by other entities, are not under DEC's jurisdiction, and/or focus on improving or enhancing pesticide handling or use practices but do not have water quality goals. A comprehensive assessment of all of these programs and activities goes beyond the scope of the Strategy.

However, as the Strategy is implemented and various potential pollution prevention measures are identified, assessed, and implemented, some of these programs and activities may certainly be utilized. At that point, assessment of the programs that are utilized in this manner, in light of their ability to contribute to the Strategy's overall goal, may be appropriate and beneficial. Chapter 5 of the Strategy has been modified to reflect this possibility.

Comment 5-3: DEC should build upon the success of the "Clean Sweep Program" and provide a consistent, set schedule so businesses can ensure proper disposal of harmful, toxic chemicals. This is a valuable program that should be expanded to include consistent biyearly events, which is visibly posted on the DEC website. This allows growers, municipalities, and industrial users to adequately plan for and anticipate events. Uncertainty of when the next event will be could lead to illegal disposal of toxic, hazardous chemicals.

Response: The Department is aware of the value of the CleanSweepNY program. We are exploring ways to expand the CleanSweepNY program and to schedule more consistent and regular collection events.

Comment 5-4 through 5-15: Cornell recommended a number of clarifications and additions regarding the important role its Pesticide Management and Education Program (PMEP) could play in the Strategy's implementation.

Response: The Strategy has been amended to reflect the overall responsibilities and capabilities of Cornell's PMEP and NYSIPM programs and their potential role in implementing the Strategy.

Comment 5-16: The code number for the Suffolk County Pesticide Phase-Out law has changed.

Response: Comment noted. The Strategy has been revised to reflect the change to Suffolk County Code, Chapter 647.

CHAPTER 6: LEGAL AUTHORITY and ENFORCEMENT

Comment 6-1: Additional or different statutory authority may be needed to allow potentially beneficial changes in pesticide uses. The industry should consider these options to help ensure that DEC has what it needs to do its job.

Response: Comment noted.

APPENDIX A: PESTICIDE-RELATED CHEMICALS DETECTED IN LONG ISLAND GROUNDWATER 1996-2010

Comment A-1: The following are some minor corrections; 12: Carbaryl (Sevin) – Should read carbamate insecticide not fungicide; 53: Ronstar (Oxadiazon) – Should be listed under Oxadiazon (Ronstar) to indicate that Ronstar is a trade name for oxadiazon; 58: Triadimenol (Bayton) – spelling should be corrected to Baytan

Response: These corrections have been made to the Strategy.

APPENDIX B: SUMMARIES of LONG ISLAND WATER QUALITY MONITORING DATA FOR METALAXYL, IMIDACLOPRID, AND ATRAZINE

No comments specifically on Appendix B.

APPENDIX C: TECHNICAL REVIEW AND ADVISORY COMMITTEE (TRAC) DESCRIPTION and ONGOING PEST MANAGEMENT OUTREACH AND EDUCATION EFFORTS

No comments specifically on Appendix C.

ATTACHMENT 1
To
Long Island Pesticide Pollution Prevention Strategy
NYSDEC Responsiveness Summary

Individuals Who Commented on the Draft Long Island Pesticide Pollution Prevention Strategy

A. Individuals who submitted written comments on the January 30, 2013 Draft Long Island Pesticide Pollution Prevention Strategy

Name	Title	Organization
Rebeckah Adcock	Senior Director, Government Relations	CropLife America
Laura Andrysiak		
Toni Bakker		
Ira Barocas	President	Duck Creek Farm Association
Francis Becker		Nassau County Legislature
Tina Becker		
Joseph Belesi		Nassau County Legislature
Joshua Bloom	Quality Assurance Director	Standard Pest/NYPMA
Victor Bonavita	Vice President	New York Pest Management Association (NYPMA)
Matthew Cohen	Vice President of Government Affairs and Communications	Long Island Association
Robert S. DeLuca	President	Group for the East End
East Hampton Town Trustees		East Hampton Town Trustees
Adrienne Esposito	Executive Director	Citizens Campaign for the Environment
Joel Fagin	President	Dial A Bug Pest Control
Rona Fried		SustainableBusiness.com
Carrie Meek Gallagher	Chief Sustainability Officer	Suffolk County Water Authority
Michael Gilberti, Jr		
Peggy Jacobs		
Ed Kirchberger		
Andrew Laquara		
Dale A Larnder	General Manager	Exodus Exterminating, Inc
Beth Law	Assistant General Counsel and Vice President for International Affairs	Consumer Specialty Products Association
Kristie Malkasian		
Bill Minahan		NYPMA
Dale Moyer	Agriculture Program Director	Cornell Cooperative Extension of Suffolk County

