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JOHN R. WEINGART
Chairman

EILEEN SWAN
Executive Director

MEETING AGENDA

Thursday, June 26, 2008 - 4:00 p.m.

1. CALL TO ORDER
2. ROLL CALL
3. OPEN PUBLIC MEETINGS ACT
4. PLEDGE OF ALLEGIANCE
5. APPROVAL OF MINUTES – June 12, 2008
6. CHAIRMAN'S REPORT (and Council Member Reports)
7. EXECUTIVE DIRECTOR'S REPORT
8. COMMITTEE REPORTS
9. CONSIDERATION OF RESOLUTION – *Approval of Certain Planning Assistance Grants* - (voting matter with public comment)
10. CONSIDERATION OF RESOLUTION – *Contract with Rutgers University - Grant F. Walton Center for Remote Sensing and Spatial Analysis* - (voting matter with public comment)
11. CONSIDERATION OF RESOLUTION – *Establishment of Highlands Development Credit Bank* - (voting matter with public comment)
12. REGIONAL MASTER PLAN DISCUSSION
 - a. Prime Ground Water Recharge
 - b. Highlands Open Waters
 - c. Transfer of Development Rights Program
 - d. Water Quality Management Plan Amendment Consistency Determinations
 - e. Cash Flow Timetable
 - f. Transportation Program
 - g. Update on Web-based tools
13. PUBLIC COMMENTS
14. EXECUTIVE SESSION (if deemed necessary)
15. ADJOURN

NEW JERSEY HIGHLANDS WATER PROTECTION
AND PLANNING COUNCIL
MINUTES OF THE MEETING OF JUNE 26, 2008

PRESENT

JOHN WEINGART) CHAIRMAN

COUNCIL MEMBERS

MIMI LETTS)
TIM DILLINGHAM)
KURT ALSTEDE)
ERIK PETERSON)
BILL COGGER)
ELIZABETH CALABRESE)
TAHESHA WAY)
SCOTT WHITENACK)
JACK SCHRIER)
GLEN VETRANO)
JANICE KOVACH)
DEBBIE PASQUARELLI)

TELECONFERENCE

TRACY CARLUCCIO)

CALL TO ORDER

The Chairman of the Council, John Weingart, called the 72nd meeting of the New Jersey Highlands Water Protection and Planning Council to order at 4:13 pm.

ROLL CALL

The members introduced themselves.

OPEN PUBLIC MEETINGS ACT

Chairman Weingart announced that the meeting was called in accordance with the Open Public meetings Act, N.J.S.A. 10:4-6 and that the Highlands Council had sent written notice of the time, date, and location of this meeting to pertinent newspapers or circulation throughout the State and posted on the Highlands Council website.

PLEDGE OF ALLEGIANCE was then recited.

APPROVAL OF MINUTES OF JUNE 12th, 2008

Mr. Schrier introduced the motion to approve the minutes. Mr. Cogger seconded the motion. Mr. Alstede and Mr. Vetrano abstained. Ms. Carluccio and Mr. Peterson were absent. All other members present voted to approve. The minutes were APPROVED.

CHAIRMAN'S REPORT

Chairman Weingart reviewed the meeting schedule stating that there would be a meeting on July 10th at 10 a.m. in Chester and one on July 17th at 10 a.m. which would be held at the Morris County Arboretum. He also spoke about letters sent to the Council (about 18) objecting to a policy

mandating RMP nitrate levels in the Planning Area for non-conforming municipalities. The letters are from legislators, freeholders, mayors, planning departments, and members of the public. He acknowledged Senator Oroho who was present. He also noted comments received from the Highlands Coalition and the Farm Bureau.

Ms. Carluccio joined the meeting via teleconference.

EXECUTIVE DIRECTOR'S REPORT

Ms. Swan reviewed meetings that have taken place: a June 20th a State Bar Association presentation by Tom Borden, a June 26th presentation with the North Jersey Transportation Authority with Ms. Swan and Chris Danis. She noted that tomorrow there is a Law International seminar where Ms. Swan will present on implementation of the RMP.

Chairman Weingart explained the process for public comment for those who haven't attended meetings previously.

COMMITTEE REPORTS

There were no Committee reports.

RESOLUTIONS

I. CONSIDERATION OF RESOLUTIONS – Approval of Certain Planning Assistance Grants (voting matter with public comment)

Summary: The Highlands Council initiated a grant application process for Initial Assessment grants to municipalities within the seven Highlands Counties in furtherance of Plan Conformance, in an annual amount not to exceed \$1,500,000. Council staff reviewed the grant applications and recommend grants for Council consideration.

1. Consideration of Resolution – Initial Assessment Grant for Bethlehem Township
The Township of Bethlehem is applying for an initial assessment grant in the amount not to exceed \$15,000. Ms. Swan explained that this is the first grant that they have applied for. There was no public comment. ***Mr. Schrier moved the motion and Ms. Letts provided a second. Mr. Peterson was absent. All other members present voted to approve. The resolution was APPROVED.***
2. Consideration of Resolution – Initial Assessment Grant for Mt. Olive Township
The Township of Mt. Olive is applying for an initial assessment grant in the amount not to exceed \$17,628. Ms. Swan specified that the Council staff reviewed and recommended approval of the Township's request for additional funds above the standard grant of \$15,000 for RMP Updates. The COAH grant they had received is satisfactorily closed. There was no public comment. ***Mr. Cogger moved the motion and Ms. Way provided a second. Mr. Peterson was absent. All other members present voted to approve. The resolution was APPROVED.***
3. Consideration of Resolution – Initial Assessment Grant for the Township of West Milford
The Township of West Milford is applying for an initial assessment grant in an amount not to exceed \$15,000. Ms. Swan explained that their COAH and MP3 grants were satisfactorily

closed. There was no public comment. *Mr. Cogger moved the motion and Ms. Calabrese provided a second. Mr. Peterson was absent. All other members present voted to approve. The resolution was APPROVED.*

4. Consideration of Resolution – Initial Assessment Grant for the Township of Lebanon

The Township of Lebanon is applying for an initial assessment grant in an amount not to exceed \$20,000. Mr. Borden explained that Council staff reviewed and recommended approval of the Township's request for additional funds above the standard grant of \$15,000 for Master Plan re-examination. He also noted that Council staff review was completed without Ms. Swan due to her prior elected positions within the Township. Their COAH grant was satisfactorily closed. There was no public comment. *Ms. Way moved the motion and Mr. Schrier provided a second. Mr. Peterson was absent. All other members present voted to approve. The resolution was APPROVED.*

II. CONSIDERATION OF RESOLUTION – Contract with Rutgers University - Grant F. Walton Center for Remote Sensing and Spatial Analysis (voting matter with public comment)

(Chairman Weingart and Mr. Dillingham recused themselves due to Mr. Weingart's employment with Rutgers University and Mr. Dillingham's affiliations with Rutgers)

Summary: Rutgers University's Walton Center for Remote Sensing and Spatial Analysis (CRSSA) has prepared a work plan to conduct analyses of the LiDAR data that was collected by the United States Army Corps of Engineers (USACE) to support the implementation of the Regional Master Plan as well as to host the LiDAR data for public review. The resolution is for the consideration of a contract with CRSSA for an amount not to exceed \$111,474.00 to complete the LiDAR-based Terrain Analysis.

Ms. Swan described the proposed contract with CRSSA and outlined the work that Rutgers will perform. CRSSA will host the LIDAR data as it is too much for the Highlands system, the contract includes hosting and maintenance for three years. She stated that the LiDAR analysis will include two pilot programs and will include a detailed analysis such that the work will be able to be continued and expanded for the entire region in the future either in house or with a contractor. The Council will receive all of the information in regards to process and all results will be available to the public including all of the Highlands municipalities.

Mr. Peterson joined the meeting.

There was no public comment on the resolution.

Ms. Kovach moved the motion and Ms. Letts provided a second. Chairman Weingart and Mr. Dillingham recused themselves. All other members present voted to approve. The resolution was APPROVED.

III. CONSIDERATION OF RESOLUTION – Establishment of Highlands Development Credit Bank (voting matter with public comment)

Summary: The proposed Resolution would create the Highlands Development Credit Bank (Bank) as a development transfer bank for implementation of the Highlands TDR Program. Its functions would be to serve as: a regional clearinghouse for information with regard to the Highlands

Development Credit Program, the administrator and official recording agency for the Highlands Development Credit Program, and a buyer and seller of Highlands Development Credits. The Bank would be governed by a nine member Board of Directors who shall be appointed by Highlands Council Chairperson.

Ms. Swan provided a summary of the proposed resolution and explained the Highland Development Credit Bank as well as the creation and composition of the Board of Directors which would include representatives from the Council, the State TDR Bank, the Garden State Preservation Trust and four public members with specific areas of expertise..

Mr. Dillingham moved the motion and Mr. Cogger provided a second.

Mr. Vetrano asked how general public members will be selected. Chairman Weingart stated that he would ask Council members for recommendations and there would be a process for public recommendations as well. There will be a posting on the Council's website to solicit interest.

PUBLIC COMMENT:

ERIC SNYDER, Sussex County Planning Department – Mr. Snyder asked about where the TDR Program was and questioned where the funds are for this program. He also asked if there are areas that have been identified (in certainty) for credits and what capacity has been established. He explained that this is a major concern.

DEBRA POST – Ms. Post questioned where the funding is. She also wanted to know how many credits will be allocated for landowners. She quoted the approximate credits noted at the TDR meeting, and questioned what the ratios will be for the credits in regards to the loss of ability to build on properties within the Highlands. She mentioned that there doesn't seem to be enough credits available for the all of those who are losing property values or the ability to build on their properties. She also reiterated that the credits may be at a 75% discount to market which is unfair. Creating the TDR Bank doesn't meet requirements for setting up the TDR Program (as an active marketplace is not in place). She stated that the Council needs to identify sources for TDR credits and create balance for this TDR Program to be set properly.

JAMES TRIPP, Counsel for the Environmental Defense – He stated his support for this resolution, that there is still a lot of work to be done, but that this is a good step. He urged that the bank have the broadest powers possible under law. He mentioned that it may start at a municipal level rather than at a regional level and then grow over time. He explained that broad powers will help to make it work.

HELEN HEINRICH, New Jersey Farm Bureau – She stated that she is glad to see this first step even though there is much more work to be done. She asked if there was an intention for the bank to be set before the 17th or if it will wait until after adoption. The need for the ability to look at how this proposed TDR Program will work on properties, for instance, a preserved farm was also mentioned. She stated that she would like to set up a meeting with the Council and local farmers to help to answer questions and make things more clear. Lastly, she expressed her support for this resolution.

Chairman Weingart explained that, if approved, the Council would move quickly on the selection of board members but stated that full membership will probably not be in place by July 17th.

All members present voted to approve. The resolution was APPROVED.

REGIONAL MASTER PLAN DISCUSSION

Ms. Swan provided a PowerPoint presentation of the issues for consideration regarding the Regional Master Plan and began her presentation with a review of the Prime Ground Water Recharge.

a. Prime Ground Water Recharge

Ms. Swan first discussed the delineation of the Prime Ground Water Recharge Areas (PGWRA). She explained that the annual recharge was calculated using the NJGS model GSR-32 and that the total recharge within a subwatershed was computed assuming drought conditions. The land units that most efficiently recharge 40% of the total annual recharge were identified as PGWRA.

Ms. Swan presented a map which outlined the distribution of PGWRAs within the Highlands Region explaining that they account for 232,854 acres which is 27% of the Highlands Region's 859,358 acres. She also stated that 98% of PGWRAs are in the Protection Zone or the Environmentally Constrained Sub-Zones. Ms. Swan showed a table which listed the different zones and the corresponding amount of total acres, PGWRA acreage, percentage of zone within PGWRAs, and the total PGWRA percentage within that zone.

Since 98% of the PGWRAs are within the Protection Zone or Environmentally-Constrained Sub-zones, Council staff recommends to use a single policy and approach which is appropriate to those zones. This approach would utilize the management hierarchy: Avoid → Minimize → Mitigate. By focusing on limiting total recharge disruption this approach is more restrictive than impervious surface. The use of total site disturbance is not advised as this could prohibit disturbance that actually restores recharge potential in previously disturbed sites.

Within the PGWRA GPOs there were some proposed changes and updates. Development is prohibited in PGWRs unless the entire site is in such areas or if it is necessary to avoid Critical Habitat, Highlands Open Water Buffers, or steep slopes (Policy 2D4a). Within Objective 2D4e infrastructure extensions are prohibited except for clusters and waivers. The total recharge disruption will be limited to 15% of PGWRAs and will be placed wherever feasible on areas with the lowest relative ground water recharge rates as well as the least potential for aquifer recharge (based on site analyses – Obj. 2D4d). Low impact development techniques will be utilized to reduce the total recharge disruption, where feasible, within the 15% maximum (Obj. 2D4c). Mitigation equal to 125% of the pre-construction recharge volume within the disrupted portion of the PGWRAs will be required (Obj. 2D4b) and development of major potential pollutant sources (Obj. 2D3d, 2D4f) will be restricted while existing and future potential pollutant sources will be managed (Obj. 2D3g).

Ms. Swan then presented three slides with visuals to show examples of PGWRA Avoidance and Minimization/Mitigation. The first two maps were based on a hypothetical site which outlined where development and disturbance would be permitted the first one avoided the PGWRA entirely using the Avoidance approach, the second showed the application of the 15% disturbance and 125% mitigation within areas containing PGWRA, Critical Habitat, Highlands Open Water Buffers, and Steep Slopes and showed the results of the approach in real terms. . The next map that was presented showed an actual property and how development within this area would be limited by the

PGWRAs, Critical Habitat, Highlands Open Water Buffers, and Steep Slope areas. Lastly, Ms. Swan reviewed and summarized the PGWRA examples. She stated that they demonstrate the importance of first using the avoidance and minimization policies. They also demonstrated that typically there is not sufficient rainfall available to satisfy the 125% mitigation requirement and that the disrupted areas must be reduced in order to meet the 125% - this yields a lower mitigation volume. She explained how this mitigation requirement will be more protective of PRWRAs such that the full 15% disruption will not typically be realized. Typically, only low impact development (LID) techniques will be capable of achieving the 125% mitigation objective and where on-site mitigation is not feasible off-site mitigation will be required and criteria is set forth for that. Ms. Swan noted that there was a memo reviewing other procedures and ordinances in existence that used percent impervious cover allowed but that the staff research did not uncover a basis for the decisions under which these ordinances were adopted. Thus the staff tested the recommendation to see if it were protective and yet met the intent.

Mr. Schrier noted that this approach is very strict and effectively prohibits growth which he felt was appropriate. Ms. Letts asked what “disruption” means. Ms. Swan responded that it is more protective than just impervious surface, it is where the disrupted area would not allow for equal or superior recharge than the original state of the site. Mr. Hutzelmann explained that even a change in the natural vegetation could be included. Mr. Cogger asked about the differences if this was an agricultural property – Ms. Swan explained that that would be a previously disrupted property and the recharge would be calculated “as is”. Mr. Cogger asked for clarification on previously disrupted areas where the disruption will change. There was explanation of the ability to improve mitigation in other areas of the property, possibly where the agricultural uses were and that could be used to satisfy some of the 125% mitigation.. The differences between disruption and disturbance were outlined. Mr. Hutzelmann helped to explain how changes to properties will be considered and how the rules for disruption work. Ms. Swan explained that it is possible to improve the mitigation on the property. She also pointed out that agricultural activity is not typically found in PGWRAs.

Mr. Alstede asked about this applying to an agricultural property. Mr. Borden explained that the Council previously had considered an overarching policy regarding agricultural use and development and that development restrictions for these activities would not apply unless affirmative action is taken under the Right to Farm Act to address public health and safety issues. Chairman Weingart reiterated that it is unlikely for agriculture to be over a prime ground water recharge areas. Ms. Swan went back to the chart showing distribution of the Prime Ground Water Recharge Areas and showed that this would apply to an extremely small percentage of existing agricultural lands (since they are mainly in the Conservation Zone). Mr. Alstede stated that there is a possibility of issues for farmers regarding these rules. Mr. Borden replied that the Right to Farm Act does provide protection for farm activities unless it affects public health.

Mr. Alstede asked how soon the Council will be able to see the multiple overlays on a map. Ms. Swan explained that if you add all of the layers, approximately 57, that you can no longer see it clearly because there just is too much information. However, you are able to turn layers on and off, which will show you multiple layers. She indicated that she would be showing the Council a web based tool later in the meeting.

Ms. Pasquarelli asked about point #3 on the Summary of PGWRA slide and she asked for clarification. Ms. Swan explained that the 125% mitigation requirement will, in many instances, be more protective than the 15% disruption (showing one of the examples she had presented). Mr.

Letts asked if the 125% represented all of the water that you are preventing from going into recharge area plus 25% more. She asked if there are ways to analyze this information. Ms. Swan explained that the staff has already done the analyses to this level and indicated some information and calculations on recharge provided to the Council.

b. Highlands Open Waters

Ms. Swan explained that this issue is coming back to the Council with the recommended changes as a result of the previous Council meeting.. She noted that some of the changes are clarification language changes that were submitted by Mr. Dillingham.

Ms. Swan reviewed the Highlands Open Waters Stream Corridor Buffers and Plans. She noted that regarding the 300 foot buffer, Policy 1D4 was clarified for modification of buffer width for Category 2 streams in the Planning Area through a Stream Corridor Protection/Restoration Plan. This plan may be developed for stream reaches or subwatersheds. In Objective 1D4i Part 1, the meaning of disturbance was clarified to be where the disturbance was removed or substantially impaired natural vegetation and has significantly impaired functional values. The following revisions were made to this section: in Objective 1D4i, Part 4 was revised to focus on the potential for modification of buffers on C2 waters in the Planning Area, only where disturbed buffer exists, and only through a Council-approved Stream Corridor Protection/Restoration Plan; this section was also revised regarding the extent to which a modification to no less than a 150 foot buffer for undisturbed lands to the extent allowed under State or local regulations.

Mr. Alstede asked if there is a definition of natural vegetation. Ms. Ross clarified the definition and that a definition could be added to the glossary for clarification. Mr. Dillingham noted that his intent with the clarifications was to focus on restoration where corridors have been impaired. Also, in redevelopment areas to try to allow some reduction of the buffer as long as the value is not lost and alternatives do not exist. He stated his disagreement with the reduction of the buffers that the staff had recommended. He noted that reducing the buffer should not be listed under restoration and stated his concerns about implementing and evaluating this. He stated that #4 under 1D4i is still not acceptable to him. Ms. Ross explained that the intent of this was to give the towns a watershed based approach and to be more protective. She stated possible examples where reducing the buffer with strong restoration and mitigation would actually be more protective than setting a higher buffer. She noted that a scientific approach would be utilized to identify appropriate areas without compromising protection.

Ms. Pasquarelli asked about the science based approach and if there would be reliance on the developers' or town's staff and consultants. Ms. Ross explained that it would be in meeting with staff and receiving their consultation. Ms. Pasquarelli asked about how many towns have a stricter buffer than the RMP and if this will make them relax those buffers (which could be difficult to defend). Mr. Borden explained that the RMP supports and encourages the stricter standards, so if they are currently in place, the stricter would be utilized.

Ms. Letts brought up the previous discussion of this being town based or application/site based. She clarified that the town's professionals would be handling this, not the builder's consultants. Chairman Weingart and Ms. Swan explained that this is not site specific but would be through municipal Plan Conformance. Ms. Letts noted that this will require larger amounts of grant funding.

Mr. Dillingham explained that restoration is a complex science and questioned if it is going to be possible to achieve the goals the staff is hoping for. He stated that allowing for a lesser buffer could be problematic. Ms. Pasquarelli also stated that the ambiguity of there being a range of buffers instead of a set standard, and how this could cause future issues. Ms. Letts stated that restoration is important and that a little flexibility will help restoration to happen. Ms. Pasquarelli asked what the reduction really accomplishes and how it encourages a town to do restoration when they could do it under current conditions with the stricter buffer. Ms. Letts gave some possible examples of how the lesser buffer could be an incentive for builder's to do restoration. Mr. Peterson explained that this could provide an economic advantage to owners who are doing restoration and that these practices are already in place in many areas by the shore. Chairman Weingart noted that maybe an example of how this could be used would help clarify it for the Council. He reviewed his understanding of this policy.

c. Transfer of Development Rights Program

Ms. Swan explained that the staff has reviewed this in response to comments and has decided to revise the mapping to meet the Highlands Act mandate by focusing entirely on the Existing Community Zone within the Planning Area.

Ms. Swan then presented the Identification of Voluntary Receiving Zones in the TDR Program. She explained that the Receiving Zones under the Highlands Act are entirely voluntary. She noted that the Act requires the identification of potential voluntary Receiving Zones in the Planning Area and sets a 4% (of the Planning Area) as a goal. The regional Receiving Zone assessment is preliminary and will require local analysis, including a review of site specific environmental restraints. Ms. Swan then reviewed the revised Receiving Zone Assessment which included: focus on the Existing Community Zone within the Planning Area and excludes all constrained zones, inclusion of developed and undeveloped lands both with and without infrastructure, exclusion of preserved lands, right of ways, cemeteries, and lands developed with single family homes as of 2002. In summary, the identification included approximately 12,000 acres in the Planning Area.

The two types of opportunities which are possible within the HDC Receiving Zone Assessment included Greenfield Opportunities and Redevelopment or Infill Opportunities. She explained the requirements for these two opportunities and noted that the total Greenfield Opportunities totaled 980 acres (280 with wastewater capacity and water availability) and the total Redevelopment or Infill opportunities totaled 11,000 acres (existing areas served). Ms. Swan presented a slide with a map outlining potential areas for voluntary HDC Receiving Zones in the Existing Community Zone. Ms. Swan explained this is slightly less than the 4% (which was a goal) and doesn't mean that there isn't potential elsewhere. Municipalities can examine other areas if they can prove that they are protective of resources consistent with the RMP and that there is infrastructure present to support development.

Ms. Pasquarelli asked about the 280 acres that have sufficient remaining wastewater and water capacities and how this was identified. She also asked about how water that is allocated but not currently in use was taken into account – she was concerned about how this was accounted for and that the available resources are incorporating allocations not currently in use. Mr. LeJava explained that these were accounted for and this information was used in the analysis. Ms. Letts discussed how capacities are outlined and mapped, and expressed concerns about exceeding actual available capacity. Ms. Swan explained that the staff has already followed up and verified this information for the analysis that was done. Ms. Pasquarelli explained that there are instances where the zoning and

available capacities do not mesh and can cause issues. Chairman Weingart clarified that the staff is simply identifying areas that are opportunities for TDR.

Ms. Swan explained that this is preliminary, conservative map of potential sites. There was discussion of the feasibility analyses (discussed in the program) that municipalities will need to complete for a receiving area. Ms. Swan then presented a real world example of potential , as per Mr. Dillingham's request, which showed the Livingston Town center. She noted how the redevelopment site utilized smart growth principles. Ms. Swan then reviewed the HDC Determination Tool within the TDR Program and how the interactive map can be used to give a landowner preliminary information on numbers of credits for sending areas in the preservation area.. She explained that the residential allocation method accounts for 3 important questions: Where is the property located? How Many acres is the property? Where is the applicable zoning? The calculation for the HDC allocation = (Net Yield) x (Zoning Factor) x (Location Factor). Ms. Swan defined all of the factors as well as the possible Bonus Credits which are possible if the parcel is located in either a moderate or high value conservation or agricultural priority area. She then presented a table which gave examples of parcels within different municipalities and how the Allocation of HDCs would be calculated.

Mr. Cogger stated that regarding the Chester numbers within the table, that the landowners would be better off going through the farm preservation program. Ms. Swan explained that this is based on the initial credit value that has been estimated – eventually the market will take over (as was seen in the Pinelands) and the prices will be market driven. Mr. Cogger noted that lands that owners who have limited options due to wetlands, will be able to consider this program as they might not be eligible for farm preservation due to the environmental constraints. Mr. Alstede asked about the difference in values between Chester and Tewksbury. Mr. Cogger pointed out the difference in lot size. Mr. LeJava explained the process for developing the values of this table and how Mod 4 data tax assessment data was utilized. Lot size was examined and a tiering system was established. He explained the Tiers that were established and that all of this information is available online (under the May TDR Committee meeting). He explained how equalized assessed values were used and how zoning and location value were involved. He also explained how the results were then tested by the consultants using actual sales data.

d. Water Quality Management Plan Amendment Consistency Determination

Ms. Swan continued her presentation with a review of the Water Quality Management Plan Consistency Determinations. She noted that staff had assessed the requirements of NJDEP's revised WQMP rules at N.J.A.C 7:15 (WQMP Rules). Counties and municipalities must be aware of all applicable standards that will be required by NJDEP, as they must complete their Wastewater Management Plans (WMP) within 9 months of the effective date of the rules. She explained that the Council will provide to NJDEP the RMP standards applicable to the WQMP regulations for the purposes for rendering a consistency determination as required by the NJDEP rules at N.J.A.C. 7:38 (Highlands Rules) and any additional RMP standards that the Council feels are relevant to the WQMP process. The Council will prepare consistency determinations as required by the Highlands Rules and the NJDEP will provide guidance to counties and municipalities on the standards required in order to prepare their WMPs. She pointed out the meeting packet handout which included tables of the NJDEP WQMP Rules, the Final Draft RMP Standards applied to the WQMP reviews and the Future Consistency Review Scenarios and highlighted the important provisions of the revised WQMP Rules and the RMP standards that may be considered as part of an RMP consistency review of a WMP.

She explained how the staff and Council will work with NJDEP to ensure that counties and municipalities are informed at the beginning of the planning process of the applicable standards.. This will also make the review process easier. Towns which choose to conform, will be going through the WMP process at the same time as they are working with staff on Plan Conformance. In order to facilitate this, the WMP requirements will be the first requirements for conformance so that both NJDEP and the Highlands can keep the process moving in a manner which facilitates applicants. It was stated that this should add clarity regarding what the counties and municipalities need to do in regards to standards.

Chairman Weingart noted that this is in response to the new NJDEP rules and the Council's need to comment on WMPs. He explained the need to comment on these standards and clarified the issue regarding nitrate standards. He clarified that the Council is stating that the Council would require these standards if the municipality wanted to conform, but the NJDEP would be the ones mandating the nitrate level within the WMP for non conforming municipalities.. Ms. Swan explained that the NJDEP makes the final decision as to whether a town's WMP is approved. The Council would be delivering all of the requirements, basically all of the standards within the plan, to the NJDEP which gives the guidance to the counties and the towns.

Mr. Vetrano clarified that the Council has rejected the staff's original recommendation and that this new recommendation in a sense sets the question back to the NJ DEP. He expressed that this issue will effect whether municipalities embrace the RMP or not. And that if the Council doesn't look at it in the broader sense which will allow them to embrace it, the Council is just spinning their wheels. He expressed that there are a number of people unhappy with this and that the Council needs to listen to them. He questioned why the Council needs to have standards that are stricter than the NJDEP rules. Chairman Weingart reiterated that the new NJDEP rules have created an issue where the Council must comment.

Ms. Carluccio responded that the Council has to set stricter standards than the NJDEP because this is what the Act is all about in order to protect the water resources. She noted that the NJDEP within their new standards also left room for those who have found that a higher standard would benefit the people of New Jersey and their resources. She stated that it is the Council's responsibility to use the higher standard since it has been shown necessary for proper protection. It is the Council's charge to protect the water resources – it would be irresponsible for the Council not to use the higher nitrate standards that the science has shown appropriate. She explained that a lot of the NJDEP regulations can be made stricter on a municipality level for better protection. The Council's charge has not changed with these WMP rules. The Council has listened to the comments both supporting and not supporting these standards, but has to do what is best for the needed protection of the water resources. The bottom line is that the Council has to plan and protect – it cannot lose sight of that because of fears of what the decision of applying these standards might or might not do. A lot of what towns are concerned about is really a fear about how it will affect their WMP process and that is yet to been seen. Many municipalities already have stricter standards in place.

Mr. Vetrano stated that he disagrees and that the Council is protecting resources sufficiently within the Preservation Area and that the Planning Area is set for planning and allowing some movement within the area. Chairman Weingart stated that he believes that the Council hasn't had an issue with

the nitrate standards and the Planning Area municipalities that choose to comply. The issues have been raised regarding the Council's need to respond to NJDEP and what effects that will have.

Ms. Carluccio explained that since the Council hasn't had an issue with these standards, because it is based on science and research, that it should stand by those standards. It should not revisit that because of political whiplash. It would be a mistake to be revisiting the fundamentals of the plan. Mr. Schrier noted the reference to politics – and how he believes that this isn't appropriate. He explained the development of the two areas, Preservation and Planning and that scientific research was utilized to set these zones. He stated that the boundaries were drawn based on that science. There are two separate zones. He stated that by replying to the NJDEP that if a municipality wants to conform, it will need to meet certain standards. This is just sending down information. He stressed his support of this, but if the Council was stating what standard will be set within the planning area this is inappropriate and the wrong message to send. It should be clear to the NJDEP the difference between the mandatory Preservation Area and that conformance in the Planning Area is voluntary.

Mr. Dillingham stated that he believes that the Council has set what the appropriate standard is and have received clarification on what the Council's authority is. Under the Water Quality Planning Act, the NJDEP needs to seek consistency with the RMP, which is in their authority. He stated that there needs to be harmonization and consistency between the two zones even though they are distinctly different zones. The Council has discussed working towards having the NJDEP utilize the RMP. He doesn't think this should be simply passing on information to the NJDEP.

Ms. Letts question that if the Council's standard is based on science, what is the basis for NJDEP's standard. There was clarification on the fact that the NJDEP standard is statewide and works well in some areas. However, they also accept specific data that supports stricter standards in some areas. Ms. Carluccio reiterated that the supporting information for these standards is based on science and data gathered, and not on politics. Ms. Pasquarelli clarified that the Council doesn't need to give the NJDEP the Preservation Area standards as they developed them for their own standards. She stated that she supports giving the information up front asked if this is about eliminating the consistency review at the end. Ms. Swan stated no, it doesn't affect the consistency review. Mr. Alstede returned to Mr. Vetrano's point, and stated that the legislature was very clear in that there are two zones with different restrictions. He read from the Act. He noted that there should be two different approaches (as set down from the Legislature) and expressed his concerns that municipalities will reject this idea. Public representatives are present to speak up against this. The taxpayer will be the ones who lose. Mr. Vetrano returned to the idea that all of the work done by staff to build trust will be undone. Mr. Alstede read from the Act again and stated that the focus was all on the Preservation Area.

Ms. Carluccio stated that the Planning Area is hydrologically connected and that there is a large responsibility attached to this – to all of the constituents who use Highlands area water. She stated that water throughout both zones go into the water resources for 50% of New Jersey. The Council cannot use excuses to reduce the importance of the Planning Area. The Legislature pointed out the entire Highlands area as in need of protection. She stated that having a weaker standard would be turning your back on the planning area, as if it doesn't require protection. Mr. Schrier stated that opting in leaves an option. Taking away that option from the Planning Area betrays the intent of the Act, and betraying the promises that were made to the municipalities. Not leaving that option for municipalities and pushing them into this standard will push them away. The Council wants the

municipalities to opt in so that the plan can be successful. He stated that he doesn't believe that the NJDEP is degrading the water in the Planning Area with their standard. There are some who would believe that only the strictest standards would sufficiently protect the water, and this was not the intent.

Ms. Calabrese asked why the higher standard is so onerous for the people in the Planning Area. Ms. Swan explained that the thresholds within the different zones. She explained that essentially, it will reduce the amount of acres allowed per unit. Mr. Schrier stated that the question really is that the Council would be telling them that they have to accept the standard whether they like it or not. Chairman Weingart reviewed how the Council has gotten to this point. He explained that the NJDEP has asked what would be required for consistency and conformance – he is uncomfortable with this, but we are in a position that we have to give an appropriate response. The Council needs to come up with how they want answer what would be needed to be consistent with the Highlands Plan. Mr. Dillingham stated that the controversy is what this standard will do to development. He believes that those against the higher standard are trying to protect a higher development yield. He stated that he believes that if this standard is so onerous to a municipality, then they would not be looking to conform anyway – it will not affect their decision one way or another.

There was discussion about the Council's need to protect the resources with this standard and the Council's ability to use its power to enforce the stricter standard for higher protection. Ms. Carluccio reviewed that the Council followed the science to develop the necessary standards. She stated that the Council must do what the science has shown to protect the resources. The protests that are being received, should not make the Council falter from following the science and the research. She said that the Council should tell the NJDEP what the RMP standards are and not bend to the pressures that are being applied – this is the honest thing to do. She clarified that the Council is not making the Planning Area municipalities do this – that they are simply stating that this has been a scientifically proven standard and are recommending it to NJDEP and they are the one who make the final decisions.

Mr. Vetrano noted that by using the stricter standard will make the area too difficult for people to live in. There needs to be a discussion about the economic impact of these stringent rules in the Planning Area. Mr. Cogger questioned what exactly the recommendation will be. Chairman Weingart explained that a new staff recommendation is before the Council regarding the response to the NJDEP. He stated that the Council would be providing the information to the NJDEP regarding the standards that the Council would be requiring if municipalities want to conform. The NJDEP would be most likely utilize the Council's science and recommendation to set a mandate. Mr. Cogger stated that the Council should be using the science.

Chairman Weingart asked whether the Council would like a straw vote on this recommendation or would the Council rather hear public comment and then return to the issue. Ms. Pasquarelli noted that the Council doesn't know that the NJDEP will set the recommendation as a standard. She clarified that the Highlands Act is why the Council is using the science which has lead to the higher standard. The Highlands Act is why the Council is not simply using the NJDEP standard. Nothing has changed. The Council should recommend that the NJDEP use the Council's standard. She clarified that the Preservation Area was set for areas that were in need extensive and immediate protection. The Planning Area, by her understanding, is not an "anything goes" area – or it wouldn't exist if it was. It is an area that needs protection within certain sections to protect the resources, but not as extensive as in the Preservation Area. She explained that with the Planning

area there are different sections – areas for encouraging development and some for higher protection to protect the water supply and some needing less protection. There are different rules for these different areas. She stated that the Council used different methodology than the NJDEP in creating these standards. She clarified that the Council is providing a technical review to NJDEP - this is not about mandating and is not about opting in. These are misconceptions. She stated that the Council is not breaking promises – they are just doing what they have been doing. She added that the word require should be removed from the table document regarding smart growth development patterns in the Region.

To answer Ms. Calabrese's question – that municipalities believe that their plans for development will be inhibited. She believes many of these ideas and opinions have been muddled. She stated that she is all for voluntary conformance and voluntary TDR – but there are many misconceptions present.

It was decided that this issue will be returned to at the next meeting, after public comments have been heard.

e. Cash Flow Timetable (Land Acquisition Costs)

Ms. Swan continued her presentation with a review of the land acquisition costs. The Highlands Act requires an estimate of the 5 year and 10 year acquisition costs to preserve land. She noted that currently preserved lands in the Highlands Region equal 266,522 acres including 237,994 acres of preserved open space and 28,528 acres of preserved farmland. The Land Acquisition Costs are based upon actual land acquisition costs from Green Acres (fee simple) and SADC's Farmland Preservation program (easement purchase) for lands with confidential inventory. The Agricultural Priority List includes 70,197 acres and the Conservation Priority list includes 92,360 acres – so the total is 162,557 acres.

Within the land acquisition costs analysis, it was found that: within the Agricultural Priority List the cost to preserve 5 years is estimated at \$544 million, 10 year priorities an additional cost of \$109 million, so the total is \$653 million. For the Conservation Priority List – the cost to preserve 5 years is estimated at \$599 million, 10 year priorities an additional cost of \$79 million, totaling \$678 million. Therefore, the total cost of preserving the entire agriculture and conservation priority lists is estimated at approximately \$1.3 billion.

She then reviewed the total Garden State Preservation Trust (GSPT) from 2000 through 2009 (2007 referendum). The Green Acres Program accounts for approximately an average of \$132 million (or 59%) annually and there is an estimated 9% annual funding allocation from Green Acres to Highlands open space preservation. The SADC Program account for approximately an average of \$85 million (or 38%) annually and there is an estimate 21% annual funding allocation to Highlands farmland preservation. The GSPT figures would need to be consistent over the next 10 years for Green Acres (past spending is only 76% of the projected need) and enhanced considerably for SADC's Farmland Preservation Program (past spending is only 42% of projected need) to preserve properties on both of the confidential lists. This funding is critical to keep momentum going to preserve the Highlands natural areas and agricultural lands. She noted that the staff used actual sales information from Green Acres and the SADC to arrive at these conclusions.

Mr. Alstede asked about how the tax stabilization, or relief for economic lost, has been accounted for. Mr. Borden explained that there are two separate issues and that this presentation is about one section of the cash flow timetable – acquisition costs. He explained that there is a cash flow

timetable which addresses these other issues. There is existing funding for tax stabilization, which will be made available after adoption. There is an existing balance of the Highlands Tax Stabilization Fund for what the Legislature has appropriated and anticipated allocations.

Ms. Letts asked for clarification that these are based on conservation easements. Ms. Swan explained that this is based on fee simple for the open space and easements for farmland preservation. Mr. Alstede asked if the loss of ratables was calculated. Ms. Swan replied that this will have to be done on a case by case basis after implementation so that it is accurately calculated. Mr. Alstede asked if the Council needs to analyze implications and costs for the municipalities. Mr. Borden clarified that the Council is not charged or required to analyze actual budget implications for all of the 88 municipalities. There is a tracking mechanism established to look at costs that occur during implementation. The tax implications cannot be accurately estimated as land acquisition is a voluntary, willing seller, issue. He also explained that the Act does have procedure for phasing out tax stabilization over time and that is captured in the cash flow timetable – if additional funds become necessary, it can be revisited.

f. Transportation Program

Ms. Swan then continued with presenting on the Transportation Safety and Mobility Program. The Voorhees Transportation Center (VTC) performed an evaluation of Induced Growth Potential in the Highlands Region. They also performed an assessment of proposed projects and on-going studies relevant to the Highlands Region for consideration by the Council in the RMP. They found that: additional highway capacity attracts traffic and encourages growth of new activities, whereas transit has little impact on accessibility and is highly localized; impacts of rail transit are highly localized and mainly occur in downtown areas and depend on zoning, parking and traffic policies; for any significant growth inducing impacts to materialize from rail expansion, supportive land use policies would have to be in place. The Council staff recommends that the RMP project recognition include only transit (rail, bus, multi-modal) projects or studies in accordance with the goals of the Highlands Act and RMP policies.

Ms. Swan then reviewed the relevant on-going transit project and studies. The Access and Mobility 2030 (the most recent Regional Transportation Plan (RTP) of the North Jersey Transportation and Planning Authority (NJTPA)) was evaluated for relevant ongoing projects and studies. Interviews were conducted, public comments were reviewed and county transportation/transit plans were considered. Presently 15 transit studies are identified in the RTP and 7 of which may be considered relevant to the Highlands Region with 4 being recognized as viable projects or studies that are on-going and support the RMP policies and Implementation Programs. She described the two currently funded projects, Access to the Regions Core (ARC) and Montclair-Boonton Line rail extension to Andover, which support transit. She specified that any extension beyond Andover was not included in the recommendation. Ms. Swan then reviewed the two ongoing studies, the Northwest NJ Bus Study (which has 80% of the study area in the Highlands Region) and the Raritan Valley Line from High Bridge to Phillipsburg Study (which is anticipated to be completed in early 2009), both of which support transit.

g. Update on Web-based tools

Ms. Swan then gave an overview of the updates on the Web-based tools. She described the changes to the Property Search, Consistency Application, and the RMP Updates applications. The slides she presented walked the viewers through the process of using these applications using examples.

Chairman Weingart reiterated the Council's meeting schedule and recommended that the Council members be available for many hours on those days as he anticipates long meetings.

PUBLIC COMMENTS:

MIKE FRANCIS, Councilman with Hopatcong Borough: Regarding Plan Conformance and the RMP, Mr. Francis stated that it is a slippery slope regarding information with the NJDEP. He stated that regarding the nitrate standard and the recommendation with NJDEP – he believes that it is violating the trust of the borough. He stated that the legislation is clear and that there is a specific line. Crossing the line is wrong. He stated that the concern is about home rule, and that they are concerned about conforming to something that they can trust will not change. The local people are interested and concerned about this issue. He expressed the ideas and alternatives that could be put in place instead of the set standard. He noted that the NJDEP respects the Council, and will likely accept and implement the standard. There needs to be clear definition between the Preservation Area and the Planning Area. He stated that if the Council wants to focus more on the Planning Area, it should change the legislation.

MARYANNE SMITH, Hardyston Township; as well as **TOM COLLINS, Hardyston Township, Sparta Township, and Byram Township** – She expressed that Hardyston has been active in this process from the start and that they are disappointed. They had trust that this was a mutual effort to the benefit of all, and that trust is being broken. Mr. Collins then stated there needs to be a statement that opting in is truly optional. He noted that all three municipalities have been supportive and active within the creation of the RMP. A large amount of information has been provided for corrections in mapping. The townships would have liked these changes to have been done before adoption. If the nitrate standard is adopted and areas for potential growth are not identified, sewer service will not be able to be utilized in the Planning Area. He discussed the need for sewer extensions that have been based on smart growth plans and the fact that this mandate will not allow the needed sewers for compliance with the COAH and Smart Growth rules. These nitrate dilution models devastates the village center sites. He stated that the Council needs to revisit the mapping so that building cannot be going into inappropriate areas. He asked for clear language that this mandate is only recommended and that it is only required if you are opting in. There needs to be harmony not just with the NJDEP, but also with municipal and county master plans – this is appropriate planning. Going forward with this will create problems. Lastly, Ms. Smith noted that the studies were created looking at 2002 data and that the township gave newer data for the Council to be utilizing. Not using this information, will have huge effects on these townships. She expressed that the mandate is being enforced differently from what is set in the Act.