Carol Myers		
John Papandrea		
Chris Phillips		NYPMA
Amy Pink		Pink sky farm, pink sky apiary, pink sky honey
Dr. Jeffrey Pinkham	Global VP of Regulatory Affairs	The Scotts Miracle-Gro Company
Nicole Pyun		
Karen Reardon	Vice President, Public Policy	Responsible Industry for a Sound Environment (RISE)
Harvey Reissig		Cornell Pesticide Management Education Program (PMEP)
Billii Roberti		
Joseph Sheehan	Board of Directors Region #2	NYPMA
Robin Simmen	Director	Greenbridge Brooklyn Botanic Garden
James Skinner	President	NYPMA
Sarah Thomas-Clark	Vice President	Thomas Pest Services/NYPMA
David Tue		
Ken Unger		NYPMA
Janet Van Sickle		
Robert Sweeney	Chair	New York State Assembly - Environmental Conservation Committee
James L. Tomarken	Commissioner	Suffolk County Department of Health Services
Carmine Vasile		
Stephen Weir	Vice President	Farm East Credit
Jeff Williams	Manager of Governmental Relations	New York Farm Bureau
Wayne Wink		Nassau County Legislature
Patricia Wood	Executive Director	Grassroots Environmental Education, Inc

B. Individuals who commented at the April 3, 2013 Public Hearing in Riverhead, NY

Al Krupski, Suffolk County Legislature
Deborah Klughers
Bob DeLuca, Conservation Advocacy and Education Organization (aka Group for the East End)
James Skinner, New York Pest Management Association
Stephen Mudd
Robert Nolan
Dale Moyer, Cornell Cooperative Extension of Suffolk County
Deborah Schmitt
Jeff Williams, NYS Farm Bureau
Jeff Rottkamp

Adrian Esposito, Citizens Campaign for the Environment
Andrea Spilka, Southampton Town Civic Coalition
Joseph Gergela, Long Island Farm Bureau
John Halsey, Peconic Land Trust
Richard Mailander, Lawn Patrol of Long Island, Nassau/Suffolk Landscape Gardeners Association
Richard Amper, Long Island Pine Barrens Society
Cathy Cunningham
Craig Byer, Suburban Pest Control, American Heritage Society, American Beekeepers Federation
Lisa Barrow
Jay Schneiderman, Suffolk County Legislature
Valerie Slonecki
John Botos, Peconic Institute

C. Individuals who commented at the April 4, 2013 Public Hearing in Bethpage, NY

Victor Bonavita, New York Pest Management Association
Michael Maffei, New York State Turfgrass Association, Metropolitan Golf Course Superintendents Association
Brian Benedict, Long Island Golf Course Superintendents Association
Joe Campanelli, Nassau Suffolk Landscape Gardeners Association
Larry Wilson, New York State Alliance for Environmental Concerns
Craig Byer

D. Suffolk County Legislature – Environment, Planning and Agriculture Committee March 11, 2013 Committee Meeting

Committee Chair, Kara Hahn
Assemblymember Sarah Anker
Assemblymember DuWayne Gregory
Assemblymember Thomas Barraga

ATTACHMENT 2
To
Long Island Pesticide Pollution Prevention Strategy
NYSDEC Responsiveness Summary

Information about Federal Drinking Water Standards

Federal drinking water standards are in force for public water systems. Private water supplies are not subject to these standards.

Public Water Systems

The term "public water system" means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen service connections or regularly serves at least twenty-five individuals. The federal government has established regulatory limits (standards) on over 100 chemical and microbial contaminants in drinking water. These have their origin in the Safe Drinking Water Act (SDWA), which governs public water systems. Many states have established their own standards, which must be at least as stringent as the federal standards.