JAMES TRIPP, Environmental Defense Fund (comments submitted) – Regarding the TDR Program, he stated that a TDR Program envisions a landscape where much land is preserved and the development that does occur happens in a larger densities. It is a program that can reach many of the resource goals and can cut down on nitrite levels in the water. He stated that the other aspect of the TDR Program is generating revenue to finance this program. He mentioned the costs for preserving important areas. A TDR Program can accomplish many of these things – by higher density within these areas. He reviewed the presentation that was handed in to the Council. He stated that it is important to look at the economic aspect of the TDR Program regarding the financing of the program which is important for protecting the resources.

ERIC SNYDER, Sussex County Planning Department - He stated again the lack of support for setting a mandate in the Planning Area. He expressed that there is a line in the legislation. He stated that the authority is restricted in the legislation and that the legislation needs to be changed if the authority is going to change. He mentioned that rejection of the NJDEP standard is not fully understood – he questioned the benefits of the greater nitrate standard. He wanted to know what is going to be gained by the higher nitrate standard. He noted that there are no performance standards. He stated that this is regulation, not planning.

MICHAEL GAUS (previous chairman of Sussex County Economic Development Partnership) – He explained the role of the Sussex EDP. He noted that the concept set forth will destroy home rule. With these rules in place, the Council will become a super zoning board. He explained that the legislation states that there are different rules for the two different zones. The science of the NJDEP and Council is different. The Council needs to regain the trust of the municipalities. Following this course will lead to failure.

DEBORAH POST – She expressed that some of the Council members are not concerned with the people. She explained the conflicts of interest. She stated that the area will become an area only for the rich and the wood turtle. She cited a court case regarding eminent domain in Piscataway. The Council's pricing is not appropriate or fair. The pricing will burn the landowners and is unfair. Tax assessment data shouldn't be used to develop fair market value. She spoke about the chart with the pricing within Chester – and how the numbers seem inaccurate. She disagreed that the market fluctuations will affect the values as needed. She asked about the secret lists and how it is determined who will be on them.

JULIA SOMERS, NJ Highlands Coalition – In regards to Prime Ground Water recharge, she stated that is was much improved. She stated that the reduction of the buffers should be based more on restoration (1d4i – should provide the functional assessment equivalent of restoration). In regards to WQMP, some comments were made that were untrue. She mentioned that she did see some of the letters that the Council has received, and that there is a willful ignorance regarding the NJDEP rules. She noted that the NJDEP states that the NJDEP will review both zones and shall provide consistency with the Council. It also explains what the RMP is and what it means. She read from the NJDEP correspondence. At this time, the Council doesn't know what the NJDEP will do with the Council's recommendation. The NJDEP has recognized that standards other than their set nitrate standard, can be used with support. The Council has done research to show that the Council's standard is necessary in the Conservation and Protection Zone. She noted that towns saved tax money when they preserve land. She also requested that: minimum practical use, public health and safety, growth areas, no viable alternative, and feasibility be added to the glossary.

Ms. Pasquarelli asked that substantially consistent also be added.

DAVID PEIFER, ANJEC (comments submitted) – About the nitrate standards in WQMPs, he stated that the Council is required to provide consistency determinations on WQMPs within both areas. He stated that this has been being done. The consistency reviews have to allow the NJDEP to discharge their regulatory authorities. They also have to be done in a way where the relationship between the RMP and the proposal can be understood. He mentioned that Ms. Somers covered what the RMP consists of, one of which are the standards that are established. He noted that detailed scientific work has been done to support these standards. If this nitrate standard is not going to be utilized, the RMP should be changed and the research would have to be done over – he

doesn't suggest that. He mentioned that within the NJDEP rule, they were aware of areas where their nitrate standards were not sufficient. He read from the NJDEP rule regarding the ability to use a more stringent standard. Mr. Peifer reiterated that the consistency reviews are mandated and need to be based on the Council's science, and should be committed to the NJDEP consistent with the RMP.

ROSS KUSHNER, Pequannock River Coalition - He noted that he lives in the Highlands Region. The people concerned with the nitrate standards are the large builders. He stated that he was appalled that the public servants haven't brought up the effect on the local people. The public officials are not effectively defending their entire public.

HELEN HEINRICH, New Jersey Farm Bureau (comments submitted) – She stated that she will make a few points and may bring back the maps at a future meeting. She showed enlarged maps of the Highlands Region and noted that the only areas not affected by one of these features/restrictions, are only small spots. The Council needs to review the mapping for counties and municipalities as a whole when considering the RMP. She stated concerns about farming in the future. She asked how are the municipalities going to plan for all of these little areas and how is a farmer going to plan for his property, when it is in different zones. The updating will be a difficult job.

SCOTT OLSEN, Byram Township Council member – Mr. Olsen stated that he is speaking on his own behalf, not on behalf of the township. He states that the Council gained his respect – particularly with removing the Preservation Areas from the TDR Program. He stated that many of the decisions that the Council is making will make his job more difficult. As long as the Council's decisions are based on good science, he will support them. He would rather change zoning, than have to explain why the planning didn't work properly, or how the water was effected. He stated his respect for all of the points of the Council members, even when their positions differ from his own.

WILMA FREY, New Jersey Conservation Foundation – Ms. Frey stated support regarding the Prime Ground Water Recharge Areas as it is improved – although she questions why the choice to use 15%. She discussed the need for a distinction between developed and undeveloped areas - disturbance and impervious cover. She stated that reducing protections for Category 2 streams is far too broad – it is not the correct way to go. With implementing buffer plans, she expressed her concerns as determining functional value is difficult. The whole thing should focus more on restoration than on buffer reduction. Regarding the WQMP determination, she wanted to clarify that they came from the Act's mandate to preserve the water. The nitrate standard is used as a measure of water purity/quality.

SENATOR OROHO (24th district) – Senator Oroho stated that he is an elected official and was concerned with some of the public comments. He stated that the intent of the 120 legislators is important, not irrelevant. There were a number of towns present – these towns signed a letter of support regarding the legislation behind the Act. They understood the intent and the rules. He doubts that they would have supported this back door attempt to get everything into the Preservation Area. He supported Mr. Schrier's comments and position. He noted over reaching regulations going beyond the legislation, is a problem in New Jersey. The intent of this regulation was to have two clearly distinct areas. He read from a letter (August 2006) from Chairman Weingart to his predecessor, Senator Littell. He read sections from the Act pointing out the voluntary nature of municipalities in the Planning Area in regards to conformance. He also read from the regulations

of the NJDEP stating again the voluntary nature of the municipalities in opting into Plan Conformance. He asked that the Council think about the intent of the legislation as they make their decision. He asked that the Council think about the municipalities trying to comply with the Highlands Act and COAH and the difficulties in doing so. Again, he asked for the Council to consider the intent of the legislation and what the municipalities expected when they supported that legislation. Over reaching the legislation – how much further are we from dictatorial type governments that nationalize people’s property rights - and that is wrong.

Chairman Weingart asked for motion to adjourn which was moved, seconded and approved by all Council members.

**Vote on the Approval of
these Minutes**

	<u>Motion</u>	<u>Second</u>	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede	_____	_____	_____	_____	_____	✓
Councilmember Calabrese	_____	_____	✓	_____	_____	_____
Councilmember Carluccio	_____	_____	✓	_____	_____	_____
Councilmember Cogger	_____	✓	✓	_____	_____	_____
Councilmember Dillingham	_____	_____	✓	_____	_____	_____
Councilmember Kovach	_____	_____	_____	_____	_____	✓
Councilmember Letts	_____	_____	✓	_____	_____	_____
Councilmember Pasquarelli	_____	_____	_____	_____	_____	✓
Councilmember Peterson	_____	_____	✓	_____	_____	_____
Councilmember Schrier	✓	_____	✓	_____	_____	_____
Councilmember Vetrano	_____	_____	✓	_____	_____	_____
Councilmember Way	_____	_____	✓	_____	_____	_____
Councilmember Whitenack	_____	_____	✓	_____	_____	_____
Councilmember Weingart	_____	_____	✓	_____	_____	_____

PUBLIC COMMENTS SUBMITTED

ENVIRONMENTAL DEFENSE FUND

RECEIVING ZONE SUPPLY

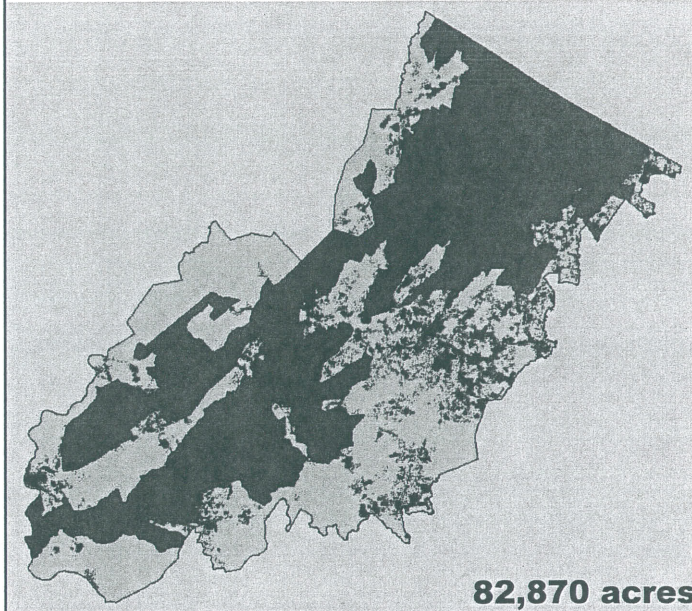
- ▶ WHAT RECEIVING ZONE ACREAGE IS AVAILABLE TODAY WITHIN THE HIGHLANDS REGION TO SUPPORT A TDR PROGRAM?
- ▶ HOW MANY BONUS TDR RESIDENTIAL UNITS COULD THAT ACREAGE REALISTICALLY SUPPORT?
- ▶ HOW MUCH REVENUE COULD BE GENERATED FROM THOSE BONUS TDR RESIDENTIAL UNITS?

ENVIRONMENTAL DEFENSE FUND

RECEIVING ZONE SUPPLY

- ▶ WHAT ACREAGE IS AVAILABLE TODAY?

Council's first-level analysis



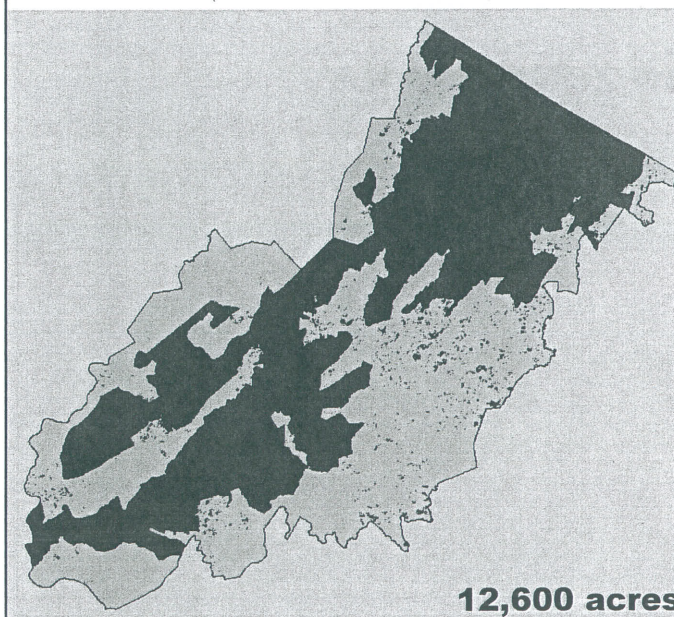
INCLUDES ONLY:

Previously developed
and vacant
parcels within
existing
community zone;
AND

Previously developed
or vacant Parcels
located outside
ECZ but within a
water supply or
wastewater
Existing Area
Served.

82,870 acres

What if we exclude previously developed parcels?

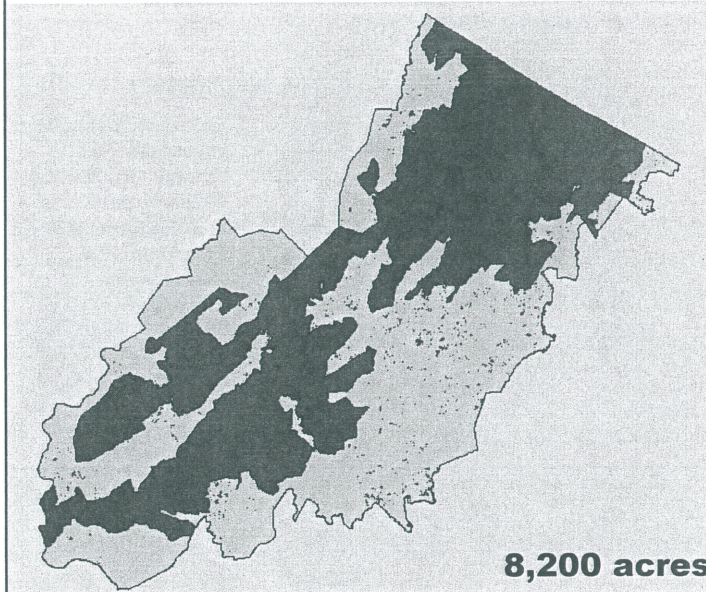


INCLUDES ONLY:

Vacant parcels
(Class 1 and 3B)

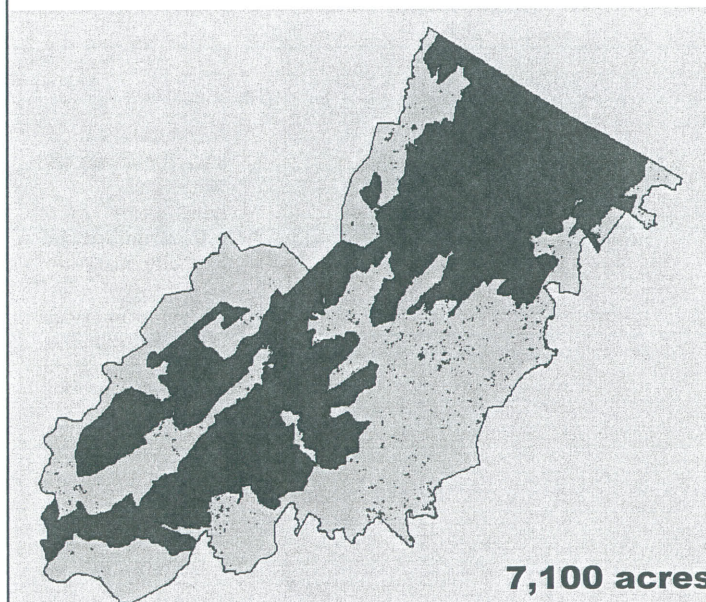
12,600 acres

What if we also exclude non residential zoned parcels?



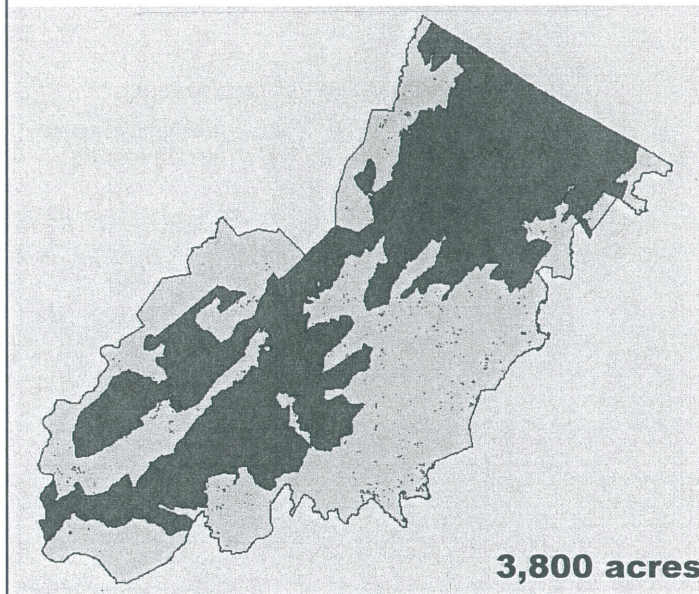
INCLUDES ONLY:
Residential zoned
vacant parcels

What if we also exclude land within the Preservation Area?



INCLUDES ONLY:
Residential zoned
vacant parcels
located outside
the Preservation
Area

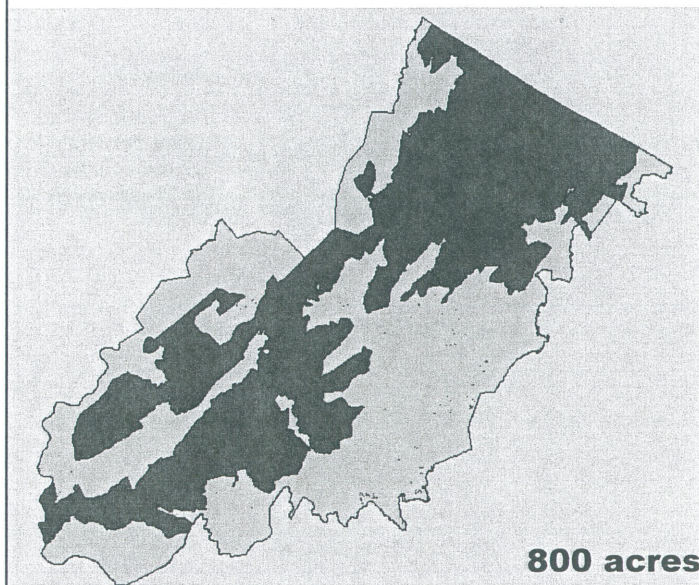
What if we also exclude environmental constrained?



INCLUDES ONLY:

Residential zoned
vacant parcels
located outside the
Preservation Area
and the Council's
Environmental
Constrained
Subzones

What if we also exclude parcels that lack both infrastructure
and capacity?



INCLUDES ONLY:

Residential zoned
vacant parcels with
water and
wastewater
infrastructure and
capacity, located
outside the
Preservation Area
and the Council's
Environmental
Constrained
Subzones

ENVIRONMENTAL DEFENSE FUND

SUMMARY

PROCESS	ACRES
COUNCIL'S FIRST LEVEL ANALYSIS	82,870
VACANT PARCELS	12,600
RESIDENTIAL VACANT	8,200
OUTSIDE PRESERVATION AREA	7,100 SCENARIO I
OUTSIDE ENV CONSTRAINED ZONES	3,900 SCENARIO II
WITH INFRASTRUCTURE + CAPACITY	800 SCENARIO III

ENVIRONMENTAL DEFENSE FUND

RECEIVING ZONE SUPPLY

- HOW MANY BONUS RESIDENTIAL UNITS COULD SCENARIO I (7,100 acres), SCENARIO II (3,900 acres) or SCENARIO III (800 acres) REALISTICALLY SUPPORT?

ENVIRONMENTAL DEFENSE FUND

RECEIVING ZONE SUPPLY

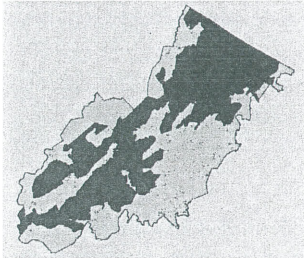
- ▶ HOW MANY BONUS RESIDENTIAL UNITS COULD
SCENARIO I (7,100 acres), SCENARIO II (3,900 acres)
or SCENARIO III (800 acres) REALISTICALLY
SUPPORT?
 - That answer depends on what specific densities are
specified for receiving zones

ENVIRONMENTAL DEFENSE FUND

- ▶ LETS ASSUME FOR EACH SCENARIO THAT
MUNICIPALITIES USE ONE OF THE FOLLOWING BONUS
DENSITY ASSUMPTIONS :
 1. 1 bonus unit per acre added to existing base zoning condition
 2. 5 residential units per acre for receiving zone parcels
currently zoned for 4 units per acre or less; and
1 additional residential unit per acre for receiving zone
parcels currently zoned for greater than 4 units per acre

ENVIRONMENTAL DEFENSE FUND

**SCENARIO I RESULTS FOR
ZONING ASSUMPTION 1**



Assumption 1

- base zoning plus
one bonus unit

TDR RECEIVING ZONE ACREAGE:

7,100 ACRES

BUILD OUT UNDER CURRENT ZONING:

17,800 RESIDENTIAL UNITS

BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM

25,000 RESIDENTIAL UNITS

POTENTIAL REVENUE FOR LAND PRESERVATION

\$335 MILLION

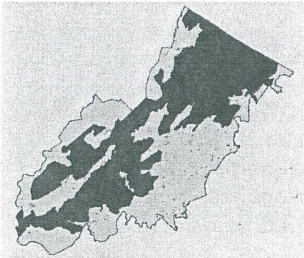
NUMBER OF MUNIS WITH BOTH RECEIVING ZONE AND

PRESERVATION AREA ACREAGE

40 MUNICIPALITIES

ENVIRONMENTAL DEFENSE FUND

**SCENARIO I RESULTS FOR
ZONING ASSUMPTION 2**



Assumption 2

- 5 units per acre
for parcels zoned for
4 units per acre or less
- 1 additional unit per acre
for parcels zoned for
greater than 4 units per acre

TDR RECEIVING ZONE ACREAGE:

7,100 ACRES

BUILD OUT UNDER CURRENT ZONING:

17,800 RESIDENTIAL UNITS

BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM

40,700 RESIDENTIAL UNITS

POTENTIAL REVENUE FOR LAND PRESERVATION

\$1 BILLION

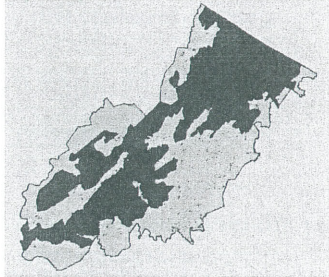
NUMBER OF MUNIS WITH BOTH RECEIVING ZONE AND

PRESERVATION AREA ACREAGE

40 MUNICIPALITIES

ENVIRONMENTAL DEFENSE FUND

**SCENARIO II RESULTS FOR
ZONING ASSUMPTION 1**



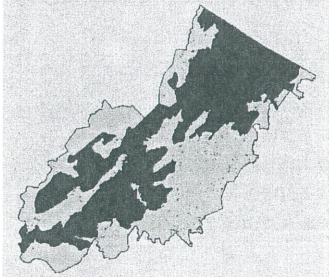
Assumption 1

- base zoning plus
one bonus unit

TDR RECEIVING ZONE ACREAGE:
3,900 ACRES
BUILD OUT UNDER CURRENT ZONING:
10,500 RESIDENTIAL UNITS
BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM
14,500 RESIDENTIAL UNITS
POTENTIAL REVENUE FOR LAND PRESERVATION
\$170 MILLION
NUMBER OF MUNIS WITH BOTH RECEIVING ZONE AND
PRESERVATION AREA ACREAGE
40 MUNICIPALITIES

ENVIRONMENTAL DEFENSE FUND

**SCENARIO II RESULTS FOR
ZONING ASSUMPTION 2**



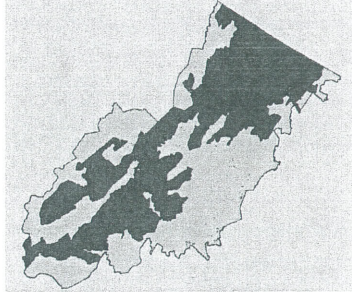
Assumption 2

- 5 units per acre
for parcels zoned for
4 units per acre or less
- 1 additional unit per acre
for parcels zoned for
greater than 4 units per acre

TDR RECEIVING ZONE ACREAGE:
3,900 ACRES
BUILD OUT UNDER CURRENT ZONING:
10,500 RESIDENTIAL UNITS
BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM
22,600 RESIDENTIAL UNITS
POTENTIAL REVENUE FOR LAND PRESERVATION
\$500 MILLION
NUMBER OF MUNIS WITH BOTH RECEIVING ZONE AND
PRESERVATION AREA ACREAGE
40 MUNICIPALITIES

ENVIRONMENTAL DEFENSE FUND

**SCENARIO III RESULTS FOR
ZONING ASSUMPTION 1**

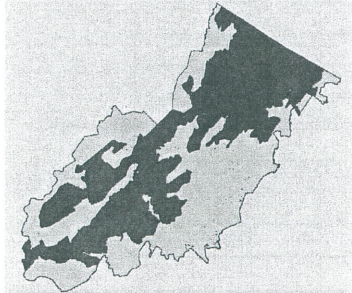


Assumption 1
- base zoning plus
one bonus unit

TDR RECEIVING ZONE ACREAGE:
800 ACRES
BUILD OUT UNDER CURRENT ZONING:
4,200 RESIDENTIAL UNITS
BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM
5,000 RESIDENTIAL UNITS
POTENTIAL REVENUE FOR LAND PRESERVATION
\$39 MILLION
NUMBER OF MUNIs WITH BOTH RECEIVING ZONE AND
PRESERVATION AREA ACREAGE
13 MUNICIPALITIES

ENVIRONMENTAL DEFENSE FUND

**SCENARIO III RESULTS FOR
ZONING ASSUMPTION 2**



Assumption 2
- 5 units per acre
for parcels zoned for
4 units per acre or less
- 1 additional unit per acre
for parcels zoned for
greater than 4 units per acre

TDR RECEIVING ZONE ACREAGE:
800 ACRES
BUILD OUT UNDER CURRENT ZONING:
4,200 RESIDENTIAL UNITS
BUILD OUT UNDER FULLY UTILIZED TDR PROGRAM
5,800 RESIDENTIAL UNITS
POTENTIAL REVENUE FOR LAND PRESERVATION
\$83 MILLION
NUMBER OF MUNIs WITH BOTH RECEIVING ZONE AND
PRESERVATION AREA ACREAGE
13 MUNICIPALITIES

Comments submitted at Highlands Council
Meeting on June 26, 2008 by James Tripp,
Environmental Defense Fund Page 10 of 17

ENVIRONMENTAL DEFENSE FUND

OUR CALCULATIONS

Estimated Developer Willingness To Pay Values

	Units Per Acre					
	<.25	0.50	1.00	2.00	3.00	>4.00
Bergen	\$370,000	\$224,000	\$169,000	\$130,000	\$108,000	\$101,000
Morris	\$220,000	\$133,000	\$100,000	\$78,000	\$64,000	\$60,000
Somerset	\$200,000	\$121,000	\$91,000	\$70,000	\$58,000	\$54,000
Sussex	\$56,000	\$34,000	\$25,000	\$20,000	\$16,000	\$15,000
Warren	\$49,000	\$30,000	\$23,000	\$17,000	\$14,000	\$13,000
Passaic	\$157,000	\$95,000	\$72,000	\$55,000	\$46,000	\$43,000

*Hunterdon County Willingness To Pay Value estimated
from the regional average - \$27,000

SCENARIO I

Current Base Buildout

County	Total Units
Bergen	561
Hunterdon	936
Morris	9,468
Passaic	251
Somerset	2,753
Sussex	936
Warren	2,861
Grand Total	17,766

TDR Buildout Assumption 1

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	815	254	\$101,000	\$25,700,660
Hunterdon	1,520	584	\$27,000	\$15,755,035
Morris	12,907	3,439	\$60,000	\$206,368,461
Passaic	303	51	\$43,000	\$2,213,430
Somerset	3,886	1,133	\$54,000	\$61,157,893
Sussex	1,577	641	\$15,000	\$9,621,236
Warren	3,885	1,024	\$13,000	\$13,312,869
Grand Total	24,893	7,127		\$334,129,583

**Comments submitted at Highlands Council
Meeting on June 26, 2008 by James Tripp,
Environmental Defense Fund Page 11 of 17**

SCENARIO I

Current Base Buildout

County	Total Units
Bergen	561
Hunterdon	936
Morris	9,468
Passaic	251
Somerset	2,753
Sussex	936
Warren	2,861
Grand Total	17,766

TDR Buildout
Assumption 2

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	1,346	786	\$101,000	\$79,345,085
Hunterdon	3,212	2,276	\$27,000	\$61,450,641
Morris	20,073	10,605	\$60,000	\$636,290,514
Passaic	356	105	\$43,000	\$4,493,641
Somerset	6,573	3,820	\$54,000	\$206,278,282
Sussex	3,323	2,387	\$15,000	\$358,089,97
Warren	5,812	2,951	\$13,000	\$38,365,466
Grand Total	40,696	22,929		\$1,062,032,626

SCENARIO II

Current Base Buildout

County	Total Units
Bergen	279
Hunterdon	738
Morris	4,748
Passaic	163
Somerset	2,357
Sussex	476
Warren	1,781
Grand Total	10,543

TDR Buildout
Assumption 1

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	377	98	\$101,000	\$9,937,657
Hunterdon	1,043	305	\$27,000	\$8,241,369
Morris	6,232	1,483	\$60,000	\$88,992,132
Passaic	192	29	\$43,000	\$1,238,656
Somerset	3,228	871	\$54,000	\$47,012,619
Sussex	8,90	414	\$15,000	\$6,205,881
Warren	2,455	673	\$13,000	\$8,754,916
Grand Total	14,417	3,873		\$170,383,230

SCENARIO II

Current Base Buildout

County	Total Units
Bergen	279
Hunterdon	738
Morris	4,748
Passaic	163
Somerset	2,357
Sussex	476
Warren	1,781
Grand Total	10,543

TDR Buildout
Assumption 1

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	553	255	\$101,000	\$25,724,673
Hunterdon	1,801	1,063	\$27,000	\$28,708,175
Morris	8,937	4,189	\$60,000	\$251,326,545
Passaic	225	62	\$43,000	\$2,677,607
Somerset	5,185	2,828	\$54,000	\$152,700,622
Sussex	2,109	1,633	\$15,000	\$244,89,126
Warren	3,772	1,990	\$13,000	\$25,873,776
Grand Total	22,563	12,020		\$511,500,525

SCENARIO III

Current Base Buildout

County	Total Units
Bergen	83
Hunterdon	435
Morris	1,625
Passaic	3
Somerset	1,413
Sussex	11
Warren	583
Grand Total	4,153

TDR Buildout
Assumption 1

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	103	20	\$101,000	\$2,046,374
Hunterdon	498	63	\$27,000	\$1,711,969
Morris	1,900	275	\$60,000	\$16,504,955
Passaic	4	1	\$43,000	\$40,909
Somerset	1,747	334	\$54,000	\$18,015,853
Sussex	13	2	\$15,000	\$32,667
Warren	696	112	\$13,000	\$1,460,598
Grand Total	4,961	808		\$39,813,326

SCENARIO III

Current Base Buildout

County	Total Units
Bergen	83
Hunterdon	435
Morris	1,625
Passaic	3
Somerset	1,413
Sussex	11
Warren	583
Grand Total	4,153

TDR Buildout
Assumption 2

County	TDR Buildout	Bonus Units	WTP per Unit	Total WTP
Bergen	104	21	\$101,000	\$2,083,514
Hunterdon	513	78	\$27,000	\$2,099,883
Morris	2,117	492	\$60,000	\$29,547,851
Passaic	5	2	\$43,000	\$79,695
Somerset	2,260	847	\$54,000	\$45,713,746
Sussex	16	6	\$15,000	\$82,570
Warren	829	246	\$13,000	\$3,201,836
Grand Total	5,844	1,691		\$82,809,094

Bergen County

- Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Mahwah Township	148	69	20	9,687
Oakland Borough	106	30	0	2,622
County Total	254	99	20	12,309

Hunterdon County

- Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Clinton Town	36	32	14	141
Clinton Township	244	127	3	639
Holland Township	69	52	0	1,961
Tewksbury Township	10	6	0	13,475
Union Township	55	54	38	10,482
Total	414	271	55	26,698

Morris County

- Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Boonton Township	60	31	0	1,593
Chester Township	8	8	0	15,790
Jefferson Township	12	7	0	24,033
Kinnelon Borough	1	1	0	11,954
Montville Township	382	135	1	3,440
Mount Arlington Borough	25	14	0	132
Mount Olive Township	101	32	0	15,865
Pequannock Township	3	3	0	475
Randolph Township	417	70	0	583
Rockaway Township	348	120	36	17,830
Roxbury Township	199	78	6	4,301
Total	1556	499	43	95,996

PASSAIC COUNTY

- Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Bloomingtondale Borough	9	8	0	4,179
Wanaque Township	10	2	0	4,641
Total	19	10	0	8,820

SOMERSET COUNTY

- Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Bedminster Township	138	125	90	1,011
Total	138	125	90	1,011

Sussex County

► Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Byram Township	4	1	0	14,272
Green Township	18	17	0	281
Hardyston Township	252	178	0	12,557
Hopatcong Borough	47	41	0	2,607
Ogdensburg Borough	6	2	0	199
Sparta Township	98	44	1	11,538
Stanhope Borough	18	7	0	5
Vernon Township	44	28	0	29,319
Total	487	318	1	70,778

Warren County

► Municipalities with both receiving zone and preservation area land

Municipality	Scenario I acreage	Scenario II acreage	Scenario III acreage	Preservation Area acreage
Allamuchy Township	147	126	68	5,228
Franklin Township	14	11	0	3,792
Greenwich Township	129	97	6	792
Hackettstown Township	80	26	6	203
Independence Township	42	27	0	6,250
Lopatcong Township	77	17	2	1,051
Mansfield Township	69	56	0	13,047
Oxford Township	34	15	0	2,184
Pohatcong Township	11	10	0	7,582
Washington Township	305	229	0	3,604
White Township	8	7	0	7,812
Total	916	621	82	51,545

Counties with both receiving zone and preservation area land

County	SCENARIO I acreage	SCENARIO II acreage	SCENARIO III acreage	Preservation Area acreage*	Total County Preservation Area acreage
Bergen	254	99	20	12,309	12,309
Hunterdon	414	271	55	26,698	64,924
Morris	1,556	499	43	95,996	120,124
Passaic	19	10	0	8,820	78,789
Somerset	138	125	90	1,011	1,011
Sussex	487	318	1	70,778	70,778
Warren	916	621	82	51,545	67,030
Total	3,784	1,943	291	267,157	414,965

*Combined preservation area acreage of the municipalities in that county with both receiving zone and preservation area land.

**Comments
of the
Association of New Jersey Environmental
Commissions (A.N.J.E.C.)**

Nitrate Concentration Standards (WQMP Amendments)

**Prepared and Submitted by
David Peifer
Highlands Project Director
June 26, 2008**

ANJEC is pleased to submit the following comments to the Highlands Council in the spirit of constructive criticism and to assist the Council in its deliberations concerning the Regional Master Plan. ANJEC makes these comments of its own volition, owns no property in the Highlands Region and has received no direct compensation for their preparation.

ANJEC strongly urges the Council to continue to utilize the nitrate concentration standards developed by the Council in its reviews and consistency determinations of Water Quality Management Plans, whether within the Preservation or Planning Areas.

We take this position for the following reasons:

- **The Council is required by the DEP Highlands Rules to review and make recommendations to the N.J.D.E.P. on all WQMPs in both the Preservation and Planning Areas for consistency with the RMP. This applies to both the Preservation Area and the Planning Area and both before adoption and after adoption of the RMP.**

At N.J.A.C. 7:38-1.1(k), the DEP rules state:

***“For both the planning area and the preservation area, the Department shall review the Highlands Council regional master plan and consider amending the appropriate Water Quality Management Plans to maintain consistency with the regional master plan. The Department shall approve a Water Quality Management Plan amendment only after receiving from the Highlands council a determination of consistency with the Regional master Plan to be incorporated by reference in (l) below, when adopted by the Highlands Council. Pending completion of the Regional master Plan, the Department shall not approve a Water Quality Management Plan amendment for a project proposed in the planning area or preservation area without first obtaining a recommendation from the Highlands Council.*”**

- **Council consistency reviews must at a minimum, provide reasoned guidance for the Department to discharge its functions. Importantly, the reviews must be comprehensive with regard to all elements of the RMP.**

At 7:38-1.1(l), the DEP rules define the Regional Master Plan as,

“The Regional Master Plan shall mean the standards, established in the Regional Master Plan adopted by the Highlands Council, pursuant to NJSA 13:20-8 including all goals, requirements, provisions and any municipal master plans and development regulations or county master plans and associated regulations that have been formally approved by the Highlands Council pursuant to the Highlands Act. The Regional Master Plan shall be incorporated by reference into this chapter when adopted by the Highlands Council pursuant to NJSA 13:20-8 provided the Department does not determine such incorporation is inconsistent with the purposes of this chapter. This incorporation by reference shall include all amendments to the Regional Master Plan subsequently adopted by the Highlands Council. The Regional Master Plan shall be available at the Council’s website at www.highlands.state.nj.us. Or may be reviewed at the Department or the Highlands Council at the addresses at NJAC 7:38-1.2”.

- The Council has scientifically determined appropriate nitrate limits as a basic land use planning factor for the region to be fully protective of surface and groundwater. These standards are considerably more protective than the NJ DEP statewide 2 mg/l standard, being .74 mg/l for the Protection Zone, 1.88 mg/l for the Conservation Zone and 2 mg/l for the Existing Community Zone. These standards must be considered a part of the RMP.
- In reviewing WQMP submissions, and in consideration of consistency determinations provided by the Council, the Department has the ability to utilize more stringent limits than the 2mg/l statewide minimum standard in its review of Highlands WQMPs.

In its statements accompanying the WQMP Rule proposal the Department states:

“Further, the Department does not intend to limit WMP Planning entities or municipalities from establishing more protective requirements within their jurisdictional areas. Therefore, proposed N.J. A.C. 7:15-5.25 (a) also provides that the standards set forth in the section are the minimum standards, and that the WMP planning entity or municipality can substitute more protective standards. For example a municipality may wish a more conservative water quality target for the nitrate dilution standard, a wider buffer for riparian protection or provide protection for slopes with a grade less steep than 20 percent”.

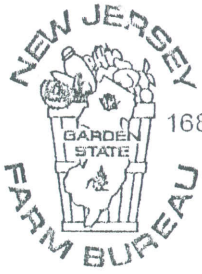
Conclusions:

The Council is required by rule to review and provide the Department of Environmental Protection with consistency determinations all WQMP amendments in both the preservation and planning areas. These reviews are to be transmitted to the Department of Environmental Protection as “Consistency Determinations” required under the DEP rules. The Department is required to consider these consistency determinations in decision making on Water Quality Management Plan Amendments in both the Planning

and Preservation Areas. The consistency determinations provided by the Council must consider all aspects of the RMP and provide, a minimum, enough information for the Department to exercise its regulatory duties.

The Council has, after considerable analysis, developed a set of standards for the region that are equally or more protective than the *statewide minimum standard* developed by the Department. As part of the RMP, the Council must apply these more stringent standards in WQMP consistency reviews. These reviews, based on the scientific analyses of allowable nitrate concentrations, will be more protective of Highlands surface and groundwaters than the Department's minimum statewide nitrate standards. In considering the consistency reviews submitted by the Council, the Department is free to utilize the more restrictive standards developed by the Council.

ANJEC strongly urges the Council to continue to review all WQMP amendments utilizing the nitrate concentration standards developed under the RMP and to find any WQMP proposals utilizing the statewide 2mg/l limit to be "inconsistent" with the RMP.



168 WEST STATE STREET • TRENTON, NEW JERSEY 08608 • TEL: 609-393-7163 • FAX: 609-599-1209

June 25, 2008

To: John Weingart, New Jersey Highlands Council Chairman
From: Peter Furey, NJFB Executive Director
Re: Comments on June 12 RMP Changes

The New Jersey Farm Bureau in reviewing the new material released to the public on June 12, notes the following points that should be corrected or in some cases added.

Cluster/Conservation Design Development Program:

Though the title and the glossary will still mention "conservation design development," the Program goes into too much detail about what the MLUL says about cluster. The requirement for the set aside land to belong to the municipality or a homeowners' association has been shown to be the kiss of death for new clusters. If MLUL NJSA 40:55D-40 is a very broad power to create any form of development including lot-size averaging, this section language should also include "conservation design," "open lands ratio," and other phrases that would define these innovative rural land use tools. Leaders of rural municipalities need every possible reminder about their ability to use the most innovative and effective tools.

Omit the language about the municipality coming to own the preserved farmland, then renting it to a farmer. Unless there is a long-term lease and requirements to farm actively, towns may tend to allow this land to go out of production and into growth of invasive species and wildlife such as deer.

The changes to policies permitting additional water and wastewater infrastructure in the ARA (which list several instances where they would be allowed including clustering) are still not broad enough to cover expansions of agricultural processing, aquaculture or B&Bs that the RMP allows in other policies, adding value to crops to increase farm income and so forth. There aren't too many improvements to a farm to increase sales that don't these days require renovated or expanded septic systems.

Cluster Design for Environmental Protection as now written sets none of the same stringent management requirements on those who will own or manage that set-aside land. There must be no difference, so among other requirements should include a mandated land management plan also monitored by the Highlands Council and other appropriate agencies

Part 3. Agricultural Resources

Agricultural Sustainability, Viability, and Stewardship:

We still have questions about what will be the language of the required "conservation easement" on all set-aside land.

Several new sections including the Right to Farm Act cause some concern:

These policies limit the requirement for a municipality to include Right to Farm provisions in their master plans and ordinances to municipalities and counties "with farmland preservation programs or a significant agricultural land base." This may not cover all active farm operations.

2. New Policy 3E4: "To address agricultural or horticultural development and use through Plan Conformance with the Right to Farm Act" coordinating with the NJDA, the SADC and the CADBs. Does this mean that for every town, there will be detailed decisions made up front about what future agricultural development or agricultural land use will be permitted? We oppose such a requirement since there is no way to predict what changes a farm operators will need to make to continue to be viable in the future. The proper way to deal with this is with Site Specific AMPs as the changes develop over time.

3. New Objective 3E4a: states that the SADC and Highlands Council will "cooperatively develop specific AMPs that address air and water quality control, noise control, pesticide control, fertilizer application, IPM, labor practices and other related activities consistent with the resource management and protection requirements of the RMP." This seems to assume that there are not already federal or state statutes or rules already in place to deal with any questions about farm practices. There are Agricultural Management Practices for some of these issues adopted by the SADC based on annual recommendations of the New Jersey Agricultural Experiment Station. Labor practices are governed by both federal and state statutes and regulations. The New Jersey Farm Bureau opposes the Highlands Council insisting on developing further regulation that could conflict with what is already being imposed and render Highlands agriculture at a disadvantage compared to agriculture outside the Highlands.

4. New objective 3E4b requires development of municipal and county regulations not only consistent with the Right to Farm Act but "necessary to address agricultural practices that pose a direct threat to public health and safety." Again, these concerns should be addressed through the traditional channels of state regulation of agriculture, not through a separate code for the Highlands farms.

Funding Opportunities talks about coordinating with the State Historic Preservation Office and the SADC to include "historic structures in tax incentive and adaptive reuse funding programs" but does not say anything about expanding opportunities to use historic farm structures for non-farm purposes.

The New Jersey Farm Bureau supports the positive language changes about the need for agricultural operations to evolve, to add business opportunities (though the examples are limited) and housing for the farm family and labor.

Highlands Restoration: Water Deficits Program:

The New Jersey Farm Bureau supports language that states that DEP rules will continue to approve agricultural water allocations but:

New objective 2B4d: Highest priority is awarded to agricultural uses in the Preservation Area "only if they provide agriculture or horticultural compatible with Highlands resource protection." Who will decide what is compatible? Those in the Planning Area that "promote continuation & expansion of agricultural/horticultural, recreational, cultural uses and opportunities" would receive water and not others? "Compatible agricultural/horticultural uses shall minimize consumptive water uses through efficiency measures." This only repeats language from the Highlands Act that has consistently concerned the farm community, but still leaves unanswered the question of who decides what is compatible or permissible and upon what basis.

The required municipal/county Water Use & Conservation Plan must contain numbers on agricultural water use that even the New Jersey Agricultural Experiment Station does not possess. A municipality/county cannot forbid new or increased uses without a scientifically based reason. Or also review the figures (in conjunction with other water use/deficit info) when permits are renewed. This is an unnecessary and redundant step when all that information has been provided to the county agricultural agents and the DEP as basis for the water allocation.

New Objective 2G5c: There is no need for the Highlands Council and SADC to develop new water use AMPs with all sorts of new protections and possible limitations when there is a detailed water allocation process already in place. There may be a need for guidelines based on the USDA NRCS FOTG practices and cost-sharing funding as incentives for farmers to use them.

New Objective 7F1h: Exemption determinations are limited to activities authorized by the Highlands Act but "water conservation requirements, septic maintenance requirements or any other activities related to the use of that dwelling" are not exempt. Where in the Act does it limit exemptions in this way? New Jersey Farm Bureau opposes any measure in the RMP that takes away the feasibility of using the one "fair compensation" mechanism allowed by the Legislature.

On the other hand, New Jersey Farm Bureau supports and appreciates continuing to give the highest priority for Net Water Availability for TDR Receiving Zones in the Existing Community Zone.

Part 3 Improvement of the Regional Master Plan

Subpart a. Water Resources and Ecosystem Science Agenda

There is no section on Agricultural Sustainability similar to Forest Sustainability. Please add:

"The Highlands Council will implement a long term agricultural sustainability program that would monitor past and future research on the effectiveness of agricultural Best Management Practices and the feasibility of development of a carbon sequestration

program for adding value to farmland. This would be similar to programs being developed in many states."

Restoration of Streams and Riparian Areas Program:

In this program statement there should be a description of the benefits of applying for the USDA and New Jersey Conservation Reserve Enhancement Program (CREP) that provides free technical assistance and significant long-term rental payments to landowners who convert cropland to riparian buffers and other stream protection BMPs. The plans developed for this program typically analyze each site and determine the most appropriately sized buffer to produce the most conservation benefits.

Therefore the New Jersey Farm Bureau supports Objective 1D4i that proposes important and necessary flexibility in determining buffer widths, rather than imposing a rigid 300 ft.

#

Issues for Council Discussion

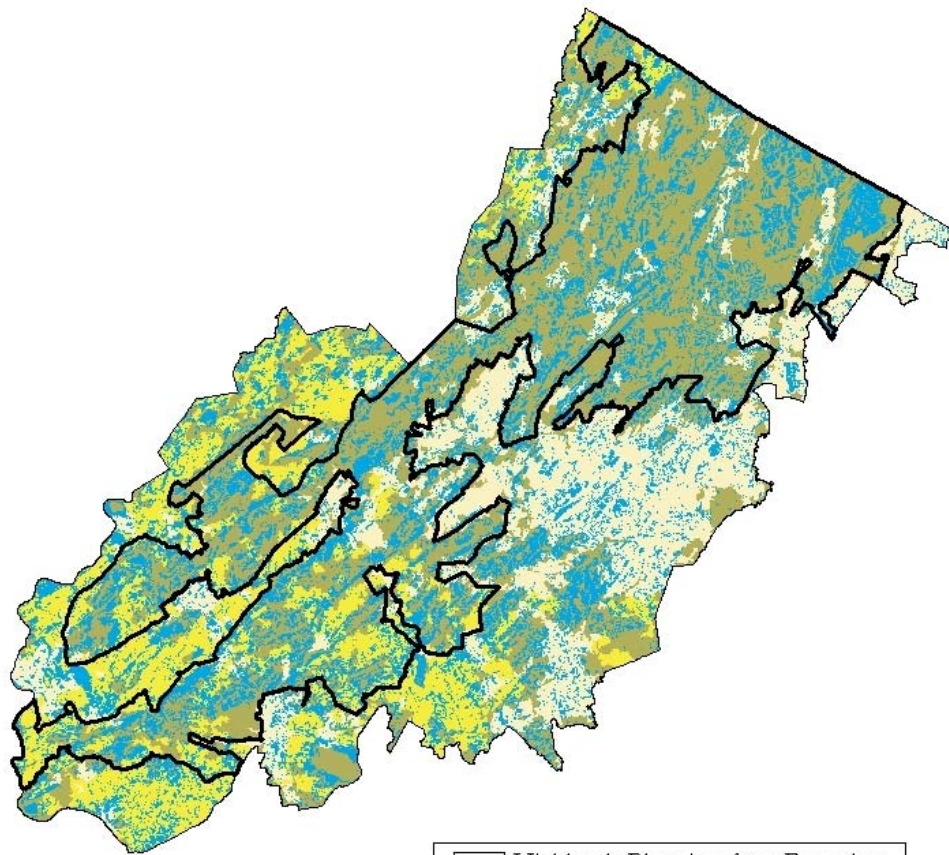
June 26, 2008

Prime Ground Water Recharge Areas

Delineation of Prime Ground Water Recharge Areas

- The Highlands Council developed a subwatershed based system for mapping Prime Ground Water Recharge Areas (PGWRA)
- Annual recharge was calculated using NJGS model GSR-32
- The total recharge within a subwatershed was computed assuming drought conditions
- The land units that most efficiently recharge 40% of the total annual recharge were identified as PGWRA

Distribution of Prime Groundwater Recharge Zones Within the Highlands



0 5 10 20 Miles



Prime Ground Water Recharge Areas (PGWRAs) account for 232,854 acres (27 percent) of the Highlands Region's 859,358 acres.

98% of PGWRAs are in the Protection Zone or Environmentally-Constrained Sub-Zones

Distribution Of Prime Ground Water Recharge Areas (PGWRAs) By Land Use Capability Zones

Area	Total Acres	PGWRA Acreage in Zone	Percentage of Zone in PGWRAs	Percentage of Total PGWRA in Zone
Protection Zone	469,462	158,392	33.74	68.13
Conservation Zone (not environmentally constrained)	70,474	4,357	6.18	1.87
CZ- Environmentally Constrained Subzone	120,485	38,611	32.04	16.58
Existing Community Zone (not environmentally constrained)	146,011	737	0.50	0.32
ECZ- Environmentally Constrained Subzone	32,231	30,757	95.42	13.21

*Excludes Lake Community Overlay Zone – already developed

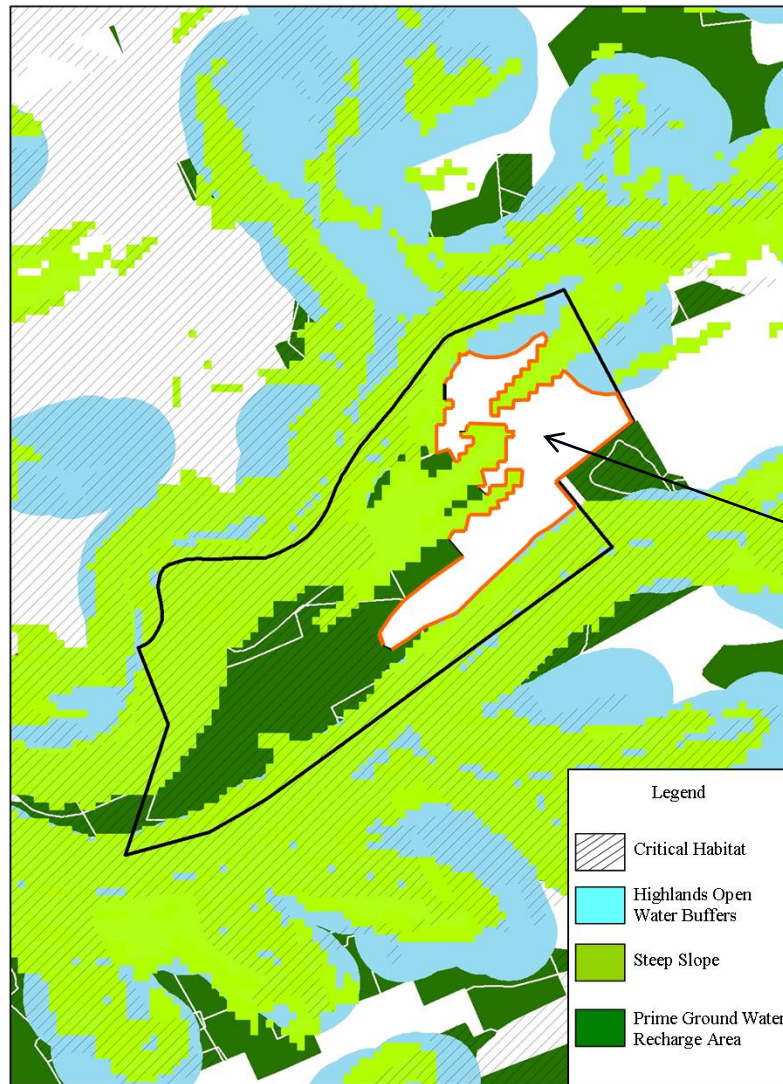
Recommended Approach

- Use a single policy and approach appropriate to Protection Zone or Environmentally-Constrained Sub-zones, because they include 98% of Prime Ground Water Recharge Areas.
- Use the management hierarchy
Avoid  **Minimize**  **Mitigate**
- Focus on limiting “total recharge disruption” (i.e., alteration of natural recharge patterns or volumes). More restrictive than impervious surface. Using total site disturbance not advised – could prohibit disturbance that actually restores recharge potential in previously disturbed sites.

Prime Ground Water Recharge GPOs

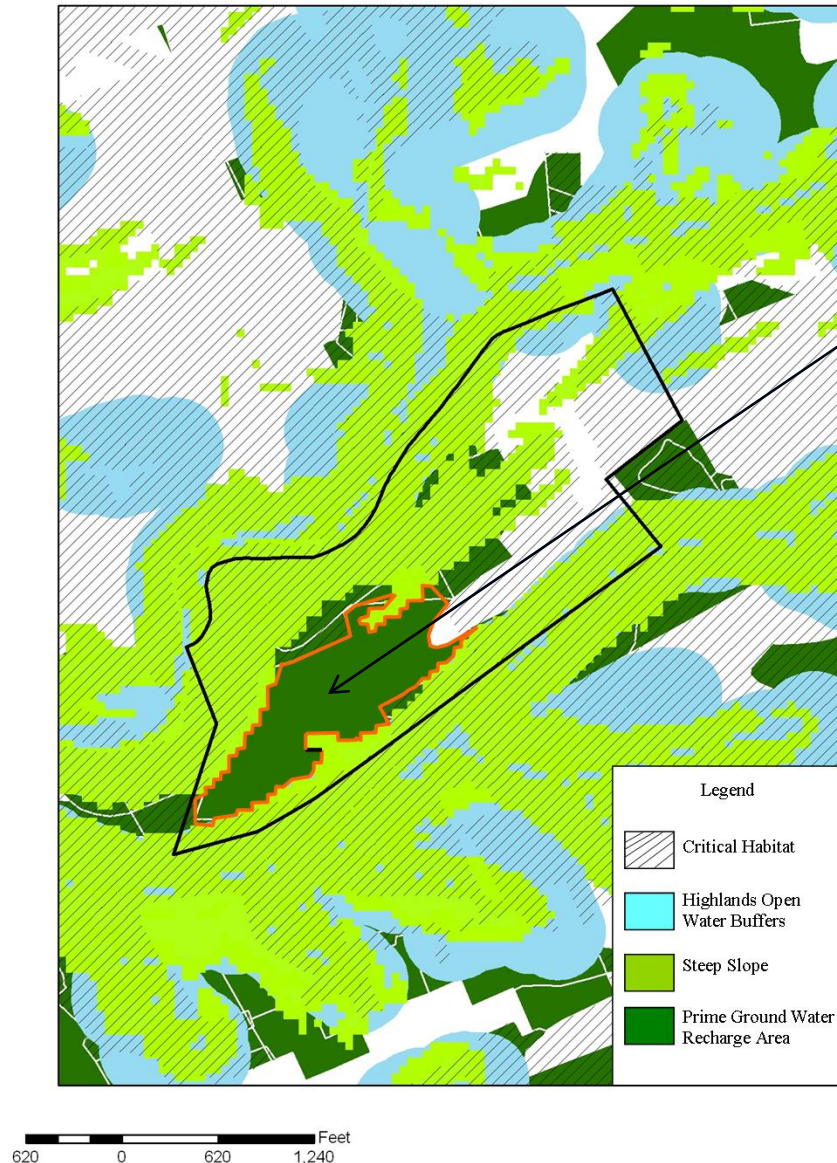
1. Prohibit development in Prime Ground Water Recharge Areas unless the entire site is in such areas, or if necessary to avoid Critical Habitat, Highlands Open Water Buffers and steep slopes (**Policy 2D4a**).
2. Prohibit infrastructure extensions except for clusters and waivers (**Objective 2D4e**).
3. Limit total recharge disruption to 15 percent of Prime Ground Water Recharge Areas, placed wherever feasible on those parts of the Prime Ground Water Recharge Areas with the lowest relative ground water recharge rates and the least potential for aquifer recharge, based on site analyses (**Objective 2D4d**).
4. Use low impact development techniques to reduce total recharge disruption as much as feasible, within the 15 percent maximum (**Objective 2D4c**).
5. Require mitigation equal to 125% of the pre-construction recharge volume for the disrupted portion of the Prime Ground Water Recharge Areas (**Objective 2D4b**).
6. Restrict the development of major potential pollutant sources (**Objectives 2D3d, 2D4f**), and manage existing and future potential pollutant sources (**Objective 2D3g**).

Figure 1; Conservation Zone PGWRA Avoidance Example



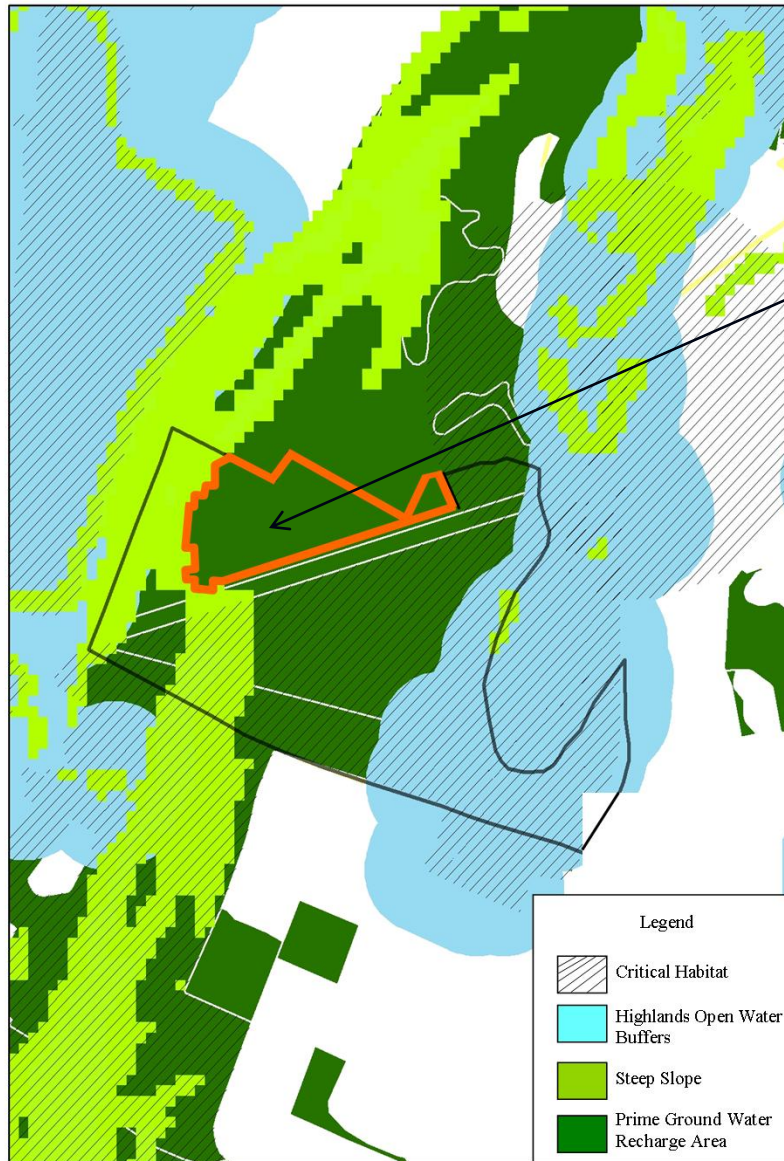
- A 120-acre open pasture hypothetical site (outlined in black) located within the Conservation Zone.
- 79 acres are PGWRA are occupied by Critical Habitat, Highlands Open Water Buffers or Steep Slopes.
- Under the Avoid>Minimize>Mitigate policy, no disturbance or development would be allowed on the entire 79-acres of the Prime Ground Water Recharge Area to avoid the environmentally sensitive areas.
- Development would only be permitted on the 41 acres of unconstrained land (outlined in red).

Figure 2; Conservation Zone PGWRA Minimization/ Mitigation Example



- The same 120-acre hypothetical site assuming different constraints. Using the average CZ septic density of 10 acres/lot, 12 dwelling units could be located on the site.
- 79 acres of PGWRA – 41 of the 79 acres are constrained by Critical Habitat, Highlands, Open Water Buffers or Steep Slopes, where no disturbance or development permitted. 38 acres (outlined in red) of the 79 acres are unconstrained.
- The policy limits the impact to natural recharge patterns to maximum of 15% (11.85-acres) of the 79 acres of PGWRA, setting a 125% recharge mitigation of 6,016,108-gal/yr.
- The 125% recharge mitigation requirement cannot be met assuming full disruption of the 15% PGWRA area. The 125% mitigation recharge rate was met when the disrupted area was reduced to a total of 7.3-acres, or 0.6-acre per lot.

Figure 3; Protection Zone PGWRA Minimization/Mitigation Example



- A 69-acre wooded site located within the Protection Zone. Using the Protection Zone septic density of 26.1 acres/lot, 2-dwelling units could be located site.

- Total PGWRA is 61 acres (outlined in black) and 48 acres are constrained by Critical Habitat, Highlands Open Water Buffers or Steep Slopes. 13 acres (outlined in red) are unconstrained by resources other than PGWRAs.

- The policy limits the impact to natural recharge patterns to 15% (9.15-acres) of the 61 acre PGWRA, requiring a 125% recharge mitigation of 6,016,108 gal/yr.

- The 125% recharge mitigation requirement. cannot be met assuming full disruption of the 15% PGWRA area. The development failed to achieve the target 125% mitigation until the disrupted area was reduced to 1 acre total, or 0.5-acre per lot. The policy would allow for off-site mitigation where on-site mitigation is not feasible.

Summary of PGWRA Examples

- The PGWRA examples demonstrate the importance of first using the avoidance and minimization policies.
- The examples also demonstrate that even assuming full capture of impervious surfaces and some pervious surface runoff, there is typically insufficient rainfall available to satisfy the 125% mitigation requirement. The disrupted area must be significantly reduced to meet the mitigation policy. This approach yields a lower mitigation volume.
- Accordingly, the 125% mitigation requirement will generally be more protective of PGWRA such that the full 15% disruption permitted by the policy will not typically be realized using on-site mitigation.
- Traditionally developed lots with large areas of turf are unlikely to achieve the mitigation requirement. The examples shown ultimately yielded disturbed areas of 0.5 - 0.6 acre/lot (*not* lot size). Low impact development (LID) techniques will be necessary to achieve the mitigation objective.
- Off-site mitigation will be required where it is demonstrated that on-site is not feasible.

Highlands Open Waters

The background of the slide is a solid dark blue. In the lower right quadrant, there are several stylized, wavy lines in a slightly lighter shade of blue, suggesting the movement of water or ripples on a surface.

Highlands Open Waters

Stream Corridor Buffers and Plans

- 300 foot buffers - Policy 1D4 was clarified for modifications of buffer width for Category 2 streams in Planning Area through a Stream Corridor Protection/Restoration Plan
- Stream Corridor Protection/Restoration Plan may be developed for stream reaches or subwatersheds
- In Objective 1D4i Part 1, clarified meaning of “disturbance” to be where the disturbance has removed or substantially impaired natural vegetation and has significantly impaired functional values
- Revised Part 4 of Objective 1D4i to focus the potential for modification of buffers on C2 waters in Planning Area, only where disturbed buffer exists, and only through a Council-approved Stream Corridor Protection/Restoration Plan
- Revised Part 4 of Objective 1D4i regarding extent to which a modification to no less than a 150 foot buffer for undisturbed lands to the extent allowed under State or local regulations

Highlands TDR Program

TDR Program

Identification of Receiving Zones

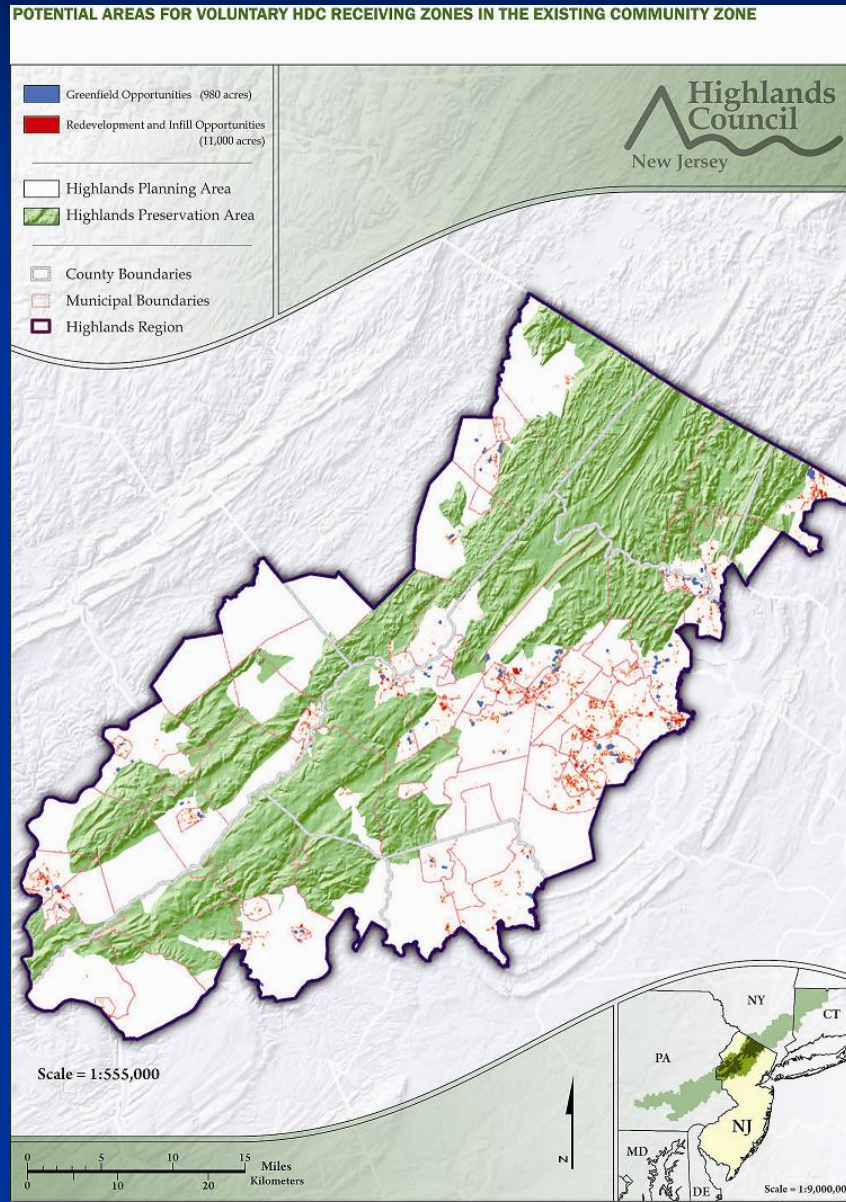
- Receiving Zones under the Highlands Act are voluntary. The Act requires the Council to identify potential voluntary Receiving Zones in the Planning Area and sets 4% (of the Planning Area) as a goal. The regional Receiving Zone assessment is preliminary and will require local analysis, including a review of site specific environmental constraints
- Revised Receiving Zone Assessment:
 - Focus on the Existing Community Zone within the Planning Area and excludes all constrained subzones
 - Includes developed and undeveloped lands both with and without infrastructure
 - Excludes preserved lands, rights of ways, cemeteries, and lands developed with single family homes as of 2002
 - Identified approximately 12,000 acres in the Planning Area

TDR Program

Identification of Receiving Zones

- Potential HDC Receiving Zone Assessment focuses on two types of opportunities:
 - Greenfield Opportunities - undeveloped lands at least 2 acres in size located in approved sewer service areas that are not Existing Areas Served. Lands that were intended for future development served by wastewater utilities. Approximately **980 acres**. Further study identifies **280 acres** that have sufficient remaining wastewater capacity and water availability at the HUC 14 subwatershed level to support a minimum of 5 dwelling units per acre if residentially zoned or 0.84 FAR if non-residentially zoned.
 - Redevelopment or Infill Opportunities - developed and undeveloped lands at least 0.125 acres in size that are currently served with public wastewater infrastructure (Existing Areas Served) with remaining capacity. These lands total approximately **11,000 acres**.

Potential Areas for Voluntary HDC Receiving Zones



You are viewing an archived document from the New Jersey State Library.

Livingston Town Center



Before

Livingston Town Center



After

Livingston Town Center

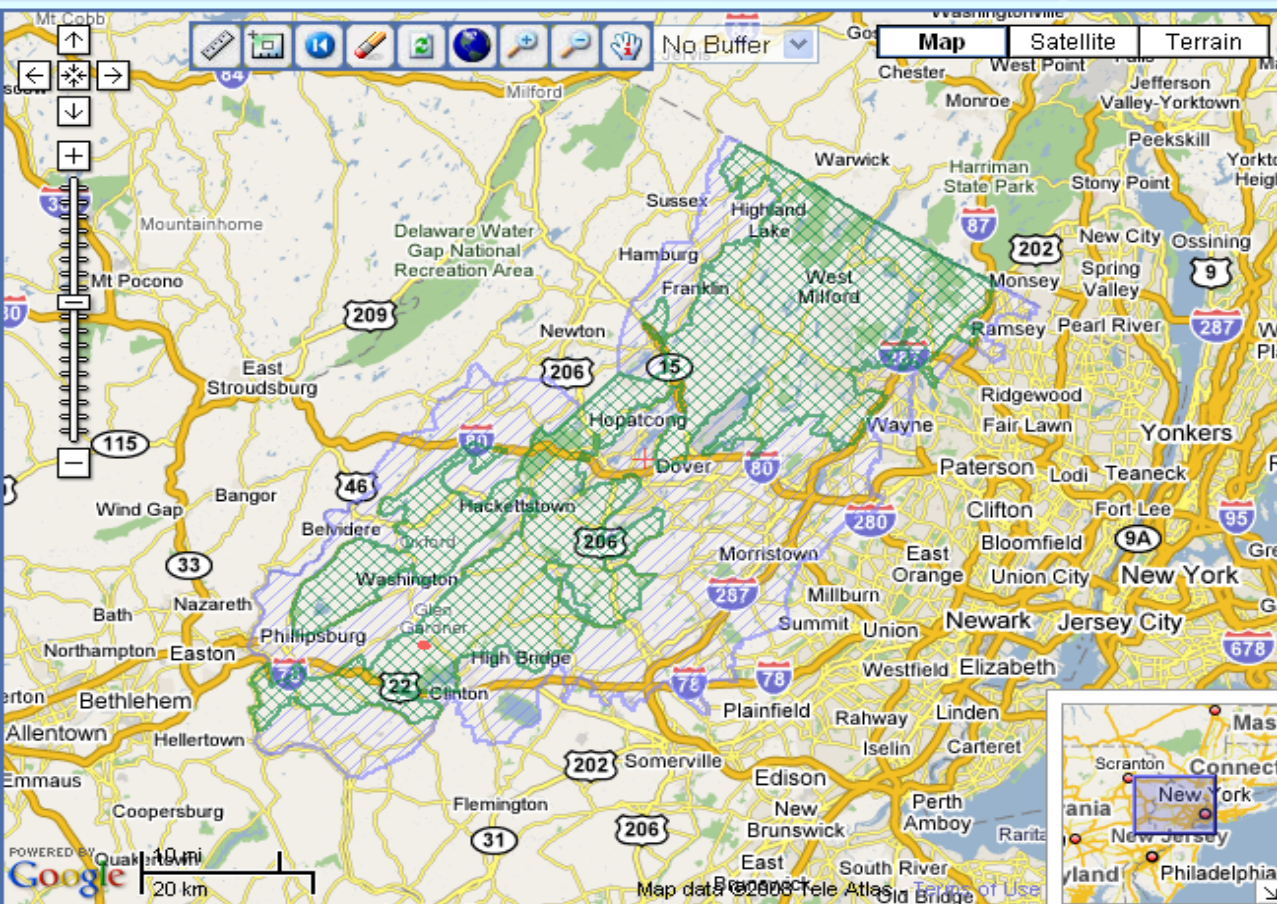


After

Highlands TDR Program – HDC Determination Tool



Interactive Map



LAYERS

☒ **SHOW OVERLAYS IN CURRENT VIEW**

☒ Planning Area / ☒ Preservation Area

☐ Land Use Capability

☐ Protection Zone ☐ Conservation Zone

☐ Existing Community Zone ☐ Lake Community Subzone

☐ Conservation Environmentally Constrained Subzone

☐ Existing Community Environmentally Constrained Subzone

☐ County

☐ Municipality

PARCEL INFORMATION

SEARCH

Address:

e.g., 100 North Road, Chester, NJ
OR 100 North Road, Chester, 07930

Township:

Block

Lot

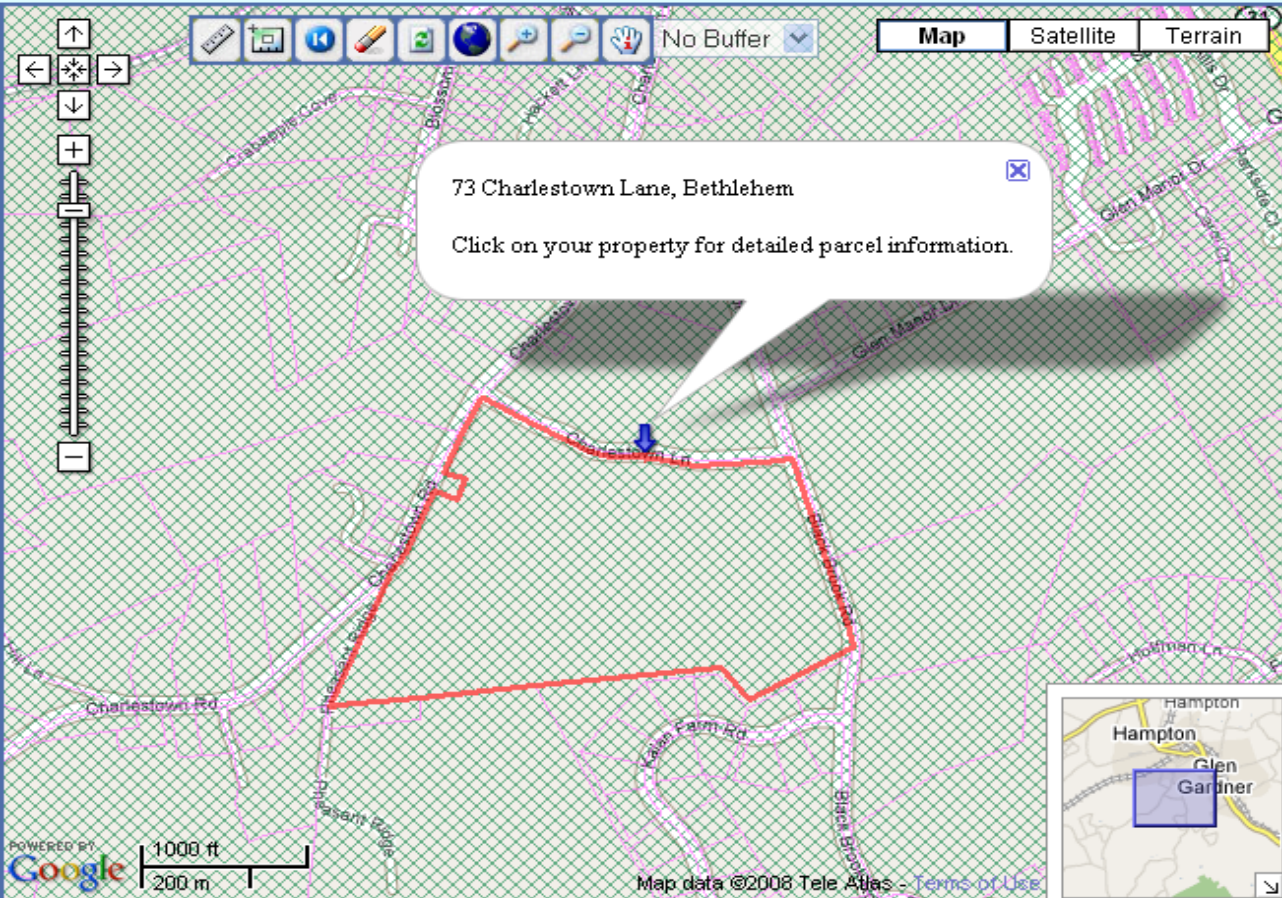
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Highlands TDR Program – HDC Determination Tool



Interactive Map



73 Charlestown Lane, Bethlehem

Click on your property for detailed parcel information.

Map data ©2008 Tele Atlas - Terms of Use

LAYERS

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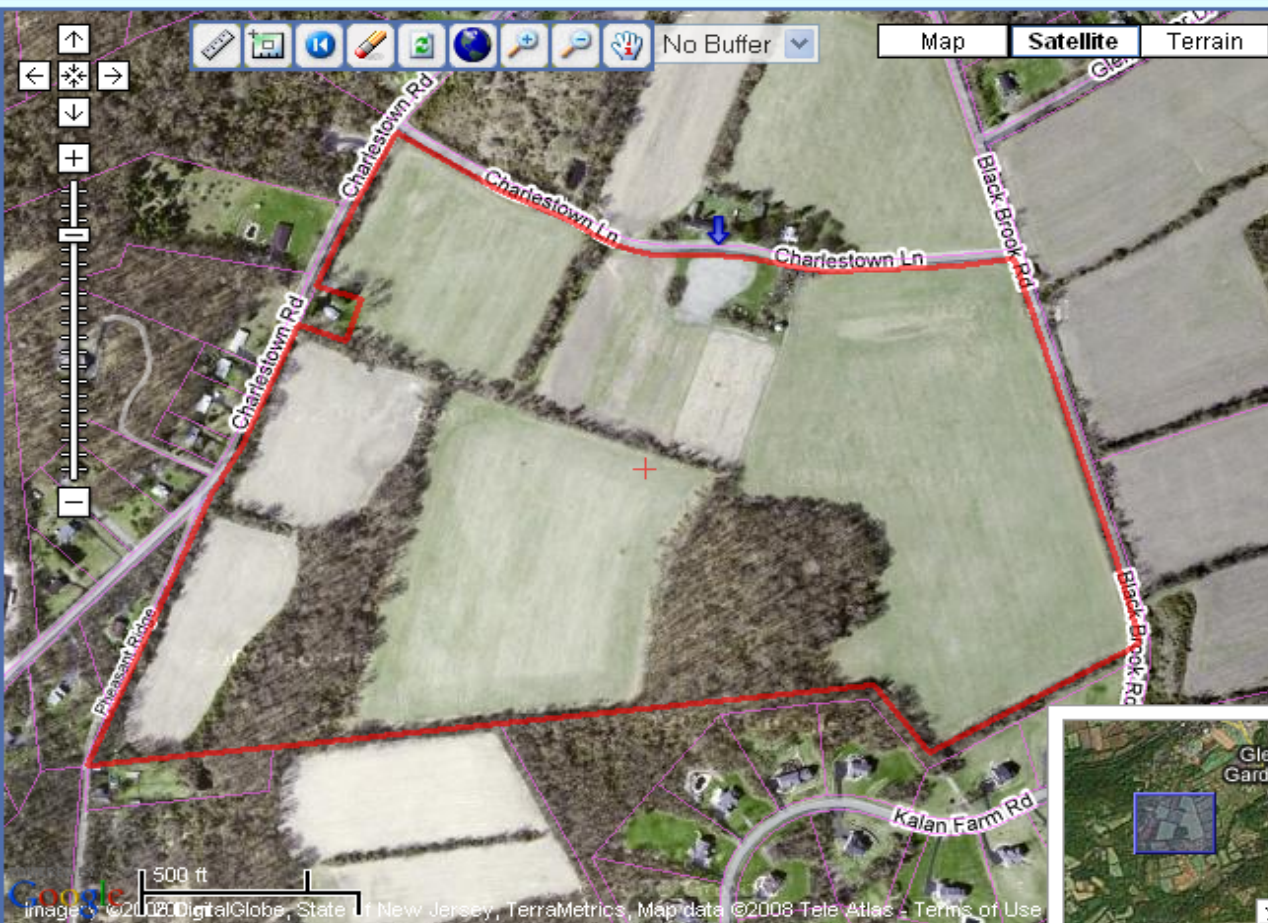
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Highlands TDR Program – HDC Determination Tool



Interactive Map



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PARCEL INFORMATION

Parcel Information
Address/Property Class:

CHARLESTOWN LANE, 73/Farm (Regular)

Property 1

Development Credit Number	150
Block	44
Lot	2
Address	73 Charlestown Lane
Municipality	Bethlehem Township
County	Hunterdon
Highlands Area	Preservation
Land Use Capability Zone	Protection, Conservation, Conservation EC
Property Acres	92

Search

Township:

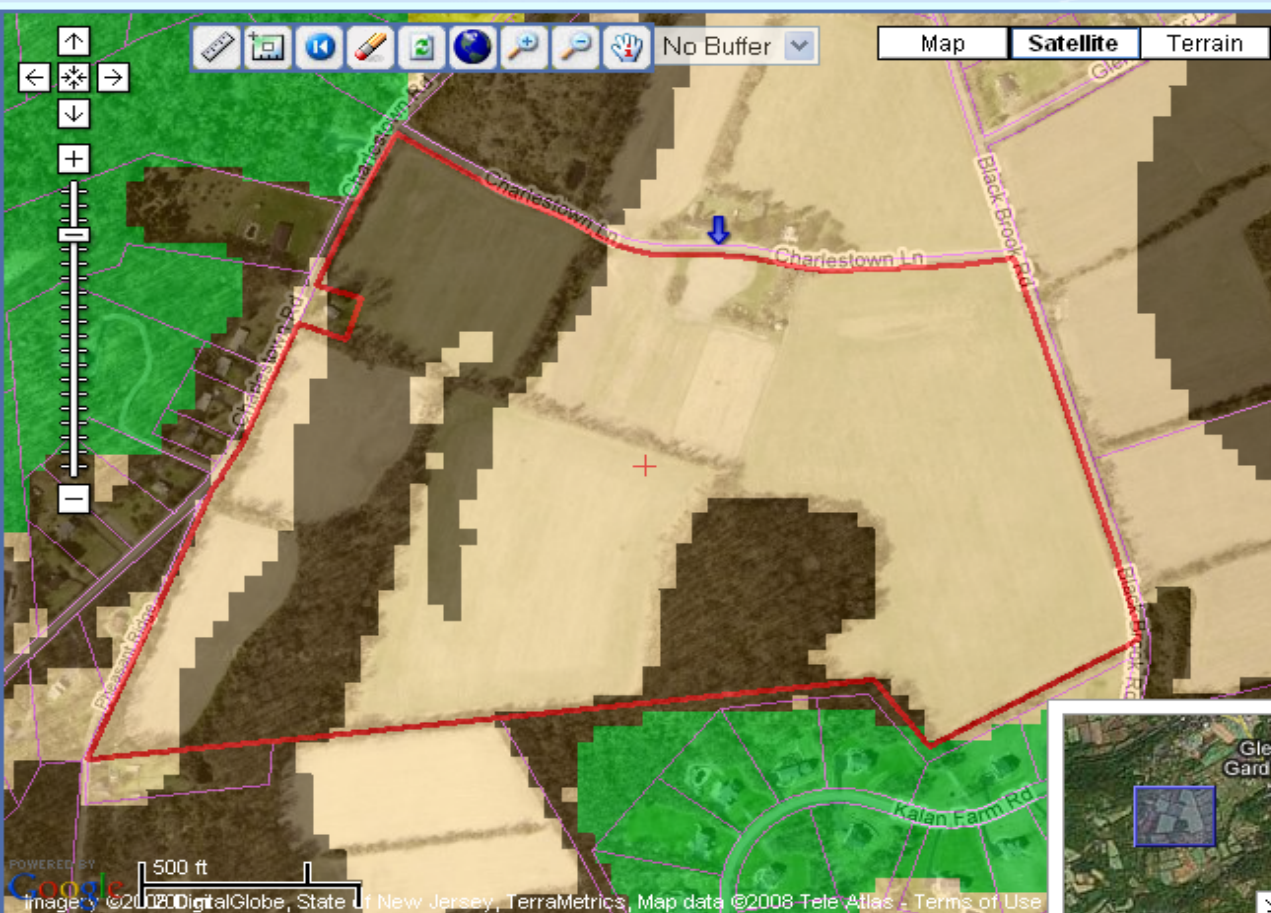
Block Lot

Search

Highlands TDR Program – HDC Determination Tool



Interactive Map



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Search

Township:

Block Lot

Search

Allocation of HDCs - Residential

Residential allocation method accounts for 3 important questions:

- Where is the property located?
- How many acres is the property?
- What is the applicable zoning?