The U.S. Environmental Protection Agency (EPA) sets two types of standards:

Primary standards are set to provide the maximum feasible protection to public health. They regulate contaminant levels based on toxicity and adverse health effects. The goal of standard setting is to identify maximum contaminant levels (MCLs) which prevent adverse health effects.

Secondary standards regulate contaminant levels based on aesthetics such as color and odor, which do not pose a risk to health. These secondary maximum contaminant levels (SMCLs) are guidelines, not enforceable limits. They identify acceptable concentrations of contaminants which cause unpleasant tastes, odors, or colors in the water. SMCLs are for contaminants that will not cause adverse health effects.

Public water suppliers are required to monitor the quality of the water they supply. Consumers must be notified if a primary standard is exceeded.

Health Advisories are guidance values based on non-cancer health effects for different durations of exposure (e.g., one-day, ten-day, longer-term, and lifetime). They provide technical guidance to EPA Regional Offices, State governments, and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination. EPA maintains Webpage tables of the Primary and Secondary standards and Health Advisory guidance values. There are consumer fact sheets on each of the contaminants for which there are primary standards.

Private Water Supplies

Users of private wells or other private water sources are solely responsible for monitoring and maintaining the quality of their water supply. Some state or local health authorities regulate private water sources. Check with your local health department.

Information Source: http://extoxnet.orst.edu/faqs/safedrink/stan.htm

Information about MCLs and MCLGs

Establishing the Maximum Contaminant Level

The Maximum Contaminant Level (MCL) is the maximum concentration of a chemical that is allowed in public drinking water systems. The MCL is established by the U.S. Environmental Protection Agency (EPA). Currently there are fewer than 100 chemicals for which an MCL has been established; however, these represent chemicals that are thought to pose the most serious risk.

The EPA guidance for establishing an MCL states that "MCLs are enforceable standards and are to be set as close to the maximum contaminant level goals (MCLGs) (Health Goals) as is feasible and are based upon treatment technologies, costs (affordability) and other feasibility factors, such as availability of analytical methods, treatment technology and costs for achieving various levels of removal." The process of determining an MCL starts with an evaluation of the adverse effects caused by the chemical in question and the doses needed to cause such effects. The final result of this process is a safe dose (the dose thought to provide protection against adverse effects including a margin of safety), now called a Reference Dose (RfD) by the EPA. This evaluation is based on the results of animal experiments, and the research results are extrapolated to humans using standard EPA methods.

For chemicals that do not cause cancer, an MCLG is established by first converting the safe dose (RfD) to a water concentration. Then this number is divided by five based on the assumption that exposure to the chemical through drinking water represents only one-fifth of the possible exposure to this substance. Other sources of exposure may be air, soil, and food. In almost all cases, the MCLG value is the same one that is used as the MCL.

For chemicals believed to cause cancer, (*known* or *probable* human carcinogens - EPA Class A or B), the MCLG is set at zero; i.e., no amount of chemical is considered acceptable. However, since zero cannot be measured, the MCL is based on the lowest concentration that can be measured on a routine basis. This is known as the Practical Quantitation Limit (PQL). Thus for known or probable carcinogens, the MCL is not a safe level but instead is the lowest measurable level.

For chemicals that are *possible* cancer-causing agents (EPA Class C); i.e., there is some evidence that they may cause cancer but this is not very convincing, a value equivalent to the MCLG is calculated as if they were not carcinogens. Then this value is divided by a factor of ten to give the final MCLG. This provides an additional margin of safety in case the chemical is later determined to be a carcinogen.

A sample MCL calculation can be seen here.

What is equivalent daily human intake for an average human?

Intake = RfD × body weight = 1 × 70 = 70 mg/day (Assume RfD = 1 mg/kg/day)

What concentration in drinking water would provide this intake?

Water concentration = intake/water consumption = 70 mg/day divided by 2 liter/day = 35 mg/liter

But water consumption is assumed to be only 20% of total consumption,
MCL = 35 mg/liter × 0.2 = 7 mg/liter

If chemical is Class C carcinogen, divide by ten, so in this case:

MCL = 7/10 = 0.7 mg/liter

If chemical is Class A or B carcinogen, then:

MCL = Practical Quantitation Limit

Information Source: **http://extoxnet.orst.edu/faqs/safedrink/mcl.htm**