Allocation of HDCs - Residential

$$\text{HDC Allocation} = (\text{Net Yield}) \times (\text{Zoning Factor}) \\ \times (\text{Location Factor})$$

Zoning Yield - Number of units permitted under municipal zoning subject to other applicable regulatory limitations

Zoning Factor - Relative regional average equalized assessed value of lot less than 2x zoning minimum lot size by Composite Zone

Location Factor - Relative average equalized assessed value of parcels by observed lot size and by location

Bonus Credits - a 25% bonus added to Zoning Yield if parcel located in high value conservation or agricultural priority area; a 15% bonus added to Zoning Yield if parcel located in moderate value conservation or agricultural priority area

Allocation of HDCs - Residential

Parcel Example	Municipality	Parcel Size (Acres)	Net Yield (Potential Lots)	Applicable ZF (see Appendix A)	Applicable LF (see Appendices B & C)	HDC Allocation	Value of HDC Allocation*	HDC Value Per Lot	HDC Value Per Acre
A	Chester Twp (3 acre lots)	20	6	1.37	3.23	26.55	\$ 424,809.60	\$ 70,801.60	\$ 21,240.48
B	Bethlehem (3 acre lots)	16	5	1.37	1.45	9.93	\$ 158,920.00	\$ 31,784.00	\$ 13,243.33
C	Tewksbury (12 acre lots)	84	7	2.44	9.07	154.92	\$ 2,478,649.60	\$ 354,092.80	\$ 34,425.69
D	West Milford (2 acre lots)	12	6	1.00	1.44	8.64	\$ 138,240.00	\$ 23,040.00	\$ 11,520.00
E	Chester Twp (3 acre lots with 5 acres of wetlands)	20	6.25	1.37	3.23	27.66	\$ 442,510.00	\$ 70,801.60	\$ 22,125.50
Examples A through D assume no pre-Highlands Act environmental constraints Example E assumes that property located in High Value Conservation Priority Area									
* HDC Price = \$16,000 per HDC (discussion of initial HDC price below)									

Water Quality Management Plan Consistency Determinations

Water Quality Management Plan

Consistency Determinations

- Council staff assessed the requirements of NJDEP's revised and recently published WQMP rules at N.J.A.C. 7:15 (WQMP Rules)
- Counties and municipalities must complete their Wastewater Management Plans (WMP) within 9 months of effective date of the rules. Thus, it is critical that counties and municipalities in the Region be aware of all applicable standards that will be required by NJDEP
- Council will provide to NJDEP the RMP standards applicable to the WQMP regulations for purposes of rendering a consistency determination as required by NJDEP rules at N.J.A.C. 7:38 (Highlands Rules) and any additional RMP standards that the Council feels are relevant to the WQMP process
- NJDEP provides counties and municipalities with guidance on standards to prepare WMPs
- Council will prepare consistency determinations as required by the Highlands Rules

Water Quality Management Plan Consistency Determinations (cont')

- The table provided in the meeting packet highlights the important provisions of the revised WQMP Rules and the RMP standards that may be considered as part of an RMP consistency review of a WMP:
 - Left-hand column – review standards in recently adopted NJDEP WQMP Rules
 - Center column – Final Draft RMP standards applied to Highlands Council WQMP reviews prior to RMP Adoption
 - Right-hand column – future review scenario: full RMP review standards , which represents maximum WQMP review standard

Land Acquisition Costs in the Highlands

Land Acquisition Costs in the Highlands

- The Highlands Act requires an estimate of the 5 year and 10 year acquisition costs to preserve land.
- Currently preserved lands - 237,994 acres open space and 28,528 acres farmland - totaling 266,522 acres of preserved land.
- The Land Acquisition Costs are based upon actual land acquisition costs from Green Acres (fee simple) and SADC's Farmland Preservation program (easement purchase) for lands within the confidential inventory.
- The Agriculture Priority List includes 70,197 acres and the Conservation Priority List includes 92,360 acres (162,557 acres).

Land Acquisition Costs in the Highlands

- Findings of land acquisition costs analysis:
 - Agriculture Priority List - cost to preserve 5 year is estimated at \$544 million, 10 year priorities an additional cost of \$109 million, totaling \$653 million
 - Conservation Priority List - cost to preserve 5 year is estimated at \$599 million, 10 year priorities an additional cost of \$79 million, totaling \$678 million
 - Total cost of preserving entire agriculture and conservation priority lists estimated at approximately \$1.3 billion

Land Acquisition Costs in the Highlands

- Total Garden State Preservation Trust (GSPT) from 2000 through 2009 (2007 referendum):
 - Green Acres Program accounts for approximately an average of \$132 million (59%) annually, estimated 9% annual funding allocation from Green Acres to Highlands open space preservation
 - SADC Program accounts for approximately an average of \$85 million (38%) annually, estimated 21% annual funding allocation from SADC to Highlands farmland preservation
- GSPT figures would need to be consistent over the next 10 years for Green Acres (past spending is 76% of projected need) and enhanced considerably for SADC's Farmland Preservation program (past spending is 42% of projected need) to preserve properties on both confidential lists
- Funding critical to keep momentum going to preserve Highlands natural areas and agricultural lands

Transportation Program

Transportation Safety and Mobility Program

- Voorhees Transportation Center (VTC) performed an evaluation of Induced Growth Potential in the Highlands Region
- VTC also performed an assessment of proposed projects and on-going studies relevant to the Highlands Region for consideration by the Council in the Regional Master Plan
- Summary of Findings:
 - Additional highway capacity attracts traffic and encourages growth of new activities, whereas transit has little impact on accessibility and is highly localized.
 - Impacts of rail transit are highly localized and mainly occur in downtown areas and depend on zoning, parking and traffic policies.
 - For any significant growth inducing impacts to materialize from rail expansion, supportive land use policies would have to be in place.
 - Council staff recommends that RMP project recognition include only transit (rail, bus, multi-modal) projects or studies in accordance with the goals of the Highlands Act and RMP policies.

Transportation Safety and Mobility Program

Relevant On-going Transit Projects and Studies

- Access and Mobility 2030, the most recent Regional Transportation Plan (RTP) of the North Jersey Transportation and Planning Authority (NJTPA) was evaluated for relevant ongoing projects and studies.
- Interviews were conducted, public comments were reviewed and county transportation/transit plans were considered in support of the evaluation.
- Presently 15 transit studies are identified in the RTP and 7 may be considered relevant to the Highlands Region with 4 being recognized as viable projects or studies that are on-going and support RMP policies and Implementation Programs.

Transportation Safety and Mobility Program

The two currently funded projects that support transit are:

- The *Access to the Regions Core* (ARC) project which is the study that supports the Trans Hudson Expansion (THE) Tunnel project and includes upgrades to the Raritan Valley Line, Main/Bergen/Pascack Valley and Morris & Essex Lines. The operating plan for this project provides a long term opportunity for enhanced commuter and regional tourism activities.
- The *Montclair-Boonton Line rail extension to Andover* along the existing right of way has been approved for funding and the project is imminent. Information for the full Lackawanna Cut-off project is not complete and will require further evaluation by the Council; therefore staff recommends that the Lackawanna Cut-off project beyond Andover not be included in the RMP at this time. When the ARC project comes onboard and is fully implemented it is anticipated that rail service to the Andover station will be enhanced and may serve to support Highlands regional tourism initiatives in bringing residents and visitors further west via mass transit and allow for additional multi-modal connections.

Transportation Safety and Mobility Program

The two ongoing studies that support transit are:

- The ***Northwest NJ Bus Study*** has 80% of the study area in the Highlands Region. It will provide in early 2009 a series of recommendations for additional follow up and study that align with the RMP Transportation Safety and Mobility policies for transit enhancement, smart growth principles and reduced vehicle miles traveled. The project provides a transit evaluation in an area that is currently underserved or not served by transit. However the study recommendations and next steps will require evaluation by the Council in support of implementing RMP policies and Plan Conformance components.
- The ***Raritan Valley Line from High Bridge to Phillipsburg Study*** is anticipated to be completed in early 2009. The rights of ways have been obtained by NJ Transit, however further study is warranted. The study will provide recommendations for stations and park and rides to support rail and I-78 transit connections and also benefit from the ARC/THE Tunnel rail line enhancements. The project supports RMP smart growth principles however the recommendations for the stations and park and ride locations will require further evaluation by the Council and are not available at this time.

Highlands Web-based Tools

Updates to Property Search, Consistency Application,
and RMP Updates Applications



New Jersey Highlands Council

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[News](#)



**draft HIGHLANDS REGIONAL BUILD OUT TECH
REPORT**
The Final Draft Public Comments Are Now Available
2008 New Jersey Highlands Council Meeting Schedule
Draft Scenic Resource Procedures
Draft Highlands Redevelopment Procedures



[Final Draft RMP
\(2007\)](#)



[Final Draft Public
Comments](#)



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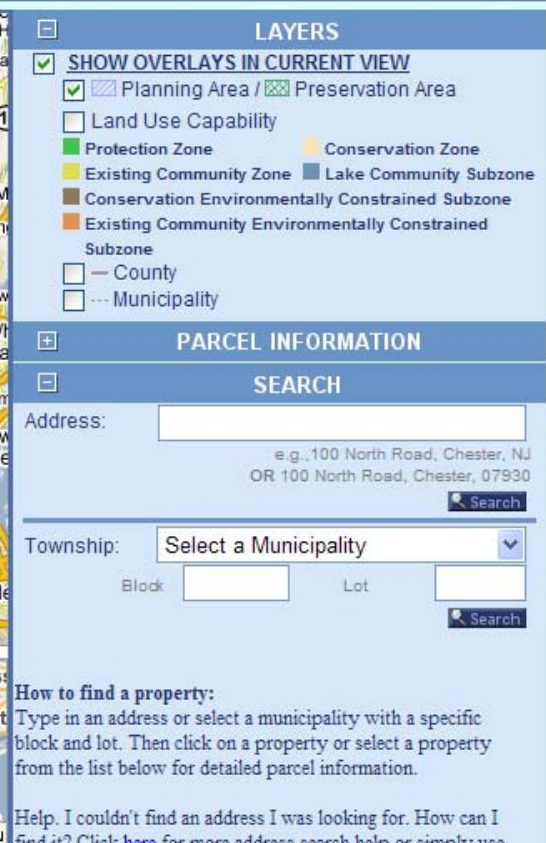


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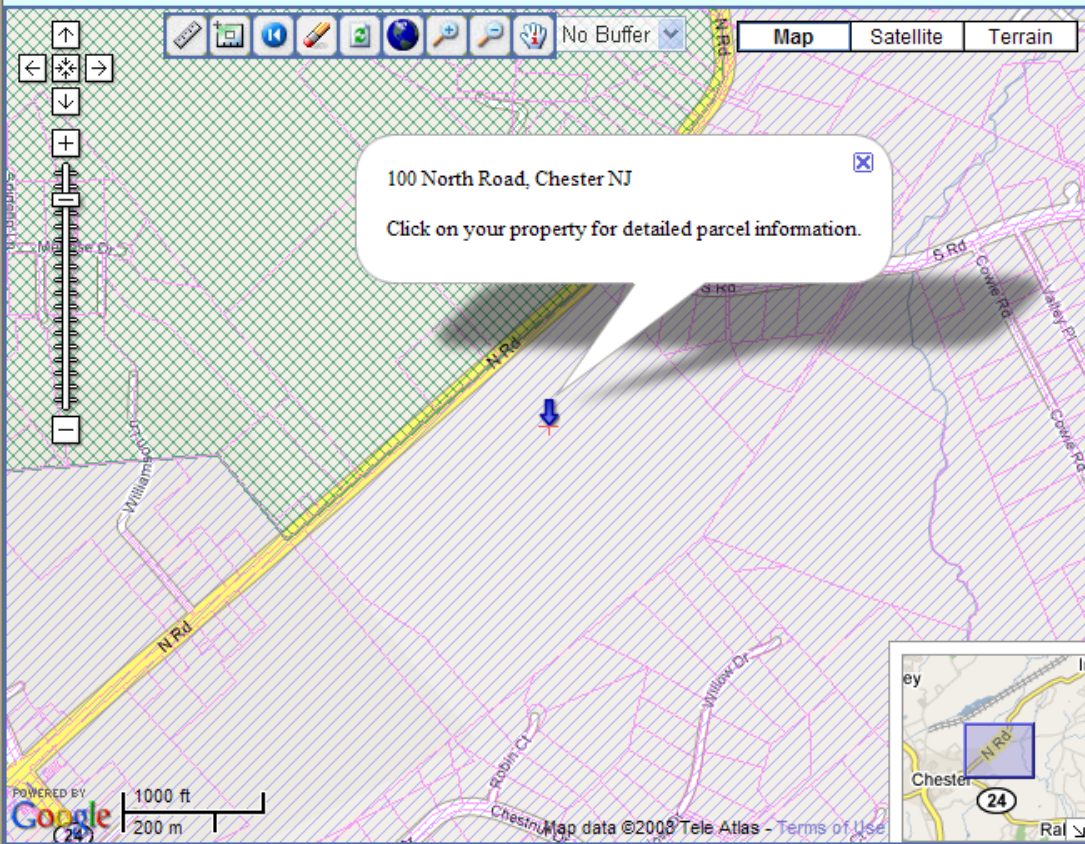
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Interactive Map

- Layer Desc. & Metadata



- ## LAYERS
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PARCEL INFORMATION

SEARCH

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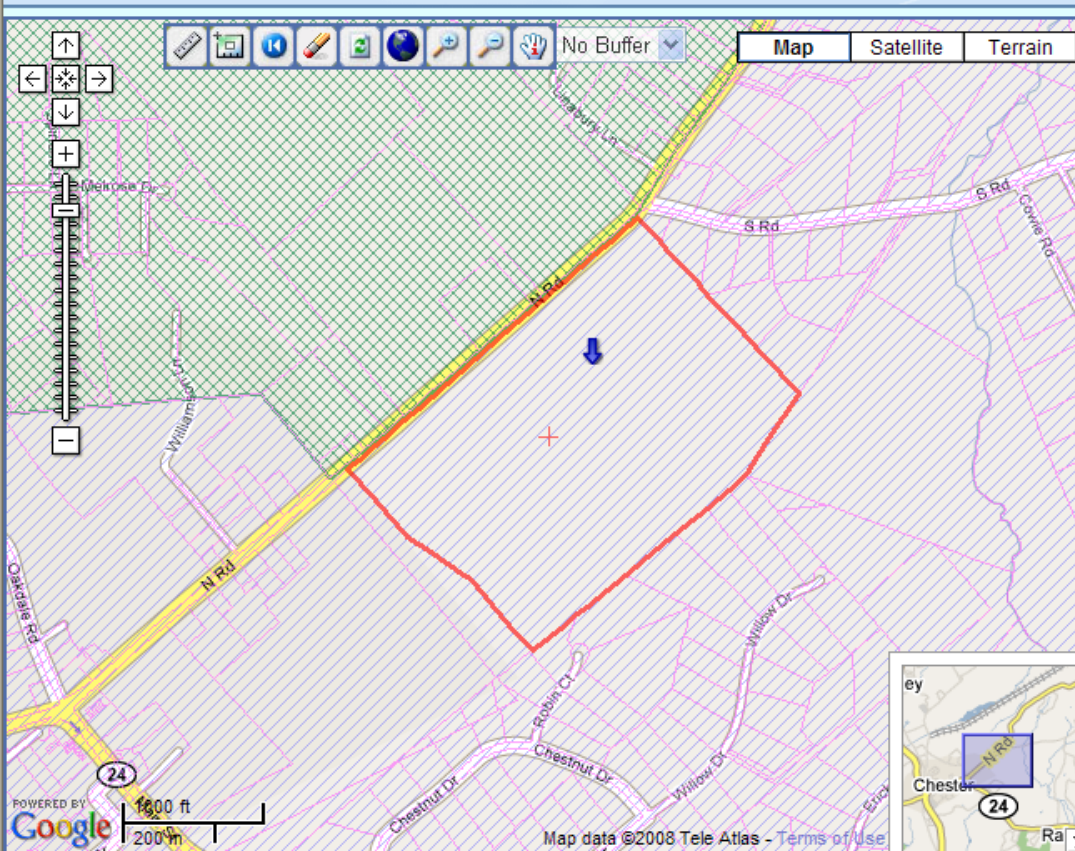
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OR 100 North Road, Chester, 07930

Township:

Block Lot

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PARCEL INFORMATION

Parcel Information [Print]

Block	26
Lot	78
Address	100 NORTH RD
Municipality	CHESTER TOWNSHIP
County	Morris
Highlands	Planning Area
Land Use Capability	Existing Community Environmentally Constrained Subzone, Existing Community Zone, Protection Zone
Zoning	IL
Qualification	00000

SEARCH

Address:

e.g., 100 North Road, Chester, NJ
OR 100 North Road, Chester, 07930

Township:

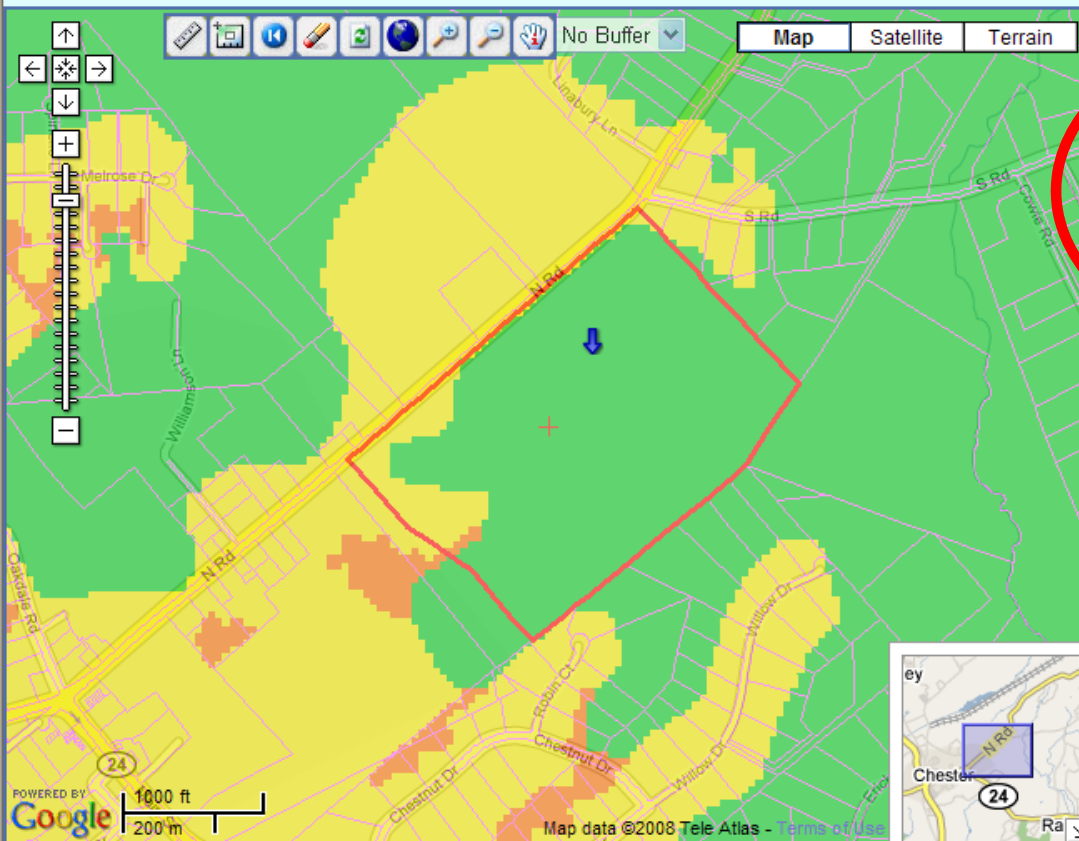
Block Lot

BLOCK	LOT	ADDRESS
26	78	100 NORTH RD
26.01	78	10 WINDING WAY
26.04	78	49 OLD MILL RD



Interactive Map

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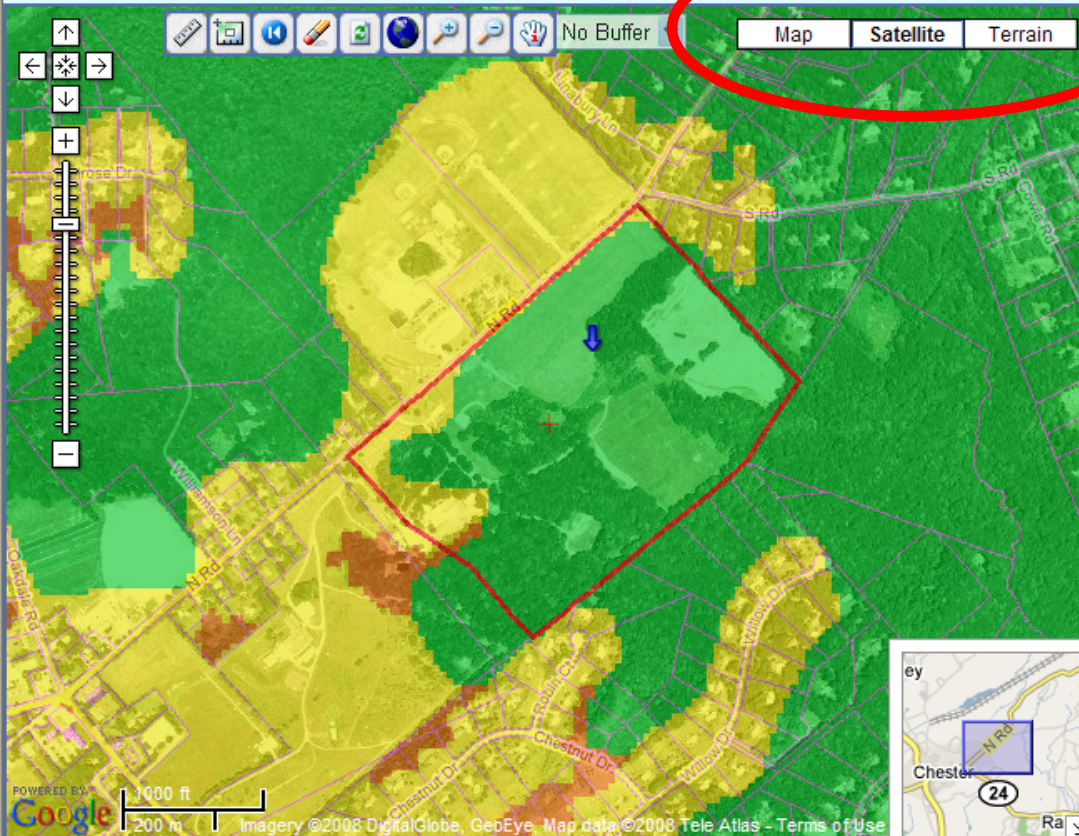
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Interactive Map

- Layer Desc. & Metadata

No Buffer

Map Satellite Terrain

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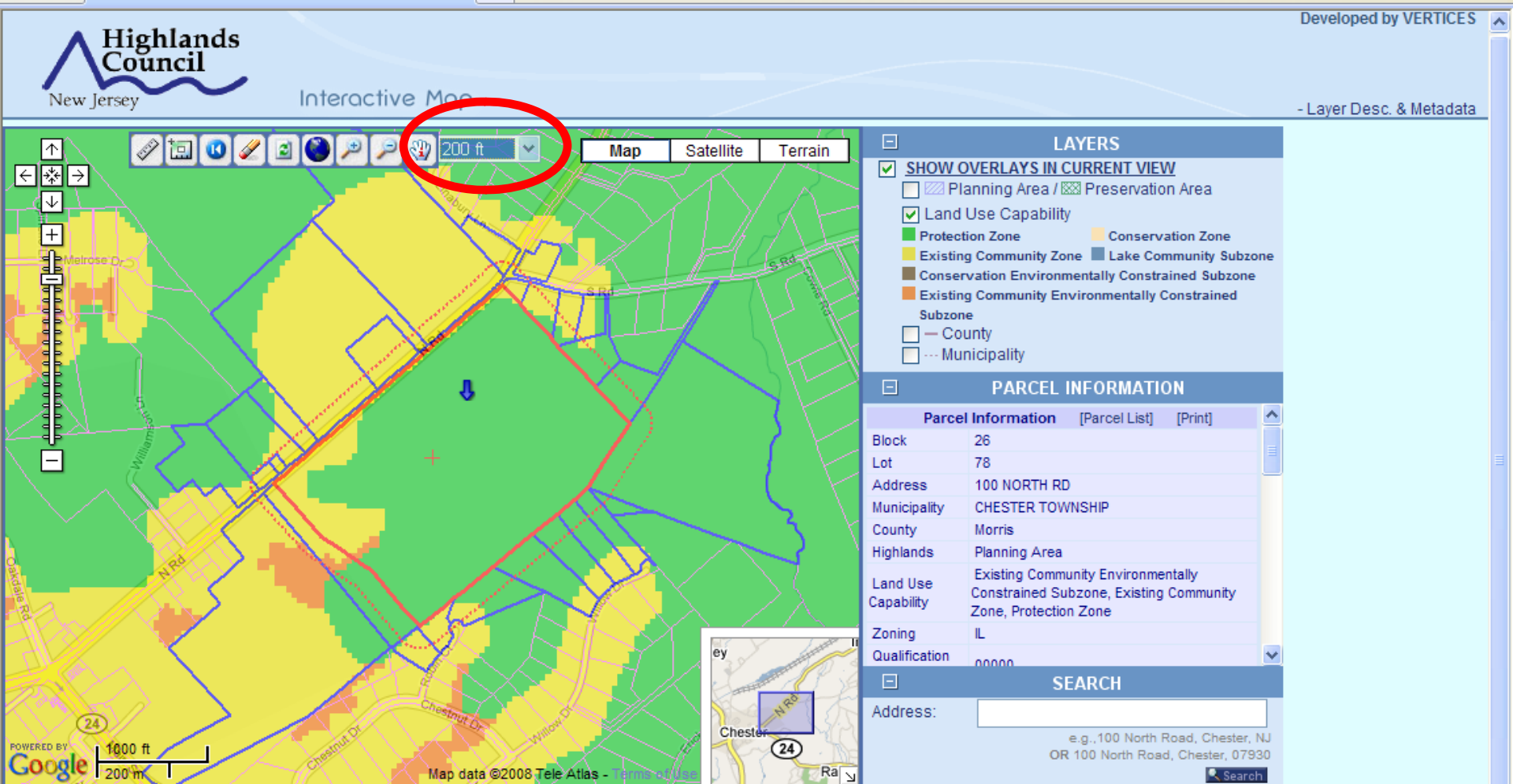
Address:

e.g., 100 North Road, Chester, NJ
OR 100 North Road, Chester, 07930

Township:

Block Lot

BLOCK	LOT	ADDRESS
26	78	100 NORTH RD
26.01	78	10 WINDING WAY
26.04	78	49 OLD MILL RD



LAYERS

☒ **SHOW OVERLAYS IN CURRENT VIEW**

☐ Planning Area / ☒ Preservation Area

☒ **Land Use Capability**

☒ Protection Zone ☐ Conservation Zone

☒ Existing Community Zone ☐ Lake Community Subzone

☒ Conservation Environmentally Constrained Subzone

☒ Existing Community Environmentally Constrained Subzone

☐ County

☐ Municipality

PARCEL INFORMATION

[Parcel Information](#) [\[Parcel List\]](#) [\[Print\]](#)

Block	26
Lot	78
Address	100 NORTH RD
Municipality	CHESTER TOWNSHIP
County	Morris
Highlands	Planning Area
Land Use Capability	Existing Community Environmentally Constrained Subzone, Existing Community Zone, Protection Zone
Zoning	IL
Qualification	00000

SEARCH

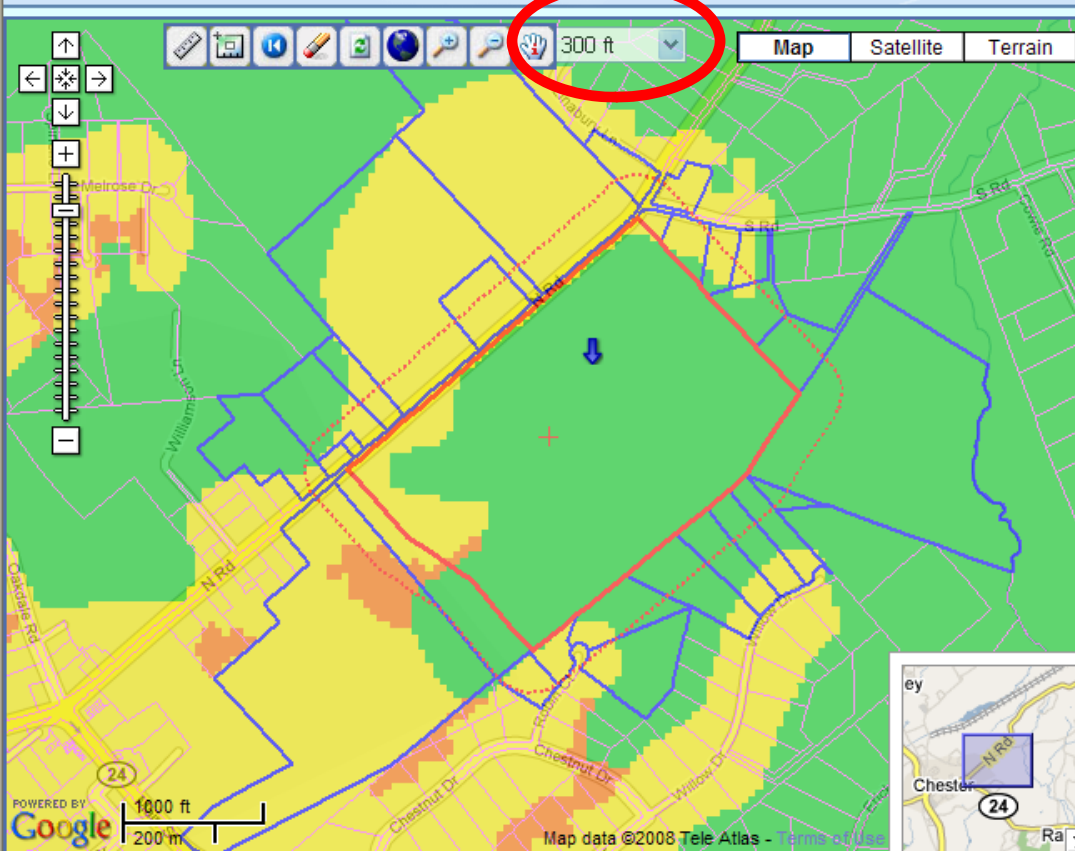
Address:

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Block Lot

BLOCK	LOT	ADDRESS
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LAYERS

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PARCEL INFORMATION

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Qualification	00000

SEARCH

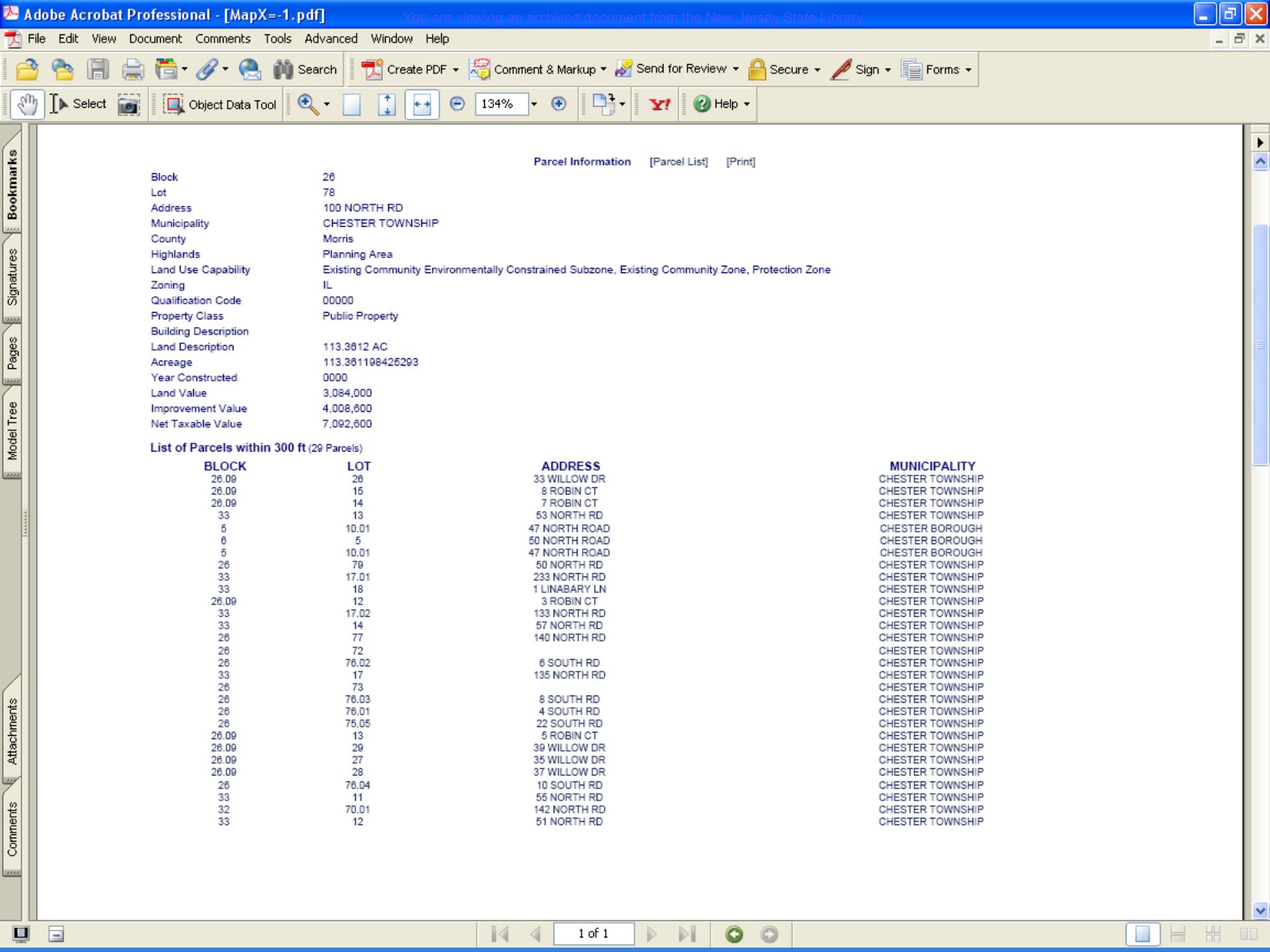
Address:

e.g., 100 North Road, Chester, NJ
OR 100 North Road, Chester, 07930

Township:

Block Lot

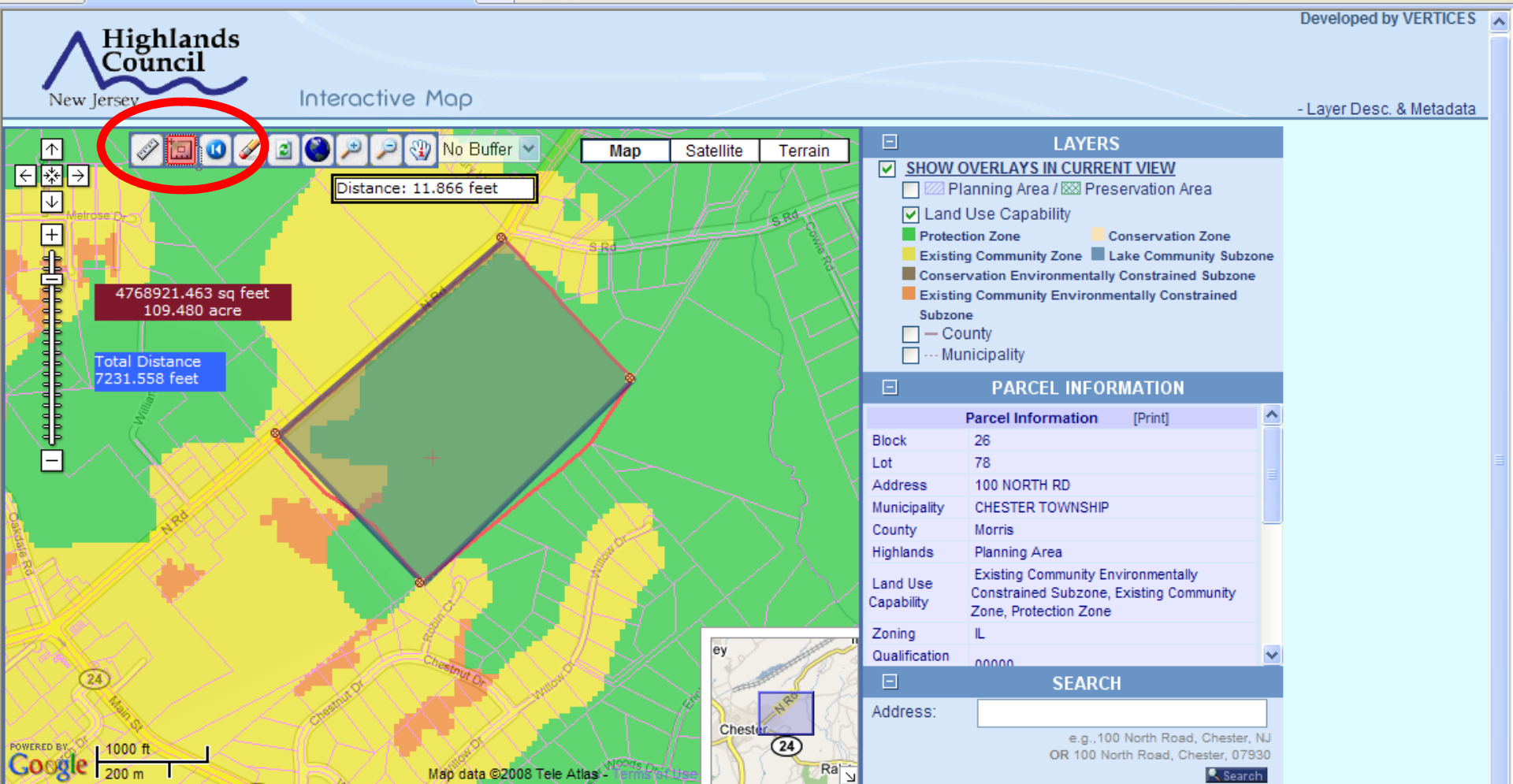
BLOCK	LOT	ADDRESS
26	78	100 NORTH RD
26.01	78	10 WINDING WAY
26.04	78	49 OLD MILL RD

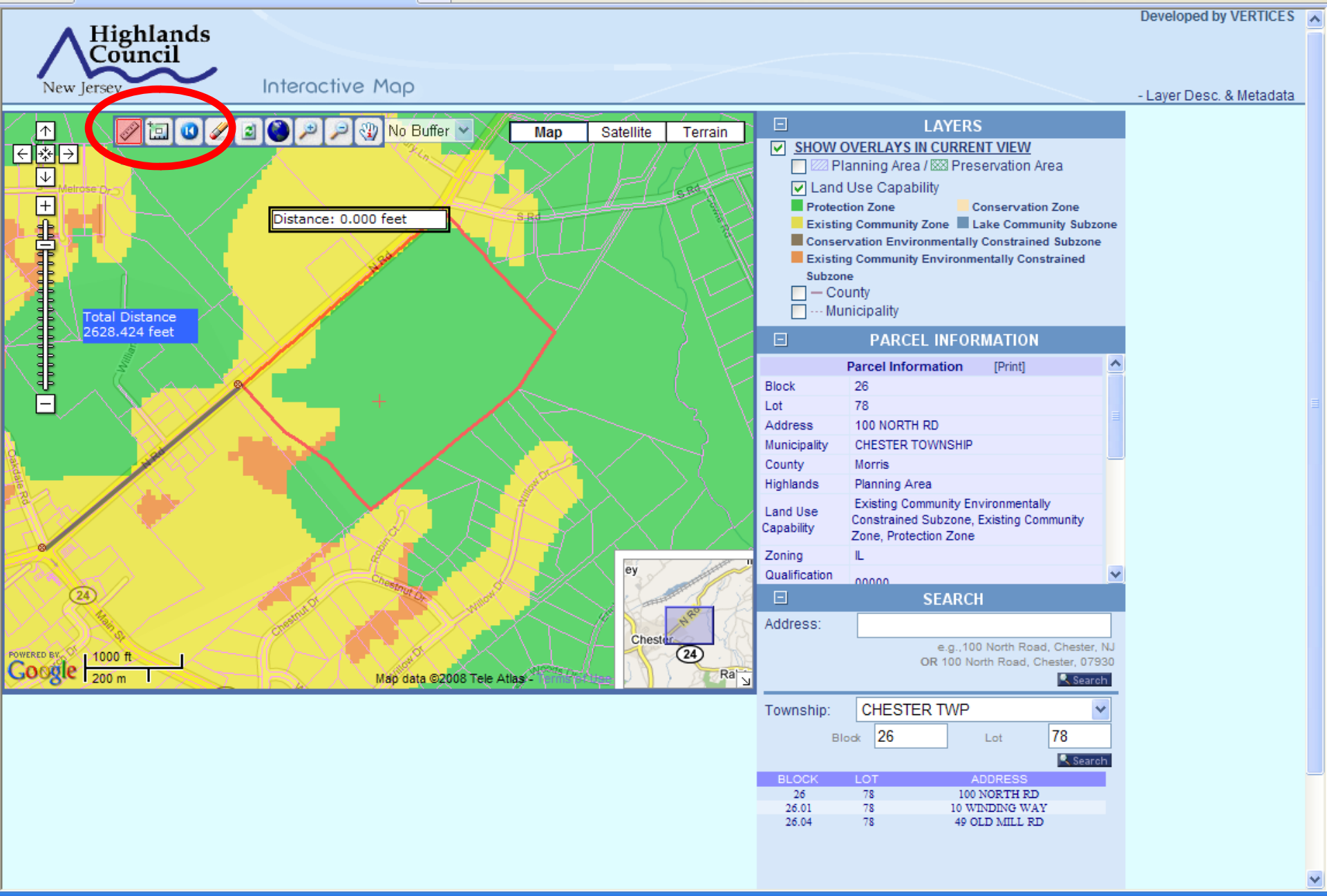


Block		26
Lot		78
Address		100 NORTH RD
Municipality		CHESTER TOWNSHIP
County		Morris
Highlands		Planning Area
Land Use Capability		Existing Community Environmentally Constrained Subzone, Existing Community Zone, Protection Zone
Zoning		IL
Qualification Code		00000
Property Class		Public Property
Building Description		
Land Description		113.3812 AC
Acreage		113.381198426293
Year Constructed		0000
Land Value		3,084,000
Improvement Value		4,008,600
Net Taxable Value		7,092,600

List of Parcels within 300 ft (29 Parcels)

BLOCK	LOT	ADDRESS	MUNICIPALITY
26.09	26	33 WILLOW DR	CHESTER TOWNSHIP
26.09	15	8 ROBIN CT	CHESTER TOWNSHIP
26.09	14	7 ROBIN CT	CHESTER TOWNSHIP
33	13	53 NORTH RD	CHESTER TOWNSHIP
5	10.01	47 NORTH ROAD	CHESTER BOROUGH
6	5	50 NORTH ROAD	CHESTER BOROUGH
5	10.01	47 NORTH ROAD	CHESTER BOROUGH
26	79	50 NORTH RD	CHESTER TOWNSHIP
33	17.01	233 NORTH RD	CHESTER TOWNSHIP
33	18	1 LINABARY LN	CHESTER TOWNSHIP
26.09	12	3 ROBIN CT	CHESTER TOWNSHIP
33	17.02	133 NORTH RD	CHESTER TOWNSHIP
33	14	57 NORTH RD	CHESTER TOWNSHIP
26	77	140 NORTH RD	CHESTER TOWNSHIP
26	72		CHESTER TOWNSHIP
26	76.02	6 SOUTH RD	CHESTER TOWNSHIP
33	17	135 NORTH RD	CHESTER TOWNSHIP
26	73		CHESTER TOWNSHIP
26	76.03	8 SOUTH RD	CHESTER TOWNSHIP
26	76.01	4 SOUTH RD	CHESTER TOWNSHIP
26	75.05	22 SOUTH RD	CHESTER TOWNSHIP
26.09	13	5 ROBIN CT	CHESTER TOWNSHIP
26.09	29	39 WILLOW DR	CHESTER TOWNSHIP
26.09	27	35 WILLOW DR	CHESTER TOWNSHIP
26.09	28	37 WILLOW DR	CHESTER TOWNSHIP
26	76.04	10 SOUTH RD	CHESTER TOWNSHIP
33	11	55 NORTH RD	CHESTER TOWNSHIP
32	70.01	142 NORTH RD	CHESTER TOWNSHIP
33	12	51 NORTH RD	CHESTER TOWNSHIP





Consistency Application

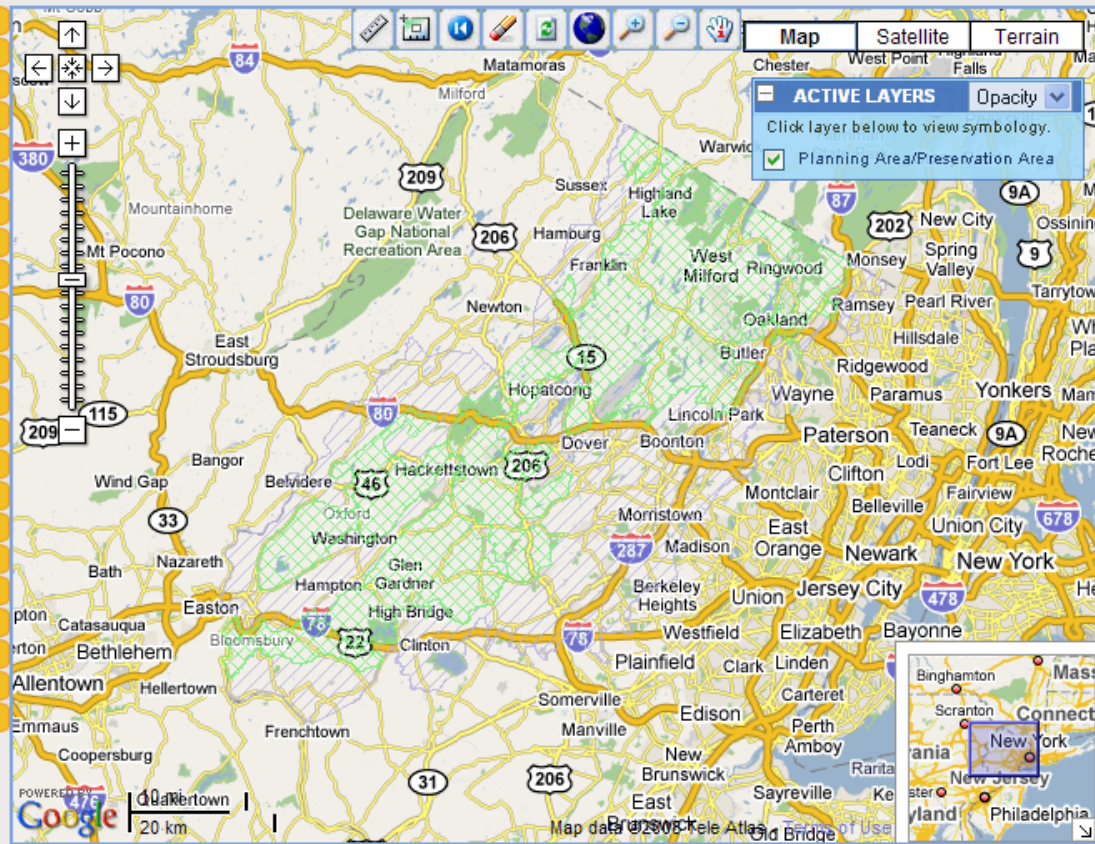
Highlands Interactive Map



Interactive Map

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
- ☐ Search
- ☐ Parcel Information
- ☐ Administration
- ☐ Forest Resources
- ☐ Open Waters
- ☐ Riparian
- ☐ Topography
- ☐ Critical Habitat
- ☐ Preserved Open Space & Agricultural Lands
- ☐ Geology
- ☐ Water Capacity
- ☐ Water Quality
- ☐ Contaminated Sites
- ☐ Potable Waters
- ☐ Waste Water
- ☐ Septic System Yield
- ☐ Agricultural Resources
- ☐ Historical, Archaeological & Scenic Resources
- ☐ Transportation & Transit Conditions
- ☐ State Planning Areas & Designated Centers
- ☐ Transfer of Development Rights
- ☐ Zoning



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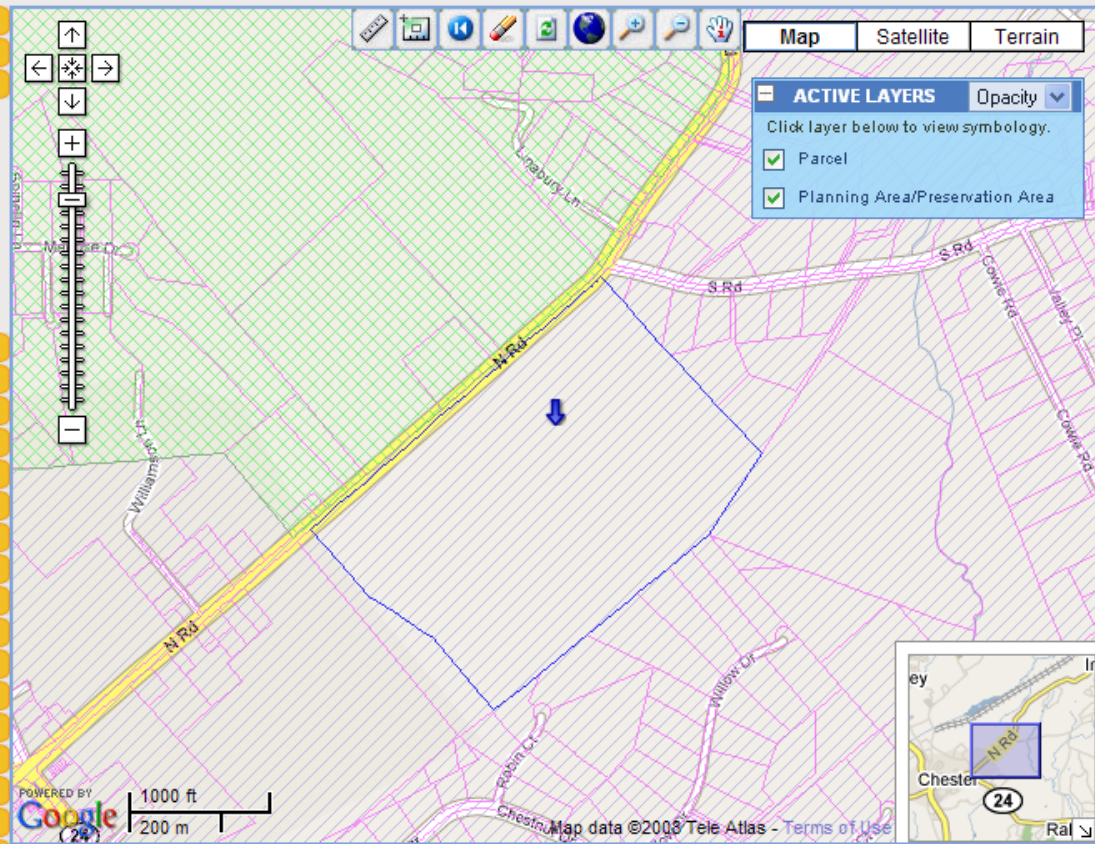
Interactive Map

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
- ☐ Search
- ☐ Parcel Information

Block: 00026
 Lot: 00078
 Address: 100 NORTH RD
 Municipality: CHESTER TOWNSHIP
 County: Morris

- ☐ Administration
- ☐ Forest Resources
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- ☐ Transfer of Development Rights
- ☐ Zoning



ACTIVE LAYERS Opacity ▾

Click layer below to view symbology.

- ☒ Parcel
- ☒ Planning Area/Preservation Area

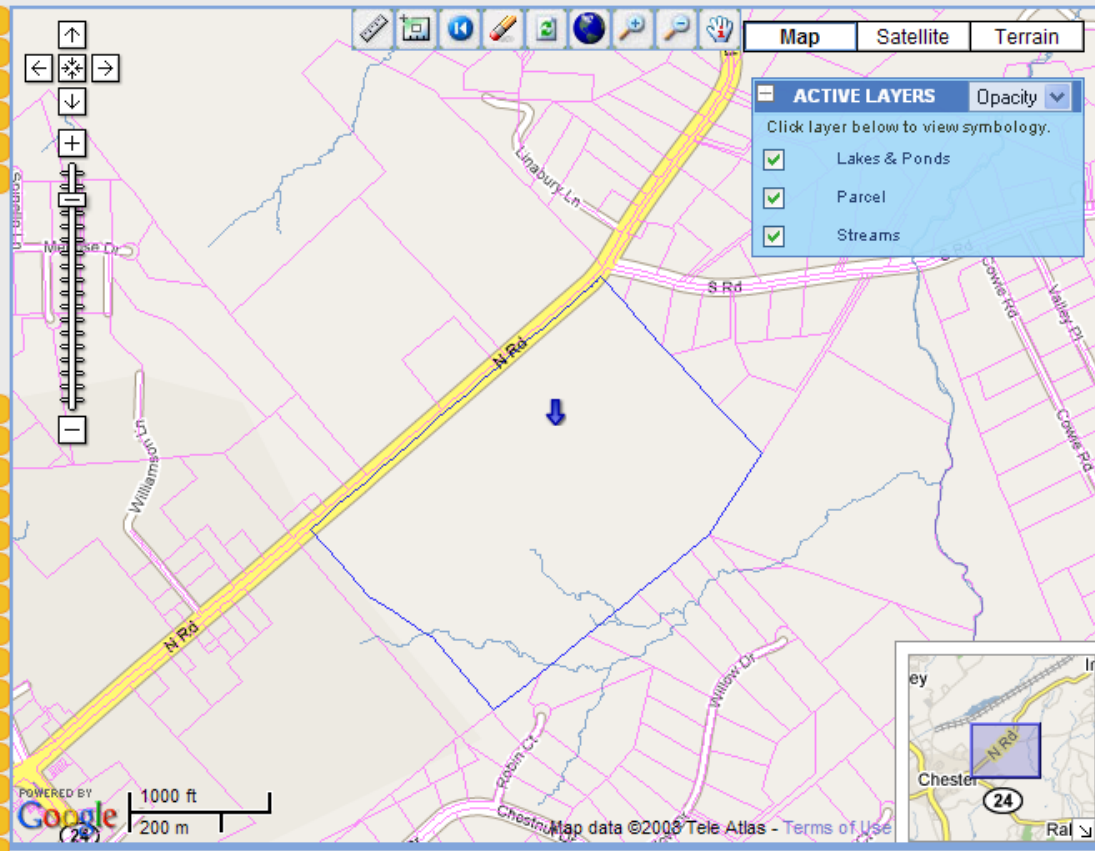
This site is powered by Open Source Software - PostgreSQL and MapServer.



Interactive Map

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
- ☐ Search
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- ☐ Administration
- ☐ Forest Resources
- ☐ Open Waters
 - ☒ Streams
 - ☒ Lakes & Ponds
 - ☐ Wetlands
 - ☐ Open Water Protection Area
 - ☐ HUC14 Water Availability
 - ☐ Watershed Values
 - ☐ HIGH
 - ☐ MODERATE
 - ☐ LOW
- ☐ Riparian
- ☐ Topography
- ☐ Critical Habitat
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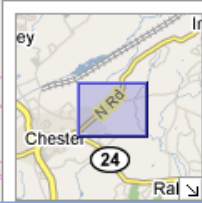


Map Satellite Terrain

ACTIVE LAYERS Opacity

Click layer below to view symbology.

- ☒ Lakes & Ponds
- ☒ Parcel
- ☒ Streams



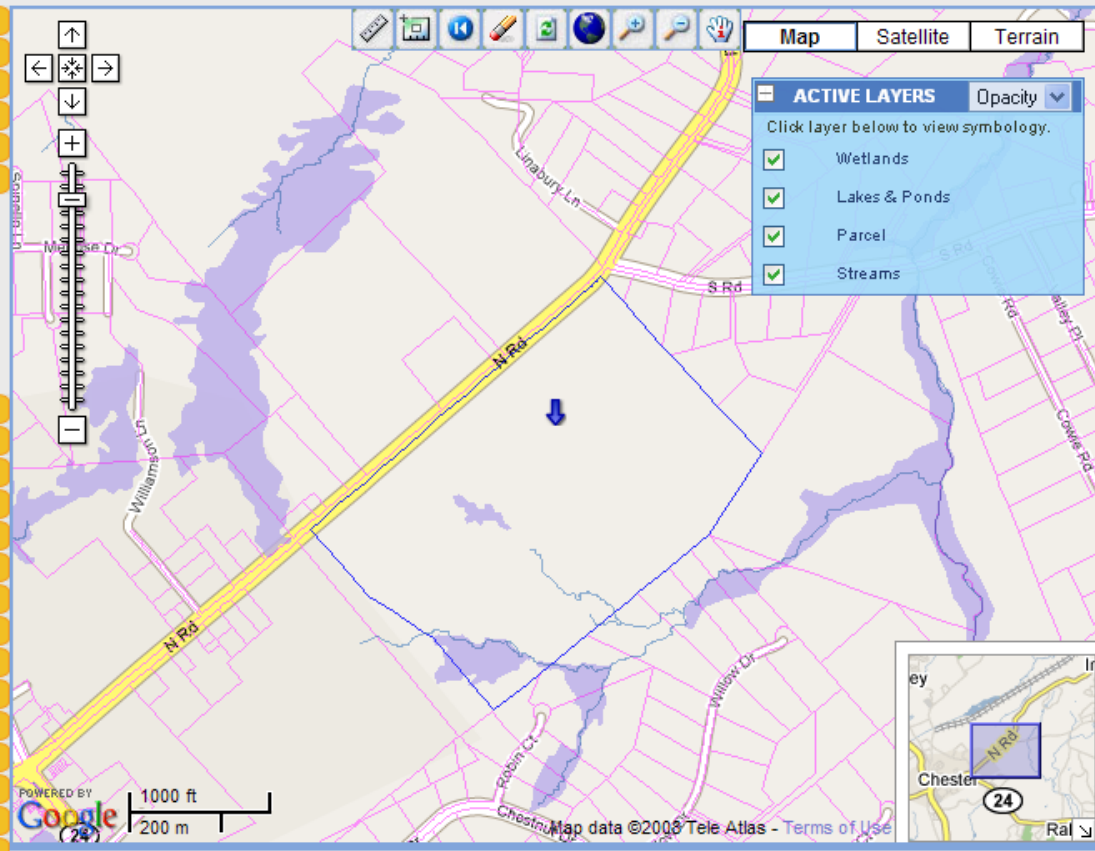
This site is powered by Open Source Software - PostgreSQL and MapServer.



Interactive Map

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
- ☐ Search
- ☐ Parcel Information
- ☐ Environmental Protection
- ☐ Forest Resources
- ☐ Open Waters
 - ☒ Streams
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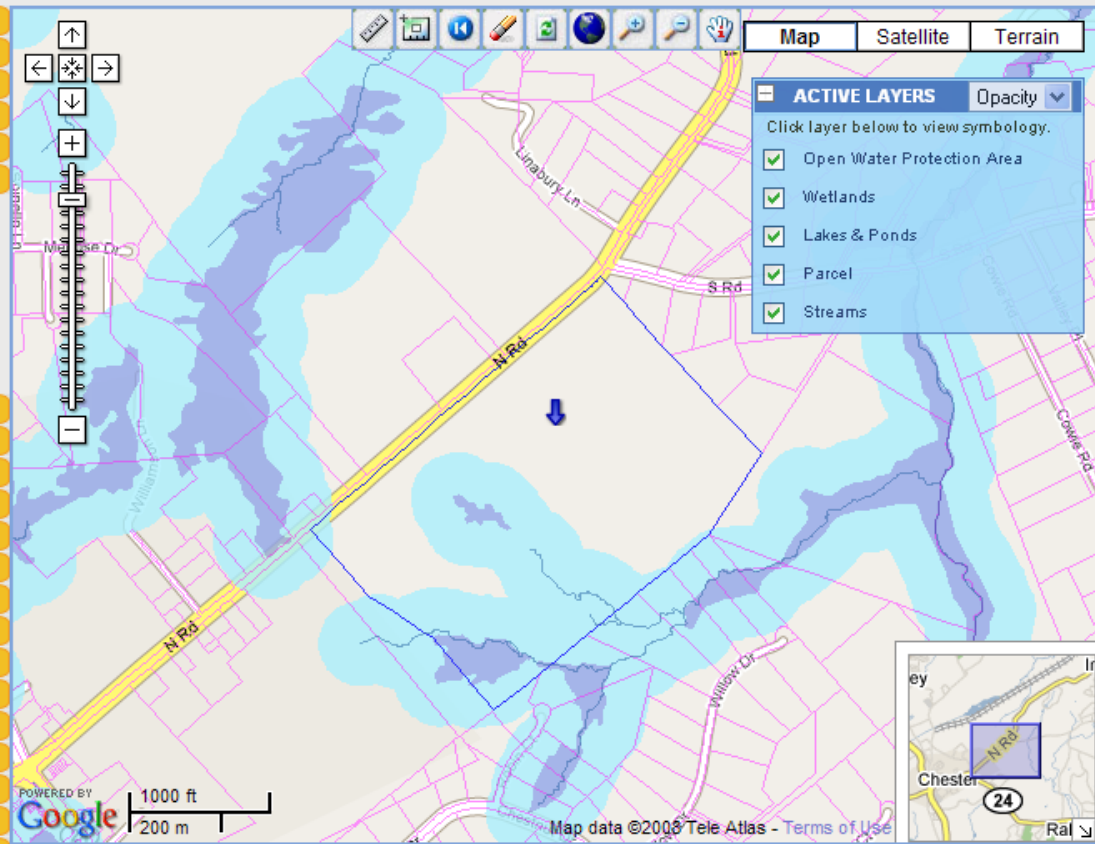
This site is powered by Open Source Software - PostgreSQL and MapServer.



Interactive Map

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- ☒ State Planning Areas & Designated Centers
- ☒ Transfer of Development Rights
- ☒ Zoning



Map Satellite Terrain

ACTIVE LAYERS Opacity

Click layer below to view symbology.

- ☒ Open Water Protection Area
- ☒ Wetlands
- ☒ Lakes & Ponds
- ☒ Parcel
- ☒ Streams

This site is powered by Open Source Software - PostgreSQL and MapServer.

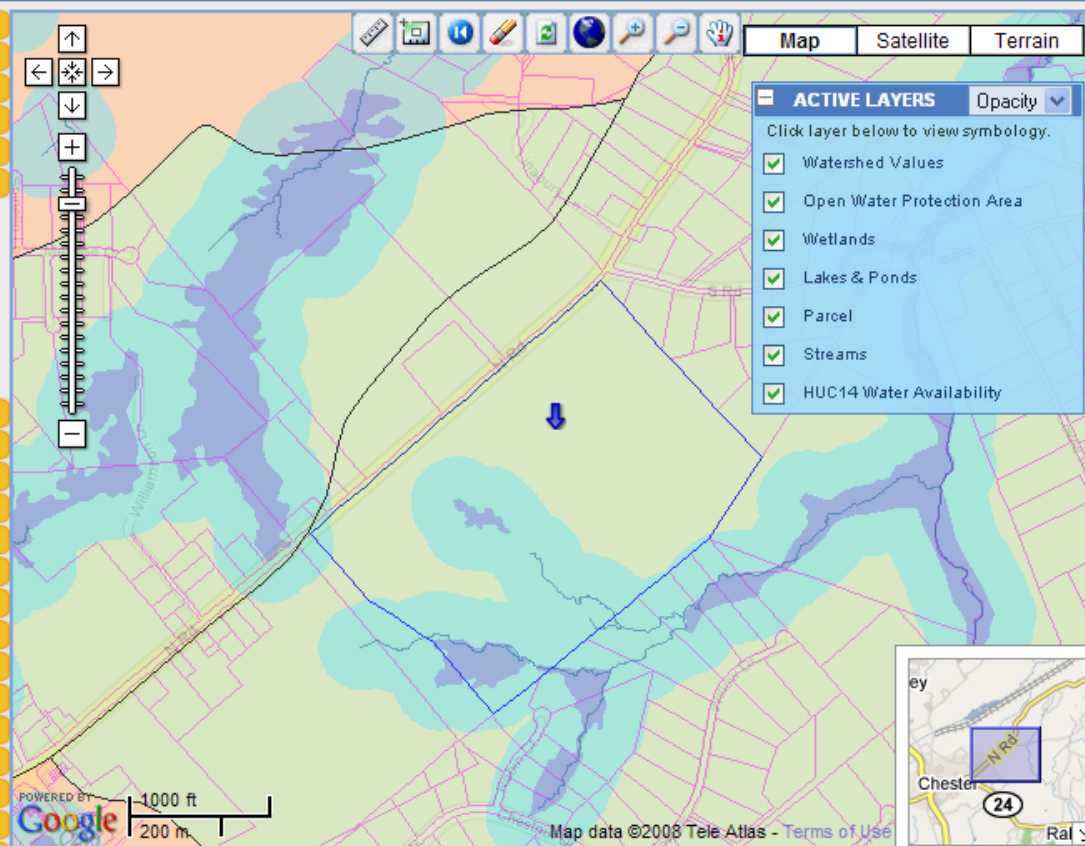


Interactive Map

Developed by VERTICES

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
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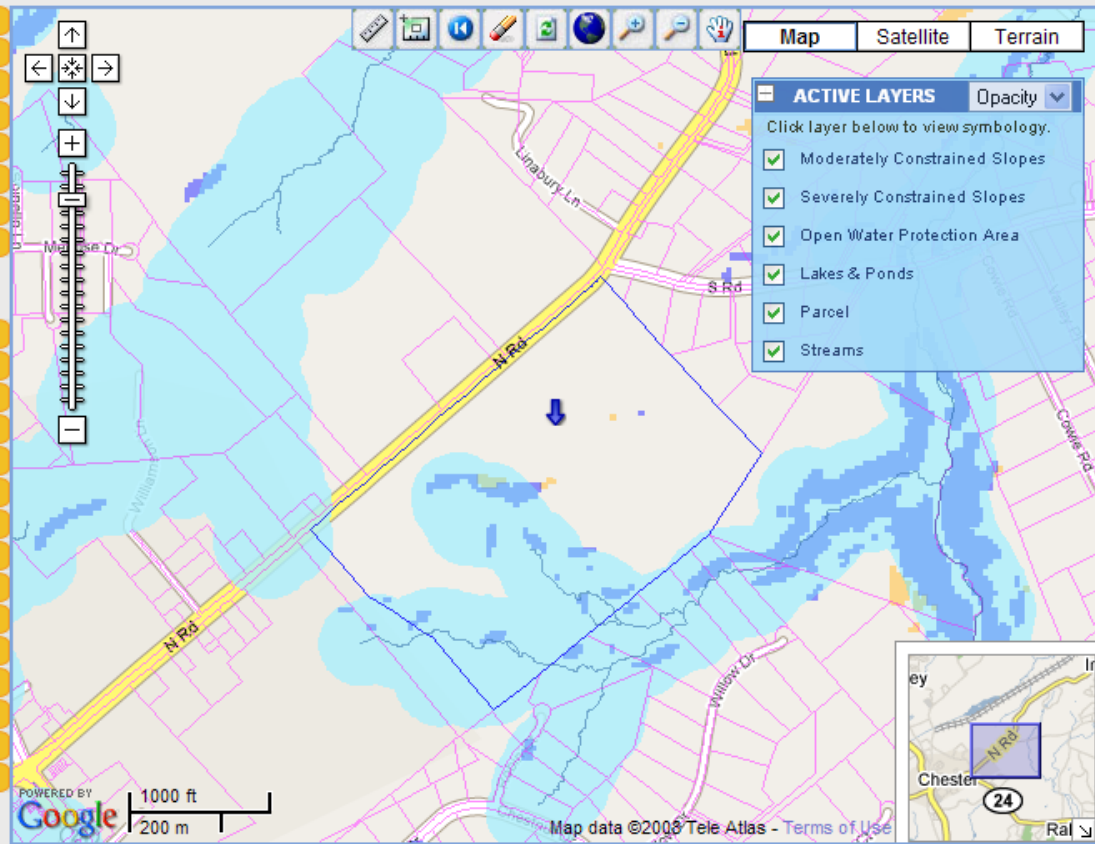
This site is powered by Open Source Software - PostgreSQL and MapServer.



Interactive Map

3-D Birds Eye View Help Meta

- ☒ Turn off All Layers
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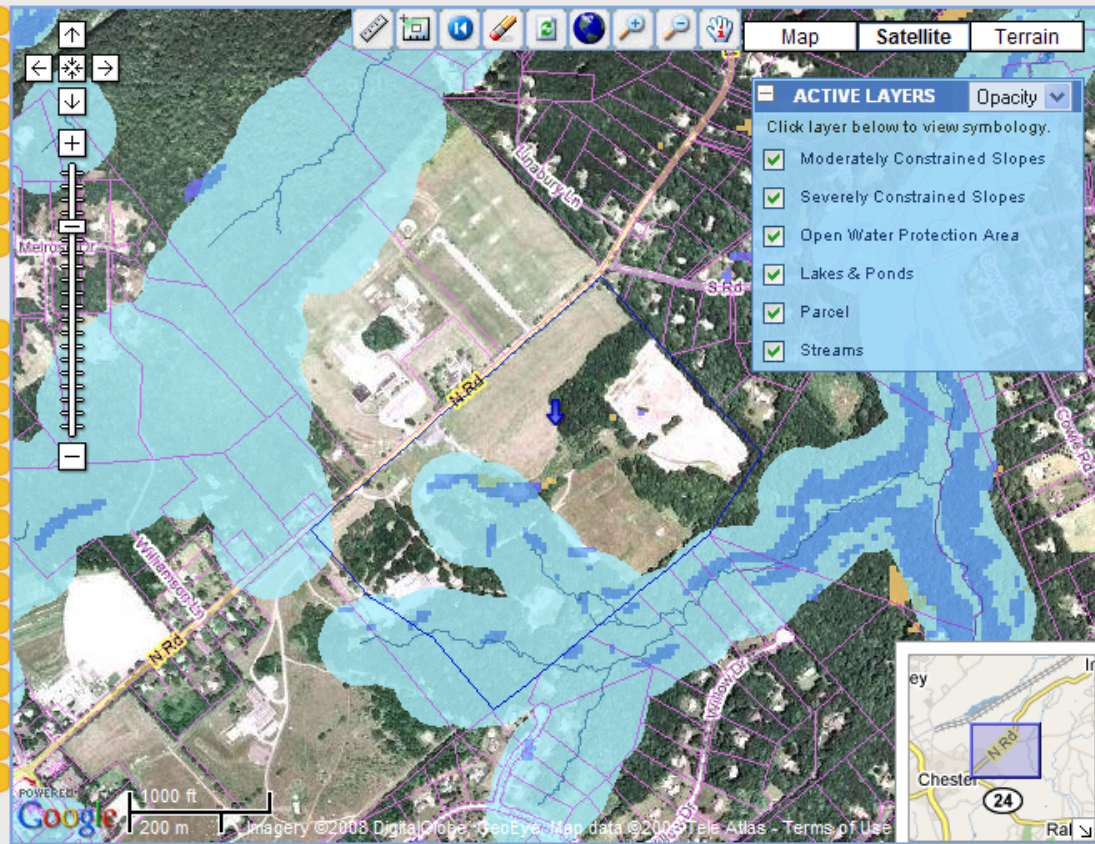


Interactive Map

Developed by VERTICES

3-D Birds Eye View Help Meta

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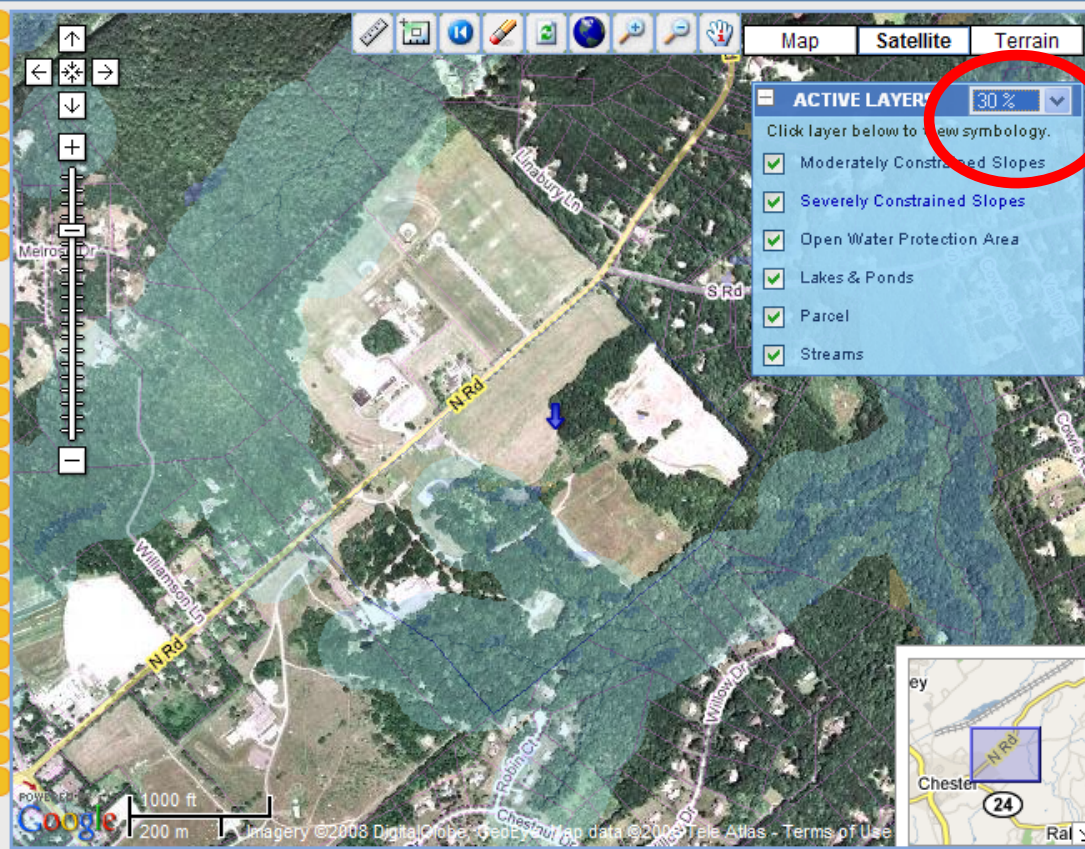
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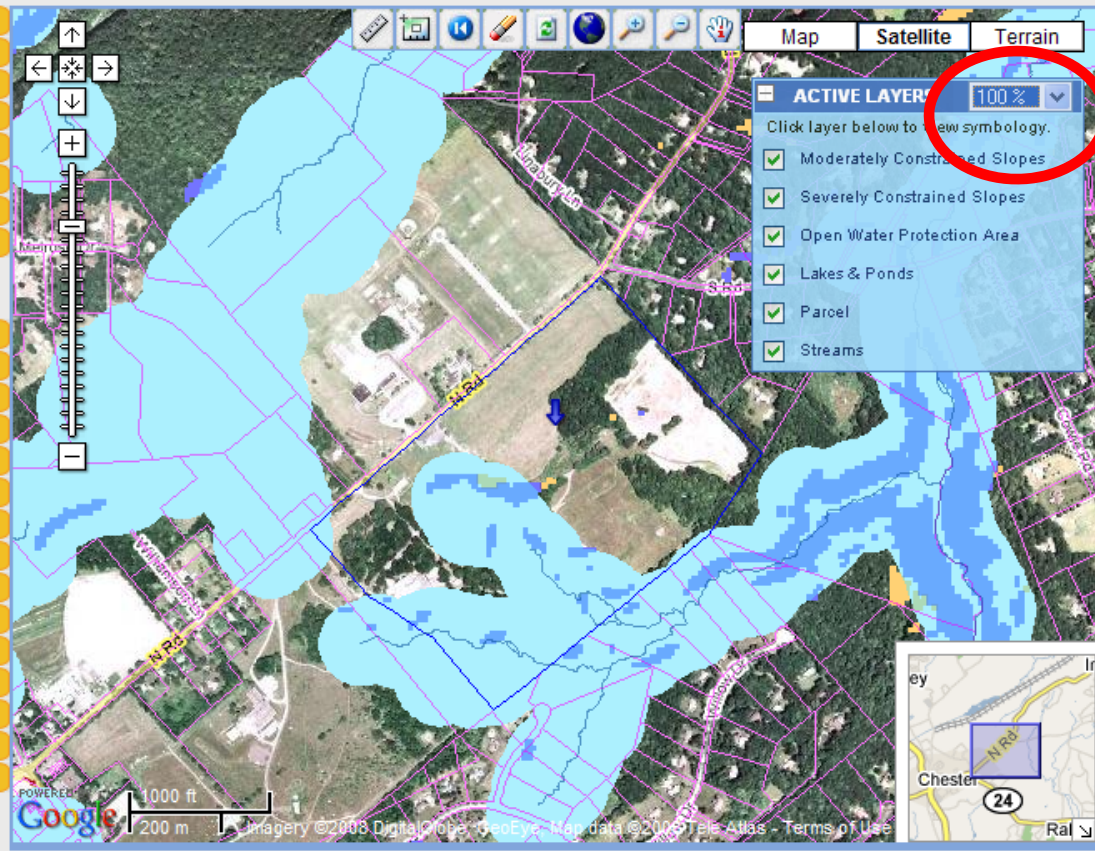
This site is powered by Open Source Software - PostgreSQL and MapServer.



Interactive Map

3-D Birds Eye View Help Meta

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- ☐ Zoning



Map Satellite Terrain

ACTIVE LAYERS 100%

Click layer below to view symbology.

- ☒ Moderately Constrained Slopes
- ☒ Severely Constrained Slopes
- ☒ Open Water Protection Area
- ☒ Lakes & Ponds
- ☒ Parcel
- ☒ Streams

http://maps.njhighlands.org/highlands.asp?x=-74.66678738594055&y=40.7938310581158&z=17 - Windows Internet Explorer

Google

2D 3D Road Aerial Hybrid Bird's eye <<

North Rd 513

Microsoft Virtual Earth™

100 yds

© 2007 Microsoft Corporation © 2007 NAVTEQ © 2007 USGS Image courtesy of USGS

Developed by VERTICES

3-D Birds Eye View Help Meta

Terrain

Opacity

Symbolology

Reservation Area

Water Capacity

Water Quality

Contaminated Sites

Potable Waters

Waste Water

Septic System Yield

start

Inbox - Mic... Pandora R... Document7... NJ Highlan... http://map... untitled - P... Microsoft P...

7:38 PM

http://maps.njhighlands.us/hgis/ms.asp?x=-74.66772079467773&y=40.79558547994555&z=15 - Windows Internet Ex...

Google

Developed by VERTICES

3-D Birds Eye View Help Meta

Terrain

100 %

Symbolology

Shaded Slopes

Steepest Slopes

Watershed Area

Microsoft Virtual Earth™

40 yds

© 2007 Microsoft Corporation © 2007 Pictometry International Corp.

24

Ral

Map interface showing a 3D aerial view of a building complex and surrounding terrain. The interface includes a navigation toolbar on the left with a compass and zoom controls, a top menu bar with map styles (2D, 3D, Road, Aerial, Hybrid, Bird's eye), and a right sidebar with a '3-D Birds Eye View' button and a 'Terrain' panel. The main map area displays a 3D aerial view of a building complex and surrounding terrain. A scale bar indicates 40 yards. The bottom of the map shows copyright information for Microsoft and Pictometry International Corp.

http://maps.njhighlands.us/hgis/ms.asp?x=-74.66777079467773&y=40.79558547994555&z=15 - Windows Internet Ex...

Google

Developed by VERTICES

3-D Birds Eye View Help Meta

Terrain

100 %

Symbolology

Shaded Slopes

Unshaded Slopes

Watershed Area

Microsoft Virtual Earth™

40 yds

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http://maps.njhighlands.us/hgis/ms.asp?x=-74.66772079467773&y=40.79558547994555&z=15 - Windows Internet Ex...

Google

Developed by VERTICES

3-D Birds Eye View Help Meta

Terrain

100 %

Symbolology

Shaded Slopes

Steepest Slopes

Watershed Area

Microsoft Virtual Earth™

40 yds

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http://maps.njhighlands.us/hgis/ms.asp?x=-74.66772079467773&y=40.79558547994555&z=15 - Windows Internet Ex...

Google

2D 3D Road Aerial Hybrid **Bird's eye**

W
S N
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↺
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Microsoft Virtual Earth™

20 yds

© 2007 Microsoft Corporation © 2007 Pictometry International Corp.

Developed by VERTICES

3-D Birds Eye View Help Meta

Terrain

100 %

Symbolology
Slopes
Slopes
Area

N Rd
24
Ral

RMP Updates Applications

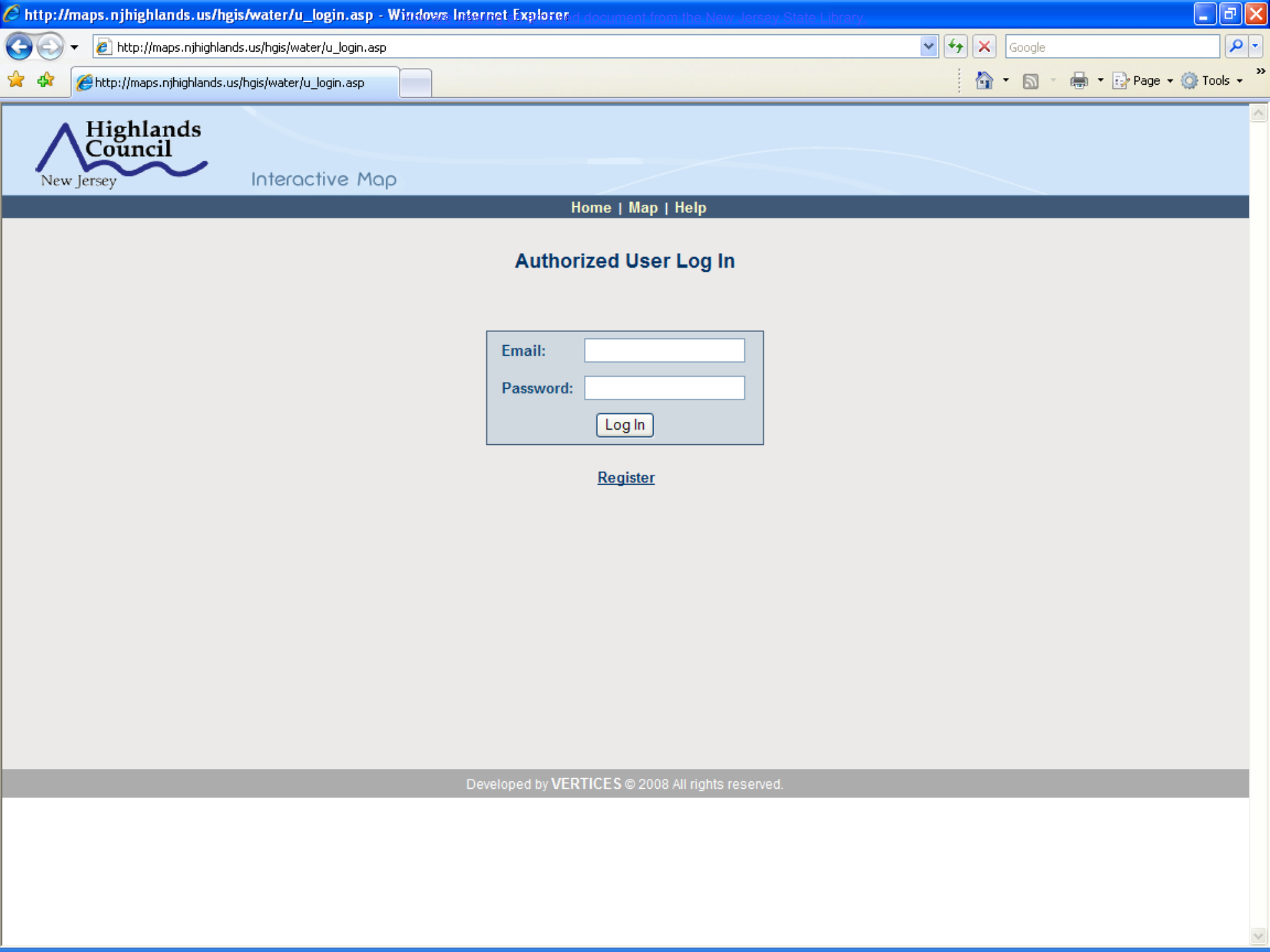


Interactive Map

Admin

The Highlands Council Water and Waste Water Update Application

- Go To Map
- Authorized User Profile / Register



Interactive Map

[Home](#) | [Map](#) | [Help](#)

Authorized User Log In

Email:	
Password:	
Log In	

[Register](#)



* indicates required fields for your registration.

Company Name:		*
Street Address:		*
City:		*
State:		*
Zip Code:		*
Email:		*
Contact First Name:		*
Contact Last Name:		*
Primary Phone Number:		*
Alternate Phone Number:		
Title / Position:		

Submit



Interactive Map

View the same area in Microsoft Virtual Earth

- Layer Desc. & Metadata

Search

Address:

e.g., 100 North Road, Chester, NJ
OR 100 North Road, Chester, 07930

Township:

Block: Lot:

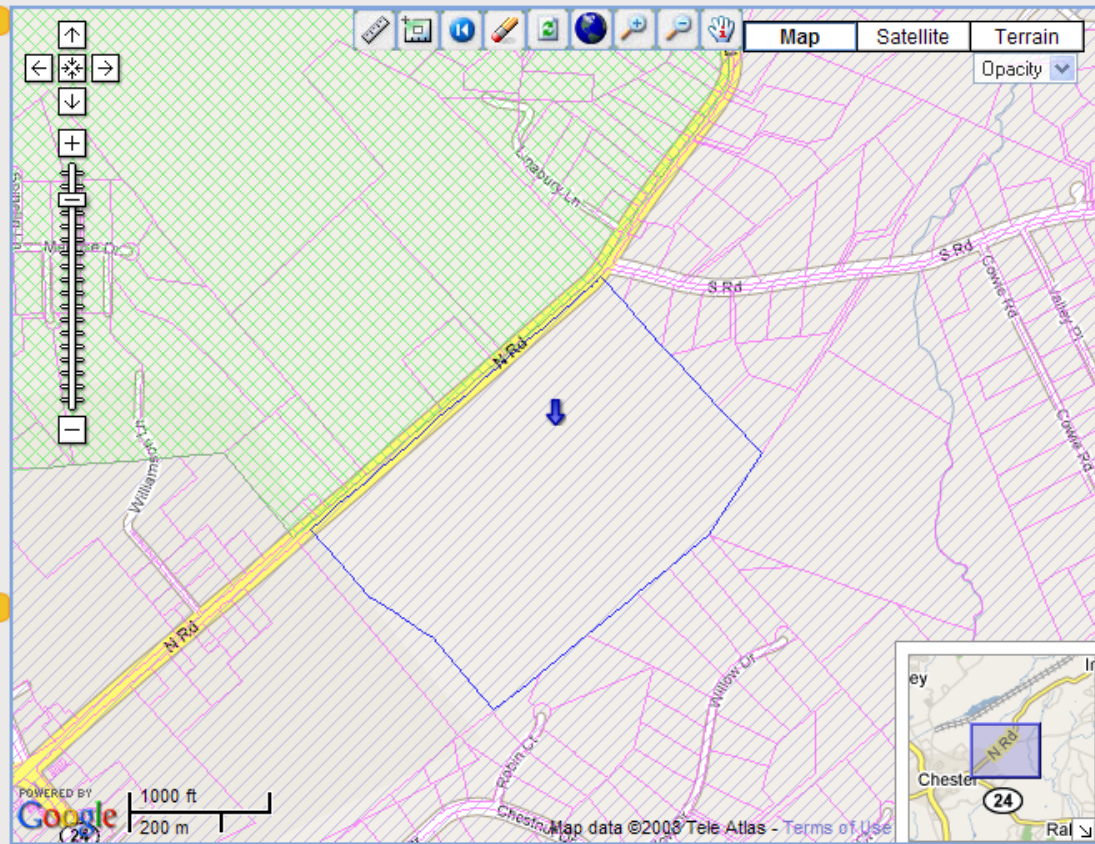
How to find a property:

Type in an address or select a municipality with a specific block and lot. Then click on a property or select a property from the list below for detailed parcel information.

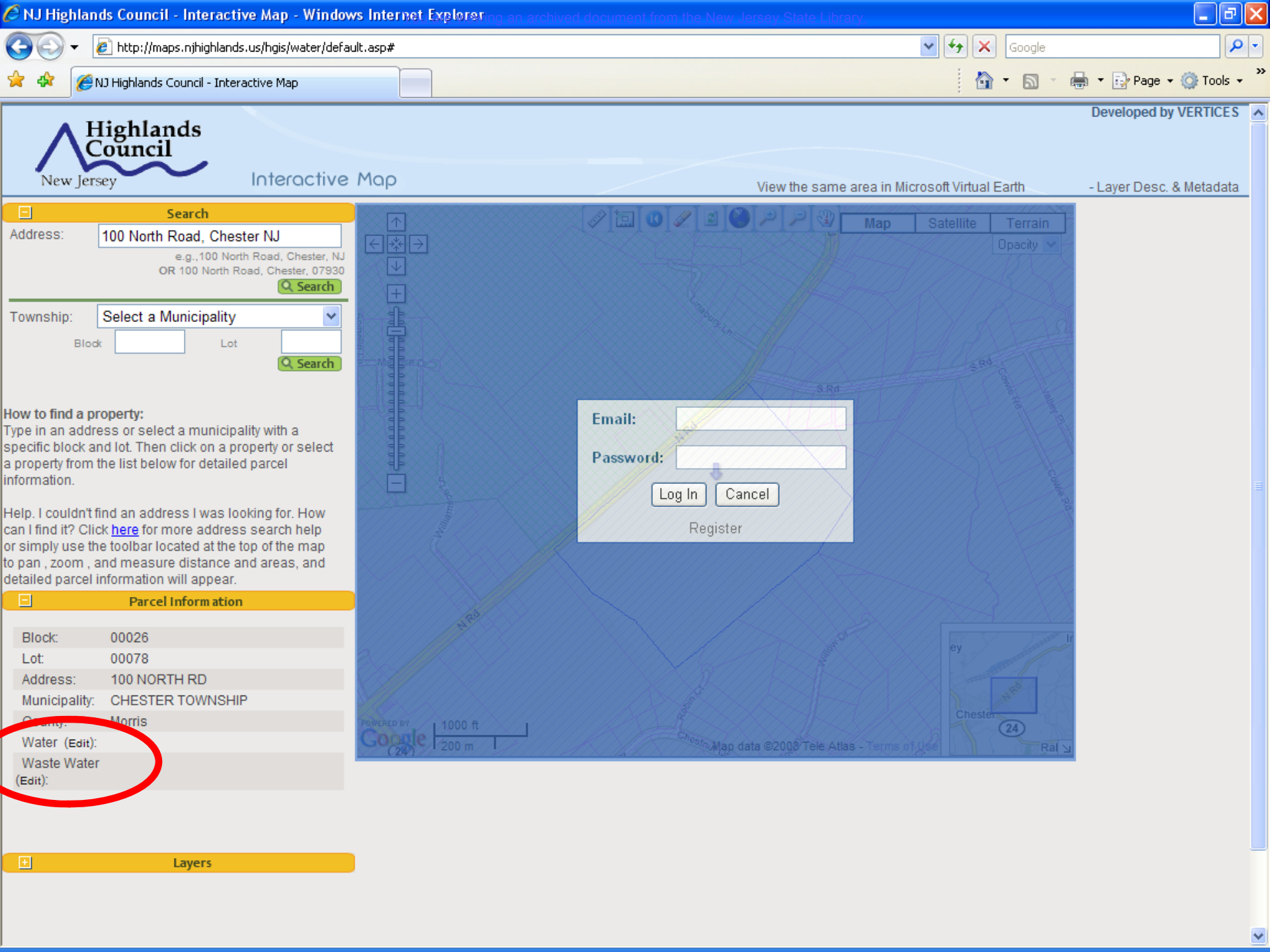
Help. I couldn't find an address I was looking for. How can I find it? Click [here](#) for more address search help or simply use the toolbar located at the top of the map to pan, zoom, and measure distance and areas, and detailed parcel information will appear.

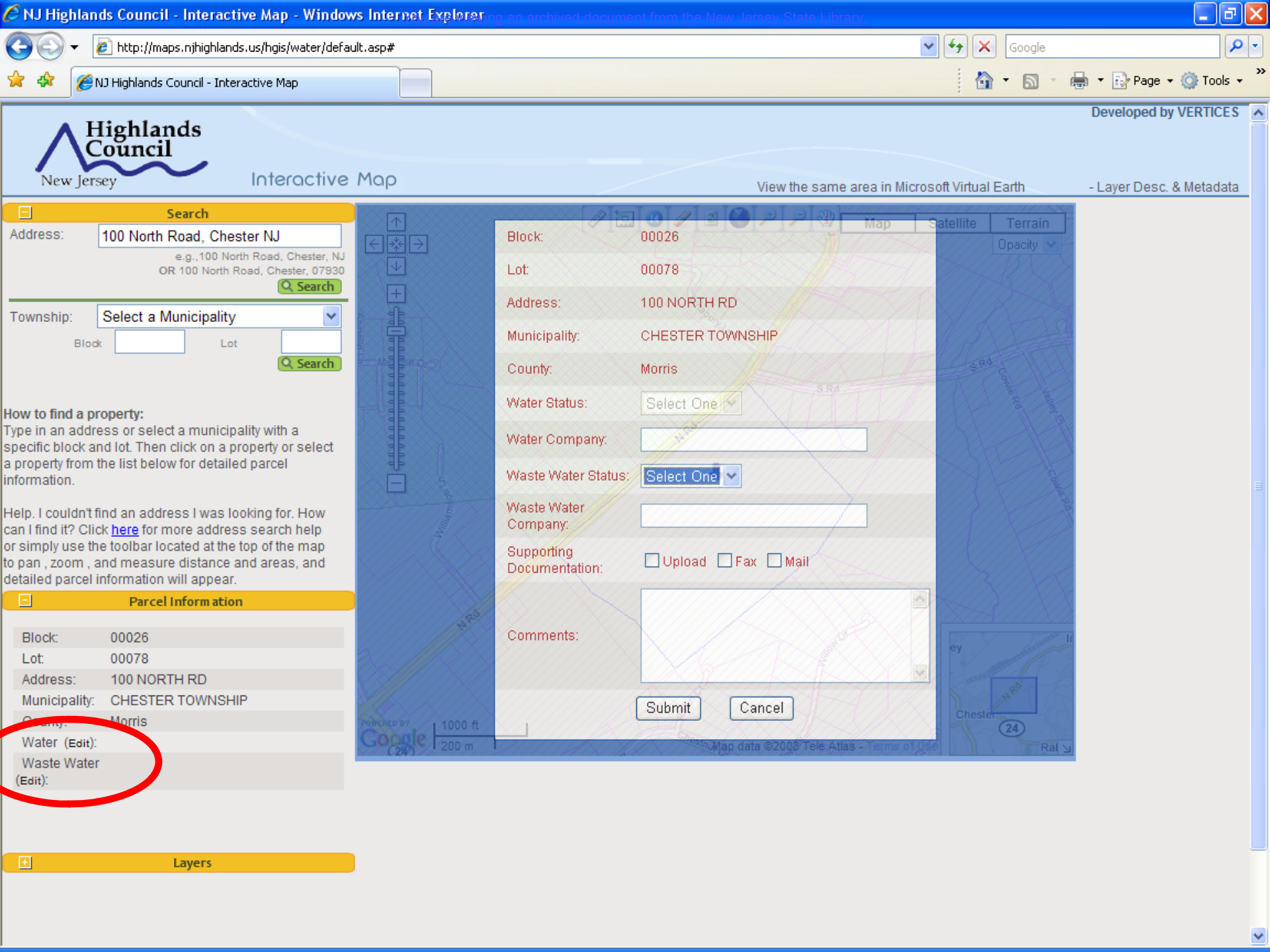
Parcel Information

Block:	00026
Lot:	00078
Address:	100 NORTH RD
Municipality:	CHESTER TOWNSHIP
County:	Morris
Water (Edit):	
Waste Water (Edit):	



Layers







Interactive Map

View the same area in Microsoft Virtual Earth

- Layer Desc. & Metadata

Search

Parcel Information

Attach a file(up to 1 megabyte)

Block: 00026

Lot: 00078

Address: 100 NORTH RD

Municipality: CHESTER TOWNSHIP

County: Morris

Water Status:

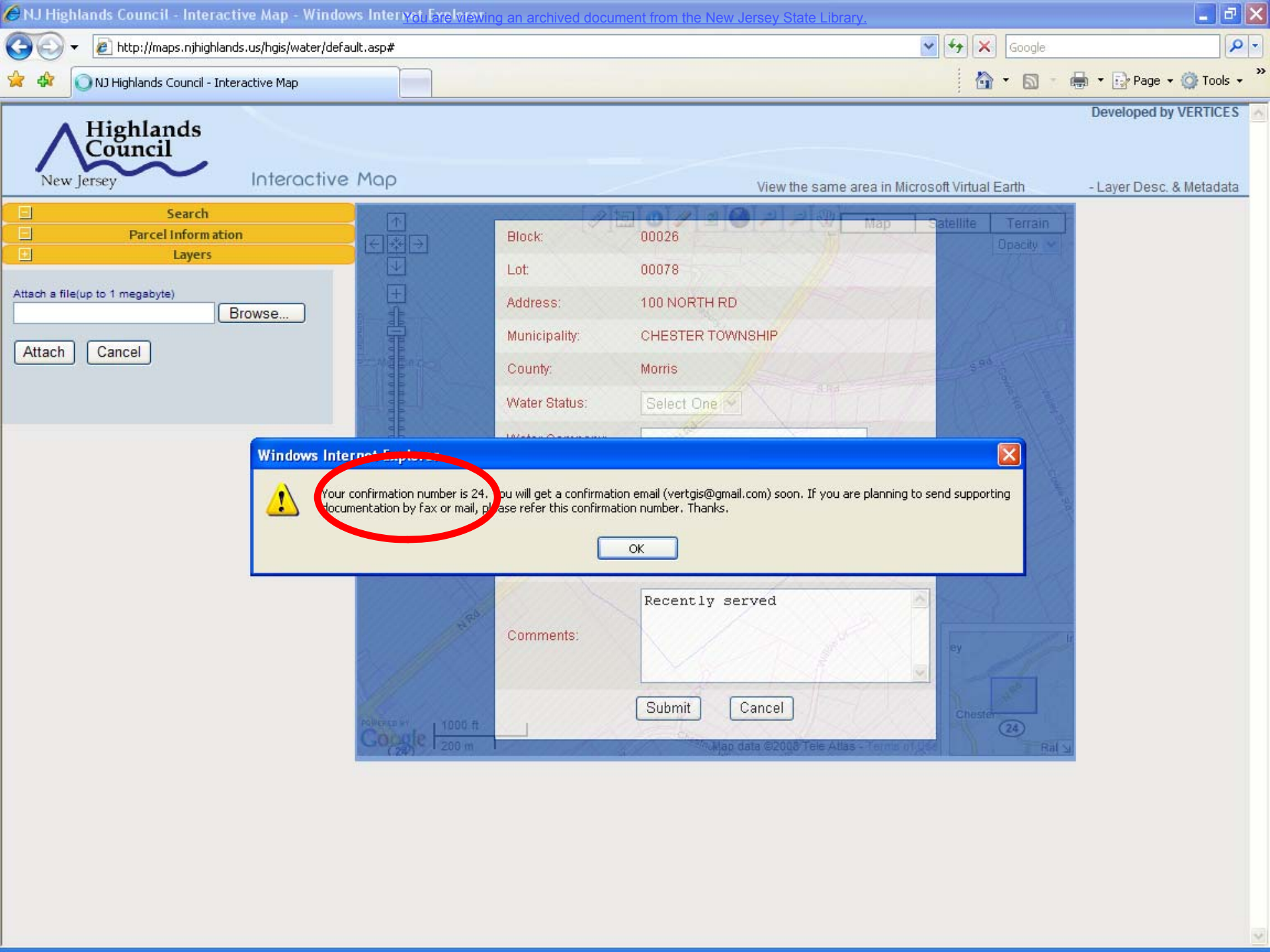
Water Company:

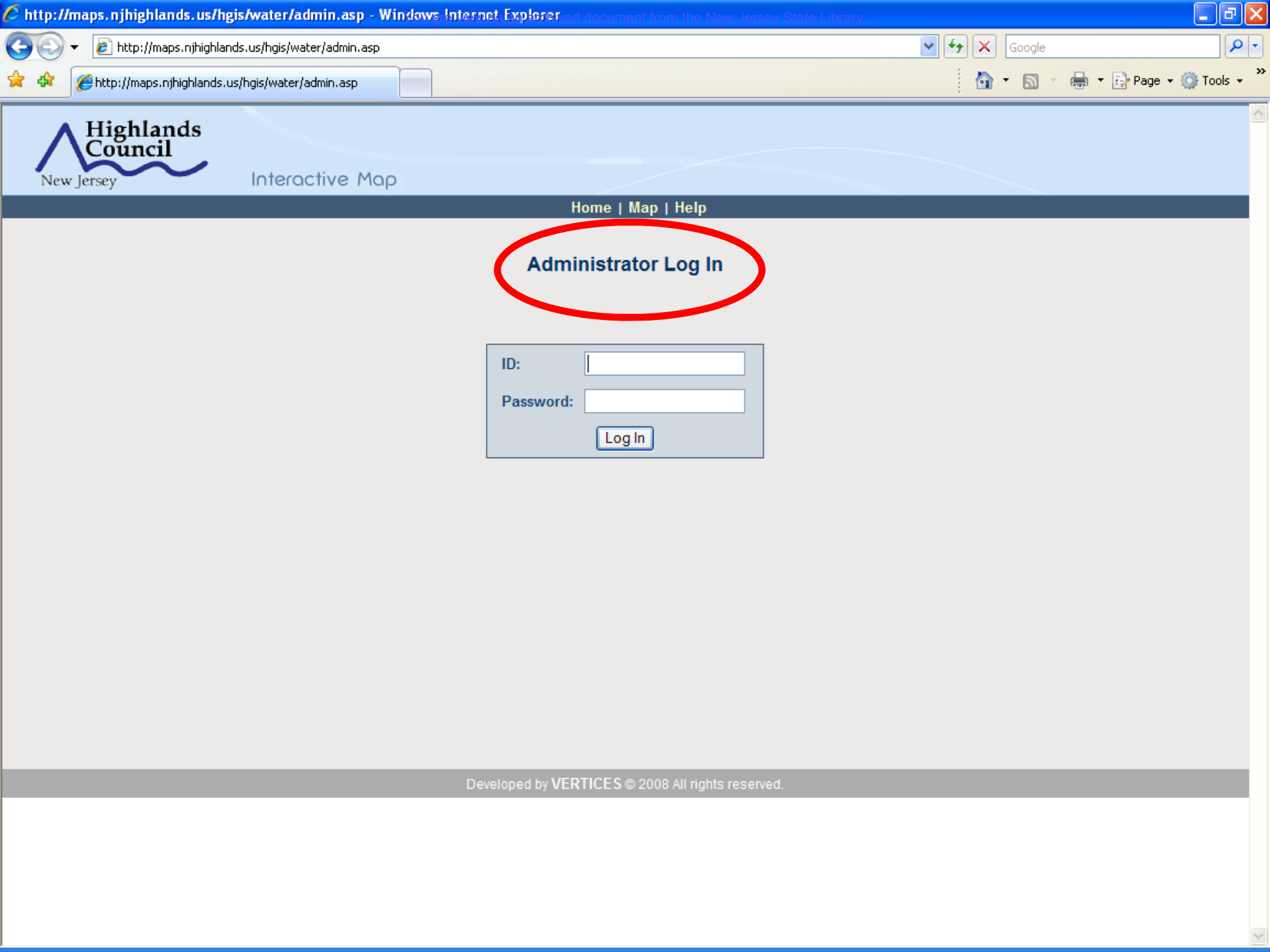
Waste Water Status:

Waste Water Company:

Supporting Documentation: ☒ Upload ☐ Fax ☐ Mail

Comments:





Administrator Log In

ID:

Password:

Submitted Data List

Show: Not Reviewed Only Sort by: Confirmation Number A-->Z

Requested Date	Confirmation Number	Category	Block	Lot	Address	Municipality	County	Status	Delete
6/10/2008	15	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	16	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	17	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	18	Waste Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	19	Water	11407	00008	510 RYERSON RD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/23/2008	21	Waste Water	11408	00001	83 VAIL RD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/23/2008	22	Waste Water	11001	00001	LAKESIDE BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/24/2008	23	Waste Water	00199	00046 17		RANDOLPH TOWNSHIP		Not Reviewed	Delete
6/24/2008	24	Waste Water	00026	00078	100 NORTH RD	CHESTER TOWNSHIP	Morris	Not Reviewed	Delete



[Home](#) | [User List](#) | [Submitted Data](#) | [Map](#)

Submitted Data List

Show: Not Reviewed Only Sort by: Confirmation Number A-->Z

Requested Date	Confirmation Number	Category	Block	Lot	Address	Municipality	County	Status	Delete
6/10/2008	15	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	16	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/10/2008	17	Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Approved	Delete
6/10/2008	18	Waste Water	11408	00002	192 MT ARLINGTON BLVD	ROXBURY TOWNSHIP	Morris	Rejected	Delete
6/10/2008	19	Water	11407	00008	510 RYERSON RD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/23/2008	21	Waste Water	11408	00001	83 VAIL RD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/23/2008	22	Waste Water	11001	00001	LAKESIDE BLVD	ROXBURY TOWNSHIP	Morris	Not Reviewed	Delete
6/24/2008	23	Waste Water	00199	00046 17		RANDOLPH TOWNSHIP		Not Reviewed	Delete
6/24/2008	24	Waste Water	00026	00078	100 NORTH RD	CHESTER TOWNSHIP	Morris	Not Reviewed	Delete

http://maps.njhighlands.us/hgis/water/request_list.asp - Windows Internet Explorer

http://maps.njhighlands.us/hgis/water/request_list.asp

Google

http://maps.njhighlands.us/hgis/water/request_list.asp

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Highlands Council
New Jersey

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Submitted Data List

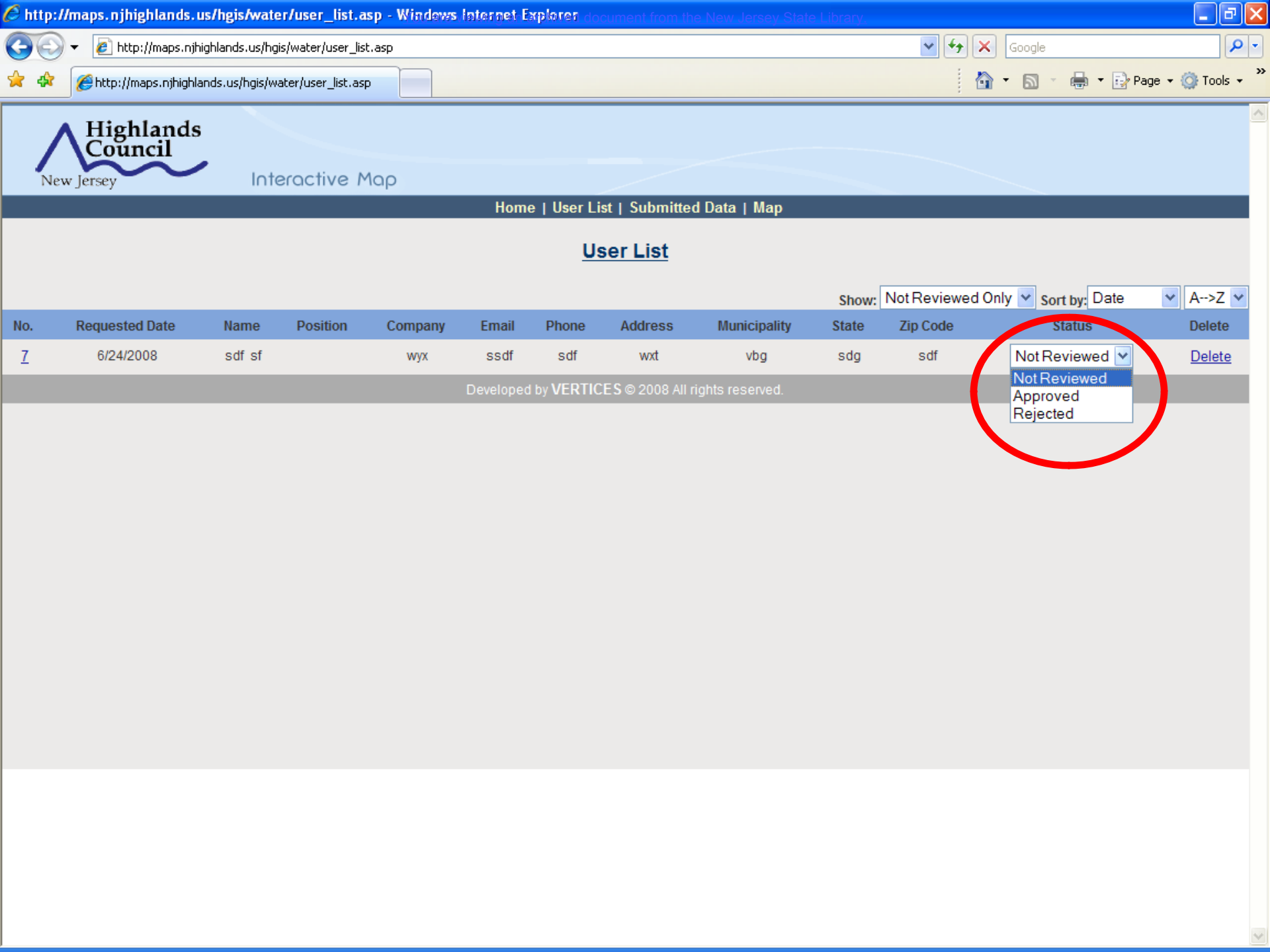
Show: Not Reviewed Only

Sort by: Confirmation Number

A-->Z

Requested Date	Confirmation Number	Category	Block	Lot	Address	County	Status	Delete
6/10/2008	15	Water	11408	00002	192 MT ARLINGTON BLVD	Morris	Not Reviewed	Delete
6/10/2008	16	Water	11408	00002	192 MT ARLINGTON BLVD	Morris	Not Reviewed	Delete
6/10/2008	17	Water	11408	00002	192 MT ARLINGTON BLVD	Morris	Not Reviewed	Delete
6/10/2008	18	Waste Water	11408	00002	192 MT ARLINGTON BLVD	Morris	Not Reviewed	Delete
6/10/2008	19	Water	11407	00008	510 RYERSON RD	Morris	Not Reviewed	Delete
6/23/2008	21	Waste Water	11408	00001	83 VAIL RD	Morris	Not Reviewed	Delete
6/23/2008	22	Waste Water	11001	00001	LAKESIDE BLVD	Morris	Not Reviewed	Delete
6/24/2008	23	Waste Water	00199	00046 17			Not Reviewed	Delete
6/24/2008	24	Waste Water	00026	00078	100 NORTH RD	Morris	Not Reviewed	Delete

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Interactive Map

Home | User List | Submitted Data | Map

User List

Show: Not Reviewed Only Sort by: Date A-->Z

No.	Requested Date	Name	Position	Company	Email	Phone	Address	Municipality	State	Zip Code	Status	Delete
1	6/24/2008	sdf sf		wyx	ssdf	sdf	wxt	vbg	sdg	sdf	Not Reviewed	Delete

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RESOLUTION 2008-20
NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, the Highlands Act authorizes the Highlands Council to enter into any and all agreements or contracts, execute any and all instruments to carry out any power, duty or responsibility under the Highlands Act; and

WHEREAS, Section 18 of the Highlands Act authorizes the Highlands Council to make available grants and other financial and technical assistance to municipalities and counties in furtherance of the Regional Master Plan; and

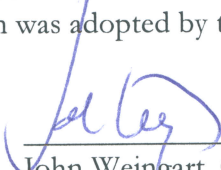
WHEREAS, on February 28, 2008 the Highlands Council by Resolution 2008-4 authorized the initiation of a grant application process for Initial Assessment grants to municipalities within the seven Highlands counties in furtherance of Plan Conformance, in an annual amount not to exceed \$1,500,000; and

WHEREAS, the Highlands Council staff has reviewed the following grant applications and recommends approval by the Highlands Council;

NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that the Executive Director, or her designee, is hereby authorized to enter into a grant agreement with the Township of Mt. Olive for an Initial Assessment Grant in an amount not to exceed \$17,628.

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 26th day of June, 2008.



John Weingart, Chairman

RESOLUTION 2008-20

Vote on the Approval of this Resolution

	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede	✓			
Councilmember Calabrese	✓			
Councilmember Carluccio	✓			
Councilmember Cogger	✓			
Councilmember Dillingham	✓			
Councilmember Kovach	✓			
Councilmember Letts	✓			
Councilmember Pasquarelli	✓			
Councilmember Peterson				✓
Councilmember Schrier	✓			
Councilmember Vetrano	✓			
Councilmember Way	✓			
Councilmember Whitenack	✓			
Councilmember Weingart	✓			

RESOLUTION 2008-21
NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, the Highlands Act authorizes the Highlands Council to enter into any and all agreements or contracts, execute any and all instruments to carry out any power, duty or responsibility under the Highlands Act; and

WHEREAS, Section 18 of the Highlands Act authorizes the Highlands Council to make available grants and other financial and technical assistance to municipalities and counties in furtherance of the Regional Master Plan; and

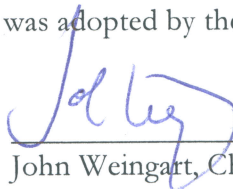
WHEREAS, on February 28, 2008 the Highlands Council by Resolution 2008-4 authorized the initiation of a grant application process for Initial Assessment grants to municipalities within the seven Highlands counties in furtherance of Plan Conformance, in an annual amount not to exceed \$1,500,000; and

WHEREAS, the Highlands Council staff has reviewed the following grant applications and recommends approval by the Highlands Council;

NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that the Executive Director, or her designee, is hereby authorized to enter into a grant agreement with the Township of West Milford for an Initial Assessment Grant in an amount not to exceed \$15,000.

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 26th day of June, 2008.



John Weingart, Chairman

RESOLUTION 2008-21

**Vote on the Approval of
this Resolution**

	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede	✓			
Councilmember Calabrese	✓			
Councilmember Carluccio	✓			
Councilmember Cogger	✓			
Councilmember Dillingham	✓			
Councilmember Kovach	✓			
Councilmember Letts	✓			
Councilmember Pasquarelli	✓			
Councilmember Peterson				✓
Councilmember Schrier	✓			
Councilmember Vetrano	✓			
Councilmember Way	✓			
Councilmember Whitenack	✓			
Councilmember Weingart	✓			

RESOLUTION 2008-23

NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL APPROVAL OF CONTRACT FOR LiDAR-BASED TERRAIN ANALYSIS

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, Section 6.g of the Highlands Act authorizes the Highlands Council to conduct its business as needed to effectuate the purposes of the enabling legislation; and

WHEREAS, in February 2006, the Highlands Council entered into a contract with the United States Army Corps of Engineers (USACE) to conduct aerial flyovers of the Highlands Region for the purpose of gathering digital elevation data using light detection and remote sensing technology (LiDAR); and

WHEREAS, USACE has gathered LiDAR data for the entire Highlands Region which must now be analyzed for a variety of different uses, including extraction of detailed information concerning Highlands terrain features such as watershed basins and steep slope areas; and

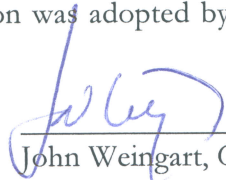
WHEREAS, the Walton Center for Remote Sensing and Spatial Analysis at Rutgers University (CRSSA) has prepared a work plan to conduct these and other analyses of the LiDAR data to support the implementation of the Regional Master Plan, as well as host the LiDAR data for public review; and

WHEREAS, Highlands Council previously entered into a contract with CRSSA to conduct geospatial analysis of GIS data to assist the Highlands Council in development of the Regional Master Plan, which work CRSSA satisfactorily performed;

NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that the Executive Director, or her designee, is hereby authorized to enter into a contract with CRSSA for an amount not to exceed \$111,474.00.

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 26th day of June, 2008.



John Weingart, Chairman

RESOLUTION 2008-23

**Vote on the Approval of
this Resolution**

	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede	✓			
Councilmember Calabrese	✓			
Councilmember Carluccio	✓			
Councilmember Cogger	✓			
Councilmember Dillingham			✓	
Councilmember Kovach	✓			
Councilmember Letts	✓			
Councilmember Pasquarelli	✓			
Councilmember Peterson	✓			
Councilmember Schrier	✓			
Councilmember Vetrano	✓			
Councilmember Way	✓			
Councilmember Whitenack	✓			
Councilmember Weingart			✓	

RESOLUTION 2008-24

NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL ESTABLISHMENT OF HIGHLANDS DEVELOPMENT CREDIT BANK

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, Section 13.i of the Highlands Act authorizes the Highlands Council to establish a development transfer bank for the purpose of facilitating a transfer of development rights (TDR) program for the Highlands Region; and

WHEREAS, consistent with this authority, the Highlands Council wishes to establish a development transfer bank to be called the Highlands Development Credit Bank that will work with the Highlands Council in implementing the Highlands TDR Program; and

WHEREAS, the Bank will operate in accordance with the Highlands Act and with provisions of general law authorizing the creation of development transfer banks by municipalities and counties and will be guided by the Highlands Regional Master Plan; and

WHEREAS, the functions of the Highlands Development Credit Bank shall include serving as (i) a regional clearinghouse for information with regard to the Highlands Development Credit program; (ii) the administrator and official recording agency for the Highlands Development Credit program; and (iii) a buyer and seller of Highlands Development Credits.

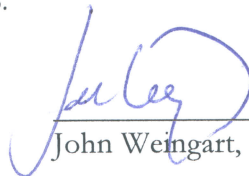
NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that:

1. The Highlands Council hereby establishes a development transfer bank known as the Highlands Development Credit Bank (Bank) that shall be governed by a nine-member Board of Directors;
2. In addition to the Highlands Council Chairperson, the nine-member Board of Directors shall be comprised of the following eight persons or their designees, who shall all be appointed by the Chairperson of the Highlands Council:
 - a. Two Members of the Highlands Council;
 - b. Member of the State TDR Bank or the Bank's Executive Director;
 - c. Member of the Garden State Preservation Trust or the Trust's Executive Director;
 - d. Member of the general public, who shall have expertise in land development and redevelopment;
 - e. Member of the general public, who shall have expertise in land conservation and stewardship;
 - f. Member of the general public, who shall be a farmer actively engaged in agriculture in the Highlands; and
 - g. Member of the general public, who shall have expertise in banking, finance, or land economics.

3. The Highlands Council shall appoint one member of the Bank Board of Directors to serve as Chairperson;
4. The members of the Board of Directors shall serve for terms of five years and each member shall serve for the term of the appointment and until a successor shall have been appointed. Any vacancy shall be filled in the same manner as the original appointment for the unexpired term only. Any member of the Board of Directors may be removed by the Highlands Council, for cause, after a public hearing. The members of the Board of Directors shall serve without compensation, but the Bank may, within the limits of funds appropriated or otherwise made available for such purposes, reimburse its members for necessary expenses incurred in the discharge of their official duties;
5. The powers of the Bank Board of Directors shall be vested in the members thereof in office. A majority of the total authorized membership of the Bank Board of Directors shall constitute a quorum and no action may be taken by the Board of Directors except upon the affirmative vote of a majority of the total authorized membership of the Board of Directors. No alternate or designee of any Board member shall exercise any power to vote on any matter pending before the Bank Board of Directors;
6. The Bank shall operate in accordance with the Highlands Act and with provisions of general law authorizing the creation of development transfer banks by municipalities and counties and its activities shall be consistent with the goals, policies and objectives of the Highlands Regional Master Plan;
7. Any monies allocated or appropriated to the Bank, whether from the State or another source, shall be held in an account separate and apart from any Highlands Council monies; such monies may only be used for the purposes of acquiring Highlands Development Credits or administering operations of the Bank; and
8. The Bank Board of Directors shall hold its first meeting as soon as possible after adoption of this resolution at which time the Bank Board of Directors shall adopt by-laws and operating procedures that together will govern Bank operations.

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 26th day of June, 2008.



John Weingart, Chairman

RESOLUTION 2008-24

Vote on the Approval of this Resolution

	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Calabrese	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Carluccio	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Cogger	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Dillingham	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Kovach	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Letts	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Pasquarelli	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Peterson	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Schrier	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Vetrano	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Way	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Whitenack	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>
Councilmember Weingart	<u>✓</u>	<u> </u>	<u> </u>	<u> </u>

RESOLUTION 2008-25
NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, the Highlands Act authorizes the Highlands Council to enter into any and all agreements or contracts, execute any and all instruments to carry out any power, duty or responsibility under the Highlands Act; and

WHEREAS, Section 18 of the Highlands Act authorizes the Highlands Council to make available grants and other financial and technical assistance to municipalities and counties in furtherance of the Regional Master Plan; and

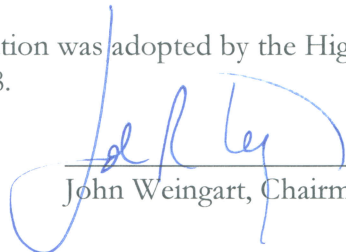
WHEREAS, on February 28, 2008 the Highlands Council by Resolution 2008-4 authorized the initiation of a grant application process for Initial Assessment grants to municipalities within the seven Highlands counties in furtherance of Plan Conformance, in an annual amount not to exceed \$1,500,000; and

WHEREAS, the Highlands Council staff has reviewed the following grant applications and recommends approval by the Highlands Council;

NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that the Executive Director, or her designee, is hereby authorized to enter into a grant agreement with Bloomsbury Borough for an Initial Assessment Grant in an amount not to exceed \$15,000:

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 10th day of July, 2008.



John Weingart, Chairman

RESOLUTION 2008-25

**NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS**

Vote on the Approval of this

<u>Resolution</u>	<u>Yes</u>	<u>No</u>	<u>Abstain</u>	<u>Absent</u>
Councilmember Alstede				✓
Councilmember Calabrese	✓			
Councilmember Carluccio	✓			
Councilmember Cogger	✓			
Councilmember Dillingham	✓			
Councilmember Kovach	✓			
Councilmember Letts	✓			
Councilmember Pasquarelli	✓			
Councilmember Peterson	✓			
Councilmember Schrier	✓			
Councilmember Vetrano	✓			
Councilmember Way	✓			
Councilmember Whitenack	✓			
Councilmember Weingart	✓			

RESOLUTION 2008-26
NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS

WHEREAS, the Highlands Water Protection and Planning Act (Highlands Act) has created a public body corporate and politic with corporate succession known as the Highlands Water Protection and Planning Council (Highlands Council); and

WHEREAS, the Highlands Act authorizes the Highlands Council to enter into any and all agreements or contracts, execute any and all instruments to carry out any power, duty or responsibility under the Highlands Act; and

WHEREAS, Section 18 of the Highlands Act authorizes the Highlands Council to make available grants and other financial and technical assistance to municipalities and counties in furtherance of the Regional Master Plan; and

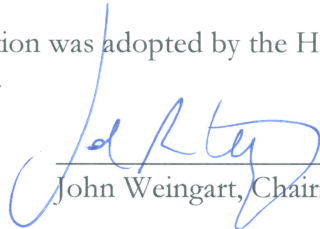
WHEREAS, on February 28, 2008 the Highlands Council by Resolution 2008-4 authorized the initiation of a grant application process for Initial Assessment grants to municipalities within the seven Highlands counties in furtherance of Plan Conformance, in an annual amount not to exceed \$1,500,000; and

WHEREAS, the Highlands Council staff has reviewed the following grant applications and recommends approval by the Highlands Council;

NOW, THEREFORE, BE IT RESOLVED by the Highlands Council that the Executive Director, or her designee, is hereby authorized to enter into a grant agreement with Lopatcong Township for an Initial Assessment Grant in an amount not to exceed \$15,000:

CERTIFICATION

I hereby certify that the foregoing Resolution was adopted by the Highlands Council at its regular meeting held on the 10th day of July, 2008.



John Weingart, Chairman

RESOLUTION 2008-26

**NEW JERSEY HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL
APPROVAL OF CERTAIN PLANNING ASSISTANCE GRANTS**

Vote on the Approval of this

Resolution

Yes

No

Abstain

Absent

Councilmember Alstede

✓

Councilmember Calabrese

✓

Councilmember Carluccio

✓

Councilmember Cogger

✓

Councilmember Dillingham

✓

Councilmember Kovach

✓

Councilmember Letts

✓

Councilmember Pasquarelli

✓

Councilmember Peterson

✓

Councilmember Schrier

✓

Councilmember Vetrano

✓

Councilmember Way

✓

Councilmember Whitenack

✓

Councilmember Weingart

✓

**DRAFT – FOR CONSIDERATION AT JUNE 26, 2008
HIGHLANDS COUNCIL MEETING**



JON S. CORZINE
Governor

State of New Jersey
Highlands Water Protection and Planning Council
100 North Road (Route 513)
Chester, New Jersey 07930-2322
(908) 879-6737
(908) 879-4205 (fax)
www.highlands.state.nj.us



JOHN R. WEINGART
Chairman

EILEEN SWAN
Executive Director

PRIME GROUND WATER RECHARGE AREA STANDARDS
Summary and Recommendation

This paper responds to the Highlands Council request at its meeting on May 15, 2008 for further information regarding recommendations for Prime Ground Water Recharge Area protection.

A new analysis of the distribution of Prime Ground Water Recharge Areas by LUCM Zone shows that nearly 98% of the Prime Ground Water Recharge Areas are in the Protection Zone (68 percent) and the two Environmentally-Constrained Sub-zones (30%). Therefore staff recommends:

- That a single policy apply to all Prime Ground Water Recharge Areas, as nearly all are in Zones with low allowable septic system densities.

In researching examples throughout the country, we found very few examples of impervious surface standards for ground water recharge areas (ranging from 10 to 61 percent), with no apparent scientific basis provided. The Center for Watershed Protection advises us that they have no research on this issue and no NJDEP rules address this issue. Most existing impervious surface standards in New Jersey are based on either community character or impacts of stormwater runoff to stream habitats, or both. Therefore staff recommends:

- That standards for Prime Ground Water Recharge Areas be unique to the Highlands Region and based on development types anticipated for the more restrictive Zones and Sub-Zones.

Site development concerns regarding Prime Ground Water Recharge Areas focus on recharge quantity and quality, including the risk that engineered recharge systems may not meet their objectives perpetually. Therefore, Council staff recommends the following approach using the management hierarchy **Avoid>Minimize>Mitigate** (see draft GPOs):

1. Prohibit development in Prime Ground Water Recharge Areas unless the entire site is in such areas, or if necessary to avoid Critical Habitat, Highlands Open Water Buffers and steep slopes (**Policy 2D4a**).
2. Prohibit infrastructure extensions except for clusters and waivers (**Objective 2D4e**).
3. Limit total recharge disruption (i.e., alteration of natural recharge patterns or volumes) to 15 percent of Prime Ground Water Recharge Areas, placed wherever feasible on those parts of the Prime Ground Water Recharge Areas with the lowest relative ground water recharge rates and the least potential for aquifer recharge, based on site analyses (**Objective 2D4d**).
4. Use low impact development techniques to reduce total recharge disruption as much as feasible, within the 15 percent maximum (**Objective 2D4c**).
5. Require mitigation equal to 125% of the pre-construction recharge from the area where disruption of the Prime Ground Water Recharge Areas is permitted (**Objective 2D4b**).

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Page 2

6. Restrict the development of major potential pollutant sources (**Objectives 2D3d, 2D4f**), and manage existing and future potential pollutant sources (**Objective 2D3g**).

PRIME GROUND WATER RECHARGE AREA STANDARDS

Overview

At its meeting on May 15, 2008, the Highlands Council requested that staff prepare information regarding Prime Ground Water Recharge Areas, and specifically the potential basis for RMP policies regarding allowable impervious surfaces by LUCM Zone or regionally. This paper examines the general nature of recharge areas, the distribution of Prime Ground Water Recharge Areas in the Highlands Region by LUCM Zone, management issues for protection of such areas, examples from various municipalities and agencies, and potential approaches for use in the Highlands Region.

In summary, nearly 98% of the Prime Ground Water Recharge Areas are in the Protection Zone (68 percent) and in the Environmentally-Constrained Sub-zones of the Conservation and Existing Community Zones (30%), all of which have relatively low allowable development densities based on septic system yields. Therefore, Prime Ground Water Recharge Areas should be subject to little if any truly dense development. Based on this finding, allowable percentages for impervious surface should reflect the limited development potential of these Zones, and a single threshold should be feasible.

The question then is what thresholds would be appropriate. We have been able to identify through a legal search only a very few municipalities and no regional agencies that regulate impervious surfaces in ground water recharge areas by percentage. Of those that do, no scientific rationale was stated for the selection of their percentages, which appear to respond more to local needs than regional perspectives. Impervious surface limitations identified by the Center for Watershed Protection, the CAFRA rules, the Highlands Act and similar regulations are based on research regarding the impact of storm water runoff on stream stability and habitat quality, not on ground water recharge. We specifically inquired with the Center for Watershed Protection, a national leader in this field, and they informed us that their research does not address the issue of impervious surfaces in ground water recharge areas, nor were they aware of any such studies. We have not been able to identify any existing, defensible models for setting an impervious surface threshold. Therefore, a new approach is needed.

We examine two approaches. One is site-specific and does not result in a predetermined impervious surface threshold. Instead, it relies on site-specific analyses and low impact development approaches to minimize development impacts so as to protect recharge volume and quantity. The other method sets a maximum percentage of a site where Prime Ground Water Recharge Areas are disrupted; that is, the land surface is changed such that natural recharge patterns no longer exist. Storm water may be routed through engineered systems, or recharge is not through infiltration in naturally vegetated areas.

We examined how a threshold could be set, including the case of a septic system cluster on a lot that is entirely within a Prime Ground Water Recharge Area. Staff recommends that the maximum

**DRAFT – FOR CONSIDERATION AT JUNE 26, 2008
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Page 3

allowable disruption of the Prime Ground Water Recharge Area would be 15 percent, but with the allowable area placed where the potential for aquifer recharge is most limited and the relative ground water recharge rate is lowest. Identification of these areas would be based on a site-specific approach, which would be detailed in the conformance standards for development review.

Background

In the hydrologic cycle, when precipitation occurs over the land surface a majority of it will be returned back to the atmosphere through evaporation and some will flow over the surface in a process known as overland flow to lakes and other open water bodies which flow into streams and eventually to the ocean where the cycle begins again. A small percentage of precipitation that reaches the land surface will find its way into the subsurface in a process known as infiltration. Where infiltration reaches the water table, it is considered ground water recharge, and the overlying land areas are classified as ground water recharge areas. Ground water recharge areas can be defined as locations within a drainage basin where meteorological, ecological, geological and hydro geological factors are conducive to allow for the infiltration of water from the surface into the subsurface. The factors that determine recharge potential are:

- **Precipitation:** The primary meteorological factor controlling infiltration. The amount of precipitation and its characteristics such as intensity and duration control the overall volume of water that is available for infiltration.
- **Evapotranspiration:** Is the combined evaporation from streams, open water bodies and land surfaces, and transpiration from plants. Of all the precipitation that falls within a drainage basin, a majority will be returned back to the atmosphere as evapotranspiration. Evapotranspiration rates are controlled by a combination of meteorological factors such as temperature, relative humidity and wind speed, and ecological factors such as type of vegetation, soil type and the size and volume of a water body.
- **Anthropogenic:** Socio-economic factors that include extent of urbanization, suburban areas, industrial zones, the presence of sewer service areas, public and private water supply wells, reservoirs, and septic system densities, cultural and historical and agricultural activities. Anthropogenic factors are the primary non-meteorological factor affecting infiltration.
- **Ecological:** These factors include the types of vegetation, the density of forested areas, wetlands, vernal pools, critical habitat and riparian buffer zones.
- **Geological factors** include soil type and characteristics, depth to bedrock, rock type and its characteristics, rock outcroppings, faulting, and topography.
- **Hydro-geological factors** include depth to ground water, soil permeability, rock type porosity, the presence or absence of fractures and wellhead protection areas.

Once into the subsurface, the infiltrated water under the pull of gravity will move down through the soil root zone to zones of saturation to become ground water. A portion of this ground water will become ground water runoff or ground water base flow which is ground water that migrates horizontally along zones of lower permeability soil or along the soil-bedrock interface and exits the drainage basin as stream flow. Some ground water will move further downward to enter an aquifer system where it can be used as a water-supply resource, or will eventually migrate to surface waters and again exit the drainage basin as stream flow.

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Prime Ground Water Recharge Areas in the Highlands Region

Ground water recharge zones are designated within the Highlands Region as Prime Ground Water Recharge Areas account for 232,854 acres (126,636 acres of the Preservation Area and 106,221 acres of the Planning Area), or 27 percent of the Highlands Region.

Prime Ground Water Recharge Areas were one factor used in defining the Protection Zone. The Land Use Capability Zone Map divides the Prime Ground Water Recharge Areas among the Protection Zone, the Conservation Zone (CZ), the Existing Communities Zone (ECZ) and the Environmentally Constrained Sub-zones of the Existing Community Zone and Conservation Zone as shown in Table 1.

Table 1. Distribution Of Prime Ground Water Recharge Areas By Land Use Capability Zone				
Zone and Sub-zone	Total Acres	PGWRA Acreage	Percentage of Zone in PGWRAs	Percentage of Total PGWRA in Zone
Protection Zone	469,462	158,392	33.74	68.13
Conservation Zone (not environmentally constrained)	70,474	4,357	6.18	1.87
CZ Environmentally Constrained Sub-zone	120,485	38,611	32.04	16.58
Existing Community Zone (not environmentally constrained)	146,011	737	0.50	0.32
ECZ Environmentally Constrained Sub-zone	32,231	30,757	95.42	13.21

*Excludes Lake Community Overlay Zone

As shown above, Prime Ground Water Recharge Areas are predominantly in the Protection Zone (68 percent) and in the CZ Environmentally Constrained Sub-zone (17 percent) and ECZ Environmentally Constrained Sub-zone (13 percent), all of which have lower allowable development densities based on septic system yields. With 98 percent of Prime Ground Water Recharge Areas within these areas, dense development will not be proposed in these areas. This distribution is particularly striking in the ECZ Environmentally Constrained Sub-zone which is 95 percent Prime Ground Water Recharge Areas. In sharp contrast, Prime Ground Water Recharge Areas comprise only 1.87 percent of the Conservation and only 0.37 percent of the Existing Communities Zones. In both cases, these areas are likely on existing developed parcels. The very small percentage of Prime Ground Water Recharge Areas in these Zones means that the RMP threshold should have little to no impact on development there, and is no bar to using a single regional standard.

Although Prime Ground Water Recharge Areas do make up a significant portion of the Protection Zone and Environmentally Constrained Sub-zones, they are not stand alone features, but instead are totally interrelated to local anthropogenic, ecological, geological and hydro-geological conditions which function as constraints that control the degree of infiltration and hence the volume of water that is recharged to ground water base flow and aquifer systems.

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Management Issues and Examples for Prime Ground Water Recharge Areas

Changes in anthropogenic factors greatly affect the degree of infiltration and water quality within a ground water recharge area by changing the ecological, geological and hydrogeological constraining factors. Because anthropogenic changes are influenced largely by socio-economic forces they can be controlled through the regulatory process and through the use of engineering techniques or a combination of both, as discussed below.

Water quality can be regulated through the establishment of water quality standards which set specific concentration limits on potential contaminants to prevent water quality degradation. By establishing water quality standards, regulators can limit the type of land use activity and its density within ground water recharge areas to those that do not violate these standards. One of the more widely used water quality standard is for nitrate concentrations in ground water (e.g., the RMP standards for septic system densities). Another approach to water quality protection is to regulate specific types of pollutant sources, as is done in the RMP wellhead protection requirements.

Land use can be controlled through adoption of rules and ordinances to regulate or prohibit certain land use activities, establish development densities, require scientific studies to evaluate a development's potential impact, and provide the necessary and appropriate measures to protect and enhance infiltration and water quality. Listed in Table 2 are examples of county level and local regulations designed to manage Prime Ground Water Recharge Areas, as identified through a search of legal databases available to the Highlands Council.

Table 2. Summary of County and Municipal Ground Water Recharge Regulations	
County/Municipality	Regulation
Augusta, GA	Restricts or prohibits certain land use activities and regulates septic system densities nitrate using ground water quality standards and sets stormwater performance standards
Borough of Ringwood, NJ	Standard wellhead protection ordinance
The Cape Cod Commission, MA	Model Aquifer Protection Bylaw: Establishes an Aquifer Protection Overlay District which prohibits certain land use activities, requires permitting for certain land use activities and for any construction that renders 10,000 square feet impervious, establishes Nitrogen based ground water quality standards, and sets stormwater performance standards
Fauquier County, VA	Establishes an Aquifer Protection Overlay District which prohibits certain land use activities, requires permitting for certain land use activities and for any construction that renders 10,000 square feet impervious, establishes Nitrogen based ground water quality standards, and sets stormwater performance standards
Middlesex County, NJ	Recommends "Site Specific Recharge Analysis" and that municipalities adopt an Aquifer Protection Overlay District to be managed through wellhead protection regulations. Evaluates aquifers based on quality.
Montville, NJ	Modification of Land Use ordinance to include wellhead protection regulations prohibiting certain land use activities and requires a site specific hydrogeologic study
Mountain Lakes, NJ	Prohibits certain land use activities and requires a "Ground Water

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Table 2. Summary of County and Municipal Ground Water Recharge Regulations	
	Management Plan” detailing site hydrogeology and other factors.
Readington Township, NJ	Standard wellhead protection and stormwater regulations.

The most common method to manage Prime Ground Water Recharge Areas is through the use of zoning regulations that restrict or prohibit specific land use activities that are considered potential contaminant sources based upon their Standard Industrial Classification (SIC) Code. These zoning regulations are most commonly applied in an Aquifer Protection Overlay District or Zone established through a Wellhead Protection Ordinance. To manage infiltration within a Prime Ground Water Recharge Area, all of the counties and municipalities listed above require conformance with stormwater performance standards. Nitrogen based water quality standards are employed by Augusta, GA, The Cape Cod Commission, MA and Fauquier County, VA to regulate septic system densities. Site specific hydrogeologic or recharge analysis studies were only recommended or required by Middlesex County, NJ, Montville, NJ and Mountain Lakes, NJ. Thus, as summarized above, it very common for county and local regulators use a combination of zoning, wellhead protection and storm water regulations and nitrogen based water quality standards to manage Prime Ground Water Recharge Areas.

However, a few counties and municipalities have adopted aquifer recharge ordinances or have included within their wellhead protection ordinances language that specifies the maximum percentage of impervious coverage allowed within a ground water recharge area. The primary goal of impervious coverage limits is to allow for controlled development within prime ground water recharge areas while protecting natural infiltration. This goal is supplemented by an embedded requirement in the regulations to implement Best Management Practices to maximize water infiltration and to maintain and possibly enhance water quality. Table 3 represents a sampling of county and municipal impervious coverage limits:

Table 3. County/Municipal Regulation of Impervious Coverage In Aquifer Protection Zones	
County/Municipality	Allowable Percentage of Impervious Coverage
Boonton, NJ	15 percent
Fremont, NH	10 percent
Hillsdale, NJ	20 percent to 38 percent
Montville, NJ	50 percent Restricted Aquifer Zone, 40 percent Prime Aquifer Zone
Princeton, NJ	A sliding scale from 14 percent to 61 percent
Rye, NH	35 percent
Stratham, NH	20 percent

The designation of impervious coverage limits within Prime Ground Water Recharge Areas attempts to balance the pressures of development with that of the protection of ground water resources. However, the examples include many inconsistencies. As shown in Table 3, the maximum percentage of impervious cover varies widely from municipality to municipality and from state to state. Impervious coverage limitations range from a low of 10 percent in Fremont, New Hampshire to a high of 61 percent in Princeton, New Jersey. The lack of uniformity with respect to impervious coverage standards suggests that these standards are derived at the local level in response to local factors and are not established by any regional regulatory authority or regional analysis. Further, a review of these ordinances reveals that the rationale used to establish impervious coverage standards

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is either not stated or is based upon a patchwork of local zoning regulations and stormwater-derived engineering methods and procedures. This finding indicates that there are no established, overarching, scientifically-based methods and procedures to determine the appropriate extent of impervious coverage. Additionally, the lack of a clear regionally accepted standard suggests that impervious coverage standards are based more upon local socio-economic and community conditions than purely environmental concerns.

We reviewed available information from the Center for Watershed Protection, a nationally-recognized leader in the field of watershed management that has extensive research on the impacts of storm water runoff from developed lands on stream stability and habitat quality. In discussions with the Research Director of the Center, they do not have nor are they aware of any studies regarding impervious surface limitations on ground water recharge areas. The Center's primary focus is on the destructive impacts of high flow periods rather than on low flow periods, though they do emphasize the need to maintain the volume and quality of recharge. RMP requirements address these issues regarding maintenance of recharge volume, mitigation at 125% for disturbance of Prime Ground Water Recharge Areas, and control of potential pollutant sources in the same manner as for wellhead protection areas. We reviewed the CAFRA regulations, which address percent impervious surface in certain areas, and find that these regulations, similar to the Center for Watershed Protection recommendations, are based on impacts of runoff on surface waters, rather than on recharge impacts. There are no NJDEP regulations that address impervious surface limitations in ground water recharge areas.

Management of Prime Ground Water Recharge Areas needs to be implemented in two ways – through municipal planning that maximizes protection by proper zoning, and on a site-specific basis to address variations in local anthropogenic, ecological, geological and hydrogeological conditions. To do this, regulators must provide clear, scientifically sound standards or method and procedures that can be applied to site-specific conditions. Ordinances for wellhead protection and stormwater, and standards such as impervious coverage limits based upon community character or surface water impacts are not appropriate to manage Prime Ground Water Recharge Areas. This is because these ordinances and standards lack the necessary guidance or appropriate scientific methods that can be applied to site-specific conditions associated with ground water recharge.

Recommended Approach for the Highlands Region

Council staff recommends the following method for addressing the protection of Prime Ground Water Recharge Areas beyond the volume and quality provisions already in the RMP. The method is based on a limit on disruption of natural recharge patterns and volumes, with the use of site-specific analyses to address parts of the requirements. As with most other resource policies in the RMP, the management hierarchy is **Avoid>Minimize>Mitigate**. The references to policies and objectives are based on the draft GPOs, provided separately.

1. Prohibit development in Prime Ground Water Recharge Areas unless the entire site is in such areas, or if necessary to avoid Critical Habitat, Highlands Open Water Buffers and steep slopes (**Policy 2D4a**).

The first priority is to avoid development of Prime Ground Water Recharge Areas wherever feasible. Where the entire site is Prime Ground Water Recharge Area, then the policy must

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recognize that these areas cannot be entirely avoided. At the same time, policies must be seen in context of the full RMP. This policy recognizes that not all critical areas have the same functions, the same potential for mitigation, and the same goals under the Highlands Act. The disruption of Critical Habitat, Highlands Open Water Buffers and Moderately and Severely Constrained Steep Slopes are given very high priority under the RMP. Under this policy, protection of these three critical areas would be given priority over the protection of Prime Ground Water Recharge Areas, but only where avoidance of all four critical areas is not feasible.

2. Prohibit infrastructure extensions except for clusters and waivers (**Objective 2D4e**).

Clusters are mandatory within the Agricultural Resource Area, and within the Planning Area only may include creation or extension of water supply and wastewater infrastructure. The potential for waivers is a general policy within the RMP. Both need to be provided for. However, in all other cases (given that Prime Ground Water Recharge Areas are nearly all in the Protection Zone and Environmentally-Constrained Sub-zones), there is no reason to allow infrastructure in Prime Ground Water Recharge Areas other than for clusters and waivers, and even then only to the extent that compliance with Policy 2D4a requires it.

3. Limit total recharge disruption (i.e., alteration of natural recharge patterns or volumes) to 15 percent of Prime Ground Water Recharge Areas, placed wherever feasible on those parts of the Prime Ground Water Recharge Areas with the lowest relative ground water recharge rates and the least potential for aquifer recharge, based on site analyses (**Objective 2D4d**).

The term “recharge disruption” is used in this policy to reflect the key issues for protection of ground water recharge. The use of impervious surface as a standard would be insufficient, as a development can disrupt natural recharge in a much larger area. The re-routing of storm water flow also disrupts natural recharge potential. The use of total site disturbance would often be excessive, as low impact development techniques could result in site disturbance (e.g., on previously developed or agricultural lands) that actually restore or enhance the potential for recharge through naturalized vegetation. Therefore, a better measure of the site development impacts on Prime Ground Water Recharge Areas is the amount of area that will not, upon construction, recharge directly downward from the point of precipitation, through natural vegetation, naturalized vegetation or other undeveloped soils without any storm water routing. The area of recharge disruption within the Prime Ground Water Recharge Area will include all impervious surfaces, all areas where stormwater is routed to another location through engineered systems such as storm sewers and basins, etc, and all areas where the nature of the land surface does not allow for unimpeded recharge through natural vegetated areas.

It is important to specify that the 15% limit is not equivalent to a 15% limit on impervious surfaces, because impervious surfaces are only one part of the total recharge disruption. While the percentage of impervious surface will differ based on site design and land use, given the nature of land development and stormwater management it will always be less than 15%. Further, it is not scientifically appropriate to compare the total area of recharge disruption to impervious surface thresholds, such as those advocated by the Center for Watershed Protection, that are based on research involving the impacts of stormwater runoff on streams. Where there is a concern regarding stormwater runoff volumes, that issue should be addressed separately.

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The other critical issue in this policy is recognition that Prime Ground Water Recharge Areas have internal differences in their recharge rates. Further, some parts of the Prime Ground Water Recharge Areas will be more likely to recharge aquifers, ground water units than can support human water uses through wells. Site-specific analyses can determine what part of the development site has the lowest potential for aquifer recharge, and the Highlands Council mapping indicates areas that have lower relative recharge rates. To the extent that recharge disruption is allowed and necessary, it should be located on those areas with the least aquifer recharge potential and the lowest recharge rates, to minimize development impacts. Site evaluation techniques will be included in the conformance standards guidance, and may include such steps as:

- Evaluation of the type and characteristics of all soils on-site and delineation of the vertical and horizontal extent of soils conducive to maximum water infiltration. Identification of the relative recharge rates of soils within the Prime Ground Water Recharge Areas;
 - Evaluation of the relative potential for aquifer recharge within the Prime Ground Water Recharge Areas;
 - Evaluation of the site's hydrogeological conditions and overall water quality;
 - An evaluation of the relationship between all relevant ecological factors and their relationship to the Prime Ground Water Recharge Areas;
 - The potential effects of proposed development on Prime Ground Water Recharge Areas;
 - A description of all appropriate and necessary best management practices to provide for the maximum amount of natural infiltration and total infiltration, and protection of water quality, including low impact development techniques.
4. Use low impact development techniques to reduce total recharge disruption as much as feasible, within the 15 percent maximum (**Objective 2D4c**).

Even though the 15% limitation applies by site, that does not mean that 15% recharge disruption will be needed or should be allowed on each site. The use of low impact development techniques will minimize the total recharge disruption to the lowest percentage possible, and will emphasize site designs that maximize protection or restoration of natural vegetation and the recharge associated with those areas.

5. Require mitigation equal to 125% of the pre-construction recharge from the area where disruption of the Prime Ground Water Recharge Areas is permitted (**Objective 2D4b**).

This policy is clarified from the Final Draft RMP, so that the recharge target for the site will be enhanced from natural levels. This objective should be technically feasible because the disturbed portions of the Prime Ground Water Recharge Area should still be able to support engineered recharge techniques using clean runoff from the affected area (e.g., rooftop runoff) in excess of natural recharge rates. Staff have examined hypothetical Protection and Conservation Zone examples and determined that meeting the 125% mitigation requirement should be feasible, but may require significant limitations on the loss of forest cover (an objective of Low Impact Development techniques) to meet the requirement.

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6. Prohibit the development of major potential pollutant sources (**Objectives 2D3d, 2D4f**), and manage existing and future potential pollutant sources (**Objective 2D3g**).

These objectives address the concern that, even with protections in place, there are some land uses that have too high a risk or potential for significant discharges of pollutants through spills or leaks. These land uses should be prohibited from Prime Ground Water Recharge Areas regardless of the standards for total recharge disruption and low impact development. The risks are too high. For other potential pollutant sources, ongoing management measures should be required and followed. These objectives mimic the wellhead protection policies for WHPA Tiers 2 and 3.

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Goals, Policies and Objectives for Prime Ground Water Recharge Areas

(Highlighted text indicates changes from prior versions)

Subpart b. Protection of Water Resources Quantity

The Highlands Regional Master Plan focuses on a variety of measures to protect the replenishment of water resources in the Highlands Region through ground water recharge and other means, to ensure the maintenance of aquatic ecosystems and human water uses. Science agenda items include improvements to the methods for estimating Net Water Availability, safe yields and passing flow requirements, better watershed delineations, and improved tracking of water and wastewater flows across watershed boundaries. The protection of Prime Ground Water Recharge Areas is emphasized, as these areas provide the most productive recharge of waters that are critical for stream flow and water supply wells. Protection is provided for both the quantity and quality of recharge.

GOAL 2C	REFINEMENT OF WATER AVAILABILITY METHODS AND ESTIMATES.
Policy 2C1	To improve estimates of Net Water Availability over time, including testing, development and adoption of ecologically-based assessment techniques to evaluate the high and low flow needs of streams necessary to maintain the health of aquatic ecosystems, and the relationship between ground water recharge, ecological flow needs, consumptive water uses and estimates of water availability for both ground and surface water resources.
Policy 2C2	To evaluate potable water supply reservoir safe yield and passing flow requirements and examine the effects of upstream consumptive and depletive water uses on safe yields and of passing flows on Highlands Open Waters and recommend regulatory changes to NJDEP as appropriate.
Policy 2C3	To develop a more refined Hydrologic Unit Map using Light Detection and Ranging (LiDAR) technology and high resolution digital elevation modeling to support more detailed geographic estimates of water availability.
Policy 2C4	To develop more refined estimates of the effects on Net Water Availability regarding the exportation and importation of water and wastewater.
GOAL 2D	MAINTENANCE OF HYDROLOGIC INTEGRITY THROUGH THE PROTECTION OF GROUND WATER RECHARGE.
Policy 2D1	To map and maintain an inventory of ground water recharge potential for the Highlands Region.
Policy 2D2	To delineate Prime Ground Water Recharge Areas as those lands within a HUC14 subwatershed that have the highest recharge volumes as of the most recent land use/land cover data available, relative to other land areas, and in the aggregate provide 40 percent of total ground water recharge during drought conditions.

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Policy 2D3	To protect, enhance and restore the quantity and quality of Prime Ground Water Recharge Areas.
Objective 2D3a (Formerly 2D3a, 2D6a, 2D8b, 2D9)	Establish low impact development and other best management practices, technical guidelines and procedures to protect, restore and enhance Prime Ground Water Recharge Areas, to maximize the protection of natural ground water recharge and to minimize the need for engineered recharge methods for the purpose of complying with N.J.A.C. 7:8 (Stormwater Management Rules).
Objective 2D3b (Formerly 2D11)	Establish model municipal development regulations and master plan elements for the protection of Prime Ground Water Recharge Areas, through mechanisms that both complement and supplement the provisions of N.J.A.C. 7:8 (Stormwater Management Rules).
Objective 2D3c	Implement master plans and development review ordinances through Plan Conformance that protect Prime Ground Water Recharge Areas and minimize the potential for disruption of recharge in such areas by development. This requirement shall apply to all portions of the Prime Ground Water Recharge Area where the recharge is disrupted through impervious surfaces, routing of stormwater runoff and recharge from natural flow paths, and other similar changes.
Objective 2D3d (Formerly 2D8a, 2D10)	Establish minimum site design guidelines and permissible uses within a Prime Ground Water Recharge Area, including identification of land use categories or other activities posing sufficient risk of contamination that are not allowed within Prime Ground Water Recharge Areas.
Objective 2D3e (Formerly 2D8c)	Identify and implement opportunities for the restoration or enhancement of recharge in Prime Ground Water Recharge Areas and other lands through the retrofit or rehabilitation of stormwater recharge facilities, land management improvements, reforestation, etc.
Objective 2D3f (Formerly 2D8d)	Implement programs for Prime Ground Water Recharge Areas which encourage redevelopment of previously developed areas and allow for other compatible uses that improve recharge area productivity or water quality.
Objective 2D3g (Formerly 2H2c)	Require through Plan Conformance and local health ordinances, that existing land uses that have a significant potential to result in major discharges of pollutants to ground water or to the land surface (including but not limited to non-sanitary wastewater effluent and any major sources of potential discharges such as spills and leaks), such that they may degrade ground water quality within a Prime Ground Water Recharge Area, shall incorporate ongoing management of toxic chemical sources and prohibition of unregulated discharges, so that the potential for ground water contamination is minimized and the opportunity for discharge discovery and control is maximized.
Policy 2D4 (Formerly 2D3b, 2D4, 2D5, 2D6, 2D7, 2D8)	To apply standards through Plan Conformance, local development review and Highlands Project Review to protect, restore and enhance the functionality and the water resource value of Prime Ground Water Recharge Areas by restricting development and uses of land within a Prime Ground Water Recharge Area that reduce natural ground water recharge volumes or may directly or indirectly contribute to or result in water quality degradation.
Objective 2D4a	Development shall not occur in Prime Ground Water Recharge Areas unless the

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	entire site is in such areas, or if necessary to prevent disturbance of Critical Habitat, Highlands Open Water Buffers and Moderately and Severely Constrained Steep Slopes.
Objective 2D4b	Any development activity approved to occur in a Prime Ground Water Recharge Area shall provide an equivalent of 125% of pre-construction recharge volumes for the disrupted portion of the Prime Ground Water Recharge Area of the site as defined in Objective 2D3c , within the following areas, in order of priority: (1) the same development site where feasible; (2) the same HUC14 subwatershed, or (3) an interrelated HUC14 subwatershed as approved by the Highlands Council where no feasible option exists in the same HUC14 subwatershed.
Objective 2D4c (Formerly 2D3a)	Require through Plan Conformance, local development review and Highlands Project Review that the disruption of Prime Ground Water Recharge Area shall be minimized through the implementation of low impact development best management practices meeting the requirements of Objective 2D3a .
Objective 2D4d	Require through Plan Conformance, local development review and Highlands Project Review that the disruption of Prime Ground Water Recharge Area, after conformance with Objectives 2D4a, 2D4b and 2D4c is achieved, shall be limited to no greater than 15% of the Prime Ground Water Recharge Area on the site and shall be preferentially be sited on that portion of the Prime Ground Water Recharge Area that has the lowest ground water recharge rates and the lowest potential for aquifer recharge.
Objective 2D4e (Formerly 2D5a, 2D5b, 2D6a, 2D6b)	Prohibit through Plan Conformance, local development review and Highlands Project Review the expansion or creation of public water supply systems or public wastewater collection and treatment systems or community-based on-site wastewater facilities into a Prime Ground Water Recharge Area within the Protection or Conservation Zone within the Planning Area except as provided for in Policy 2J4 with Objectives 2J4a through 2J4d, and Policy 2K3 with Objectives 2K3a through 2K3e , and within the Preservation Area except as provided for in Policy 2I1 and Objectives 2I1a and 2I1b . (see attachment for these objectives from the Water Utilities GPOs)
Objective 2D4f (Formerly 2H2b)	Prohibit through Plan Conformance, local development review and Highlands Project Review new land uses, including those identified through Objective 2D3d , that have a significant potential to result in the discharge of persistent organic chemicals sources (including but not limited to existing discharges of industrial or other non-sanitary wastewater effluent) to ground water or to the land surface within a Prime Ground Water Recharge Area, such that they may degrade or contribute to the degradation of ground water quality.
Objective 2D4g (Formerly 2D8e)	Require conformance with applicable components of regional stormwater management plans, where applicable, as a mandatory requirement for any site plan application.
Objective 2D4h (Formerly 2D7a)	Achieve a net improvement in ground water recharge volume and maintenance of water quality as required through compliance with and implementation of any related provisions of an adopted regional stormwater plan.
Objective 2D4i	Achieve a net improvement in ground water volume and maintenance of water quality through redevelopment, enhanced infiltration, pretreatment or other means

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(Formerly 2D7b) where feasible.

GOAL 2E	IMPROVEMENT OF GROUND WATER RECHARGE THROUGH REGIONAL MANAGEMENT EFFORTS.
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Policy 2E1	To develop regional stormwater plans to promote regional protection, restoration and enhancement of ground water recharge volume and quality where specific watersheds are at risk in the absence of regional analysis and enhanced standards (see N.J.A.C. 7:8, Stormwater Management Rules).
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Policy 2E2	To coordinate programs, funding and activities among public and private entities to encourage regional ground water recharge protection, restoration and enhancement activities consistent with the Plan.
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References for Objective 2D4c

Policy 2I1 and Objectives 2I1a and 2I1b

Policy 2J4 with Objectives 2J4a through 2J4d

Policy 2K3 with Objectives 2K3a through 2K3e

Policy 2I1. To prohibit the expansion or creation of public water supply systems, public wastewater collection and treatment systems and community on-site treatment facilities in the Preservation Area unless approved through a Highlands Applicability Determination or a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38 and Policy 7G1.

Objective 2I1a. Designated sewer service areas in the Preservation Area shall be restricted to the Existing Area Served as of August 10, 2004, except to serve development that is approved through a Highlands Applicability Determination or a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38 and Policy 7G1.

Objective 2I1b. The expansion or creation of public water supply systems, public wastewater collection and treatment systems and community on-site treatment facilities in the Preservation Area as approved through a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38 and Policy 7G1 shall maximize the protection of sensitive environmental resources including avoidance of Open Water buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, Steep Slopes, Prime Ground Water Recharge Areas, and Critical Habitat Areas.

Policy 2J4. To minimize, through Plan Conformance, local development review and Highlands Project Review, the creation or extension of public water supply systems within the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area, and to allow for the creation or extension of public water supply systems where appropriate within the Existing Community Zone.

Objective 2J4a. Prohibit new, expanded or extended public water systems within the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area unless they are shown to be necessary for and are approved by the Highlands Council for one or more of the purposes listed below. For approvals regarding parts 1, 2 and 4, the project must maximize the protection of sensitive environmental resources such as Open Water buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, Steep Slopes, Prime Ground Water Recharge Areas and Critical Habitat Areas. For approvals regarding part 3, the project must avoid disturbance of Open Water buffer areas, Riparian Areas, Steep Slopes and Critical Habitat Areas, and must minimize disturbance of the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, and Prime Ground Water Recharge Areas. The extension or creation of systems shall follow the requirements in Objective 2J4b (parts 2 and 3). The applicable purposes are:

1. to address through a waiver under Policy 7G1 or 7G2 a documented existing or imminent threat to public health and safety from contaminated domestic and other on-site water supplies that is of sufficient scale to justify a public water supply and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety. Such needs shall have highest priority for allocation of existing system capacity;
2. to address development permitted through a Highlands Redevelopment Area or takings waiver under Policy 7G1 or 7G2; or
3. to serve a cluster development that meets all requirements of Objective 2J4b.

Objective 2J4b. Clustered development served by public water supply within the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area shall be approved only if the following conditions are met:

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1. The development impacts are otherwise consistent with the requirements of the RMP, including provisions for mandatory clustering in Agricultural Resource Areas pursuant to Policy 3A5; 2. Extension of an existing public water system will occur only where the cluster development is within or immediately adjacent to an Existing Area Served with available capacity; 3. Creation of a new public water system will occur only where such development is not within or immediately adjacent to an Existing Area Served with available capacity; 4. The clustered development preserves at least 80 percent of the cluster project area in perpetuity for environmental protection or agricultural purposes. To the maximum extent feasible the developed portion (i.e., not including wetlands, open water buffers, and recreational lands) occupies no more than 10 percent of the cluster project area if served by a public or community on-site wastewater system; 5. Where the preserved land in the cluster project area is dedicated to agricultural purposes, the cluster development ordinance and an Agriculture Retention/Farmland Preservation Plan supports continued agricultural viability of the agricultural land and requires the implementation of best management practices, including development and implementation of a Farm Conservation Plan that addresses the protection of water and soil resources prepared by the USDA Natural Resources Conservation Service (NRCS), Technical Service Provider (TSP), appropriate agent or NJDA staff, and approved by the local Soil Conservation District (SCD).
Objective 2J4c. Allow the expansion or creation of public water systems within the Existing Community Zone of the Planning Area, other than the Environmentally-Constrained Sub-zone, to serve lands which are appropriate for designated TDR Receiving Zones, infill or redevelopment, to meet needs and protection requirements equivalent to Objective 2J4a within the Existing Community Zone, or to serve new areas for development that meet all other requirements of the RMP. TDR Receiving Zones, affordable housing projects (where the affordable units exceed 10% of the total units), infill and redevelopment shall have higher priority for capacity than expansion of public water service areas within this Zone.
Objective 2J4d. All development within the Highlands Region, in areas that are not served by public water systems, shall be at a density that can be supported by on-site wells. Where cluster development in the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area will be served by on-site wells, and the undeveloped land is preserved for agricultural purposes in perpetuity, the cluster development in combination with the Agriculture Retention/Farmland Preservation Plan required by Objective 2J4b shall provide for best management practices that protect the on-site wells from contamination resulting from agricultural practices and shall include provisions to minimize or reduce net pollutant loadings from the total cluster project area including the preserved agricultural lands.
Policy 2K3. To provide adequate, appropriate, efficient and cost-effective wastewater management to all development in the Highlands Region, through Plan Conformance, local development review and Highlands Project Review.
Objective 2K3a. Areawide Water Quality Management Plans, including Wastewater Management Plans and project-specific amendments, shall be consistent with requirements of this Plan.
Objective 2K3b. Existing wastewater collection and treatments systems which are non-compliant with state water quality standards for wastewater treatment and effluent discharge shall be prohibited from collecting and treating additional wastewater until the treatment systems are fully compliant with State permit requirements.
Objective 2K3c. Prohibit new, expanded or extended public wastewater collection and treatment systems and community on-site treatment facilities within the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area unless they are shown to be necessary for and are approved by the Highlands Council for one or more of the purposes listed below. For approvals

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regarding parts 1, 2 and 4, the project must maximize the protection of sensitive environmental resources such as Open Water buffer areas, Riparian Areas, the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, Steep Slopes, Prime Ground Water Recharge Areas and Critical Habitat Areas. For approvals regarding part 3, the project must avoid disturbance of Open Water buffer areas, Riparian Areas, Steep Slopes and Critical Habitat Areas, and must minimize disturbance of the forested portion of the Forest Resource Area, agricultural lands of Agricultural Resource Areas, and Prime Ground Water Recharge Areas. The choice of extension or creation of systems shall follow the requirements in Objective 2K3d (2 and 3). The applicable purposes are:

1. to address through a waiver under Policy 7G1 or 7G2 a documented existing or imminent threat to public health and safety from a pattern of failing septic systems (where the failing systems cannot reasonably be addressed through rehabilitation or replacement) or highly concentrated septic systems, where the threat is of sufficient scale to justify a public wastewater collection and treatment system or community on-site treatment facility and where no alternative is feasible that would sufficiently assure long-term protection of public health and safety. To address other issues of public health and safety, such needs shall have highest priority for allocation of existing system capacity;
2. to address development permitted through a Highlands Redevelopment Area or takings waiver under Policy 7G1 or 7G2; or
3. to serve a cluster development that meets all requirements of Objective 2K3d.

Objective 2K3d. Clustered development served by a public wastewater collection and treatment system or community on-site treatment facility within the Protection Zone, the Conservation Zone and the Environmentally-Constrained Sub-zones of the Planning Area shall be approved only if the following conditions are met:

1. The development impacts are otherwise consistent with the requirements of the RMP, including provisions for mandatory clustering in Agricultural Resource Areas pursuant to Policy 3A5;
2. Extension of an existing public wastewater collection and treatment system will occur only where the cluster development is within or immediately adjacent to an Existing Area Served with available capacity;
3. Creation of a community on-site treatment facility will occur only where such development is not within or immediately adjacent to an Existing Area Served with available capacity, where the proposed system is designed, permitted and constructed at a capacity limited to the needs of the clustered development, and where the system does not create the potential for future expansion into areas that are not the subject of cluster developments immediately adjacent to the initial cluster served;
4. The cluster development preserves at least 80 percent of the cluster project area in perpetuity for environmental protection or agriculture purposes. To the maximum extent feasible the developed portion of the project area (i.e. not including wetlands, open water buffers, and recreational lands) occupies no more than 10 percent of the cluster project area if served by a public or community on-site wastewater system.
5. Where the preserved land in the cluster project area is dedicated to agricultural purposes, the cluster development ordinance and an Agriculture Retention/Farmland Preservation Plan supports continued agricultural viability of the agricultural land and requires the implementation of best management practices, including development and implementation of a Farm Conservation Plan that addresses the protection of water and soil resources prepared by the USDA Natural Resources Conservation Service (NRCS), Technical Service Provider (TSP), appropriate agent or NJDA staff, and approved by the local Soil Conservation District (SCD).

Objective 2K3e. Allow the expansion or creation of wastewater collection systems within the Existing Community Zone of the Planning Area, other than the Environmentally-Constrained Sub-zone, to serve

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lands which are appropriate for designated TDR Receiving Zones, infill or redevelopment, to meet needs and protection requirements equivalent to those provided at Objective 2K3c within the Existing Community Zone, or to serve new areas for development that meet all other requirements of the RMP. The highest priority for allocation of excess or additional wastewater treatment capacity is to areas where there are clusters of failed septic systems that are located within or adjacent to Existing Areas Served. TDR Receiving Areas, where designated, affordable housing projects (where the affordable units exceed 10% of the total units), infill and redevelopment shall have higher priority for capacity than other developments requiring expansion of sewer service areas.

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HIGHLANDS OPEN WATERS – STREAM CORRIDOR BUFFERS AND PLAN
Summary and Recommendation

At the June 12, 2008 meeting of the Highlands Council, Council staff was asked to revise Objective 1D4i regarding potential modifications to the standard 300 foot buffers so that part 4 of this Objective clearly affects previously disturbed buffer areas only, and so that part 5 of this Objective for designated Redevelopment Area waivers is more clear. The staff recommends that Policy 1D4 also be revised to better support the changes to Objective 1D4i, and proposes the language shown below. The most significant changes are:

1. Add language to Policy 1D4 stating that the protection buffer width for Category 2 streams in the Planning Area may be modified through a Stream Corridor Protection/Restoration Plan, as specified in Objective 1D4i.
2. Removed the provision for “municipality-wide” Stream Corridor Protection/Restoration Plans in Objective 1D4i. Such plans should be developed for stream reaches or subwatersheds. Where a municipality wants to develop such plans for all stream reaches in the municipality, the plans would cover the full municipality, but would be focused on individual stream reaches.
3. Clarified the meaning of “disturbance” in part 1 of Objective 1D4i as “land” disturbance within the buffers where the disturbance has removed or substantially impaired natural vegetation communities and has significantly reduced or impaired functional values. Therefore, the disturbance must actually harm the buffer, or it will not be considered a disturbance for this purpose. For example, an historic disturbance that has since gone back to a vegetated state with good buffer values would not be considered “disturbed.”
4. Substantially edited part 4 of Objective 1D4i to focus the potential for modification of buffers on Category 2 waters in the Planning Area, and only where a disturbed buffer area exists. The buffer modification must occur through a Stream Corridor Protection/Restoration Plan, which must involve a scientific analysis of functional values. The resulting buffer must include the undisturbed area at a minimum, and must have a net functional value at least equivalent to existing conditions and at least as restrictive as any other State or municipal regulations. The buffers would be based on the analysis involved rather than necessarily on fixed distances, and may not be used as the basis for buffer “averaging” because that is a mathematical concept rather than a functional analysis.
5. Substantially edited part 5 of Objective 1D4i on designated Redevelopment Areas, regarding the extent to which a waiver would be allowed to infringe on undisturbed buffers. Staff

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proposes a minimum buffer of 150 feet under a waiver, or any other State or municipal regulations if more restrictive. Restoration of functional values shall be provided on-site or in the stream reach.

Proposed Language

Policy 1D4. Highlands Open Waters shall include a protection buffer of 300 feet from the edge of the discernable bank of the Highlands Open Water feature, or from the centerline where no discernable bank exists. With respect to wetlands and other Highlands Open Waters features (e.g., seeps, springs, etc.), the feature shall include a protection buffer of 300 feet from the delineated Letter of Interpretation (LOI) line issued by the NJDEP for wetlands, or from a field-delineated boundary for other features. In areas where existing development or land uses within the protection buffers have reduced or impaired the functional values of the buffers, the Council will seek opportunities to restore the buffer and its functions. Any proposed disturbance shall, through local development review and Highlands Project Review, comply with Highlands Open Waters buffer standards. The protection buffer width for Category 2 streams in the Planning Area may be modified through a Stream Corridor Protection/Restoration Plan, as specified in Objective 1D4i. In approved Redevelopment Areas, the Council may, at its discretion, modify the required buffer, upon a showing of no alternatives, no impact to the functional value of the buffer, and provision of alternative approaches to enhancing or protecting the Highlands Open Water and resources of the buffer area.

Objective 1D4i. Develop through Plan Conformance and implement stream corridor or subwatershed-based Stream Corridor Protection/Restoration Plans which shall include Steps 1, 2 and 3, and may include Steps 4 and 5:

1. Identify areas where existing development, land disturbances, or land uses are within the Highlands Open Water buffers have removed or substantially impaired natural vegetation communities, and have significantly reduced or impaired the functional values of Highlands Open Water buffers;
2. Identify opportunities for restoration of areas identified in Step 1 as part of mitigation requirements under a Highlands Act waiver or Objectives 1D4e and 1D4f, and public or non-governmental restoration/stabilization projects;
3. Identify the extent of stream corridor features that are critical to supporting the functions of a healthy Highlands Open Waters buffer and that extend beyond the buffers required by Objectives 1D4b and 1D4c. The 300-foot buffer in these areas may be expanded to be most protective of these features which may include, but are not limited to, critical habitat areas, pollutant source areas identified through scientific techniques, and steep slopes;
4. Where Highlands Open Water buffers include areas identified in Step 1, regarding Category 2 surface waters in the Planning Area only, the Stream Corridor Protection/Restoration Plan may identify where, based on scientific analysis of site-specific conditions (e.g., topography, vegetation cover type, habitat, soil type, upstream land uses and pollution inputs, width of floodplain, rate and volume of run-off), a buffer of less than the full 300 feet (but including the undisturbed buffer area at a minimum) is sufficient to maintain or improve the protection of Highlands Open Waters and Riparian Areas. The Plan must identify alternative buffers that provide functional buffer values at least equivalent to existing conditions and are no less than 150 feet or no less than the extent allowed in State or municipal regulation (including Objectives 1D4b and 1D4c), whichever is greater. Further, the Plan shall include a functional value

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assessment to ensure that there is no net loss in the overall functional value of the subwatershed's stream buffers. Buffers established through this process shall be determined based on site conditions rather than fixed distances, reflecting findings of the scientific analysis, and shall be used in the site design and development review process regarding determinations of restoration, continued use, or increased use of the disturbed buffer area. Buffer averaging for the purpose of accommodating development proposals is deemed *not* to meet the requirements of this provision;

5. Where a proposed Highlands Redevelopment Area would not meet in full Objectives 1D4b through 1D4h but affects an undisturbed buffer area determined to *not* be necessary for the protection of the functional values for a Highlands Open Water buffer for a Category 2 surface water (as determined through scientific analysis of site-specific conditions), modification of the undisturbed buffer may be allowed to no less than the extent allowed in State or municipal regulation. However the Council shall first determine that there is no alternative to the proposed reduction of the buffer, and require a showing of no impact to the functional values of the buffer and provision of alternative approaches to enhancing or protecting the Highlands Open Water and resources of the buffer area. Restoration or enhancement of buffer functional values shall be provided on-site or within the same stream reach to achieve a net improvement of existing buffer functional values.

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**Highlands Council
Identification of
Potential Voluntary
HDC Receiving Zones
in the Planning Area**

A crucial component to establishing the Highlands TDR Program is the identification of areas that may serve as voluntary Receiving Zones. It is within these areas that the HDCs allocated to landowners in the Sending Zones may be used to increase the density or intensity of uses permitted by underlying zoning. In turn, the ability to use the HDCs in Receiving Zones for more development than would otherwise be permitted creates demand for purchasing the credits and ultimately establishes their value.

Pursuant to the Highlands Act, potential Receiving Zones identified by the Highlands Council for use in the regional TDR program are strictly voluntary. Any areas identified by the Council's analysis need not be accepted by the municipalities in which they are identified. Despite the voluntary nature of the Receiving Zones, the Highlands Council is still charged with identifying areas within the Highlands Region that are or may be appropriate to serve as Receiving Zones and recommending an appropriate density for those identified areas. (N.J.S.A. 13:20-8 and 13:20-13.c) The Highlands Act establishes a goal of identifying at least four percent of the Planning Area for potential TDR receiving areas, unless environmental constraints limit such areas to below that goal. Accordingly, the goal of the Highlands Act through the implementation of the Regional Master Plan is to identify 17,776 acres of the Planning Area's 444,398 acres.

The Highlands Council has conducted a preliminary, GIS-based analysis of Planning Area lands that may have potential for serving as HDC Receiving Zones. This analysis focuses on lands that are not within the Environmentally Constrained Sub-zones, not preserved, and not developed with residential housing (as of 2002), and which have or may have the water and wastewater infrastructure necessary to accommodate more development. This analysis will require refinement as the Highlands Council works with Highlands municipalities during the Plan Conformance process, including gaining a better understanding of the potential densities for these identified lands.

As noted above, this analysis does include lands that are not currently served by infrastructure. Simply because such lands have limited or no infrastructure currently does not mean that necessary capacity or new infrastructure may not be provided sometime in the future where the provision of that infrastructure is consistent with the goals, policies and objectives of the Regional Master Plan. As Section 11.a(6)(e) of the Highlands Act notes, the Highlands Council shall identify potential voluntary receiving zones “. . . through the appropriate expansion of infrastructure or the modified uses of existing infrastructure.” (N.J.S.A. 13:20-11.a(6)(e)) Therefore the Act does not preclude the identification of a Receiving Zone in an area that does not currently have sufficient infrastructure or capacity but may be appropriate to support more intense residential or non-residential development in the future.

Importantly, this analysis is a tool to help foster discussion about those areas within the Planning Area that are most appropriate to serve as voluntary Receiving Zones. Further specific local analysis of these areas will be required, including an assessment of site specific environmental constraints, infrastructure capacity, and real estate market viability, before any designation may be considered. Only after this assessment is complete and the municipality and

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Highlands Council concur in the assessment's results, will designation be considered by the Highlands Council.

Based upon the analysis parameters outlined above, the Highlands Council has preliminarily identified approximately 12,000 acres within the Existing Community Zone of the Planning Area using criteria that relate to the existence of water and wastewater infrastructure (see figure *Potential Areas for Voluntary HDC Receiving Zones in Existing Community Zone*). The criteria used in analyzing these areas and the acreage associated with these criteria are highlighted below.

- Greenfield Opportunities – undeveloped lands at least 2 acres in size located in approved sewer service areas that are not Existing Areas Served and therefore correspond to lands that municipalities likely intended for future development served by wastewater utilities. This analysis reveals approximately 980 acres that satisfy these criteria. The Highlands Council further evaluated these lands using the Highlands Regional Build-Out Model and existing municipal zoning. The purpose of this additional study was to determine which lands within these 980 acres could support development at a minimum of 5 dwelling units per acre if residentially zoned or 0.84 FAR if non-residentially zoned. The study identifies 280 acres that have sufficient remaining wastewater capacity and water availability at the HUC 14 subwatershed level to support this amount of development intensity.
- Redevelopment and Infill Opportunities – developed and undeveloped lands at least 0.125 acres in size that are currently served with public wastewater infrastructure (Existing Areas Served) with remaining capacity. These lands total approximately 11,000 acres. Lands in this category represent potential Receiving Zones that are premised on infill and redevelopment.

It is critical to understand that other lands within the Highlands Region may also be appropriate to serve as voluntary Receiving Zones but would not be identified in this regional GIS-based analysis. For example, this analysis does not examine the potential of lands within the Conservation Zone to serve as Receiving Zones, which is allowed by the policies adopted by the Highlands Council, provided that the designation of such lands is consistent with the RMP and the development will not conflict with the maintenance of viable agriculture. Additionally, this assessment does not identify any specific potential Highlands Redevelopment Areas which may also serve as voluntary Receiving Zones per the policies of the Regional Master Plan. Lastly, this analysis only examines land areas that are at least 2 or 0.125 acres in size, based on the analysis involved. There may be areas smaller than these thresholds that may be appropriately considered for Receiving Zone designation. The Highlands Council will work with conforming municipalities during Plan Conformance to identify additional lands to meet the goal of the Highlands Act.

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WATER QUALITY MANAGEMENT CONSISTENCY DETERMINATIONS
Overview

At the direction of the Highlands Council, Council staff has assessed the requirements of NJDEP's revised and recently published Water Quality Management Planning Rules (WQMP Rules) at N.J.A.C. 7:15. Staff has prepared an analysis of these rules and presents a comparison of the rules to the RMP standards applied by staff during the reviews conducted of WQMP amendments to date.

Under the revised WQMP rules, counties and municipalities must complete their wastewater management plans (WMP) within nine (9) months of the effective date of the rules. Given this timeframe, it is critical that the counties and municipalities in the Highlands Region be aware of the applicable standards that will be required by the NJDEP in order to have an approved WMP. As such, it is recommended that the Highlands Council provide to NJDEP the Highlands Regional Master Plan (RMP) standards that are specifically applicable to the WQMP regulations for purposes of rendering a consistency determination as required by the NJDEP's rules for the Highlands Region at N.J.A.C. 7:38-1.1(k) (Highlands Rules), and any additional RMP standards that the Highlands Council feels are relevant to the WQMP process and should be considered by NJDEP in terms of consistency for counties and municipalities.

NJDEP is the agency that has the ultimate responsibility to determine whether the proposed WMP complies with the requirements of both WQMP Rules and the Highlands Rules, thus the Highlands will provide the standards for planning purposes to achieve consistency. Consequently, to ensure a coordinated planning process, the relevant RMP standards will be provided to NJDEP.. This will permit discussion and consideration of the relevant RMP standards at the earliest possible time in the planning process.

Attached hereto is a table highlighting the important provisions of the revised WQMP Rules and the RMP standards that relate to those provisions. Additionally, the right-hand column of the table includes those RMP standards that may be considered as part of an RMP consistency review of a WQMP, but do not necessarily correspond to a specific requirement of the revised WQMP rules.

As noted above, there is a nine-month timeframe set forth for completion of these plans. Planning entities will need to know the standards in advance so that they may achieve them within the given timeframe. It should be noted that this is the same timeframe during which the Council and staff will be starting the RMP implementation in order to meet the Plan Conformance deadlines set forth by the Highlands Act. Due to this overlap, it is important to consider the practical implications of

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Highlands Council staff having to review all WQMPs or WQMP amendments within the specified timeframe. Based on this approach, the Council staff would provide relevant information to counties and municipalities directly, as needed, as well as through the Council's Web site, for their use in the WMP process. In addition, the Council would coordinate with NJDEP to ensure that the RMP standards and data are fully understood and used properly. Consistency determinations would be based upon the RMP standards provided by the Council to NJDEP, with ongoing coordination with NJDEP as to the RMP components for which NJDEP requires consistency in WMP development.

Towns with lands in the Planning Area that choose to conform will be facilitated by the Council by having their Conformance Action Plan identify WQMP components as early mandatory items. In this manner the Council can facilitate the NJDEP in meeting the goal of 9 months.

Recently Adopted NJDEP WQMP Rules (N.J.A.C. 7:15) <i>(represents minimum WQMP review standard)</i>	Final Draft RMP Standards applied to WQMP reviews (Highlands Council WQMP reviews prior to RMP Adoption) Note: Red text indicates resource not specifically addressed by WQMP Rules	Future Consistency Review Scenario: Full RMP Review Standards <i>(represents maximum WQMP review standard)</i> Note: Red text indicates resource not specifically addressed by WQMP rules Blue text indicates source of standards to provide to NJDEP
- Enhanced natural resource protection (N.J.A.C. 7:15-5.25) applied through restriction on SSA delineation in four environmentally sensitive areas (T&E wildlife species habitat, Natural Heritage Program priority sites, special water resource protection areas along a Category One waters and their tributaries, and wetlands) and municipal adoption of the following protection ordinances: - Water supply and service areas - Steep slopes - Riparian zones - Stormwater - Water quality impacts (non-point source and point source) - Water and Wastewater capacity examined in full build-out, except for urban areas which use a 20-year planning build-out. - Requires septic system yield analysis for areas outside SSAs using NJDEP nitrate targets of 2.0 mg/l.	- RMP standards applied to sewer service area changes consist of a more comprehensive set of natural resource and historic/cultural resource GPOs: - Steep Slopes - Highlands Open Waters and Riparian Areas - Critical Habitat (includes T&E wildlife species habitat <u>and</u> Significant Natural Areas <u>and</u> Vernal Pools with 1000 foot buffers) Carbonate Rock Areas Lake Management Areas Forest Resource Areas and forest resources Agricultural Resource Areas and important soils Prime ground water recharge areas Wellhead protection areas - Total Maximum Daily Loads Water availability and deficit subwatershed mitigation Historic & cultural resources (presence) - Water and Wastewater capacity evaluated - Smart Growth standards not applied - Septic system yield not applied	- Continued application of natural and historic/cultural GPOs, as modified for adopted RMP: - Steep Slopes - Conformance standards provided to NJDEP - Highlands Open Waters and Riparian Areas - Conformance standards provided to NJDEP - Critical Habitat (includes T&E species wildlife habitat <u>and</u> Significant Natural Areas <u>and</u> Vernal Pools with 1000 foot buffers) - Conformance standards provided to NJDEP Carbonate Rock Areas - Conformance standards provided to NJDEP Lake Management Areas - Conformance standards provided to NJDEP Forest Resource Areas and forest resources - Conformance standards provided to NJDEP Agricultural Resource Areas and important soils - Conformance standards provided to NJDEP Prime ground water recharge - Conformance standards provided to NJDEP Wellhead protection areas - Conformance standards provided to NJDEP - Total Maximum Daily Loads - RMP GPOs provided to NJDEP Water availability and deficit subwatershed mitigation - RMP GPOs and Program provided to NJDEP Historic & cultural resources - Conformance standards provided to NJDEP - Water and Wastewater capacity evaluated - RMP GPOs provided to NJDEP Application of Smart Growth standards for requiring or encouraging development patterns in the Region that are consistent with existing infrastructure and land uses. Discourage scattered piecemeal and inefficient development patterns, including minimum residential and non-residential densities for sewer service area extensions. - RMP GPOs and conformance standards provided to NJDEP - RMP median nitrate targets and septic system yields would be applied for the Planning Area; NJDEP Highlands Rules targets would be applied in the Preservation Area. - RMP GPOs provided to NJDEP

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Land Acquisition Costs in the Highlands

In order to address the requirement in the Highlands Act, in Section 11.a(2)(a), to detail the cost of implementing the RMP, including five year and ten year acquisition costs to preserve land, the following discussion will be included in Chapter III. Analysis of the Highlands Region, Part 8. Sustainable Economic Development and Chapter V., Part 1. Natural Resources, Land Preservation Program.

Program

Determine the Cost of 5 and 10 Year Priorities for Land Acquisition.

Discussion

In order to derive the cost of lands that are 5 and 10 year priorities for land acquisition, the Highlands Council applied a series of assumptions to those lands within the confidential inventory, which are fully discussed in the *Financial Analysis Technical Report*. The findings of that analysis are as follows:

- The cost to preserve the 5 year agriculture confidential priority list is estimated at \$544 million with the 10 year priorities costing an additional \$109 million, totaling \$653 million.
- The cost to preserve the 5 year conservation confidential priority list is estimated at \$599 million with the 10 year priorities costing an additional \$79 million, totaling \$678 million.
- Total cost of preserving the entire agriculture and conservation priority lists is estimated at approximately \$1.3 billion.

Total funding allocations from the Garden State Preservation Trust (GSPT) from 2000 through 2009 (2007 referendum) to the Green Acres Program account for approximately an average of \$132,000,000 (59%) annually. Approximately 9% of the annual funding allocation from Green Acres was attributed to open space preservation in the Highlands Region based on historical acquisition costs. The SADC Program accounts for approximately an average of \$84,870,000 (38%) annually. Approximately 21% of the annual funding allocation from SADC was attributed to farmland preservation in the Highlands Region based on historical acquisition costs.

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The total acquisition cost for both the Agriculture and Conservation Confidential Priority Lists is approximately \$1.3 billion (162,557 acres). The GSPT figures for Green Acres would need to be consistent over the next ten years and enhanced considerably for SADC regarding agriculture to preserve the properties on both Confidential Priority Lists for agriculture and open space.

It is important to keep the momentum going in preserving Highlands open rural landscapes, natural areas such as the forests, working farms and crucial watersheds. As a result, conservation acquisitions need to be maintained at least at current levels. Moreover, funds for farmland preservation should be at least doubled in order to prevent the loss of farms to non-agricultural development and achieve a critical mass of preserved farmland to sustain the agriculture industry. It should be noted that the current preserved lands shows that the preserved conservation land area (237,994 acres) is over eight times the preserved farmland (28,528 acres) in the Highlands Region, emphasizing the need for increased emphasis on farmland preservation. Preserving land is a challenge in planning and a challenge in public finance. In partnership with the federal, State, county and municipal governments, and non-profit land trusts, preserving open space and farmland can be accomplished.

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Part 5. Transportation

Transportation Safety and Mobility

Issue Overview

The Highlands regional transportation system uses roads, highways, railways and bridges to move people and goods through various modes of travel, including private automobile, bus, plane, truck, rail, bicycle and walking. In the Highlands, numerous factors including inefficient land use patterns have led to an increased dependence on automobile travel, which has had adverse impacts on natural resources and overall quality of life. By promoting efficient mixed land uses and increasing access to a multimodal transportation system, better protection can be offered to environmentally sensitive areas of the Region.

The Highlands Act emphasizes the preservation and enhancement of the transportation system which integrates transportation and comprehensive land use planning. It emphasizes the promotion of a balanced, efficient and safe transportation system that is consistent with smart growth strategies and principles and which preserves mobility and maintains transportation infrastructure in the Highlands Region.

The Act also provides that the Council recognize projects that promote a sound, balanced transportation system that is consistent with smart growth strategies and principles. A preliminary evaluation of existing and planned transportation studies in the Highlands Region that are anticipated as near-term (5 years), mid-term (5 to 10 years) and long-term (greater than 10 years) projects was performed. The Council received input from State agencies, transportation planning professionals, non-profits and county, municipal and local stakeholders in its evaluation of projects. The projects were evaluated based on input received, research and participation in project studies, the viability of both an anticipated near term project and a longer term project, projects that promote preservation of the transportation system, incorporate transit or multi-model components, serve a significant portion of the Region, reduce vehicle miles traveled, improve mobility and accessibility for residents and visitors and support both the Highlands Act and RMP policies. The currently funded projects and on-going studies selected by the Council to be recognized in the RMP for further evaluation include:

- The Access to the Regions Core (ARC) project, and particularly the Trans Hudson Expansion (THE) Tunnel project, which includes upgrades to the Raritan Valley, Main/Bergen/Pascack Valley and Morris & Essex Lines. This project is anticipated for completion in 2017 and has met funding matching criteria. Highlands Region stations that will benefit include but are not limited to the following: the Montclair-Boonton Line, Mt. Arlington, Dover, Mahwah, Hackettstown and the new Andover station. The operating plan for this project provides a long term opportunity for both commuter and regional tourism activities.
- The Montclair-Boonton Line rail extension project to Andover only, along the existing right of way. The project has been approved for funding by the New Jersey Transportation Planning Authority (NJTPA) and construction is imminent. The project currently includes limited commuter travel service and is anticipated to be implemented within 5 to 10 years. Because information for the

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full Lackawanna Cut-off project is not available for review at this time and will require further evaluation by the Council, the extension beyond Andover is not included in the RMP at this time. When the ARC project comes onboard and is fully implemented it is anticipated that rail service to the Andover station will be enhanced and may serve to support Highlands regional tourism initiatives in bringing residents and visitors further west via mass transit and allow for additional multi-modal connections.

- The Northwest NJ Bus Study, for which 80% of the study area in the Highlands Region. It will provide in early 2009 a series of recommendations for additional follow up and study that align with the RMP Transportation Safety and Mobility policies for transit enhancement, smart growth principles and reduced vehicle miles traveled. The project provides a transit evaluation in an area that is currently underserved or not served by transit. The study recommendations and next steps will require evaluation by the Council regarding RMP policies and Plan Conformance components.
- The Raritan Valley Line Extension Study from High Bridge to Phillipsburg. This study is anticipated to be completed in early 2009. It has been supported by the I-78 Corridor Study and the rights of ways have been obtained by NJ Transit, however further study is warranted. The study will provide recommendations for stations and park and rides to support rail and Interstate Route 78 transit connections. The project can support RMP smart growth principles; however recommendations for the stations and park and ride locations will require further evaluation by the Council regarding RMP policies and Plan Conformance components.

The Council will continue to evaluate transportation projects with its agency partners and stakeholders and support intra- and inter-regional transportation and transit through Plan Conformance and the Transportation Safety and Mobility Program.

Section 11 of the Act states:

11. a. *The regional master plan shall include, but need not necessarily be limited to...*
(5) *A transportation component that provides a plan for transportation system preservation, includes all federally mandated projects or programs, and recognizes smart growth strategies and principles. The transportation component shall include projects to promote a sound, balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility and maintains the transportation infrastructure of the Highlands Region. Transportation projects and programs shall be reviewed and approved by the council in consultation with the Department of Transportation prior to inclusion in the transportation component;*

An assessment of roadway conditions across the Highlands indicates that many of the Region's roads are at or approaching traffic capacity. Some of the major U.S. and State highways have recurring capacity constraints during the AM and PM peak travel periods. In addition, because mobile source pollution is generated by vehicle emissions, this traffic congestion increases emissions of harmful pollutants and adversely affects air quality.

Program Summary

The Highlands Act states that a primary goal is to promote a sound and balanced transportation system that is consistent with smart growth strategies and principles and which preserves mobility. The transportation program serves multiple purposes such as identifying roadway capacity constraints, addressing safety concerns,

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**RMP Policies and
Objectives Addressed**

assessing agricultural and freight needs, and promoting efficient land use patterns which look comprehensively at land use and transportation planning. The program also looks to enhance a multi-modal transportation system which facilitates the movement of people and goods without adversely affecting ecosystem integrity and community character. Each program component addresses a specific need area while providing a set of strategies through which the Highlands Council, in coordination with state agencies, local government units and stakeholders, can ensure that RMP goals are achievable.

Policy 5A1. To ensure that the Highlands transportation system provides safe and efficient intra-regional and inter-regional mobility and that critical safety road improvements use design and engineering controls to minimize induced demand and maximize resource protection.

Policy 5A2. To ensure that the Highlands transportation system affords the Highlands private economic sector, including agriculture, cost-effective transportation for raw materials, products and employees.

Objective 5A2a. Encourage the movement of goods from the roadway network to the freight rail network wherever possible.

Objective 5A2b. Evaluate opportunities to increase freight service through the reactivation of abandoned freight lines.

Objective 5A2c. Ensure sustainability of regional airport facilities and appropriately include the role of general aviation in meeting regional transportation planning needs.

Policy 5A3. To improve public safety through implementation of traffic calming measures in areas with high pedestrian activity.

Policy 5A4. To provide for safe and efficient pedestrian connections including features such as sidewalks, proper lighting, signage, shelters and green street initiatives consistent with NJDOT's Pedestrian Safety Initiative.

Policy 5A5. To promote safe routes for children to travel to and from school in support of the NJDOT's Safe Routes to School Program.

Policy 5B1. To promote more efficient use of existing road capacity by appropriate means, including but not limited to increased bus, van, shuttle, and car pool ridership, and non-motorized travelers.

Policy 5B2. To require through Plan Conformance and Highlands Project Review an evaluation of potential growth inducing effects such as substantial new land use, new residents, or new employment that could occur as a result of road improvements for increased motorized vehicle traffic capacity.

Policy 5B3. To prohibit through Plan Conformance and Highlands Project Review road improvements in the Highlands Region in areas for which a Growth Inducing Study, conducted in consultation with agencies including but not limited to the NJ Department of Transportation, demonstrates that proposed improvements do not support the RMP resource protection and smart growth policies and are likely to be growth-inducing for lands with limited or no capacity to support human development without a significant adverse impact on the Highlands ecosystem.

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**Linking Transportation
and Land Use**

Policy 5C1. To ensure, to the extent practicable, that proposed transportation improvements which are not consistent with the RMP be modified to be consistent or be re-evaluated in the context of state and regional planning goals.

Policy 5C2. To coordinate with NJ DOT, NJ Transit, North Jersey Transportation Planning Authority (NJTPA), counties and municipalities with regard to transportation planning and strategies within both the Highlands Region and the larger 13-county metropolitan planning region.

Objective 5C2a. Highlands Region transportation site development activities will reflect RMP resource protection, development and redevelopment goals.

Policy 5C3. To limit road improvements through local development review and Highlands Project Review where roads are constrained by topography, forested lands or the community character of land uses fronting on the road.

Policy 5C4. To support economic development by ensuring that transportation planning and improvements support regional development, redevelopment, and tourism opportunities.

Objective 5C4a. Increase tourism opportunities through innovative multi-modal transportation measures and accessible transit schedules.

Objective 5C4b. Support regional tourism economy through enhanced street furnishings, directional signage and Highlands Region tourism information.

Objective 5C4c. Support regional tourism through the recognition and protection of scenic resource view sheds along scenic byways and road corridors.

This program component discusses the critical relationship between transportation and land use in the Highlands Region, and the necessity to incorporate smart growth principles in transportation improvements in order to protect the environment while encouraging economic viability.

Many of the transportation improvements made in recent decades have been in the form of adding roadway capacity, with the intent of relieving or mitigating traffic congestion. It is widely acknowledged, however, that the strategy of adding roadway capacity is not a sustainable solution to the many problems facing the transportation system. By looking at transportation and land use planning comprehensively, a long-term strategy can be developed to better solve the Region's transportation issues. There are several integrated land use/transportation corridor studies currently underway or planned in the Highlands Region including but not limited to Interstate 78, Route 57 and Route 23.

The idea of mixing land uses, combining jobs, housing, retail and other uses in a compact, efficient manner, is one approach which can lead to shorter and less frequent trips taken and fewer vehicle miles traveled. These mixed uses, when integrated as a compact, walkable community, can also create and enhance a sense of place and vitality, which may in turn lead to higher property values and lower infrastructure costs. Transit Oriented Development (TOD) is another method that integrates transportation planning specifically by promoting more compact development around existing transportation infrastructure as an alternative to sprawl. Innovative approaches to roadway design can also put greater focus on ecological systems. The NJTransit *Transit Score Program* is an approach for evaluating land use and transit supported links by defining a transit score index. The program evaluates

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the relationship between people, employment and vehicle use as related to land use to improve transit options in local and regional planning.

Green Street approaches seek to design a street system that protects water resources in order to prevent the adverse affects of surface runoff. A concept called “Shared Parking” is used extensively in traditional neighborhood commercial settings and downtowns. In these locations, higher densities and mixed uses often allow people to park in a single spot and then walk from one destination to another, allowing one parking space to serve multiple destinations.

The Highlands Region includes seven regional airport facilities that vary in size and aircraft capacity and they serve to support the regional transportation system.

This program component includes the following:

1. Municipal Plan Conformance includes the development of a circulation plan element in coordination with the land use plan element; that ensures mobility and accessibility, evaluates local Transit Scores in support of connecting land use to transit services and addresses smart growth principles consistent with the goals of the RMP.
2. A circulation plan element must show the location and types of facilities for modes of transportation required for the efficient movement of people and goods, including scenic byways and corridors and regional airports, as well as a municipal evaluation of transit and shared parking opportunities through a comprehensive parking study.
3. Conforming counties shall develop a transportation plan that supports local and regional land use planning, ensures mobility and accessibility, evaluates regional Transit Scores as a means to screen for improved and innovative transit options, promote connectivity, shared service opportunities and long-term transportation network needs.
4. Council shall evaluate the existing and proposed Residential Site Improvement Standards (RSIS) in the context of the RMP and develop recommendations for amendments that would minimize environmental impacts resulting from new residential developments while maximizing utility efficiency from new residential developments in a context-specific manner that addresses community and landscape character.
5. Coordinate with NJ Transit, counties and municipalities to increase the performance of the public and private bus carrier systems, increasing transit rider-ship and the use of multi-modal transportation systems for peak hour travel including the use of shuttle service and innovative car sharing rental options.
6. Encourage development and redevelopment which provides a balance of jobs to housing in close proximity to rail and bus.
7. Ensure sustainability of regional airport facilities and appropriately include the role of general aviation in meeting regional transportation planning needs.

**Regional Transportation
Safety and Pedestrian
Security**

The widespread usage of the Highlands roadway system does not come without certain risks for pedestrians, bicyclists, motorists and bus passengers. Many years of vehicle safety and traffic engineering improvements have resulted in generally safer conditions for automobiles, with fewer fatalities and fewer crashes per vehicle miles traveled. Beyond automobile safety, there has been a growing awareness of the need to protect the most vulnerable road users - pedestrians and bicyclists.

The Act emphasizes the importance of transportation safety and creates certain exemptions which allow for such things as the routine maintenance and

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**Mobility of Agriculture
and Freight Access**

reconstruction of transportation infrastructure provided that the activity is consistent with the goals of the Act, and does not result in new through-capacity travel lanes. The challenge of improving safety for all travelers in Highlands Region can best be addressed through strategic and coordinated efforts to integrate safety concerns into transportation planning with State agencies, local governments and stakeholders.

This program component emphasizes the following strategies in order to promote transportation safety:

1. Require municipalities to assess local transportation improvement needs and safety concerns as part of their circulation plan element for Plan Conformance.
2. Coordinate with municipalities, counties, NJDOT, NJTPA and NJ Transit in order to increase safety and security of inter-modal transportation for motorized and non-motorized users, and by implementing traffic calming measures in areas with high pedestrian activity.
3. Promote safe routes for children to travel to and from school in a coordinated effort with NJDOT's Safe Routes to School Program. In addition, encourage safe routes to public transportation through NJDOT's Safe Streets to Transit Program.
4. Provide for safe pedestrian connections including features such as sidewalks, proper lighting, shade trees, and shelters consistent with NJDOT's Pedestrian Initiative.

Transportation mobility is a vital component to the agricultural industry in the Highlands Region, as farmers rely on a functional transportation system in order to operate farms, ultimately bring a variety of goods to market and support agri-tourism initiatives. In order to ensure the safety and viability of farming as an occupation in the Highlands Region, safe travel routes for farmers need to be coordinated with local governments and state agencies.

Mobility is also critical to the needs of a growing freight industry which continues to use the Region's infrastructure to haul goods to and from the State's major ports. However, a growing number of freight trucks are having a negative impact on the Region's roads. By improving upon existing rail infrastructure and shifting from truck to rail for long-distance transport, more freight can be moved safely and efficiently.

The program components include:

1. Coordinate with municipalities, counties, New Jersey Department of Agriculture and NJDOT to identify and support the unique needs of the agricultural industry to move farm vehicles and goods along transportation corridors, and establish safe travel routes for farmers in order to ensure the safety and viability of farming as an occupation in the Highlands Region.
2. Require that all circulation plan elements and county plans, as part of Plan Conformance, evaluate "farm-to-market" opportunities to improve upon the movement of goods from farms and areas of supply to areas where goods are in demand and in support of agri-tourism initiatives.
3. Require that all circulation plan elements and county plan, as part of Plan Conformance, evaluate opportunities to increase freight service through the reactivation of abandoned freight lines.
4. Coordinate with NJDOT on new Comprehensive Statewide Freight Plan

(For more information on agricultural needs see Agricultural Management and

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**Transportation and
Tourism Economy**

Sustainability Program)

As a Region that reflects history, exhibits scenic beauty, and provides outdoor recreational activities, the Highlands offers residents and visitors a variety of recreational and tourism opportunities. A strong tourism industry in the Highlands depends upon a safe and efficient transportation system. The Region also includes scenic resource viewsheds along scenic byways and corridors that require protection.

This component seeks to focus on the relationship between the Highlands transportation system and tourism resources. Are transportation services available so that tourists can travel safely and by a variety of modes? Is information about transportation to tourist attractions and activities available? What are opportunities to expand tourism through transportation-related activities such as rail, bus, hiking trails and signage? By answering these questions, Highlands communities can support enhanced regional economic vitality and contribute to overall quality of life.

This program component includes the following:

1. Coordinate with NJDOT, NJTransit and NJ Division of Travel and Tourism to increase tourism opportunities through innovative multi-modal transportation measures and accessible transit schedules.
2. Support the regional tourism economy in cooperation with NJDOT through a road signage program which identifies significant natural and historic resources and landmarks including scenic viewsheds and byways.
3. Require that circulation plan elements evaluate opportunities to expand tourism through multi-modal transit connectivity, thus promoting the use of transit as a means to access Highlands' tourism resources.
4. Coordinate with NJDOT and NJ Department of Agriculture to promote agri-tourism through enhanced information sharing, education and outreach.

**Overview of
Transportation Project
Review**

The review of transportation projects by Council is a critical step to ensuring that transportation improvements are consistent with the goals and policies of the RMP. The Act states that the Council may provide comments and recommendations on any transportation project undertaken by any State entity or local government unit in the Highlands Region. In the Preservation Area, the Council must establish procedures for conducting reviews of projects that, except in certain cases, involve the disturbance of two acres or more of land, or a cumulative increase in impervious surface by one acre or more. The Act also states that in the Highlands Region the Council has the power to approve, approve with conditions, or disapprove a project, and that except in certain cases no such project can move forward without approval of the Council.

Transportation project review will generally evaluate the following:

1. Consistency with the goals, policies and objectives of the RMP and smart growth planning principles.
2. Determination of net effect on through lane capacity, consistent with the requirements of Policy 5B3.
3. Impact on water quantity and quality, Highlands natural resources such as forests, habitat and open waters and historic and scenic resources.
4. The relationship to surrounding land uses and near and long-term transportation plans for the Highlands Region and the larger 13-county regional transportation planning area.
5. An evaluation of growth-inducing impacts regarding new land use, new

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residents, and new permanent employment which could have secondary growth implications, or greatly expand transportation infrastructure capacity, especially in areas with high natural resource values and limited capacity to support human development.

6. Use of alternative modes of transportation including transit, bus, pedestrian and bicycle.
7. Safety measures such as traffic calming strategies and pedestrian and bicycle safety features.
8. Impact on agricultural and freight mobility.
9. Effect on eco-tourism, agri-tourism and heritage tourism in the Region.

Plan Conformance guidelines and procedures will be developed in support of transportation project review detailing the specific requirements.

The roadway capacity assessment included in the *Transportation Technical Report* provides a detailed assessment of roadway conditions, identifying major origin and destination trips generated in the Highlands for the base year 2002. The Council worked with NJDOT, NJTPA and counties to develop a Highlands Sub-Area model based on information developed from a larger model known as the North Jersey Regional Transportation Model (NJRTM). It is currently the primary analysis tool for transportation planning in the 13 county transportation planning region.

There is a need to re-examine, refine and monitor these roadway conditions and travel patterns, and the impact of future development and land use patterns on traffic conditions. The refined assessment will need to be conducted to a finer Traffic Analysis Zone standard and will require more local traffic count data in order to determine more accurately local roadway conditions by municipality in the Highlands Region. This more refined analysis can better reflect the impact of past land use changes in order to inform future land use decisions, and thereby shape transportation infrastructure improvements. The Council will continue to partner with NJDOT, NJTPA and counties to refine the model for future needs. (More information on the Roadway Capacity Assessment can be found in the *Transportation Technical Report* pg.11)